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9 January 2007

To: Members of the Planning Policy Advisory Group – Councillors RE Barrett, RF Bryant, Mrs PS Corney, Mrs A Elsby, R Hall, SGM Kindersley, RB Martlew, MJ Mason, Mrs CAED Murfitt, CR Nightingale, JH Stewart, NIC Wright,

and to Councillors Mrs SJO Doggett, Mrs SM Ellington, Mrs VG Ford, Dr SA Harangozo, Mrs CA Hunt, RMA Manning, AG Orgee, Mrs HM Smith, RJ Turner and TJ Wotherspoon

and to Councillor Mrs DSK Spink MBE (Planning & Economic Development Portfolio Holder)

Dear Councillor

You are invited to attend the next meeting of **PLANNING POLICY ADVISORY GROUP**, which will be held in **COUNCIL CHAMBER, FIRST FLOOR** at South Cambridgeshire Hall on **THURSDAY, 18 JANUARY 2007** at **10.00 a.m.**

Yours faithfully
GJ HARLOCK
Chief Executive

Requests for a large print agenda must be received at least 48 hours before the meeting.

AGENDA		PAGES
1.	ELECTION OF CHAIRMAN	
2.	APPOINTMENT OF VICE-CHAIRMAN	
3.	APOLOGIES FOR ABSENCE	
4.	DECLARATIONS OF INTEREST	
5.	MINUTES OF PREVIOUS MEETING	1 - 4
	To agree the minutes of the meeting held on 26 July 2005 as a correct record.	
6.	CAMBRIDGE EAST SUSTAINABLE TRANSPORT STUDY	5 - 76

For recommendation to the Planning and Economic Development Portfolio Holder.

Appendices 1 and 2 are attached to the paper and online versions of this agenda.

Technical Notes A, B and C (Background and Context, Strategic Choice

and Demand Assessment), which form part of Appendix 1, are available for viewing as part of the online version of this agenda.

7. REGIONAL SPATIAL STRATEGY

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SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

At a meeting of the Planning Policy Advisory Group held on
Tuesday, 26 July 2005

PRESENT: Councillor Dr DR Bard – Chairman

Councillors:	RF Bryant	SM Edwards
	MJ Mason	Mrs CAED Murfitt
	Mrs DSK Spink MBE	NIC Wright

Councillors RE Barrett, JD Batchelor, Mrs A Elsby, Mrs EM Heazell, Mrs HF Kember, SGM Kindersley, Mrs HM Smith and RT Summerfield were in attendance, by invitation.

1. APOLOGIES

Apologies for absence were received from Councillors R Hall, Mrs JM Healey and JH Stewart (Members of the Planning Policy Advisory Group), JP Chatfield, Mrs PS Corney, Mrs J Dixon, Mrs SA Hatton, Mrs CA Hunt, Mrs GJ Smith, Mrs BE Waters, DALG Wherrell and Dr JR Williamson.

2. DECLARATIONS OF INTEREST

There were no declarations of interest.

3. MINUTES OF PREVIOUS MEETING

The Planning Policy Advisory Group authorised the Chairman to sign, as a correct record, the Minutes of the meeting held on 27th May 2005.

In relation to the third paragraph from the end of the Minutes (*"In relation to Cambridge Crematorium, Mr Gunn confirmed that the current access was likely to be stopped up, but that access would be provided by a link to the Swavesey Interchange."*), the Chairman confirmed the accuracy of this statement while acknowledging the apparent confusion over the precise location of the new access.

In response to concerns raised by Councillor MJ Mason, the Principal Planning Policy Officer undertook to pursue the Highways Agency with a view to securing their outstanding responses to written questions submitted by Members prior to the meeting on 27th May. The Chairman also confirmed that a copy of the Council's formal response to the Highways Agency in relation to its proposals for the A14 would be attached to the next Planning Policy Advisory Group agenda.

4. PROPOSED REDEVELOPMENT OF PAPWORTH HOSPITAL

Stephen Bridge (Chief Executive, Papworth Hospital NHS Foundation Trust), Ken Brewer (Project Director) and Luci Blackwell (Project Manager) attended the meeting to deliver a PowerPoint presentation the proposed redevelopment of Papworth Hospital, and to address the issues raised by Members.

The Presentation focused on the following topics:

- Outline of the public consultation exercise
- The need for a new hospital
- Redevelopment on the current site in Papworth Everard
- Alternative redevelopment on the Cambridge Biomedical Campus
- Merits of the two options

- Staff location
- Future of the existing site in Papworth Everard

5. QUESTIONS AND DISCUSSION

Prompted by Members' questions, the presentation Team made the following comments:

(a) Clinical Independence, collaboration, and infection control

Following the establishment of Papworth Hospital as a Foundation Trust, there was significant confidence that the resultant protocols and safeguards would enable it both to remain clinically independent, and to collaborate with other medical facilities, where appropriate, without running the risk of provoking cross-infection.

(b) Recruitment

Papworth Hospital already found it difficult to recruit specialist personnel, partly because of its isolation, and the Trust was preparing a strategy for addressing a range of recruitment issues, that would be relevant regardless of the hospital's location. For example, relocation to the Cambridge Biomedical Campus would enhance career development, and might also help in recruiting non-medical staff as well.

(c) Public Relations

While the Trust could see significant benefits in relocating Papworth Hospital to the Cambridge Biomedical Campus, it was important to consider all of the implications of relocation in conjunction with conducting a similar exercise in connection with redeveloping the existing site in Papworth Everard. The prime consideration was to ensure that the hospital had a bright future, and not just a glorious past.

(d) Significance of previous planning permission for housing

Although South Cambridgeshire District Council had given planning consent for 1,000 houses in Papworth Everard a few years ago, and linked that to the hospital remaining in Papworth, nobody had assumed that circumstances would not change at some point in the future. Since 1997, Government had decided not to support redevelopment of the existing site, and the current options had been drawn up in the knowledge that change of some kind was essential to secure the hospital's viability as an autonomous institution. The Trust had to consider embracing economies of scale in order to address such issues as cost, quality of service, ever-increasing enhancements in patient care, and the issue of best practice.

(e) Location of Cambridge Biomedical Campus

The principal motivator in determining Papworth Hospital's future must be that of patient care. Were the hospital to relocate to this Campus, there would be significant opportunities to examine design and density issues in a way that would best suit the needs of patients. However, it was accepted that access to the Campus was a major concern, and one that needed to be addressed at an early stage. The Trust would only consider relocation were it to be satisfied that access improvements were feasible.

(f) Redevelopment of existing site in Papworth Everard

Neither the Primary Care Trust nor the Strategic Health Authority supported redevelopment of the existing site. There was a growing tendency for smaller hospitals to seek re-location to sites near bigger hospitals in order to benefit from economies of scale and to reduce the danger to them of litigation arising from the specific, as opposed to

general, expertise available at smaller institutions.

(g) Private Finance Initiative

The outcome would not be known for some time, but private finance was more likely to be forthcoming in the event that Papworth Hospital was redeveloped on a brand new site.

(h) Consultation suggesting a preference for remaining in Papworth

The results would have to be analysed by the Foundation Trust's Board of Governors, but it was important to recognise that the exercise was a consultation process rather than a referendum.

(i) Infrastructure

Members' concern about transport infrastructure, and the relative ease of access to Papworth Everard compared with the Cambridge Biomedical Campus, were well understood. However, since PFI negotiations were unlikely to be concluded until late 2008, there was every chance that appropriate infrastructure would be in place at the Cambridge Biomedical Campus by then, or at least in hand. Planning permission for new buildings was almost certain to depend on the prior enhancement of access to the Cambridge Biomedical Campus.

(j) Process

The process was being driven by Papworth Hospital itself, not the Primary Care Trust, in the context of enhanced Patient Choice provisions being introduced with effect from December 2005. From that time, each patient would be entitled to choose between four NHS hospitals and one private hospital.

(k) Density

Density on the Cambridge Biomedical Campus was likely to be 25%-30% of that on the existing Addenbrooke's site. Sensitive design of buildings would be an essential element of any relocation.

The Chairman thanked Stephen Bridge, Ken Brewer and Luci Blackwell for their presentation, and those Members, not being members of the Planning Policy Advisory Group, for attending the meeting.

The Meeting ended at 3.40 p.m.

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SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

REPORT TO: Planning Policy Advisory Group

18 January 2007

AUTHOR/S: Head of Planning

Cambridge East Sustainable Transport Study**Purpose**

1. To inform Members about the contents of a study commissioned by Cambridgeshire County Council to look at the potential transport issues arising from the proposed development in Cambridge East, and to seek Members' views on the draft study to assist the portfolio holder.

Background

2. The Cambridge East Transport Study has been commissioned by Cambridgeshire County Council to inform the Area Action Plan being prepared for the proposed development in Cambridge East. The study looks at the potential impact of the proposed development on the transport network and examines ways in which this impact could be managed sustainably. It will be used to provide information to the Inspector at the Examination in Public of the Cambridge East Area Action Plan, scheduled for the summer of 2007.
3. The study concerns itself with examining ways in which services and facilities can be accessed from the proposed development at Cambridge East. A masterplan for the site has yet to be produced, so the study looks only at links from Cambridge East to key destinations and not at the transport layout within the site itself. It is expected that measures for transport within the site will be taken forward as proposals for the site are developed.
4. The study does not look at transport issues in the wider area. These are covered by other transport plans and strategies of the County Council, including the Local Transport Plan, and the Long Term Transport Strategy.
5. The consultants have produced a draft study (**Appendix 1** attached). They will give a presentation on the study at this meeting. This report summarises the key issues raised in the Study.

Considerations

6. The aims of the study are to:
 - Maximise the potential for sustainable transport use and uptake through the development of appropriate public transport, walking and cycling infrastructure and services.
 - Minimise and mitigate negative traffic impacts on the local and strategic highway network.
 - Show how the schemes can be delivered in a phased approach to complement the phased development of Cambridge East.

7. If developed to its full scale, Cambridge East will have a residential population of just under 30,000 as well as employment for 5,000 people and a full range of community facilities. Whilst the transport requirements for such a large-scale development are very significant, Cambridge East offers a unique opportunity to provide a step-change in the quality of public transport, cycling and walking provision in this part of Cambridge and could also support broader developments in services across Cambridge.
8. The Cambridge East Area Action Plan has set an ambitious target of a 60/40 split in favour of sustainable modes of transport against car use. The vision set out in the transport study is therefore for walking, cycling and public transport to be the modes of choice offering the quickest, most convenient and highest quality means to access services and destinations. In most cases, segregation of these modes will be an essential element in achieving this.
9. Highways improvements are also considered, particularly access to the A14.

Contents of the study

10. The study sets out a number of options which could be considered as a way of achieving the 60% split in favour of sustainable modes of transport whilst at the same time ensuring that the impacts on the highway network are minimised. It should be emphasised that these options do not constitute a strategy to be implemented, but rather, have been developed to inform the councils' in their deliberations. The study does, however, demonstrate that a 60/40 split in favour of sustainable modes of transport can be achieved in a number of ways.
11. Various options are examined to access facilities from Cambridge East to three geographical areas: the north, to the city centre and to the south. In summary, the options are as follows:

The north

- (i) Highway options.
 - *Either* a connection from Cambridge East to the junction at Quy
 - *Or* the creation of a new link from Airport Way to Fen Ditton junction. This last, if implemented, would also serve to tackle current problems of through traffic in Fen Ditton by forcing traffic to divert around the village to travel to or from the A14
- (ii) Public transport options
 - *Either* a busway via Coldham's Common (as proposed for the city centre) to Newmarket Road by Abbey Stadium and continuing northwards parallel to the rail corridor to Chesterton sidings and beyond
 - *Or* a new busway link via Chesterton Fen. This could be considered if a link road from Cambridge East to the A14 at Fen Ditton were to be constructed
- (iii) Walking and cycling options
 - A new bridge to be constructed over the River Cam adjacent to the existing railway bridge. This would enable a connection to the northern fringe to be made via the upgraded Jubilee route.

The city centre

- (i) Public transport options
- *Either* a segregated busway to the city centre via Coldham's Common. This would join Newmarket Road close to the railway and continue on a fully segregated alignment towards the city centre.
 - *Or* a segregated busway to the city centre going underneath Coldham's Common, using a "cut and cover" tunnel starting on the airport site and travelling under Barnwell Road, re-emerging adjacent to the Abbey Stadium
 - *Or* a segregated bus link from the heart of the development using Barnwell Road and Newmarket Road
- (ii) Walking and cycling options
- Modelling suggests that a modal share of 32% for cycling and walking will be needed from Cambridge East to the city centre, equating to 734 walk/ cycle trips an hour. Options proposed include:
- an upgrade to the Jubilee route to enhance width and surfacing and to provide low level lighting along the route
 - a direct route across Coldham's Common East Road, including a new cycle bridge over the railway and a link to the Coldham's Lane/ Cromwell Road junction
 - an upgrade to the Tin's path route from Rosemary Lane, crossing Coldham's Lane via a signalised Toucan crossing and continuing southwards to join the Tin's Path via the existing cycle bridge over the railway.
 - Maintaining or slightly enhancing existing cycle cycling facilities on Newmarket Road.

The south

- (i) Public transport options would include one or more of the following
- Bus priority along the outer ring road. A segregated bus link leaving the development via Coldham's Lane and travelling along the outer ring road to Addenbrooke's, then through Addenbrooke's over the railway to Trumpington
 - Public transport via the railway station and guideway. An on-road service to the rail station and then through Coleridge, offering the potential to join the Cambridgeshire Guided Busway south towards Trumpington/ Addenbrooke's or travel towards the city centre
 - Connecting Cambridge East to the railway station via a guideway along the railway between Newmarket and the rail station. Services would proceed along the segregated route as far as Newmarket Road using the options detailed above setting out access to the city centre, then turn south to run alongside the railway to join the southern section of Guideway at the rail station.
- (ii) Walking and cycling options.
- Cycle routes could run parallel to a number of public transport routes, for example to the segregated route running alongside the railway. Additionally, options considered include:
- a predominantly off-road/ quiet road route from the south eastern edge of the development

- using existing cycle lanes along the other ring road, although it is recognised that it would be difficult to improve cycling provision along the route and that cycles are not well catered for at roundabout junctions

Other key measures

12. The study also looks at local highways access arrangements from Cambridge East, concluding that seven junctions would be required and at proposals for smarter choices, which, the consultants argue, would be essential.

Study conclusions

13. The study concludes that it is possible to achieve the ambitious non car mode share for transport set for Cambridge East and hence allow a development that will bring many broader benefits to Cambridge. To achieve this, the study recognises that major investment will be required in sustainable transport. It also advocates a comprehensive smarter choices package and implementation of the development along the lines proposed in the Area Action Plan.

Implications

14.	Financial	None
	Legal	None
	Staffing	None
	Risk Management	None
	Equal Opportunities	None

Consultations

15. The Study was recently considered by the Cambridge East Member Reference Group (28th November). The group raised a number of issues with the study that the County Council agreed to examine. These include:
- Providing more graphical visualisations of the proposals;
 - Providing additional explanation of Figure 2.9 (page 37);
 - How a 60/40 split might be achieved for the first phase of the development;
 - The impact of a new link road to Fen Ditton interchange 2.87 (page 36) on Waterbeach and Horningsea.
16. Draft Minutes of the Cambridge East MRG meeting are attached at **Appendix 2**.
17. A further meeting of the Cambridge East Member Reference Group is to be scheduled in early 2007 to consider points raised and potential revisions to the study.

Effect on Corporate Objectives

18.	Quality, Accessible Services	The Cambridge East Transport Study will assist in developing sustainable transport options for the Cambridge East development.
	Village Life	
	Sustainability	
	Partnership	The District Council is working in partnership with Cambridgeshire County Council and Cambridge City Council, in planning for Cambridge East.

Conclusions / Summary

19. The final report of the Study will be made available to the inspector as supporting material for the Examination of the Cambridge East Area Action Plan, and will be considered at that examination. It will also be used to inform discussion with developers.
20. Detailed transport proposals for the area will come forward as the development plans progress. The Area Action Plan is scheduled for review prior to the main airport site coming forward for development. This will provide an opportunity for members to determine detailed route options, and for public participation.

Background Papers: the following background papers were used in the preparation of this report:

Appendix 1: Cambridge East Transport Study – Final Report

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**CAMBRIDGE EAST SUSTAINABLE
TRANSPORT STRATEGY**

Strategy Report

Final

November 2006

Prepared for:

Cambridge East Transport Topic Group
c/o Cambridgeshire County Council
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B:	Technical Note B: Strategic choice evaluation of options (Appendix B);
C:	Technical Note C: Demand assessment (Appendix C);

1. ABOUT THE STRATEGY

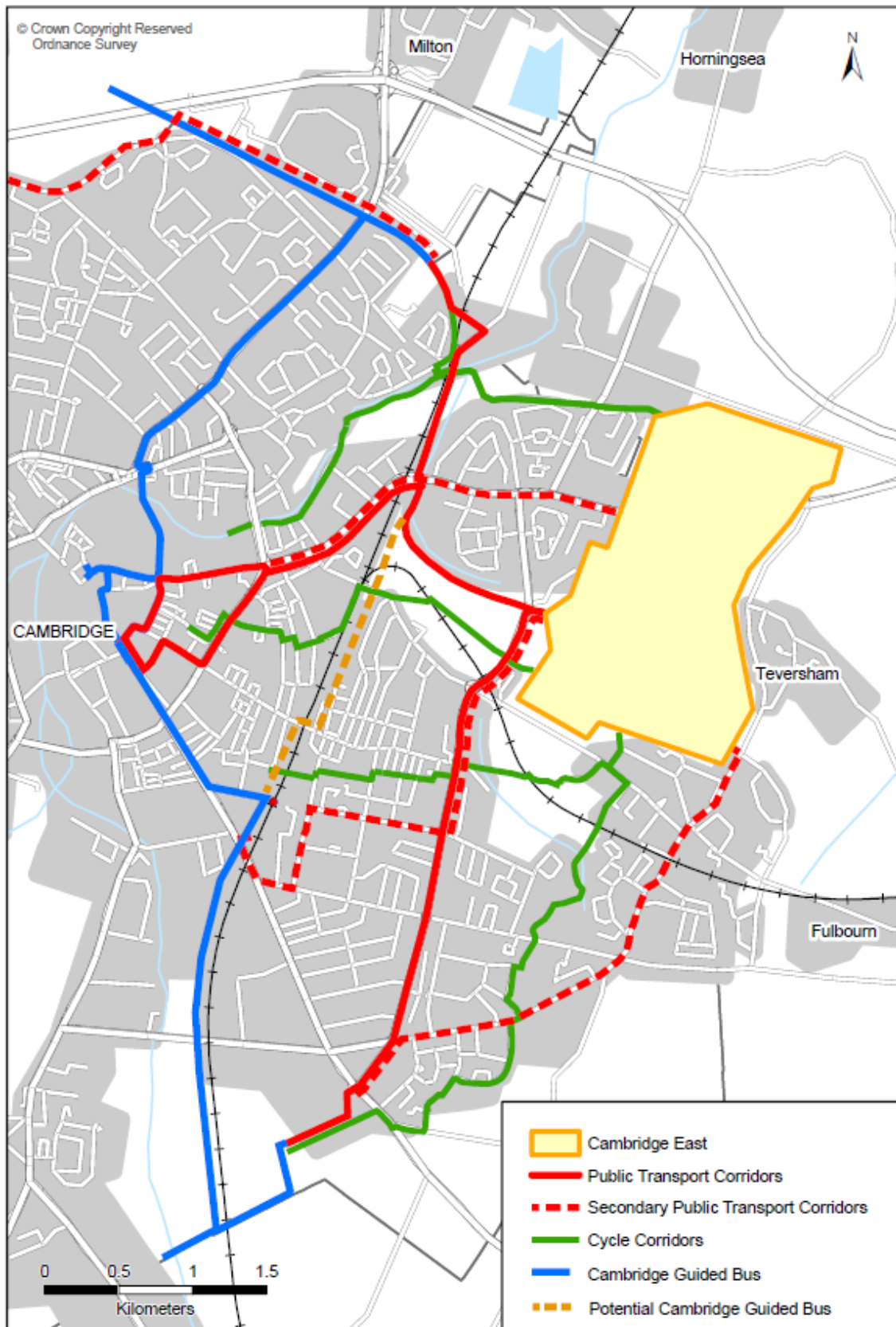
This document

- 1.1 This document provides a Transport Strategy for Cambridge East. It explains the principles behind the strategy and presents summary proposals for public transport, cycling, walking and highway enhancements (Section 2). It identifies how the strategy can be taken forward in a phased implementation approach (Section 3). Conclusions are made (Section 4) on the benefits of the strategy and the further work and validation of the strategy that is required. The Strategy sets out a range of options. It does not determine which, if any, of these options will be decided upon.
- 1.2 The summary strategy is supported by a number of technical notes including:
- Technical Note A: Background to study and method statement (Appendix A);
 - Technical Note B: Strategic choice evaluation of options (Appendix B);
 - Technical Note C: Demand assessment (Appendix C).
- 1.3 The study does not seek to determine any part of the final form of the Cambridge East Sustainable Transport Strategy. Rather it seeks only to inform Cambridgeshire County Council and the District Councils in their strategy development.

Objectives of the strategy

- 1.4 The strategy provides an overarching preferred strategy for transport provision to serve the planned 11,500 homes and 5,000 jobs at Cambridge East. Its aims are to:
- Maximise the potential for sustainable transport use and uptake through the development of appropriate public transport, walking and cycling infrastructure and services, with a specific target of achieving a 60% non-car target;
 - Minimise and mitigate negative traffic impacts on the local and strategic highway network.
 - Show how the schemes can be delivered in a phased approach to complement the phased development of Cambridge East;
- 1.5 *Technical Note A: Background to study and method statement* provides the supportive policy context to this strategy.
- 1.6 It is vital to appreciate the scale of development envisaged at Cambridge East and hence its transport requirements. If developed to its full scale, it will have a residential population of just under 30,000, as well as employment for 5,000 people and a full range of community facilities. While the transport requirements of a development of this size are significant and not without problem, Cambridge East offers a unique opportunity to provide a step-change in the quality of public transport, cycling and walking provision in this part of Cambridge, and could also support broader developments in services across Cambridge. The development has the opportunity to be an exemplar of sustainable urban extensions if the appropriate infrastructure and services are developed.

FIGURE 1.1 OVERVIEW OF PUBLIC TRANSPORT AND CYCLING PROPOSALS



Content of the strategy

1.7 The strategy proposes:

- High quality public transport links from Cambridge East into the City Centre and other key destinations;
- A dense network of high quality cycling and walking routes linking into the Cambridge network as well as leisure opportunities to the surrounding countryside;
- Traffic links to the A14 to ensure that appropriate access to the strategic network is provided without encouraging long-distance car commuting;
- Local access arrangements into the site to address general traffic needs, whilst supporting the promotion of walking, cycling and bus use as the preferred modes;
- A “smarter choices” package of measures to be delivered alongside development of Cambridge East to further embed sustainable travel practices as part of the development, including car clubs, car sharing, travel plans and information and marketing;
- A phased approach to infrastructure and service development to ensure the strategy can be practically delivered alongside the implementation of Cambridge East in distinct phases.

What the strategy does not cover

1.8 The strategy does not address the following issues:

- Proposals for the internal layout of the development, which is a more detailed planning issue that will be addressed at a later date. We do though show how the bus and cycle links from the development may come together to form a coherent network within the development and how the links between the different phases of the development will be addressed.
- Linkages with other developments in Cambridge: significant employment and housing growth is planned at the Southern Fringe (Addenbrooke’s, Trumpington), North West of Cambridge and Northern Fringe (Chesterton Sidings, Science Park etc.). There is potential for these developments cumulatively to enable particular infrastructure and services to be developed that will not be justified by one development on its own. We do identify potential scope for this - especially with regard to orbital bus services to the Northern Fringe / North West Cambridge, but this issue will have to be looked at in more detail independently of the Cambridge East strategy. The “Cambridge Area Transport Study” has subsequently been commissioned by Cambridgeshire County Council to examine these issues.
- Other transport network issues elsewhere in Cambridge: the delivery of Cambridge East (and other new developments) will require upgrades to wider parts of the transport networks in and around Cambridge. For example, proposals to improve public transport services must address bus capacity in the City Centre, but need to do so with regard to the range of public transport proposals being developed in conjunction with growth elsewhere around Cambridge. Similarly, a major barrier to increasing cycling above current levels must be lack of cycling parking at key destinations. Again this will have to be addressed as part of broader cycling strategy development. The “Cambridge Area Transport Study” will examine this.

- Detailed planning guidelines: we make some observations about build densities, parking standards and other complementary planning measures, but this is treated as a planning issue to be progressed elsewhere.
 - Recommendations on funding sources: we have sought to identify the best suite of transport measures to enable Cambridge East to achieve its sustainable transport targets. As such, we do not seek to make comments on who should pay for what infrastructure.
- 1.9 The strategy has been developed in parallel to the development of the Long Term Transport Strategy (LTTS) for the Cambridge sub-region. Subsequent work is also being underway on the Transport Investment Fund (TIF) examining the case for demand management / road user charging. While we make observations about how the strategy may complement, and be complemented by, broader transport policies and programmes, some of these policies are still in development and Cambridge East must be capable of being delivered independently from these broader considerations. In particular, whether a demand management/road user charging system is introduced and whether a Southern Orbital Route is developed will have a significant impact on the performance of Cambridge East, but the future prospect of these is currently undecided.

Conclusion

- 1.10 Cambridge East will take nearly two decades to deliver. Transport policy is evolving rapidly in response to the Cambridge sub-region being identified as a major growth area. The environmental imperative to provide alternative means of travel to the car will have strengthened.
- 1.11 It is likely that significant changes in the way transport is managed and used will have occurred before Cambridge East is complete. For example, it is probable that some form of demand management (such as road user charging) will be in place, the environmental performance of public and private vehicles will have improved and internet communications technologies continued to develop. Decisions will have been made on major new pieces of infrastructure, such as Chesterton Station and the Southern Orbital Route.
- 1.12 Therefore, our strategy seeks to identify ambitious major new infrastructure and services to promote sustainable modes, without being restricted by financial or other implementation barriers in the first instance. Where the financial case for these proposals are weak, we do propose shorter-term alternatives and show how the transport proposals will be delivered in conjunction with the phased delivery of Cambridge East.
- 1.13 But it is clear that a sustainable transport strategy for Cambridge East will need to evolve as development continues, so it can maximise the opportunities to promote sustainable modes in response to policy and physical developments.
- 1.14 Once again, we reiterate that, despite the difficulties of planning transport for a development of this size in Cambridge's context, this presents a unique opportunity to deliver a sustainable 21st century urban extension.

2. THE STRATEGY ELEMENTS

Introduction

2.1 Below, the key elements of the strategy are described:

- Public transport links to the City Centre, Northern Fringe (consisting of Chesterton sidings – a potential future rail station, the Science Park and onwards to Arbury and North West Cambridge); and Southern Fringe (consisting of Addenbrooke’s and new development in Trumpington);
- Cycling and walking links to the City Centre, Northern Fringe, Southern Fringe and recreational network;
- Strategic highways links to the A14 and local access;
- A “Smarter Choices” package of measures to embed sustainable travel within the development, including car clubs, car sharing, travel plans, information and marketing.

2.2 Some further ancillary destinations have also been identified:

- Cambridge Rail Station – as an access point for regional rail services, but also as an important area for employment and leisure and as a southern gateway to the City Centre;
- The countryside to the north and east of Cambridge East for leisure opportunities.

A) Public Transport proposals

Introduction

2.3 The Long-Term Transport Strategy, Local Transport Plan and Area Action Plan all identify a key role for public transport in addressing future transport need and acknowledge that its role needs to be increased. There is an ambition to deliver a high quality public transport network, with the Cambridgeshire Guided Busway providing the first route, but with Cambridge East offering potential to extend the system. Major recent investment in the re-branded Stagecoach ‘citi network’ has also seen patronage increase strongly over recent years, highlighting the potential for public transport to play a more major role in the future.

2.4 In keeping with the above policies, the bus transit options should include segregated running, wherever possible. The advantages of segregated running are that they:

- Maximise reliability and avoid problems associated with future traffic congestion;
- Enable higher frequency services to be operated, and hence increase capacity;
- Increase comfort and attractiveness of the bus option.

2.5 Below, we examine the options for high quality links to the City Centre, Northern Fringe and Southern Fringe. Implicit in all our proposals is a commitment to providing high quality facilities in association with the routes:

- Comfortable, sheltered waiting facilities at major boarding points;
- Level boarding facilities, through raised kerbs / protected bus stopping points;
- Fares and ticketing systems to maximise ease and speed of boarding and to offer good value and choice for customers;
- Real time information provision, at stops, on-board and away from the network (such as via mobile phones, internet, travel centres);
- High quality vehicles; fully accessible vehicles to the latest standards in terms of noise and emissions;
- Bus lane enforcement through the new powers, with vehicles fitted with cameras, to ensure that bus priorities are not abused.

2.6 Our proposals are structured as follows:

- Statement of demand: anticipated number of trips to the destination from Cambridge East when it is fully developed (i.e. 11,500 dwellings); potential number of public transport trips and mode share under a scenario with the maximum public transport option and demand management;
- Description of the two short-listed options, including route description, benefits and infrastructure issues, including where applicable, specific sub-options;
- A table providing basic information on engineering issues, costs and benefits of the two short-listed options;
- A brief description of further options that are not preferred, with the reason why they have been discounted.

1) Public transport link to the City Centre

- 2.7 The City Centre is the primary destination for Cambridge East. Modelling suggests that nearly 2,300 outbound trips could be generated from Cambridge East (when fully developed) to Market Ward during the peak hour, excluding trips to intermediate destinations.
- 2.8 We have short-listed two route options below from Cambridge East to the Elizabeth Way / Newmarket Road junction. We have not developed proposals for once the bus is across Elizabeth Way and within the City Centre. City centre bus capacity is currently constrained and Cambridgeshire County Council is currently examining options for addressing bus capacity in relation to the additional requirements of all the new developments around Cambridge.
- 2.9 Both of the short-listed options propose a fully segregated busway along the western end of Newmarket Road. The level of demand suggested in modelling work implies a high capacity public transport service is required and with existing demand along Newmarket Road, such as Park & Ride and existing citi and long-distance services, full segregation on the western section of Newmarket Road will help provide adequate capacity. It is also inevitable that despite stringent efforts to maximise sustainable travel from Cambridge East, there will still be a significant volume of private traffic, much of it heading westwards along Newmarket Road. Taking existing capacity away from general traffic on Newmarket Road is therefore problematic and a further reason for requiring segregation.

Demand

- 2.10 With demand management and maximum public transport enhancements, a market share of 47% public transport is anticipated to Market Ward, with 1070 trips per hour by bus. Assuming an average double-deck bus loading of 70, this would imply 16 buses per hour, (or 21 single-deck buses per hour).

Option 1: Segregated Busway via Coldham's Common

- 2.11 A segregated bus link from the heart of the development (Phase III) running via Coldham's Common, joining Newmarket Road close to the railway and continuing on a fully segregated alignment towards the City Centre (as illustrated in Figure 2.1).

Route description

- 2.12 From the District Centre, the service would travel westwards on a bus-only route to join Barnwell Drive, with a signalised, prioritised crossing of Barnwell Road. The service would then continue to run along the northern edge of Coldham's Common on a busway, within a tree-lined avenue, to reduce visual intrusion. The busway turns northwards to join Newmarket Road adjacent to Abbey Stadium. At Newmarket Road, it will cross the railway and run via a segregated busway as far as Coldham's Lane. This busway will be on the southern side of the road, necessitating significant property and land acquisition. A major new junction would be constructed at Coldham's Lane.

- 2.13 Specific improvement proposals for the Elizabeth Way junction have not been determined due to the complexity of the junction and the consideration that the junction caters well for significant volumes of traffic at present. Further detailed work would be required to ascertain whether additional priority could be afforded to Cambridge East bus services without undue detriment to competing traffic flows. A cost has been allocated for non-specific improvement measures.
- 2.14 An additional bus service from Phase I of the development (North of Newmarket Road) would run along Newmarket Road, with some additional bus priority provided in addition to those existing at present. This route would join the segregated facility described above for the western section of Newmarket Road. In the longer-term, this bus service could continue to run via Newmarket Road or could run via the District Centre and the Coldham's Common Busway. Phase II of the development (North of Cherry Hinton) would have services crossing into Phase III of the development to the District Centre and then joining the busway onto the City Centre.

Sub-options

- 2.15 Three further sub-options for Coldham's Common have been considered:
- Running along the northern side of the Common but crossing the railway via a new bridge running between units in the retail park. At the moment this is not preferred because of the additional costs, implementation difficulties (need to move high pressure gas main) and visual intrusion that a further bridge over the railway would cause;
 - Running along the southern side of the Common in the existing public transport corridor: this is discarded as there are significant problems in accessing the railway at the south-eastern corner of Cambridge East and leaving the railway to rejoin the highway and cross the mainline around Coldham's Lane;
 - One potential option to mitigate the environmental impact of the main option proposed is to provide the Coldham's Common section of the route in a "cut and cover" tunnel. The ground conditions for doing so appear favourable. In this case, the tunnel would start on the airport site and travel under Barnwell Road, re-emerging adjacent to the Abbey Stadium. Note that the tunnelling option favours the alignment via Abbey Stadium as it would be too costly and problematic to tunnel under the mainline railway to rejoin Newmarket Road and 'surfacing' in this area to cross the railway on a bridge would be visually intrusive. Subsequently, a scoping study to assess the likely costs and technical issues of tunnelling was commissioned from Atkins. This report forms an Appendix to this commission.

Benefits

- 2.16 This option has the following benefits:
- The routing provides 100% segregation from general traffic from the centre of the development to the city-centre side of Elizabeth Way;
 - It will therefore provide direct, reliable and quick (10 minute journey time) access to the major demand point.

Engineering and feasibility issues

- Possible need to build a new structure / replacement of existing Newmarket Road structure over railway;
- Environmental objections to the use of Coldham's Common;
- On the western section of Newmarket Road:
 - Business property and land acquisition;
 - Significant utility apparatus diversions likely;
- £17m + land acquisition and compensation costs. Potential for significant utility costs;
- If option for tunnelling under Coldham's Common used, costs could be significant;
- Lack of public transport capacity in the City Centre will need to be addressed.

Option 2: Barnwell Road busway and Newmarket Road

- 2.17 A segregated bus link from the heart of the development (Phase III), but using Barnwell Road and Newmarket Road instead of Coldham's Common, before continuing on a fully segregated alignment towards the City Centre at the railway bridge (as illustrated in Figure 2.1).

Route description

- 2.18 From the District Centre, the service would travel westwards on a bus-only route to join Barnwell Drive. Buses will turn right, via a signalised, prioritised crossing of Barnwell Road and travel northwards along Barnwell Road. Bus lanes in either direction would be provided via carriageway widening. Continuous in-bound and out-bound bus lanes would be provided on Newmarket Road from an upgraded Barnwell Drive junction to the railway bridge, including right-hand priority for outbound services turning from Newmarket Road into Barnwell Road. At the railway bridge, it will have the same treatment as Option 1, with a fully segregated busway on the southern side of the existing carriageway as far as Elizabeth Way. A new bridge across the railway is likely to be required.
- 2.19 An additional bus service from Phase I of the development (North of Newmarket Road) would run along Newmarket Road, with some additional bus priority provided in addition to those existing at present. This route would join the segregated facility described above for the western section of Newmarket Road.

Benefits

- 2.20 This option has the following benefits:
- It will provide a predominantly segregated and hence a reasonably reliable service taking around 13 minutes;
 - It avoids the environmental implications of Coldham's Common;
 - The use of the section of Newmarket Road between Barnwell Road and the railway provides greater justification for bus priorities here which will be of benefit to other services travelling along Newmarket Road.

Engineering and feasibility issues

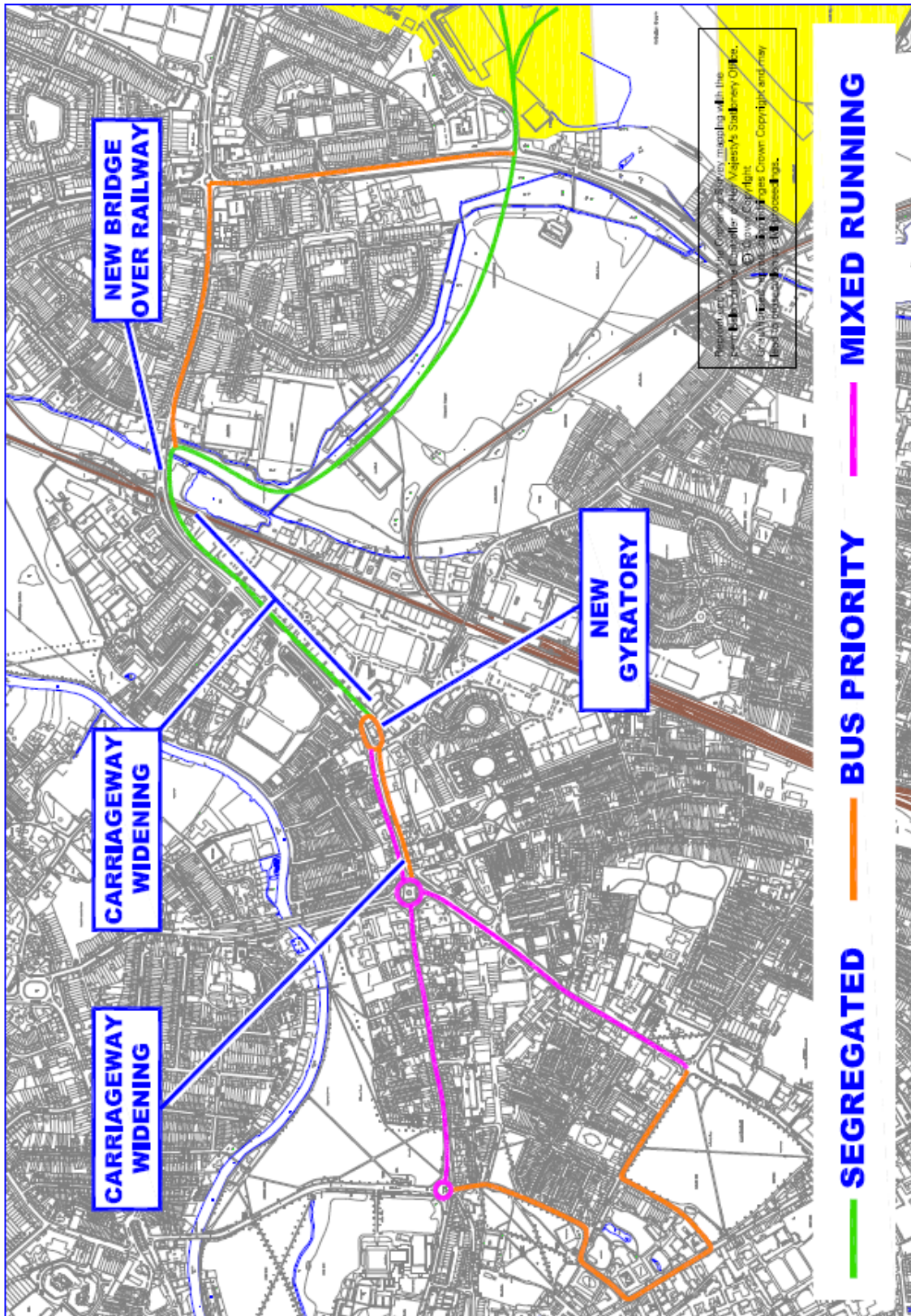
- Possible need to build a new structure / replacement of existing Newmarket Road structure over railway;
- Providing adequate priorities for outbound buses to turn right from Newmarket Road to Barnwell Road could be difficult, and buses could be subject to delay, or could cause delay to general traffic;
- Bus priorities on Newmarket Road between Barnwell Road and railway require carriageway widening which will lead to loss of trees, verges and parking, impacting on residents;
- Bus priorities on Barnwell Road will require carriageway widening which will lead to loss of verge and trees impacting on residents;
- On the western section of Newmarket Road:
 - Significant business property and land acquisition;
 - Significant utility apparatus diversions likely;
- £21m + significant land acquisition and compensation costs. Potential for significant utility costs;
- Lack of public transport capacity in the City Centre will need to be addressed;

Other options discounted

2.21 The following options were considered and discounted as not preferred:

- Running on Newmarket Road full segregation: entails significant loss of trees and verges and provides less direct routeing for services from Phase II and Phase III of development and fails to provide adequate priority to deliver the quality and capacity of service required;
- Running on Newmarket Road partial segregation: less environmental impact but fails to provide quality of service required and will not provide adequate capacity or reliability.

FIGURE 2.1 PREFERRED PUBLIC TRANSPORT LINK OPTIONS TO CITY CENTRE



2) Public transport links to the Southern Fringe

- 2.22 The Southern Fringe refers to Addenbrooke's as a large and growing employment site and visitor destination, and to planned new employment and housing around Trumpington.
- 2.23 The Southern Fringe is by far the most important destination after the City Centre with modelling suggesting nearly 1,600 outbound trips could be generated from Cambridge East (when fully developed) to Trumpington and Queen Edith's Wards over during the peak hour, excluding intermediate destinations. This reflects the significant growth in employment anticipated to come on-stream in the Southern Fringe at the same time as Cambridge East is developed. Also, the area can be expected to generate a significant volume of non-commuter trips associated with the hospital services, such as visitors and outpatients.
- 2.24 We have short-listed two route options below from Cambridge East to the Southern Fringe. It is assumed that as a part of the development plans for the Southern Fringe a public transport route through the development from Addenbrooke's, over the railway and onwards to Trumpington will be provided.

Demand

- 2.25 With demand management and maximum public transport enhancements, a market share of 36% public transport is anticipated to Queen Edith's and Trumpington wards, with 563 trips per hour by bus. Assuming an average double-deck bus loading of 70, this would imply 8 buses per hour, (or 12 single-deck buses per hour).

Option 1: Bus Priority along Outer Ring Road

- 2.26 The option consists of a segregated bus link leaving the development via Coldham's Lane and travelling along the outer ring road to Addenbrooke's and then onwards through Addenbrooke's and over the railway to Trumpington.
- 2.27 While The Outer Ring Road (Perne Road etc.) provides a direct link between Cambridge East and Addenbrooke's, it is currently a congested corridor and future growth in east Cambridge could exacerbate this. If a demand management regime were introduced or the Southern Orbital Route implemented, this could potentially partially de-traffic The Outer Ring Road enabling a reliable bus service to be operated with partial bus priority only – described as one of the sub-options below. In the absence of one or both of these measures, it is likely that traffic levels on the road would remain at or above capacity and therefore complete segregation would be required for the bus to operate a reliable and high capacity service.

Route description

- 2.28 From the District Centre, the service would travel southwards via a dedicated public transport, cycling and walking bridge over the 'Green Wedge' into Phase II of the development. It would then travel south westwards to exit the development at its south westernmost corner on Coldham's Lane, via a bus only signalised junction. This junction would be used to hold traffic travelling along Coldham's Lane towards the City Centre to ensure that the stretch of Coldham's Lane under the railway bridge and

to the roundabout with Barnwell Road remains reasonably free-flowing. From there, buses would turn left onto the outer ring road. Bus priorities would be provided in the form of nearside bus lanes in both directions.

- 2.29 An extension to the existing citi service from Cherry Hinton to Addenbrooke's to the City Centre would provide an additional bus service to Addenbrooke's from the south-eastern part of the development. There is little scope for bus priority along this route. This service will provide an important link for in-bound travel to Cambridge East from Cherry Hinton and south east Cambridge.

Sub-options

- 2.30 Various sub-options existing with this proposal:

- Alternative access point: if access onto and movement along Coldham's Lane proved difficult, buses could continue along Barnwell Road and access the development at the Barnwell Drive junction used by buses heading towards the City Centre. Provision of bus priority through highway widening along Barnwell Road to the Coldham's Lane junction would be straightforward here because of available land within the highway boundary;
- Partial bus lane scheme: if other measures are implemented (such as demand management and/or the Southern Orbital Route), traffic levels could be reduced on the outer ring road, the bus link to the Southern Fringe could be accomplished by partial bus lanes only. These could take one of two forms:
 - Nearside bus lanes on the approaches to each junction (so that in effect there is one bus lane along the length of the road, rather than two);
 - A bus way in the centre of the road which is used by buses approaching a junction. Once the bus passes through the junction, it moves left into the general traffic lane.

Benefits

- 2.31 This option has the following benefits:

- Unhindered bus access along this corridor allows direct, reliable, quick access (16 minutes journey time) to Addenbrooke's and beyond into the Southern Fringe;
- The level of demand suggested in modelling work implies a high capacity public transport service is required and in order to provide this, the reliability that bus priority provides is required;

Engineering and feasibility issues

- Provision of bus lanes along The Outer Ring Road will entail loss of trees, green verge and off-road parking, although this would be less with the partial bus lane scheme;
- Modelling also suggests a very strong level of demand for private traffic along this corridor, so without priorities, the buses will be liable to become heavily delayed, reducing the capacity and quality of service.
- Cost of £12.5m.

Option 2: Bus service via Rail Station and Guideway

- 2.32 An on-road service to the rail station, via the northern section of the outer ring road and then through Coleridge, offering the potential to join the Cambridgeshire Guided Busway south towards Trumpington / Addenbrooke's or to travel onwards to the City Centre.

Route description

- 2.33 From the District Centre, the service would travel southwards via a dedicated public transport, cycling and walking bridge over the 'Green Wedge' into Phase II of the development. It would then travel southwestwards to exit the development at its southwesternmost corner on Coldham's Lane, via a bus only signalised junction. This junction would be used to hold traffic travelling along Coldham's Lane towards the City Centre to ensure that the stretch of Coldham's Lane under the railway bridge and to the roundabout with Barnwell Road remains reasonably free-flowing. From there, buses would turn left onto Brooks Road. Bus priorities would be provided along the stretch from Coldham's Lane as far as Davy Road, where buses would turn right. Buses would then continue towards the eastern approach to the rail station before turning left into Rustat Road. They would turn right onto Cherry Hinton Road via a priority signal and follow an in-bound bus lane to turn right into Hills Road. Once over the railway, they would turn right towards the rail station via the new bus/taxi only access into the CB1 development. They would turn in front of the rail station in order to access the Cambridgeshire Guided Busway to travel southwards towards Addenbrooke's and Trumpington.

Sub-options

- 2.34 If the Guideway south of the rail station were to become the preferential route to access the Southern Fringe, a more ambitious proposal to connect from Cambridge East to the rail station would be to develop the 'missing link' of Guideway along the railway between Newmarket Road and the rail station. Services from Cambridge East would proceed along the segregated route as far as Newmarket Road, as per city centre routeings and then turn south to run alongside the railway to join the southern section of Guideway at the rail station to travel onwards to Trumpington/Addenbrooke's. The exact entry point and alignment along the railway would require more detailed work.
- 2.35 Such a bold proposal would only be envisaged in association with Guideway also being implemented between Chesterton Station and Newmarket Road (see Northern Fringe section below), which would provide a continuous north to south segregated high quality public transport route from the Cambridge Northern Fringe and beyond to the Southern Fringe.

Benefits

- 2.36 This option has the following benefits:
- It reduces the potential loss of trees, verge and parking on the outer ring road south of Davy Road;

- It provides an intermediate link to the rail station, giving access to rail services, but also to a major employment and leisure area;
- It exploits existing guideway infrastructure for the stretch from the rail station to the Southern Fringe.

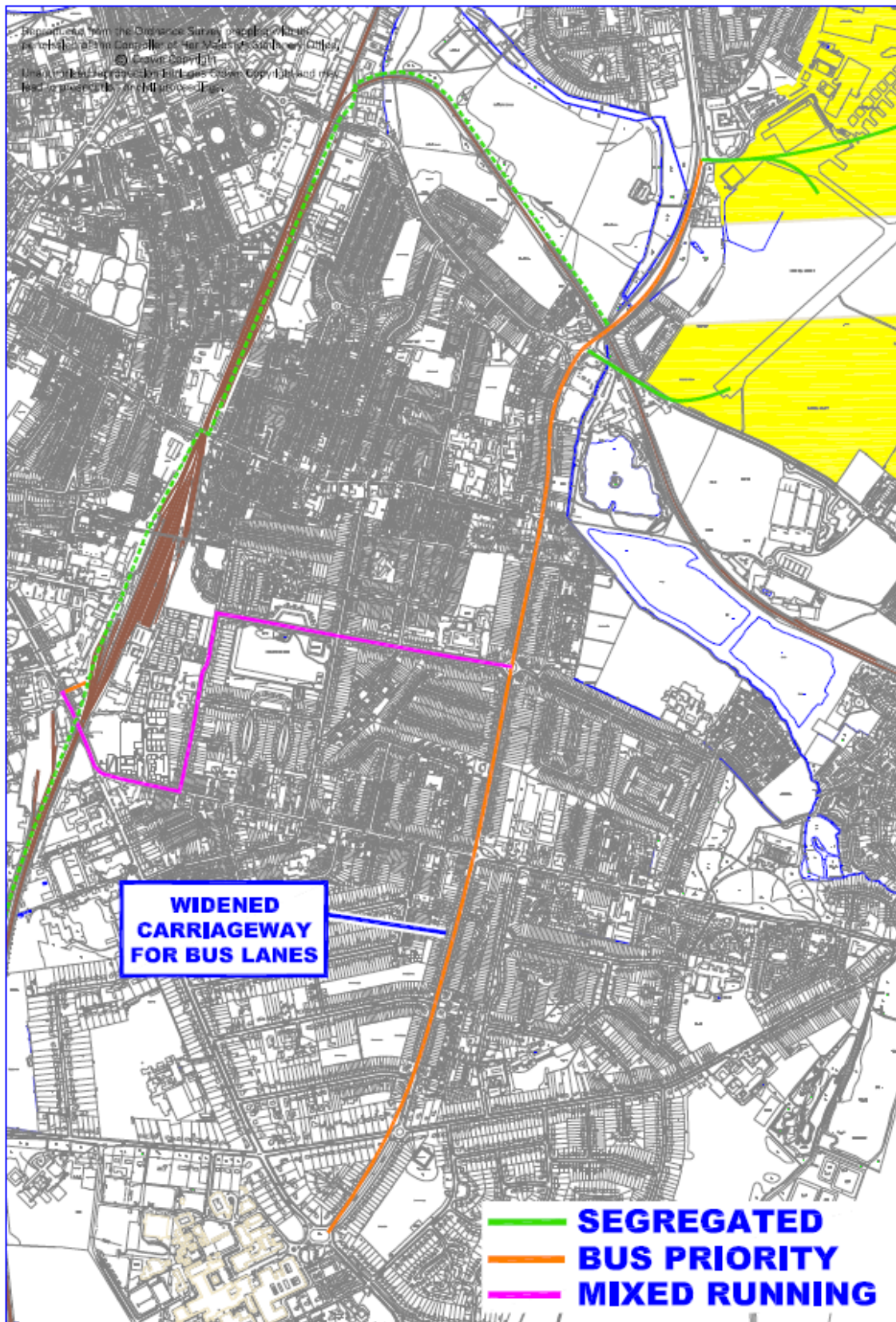
Engineering and feasibility issues

- This route is long and creates unattractive journey times (26 minutes to Addenbrooke's, compared to 16 on the direct routing). Journey times to Trumpington are more comparable (25 minutes via the guideway, compared to 20 minutes via the Outer Ring Road routing). However, it is estimated that without any improvements along the Outer Ring Road, this route would be quicker;
- In addition, it requires the same level of priority to be provided on the section of the outer ring road from Coldham's Lane to Davy Road, as with the Outer Ring Road proposal, entailing loss of trees, verges and off-street parking;
- Cost of £6.0m.

Other options discounted

- 2.37 Serving the Southern Fringe via Cherry Hinton was considered and is acknowledged as an important secondary route to provide access to the Southern Fringe, but also access to Cambridge East from residential areas of southeast Cambridge. However, the corridor is constrained and congested, with little possibility of bus priorities, so it is considered inadequate to provide the quantity and quality of public transport services required.

FIGURE 2.2 PREFERRED PUBLIC TRANSPORT LINK OPTIONS TO SOUTHERN FRINGE



3) Public transport links to the Northern Fringe

- 2.38 The Northern Fringe comprises a range of housing and employment developments from North West Cambridge through Arbury Park to the Cambridge Regional College / Science Park and on to Chesterton Sidings / Cambridge Northern Fringe East and therefore presents a potentially strong, though dispersed set of destinations.
- 2.39 Modelling work by Atkins suggests over 550 trips per peak hour could be generated to the Northern Fringe. Given the scale of development here, this seems a relatively low figure. The reason for this appears to be that the phasing of development here is ahead of Cambridge East, so most of the employment will be taken before Cambridge East comes on-stream, unlike the Southern Fringe where much of the employment creation will take place at the same time that Cambridge East is constructed. However, there could be significant in-bound demand to Cambridge East from the Northern Fringe to access employment, education and community facilities here from the new populations of the Northern Fringe.
- 2.40 We have short-listed two route options below. One is an ambitious proposal to create a major new public transport link from the east of Cambridge to the north of Cambridge. In the absence of such a link, the alternative would simply be to travel via existing routes into the centre of Cambridge and then back out again via the appropriate service (e.g. Madingley Road / Huntingdon Road for Cambridge NorthWest, Histon Road for Arbury Park and Milton Road for Science Park /Northern Fringe East).
- 2.41 The case for major new infrastructure solely to connect Cambridge East and the Northern Fringe is difficult to justify on demand grounds of flows between Cambridge East and the Northern Fringe. However, the scheme has potentially wider benefits:
- Linking Cambridge East to the proposed Chesterton station which would take demand away from the current Cambridge station;
 - Providing a segregated route into the City Centre, via Chesterton Station, for the Cambridgeshire Guided Bus and in so doing enabling an integrated High Quality Public Transport network to develop;
 - It would form a major link in an orbital bus transit system linking the key residential and employment centres in Cambridge (Longstanton, Cambridge North West, Arbury, Chesterton, Chesterton Sidings station, Cambridge East, Addenbrooke's and Trumpington);
 - In so doing, it allows travel between these locations avoiding the City Centre, hence alleviating City Centre bus congestion problems;
 - Assisting with the opening up of the wider Chesterton site for future development and consolidating access to this area, including closure of the Fen Road level crossing;
 - Opportunity to extend Cambridgeshire Guided Bus southwards along the railway from Newmarket Road to the rail station, enabling services from Cambridge East to the Southern Fringe to travel on fully segregated route via guideway, as well as providing a complete north to south guideway from Cambridge Northern Fringe to the Southern Fringe.

Demand

- 2.42 With demand management and maximum public transport enhancements, a market share of 29% public transport is anticipated to the Northern Fringe destinations, with 162 trips per hour by bus. Assuming an average single-deck bus loading of 50, this would imply 4 buses per hour.

Option 1: Busway via Coldham's Common and Rail Corridor

- 2.43 A segregated bus link from the heart of the development (Phase III) running via Coldham's Common to Newmarket Road by Abbey Stadium and continuing northwards parallel to the rail corridor to Chesterton Sidings and beyond into the Northern Fringe.

Route description

- 2.44 The route would use the Coldham's Common busway (as proposed for the City Centre). When it rejoins Newmarket Road at Abbey Stadium, it would continue straight across Newmarket Road, via a signalised junction onto a new dedicated guided busway running northwards in a tree-lined avenue at the rear of the current industrial properties. It then follows the tree line northwestwards to travel alongside the railway across Ditton Meadows and over the River Cam on a new bridge. Then the buses turn right onto Fen Road, before crossing over the railway on a new structure to reach Chesterton Sidings. This new structure could accommodate general traffic from the development between the river and railway, enabling the Fen Road level crossing to be closed. At Chesterton, the route would merge with the existing guided busway, enabling an orbital service to be provided onwards to the Science Park, Arbury and North West Cambridge.

- 2.45 Figure 2.3 below provides an annotated sketch of the preferred route..

Sub-options

- 2.46 A further sub-option for this route has been identified:
- Using the western side of the rail corridor. This would still entail crossing back over the railway at Fen Road and then re-crossing the railway over a new structure in order to avoid the need for substantial property acquisition.

Benefits

- 2.47 This option has the following benefits:
- The routeing provides completely segregated running as far as Fen Road and then shares a very lightly used part of the road network. Therefore, reliable and quick access (10 minutes) to the Northern Fringe can be provided;
 - By providing a new link across the railway and river, it significantly improves access times and distances between Cambridge East and the north of Cambridge;
 - The route could enable Cambridgeshire Guided Bus services to continue onwards to the City Centre via a completely segregated route, instead of Milton Road as currently envisaged. This would also serve a future Chesterton station;

- As such, the proposal would contribute significantly to the aspiration of developing a High Quality Public Transport network in Cambridge;
- The orbital link could provide modest relief to City Centre bus congestion.

Engineering and feasibility issues

- The visual and amenity impact of crossing Ditton Meadows and the construction of a new structure across the river;
- Crossing of the mainline railway on a new bridge in terms of visual intrusion, cost and implementation difficulties;
- Proximity of route to the Leper Chapel (although the proposed alignment is 50 metres west of this historic building);
- £15.0m for the part of the route north of Newmarket Road plus Compulsory Purchase Order costs.

Option 2: Busway via Chesterton Fen

- 2.48 An alternative new busway option was considered via Chesterton Fen. This could be considered if a link road from Cambridge East to the A14 at Fen Ditton is constructed (see Highways section below).

Route description

- 2.49 Buses would exit the Northern Phase of the development onto the proposed Fen Ditton link road which would run from Newmarket Road / Airport Way junction parallel to the A14 to an upgraded junction at Fen Ditton. From there, the bus would continue straight on, parallel to the A14 via a bus-only road and cross over the river to join Fen Road. The service would travel southwards along Fen Road (unsegregated) before turning right to bridge over the railway and to arrive in Chesterton Sidings, where it can interchange with or provide onwards services to other parts of the Northern Fringe. This crossing could be a general traffic bridge, enabling the Fen Road level crossing to be closed.
- 2.50 Figure 2.3 below provides an annotated sketch of the preferred route.

Sub-options

- 2.51 Access to Fen Ditton from High Ditch Road could be closed to general traffic (to support broader policies of removing traffic from this route) and to minimise rat-running through Fen Ditton village. In this circumstance a bus gate could allow buses to travel through Fen Ditton village via High Ditch Road, before turning right towards the A14 to access the busway across Chesterton Fen.

Benefits

- 2.52 This option has the following benefits:
- By providing a new link across the railway and river, it significantly improves access times and distances between Cambridge East and the north of Cambridge;
 - Makes use of the Fen Ditton link, if pursued and segregated busway, providing fast journey times (10.5 minutes);

- Chesterton Fen could be considered to be a less environmentally sensitive area than Ditton Meadows;
- If routeing through Fen Ditton Village used, it could considerably enhance service levels/access for residents;

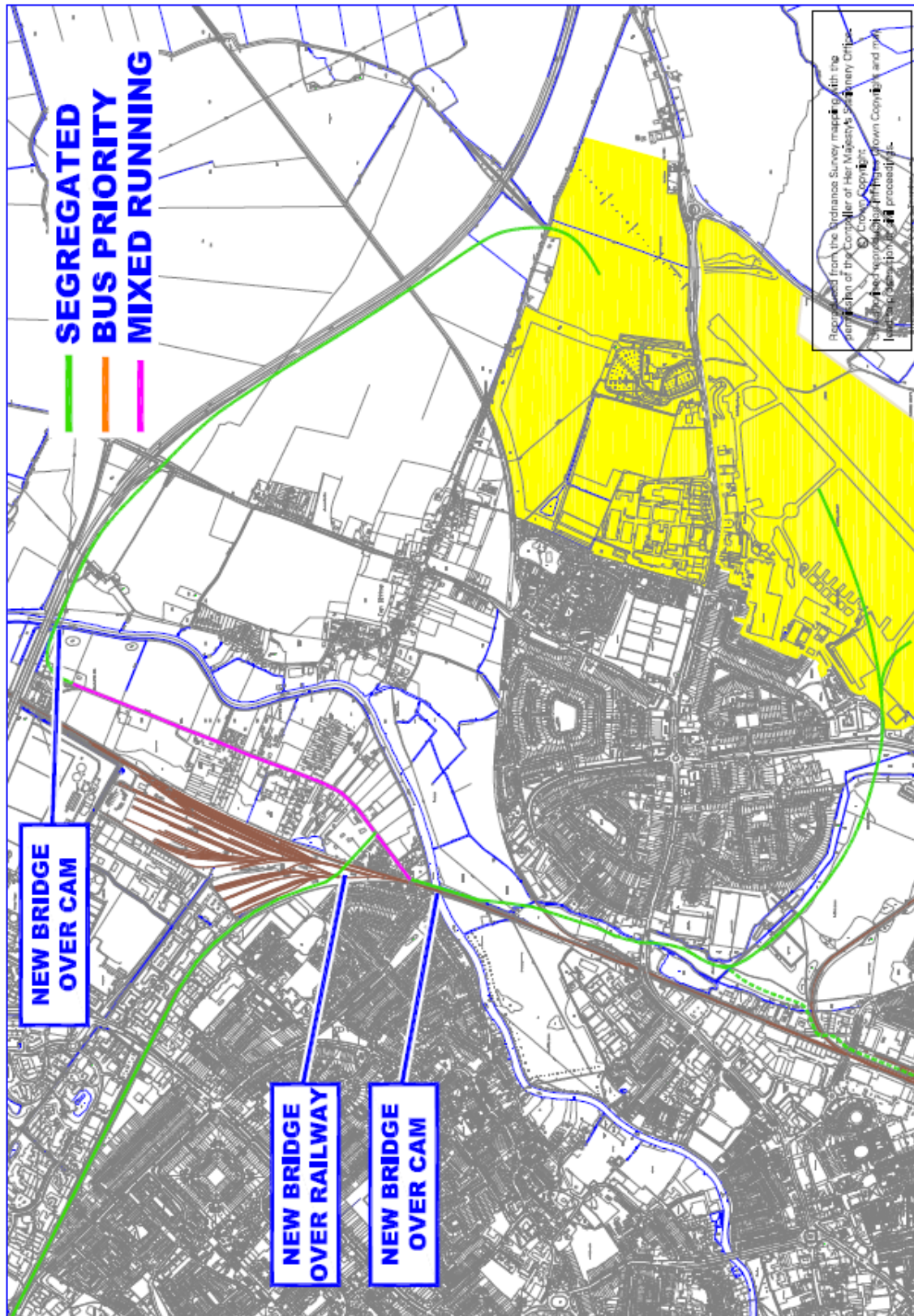
Engineering and feasibility issues

- The route is longer (25%) than the alternative via Ditton Meadows and will not provide an appropriate route to Cambridge City Centre for Cambridgeshire Guided Bus, which might undermine the economic case for the link;
- Would not provide the link for CGB services from the north into the city centre
- Relatively poor connectivity to Phases II and III
- Can only be pursued in association with Fen Ditton Link Road;
- Costs of £15.0m, excluding costs of Fen Ditton Link Road.

Other options discounted

- 2.53 The alternative option for serving the Northern Fringe is to travel via existing services going to the City Centre and then onwards to the Northern Fringe destinations from there. In the absence of the two above options being pursued, this option will be the default. It can benefit from the bus priorities between Cambridge East and the City Centre.

FIGURE 2.3 PREFERRED PUBLIC TRANSPORT LINK TO NORTHERN FRINGE



B) Cycling (and walking)

Introduction

- 2.54 This strategy 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.
- 2.55 The three primary destinations of the City Centre, Northern Fringe and Southern Fringe 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.
- 2.56 We need to provide a choice of route options for the following reasons:
- To cater for different markets from ‘professional’ cyclists who want the most direct routes and are happy to cycle on-road to ‘beginners’ who want to avoid trafficked routes;
 - To cater for the size of Cambridge East we also need to provide good penetration of the development. So, for trips to the City Centre for example, we require links from Phases I, II and III;
 - To cater for the volume of anticipated cycling trips, we need to provide adequate capacity and dispersal, as we anticipate a market share of at least 30% cycling and walking, equating to a total of nearly 4,000 walk and cycle trips per hour during the peak.
- 2.57 The routes will provide, where possible, the highest quality, state of the art facility, including:
- Direct routing to destinations;
 - Protection, where required, or an off-road route if direct;
 - Priorities for cyclists at road junctions / protection across road junctions.
 - Major new infrastructure to address pinch points / current barriers, such as cycle-accessible bridges across railways and the river;
 - Provision of continuous routes: i.e. cycling infrastructure not provided for a short section and then abandoned. If this is the major mode, we should promoting it above general traffic: e.g. looking at traffic or parking restrictions in order to enable the free-flow of cycling routes;
 - Routes that are usable year-round, and have appropriate lighting;
 - Within the development itself, high quality segregated walking and cycling routes will be provided and traffic managed to ensure pedestrians’ and cyclists’ safety and priority. Dedicated cycling, walking and public transport access will be provided between the different phases of the development making these modes the preferential way for travelling within Cambridge East.
- 2.58 It will be vital to complement these cycling proposals with broader network improvements:
- Addressing cycling parking capacity problems at key destinations, particularly the City Centre, where we anticipate new demand of 800 trips per hour;

- Route signage: network wide signing to provide clear advice on appropriate routes, coupled with distance information;
- Additional facilities to further promote cycling as a preferred mode for residents of Cambridge East, such as cycle hire, cycle training etc. (these are addressed under our “Smarter Choices” package);
- Maintenance of routes: as part of route development, an adequate maintenance programme must be committed to, to ensure that the routes are maintained to high standards and are accessible year-round.

2.59 Below, we present the cycling proposals for each of the key destinations.

2.60 The analysis focuses on cycling routes. This is because we anticipate cycling being the prevalent non-motorised modes for most destinations. However, it is anticipated that building state of the art cycling facilities into the design of Cambridge East will inherently benefit walking. We envisage that the internal links within the development and several of the external links will be appropriate for both walking and cycling. If modern design standards for widths, signing and lighting are adhered to, the off-road cycling routes can be provided as shared routes with pedestrians. We also anticipate the upgrading of several existing shared routes which are currently sub-standard, such as the Tin’s Path.

2.61 After considering the 3 primary destinations, we consider walking and cycling for leisure, and how Cambridge East will be plugged into leisure networks of rights of way and cycling routes.

1) Cycle links to the City Centre

- 2.62 Three cycling routes are proposed for upgrade / development, linking the northern, central and southern parts of the development site to different parts of the City Centre.
- 2.63 Figures 2.4 to 2.6 provide annotated sketches of each of these preferred routes.
- 2.64 Modelling suggests a modal share of 32% to the City Centre (Market ward) under a high quality public transport and demand management scenario, equating to 734 walk/cycle trips per peak hour. This excludes trips to intermediate destinations.

a) Jubilee Route

- 2.65 From the northern sector of the development to the City Centre via the River Cam and existing Jubilee Route. Heading north out of the development to join the rail trackbed to Ditton Lane, then crossing, via a new signalled toucan crossing onto the existing Jubilee Route. Upgrading of the existing section of the Jubilee Route to enhance/widen surfacing (to cater for extra levels of demand) and to provide low level lighting to make the route usable year-round. At the river a 5m width, well-lit tunnel under the railway (which is on embankment) for pedestrians and cyclists, to replace the boardwalk which is sub-standard and also causes problems for river users. Then continuing on the existing route, with widening/surface enhancements and lighting to Riverside to join the on-road route to Elizabeth Way and onwards to the City Centre.

Benefits

- A fully segregated cycle path with no sub-standard sections as far as Riverside and before sharing a 'quiet road' onwards towards the City Centre where it links with various route options to different City Centre destinations;
- Makes use of / upgrades an established cycling route;
- If a tunnel under the railway replaces the boardwalk, this would enable the full width of the river to be regained;

Engineering and feasibility issues

- The boardwalk is a serious existing pinch-point. The tunnelling option could be expensive and controversial in this environmental setting;
- Lighting of the section of route across the Meadow and widening of the surfacing in an environmentally sensitive area;
- Estimated costs of £2.1m (two thirds of which is for the tunnel).

b) Coldham's Common route

- 2.66 From the middle section of the development, a direct route across Coldham's Common to East Road. The route would leave the development at the Barnwell Drive junction with Barnwell Road and cross via a signalised junction. It would then follow the existing alignment of the footpath round the playing fields to the existing footbridge over the Ipswich railway. A new cycling bridge would be provided over the railway and a link provided to the Coldham's Lane / Cromwell Road junction. The route across Coldham's Common would be surfaced and low-level lighting provided to ensure the route is usable year-round. Via an upgraded signalised junction at

Coldham's Lane the cycling route would continue northwards along Coldham's Lane using the existing cycling bridge over the railway. At this point, it is proposed that a new cycling link is provided between the railway and the back of the Beehive Centre to link up to Sleaford Street, providing a route along quiet roads to the junction of East Road and Norfolk Street, where a cycling crossing is already provided.

- 2.67 From the southern part of the development (Phase II North of Cherry Hinton), a cycling link could be provided either via Uphall Road or a link through the southern edge of the nature reserve onto Barnwell's Road and join the Coldham's Common route at Barnwell Drive junction.
- 2.68 An alternative to the proposed route across Coldham's Common would be to run the cycle route via the proposed busway (Option 1 Public Transport Link to City Centre), and then, at the point where the busway turns northwards to rejoin Newmarket Road, the cycle route would head southwards to the existing pedestrian bridge over the railway, where it would continue towards the City Centre as indicated above.
- 2.69 Alternatives to the ambition to provide a new link between the railway and back of the Beehive Centre include:
- A route passing through the Beehive Centre car park, as existing. This is currently a mixture of shared surface and on-carriageway provision with poor transitions between them. The route also entails negotiating a mini-roundabout and one-way gyratory through a busy retail parking area and the requirement to dismount at the Coldham's Lane roundabout. In addition, the route is unadopted and outwith the control of the Highway Authority;
 - A second alternative exists via Coldham's Lane and New Street, but again, this falls short of the standard envisaged. The junction of Coldham's Lane and New Street is particularly poor. At the western end of new Street the route abruptly ends at East Road, offering poor continuity with City Centre routes.
- 2.70 Neither of these options is preferred as they do not provide the quality and capacity of cycle connection required to the City Centre, but if there are delivery problems with the preferred alignment, these represent fall back options.

Benefits

- Very direct route to the City Centre from the central part of the development with 1.3km of new segregated route and 1.2km of existing 'quiet road' routes and new bridge over the railway to provide continuous cycling link. 20% shorter-route than existing on-road route;
- Route links into the existing city network at Coldham's Lane and provides a link onwards to the City Centre at the existing East Road toucan crossing;
- The proposal for a new link between the railway and Beehive Centre will provide a step-change in the quality of facilities available at this busy and difficult part of town.

Engineering and feasibility issues

- Lighting of the section of route across Coldham's Common and hard-surfacing in an environmentally sensitive area, but still will remain relatively remote part of

route which may lead to security concerns;

- Securing a cycle link between the railway and Beehive Centre may be difficult;
- Estimated costs of £2.2m, plus land acquisition.

c) Tin's Path route

2.71 To provide access to the rail station and southern sector of the City Centre, we also propose upgrading of the Tin's Path route. From Rosemary Lane, crossing Coldham's Lane via a signalised toucan crossing and continuing southwards to join the Tin's Path via the existing cycling bridge over the railway. This pathway to be widened and adequately lit to provide safe and secure cycling. An upgrade to the wooden bridge at the end of this path providing access into Brookfields and then an upgraded signalised cycle crossing of Perne Road, turning southwards via the off-road cycle lane to reach Natal Road and continue by existing quiet roads along Marmora Road and Greville Road to Carter Bridge, and onwards to the rail station and City Centre. Given the levels of cycling anticipated, options to address the severe pinch point at the link between Marmora Road and Coleridge Road should be considered, including possible property acquisition.

2.72 In addition, cycling will be possible by Newmarket Road. Depending upon the public transport option chosen, cycling facilities on Newmarket Road should be able to be maintained or slightly enhanced.

Benefits

- Direct route to railway station / southern entrance to City Centre using segregated routes (1.4km) and quiet roads (1.5km);
- Route includes upgrades to existing network (Tin's Path widening) of benefit to wider population;

Engineering and feasibility issues

- Tin's Path section is remote and could cause security concerns;
- Land acquisition to widen Tin's Path;
- Serious pinch-point on residential roads approaching the railway station;
- Estimated costs of £0.23m.

FIGURE 2.4 PREFERRED CYCLING LINKS TO CITY CENTRE: 1) JUBILEE ROUTE

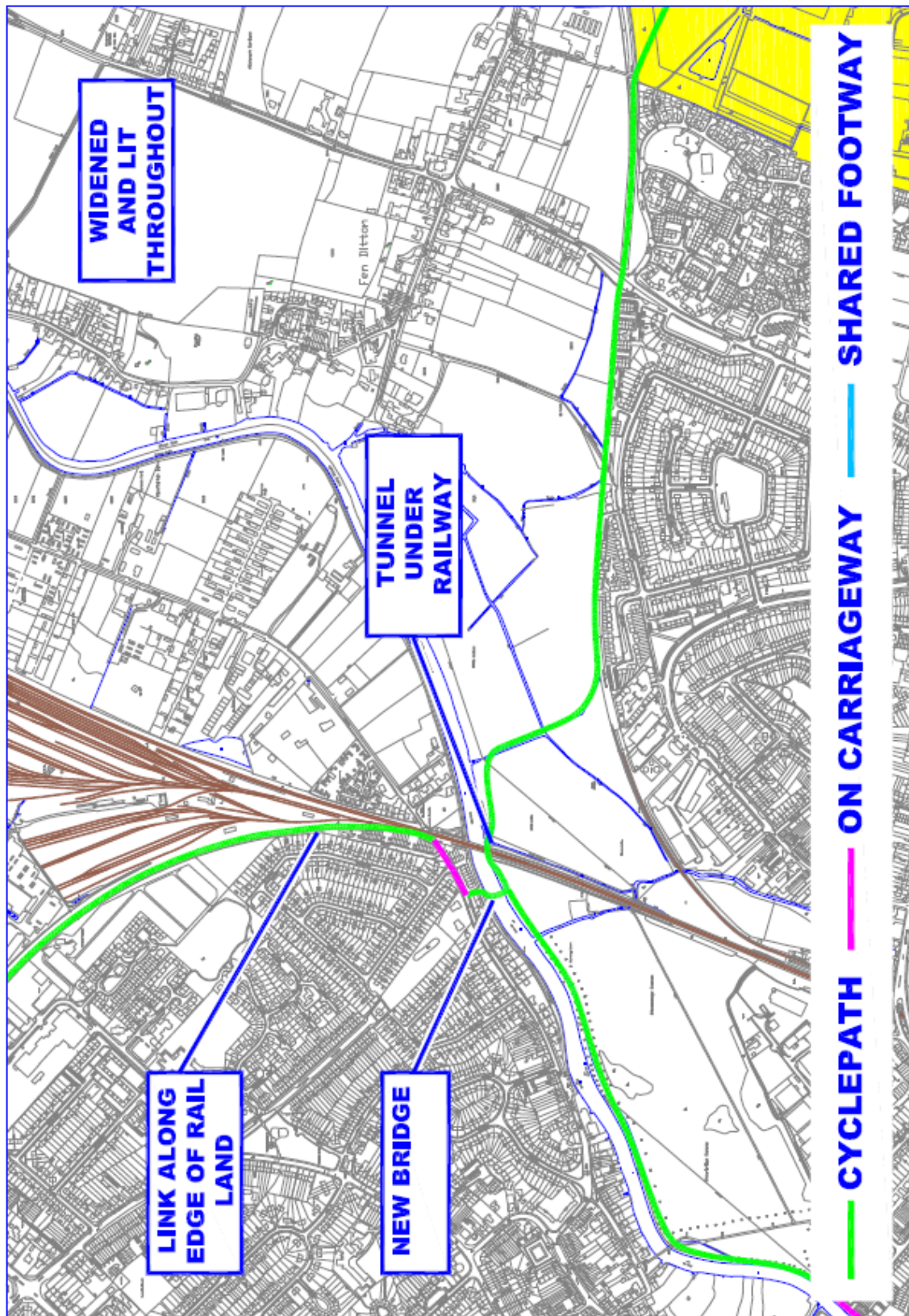


FIGURE 2.5 PREFERRED CYCLING LINKS TO CITY CENTRE: 2) COLDHAM'S COMMON

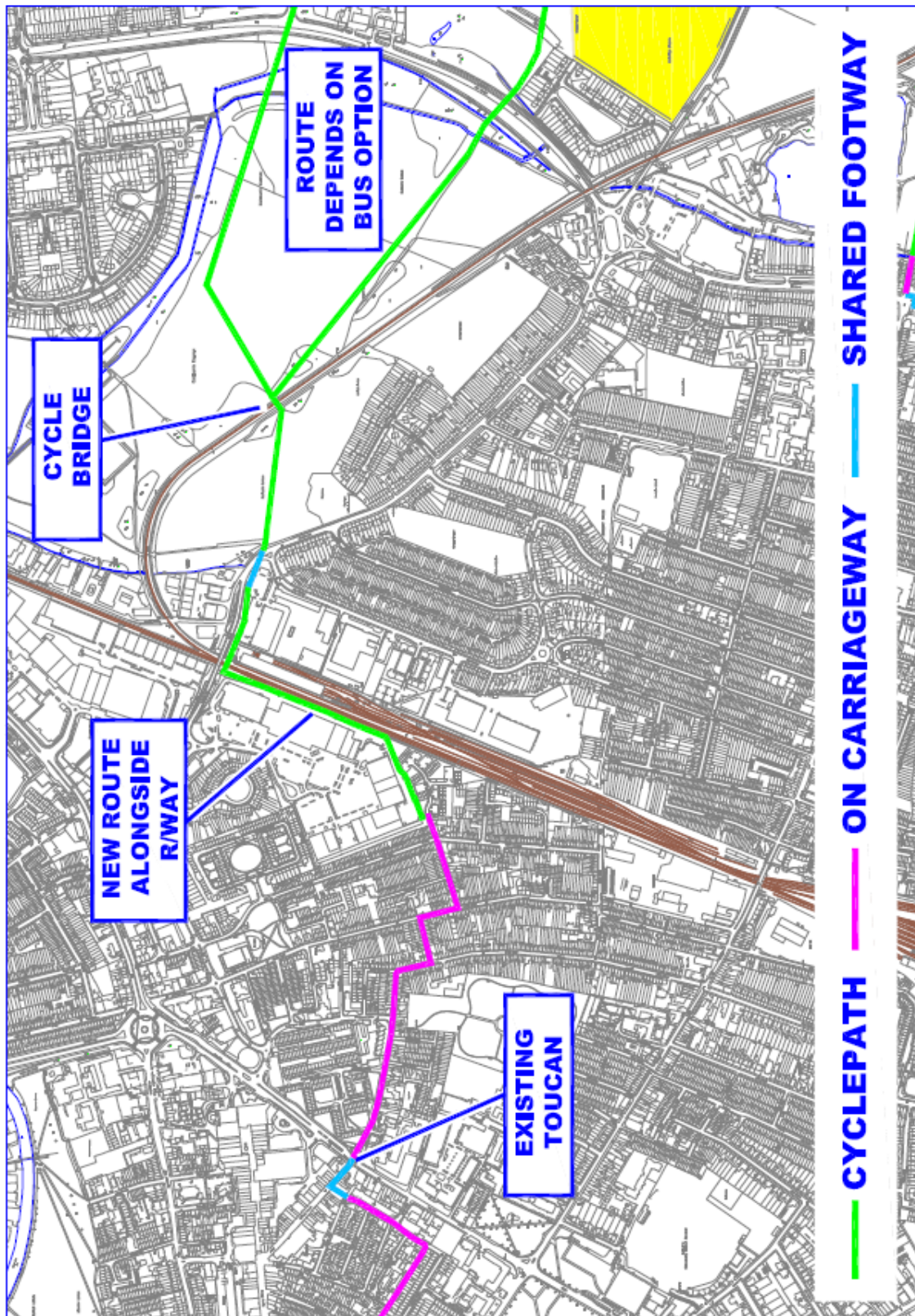
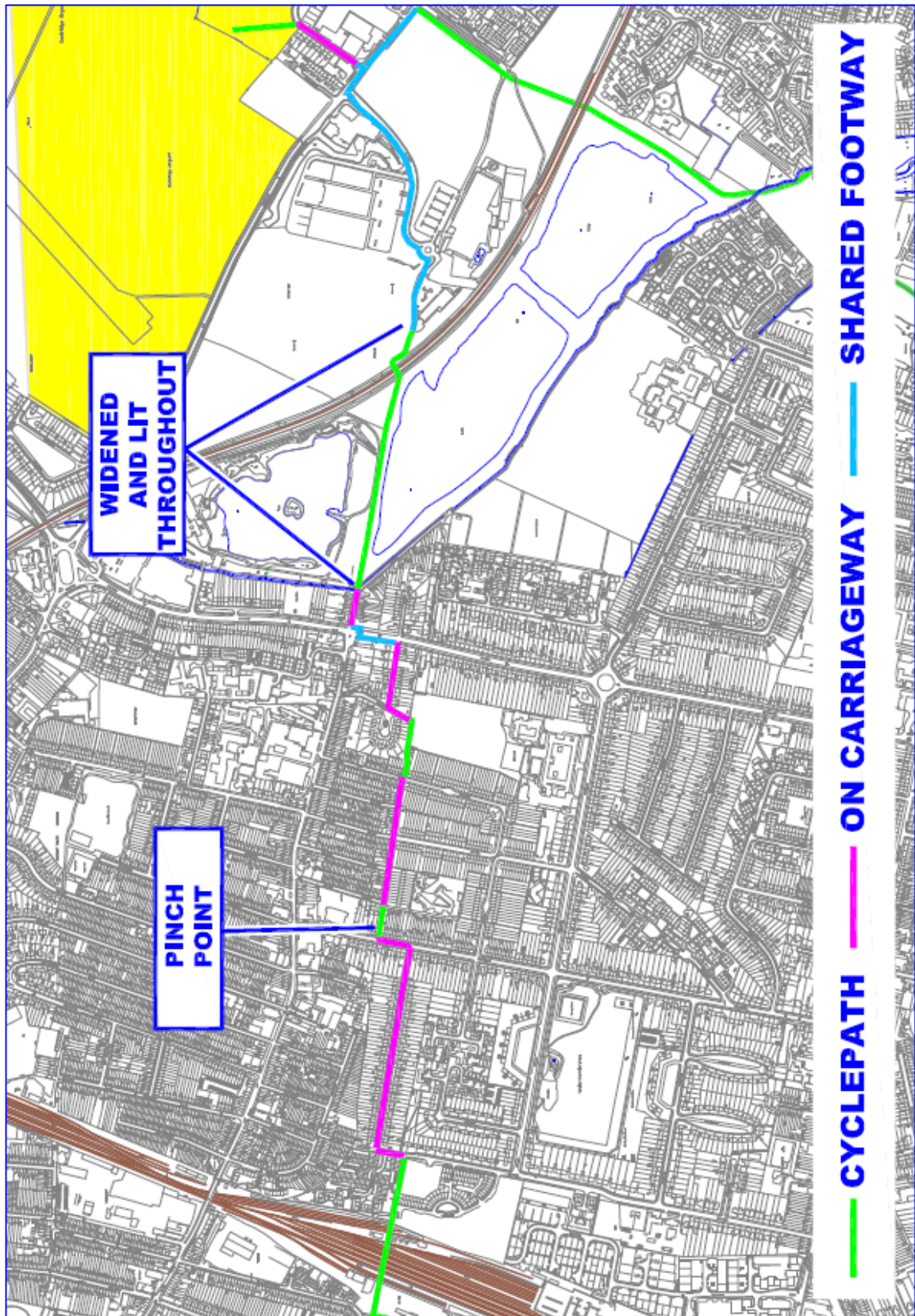


FIGURE 2.6 PREFERRED CYCLING LINKS TO CITY CENTRE: 3) TIN'S PATH



2) Cycle links to the Southern Fringe

- 2.73 There are protected cycle lanes along the length of The Outer Ring Road currently, although the number of roundabout junctions hampers safe, high quality cycling. Nonetheless, significant numbers of people already cycle towards Southern Fringe destinations. Because of the difficulties of enhancing this on-road route, and in order to encourage different markets to cycle, we have identified a predominantly off-road route / quiet road route from the south eastern edge of the development:
- 2.74 Leaving the southern edge of Phase II by Rosemary Lane and crossing Coldham's Lane via a signalised toucan junction and turning left along a cycle path parallel to Codlham's Lane. Turning right down Kathleen Elliott Way and continuing south-westwards over the railway, via a new cycling bridge and running parallel to the Gravel Pits to join the Snakey Path. Then turning westwards to follow existing track round the western side of Cherry Hinton Hall to the junction with Cherry Hinton Road. Proceeding straight across onto the existing track as far as Gunhild Way and then travelling south via Ventress Close. Continuing south on Spalding Way to the junction with Queen Edith's Way, turning right along Queen Edith's Way, via a protected junction and off-road path. Then turning left and following to the end of Almone Avene, through the alley connecting to Bowers Croft and proceeding via off-road cycle route along Wort's Causeway and Hill's Road.
- 2.75 An additional option for travel towards the Southern Fringe is along the Outer Ring Road (Perne Road etc.) in existing cycle lanes. It is difficult to improve cycling provision along this route and cyclists are not well catered for at roundabout junctions.

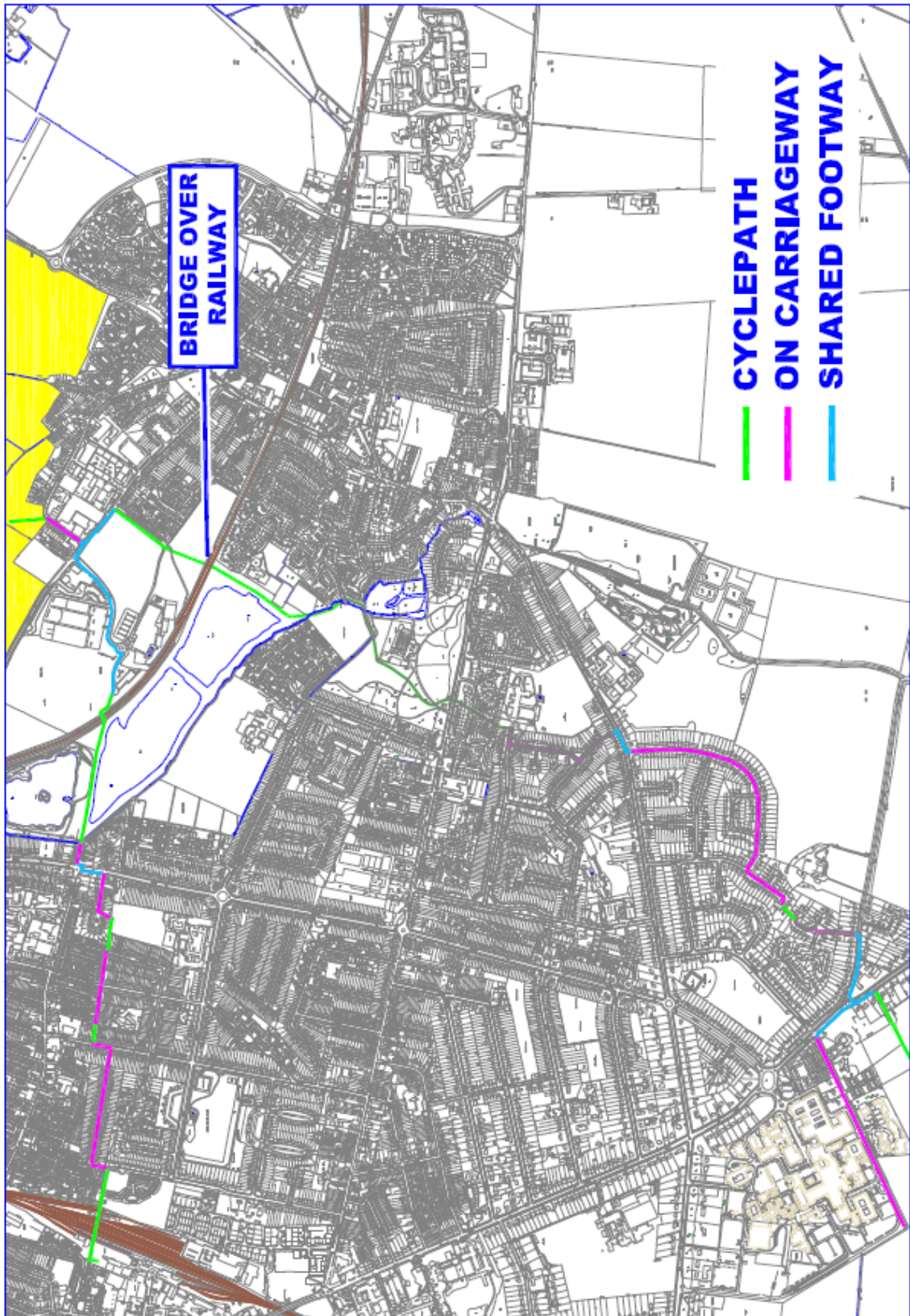
Benefits

- Continuous route providing access via segregated walk/cycle routes (1.9km) and quiet roads (1.9km);
- Route from Rosemary Lane to Snakey Path provides link between two important parts of the network currently separated;
- Catering for an estimated demand of 25% of trips to Trumpington and Queen Edith's ward, equating to 397 trips per peak hour from the new development (excluding intermediate destinations).

Engineering and feasibility issues

- Land acquisition to provide link over railway to join Snakey Path;
- Estimated costs of £1.6m.

FIGURE 2.7 PREFERRED CYCLING LINK TO SOUTHERN FRINGE



3) Cycle links to the Northern Fringe

- 2.76 It is proposed to make a connection to the Northern Fringe via the upgraded Jubilee Route, with a new bridge over the River Cam adjacent to the existing railway bridge.
- 2.77 From the northern sector of the development to the City Centre via the River Cam and existing Jubilee Route. Heading north out of the development to join the rail trackbed to Ditton Lane, then crossing, via a new signalled toucan crossing onto the existing Jubilee Route. Upgrading of the existing section of the Jubilee Route to enhance/widen surfacing (to cater for extra levels of demand) and to provide low level lighting to make the route usable year-round. Then crossing the river via a new cycling bridge parallel to the railway. This bridge could be positioned either on the western or the eastern side of the railway. It would exit the northern tow path along the river by the pedestrian link to Fen Road 80 metres to the west of the railway. From there, the route would continue via Fen Road to the railway and travel to Chesterton Station along the side of the railway (a shorter-term alternative would be to travel via Long Reach and then reach Chesterton Sidings via a path across the allotments / local nature reserve). At this point, the route joins the proposed cycleway that will run parallel to the Guided Bus route from Chesterton Sidings to Milton Road and onwards to the Science Park and beyond.
- 2.78 For the preferred route to the Northern Fringe, see Figure 2.4 (City Centre Jubilee Route).
- 2.79 Further, more detailed work is required to establish the feasibility of integrating the cycle route proposal into the Fen Road level crossing. Whilst this is the preferred solution, a fall-back alternative would be to use an on-carriageway route along Long Reach Road. This route would require an alignment through the Local Nature Reserve adjacent to the allotments area.

Benefits

- Continuous route providing almost wholly segregated access (2.4km) ;
- New bridge over River Cam substantially reduces travel distance (by 60% compared to current route) and allows continuous cycling (compared to current bridge at Green Dragon where cyclists are required to dismount);
- Provides a new link in the Cambridge network, enabling direct, segregated cycle access from the Northern Fringe of Cambridge across to the eastern side of Cambridge.
- Catering for an estimated demand of 24% of trips to Northern Fringe destinations, equating to 135 trips per peak hour from the new development.

Engineering and feasibility issues

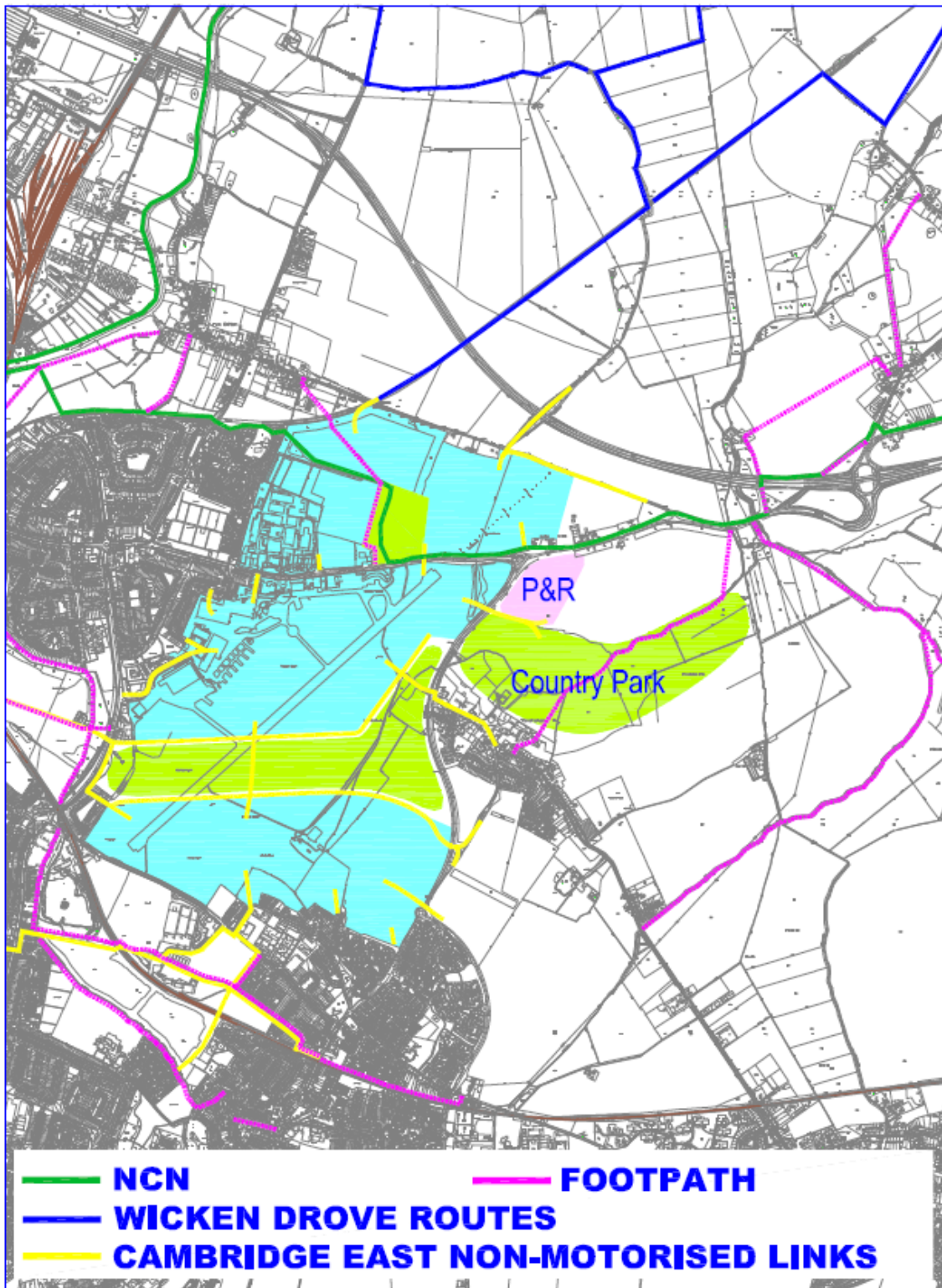
- The boardwalk is a serious existing pinch-point. The tunnelling option could be expensive and controversial in this environmental setting;
- Lighting of the section of route across the Meadow and widening of the surfacing in an environmentally sensitive area;
- Provision of cycle route alongside railway could be problematic. Alternative would require a strip of land from Local Nature Reserve;

- Cost of £1.2m for link from River to Chesterton Sidings (i.e. excluding upgrade to Jubilee Route as part of City Centre Route 1 improvement).

4) Cycle and walk links to the leisure network

- 2.80 Leisure travel represents the largest single journey purpose, although it covers a variety of activities, from visiting friends and relations, to holidays, to going on a local walk. It is also one of the most car dependent activities. Leisure travel is also growing rapidly and the proportion of these trips made by car is rising.
- 2.81 Therefore, a key element of reducing levels of car usage in Cambridge East must be to maximise opportunities for non-car based leisure. The location of the site is well-placed for this, with several local and regional leisure opportunities close by and already served by footpaths, cycle paths and bridleways.
- 2.82 The Cambridge East Area Action Plan proposes enhancements to some of the countryside recreation amenities close by, in relation to broader policies to enhance the local leisure offer, specifically, the proposed Countryside Park north of Teversham and the corridor towards Wicken Fen.
- 2.83 The network of cycle routes, footways and footpaths will be linked into the following:
- Countryside Park North of Teversham;
 - Route towards Wicken Fen via the disused rail trackbed;
 - National Cycling Network Route 51 towards Newmarket (at Newmarket Road);
 - Walk and cycle paths along the “Green Wedge” between Phases II and III of the development, travelling east-west on the northern and southern sides of the water course and onwards to Coldham’s Common and Teversham.
- 2.84 Figure 2.8 below illustrates how the internal network of walk/cycle routes could come together to provide access within the development, but also how it links to external routes, including leisure routes.

FIGURE 2.8 WALK AND CYCLE LINKS ONTO THE SURROUNDING LEISURE NETWORK

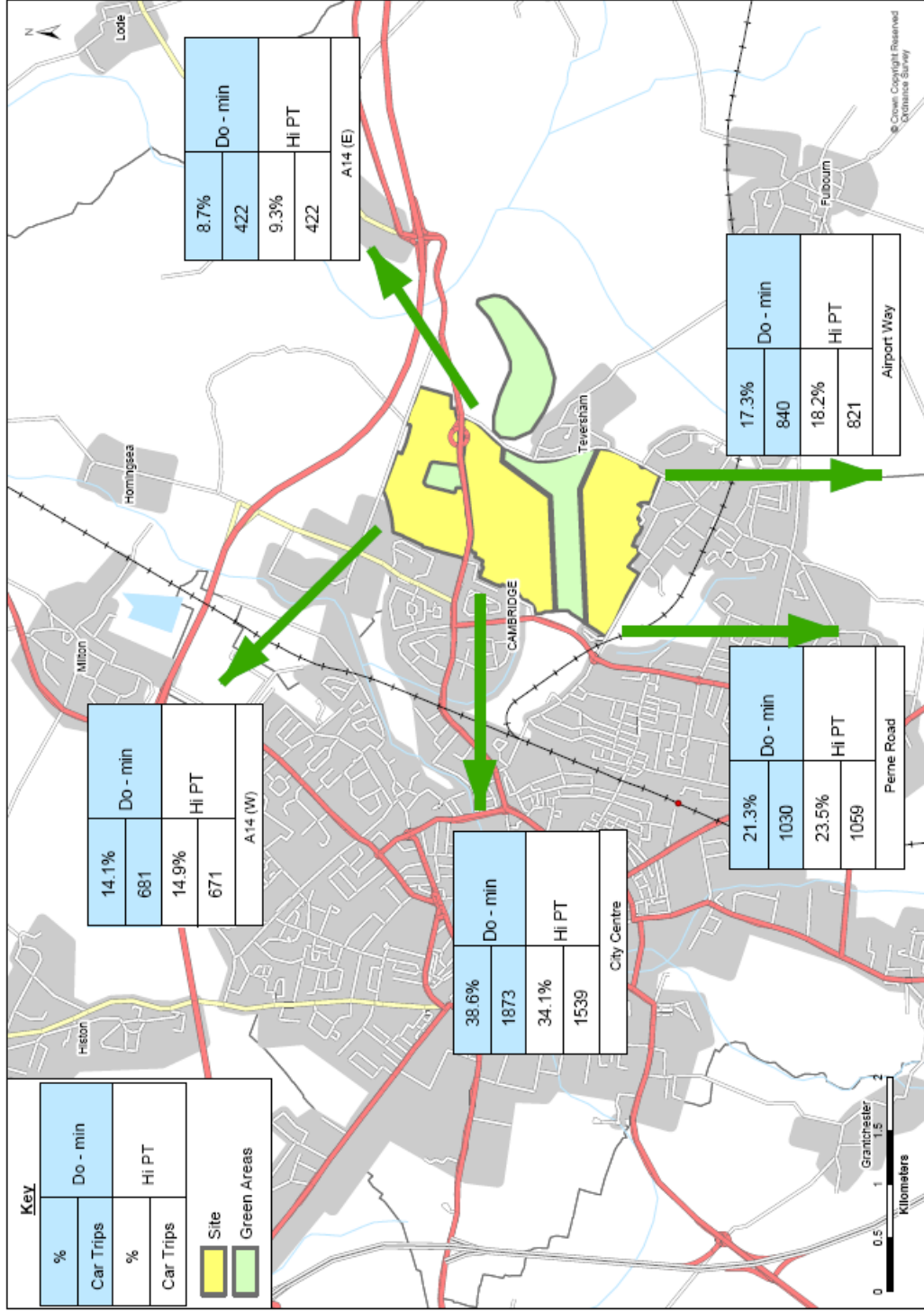


C) Highways

Introduction

- 2.85 Irrespective of the provision of high quality public transport, slow modes and smarter choices, 40-50% of the journeys generated from Cambridge East will be by car (dependent upon the demand management scenario and provision of alternatives). Modelling suggests that over 11,000 car trips will be generated during the 3-hour morning peak from 7am to 10am under the 'High Quality Public Transport and Demand Management' scenario. In the 'Do Minimum' scenario, over 14,500 car trips are anticipated.
- 2.86 In Figure 2.9 overleaf, we present the anticipated peak-hour car trips originating from Cambridge East under 5 broad destinations: Newmarket Road (for movements towards the City Centre and other west Cambridge destinations), A14 west, A14 east, The Outer Ring Road south and Airport Way south (for longer-distance southwards movements). The estimated flows are taken from modelling work by Atkins for the 'Do Minimum' scenario and the 'High Quality Public Transport plus demand management' scenario. The figures presented assume 50% of the car travel generated in the 3-hour modelled peak travel during the main peak hour.
- 2.87 In this section, we consider:
- Local access arrangements: assessing the number and location of junctions required onto the surrounding road network.
 - Upgraded access to the A14, via one of two options:
 - Improvement to Quy interchange and dualling of the Newmarket Road from Quy to Airport Way, along with restricting through traffic to travel via Fen Ditton; or
 - The provision of a new link road to Fen Ditton interchange.
- 2.88 So far as the Southern Orbital Route is concerned, we consider that the future of this route is still uncertain and Cambridge East needs to be capable of being delivered in its absence.

FIGURE 2.9 ANTICIPATED DEMAND FOR CAR TRIPS BY DIRECTION OF TRAVEL



Local access arrangements

- 2.89 In terms of the most appropriate connections from Cambridge East to the surrounding network, the modelling tests now allow us to make our recommendations for the most appropriate access arrangements, based on the following principles:
- There should be no access for private motorised traffic between Phases II and III of the development across the Green Wedge (in order to protect this landscape area, to reduce the amount of internal traffic flow within Cambridge East and to further increase the relative attractiveness of the alternative modes);
 - There should be an attempt to minimise the reliance on Newmarket Road due to congestion this road already suffers and the requirement for public transport services.
- 2.90 Examining the levels of traffic predicted from the modelling, we have assigned these to different portions of the development in order to estimate likely levels of demand for access in different directions. From this, we consider the following seven junctions are required:
- 2 junctions from the Phase I development onto Newmarket Road and the roundabout with Airport Way;
 - 2 junctions from Phase II of the development onto Airport Way (Gazelle roundabout) and Coldham's Lane;
 - 3 junctions from Phase III development onto Newmarket Road, Airport Way and Barnwell Road.
- 2.91 It would technically be possible to reduce the total number of junctions, but the size of the development and the volume of movement means that considerable delay or diversion could be entailed.
- 2.92 The detailed internal layout of the development will also need to ensure that the potential for and attractiveness of rat-running is eliminated.

Access to the A14

- 2.93 Appropriate access from Cambridge East to the A14 is required to ensure that the development is accessible, and that longer distance traffic is directed away from unsuitable routes through the built up urban area. However, it is equally important not to 'over-provide' access in order to ensure that long-distance trip-making is not encouraged from Cambridge East.
- 2.94 The County Council is currently undertaking a statutory planning consultation on its preferred option for the relocation of the Milton Waste Water Treatment Works to Honey Hill. The access options considered in this report are all compatible with the principles of this development.
- 2.95 The A14 is to be upgraded to 3 lanes from Fen Ditton junction westwards, but will remain a 2-lane road between Fen Ditton and Quy Interchange. It is anticipated that the majority of demand for travel to/from Cambridge East via the A14 will be in a westerly direction.
- 2.96 Two options for access to the A14 have been short-listed: upgrade to Quy interchange / access to Quy and a new link road to Fen Ditton junction. These options are illustrated in Figure 2.10.

Quy Interchange

- 2.97 Dualling of Newmarket Road from Airport Way eastwards to the Quy interchange and improvements to the roundabout junction itself. In addition, restrictions to through traffic in Fen Ditton through traffic calming and restrictions on turning capacity at the junction of Ditton Lane / Newmarket Road.

Benefits

- It is (possibly) the simplest to deliver, since it involves upgrade to an existing road, rather than creation of a new road;
- The current Newmarket Road between Airport Way and Quy Interchange is sub-standard in terms of capacity and alignment, so this would tackle an existing problem;
- By resisting the provision of a new link to the A14, it should help to dampen demand for travel via the A14 and the use of Cambridge East for long-distance car commuting.

Engineering issues and feasibility

- It entails a significant detour for westbound traffic wanting to access the A14;
- It brings westbound A14 traffic onto a 2-lane section of the A14, bringing the road closer to capacity with the implication that congestion problems are risked on this section or the A14 must be widened to dual-3;
- It makes restricting through traffic through Fen Ditton more difficult to implement and there is likely to be a considerable volume of traffic that will continue to use the shorter Fen Ditton route;
- Capital cost estimate of £7m plus land acquisition costs.

Fen Ditton Link

- 2.98 This option is for the provision of a link road from Airport Way to Fen Ditton junction, with an upgraded junction. From Airport Way, heading northwards to the junction of High Ditch Road and Low Fen Drove Way. Then running parallel to the A14 to the existing Fen Ditton junction with a new roundabout junction with Ditton Lane, opposite a remodelled westbound slip.

Benefits

- This provides access to the A14 where the road has adequate capacity (Fen Ditton) and does not necessitate a significant detour (to Quy) for the predominantly westbound movements;
- It enables the current problems of through traffic in Fen Ditton (which will be significantly worse in the future without action) to be tackled, by forcing traffic to divert around the village to travel to/from the A14.

Engineering issues and feasibility

- It entails the construction of a new road, with environmental and cost implications;
 - By providing a more bespoke solution to access to the A14, it risks encouraging more traffic generation onto the A14;
 - Capital cost estimate of £8m.
- 2.99 Table 2.1 below summarises the peak-hour traffic flows predicted along key parts of the road network under different scenarios. It shows that the Quy interchange option (Quy Upgrade plus Fen Ditton traffic management) causes an increase in the amount of traffic travelling on the A14 between Quy and Fen Ditton, an increase in traffic along the Newmarket Road west of Quy and an increase in traffic travelling via High Ditch Road, compared to the existing situation. The Fen Ditton link reduces traffic on all of these routes, with the traffic volume reassigning to the new link.

Options Discounted

- 2.100 Two options were considered:
- Developing the Fen Ditton link road and enhancing access to Quy interchange: both these measures together are deemed not necessary;
 - Developing a new junction at Honeyhill (between Quy and Fen Ditton) with the potential for closing one or both existing junctions. This would provide superlative access to Cambridge East from the A14, but this could encourage more car-based commuting. The environmental and financial costs of this option are considered to be very high.

Conclusion

- 2.101 The forecast flows for the Fen Ditton link are within capacity for a single carriageway link. The benefits of Fen Ditton Link include:
- Reduced flows through Fen Ditton Village;

- Reduced flows on Newmarket Road to the west of Quy; and importantly,
- The forecast flow on the two-lane section of the A14 east of Fen Ditton is also reduced to below Base Case levels.

2.102 It is likely that this option will be well received by the Highways Agency, assuming that the developer can demonstrate that the Fen Ditton junction remains within capacity. However, it should be recognised that the link has some deliverability risk and is likely to be more costly for the developer.

2.103 Upgrading Newmarket Road and the junction at Quy offers no relief to traffic through Fen Ditton village and results in broadly similar flows to the Base Case on the A14. If the restrictions on traffic passing through the village are introduced, flows can be reduced significantly (to levels associated with the Fen Ditton Link proposals) but the resulting increase in flow on the A14 results in westbound flows in the morning peak approaching capacity for a two-lane carriageway. Forecast flows on Newmarket Road suggest the need for improving the section east of Airport Way to two-lanes in each direction, and associated realignment to comply with current design standards.

FIGURE 2.10 HIGHWAYS OPTIONS FOR CONNECTING TO A14

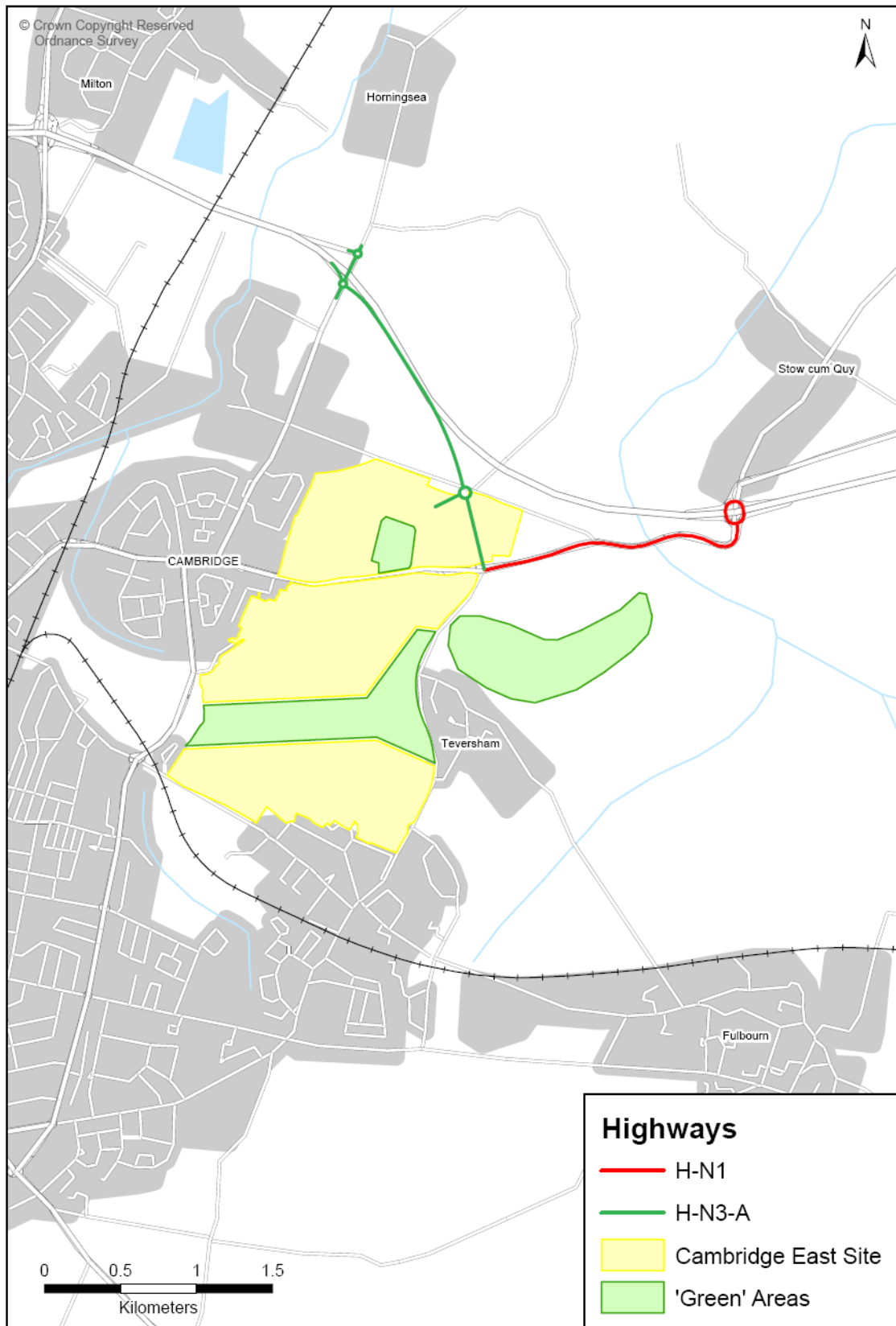


TABLE 2.1 TRAFFIC FLOWS TOWARDS A14 ON DIFFERENT LINKS UNDER DIFFERENT SCENARIOS

Scenario	A14, west of Quy east- west- bound 2-way	Newmarket Rd, west of Quy east- west- bound 2-way	High Ditch Rd, Fen Ditton east- west- bound 2-way	Ditton Lane, s of High Ditch Rd north- south- bound 2-way	Fen Ditton Link east- west- bound 2-way
Base Case	1670 3190 4860	1000 1500 2500	180 310 490	960 1050 2010	- - -
Quy upgrade only	1750 3160 4910	1060 1750 2810	120 350 470	970 1040 2010	- - -
Quy upgrade + Fen Ditton traffic mgt	1870 3300 5170	1120 1710 2830	60 260 320	570 680 1250	- - -
Fen Ditton Link + Do-min (LTTS Ref case)	1320 3020 4340	600 980 1580	- - -	430 820 1250	1020 1330 2350
Fen Ditton Link + High Cost PT + no DM	1340 2940 4280	590 970 1560	- - -	450 730 1180	1010 1350 2360
Fen Ditton Link + High Cost PT + DM	1300 2900 4200	600 1120 1720	- - -	400 660 1060	950 1030 1980
EXISTING 2006	1400 2880 4280	650 1560 2210	70 170 240	590 980 1570	- - -

D) Smarter Choices

- 2.104 Smarter Choices refers to the suite of “soft measures” that can be applied to further reduce car dependency and promote alternative modes.
- 2.105 In addition, it is recognised that hard infrastructure measures on their own (such as the public transport and cycling/walking proposals above) will not maximise their potential unless they are proactively marketed and promoted to a target audience.
- 2.106 The Smarter Choices kit includes a range of measures and we lay out below how we envisage them being implemented in Cambridge East. We recommend that the strategy is subsumed under a Site-Wide Residential Travel Plan which includes the following components:
- Employer travel plans: all employers in Cambridge East to commit (as part of planning permission) to an employer travel plan (ETP) which shows the range of measures they are taking to promote alternative travel for the journey to work, business travel and visitor travel. Standard measures, such as provision of secure cycle parking, shower facilities, mileage allowances for sustainable modes, public transport season ticket advances etc. would be incorporated and the plans would include monitoring and target setting. It may be possible to subsume individual employer travel plans within an area-wide ETP for all employers in Cambridge East. Successful travel plans have been estimated to reduce business car use by up to 25%;
 - School travel plans: a plan showing the measures a school is taking to promote the use of sustainable modes for access by staff, students and visitors. In the case of Cambridge East, this should be linked to the provision of safe routes to school as an integral part of the development design, with segregated cycle and walk routes provided around the school, and road design to enforce low traffic speeds and parking restrictions around the school gate. Successful school travel plans are estimated to reduce school-run traffic by 15%;
 - Car clubs: the setting up, or more likely, extension of a Car Club in Cambridge, providing cars available for short-term hire for club members (residents and employees), available at key locations throughout the development. It is estimated that these can achieve a reduction in mileage of 3,600km per active participant;
 - Car sharing schemes: database which residents and employees can join to match car journeys with others. It is estimated that these schemes can deliver a reduction in mileage of 4,500km per annum per active participant;
 - Individualised travel marketing: providing information and promoting sustainable travel options to target groups, such as new residents, pupils moving / leaving school etc. This bespoke service can also encompass initiatives such as cycle training. It is estimated that this can reduce residents’ car-trip making by in the region of 10%;
 - Information and promotion: generic information provision about all sustainable travel options available on-line, by phone, by text, at bus stops and at a district centre drop-in point, as well as a community-focused website for information and for discussion. Real time information facilities within the home can also be provided, so live public transport times can be checked in the house prior to departure;

- Maintaining interest in transport issues and promotion of sustainable modes: setting up a community travel forum, community travel events and other schemes (such as ‘buddy schemes’ where people are put in touch with buddies who will accompany them on cycling, walking or public transport journeys if they are lacking confidence about trying out a new trip.);
- Promotion of the use of internet communication technologies through local provision of broadband, community internet facilities at “o@sis centres”, tele- and video-conferencing facilities etc.;
- Promotion of home-delivery services to be provided by retail providers in Cambridge East;
- Welcome pack for residents containing guide to services and facilities in and around Cambridge East, cycling maps and information, booklets showing ideas for local leisure walks and cycle rides, Cambridge public transport map and bespoke timetables for Cambridge East services;
- Discount promotions for new residents: rather than providing free annual bus tickets for all residents as envisaged in the Area Action Plan, we recommend that, along with the Residents Welcome Pack, new residents are given a book of discount vouchers entitling them to a choice of discounts including:
 - Year’s free membership of Car Club;
 - Public transport season ticket pass;
 - Vouchers for free cycle training;
 - Vouchers for use at the district cycle shop redeemable for maintaining a bike, buying accessories, hiring or loaning a bike or towards buying a bicycle;
 - Discount vouchers to use at local retailers to encourage use of local amenities, plus free home delivery vouchers from relevant local retailers.

2.107 In addition, the Residential Travel Plan will also be concerned with the detailed planning of Cambridge East, in particular:

- site layout and urban design to promote permeability of the area by walking and cycling;
- site design that enables buses to permeate the site effectively, in particular direct distributor roads built to a satisfactory standard to allow unhampered bus access to housing areas;
- street layouts and patterns that ensure speed management and road safety are built in. For an exemplar of 21st century sustainable development, consideration should be given to appropriate parts of the development being designated as 20mph zones or home zones, where pedestrians are given priority over motor vehicles;
- parking standards that complement the promotion of alternative modes. For example, it is reported that the optimal parking ratio for a development to support a car club is 0.8 spaces per dwelling or less¹. and detailed design of parking to ensure that it does not dominate public spaces;
- signage for public transport, cycling and walking routes and local facilities, including recreational routes;

¹ Making Residential Travel Plans Work: Good Practice Guidelines. Dft, 2006; ref pg.24.

- provision of sufficient cycle parking, designed to a satisfactory security standard, at key destinations;
 - other aspects of the planning of the site that encourage or enable home-working (e.g. through housing design policies), home delivery (through conditions applying to retail provision) etc.
- 2.108 Smarter Choices is a nascent area of transport planning. The art of implementing these measures is likely to improve and expand and an understanding of its scale of impact and value for money will grow, so it will be appropriate to revisit the Smarter Choices Strategy over time. New measures such as preferential access to energy efficient vehicles for residents/businesses or even ideas such as carbon trading may well be established in the latter stages of Cambridge East's implementation.
- 2.109 The Government report ("Smarter Choices: Changing the Way we Travel", 2004) suggests that a co-ordinated, intensive application of such measures could deliver a reduction in car trips of up to 21% in urban peak traffic conditions. Given the already high level of cycling and public transport use we anticipate in Cambridge East, it is uncertain whether such an impact could be achieved, but we consider that an intensive application of smarter choices would make an important contribution above and beyond the infrastructure proposals laid out above, perhaps in the region of 10% further reduction in car trips.

Implementing the Smarter Choices proposals

- 2.110 For a development of this size and an ambitious and comprehensive package of this nature, it will be vital to have adequate staff resourcing. While implementation procedures will be worked out at a later stage, one mechanism would be for a travel plan co-ordinator to be employed to oversee the implementation of the Residential Travel Plan for Cambridge East, working as part of the Cambridgeshire County Council Travel Awareness Team. They would develop the Residential Travel Plan from early stages, as an important aspect of the Plan is to assist with the detailed planning stage of the application to ensure that the principles for promoting alternative modes are enshrined in the design and layout plans.
- 2.111 In terms of funding, the level of funding would have to be calculated at a later point when a detailed implementation plan is being developed, but if smarter choices are to have the sorts of impact sought, it will be significant funding. The authors of the Smarter Choices report have suggested that an "intensive application" would probably cost in the region of £5 per head of the target population per annum. Other mechanisms for calculating an appropriate spend on Smarter Choices would be to develop a full itemisation of activities and cost these, or to agree a service level agreement with the developer paying. An alternative mechanism that is being increasingly used and ensures long-term sustainability, is to use a precept, where residents pay an addition on their Council Tax. It is possible for a development like Cambridge East that residents will pay a small precept to support a range of community facilities (such as public open space etc.) and this can include support of elements of the Smarter Choices package (such as the car club, cycle training and hire, travel information centre etc.).

3. BRINGING IT ALL TOGETHER

Introduction

3.1 Section 2 presented our package of recommended infrastructure, services and other measures for Cambridge East.

3.2 Now we make comments on how the above should be implemented, focusing on:

- how the public transport and cycling proposals fit together to provide a coherent internal network within Cambridge East;
- Phasing of development of transport infrastructure;
- Providing a supportive policy and planning context.

Transport provision within Cambridge East

3.3 Whilst the focus of this strategy is on the external links from Cambridge East, one of the key aspects of creating a sustainable urban extension is to maximise the potential for internal trip-making and to ensure that walking, cycling and public transport are the modes of choice for these types of trip.

3.4 Whilst the detailed layout of Cambridge East is yet to be decided, below we show how the cycling and public transport network could come together to ensure a coherent internal network.

Public transport internal network

3.5 The key aims of public transport access within the development are to ensure that:

- all parts of the development are within 400m of a bus route;
- direct access is provided between each section of the development;
- the main district centre and local neighbourhood centres form hubs of the public transport network;
- buses enjoy direct and uninterrupted access within the development, through the provision of bus-only routes and bus gates, as appropriate. Where buses share roads with general traffic, at the detailed planning stage, it will be vital to ensure that the layout and specification of these routes enables direct, unhindered bus access to permeate the development.

3.6 Taking our proposals from Section 2, Figure 3.1 provides an illustration of how the key routes into Cambridge East could provide a coherent network to allow this.

3.7 The southern public transport links coming into Phase II from Cherry Hinton in the east and Coldham's Lane in the west help to form a natural strong spine of north-south movement through the development, up to the District Centre at the heart of Phase II via a dedicated bus, cycle and pedestrian bridge over the Green Wedge and then onwards into Phase I. The Phase I City Centre link via Newmarket Road and Southern Fringe link via Cherry Hinton would continue through the Phase I area, through the district centre to ensure that all areas of this development are within easy access of the bus route. The Park & Ride service passing through the District Centre and over Airport Way would ensure that the eastern section of Phase III has good

accessibility to public transport. From a public transport point of view, the ideal location for the main district centre is at the intersection of this main north-south, east-west spine.

- 3.8 From the demand figures in the modelling, we anticipate that some high frequency services could be justified, as shown below in Table 3.1.

TABLE 3.1 ILLUSTRATIVE POTENTIAL FREQUENCIES OF SERVICES

Service	Route	Frequency / hour
Phase I to City Centre	Via Newmarket Road	4
Phase I to City Centre	Via District Centre	4
Phase II to City Centre	Via District Centre	6
Park & Ride to City Centre	Via District Centre ^{*1}	10
Park & Ride to Southern Fringe	Via District Centre and Phase II	6
Phase I to Southern Fringe	Via District Centre, Phase II and Cherry Hinton	6
Park & Ride to Northern Fringe	Via District Centre	4
Frequencies to key destinations and on key transport links		
City Centre	Along western end of Newmarket Road ^{*2}	24
Southern Fringe		12
Northern Fringe		4

**1 Park & Ride site moved to east of Airport Way. District Centre refers to the main centre of the Airport Site in Phase III.*

**2 includes existing Park & Ride service, but excludes other existing services using Newmarket Road and potential use of corridor by Cambridgeshire Guided Bus, if link between Newmarket Road and Chesterton provided.*

Cycling and walking network

- 3.9 As for public transport, we envisage that high quality, direct walking and cycling routes will be designed into the layout and specification of the development. In Section 2, we outlined how cycling and walking links will connect into the surrounding leisure and utilitarian network (Figure 2.8). We anticipate east-west routes along the Green Wedge on either side of the water course, connected via the dedicated link over the corridor in the middle of the development. These routes enable links to the proposed Country Park north of Teversham, the Wicken Fen corridor and Coldham's Common corridor, as well as the National Cycle Network routes 11 and 51.

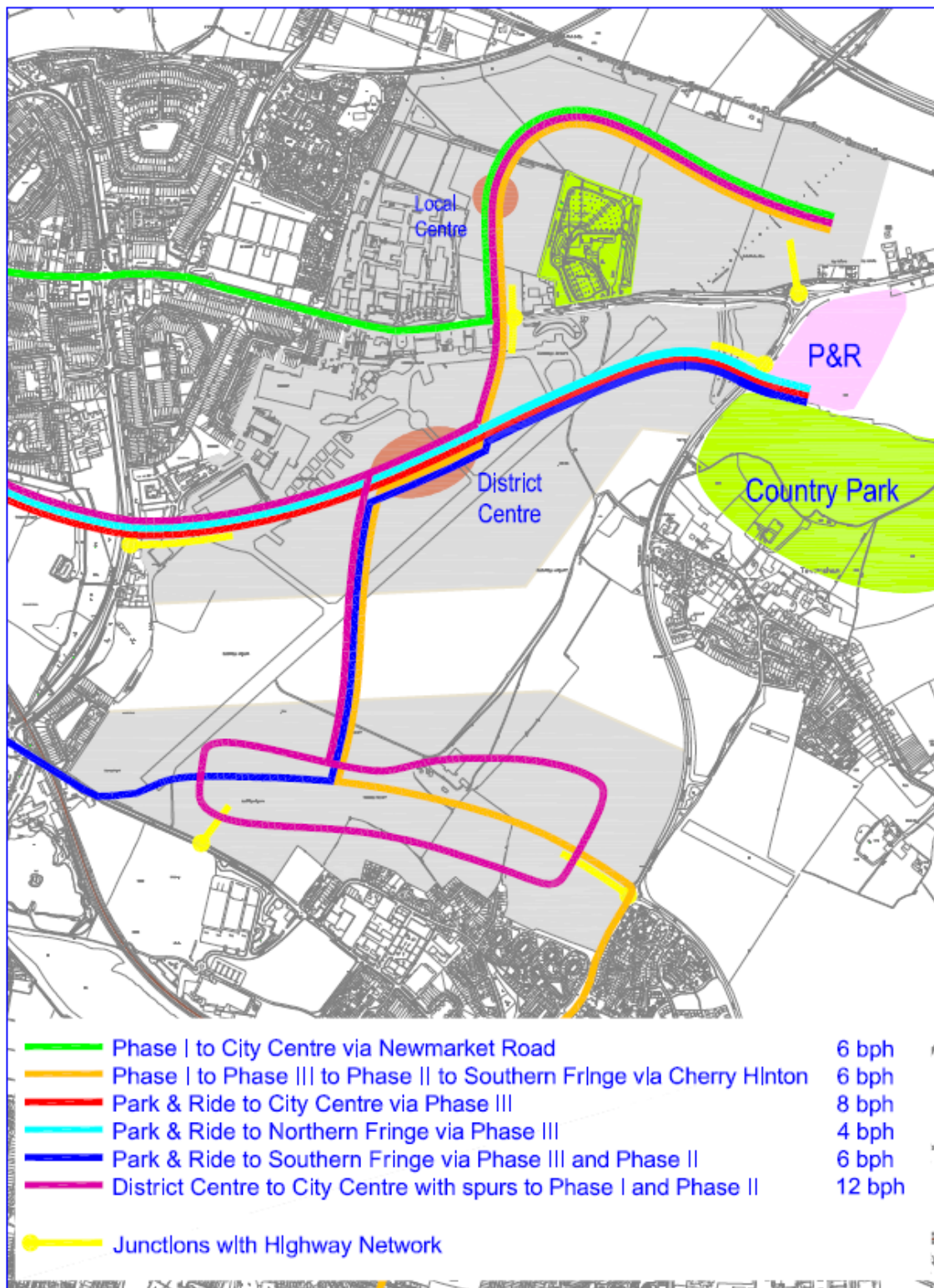
General Traffic

- 3.10 In Figure 3.1 we illustrate approximate locations for general traffic access into the development. In the case of access from Phase I to Newmarket Road, Phase II to Airport Way and Phase III to Airport Way, Newmarket Road and Barnwell Road, we consider that junctions will have to be shared with the public transport routes due to the need to minimise the number of junctions onto the surrounding roads for capacity

and safety reasons. However, these junctions should be designed in order to allow bus priority through bus lanes and signal prioritisation.

- 3.11 It is not envisaged that general traffic would be able to cross between Phases II (north of Cherry Hinton) and Phase III (Airport Site) without exiting the development onto one of the surrounding roads (Airport Way or Barnwell's Road) and then re-entering the development. This connection would be bus, walk and cycle only.

FIGURE 3.1 AN ILLUSTRATION OF THE INTERNAL NETWORK OF PUBLIC TRANSPORT ROUTES FOR CAMBRIDGE EAST



Phasing

- 3.12 The Area Action Plan identifies that the development of Cambridge East will occur in three distinct sectors, delivered over different timescales, North of Newmarket Road (Phase I), North of Cherry Hinton (Phase II) and the main airport site (Phase III). Extensions to Phases I and II will occur once the airport has been decommissioned and Phase III is underway.
- 3.13 Table 3.1 below provides an illustration of how 11,500 dwellings may be delivered.

TABLE 3.2 ANTICIPATED PHASING OF HOUSING IN CAMBRIDGE EAST

	By 2011	By 2016	By 2021	After 2021	Total
Phase I: North of Newmarket Rd	850	900			1,750
Phase Ib: North of Newmarket Rd.			1,750		1,750
Phase II: North of Cherry Hinton	250	1,200			1,450
Phase IIb: North of Cherry Hinton			1,150		1,150
Phase III: Main Airport Site			2,700	2,700	5,400
<i>Total</i>	1,100	2,100	5,600	2,700	11,500

- 3.14 The phasing of the development and the size of the different development components throws up some challenges for the implementation of the Cambridge East sustainable transport strategy.
- 3.15 Most fundamentally, Cambridge East will be built ‘from the outside in’, with the main District Centre being at the heart of the Phase III development, which comes on-stream in the later stages of the development due to this sector being reliant on the airport decommissioning.
- 3.16 This also means that the construction of transport links that rely on this part of the development will have to be developed at later stages. This specifically affects any link from Phase II (Cherry Hinton) northwards, towards Phase I or onto the proposed Coldham’s Common link towards the City Centre / Northern Fringe.

Transport requirements for Phase I

- 3.17 For the initial development of Phase I, (1,750 households to 2016), we now make recommendations on transport improvements that should be implemented alongside this first phase. This first phase will not justify the full implementation of all the transport measures proposed above and, as such, it is unlikely that the first phase development will achieve the 60% non-car modal share anticipated for the overall development once fully delivered.

Bus services

- City centre: either support for a dedicated service to link the development and the City Centre via Newmarket Road, or extension of the existing Park & Ride

service to provide a simple loop around the development. The planning conditions will specify quality of vehicle / service and an adequate capacity / frequency to be provided from the inception of the development (if a Park & Ride extension is chosen, this will require an increase in Park & Ride service capacity).

- Southern Fringe: none (travel via City Centre)
- Northern Fringe: none (travel via City Centre).

Bus infrastructure

- Newmarket Road: modest improvements to bus priorities on the eastern section of Newmarket Road (between Abbey Stadium and the site access), including in-bound priority and junction enhancements at Barnwell Road junction;
- Within the site: new junction between the existing car showrooms and Park & Ride site and traffic management to provide unhindered access on-road through site, looping back to Park & Ride site. New bus gate and minor layout changes to Park & Ride to allow the bus back into the Park & Ride car park from the north and through to the current terminus;
- Technology: provision of real time information (RTI) at Park & Ride site and at bus stops within site and on service along Newmarket Road. Fitting of buses with RTI equipment;
- Relocation of the Park & Ride site to the new site east of Airport Way: this should be required of Phase I of the development, but implemented towards the end of this Phase, when the existing Park & Ride site is to be turned over to an urban park. Ideally, this would be the point at which the Park & Ride service could run via its segregated route through Phase III of the development. The Phase I should be sufficiently large and have enjoyed a sufficiently high standard of public transport provision over a number of years that a high frequency dedicated service to the City Centre can be commercially provided;
- Initial works on infrastructure for services towards Southern Fringe: depending upon the option selected, it could be appropriate to initiate infrastructure measures for the link to the Southern Fringe so that this service can come on-stream at the earliest opportunity in Phase II.

Cycling infrastructure:

- City centre: Upgrading of Jubilee Route to City Centre, as specified in Section 2;
- Northern Fringe: Provision of new route to Northern Fringe via Jubilee Route and new bridge crossing over River Cam (as specified in Section 2);
- Southern Fringe: no proposals (option of using existing cycle routes via Airport Way or Outer Ring Road);
- Provision of connection onto long distance cycle network NCN route 51 towards Newmarket and onto leisure route towards Wicken Fen (see Section 2).

Highways infrastructure:

- Access to A14:
 - If the Quy Interchange and Newmarket Road dualling is preferred, given current capacity constraints here, it would be appropriate to implement this scheme.
 - If the Fen Ditton link road is preferred, there will not be sufficient traffic volumes at this stage to justify its construction and it would seem excessive

to make intermediate improvements to Quy interchange / the Newmarket Road approach to Quy. However, if the Highways Agency considered that the development was having an impact on an already capacity-constrained junction, it could require junction enhancements to be made.

- Traffic calming measures in Fen Ditton to ensure that excessive traffic is discouraged from routing through the village to join the A14 at the Fen Ditton junction should be initiated.
- Local Access:
 - Provision of general traffic junction between the existing car showrooms and Park & Ride site. This junction to be built with sufficient capacity for full site occupation and to provide segregated bus and cycle access from the development onto Newmarket Road and to allow, at a future point, segregated bus and cycle access across the junction into the Phase III Airport site. (This could, for example, be accomplished via a large signalised roundabout providing bus and cycle access across the roundabout);
 - Provision of general traffic distributor road connecting to Airport Way/Newmarket Road roundabout and modifications to this roundabout to accommodate it.

Other transport requirements

- Development and implementation of a Residential Travel Plan, as outlined in Section 2 above;
- Support to further works to enhance bus capacity and cycling capacity in the City Centre and at other key destinations.

Transport requirements for Phases II and III

- 3.18 It is anticipated that work on Phase II (North of Cherry Hinton) will commence in advance of the airport being decommissioned. This sector of the development is the most problematic to connect into the proposed transport network in advance of Phase III being developed. From a transport perspective, we therefore recommend that, if possible, Phase II should not be started before it is possible to provide transport links northwards towards Phase III. At the very least, planning permission for this sector should be made conditional on Phase III being fully developed. Otherwise there is a risk of having a moderate sized development in a part of the network that cannot be adequately served by quality public transport services and is likely to generate large numbers of car trips onto a constrained and inappropriate part of the transport network.
- 3.19 In the event that work on Phase II begins before transport links can be made northwards to join the proposed links to the City Centre and Northern Fringe, we recommend that the infrastructure for the bus link to the Southern Fringe is required, including provision of bus priority on the section of Coldham's Lane between Barnwell Drive and the western edge of the development and that, in the absence of some of the public transport infrastructure, temporary bus services are required to be provided towards the City Centre and Southern Fringe. We also recommend that the off-road cycling route to the Southern Fringe via Cherry Hinton Hall is required and the routes to the City Centre via Tin's Path and via Coldham's Common are provided. The two proposed local road junctions from this sector of the development onto Coldham's Lane and Airport Way should also be implemented.

- 3.20 Once Phase III is initiated, the remaining parts of the transport infrastructure can be implemented, including:
- The segregated bus route towards the City Centre (and potentially towards the Northern Fringe), (including the segregation at the western end if this is not provided as part of a wider strategy).
 - The bus, walk and cycle connection across the ‘green wedge’ between Phases II and III, enabling bus services to provide north-south routes through the entire development.
 - Remaining road junctions to access the site;
 - The Fen Ditton Link Road or Quy Interchange / Newmarket Road upgrade.

Public Transport Access to Northern Fringe

- 3.21 We have proposed a major new segregated High Quality Public Transport Link to Chesterton and beyond. As well as providing access between Cambridge East and employment/population in the north of Cambridge, it could assist with the development of an orbital public transport service linking all the developments around the north of station, provide access to the proposed Chesterton Station and provide a fully segregated link for Cambridgeshire Guided Bus to access the City Centre.
- 3.22 This proposal is not likely to be financially viable on the basis solely of trip demands from Cambridge East to the Northern Fringe. However, the opportunity to encourage sustainable travel to/from Cambridge East will be greatly enhanced the sooner this link can be provided. Therefore, it is recommended that, dependent upon the outcomes of other studies to examine the options for a northern orbital bus service, this link should be progressed as soon as possible, together with the associated works at the west end of Newmarket Road

Supportive policy and planning context

Transport policy

- 3.23 The broader policy context of the Long Term Transport Strategy, Local Transport Plan, Structure and Local Plans is provided in *Technical Note A: Background and Context*.
- 3.24 These show policy support for locating growth in the sub-region within the City of Cambridge, where employment growth is occurring and housing demand is greatest. The transport impact (in terms of overall mileage and car-reliance) is potentially a lot lower than if growth were directed to surrounding or new settlements.
- 3.25 But for a sustainable urban extension to be realised, it is essential that detailed planning policies for the development itself support these objectives.
- 3.26 The Cambridge East Area Action Plan develops planning principles and policies for the development of Cambridge East and contains many well established principles in development planning to promote sustainable travel modes and choices, namely:
- Mixed use development: provision of both jobs and housing within Cambridge East;

- Community facilities: the provision of a comprehensive suite of community facilities to meet the needs of a development of this scale, including primary schools, a secondary school, a District Centre, local neighbourhood centres and other community facilities, such as leisure and recreation, library facilities etc.;
- High density development, with a commitment to a net overall density of 50 dwellings per hectare or above.

3.27 In Section 2, we proposed that a Smarter Choices package should be implemented to complement the physical transport measures and that this should be done under the auspices of a comprehensive Residential Travel Plan for Cambridge East.

3.28 An additional part of this Residential Travel Plan is to assist in the detailed design of Cambridge East at later planning stages to ensure that the planning and site design maximises the potential for sustainable modes. Particular issues that would be addressed include:

- Ensuring the internal network of routes proposed in a site layout enables unhindered / preferential public transport access within the development;
- Ensuring that the internal network of routes provides the quality of cycling and walking facilities identified earlier;
- Ensuring that speed restraint and inappropriate parking are designed out in the design stage, possibly including the designation of home zones or 20mph speed limits within the development;
- Ensuring appropriate car parking standards and policies are devised and implemented. Draft Planning Policy Statement 3 (para.20) states that “Local planning authorities should develop parking policies for their plan area with local stakeholders and local communities having regard to expected car ownership for planned housing in different locations, the efficient use of land and the importance of promoting good design”. For Cambridge East to meet its sustainable travel targets, it is essential that the car usage is not the mode of choice for all trips. In addition, for the development to achieve its density targets and good design, large expanses of surface level parking or on-street parking need to be resisted. Therefore, bearing in mind the guidance from PPS3, it is important that facilities for the private car are not over-provided. Advice from the Car Club industry is that car clubs flourish best in areas with less than 0.8 car spaces per dwelling. Across a development of this size, it is likely that a range of densities and types of housing will be provided. While planning for 2-cars per household may be appropriate for some of the housing market, there may be other parts of the development where 1 car per dwelling is catered for, as well as planning an element of car-free housing. It could also be appropriate to consider having higher density parts of the development where no surface car parking is provided, with parking provided below buildings. This would complement the objective of creating a bold and high quality urban design.

4. CONCLUSIONS

Justification

- 4.1 Cambridge East not only requires major investment in sustainable transport in order to ensure its transport impact is manageable and the site can be fully developed, but it also represents an opportunity to enhance Cambridge's sustainable transport network for future generations.
- 4.2 It is going to have to be positively marketed as a sustainable development. Locally, these transport proposals imply some negative environmental and amenity impacts, but by pursuing these schemes, it is possible to achieve the ambitious non-car mode share set for Cambridge East and hence allow a development that will bring many broader benefits to Cambridge.
- 4.3 As described in *Technical Note C: Demand Assessment*, emerging proposals have been tested by Atkins through the Cambridge Sub-Regional Land Use and Transport Model, with the following headline results (Table 4.1).

TABLE 4.1 HEADLINE RESULTS OF MODEL RUNS FOR CAMBRIDGE EAST

Model Scenario	Car	Pub Transport	Walk/Cycle
LTTTS Base Case	45%	23%	32%
LTTTS + Proposed Camb E PT measures	41%	27%	32%
LTTTS + Proposed Camb E PT measures + DM	34%	31%	35%

- 4.4 It shows that the major proposals for high quality public transport and cycling provision enable a significantly improved modal split, compared to the base case. This is particularly pronounced under a demand management scenario.
- 4.5 Hence the strategy succeeds in its core objective of delivering a 60% non-car modal split. The benefits of this include:
- The strategy supports the overarching vision for a 21st century sustainable urban extension and ensures that the traffic impact on the surrounding network is minimised;
 - It provides a stepchange in the quality of public transport and provides the opportunity to develop a High Quality Public Transport Network across Cambridge;
 - It provides a stepchange in the quality of walking and cycling facilities, within the development and on the surrounding network for the benefit of Cambridge residents;
 - 3,404 public transport trips per peak hour (31% mode share) are generated;
 - 3,934 cycling/walking trips per peak hour (35% mode share) are generated;
 - 1,100 less car trips are exported onto the surrounding network in the morning peak hour compared to the base case;
 - A package of transport measures that allows Cambridge East to be fully developed resists the need for alternative sites further away from the Cambridge

urban area to be developed. These sites would inevitably be significantly more car dependent and generate significantly more car traffic.

4.6 However, to achieve these results requires the implementation of a comprehensive smarter choices package and implementation of the development along the lines proposed in the Area Action Plan (in terms of build densities and community facilities).

4.7 The implementation of a demand management scheme would also have a positive reinforcing impact and help to achieve an even greater non-car modal share.

Further technical work

4.8 The strategy seeks to establish general principles and specific preferred options for public transport and cycling infrastructure and services.

4.9 However, the Strategy will need to be further developed as the Area Action Plan for Cambridge East develops and in response to significant developments in transport policy:

- Future of demand management: a demand management regime has the potential to provide further assistance to meeting the non-car modal share targets set. If a demand management scheme does come forward, the Cambridge East Sustainable Transport Strategy should be revisited to assess how it can further benefit from this;
- Future of Southern Orbital Route: there has also been consideration of the potential for a Southern Orbital Route to enable traffic travelling from north of Cambridge to south of Cambridge to avoid the outer ring road and Cherry Hinton. Again, if a proposal came forward, this could have a significant impact on opportunities and requirements for public transport and cycling links to the Southern Fringe, enabling a high quality public transport scheme on The Outer Ring Road to be implemented with a lesser impact on that road and potentially allowing Cherry Hinton and local routes towards the city to be de-trafficked;
- Further development of Cambridgeshire Guided Bus: specifically the opportunity to implement the missing link between Newmarket Road and the railway station, which would provide a continuous segregated route from Cambridge Northern Fringe to Cambridge Southern Fringe and enable a full network to be developed;
- Traffic modelling of highways links to test extent of bus priority measures required on Outer Ring Road and Newmarket Road;
- In-bound assessment of Cambridge East (with updated modelling), particularly to assess the potential two-way demand for a Northern Orbital public transport route.

4.10 Currently, transport models are being developed and updated in relation to the further development of the Long Term Transport Strategy and the Transport Innovation Fund bid. Once these models are in place, it will be helpful to test the Cambridge East Strategy again to ensure it is robust. Specifically we recommend:

- Testing of the preferred strategy in the updated Land Use and Transport Model when it is updated to a 2001 census base;
- Specific proposals are tested on new micro-simulation models of Newmarket

Road to understand whether an on-road solution can work / the relative benefits of total segregation. If micro-simulation modelling is available for the Outer Ring Road, performing the same tests on a bus route along here to the Southern Fringe.

4.11 The future planning of Cambridge East also needs to address some broader, network-wide issues:

- How proposals for Cambridge East can complement, or be complemented by other developments around Cambridge. For example, the case for a Northern Orbital bus route, solely to link Cambridge East to the Northern Fringe appears to be marginal, but if a new station is developed at Chesterton and the Cambridge Northern Fringe East site developed, the viability of a northern orbital bus route may be significantly enhanced. Cambridgeshire County Council is currently commissioning some further work (The Cambridge Area Transport Study) to look at the implications of development around Cambridge;
- Bus capacity in the City Centre: currently capacity is restricted and proposals for service enhancements from this and other developments infer increased bus services going into the City Centre. Again, the Cambridge Area Transport Study being commissioned by Cambridgeshire County Council will address this;
- Provision of cycle parking at key destinations, such as City Centre, Addenbrooke's etc.: this could be a major limiting factor on the levels of usage anticipated for Cambridge East, and is another issue being picked up in the Cambridge Area Transport Study.

Consultation on Cambridge East

4.12 As the planning process on Cambridge East moves forwards, it will be necessary to consult the public on the development. The transport implications of the development have the potential to attract considerable opposition as they imply some environmental and amenity impacts. It is therefore vital that the transport requirements of Cambridge East are presented as part of an holistic consultation on Cambridge East, where the benefits of the development (in terms of supporting economic growth in the sub-region, providing affordable housing and new community facilities) can be presented.

CONTROL SHEET

Project/Proposal Name: CAMBRIDGE EAST SUSTAINABLE
TRANSPORT STRATEGY

Document Title: Strategy Report

Client Contract/Project Number:

SDG Project/Proposal Number: 206585

ISSUE HISTORY

Issue No.	Date	Details
4	16/11/06	Final, following client comments

REVIEW

Originator: Martin Higgitt

Other Contributors: Michael May, Andy Barker, Steve Oliver

Review By: Print: Michael May

Sign: _____

DISTRIBUTION

Clients: Transport Topic Group

Steer Davies Gleave: MJM, MPH, ADB, STO



SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

Minutes of a meeting of the Cambridge East Member Reference Group held on
Tuesday, 28 November 2006

PRESENT:

Councillors: J Durrant (Cambridge City Council, Labour Spokesperson on Environment), N Harrison (Cambridgeshire County Council), Cllr L Herbert (Cambridge City Council, Coleridge Ward), Mrs CA Hunt (South Cambridgeshire District Councillor, Teversham Ward), AG Orgee (Cambridgeshire County Council, Sawston Electoral Division), Ms S Reid (Cambridge City Council, Chair of Environment Scrutiny Committee), JE Reynolds (Cambridgeshire County Council, Executive Member), Ms C Smart (Cambridge City Council, Romsey Ward), Mrs DSK Spink MBE (South Cambridgeshire District Council Planning and Economic Development Portfolio Holder), RJ Turner (South Cambridgeshire District Councillor, The Wilbrahams Ward) and NIC Wright (South Cambridgeshire District Council Development and Conservation Control Committee Chairman)

Officers:	Paul Cook	Head of Service Transport Policy and Strategy, Cambridgeshire County Council
	Jonathan Dixon	Principal Planning Officer (Transport)
	Brian Human	Head of Policy & Projects, Cambridge City Council
	Barry Louth	Transport Planning Manager
	David Roberts	Planning Policy Manager, Cambridge City Council

Apologies for absence were received from Councillors J Bailey (Cambridge City Council) and B Bradnack (Cambridge City Council). Councillors Dr SA Harangozo and Mrs HM Smith were in attendance, by invitation.

1. ELECTION OF CHAIRMAN OF THE MEETING

On the proposal of Councillor Reid and seconded by Councillor Smart, it was **RESOLVED** that Councillor J Reynolds be elected Chairman of this meeting.

2. DECLARATIONS OF INTEREST

None.

3. MINUTES OF PREVIOUS MEETING

The minutes of the meeting held on 4 November 2005 were agreed as a correct record.

4. CAMBRIDGE EAST SUSTAINABLE TRANSPORT STRATEGY**Introduction to the Study**

The Head of Service Transport Policy and Strategy introduced the study 'Cambridge East Sustainable Transport Strategy Report', prepared by consultants Steer Davies Gleave. The study had been commissioned to inform the Area Action Plan for the proposed development in Cambridge East and would be used to respond to queries raised by the Inspector at the South Cambridgeshire Examination of the Cambridge East Area Action Plan, scheduled for summer 2007. The study set out a number of options which could be considered as a way of achieving a 60/40 split in favour of sustainable modes of transport. It was emphasised that the study was not a strategy for implementation but merely options which could be considered. Members would have plenty of opportunity to consider the options.

Consultants' Presentation

Cambridge East would be a major growth area with between 10,000 and 12,000 new dwellings and 5,000 new jobs. The construction would take place in 3 phases:

1. North of Newmarket Road
2. North of Cherry Hinton
3. Airport site

The objectives of the study were to maximise potential for sustainable transport and to minimise and mitigate negative traffic impacts. The core challenge was to achieve a target modal split of:

40% Car
35% Public Transport
25% Walking/Cycling

The study looked at these key journeys from Cambridge East:

1. City Centre
2. Addenbrooke's (Southern Fringe)
3. Northern Fringe

Journeys to the wider area and the railway station were also considered.

For each destination the consultant set out the options for public transport routes, cycling routes and highway improvements. The benefits and drawbacks for each option were also set out in the study.

The consultant emphasised that in order to achieve the desired reduction in car travel a 'Smarter Choice' element needed inclusion, promoting the sustainable travel options in a variety of ways through, for example, travel plans, marketing and real-time information. Smarter Choices would be a fundamental part of the package.

Phase 1 was a projected 1,750 houses to be built by 2016 and the 60/40 modal split would not be achieved during this phase of the development: all the phases would need to be completed before the desired 60/40 split would be achieved.

Members' Comments

Questions were raised concerning members' involvement with this study:

- Confirmation of the timetable for the study: the study would be presented to the Inspector in the summer of 2007 and the Inspector's verdict was likely to be received at the end of 2007.
- Incorporation of members' comments into the strategy, the influence members would have over the content of the study and who would make the final decision on what would be submitted: the Head of Transport Policy and Strategy assured members that the study was not a strategy and that their comments would be taken into account. It had been commissioned by Cambridgeshire County Council to answer the Inspector's question whether the 60/40 split was achievable. This study had not gone to the Cambridgeshire County Council Cabinet and therefore was not the formal view of the County Council.
- The study would be taken to the City Council Scrutiny Committee and to a member group at South Cambridgeshire District Council in January 2007.

The members discussed whether an additional objective 'to preserve and enhance the

existing city' should have been included in the study. The following points were made:

- Change was inevitable and the challenge was how to marry the delivery of the development and preserve the City.
- The study could not have objectives that imply no change: 'protect' should be used rather than 'preserve'.
- The challenge was going to be people's mindset and interpretations of 'enhance'.
- An Officer pointed out that the Cambridge East Action Plan includes 'enhancement' and it was one of the overall aims of the County Council. It was agreed that this needed to be cross-referenced.
- The question was what to protect and what to enhance. It was felt that there was a need demonstrate to the Inspector that these difficult decisions had been deliberated.

The following points were raised regarding the content of the study:

- Study diagrams should be revised to give a much clearer indication of the location and description of the segregated and partial segregated bus lanes. More graphical visualisations of the proposals should be provided to give members a clearer understanding of the impact of the proposals and that these be brought to a future meeting.
Action: Steer Davies Gleave
- The focus on preserving / protecting Fen Ditton should be amended to take into account the importance of all the current housing developments along Ditton Road.
- With reference to the tree / verge removal, the study did not indicate what actions might be taken to mitigate the negative response from residents, for example landscaping and pollution protection.
- The study did not take into account the current congestion in East Cambridge and suggested that existing residents wanted reassurance that these problems were being tackled. Members were informed that a Long Term Transport Strategy was currently being developed to look at the wider issues as they affect the area.
- The members queried 2.88 (page 36), asking if the County were against a Southern Orbital Route. County Council Officers confirmed that the County had no view on the Southern Orbital Route and there were no proposals for it.
- The Consultant was asked to explain Figure 2.9 (page 37). It was suggested that these figures were misleading and it was requested that a table be made available to members showing the extra trips / additional modal traffic.
Action: Steer Davies Gleave
- The eastward moving traffic / access to the A11 hadn't been addressed.

The following comments were made concerning the implementation of the options:

- With regard to the sub-option 2.34 (page 14 of the study), members asked if it were worth pursuing if Network Rail felt that this option were undeliverable. The Consultant acknowledged that this option would be a challenge but there might be ways of making it beneficial to Network Rail and therefore gaining their support.
- The group felt that the feasibility of Phase 1 (North of Newmarket Road) as a stand-alone development hadn't been addressed. It was questioned whether the approach were robust enough for the Inspector. The Consultant confirmed that most developments did not have a 60/40 split and, in transport terms, solutions for Phase 1 could be found. Members stressed that the infrastructure should be in place before the first house is occupied. It was agreed that the consultants would look at how a 60/40 split might be achieved for the first phase of the development and that this would be discussed at a future meeting of the group.
Action: Steer Davies Gleave
- Members expressed concern over the environmental impact of crossing Coldhams Common. In particular, there was opposition to any route between the stream and railway line as this was reported to be the most bio-diverse area of the Common.

- The provision of a new link road to Fen Ditton interchange 2.87 (page 36) might result in traffic using it as a 'cut through' from Ely. This would have traffic implications for Waterbeach and Horningsea. The Consultant confirmed that he would check that this was included in the modelling.

Action: Steer Davies Gleave

It was acknowledged that a lot of work needed to be done before a strategy could be produced. It was highlighted that it was still unknown what Marshalls and Anglian Water were planning to do and it was suggested that the authorities should be putting pressure on them to make a decision.

Conclusion

The Chairman summarised the discussions and concluded that there were some difficult decisions to be made. There was more work for the consultants to do and there would need to be further open debate before the final strategy is agreed. The Group should meet again in the New Year. The purpose of the next meeting would be to review changes made to the study before it was submitted to the Inspector and to discuss the development of a Transport Strategy. Members agreed that the options should be progressed simultaneously and that the strategy was essential to provide clear guidance for the developers.

5. CAMBRIDGE EAST MEMBER REFERENCE GROUP: AMENDMENT TO TERMS OF REFERENCE

Noted.

The Meeting ended at 12.10 p.m.

SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

REPORT TO:	Planning Policy Advisory Group	18 January 2007
AUTHOR/S:	Executive Director / Senior Planning Policy Officer	

Report to consider the Council's response to the proposed changes to the draft revision to the Regional Spatial Strategy for the East of England and the Statement of Reasons

Purpose

1. The purpose of this report is to outline the contents of the Government's consultation on the proposed changes to the draft revision to the Regional Spatial Strategy and debate at the Planning Policy Advisory Group before the Planning Portfolio Holders report to the Cabinet is finalised..

Executive Summary

- 2 The Key issues to discuss are as follows-
 - Noting the need for an early review of the RSS and its implications for South Cambridgeshire if growth from 2021- 2031 is to be of the scale of that proposed up to 2021
 - The Cambridge Green Belt is not to be reviewed as a result of this RSS but it is implied that this may have to be reconsidered in the review of the RSS.
 - The removal of the reference to Cambridge as a compact city from the revised Policy CSR1.
 - The supporting text in mentioning Northstowe talks of a settlement of 'initially 8-10,000.
 - The requirement for employment to contribute to affordable housing has been removed from the plan
 - The 40% or more of housing in the Cambridge Sub-region to be affordable has been removed from the text in the RSS – regional target is 35%.
 - The RSS is no longer able to contain a policy opposing a second runway at Stansted because this is national policy
 - The housing figures in Policy H1 should be seen as a minimum requirement rather than a ceiling
 - Welcome inclusion of policy on provision for Travellers and gypsies
 - Policy T6 includes consideration of regional roads which means that A10 (N) and A1307 are now included
 - Cambridge area is included in list in Policy T15 where further study to be carried out on transport because it is recognised that these areas will have increasing transport pressures as a result of the RSS development strategy.
 - New chapters on carbon dioxide emissions and renewable energy and on water to reflect change in emphasis of whole RSS to consider climate change.

- For future review of RSS the spatial options that will be considered include major urban extensions and major and small new settlements with capacity to continue growth beyond 2031.

Background

3. The East of England Regional Assembly (EERA) prepared a draft revision to the initial Regional Spatial Strategy (RSS) called the East of England Plan, which was issued for consultation in December 2004. Following the consultation an Examination in Public (EiP) was held from November 2005 to March 2006 to test the soundness of the draft RSS. In June the Government published the report of the Independent Panel that conducted the EiP. This report makes recommendations as to how the draft RSS might be improved.
4. The current consultation is on the changes the Government now proposes to the draft RSS and the statement of reasons. The document consists of two parts
 - Part 1 A Schedule of the Secretary of State's decisions on each of the EiP Panel recommendations and the reason for them.
 - Part 2 The RSS text incorporating the Secretary of State's Proposed Changes
5. The process of revising the RSS has been informed by Sustainability Appraisal (SA) incorporating Strategic Environmental Assessment (SEA) at the draft Revisions and Proposed Changes stages and by Appropriate Assessment (AA) at the Proposed Changes stage.
6. The consultation period for the proposed changes is from 19th December 2006 until 9th March 2007. Ministers will give consideration to representations on the Proposed Changes before deciding on the final version of RSS.
7. The final version of the RSS will be published in mid 2007, along with a summary analysis of the responses to the consultation on the Proposed Changes and the final stage of the SA.
8. Throughout the report for reference purposes the page number in the consultation document has been included in brackets.

The Proposed Changes to the Draft Revision of the Regional Spatial Strategy

9. South Cambridgeshire District Council was generally content with the RSS as submitted to the Secretary of State, as it did not propose to increase the level of development in the District beyond that which is already being planned for. Neither the RSS EiP Panel nor the Secretary of States proposes any changes to the housing numbers for South Cambridgeshire. There has been no increase in either housing or job numbers for South Cambridgeshire District. However there have been some changes to reflect the contents of the recently published Planning Policy Statement 3 (PPS3). The proposed changes have

also incorporated the aspirations contained in the recent publication on Planning and Climate Change – a supplement to PPS1. But the Barker Review of Land Use Planning that was published in December 2006 came too late for its ideas to be incorporated into these proposed changes.

10. It is stated in the proposed revised text of the RSS ‘... that one of the key ambitions of this RSS is to allow the region to accommodate higher levels of growth in sustainable ways.’ (Page 82) One of the key roles of this RSS is putting in place a strategy that promotes rather than constrains, medium and long-term growth. Growth is to be focused on a group of significant urban areas named Key Centres for Development and Change (KCDC) – Cambridge has been confirmed as one of these centres.
11. **Early review** - In the chapter considering the core strategy it has been highlighted that an early review of the RSS will be needed because a group of factors have suggested that the rate of growth needs to both increase further and continue after 2021.
12. The factors prompting this review are
 - The most recent household projections,
 - The continued deterioration in housing affordability,
 - The proximity of London
 - Region’s economic potential.
13. This review is included in revised Policy IMP3. The review is to start in 2007 and be completed by 2010.
14. The Key Centres will be the focus for development and it is stated that at most, but not all, Key Centres there is likely to be the need for significant continued growth after 2021. (Page 88) This therefore could have implications for South Cambridgeshire if Cambridge is identified for further growth. It is also mentioned that where Key Centres adjoin or cross local authority boundaries, local planning authorities will need to work jointly or closely together to develop co-ordinated strategies and delivery mechanisms. (Page 88)
15. **Green Belt** – In Policy SS7 Green Belt this RSS does not provide for a further review of the Cambridge Green Belt beyond that undertaken through the Cambridgeshire and Peterborough Structure Plan and related local plans/LDDs. (Page 95) Where Green Belt boundaries are being reviewed in the RSS then it is stated that the aim should be to release sufficient land to avoid the need for further review before 2031. To achieve this, in preparing LDDs it should be assumed that the rate of development at the Key Centres in question will be the same from 2021 to 2031 as the average rate 2001 to 2021. (Page 96) In considering the Cambridge Sub Region the revised text states....’ The Cambridge Green Belt will be protected following the recent review in the Cambridgeshire and Peterborough Structure Plan 2003 and in local plans/DPDs, in order to deliver the vision for the sub-region. The issue may need to be revisited in the review of the RSS.’ (Page 200) This implies that as part of the review process the Cambridge Green Belt could once more

be re-examined. And this is further highlighted in the fact that the revised wording of Policy CSR3 omits the word compact when describing Cambridge.(Page 200) The reason given for omitting the reference to a compact city is that.....' it may give a misleading emphasis including in regard to future development options.' (Page 23) This spotlighting of Cambridge will need to be carefully examined as the review begins.

16. **Sequential approach-** In the Panel Report in June 2006 the Council considered that the absence of reference in the new Policy CSR1 that the list of locations for sustainable development is a sequence is an omission that should be clarified. In the revised Policy CSR1 wording has now been added to clarify that the sequence must be followed and that there has been no change of strategy in this respect. (Page 197) This is to be welcomed. The reason for inclusion now is that it is in accordance with Policy 22 in RPG6. (Page 23)
17. The EiP Panel's recommendation on Overall Spatial Strategy Policy SS2 also included the option that ...'it may be necessary at certain times and in particular places (as identified in LDDs) to depart from the strict terms of a sequential approach to previously developed land if this is essential to bring forward development to meet the requirements of Policy H1....' The Secretary of State has not accepted this option. (Page 86)
18. Mention is made however that the 60% target for development on previously developed land should be considered for amendment in the RSS review. There could be implications for South Cambridgeshire if this target is reduced and further greenfield land is put under pressure for development. (Page 87)
19. **Cambridge Sub Region-** The Government has rejected the suggestion made by the EiP Panel to exclude the market towns of Royston, Saffron Walden, Haverhill and Newmarket from the Cambridge Sub-region and therefore the boundaries of the sub-region remain unchanged. (Page 23)
20. In the supporting text to Policy CSR1 it states that ...' Northstowe will take advantage of the Cambridgeshire guided busway and should optimise the development potential of its location with a settlement initially of 8-10,000 new homes' (Page 198) In the South Cambridgeshire Core Strategy DPD it is stated that Northstowe will be a new settlement up to 10,000. The wording in the supporting text of the RSS as proposed to be changed would now imply that this figure could be exceeded.
21. In the draft RSS in the supporting text to Policy CSR2 regarding housing provision it was stated that 40% or more of the new housing in the Cambridge sub-region will be affordable housing. This requirement is no longer included in the revised RSS. This should be rectified and a target should be included for the Cambridge Sub-region
22. In the supporting text for Policy CSR2 in the draft RSS the following was included....'Employment development will also be expected to contribute towards affordable housing.' The Council had requested that this requirement

be included in the policy thereby giving it greater force. It would appear now that this has not been included in the policy and that it has also not been kept in the revised supporting text. (Page 199) This is an important requirement that must be included in Policy CSR2. It has been supported by the Inspectors who recently considered the Cambridgeshire and Peterborough Structure Plan and the Cambridge City Local Plan.

23. In the EiP Panel 's version of Policy CSR4 there is included the idea of a possible extension of the guided busway system as part of the transport infrastructure. This has been deleted by the Government because ..' a further extension of the guided busway is only a possibility at this stage and is more appropriately referred to in supporting text.'(Page 23) Also the term experimental has been omitted from the wording suggested by the Panel in relation to demand management measures for traffic to and within the city. (Page 200)
24. Policy CSR5 regarding infrastructure provision from the draft RSS has been omitted from the revised RSS in favour of having a region –wide implementation policy - Policy IMP1. (Page240) The proposed policy is more orientated to regional level co-ordination of working. There is a need for recognition of the value of sub-regional co-ordination and a policy included in this section of the RSS to facilitate such working.
25. **Employment** – There has been an addition to the Panel's proposed wording for Policy E1 in that LDDs should provide an enabling context to achieve the targets for job growth included in Policy E1. (Page 37) The targets may be revised through the RSS review in conjunction with a review of the Regional Economic Strategy (RES). It is intended that at the RSS review targets will be produced for each district. - albeit with a degree of flexibility at local level. Cambridgeshire has been given a job growth figure of 75,000 jobs (to support 58,010 new homes) with the flexibility to allocate between each of the five Districts which is to be welcomed.
26. In the supporting text for Policy E2 there is still the misleading impression that there will be a close link between employment allocations /take up (net) and employment growth although within the policy the job growth targets are described as indicative. As part of the evidence base for LDDs employment land reviews are to be carried out and as these reviews are carried out the indicative job targets may need to amended.- thereby still keeping the misleading link between land uptake and job numbers. (Page 105)
27. It is recognised that the economy in Cambridge needs continued management and there should be guidance on high technology clusters. (Page 110) In Policy E4 on cluster developments the Cambridge sub-region is identified in the policy as being a life-science regional super cluster.
28. The policy on the Regions' airports Policy E8 confirms that the 2003 Air Transport White Paper (ATWP) states the policy for Stansted – i.e. that a second runway will be located there and that the draft RSS could not include a policy contrary to this national policy.(Page 40 & 146) In Policy T12 access to

the region's airports is considered and it is indicated that airport developers will be expected to contribute to the delivery of improvements to surface access that may be required to serve any airport expansions.(Page 146) A key priority will be to ensure that airport surface facilities reinforces the shift to more sustainable travel sought by the Regional Transport Strategy (RTS).

29. Also in Policy E8 the Plan supports the relocation of operations at Cambridge Airport to a suitable alternative location subject to adequate environmental safeguards. Since it is consistent with Council policy this is welcomed (Page 115)
30. **Housing** - PPS 3 sets out the general approach to the supply of housing land at the local level and it is this that has informed many of the changes in the chapter on housing.
31. Policy H1 states that *at least* 508,000 additional dwellings will be provided in the region. (23,500 for South Cambridgeshire) (Page 117) The figures included in this policy are to be seen as a minimum requirement rather than a ceiling, which should not be exceeded. This is in line with the new emphasis of PPS3 on delivery and encouraging more houses to be provided. Local planning authorities are being encouraged to aim to exceed the annual average rates for 2006 –2021 if more housing can be delivered without breaching environmental limits and infrastructure constraints by –
 - a) Increasing density;
 - b) Encouraging opportunities on suitable previously developed sites
 - c) Making best use of policies on exception sites to provide affordable housing in rural areas
32. The continuation of the agreed development strategy into the RSS is supported by this Council on the understanding that the phasing of house building is co-ordinated with infrastructure and is balanced with jobs and employment opportunities. If more dwellings are built than stated in Policy H1 sufficient funding must be made available for the associated infrastructure supported by a similar growth in jobs. (Page 117) It is suggested in the supporting text for Policy H2 that phasing may need to take account of the need for additional infrastructure for water supply/ or treatment as provided for under new Policy WAT2. (Page 125 & 172)
33. The housing figures have increased for the region from those proposed by the Panel. The additional 4,300 proposed by the EiP Panel for Cambridge City has been retained in Policy H1. (Page 119)
34. The EiP Panel had proposed that the housing provision from 2006 to 2021 should be divided into three 5-year phasing periods. This has been rejected by the Government as being unnecessarily complex – instead the provision is expressed as single totals and average annual rates. The figures are divided into those, which have already been built, and the minimum still to build with an annual average rate presented in brackets. (Page 118)

35. Included in Policy H1 to comply with PPS 3 is the need to plan for continuous delivery of housing for at least 15 years from the date of adoption. (Page 118) It is recognised that where LDD preparation is already well advanced as in South Cambridgeshire that this requirement will be too late to achieve for these documents. This will have implications for the timing of a review of the Core Strategy DPD. The current period for this DPD is up to 2016 and the new requirement would need to consider up to at least 2021 and more likely up to 2022 to provide a 15 year supply of housing level.
36. For affordable housing the figure of some 35% of the new housing coming forward being affordable in the region as suggested by the Panel has been accepted. An additional requirement for LDDs to set specific, separate targets for social rented and intermediate has been included in Policy H3 to comply with PPS 3. In order to consider affordable housing the sub-regional housing areas are those used to inform investment in this market. The boundaries of these are different to the planning sub-regions and it is suggested that these be looked at as to whether they are fit for purpose when the RSS is reviewed. (Page 126)
37. Policy H4 on provision for Travellers and Gypsies is to be welcomed (Page 126) and this Council is already progressing the requirements of this policy and recognises the urgent need for provision for this section of the population. It is hoped that other districts progress the requirements of this policy and that the rapid progress of this Council is recognised by the Government and that this does not prove to be disadvantageous to this Council.
38. **Transport** – The policies in this chapter more obviously show the change in emphasis of the RSS towards recognising the future affects of climate change and the need to mitigate against them.
39. The Panel had aimed to have an absolute reduction in traffic and worded policies accordingly however the Government thinks this may be unrealistic. The Government has highlighted that there is no national policy to reduce traffic growth per se but rather the aim is to tackle its consequences, congestion and emissions by providing people with more choice with the aim of slowing the rate of traffic growth. The challenge is to ensure that people have options. (Page 46)
40. Policy T3 proposes that road pricing should be considered as part of a package of measures and also recognises the need to avoid disadvantaging the rural communities. The Government states that road pricing is not a panacea and it should not be overloaded with potentially conflicting aims – the primary aim is to tackle congestion and manage demand in a fair way. The EiP Panel had included an extra bullet point suggesting that resources from road pricing could support the objectives of this Regional Transport Strategy (RTS) The Government has rejected this since in their view it implies a net overall increase in resources which may or may not occur depending on a range of factors including future policy on national taxation. (Page 47)

41. Policy T6 includes consideration of both strategic and regional roads. The policy therefore now includes A10 (N) and A1307, which will be improved, managed and maintained according to the aims of the policy. Regional routes should be the lowest level carrying significant movement by heavy vehicles. Roads not identified within the hierarchy should carry predominantly local traffic and not be part of the region's lorry network. Since many of such non-regional roads pass through villages in this region, this policy is to be welcomed. (Page 49 & 139)
42. In the draft RSS Table 8.1 defined the minimum accessibility levels for public transport service. This table has been deleted since it is no longer recognised by the Government as the most appropriate way to measure accessibility. (Page 49) Instead wording has been placed in Policy T7 emphasising the need to improve accessibility to Key centres. In Policy T13 on public transport accessibility demand responsive services are included with the policy aiming for as high a proportion of households as possible having access to public transport to access core services which could be a more useful tool than the table and is generally in accordance with the South Cambridgeshire Core Strategy.(Page 52 & 147)
43. In Policy T15 Cambridge has been identified as an area where further study will be carried out because it is recognised that the areas listed in the policy are likely to come under increasing pressure as a result of underlying traffic growth and the development strategy of the RSS. (Page 53) The implication is that in the next rounds of investment these areas will be targeted which is why more information needs to be found out about them.
44. In Appendix A there is further information including funding sources for currently programmed schemes. (Page 249) There are a number of schemes that are not listed that are important in a local context and which should be re-instated.
 - M11 dual 3 lane J9-14 – was previously listed as ‘part of an endorsed transport strategy – further appraisal needed’.
 - A428 dualling A1 to Caxton – was previously listed as ‘part of an endorsed transport strategy – further appraisal needed’.
45. **New inclusions** – New chapters have been created in the proposed changes. This reflects the new emphasis on reducing climate change emissions within Government policy generally and the policy statement on renewable energy on 8th June 2006 and the draft PPS Climate Change and Planning in particular.
46. The chapters are entitled-
 - Carbon dioxide emissions and renewable energy (Page 56 & 166)
 - Water (Page 57 & 170))
47. **Carbon dioxide emissions and renewable energy** – The chapter on Carbon dioxide emissions and renewable energy contains two policies that were formally in the environment chapter. The policies place a stronger emphasis on carbon dioxide emissions and also include the development of regional

trajectories for the carbon performance of new residential and commercial development. Policy ENG1 on carbon includes a requirement by local authorities to encourage the supply of energy from on site renewable and / or decentralised renewable or low carbon energy sources and through DPDs set ambitious but viable proportions of the energy supply of substantial new development from these sources. In the interim as a minimum 10% of the energy consumed in new development should come from such sources. This is as set out in the new PPS on Planning and Climate Change. This Council already in its Development Control Policies DPD has policies to encourage the use of renewable energy and to reduce carbon emission levels. (Policies NE1 and NE2) Similar policies are included in the Area Action Plans.

48. Policy ENG2 sets renewable energy targets for the region, which are in line with the Panel recommendations. This Council also has policies for renewable energy generation (Policy NE3) albeit expressed differently
49. **Water-**The Panel Report recommended that following the advice from the Environment Agency at the EiP that a key requirement is for water consumption to be reduced by 25% in all new properties and also an aim to achieve 8% reduction in use through retrofitting in existing properties. This requirement was included in a revised policy on water efficiency but has subsequently been removed by the Government in their modifications on the basis that it would not be practical to monitor water consumption in new and existing development separately. (Page 57) Instead in new policy WAT1 the % is replaced by a single per capita domestic consumption target to be developed through EERA's monitoring framework. (Page 57 & 170)
50. It was suggested by the EiP Panel that a regional code or good practice guide on water efficiency standards be developed for public buildings. However the Government has extended this to include all buildings. (Page 171) This Council through the Development Control Policies DPD has a policy requiring development proposals greater than 1,000 m² or 10 dwellings to submit a Water Conservation Strategy to demonstrate how water conservation measures are to be achieved in the scheme. The implementation of this policy could be enhanced by the development of the proposed good practice guide.
51. There have been concerns that the proposed growth within the region would have problems because of the water supply and wastewater infrastructure not being able to cope with the increased demand placed upon it. Policy WAT2 aims to address this problem by ensuring that appropriate infrastructure is in place to cater for the levels of development. It is stated that new development may need to be phased to ensure it does not exceed the capacity / environmental limits of the infrastructure. The scale of the investment required suggests this will be a critical delivery issue for the region. (Page 173)
52. Also in Policy WAT2 it is proposed that LDDs should plan to site new development so as to maximise the potential of existing water/ waste water treatment infrastructure, thereby minimising the need for new / improved infrastructure. This could re-emphasise the idea of clustering more growth

around Cambridge since the waste water treatment works in the north of Cambridge is capable of taking more waste without the need for re-location.

53. **Waste** - Policy WM1 outlines the objectives for waste management and one objective recognises the particular locational needs of some types of waste management facility in determining planning applications and defining green belts boundaries. (Page 178) This seems to imply that green belt boundaries could be revised in order to provide waste management facilities in sustainable locations on the edge of existing towns and cities.
54. Imported waste from London is considered in Policy WM3. It is intended that after 2015 imported waste should be restricted to the landfill of residual waste that has been subject to the maximum practical level of recovery and treatment. When dealing with waste in DPDs local authorities must provide for an annual tonnage of imported waste in addition to that arising within their area, reflecting the apportionment from London for landfill.
55. **Implementation** – Policy IMP1 identifies Local Delivery Vehicles as a means of implementing the RSS. Their roles, functions and composition should be locally determined and will vary according to circumstances. (Page 242) It also states that the remit of any exiting vehicles may need to be revised in light of the proposals in the RSS. Cambridgeshire Horizon's remit is currently being reviewed on the invitation of the Planning Minister Yvette Cooper.
56. The early review of the RSS is included in Policy IMP3 and the primary focus of it will be '...to provide for further growth and development for the 2021-31 period and any additional that may be possible in the period to 2021. As well as the organic growth of existing settlements it should consider spatial development options, including major urban extensions and major and small new settlements with the capacity for continuing development to and beyond 2031.'(Page 246)

Recommendation

57. This report is for discussion purposes.

Background Papers: the following background papers were used in the preparation of this report:

- The Secretary of State's Proposed Changes to the Draft revision to the Regional Spatial Strategy for the East of England and Statement of Reasons December 2006.
- Report of the Panel Examination in Public – June 2006
- East of England Plan – draft revised Regional Spatial Strategy - December 2004
- Cambridgeshire and Peterborough Structure Plan 2003

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