

# Eastern Cambridge Study

Final Report September 2002



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in association with  
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**Campbell Reith Hill, Studio Engleback & Professor Marcial Echenique**

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# Eastern Cambridge Study

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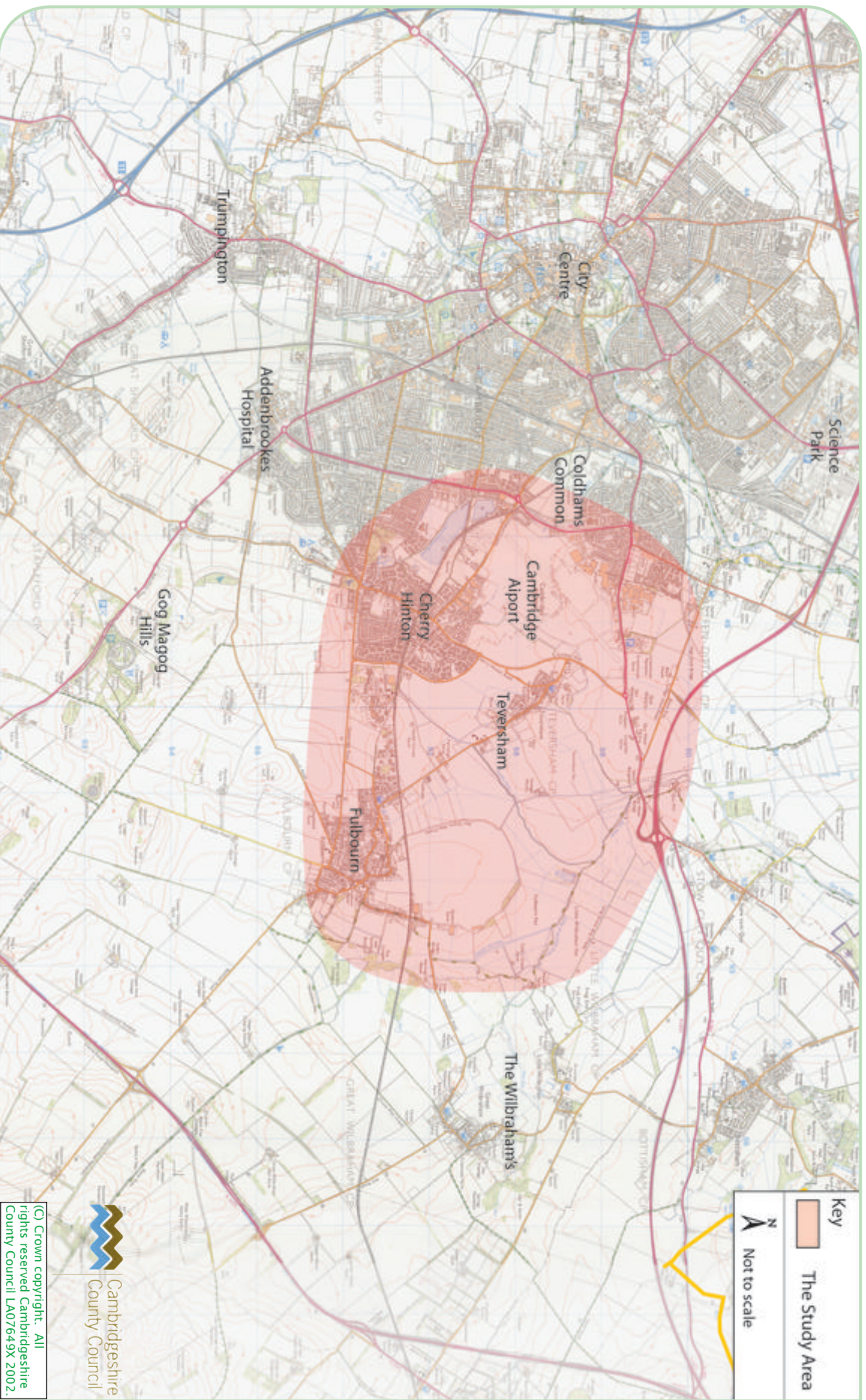
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# Contents

<b>Chapter</b>	<b>Page</b>
1 Introduction	5
2 Scale of New Development	9
3 Environmental Parameters	11
4 Possible Locations, Scales and Forms of Growth	15
5 Planning Policy Implications	23
6 Transportation Parameters	27
7 Implementation Considerations	33
8 Overall Appraisal	35



**The East of Cambridge Study Area**

# 1 Introduction

Planning for growth in Cambridge has involved contentious issues over the last 50 years. Over the last few decades, the issues have been heightened through the great economic success of the city, its university, the research/business axis and the associated effect on the demand for housing, services, commercial development and ancillary activities and uses.

The sensitivity of both the unique urban character of the city core and of the setting in the landscape allows few easy options for growth; and those that there are have been, and are being, rapidly taken up.

There has been a whole series of proposals put forward both for new settlements and urban expansion and an impressive series of studies. All the options face major difficulties of environmental, transportation and social impact.

Nevertheless, the local and central government bodies have negotiated through this contentious maze and a sub-regional development strategy is in place. This is defined in RPG6. The sub-region consists of Cambridge and the ring of market towns

surrounding it. The draft of a new Structure Plan until 2016 for Cambridgeshire and Peterborough has been put on deposit and is to be subjected to Examination in Public late in 2002. This study will inform that debate.

A new major growth concept has emerged in the draft Structure Plan following the principles of sustainable development and coinciding with the potential relocation of the airport which lies across the eastern boundaries of the City.

This area encompasses the site of Cambridge Airport, land to the north between Newmarket Road and the A14 and eastwards around the villages of Cherry Hinton, Teversham and Fulbourn. At present this is largely Green Belt land. The purpose of this study has been to establish a longer term planning framework based on large scale development to the east of Cambridge which complements the current RPG6 strategy and takes it forward beyond 2016.

There appears general consensus which has been reinforced by this study that

expansion eastwards offers major potential for development in a manner which:

- can be a quality exemplar of sustainable urban expansion; and
- create a unique opportunity for the growth of the City as a regional centre.

Although the strategy envisaged by Policy P9/2 of the draft Structure Plan is not dependant on the whole airfield being developed the airport has provided a substantial barrier to eastward expansion. This has been reinforced by the inner boundary of the Green Belt. Two key issues arise:

- What is the potential location, scale and form of eastwards development; and
- Where should the new Green Belt boundary be positioned: The Green Belt being seen as having protected the environment east of the airport from urban expansion. The importance of this issue is that planning policy guidance stipulates that Green Belt boundaries should be sustainable in the long term and only reconsidered at rare intervals; 25 years being a guideline.

1

These two issues are linked to many others. These include:

- The potential demand for urban development land; and the differing scale of growth that could be considered;
- The environmental parameters to growth; the setting in the landscape, protection of the ecology and drainage regime of the fens, of the quality and characters of the villages;
- The practicalities, performance and costs of infrastructure to support the development possibilities, particularly those of transportation and drainage;
- The way any growth could be located, planned and structured to fit into the existing and evolving structure, function and experience of the city;
- How a high quality contemporary urban environment could be created as an integral and fitting part of the historic city: and, if development is practical
- Implementation parameters: how could development be planned, organised and delivered.

These are complex matters made no easier to resolve by many externalities to the study which nevertheless impinge upon it.

However, whilst there is uncertainty about the long-term the study has assumed;

- There will be continued growth pressures in the Cambridge area; and
- There is likely to be a continued preference for sustainable forms of development close to and with good access to Cambridge.

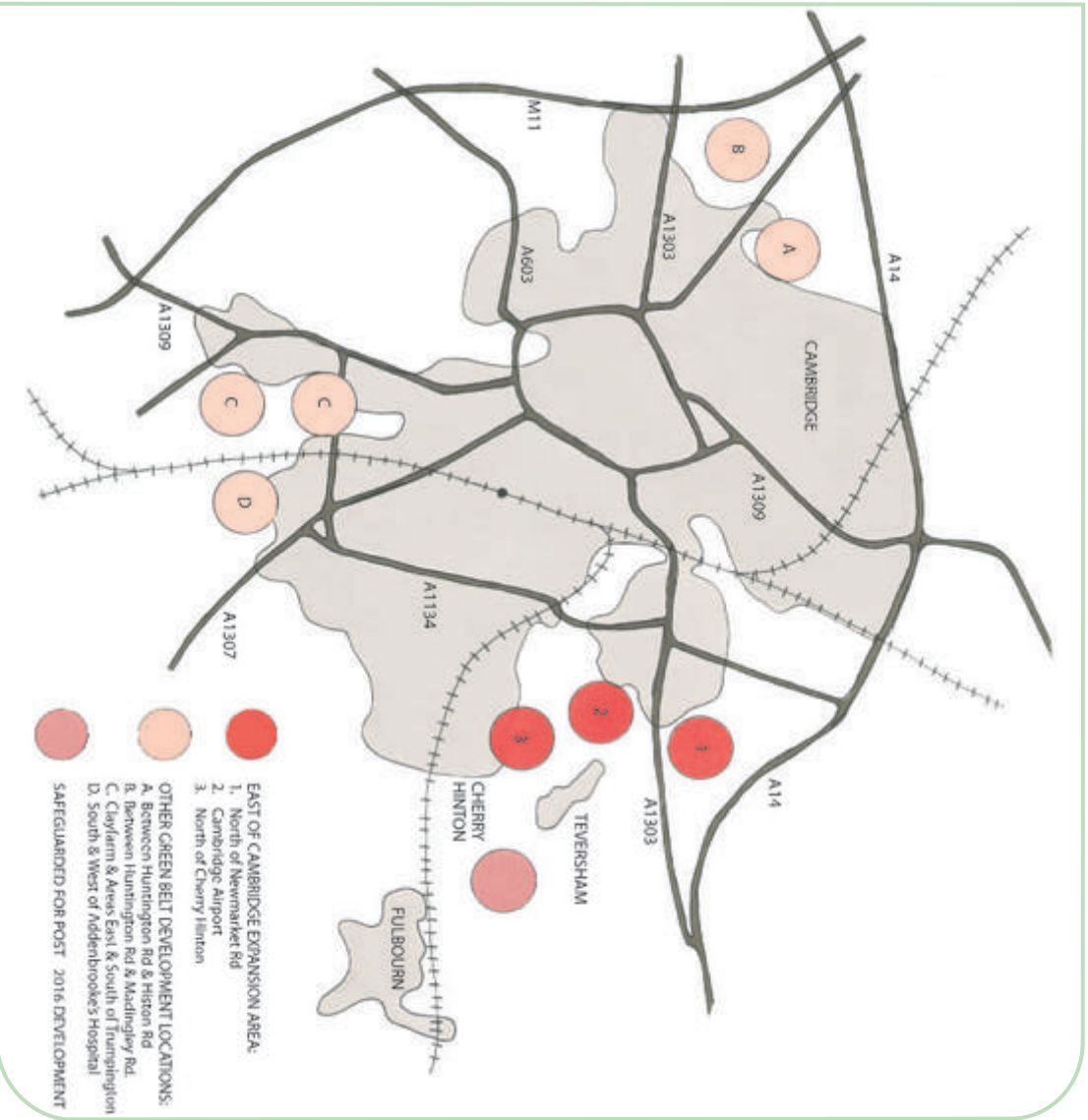
The findings of this study present a clear approach to managing future growth within a framework for sustainable development.

Given the extent and depth of the study undertaken, which builds upon other extensive studies, our findings are surprisingly clear and can be expressed concisely. The report is therefore both brief and comprehensive and showing the eastern expansion to be broadly feasible.

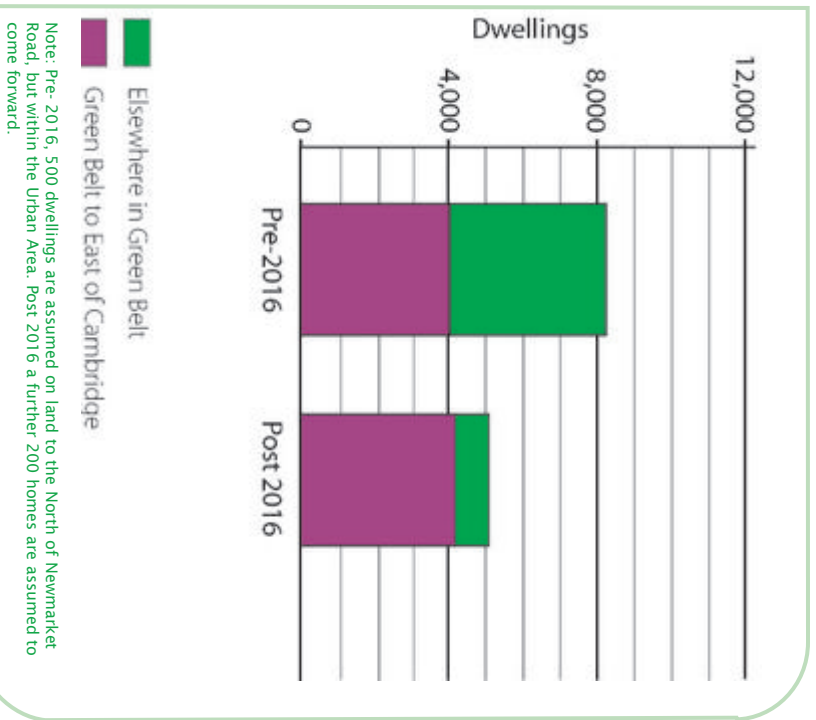
However, this report is backed by a separate volume of technical papers and appendices, making the detailed surveys, evaluation and arguments available for support, reference and scrutiny.

A full list of the technical papers is provided below:

The Strategic Context  
Landscape and Urban Development  
Green Belt Review  
Urban Form and Phasing  
Transport and Accessibility  
Implementation



Locations for Expansion in the Green Belt



Indicative Capacity of Identified Land in the Green Belt





## 2 Scale of New Development

# 2

The sub-regional and city planning context is one of continuing growth. Between 2001 and 2016 there is a challenging housing development target of 2,800 dwellings per annum in the Cambridge sub-region; with a projected increase of jobs by 49,200. There is also an historic imbalance of employment growth and housing provision to be addressed.

To meet these targets, 8,000 dwellings are expected to be developed in the Green Belt, of which in the region of 4,000 fall within the east of Cambridge study area, including some development of the Airport itself.

Beyond 2016, on the basis of the Structure Plan studies, there are further allowances for major development in the Green Belt of which a significant proportion are assumed to be to the east of Airport Way dependant upon the outcomes of this study. Policy makes it clear that such an allowance should only be built-out if development of the airport has been or is being undertaken.

However, there are and will continue to be differing projections of long term demand and uncertainties about the locations where

this demand could be met. Given this situation, the study developed a range of scenarios of the growth demand/supply potential east of Cambridge from 2016 to 2031. These are based upon development immediately to the east of Cambridge (i.e. the airport), followed by expansion around Teversham and then Fulbourn. These represent Inner, Middle and Outer levels of development. Based upon these scenarios in the region of 240 - 450 hectares of developable land could come forward, accommodating between 10,200 and 17,700 dwellings.

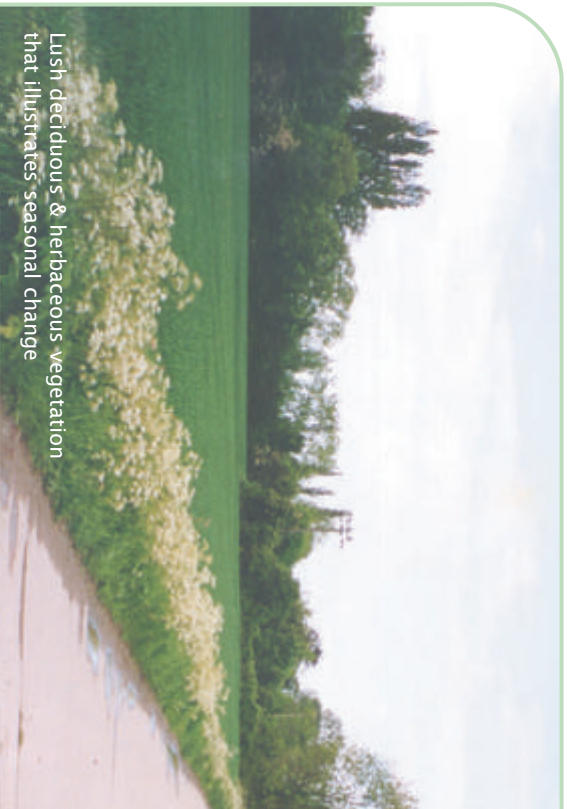
This provides a basis for testing levels and locations of growth in impact and viability terms and on a series of fronts - planning and green belt policy, countryside and environment and protection, urban form and structure both for the development areas and in relation to the city as a whole, conservation of village character, infrastructure practicalities and costs particularly for transportation and drainage, and implementation considerations.

Development Area <sup>1</sup>	Dwelling Capacity	Cumulative Number of Dwellings
Inner	10,200 <sup>2</sup>	10,200
Middle	4,200	14,400
Outer	3,300	17,700

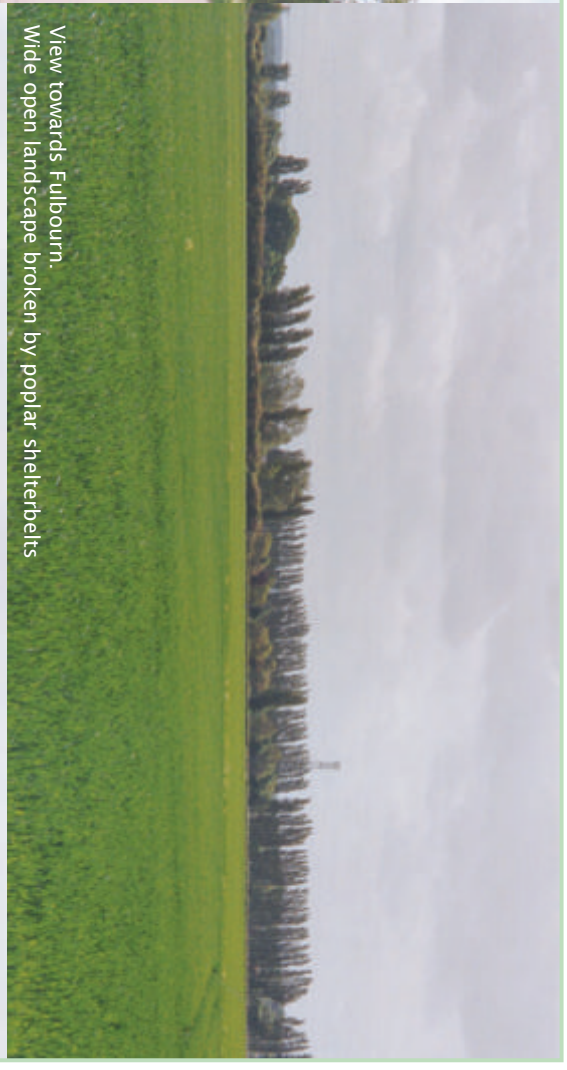
Potential Dwelling Capacity of Eastern Expansion Area

<sup>1</sup> The Inner, Middle and Outer areas are defined in more detail in Section 4

<sup>2</sup> Of the 10,200 potential dwellings identified on the inner area, 4,000 are assumed to take place during the Structure Plan period



Lush deciduous & herbaceous vegetation that illustrates seasonal change



View towards Fulbourn. Wide open landscape broken by poplar shelterbelts



Old chalk pits. Water is an important element in the Cambridgeshire landscape



Teversham. Settlements sit low in the landscape

### Characteristics of the east Cambridge landscape

10 Eastern Cambridge Study

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# 3 Environmental Parameters

# 3

## Qualitative Objectives

Cambridge is a small city with an international reputation and worldwide linkages. As a university city, it has a very distinctive reputation for stimulating economic growth on the basis of innovation and quality in many fields. The interrelationships of colleges, universities, industry, research, teaching institutions and governance have created the dynamism and thus international status of the city.

The airport site and its adjacent areas provide an opportunity for the long term continuing evolution of this dynamism. The area is close enough and big enough and the key landowners are sympathetic. It has, crucially, the characteristics which can allow it to be an exemplar of best practice in innovative urban development and design. It is important that the development is conceived in this manner, and not just as another development site to be eaten up by the speculative development industry.

## Sustainable Development

Regardless of Green Belt designations in examining the options for development there are important 'green' (open space and landscape) corridors and boundaries to be defined. These are to provide a quality setting for new and existing development, to protect and enhance the landscape, ecology, drainage and other environmental characteristics of the area, to avoid coalescence between settlements and to avoid adverse impacts on the settings and quality of the villages.

The Environment Agency has been consulted regarding the findings of the study. The outcome of this consultation is presented in the Technical Papers.

The identified open space swathes are of a scale typical of the analogous spaces in the city and link to them. In addition, they have the capacity to support a sustainable development approach to urban development in terms of drainage, ecology, shelter and amenity.

Similarly, the density assumptions, development mix and public transportation, cycling and walking networks have been designed to provide sustainable development forms which achieve:

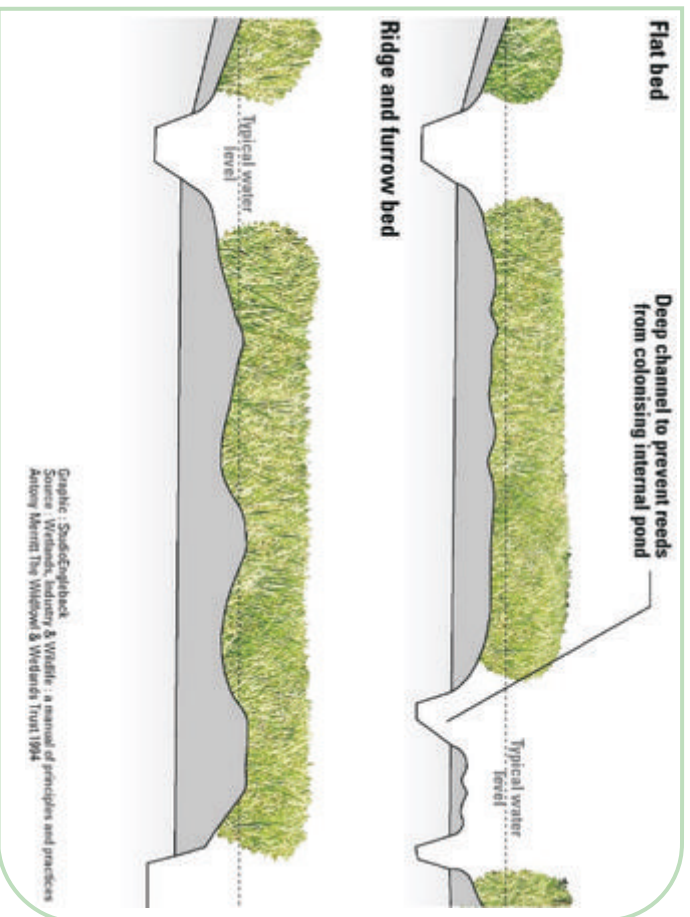
- Land use efficiency;
- High accessibilities to amenities;
- Minimise the need for car usage;
- Maximising the potential for walking, cycling and public transport use; and
- Provide a framework for low energy use and sustainable building and development forms.

## Landscape and Urban Development

Two levels of landscape appraisal have been conducted. The first is about the location of possible development areas in the landscape. This included such issues as the setting from the north (A14), east (the fens) and south (Gog Magog Hills) and the views, scale and alignment of open spaces across the study areas. Key factors in this analysis also included protection of the setting and character of the villages, respecting the drainage regime, the potential for creating long term sustainable boundaries and ensuring the scale of development areas is sufficient for sustainable urban development.

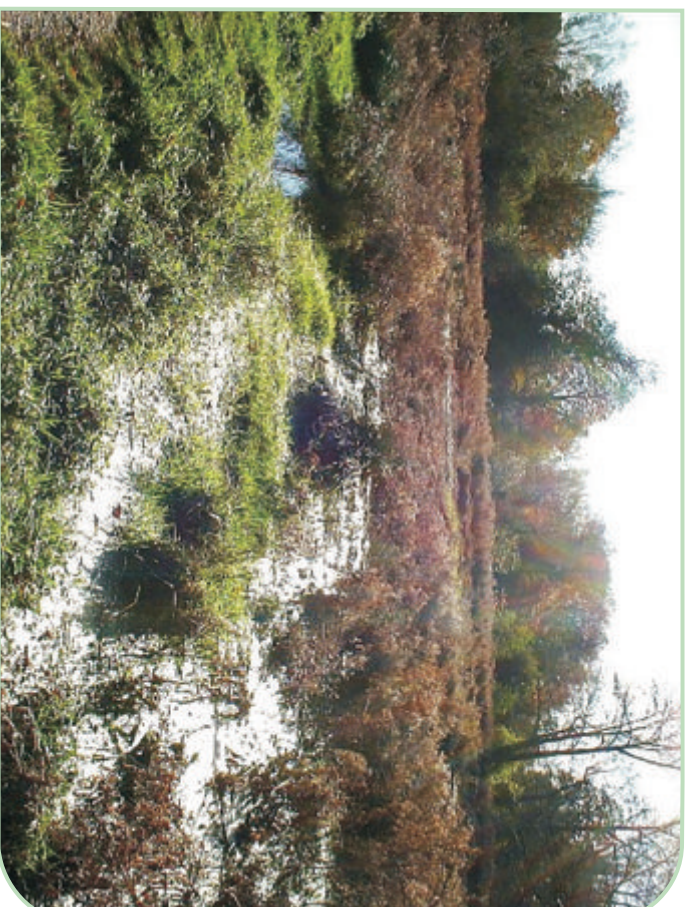
The second level of landscape appraisal is about the use of the landscape for the creation of a sustainable urban development structure - creating shelter, amenity, habitat, defining the nature of sustainable urban drainage and routing systems, and creating distinctiveness and quality in the open space, landscape and boundary structures.

Work previously undertaken by consultants DEGW for the City Council involved a detailed landscape analysis of the eastern expansion area. The analysis presented in the Technical Papers supporting this document supplements that work produced by DEGW. Together they have informed the judgements and findings of this study.



Profile of wetland areas

Key considerations for development in the east Cambridge landscape are the treatment and protection of fenland, flooding and drainage issues.



Seasonal wetland



Valued and well-used open space on Goldham's Common



The Backs: Existing open space in the heart of Cambridge



High quality, high density development along the river front



Parker's Piece: Similar valued open space needs to be developed in the eastern corridor

#### 14 The existing structure should inform the pattern of development to the east

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# 4 Possible Locations, Scales and Forms of Growth

## Introduction

# 4

The boundaries of the possible development areas were defined in three outward slices; inner (airport and northwards); middle (predominantly around Teversham), and; outer (North of Fulbourn).

The approach involved key principles over:

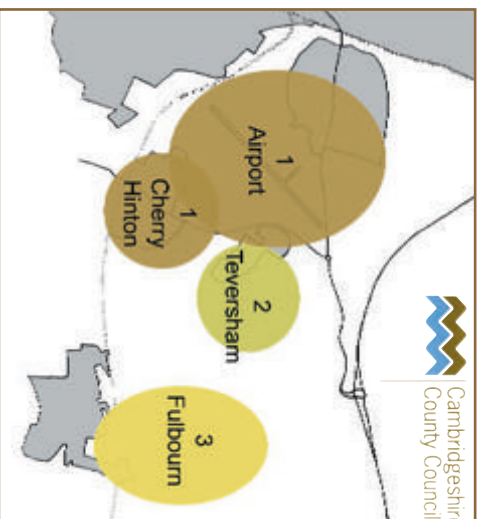
- Locating development so that it did not impact adversely on the setting of the city,
- Ensuring corridors of both open space and views to retain the distinct identity of the villages, and
- The scale and proportion of each site being amenable to sustainable form of development at each stage of expansion.

In arriving at these boundaries we have specifically assessed the three options on their own merits and not just as stages towards one final development. This is important as the level of demand may require part of the expansion area to be built out, i.e., to Teversham for example, but not all of it. It has therefore been important to address the sustainability of each location for potential development. Development is most sustainable close to the City although all areas within the study do have sustainable development benefits.

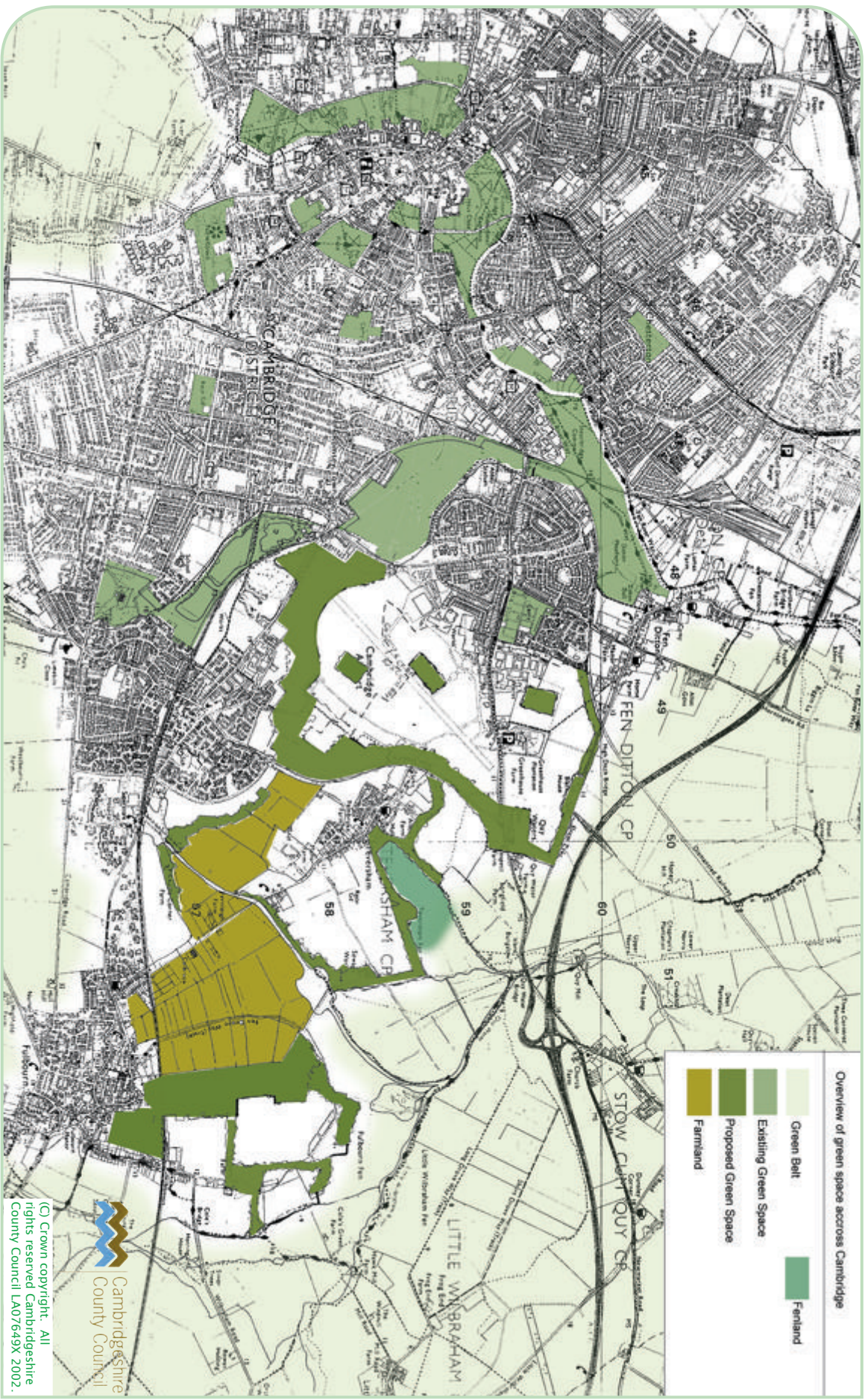
Development of the Airport site only is unlikely to be sufficient for the assumed development horizon to 2031 and further expansion should therefore proceed in a sustainable pattern; first to Teversham and then possibly to Fulbourn.

Not all of the eastern expansion area has been identified for new development. The proposals retain a significant area of green spaces, farmland and open countryside, acting as green fingers into the City. These open space swathes are of a scale typical of the analogous spaces in the City and link to them. In addition, they prevent the coalescence of the villages of Teversham and Fulbourn and have the capacity to support a sustainable development approach to urban development in terms of drainage, ecology, shelter and amenity.

The diagram below locates the basic development areas which are described in more detail overleaf.







### **Inner (Airport, North of Newmarket Road, North Cherry Hinton)**

The northern boundary was fixed at High Ditch Road because of the setting of Fen Ditton, the open aspect from the north (A14) and the containment of existing tree belts.

The eastern boundary was set to the west of Airport Way so that an open space corridor would run close to the edge of Teversham, thus preventing coalescence at this point.

To the south, a new development fringe to Cherry Hinton, including the land between Coldham's Lane and the railway will provide a development area south of a proposed open space corridor extending eastwards from Coldham's Common right across the airport site.

### **Middle (Teversham)**

To the north and east of Teversham, the fen alignments provide the basis for continuing open space and countryside corridors and boundary edges. Buffer 'zones', shelter belts, flood storage and sustainable urban drainage systems can be developed to reinforce these boundaries, provide a high level of amenity and provide a substantive area of development to the north and east of the village.

The Green Belt boundary could be drawn around this option.

### **Outer (Northern Fulbourn)**

This is the long term possible development area. To the east of Teversham much of the land falling within the Green Belt boundary would remain as open space, protected by measures and policies other than the Green Belt. An open space corridor running north of the railway and the existing village helps retain the setting of this very attractive and distinctive settlement, around which no direct development of any scale is envisaged.

Fulbourn is contained to the north by a low gentle hill. This is highly visible on the landscape and will remain undeveloped to minimise any sense of urban coalescence.

To the east and north of this development block, the fens and flood storage areas provide boundaries, and indeed a possible long term Green Belt boundary.

## Comparison of Development Area Options

A simple ranking exercise of the different levels of development shows the inner area to be the most sustainable and favourable.

There is a general consensus for development of the inner area to go ahead. As this area is currently mainly in airport use the environmental sensitivities of new development are not as great as they are elsewhere, such as around Fulbourn. Development here (and to the area around Teversham) minimises the land taken out of the green belt for expansion to take place and it makes the most efficient use of infrastructure investment. Further out the issues regarding environmental sensitivities arise in terms of landscape issues and of the need to make connections back to Cambridge. With good planning and design the visual impact of development can be reduced, particularly as Cherry Hinton and

Fulbourn have already experienced substantial development. Development of the inner area is immediately adjacent to the existing urban area. Further outwards areas of open space are retained between the development areas to provide a degree of separation between the villages and to avoid coalescence. Development of the outer option maximises potential whilst also creating a sustainable development pattern which functions as part of a cluster of communities surrounding the villages and open space structure. However, longer term expansion in the outer area may be more sustainable than in more remote locations elsewhere in the Sub-region.

The strategic urban design approach involved in defining the development and non-development areas is of course an incremental approach. This relates to such factors as allowing infrastructure development as efficiently as possible, providing for incremental development; creating long term sustainable forms of urban development, and fitting into the wider structures of the city and its landscape setting.

The key element of this structure is the landscape. The 'green fingers' of Cambridge run through the development areas defining and containing them. Reed bed buffer zones and shelter-belt planting feature in the open space wedges and corridors and the outer boundary areas of development using the fen landscape and drainage regimes as positive features in ecological, amenity and countryside protection terms.

The development blocks have been designed to allow step by step development along linking routes, planned especially for public transport and easy accessibility by foot and bicycle.

Development Option Area	Infrastructure costs re: Level of Development	Overall Environmental Acceptability	Development Patterns (Proximity & Compactness)
Inner	1	1	1
Middle	2	2	2
Outer	3	3	3

Taken together this creates a framework for exemplary urban design and development based upon creating quality places in a fine landscape setting. The framework can allow the city to expand eastwards in a form which reflects the distinctive character of Cambridge.

The basic land-use strategy should be one of mixing uses, avoiding zoning.

Encouraging a diverse and fine grain mix of land-uses is essential to create a vibrant and attractive development which can also offer accessible local services and facilities. To

quote paragraph 9.2.4 of the draft Structure Plan:

*'The City will grow considerably over the next 30 years and that growth must be in accordance with the principles of sustainable development. Cambridge will have a thriving historic centre accompanied by four expanded communities... The new areas will be compact, mixed developments with efficient use of land, improved connections between housing, jobs, amenities and services and a very high quality of urban design'*

The mixed-use approach advocated does suggest that certain uses should be concentrated or focussed in different localities to capitalise on shared infrastructure and promote more sustainable communities.

Successful communities are generally built around a full range of local services and facilities, including commercial, educational, health, spiritual and civic uses. These need to be conveniently sited and connected to residential areas by safe and comfortable routes.

The airport site forms the core, or focus, of the eastern expansion area. Its location on the periphery of Cambridge and its ability to both link into existing transport networks and be served by new links will enable it to be an attractor as well as generator of trips. Its location and potential linkages make it an attractive location for uses other than residential, such as retail, leisure and employment. The opportunity therefore exists to provide for a variety of uses and to create a community that has a distinct focus but which also integrates with and respects the traditional role and function of the City centre.

Cambridge, as existing, has a multi-nodal character: The Colleges and the key retail centre are based at its historical core with employment on the periphery of the City:

- Addenbrooke's to the south;
- The Science Park to the north; and
- The university research and expansion to the west.

The eastern expansion area therefore has an important role to play in this multi-nodal structure, the aspiration for which lies with the Councils and should be subject to a detailed site masterplanning exercises.

The airport site and middle and outer expansion areas will be key locations for different uses. The potential exists to provide housing at a higher density, focussing on the walking catchments around public transport nodes, retail and employment centres. Similar principles should apply in all of the developable areas. However, whilst not seeking to promote the development of single use housing estates, or a spreading of suburbia, the predominant land use elsewhere is likely to be residential. The links from these locations to the

airport site and more widely to the city centre and other retail and employment centres around the City will therefore be important to put in place.

Development should create areas of distinct local identity and character. They should act as viable communities that provide a range of facilities which also function as part of the extended urban area. It is important that a land use mix and role is created so that the developments do not act as dormitory settlements

The following plans are diagrammatic and are intended to show a possible approach to development of the inner, middle and outer areas. They show how the different areas may be connected. However, they must be the subject of detailed masterplans.



Inner Area Conceptual Development Framework





## 22 Eastern Cambridge Study

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Regional Planning Guidance gives high priority to the location of new housing on the periphery of the built up area of Cambridge, subject to a review of the Green Belt (Policy 22). This forms the second element of the search sequence set out in RPG6, the first element being development within the built up area of Cambridge, where capacity is known to be limited. This approach is reflected in the draft Structure Plan in Policy P9/3c, which indicates that "Local Plan's will make provision for housing and mixed use development on land to be released from the Green Belt". Among the sites identified here are the airport, land to the north of Newmarket Road and between Cherry Hinton and the airport. The draft Structure Plan states "land east of Cambridge Airport is to be safeguarded for development after 2016 and only developed following the substantial development of Cambridge airport"

National policy is long established and clearly sets out the purposes and objectives of Green Belts.

However, there are two main difficulties in simply applying the established analytical tests involved to land east of Cambridge:

(i) The Green Belt designation has tended to become a label signifying an almost absolute constraint to development regardless of the purposes, objectives and tests that apply formally, and regardless of the existence of other countryside protection policies and designations.

(ii) There is considerable discussion about the future of Green Belt policy. This discussion focussed on the compatibility of Green Belts and the principles of sustainable development. Contributions to this debate include the Royal Town Planning Institute, the Council for the Protection of Rural England and the Town and Country Planning Association for example.

The approach in this study was to establish a basis for the retention of the Green Belt as an enduring factor of Cambridge but with its boundaries adjusted to meet the needs of housing and employment in a sustainable manner over the next 25 years. In summary, this involved the examination of the following main elements:

(i) The social and economic impact and roles of the Green Belt;

(ii) Maintaining the city's character and setting;

(iii) Avoiding coalescence of settlements,

(iv) The existing and potential open space, landscape and ecological structure and drainage of possible development areas including the use of development buffer zones, shelter belts and green wedges;

(v) The planning of open land with reference to the open space structure of the city, particularly The Backs and other linear corridors;

(vi) A review of earlier changes to the Green Belt; notably the expansion of Cherry Hinton eastwards;

(vii) The application of countryside protection policies.

In addition, these approaches indicated location, forms and boundaries of the potential new urban development areas outlined earlier in this summary and ensured the retention of a high degree of green land in the form of wedges, fingers, fenland and countryside.

The key matter of the Green Belt Boundary was reviewed against this context. The



parameters for this review included the need for a boundary sustainable for 25 years or more in a situation with a series of unknowns; for example the extent of urban development likely to be needed in the region, the manner in which this might be distributed between East Cambridge and other areas, and the timing and scale of any development on the airport and adjacent sites.

Under a 'plan, monitor and manage' regime, it appeared appropriate to perceive the Green Belt policy for the future as an integral part of 'a dynamic spatial policy strategy' rather than being a separate and distinct element of policy. This planning strategy would have a number of inter-connected elements including:

- (i) A new formal inner green belt boundary, around the Airport site and Teversham (the inner and middle development areas) or a more extensive boundary which also includes the development option to the north of Fulbourn,;
- (ii) Within whichever boundary is chosen a series of open space/landscape corridors which both maintain the distinct identity of the existing villages

and delineate the maximum permissible long term development areas,

- (iii) A clear development sequence; first, the airport and adjacent sites; second, Teversham Expansion; third North Fulbourn; development only proceeding once the earlier sites in the stepped sequence have been largely built out;

- (iv) The use of other planning instruments (Countryside Protection Policies, SPG, a long term masterplan for the area etc) to ensure both the protection of the 'green land' elements of the strategy and the adherence to the proposed development sequence.

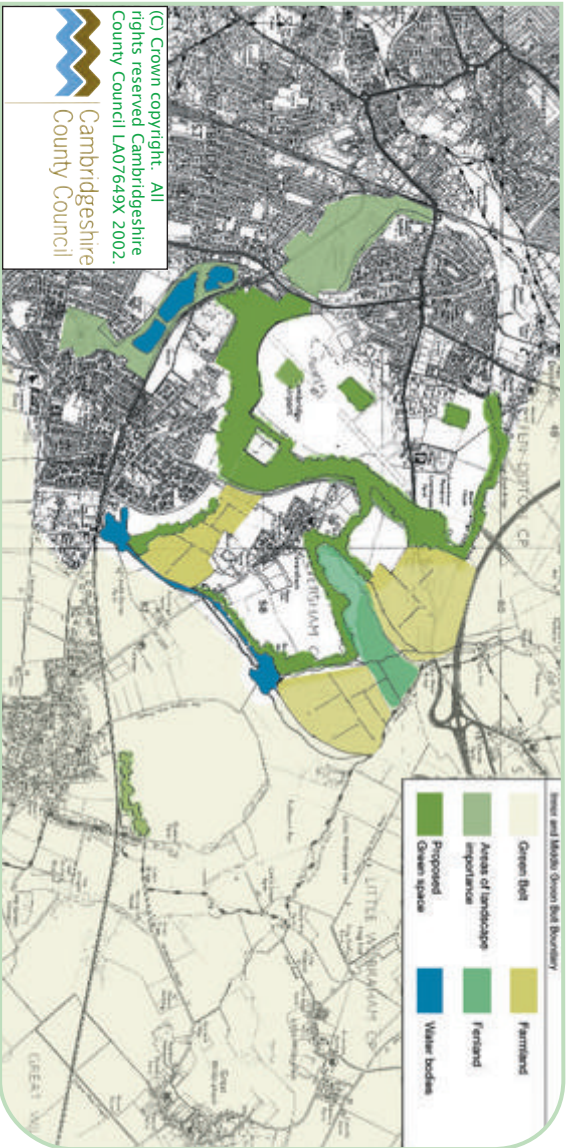
This approach is seen as dynamic and robust, capable of meeting differing levels of demand as they occur over time, protecting the countryside environment and the setting of the established villages, and providing a framework for a sustainable form of urban development. In addition, the unique setting of Cambridge in its landscape will remain protected, and the structural character of the city will be reflected in the development forms of the new area. In addition, it is an approach that can be refined in planning policy terms in relation to future national policy guidance

over green belts, sustainable development, and other related matters.

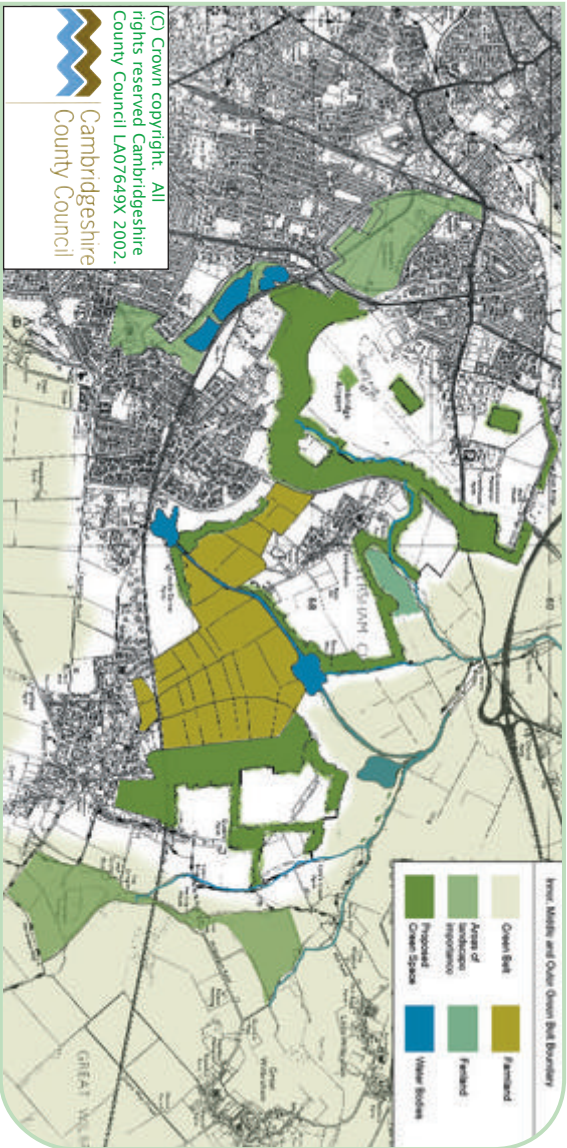
Associated with the different Green Belt boundaries are a number of pros and cons. These can be summarised as follows:

- A boundary around the inner and middle levels of development is highly defensible in terms of landscape and structure. Teversham would become part of the Cambridge urban area but the landscape structure would enable it to retain a degree of separation and identity. Its weakness is that drawing the boundary here does not allow for high levels of long term demand which it may be desirable to accommodate to the east of Cambridge.

- On the other hand drawing the Green Belt boundary to include development north of Fulbourn would allow for long term flexibility and respond to maximum levels of demand. Its weakness though is that it removes green belt protection from large areas of land which in our proposals are intended to be retained as open space to be protected through other planning policies. There may be a risk that these areas would come under pressure for development.



Green Belt Boundary Around Inner & Middle Development Areas



Green Belt Boundary Around Inner, Middle & Outer Development Areas



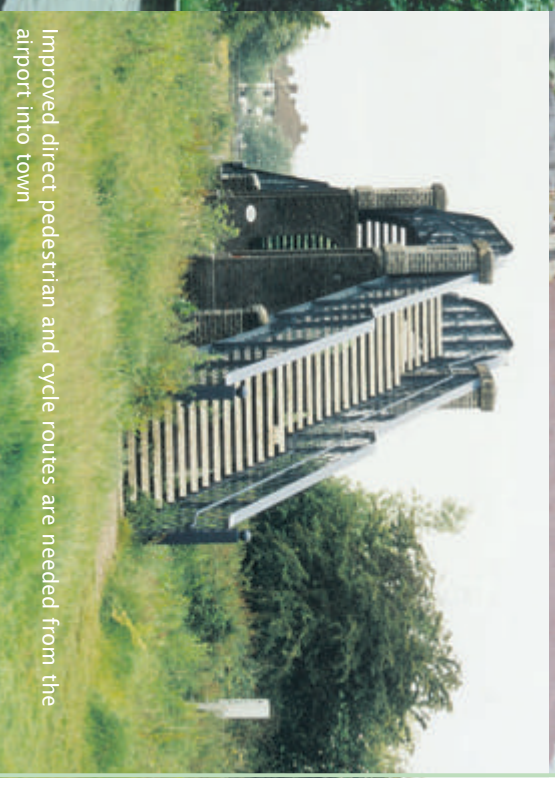
Continued traffic demand management required in Cambridge



An improved public transport service for the eastern corridor is integral to development



Current high cycle usage in Cambridge



Improved direct pedestrian and cycle routes are needed from the airport into town

# 6 Transportation Parameters

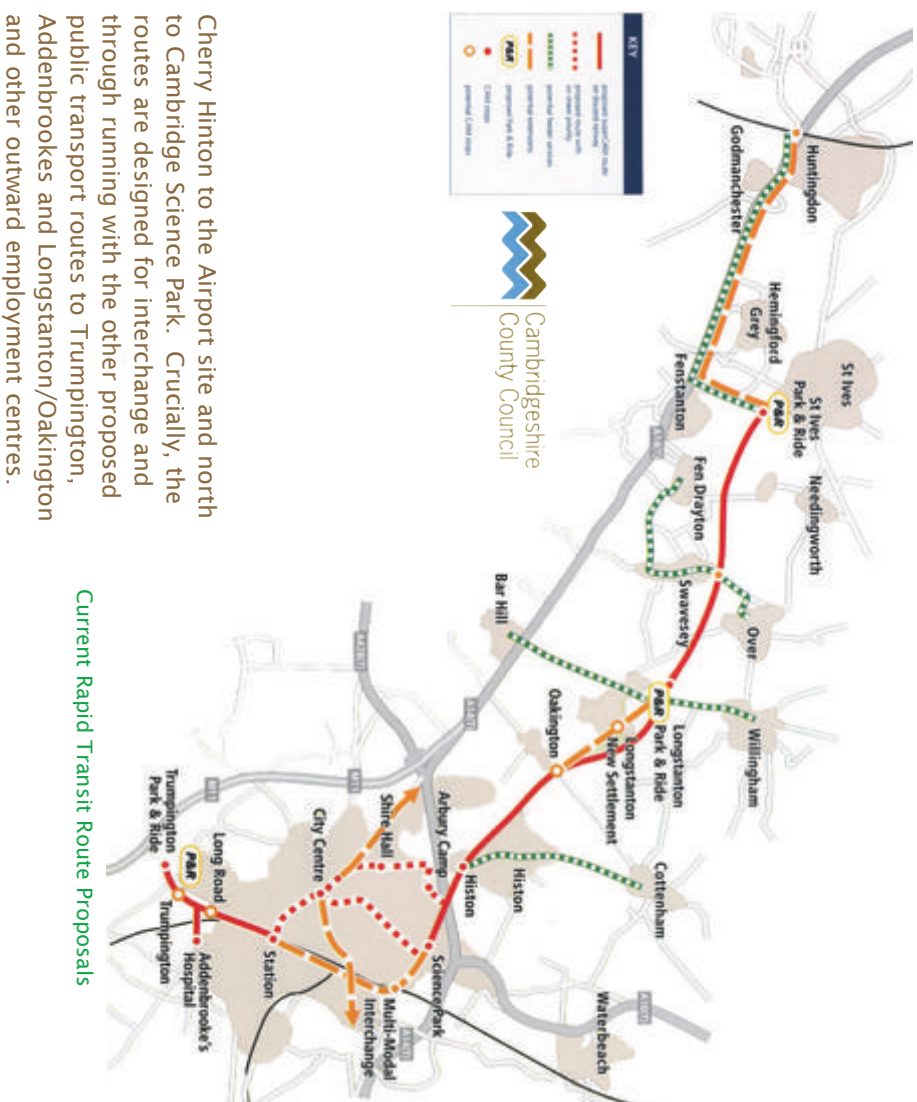
## Transport Networks and Tests

# 6

The development options, were matched with transportation networks for road, public transport, cycle and pedestrian movements. A series of transportation modelling tests were undertaken on the networks. The networks tie into the City's existing and emerging development and movement structures.

A number of options were devised for the purposes of modelling and testing. The minimum 'option' road network is essentially one that opens up access to development sites. It relies upon a new link from the A14 to the airport site and access off the current surrounding roads. The second option assessed through the testing was a potential expanded network including an orbital link (partly tunnelled) from the M11 to A14 and a Fulbourn southern bypass.

Three new dedicated public transport routes are proposed to serve the eastern expansion. Line 1 uses the Newmarket Road corridor for access to the city centre with a possible extension to Teversham and Fulbourn. Line 2 provides access to Cambridge railway station, Addenbrooke's hospital and Trumpington. Line 3 links



Cherry Hinton to the Airport site and north to Cambridge Science Park. Crucially, the routes are designed for interchange and through running with the other proposed public transport routes to Trumpington, Addenbrookes and Longstanton/Oakington and other outward employment centres.

### Current Rapid Transit Route Proposals

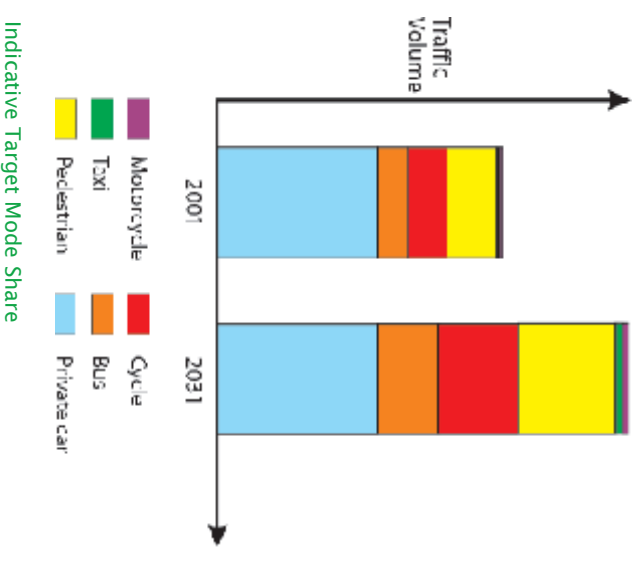
## Development and Transportation Approach

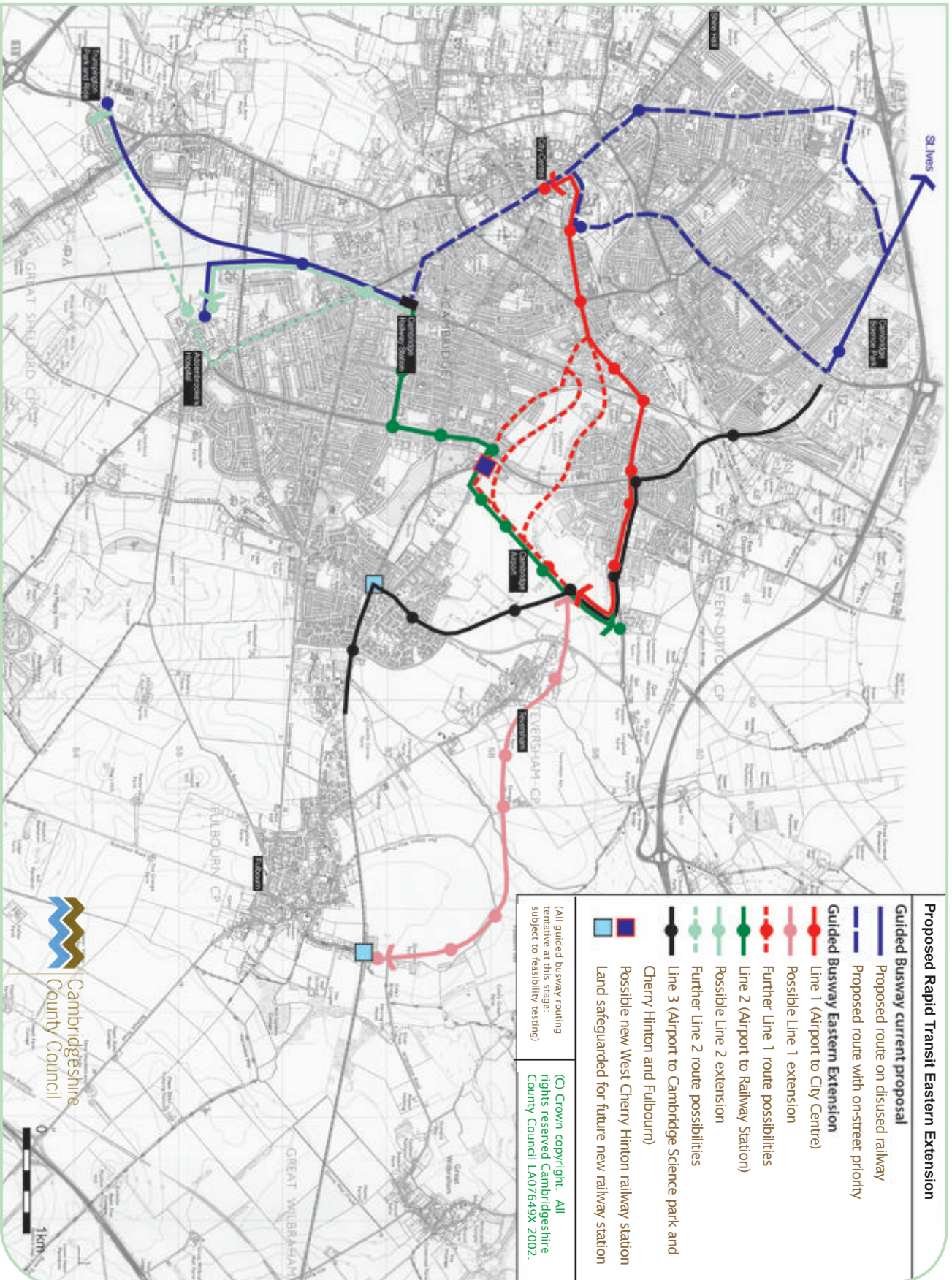
These routes can thus form part of an integrated transportation strategy for the City, linking to the outer employment and urban expansion areas around the City as well as the city centre and the main line railway station. They can help achieve quality orbital, as well as radial, public transport services for the City. They can also be extended eastwards incrementally to serve the later and outer development areas.

There are other key planning elements to the transportation approach proposed and tested:

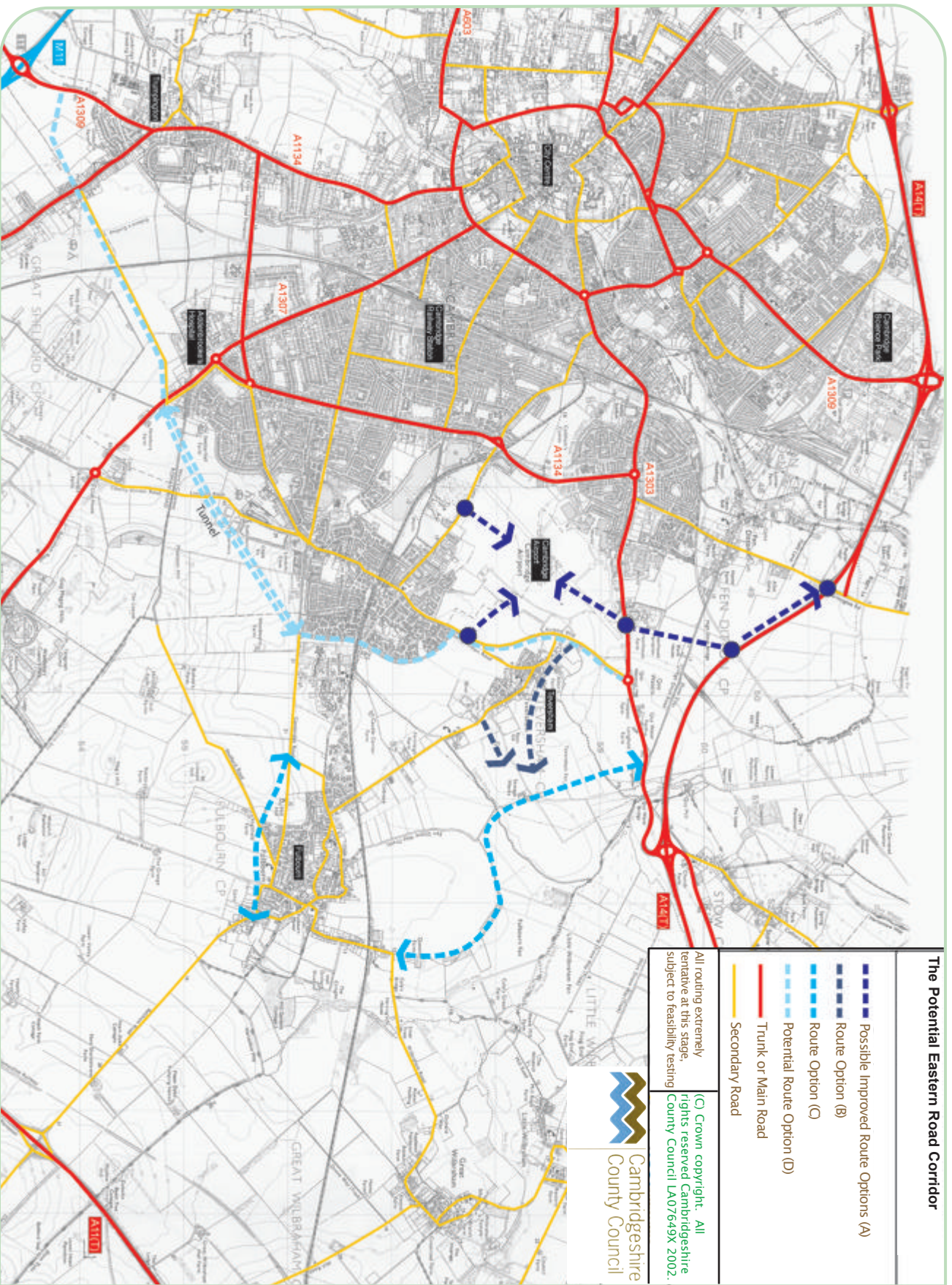
- The planned network can extend from serving the core airport development area to the expanded development area which may in time prove necessary;
- Routes for walking and cycling are seen as critical means of travel and will provide for a high mode share;
- High accessibility (a 400m maximum walking catchment) to the public and transportation systems is required;
- The core airport site is planned as an attractor of trips as well as a generator in land use terms so as to encourage local walking/ cycling life styles, 'reverse' commuting on the road and public transport systems, and as an 'interceptor' of regional inward movements from the east (for example, the A14/A11 corridors); and
- Future and improved railway station(s) on the Cambridge/Ipswich line are seen as potentially valuable in concert with a higher order service to both encourage 'modal' shift in the corridor and give status to the new development areas.

The costs of these proposals, their performance in impact and use viability terms, and the implications of future targeted modal shift assumptions have been subject to preliminary assessment. Further appraisal and testing work is required.





Proposed Rapid Transit Extension



Proposed Eastern Cambridge Route Network

## Modelling Results

Development on the airfield site can support the coverage of public transportation networks being proposed and also a quality level of service, for example using 'guided bus' technology. Equally the road, cycle and footpaths systems proposed are capable of providing the necessary accessibility to and from the site.

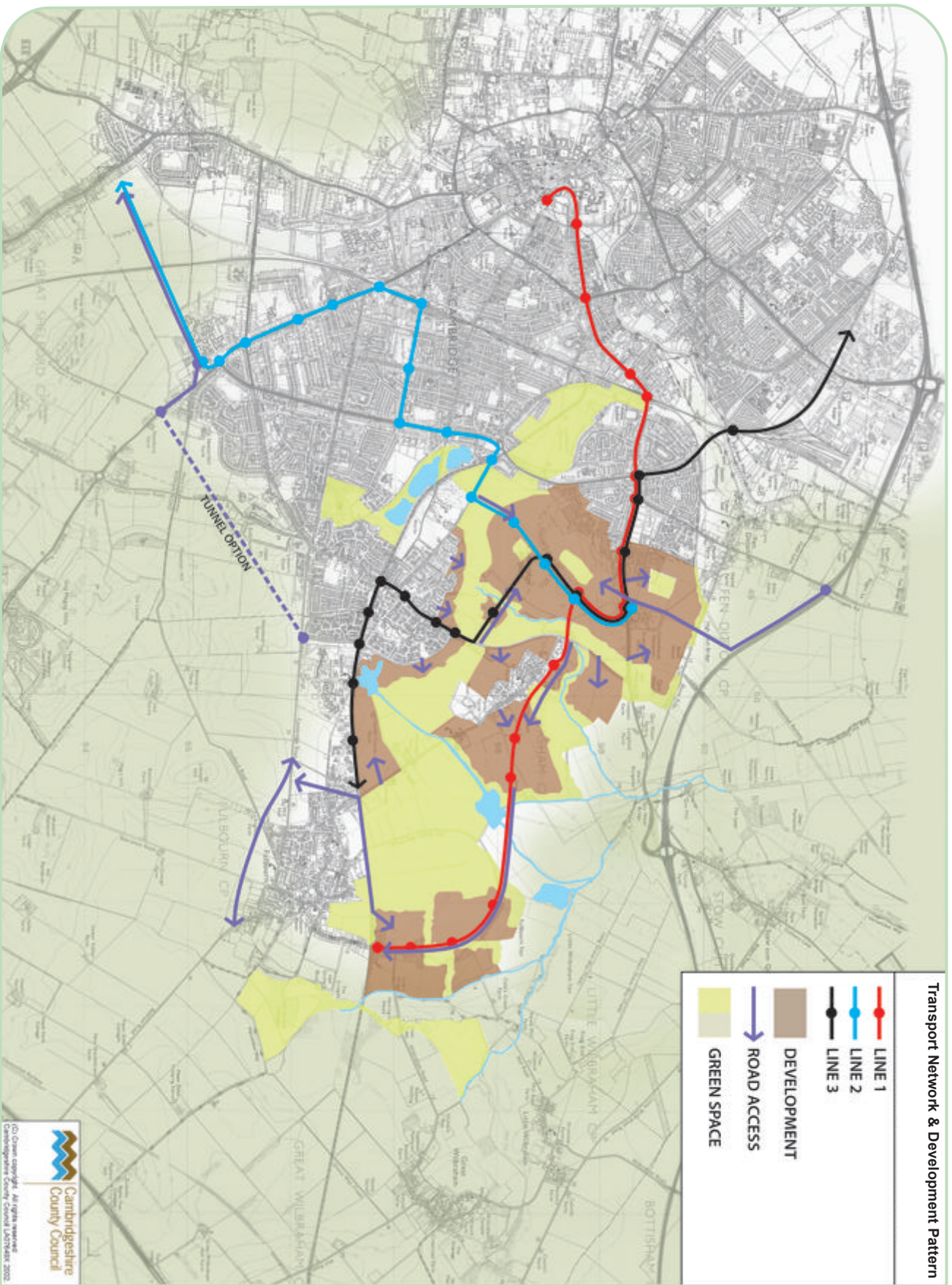
The key forecast congested links are Newmarket Road/Barnwell Road and Airport Way. Delay in terms of reduced speed of traffic would inevitably get worse as development spreads further east.

However, this does not mean that development around Teversham and to the north of Fulbourn is unsustainable as compared with alternative locations of urban growth.

Development in the eastern corridor, based on our initial testing, does not justify an eastern orbital route. Further modelling is required but, it appears that such a link could only be justifiable under City and or regional development grounds.

Strong traffic demand management measures would be required across the Cambridge sub-region to make the outer level of development workable.





# 7 Implementation Considerations



For the purposes of this study, as agreed with the County and City Councils, we have proceeded on the assumption that the Airport will become available at some stage during the Structure Plan period. A study by consultants Arup for the local authorities has identified a number of locations for the possible relocation of the Airport. The Government's recently published consultation paper regarding the future of Aviation in the UK has also identified the possibility of Alconbury have a greater role in the national and regional airport strategy.

The relocation of the airport, is almost certainly in the best long term interests of all. It will allow the businesses to expand, eliminate the environmental impact of air transport on the community, as well as allowing the city to expand efficiently on its perimeter. The Airport site is generally recognised as a sustainable location for development, particularly in social and environmental terms. Its proximity to the existing urban area means that it is able to fit into the existing infrastructure and built form. It will allow facilities that are complementary to those already existing in the City to be provided for and is able to accommodate a range of dwelling types, densities

and tenures to meet the needs of the whole population.

The costs to the airport owners of relocation are very considerable and have to be incurred prior to any income flows from development in the main site. Contributions to infrastructure development, education, affordable housing and other elements including fees will also provide front-end financing burdens and diminish the levels of net receipts to the landowner.

However, the stakes are high and the issues are important. The industries and employment characteristics of Marshall of Cambridge are of regional importance and the future of these should not be prejudiced. Equally, the City region has to be able to continue to accommodate the major urban growth potential that is such a feature of its economy.

Clearly, it is important to formally establish the airport site as a potential urban development area within the planning system.

It can be judged that a formal public/private partnership between a central government agency (EEDA perhaps) and Marshall of Cambridge and involving the local authorities of the area is the potentially the most effective vehicle for organising and delivering the linked packages of measures necessary to secure the relocation of the airport.

The implementation issues for the sites eastwards of the airport are long term and dependent upon the substantial build-up of development and infrastructure on the airport site. Infrastructure costs are unlikely to be major impediments to expansion further eastwards as they will be in place as part of the airport development.



Source: Getmapping plc 2001

34 Eastwards expansion provides an opportunity to provide a new urban quarter, complementing the existing built form

*Llewelyn-Davies*

## 8 Overall Appraisal

# 8

The planning authorities face a number of very difficult policy choices and tensions in planning for the future growth of the City. Growth at the scale required by regional guidance is highly sensitive, and particularly so when it involves the development of well-established Green Belt land. This study will help inform the policy decisions which will be crucial to Cambridge and the local communities affected by development over the next 30 years and beyond.

This study began by identifying two key issues:

- What is the potential location, scale and form of eastwards development; and
- Where should the new Green Belt boundary be positioned:

In addressing these the study has concluded that a major eastern expansion of the city can and should be viable and pursued.

Initially, and for a number of years ahead, the development effort has to be focussed upon the airport site and adjacent areas to the north and south. This report, and earlier studies, describes the parameters involved in creating a high quality and sustainable new sector of the city in this location.

In time, this expansion should continue first to the area around Teversham and then possibly to the area north of Fulbourn.

While a similar high quality and sustainable approach to urban development could be pursued, the impact on the rural environment and landscape and the settings of the established villages determine the ultimate limits of possible development. However the cost-effectiveness of infrastructure, particularly transportation development, increase in pro-rata terms the further eastwards the development. The approach of the current RPG would suggest that the study areas are likely to be the most suitable and sustainable areas for future growth. They are close to the City and can readily be connected to the public transport links which will be required for development on the Airport site in any event.

Under a 'plan, monitor and manage' regime, it would appear sensible to have a clear sequential phased approach to growth, i.e. starting inwards at the airport site and proceeding outwards towards Teversham and possibly to Fulbourn as supply has to be matched to demand. There is a major

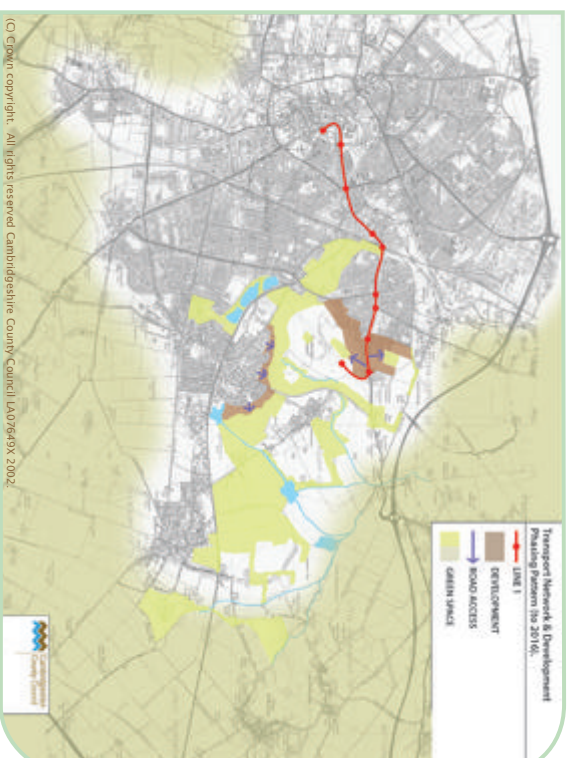
implementation task to be undertaken before even the first step - the relocation of the airport is realised.

An approach which concentrates initially on the airport area has other implementation advantages; over land ownership, the qualitative objectives of the prime landowner; the phasing of the infrastructure, particularly the roads and public transport systems; and a cohesive expansion of the structure of the city. Thus a flexible strategy is required which allows for very extensive growth if necessary; but proceeds in a focussed step-by-step development sequence according to demand.

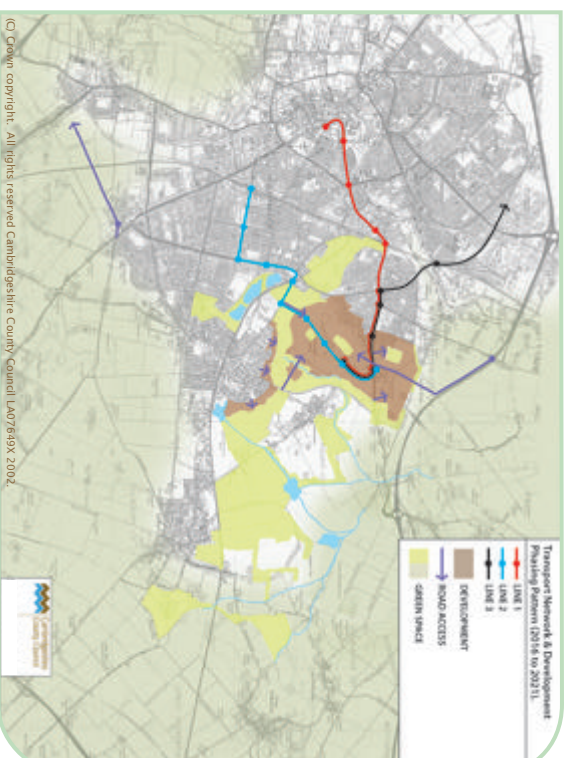
The opportunity to create a new quarter of the city is one of great substance, scale and potential quality. It can both respond to and stimulate the continuance of economic growth in the city region. It can help deal with certain imbalances, for example between housing and employment that characterise the area at present; it can remove the adverse environmental impacts of air traffic; and, it can help build-up a sustainable transportation strategy and particularly a public transportation system for the city.

Above all perhaps, it can provided an opportunity to create a vibrant mixed use piece of city of quality and variety, tied into the wider structure of the city, and in a contemporary way, expressing the form and characteristics that make Cambridge such a unique and special place.

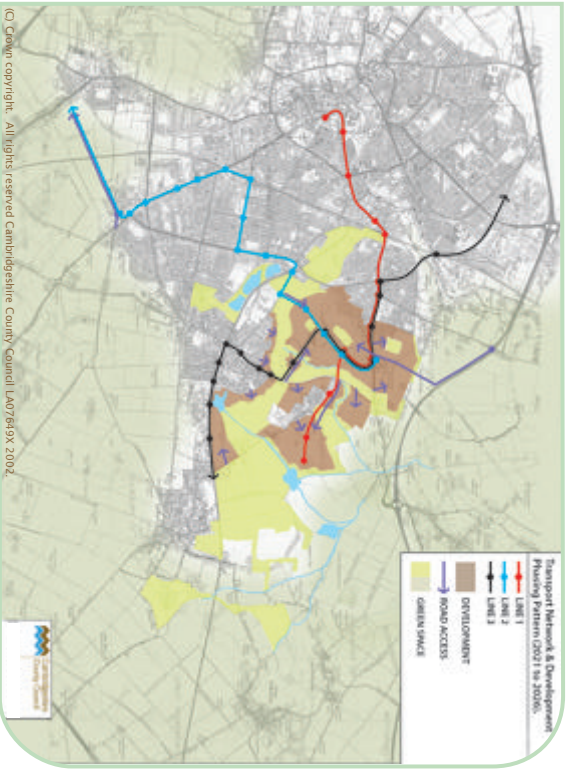
But it will not be easy, or just happen. A planned approach involving all the key players - central and local government bodies and agencies, the landowners, and the development community, is necessary if the potential is to be realised.



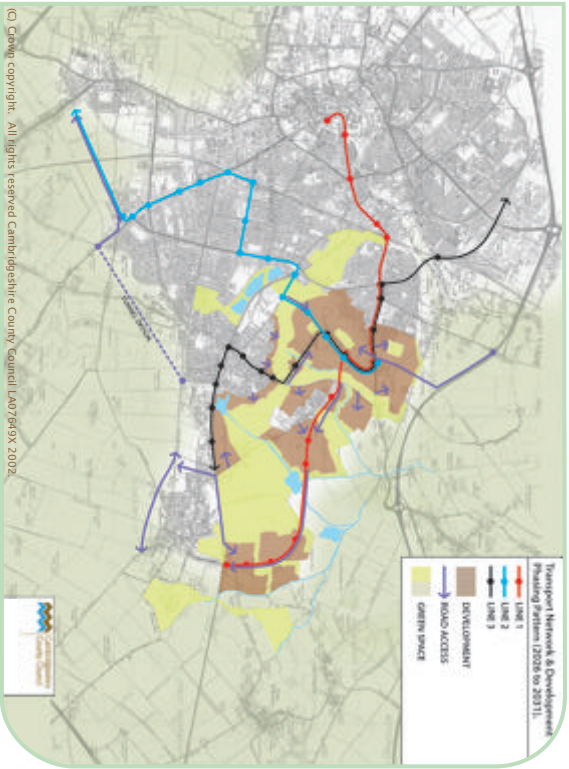
Extent of development within the Structure Plan period



Phase one: development of inner area



Phase two: development of inner and middle areas



Phase three: maximum level of development out towards Fulbourn