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Cambridge City Council

DEVELOPMENT PLAN SCRUTINY SUB-COMMITTEE

To: Scrutiny Sub Committee Members: Councillors Reid (Chair), Saunders (Vice-Chair), Blencowe, Price, Marchant-Daisley and Tucker

Alternates : Councillors Herbert and Stuart

Executive Councillor for Planning and Climate Change: Councillor Ward

Despatched: Monday, 8 October 2012

Date: Tuesday, 16 October 2012

Time: 4.30 pm

Venue: Committee Room 1 & 2 - Guildhall

Contact: Toni Birkin

Direct Dial: 01223 457086

AGENDA

1 APOLOGIES

To receive any apologies for absence.

2 DECLARATIONS OF INTEREST

Members are asked to declare at this stage any interests, which they may have in any of the following items on the agenda. If any member is unsure whether or not they should declare an interest on a particular matter, they are requested to seek advice from the Head of Legal Services **before** the meeting.

3 MINUTES (*Pages 1 - 8*)

To approve the minutes of the meeting of 12th September 2012 (*Pages 1 - 8*)

4 PUBLIC QUESTIONS (SEE BELOW)

- 5 **ASSESSMENT OF THE EFFECTIVENESS OF PERCENTAGE RENEWABLE ENERGY (MERTON RULE) POLICIES** *(Pages 9 - 100)*
- 6 **CAMBRIDGE AND SOUTH CAMBRIDGESHIRE EMPLOYMENT LAND REVIEW: UPDATE 2012** *(Pages 101 - 244)*
- 7 **CAMBRIDGE LOCAL PLAN - TOWARDS 2031 - KEY ISSUES ARISING FROM ISSUES AND OPTIONS CONSULTATION & TIMETABLE UPDATE** *(Pages 245 - 348)*
- 8 **LOCAL PLAN REVIEW - ASSESSMENT OF SITES FOR ALLOCATION IN THE NEW LOCAL PLAN** *(Pages 349 - 378)*

Information for the Public

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DEVELOPMENT PLAN SCRUTINY SUB-COMMITTEE 11 September 2012
4.30 - 6.45 pm

Present: Councillors Reid (Chair), Saunders (Vice-Chair), Blencowe, Herbert, Tucker and Ward

Officers Present:

Head of Planning Services: Patsy Dell,
Planning Policy Manager: Sara Saunders
Senior Planning Policy Officer: Bruce Waller
Senior Planning Policy Officer: Brendan Troy
Senior Planning Policy Office: Joanna Gilbert-Wooldridge
Planning Policy and Transport Officer: Matthew Bowles
Committee Manager: Toni Birkin

Also present:

Councillor John Hipkin
Representatives of Peter Brett Associates: Executive Director, John Baker and Associate, Paul Jobson.

FOR THE INFORMATION OF THE COUNCIL

12/40/DPSSC Apologies

Apologies were received from Councillor Marchant-Daisley

12/41/DPSSC Declarations of Interest

Name	Item	Interest
Councillors Reid & Saunders	12/44/DPSSC	Personal: Member of Cambridge Past, Present & Future
Councillors Reid & Saunders	12/47/DPSSC	Personal: Member of Cambridge Cycling Campaign

12/42/DPSSC Public Questions (See Below)

There were no public questions.

12/43/DPSSC Minutes

The minutes of the meeting of the 17th July 2012 were agreed as a correct record.

12/44/DPSSC Cambridge and South Cambridgeshire Infrastructure Delivery Study 2012**Matter for Decision:**

In March 2010 Cambridge City Council and South Cambridgeshire District Council commissioned an Infrastructure Delivery Study. This was part of the requirement under Planning Policy Statement 12 (PPS12) that local planning authorities, as part of the plan making process, develop a robust evidence base in relation to physical, social and green infrastructure to ensure sustainable communities are delivered. PPS12 has since been replaced by the National Planning Policy Framework (NPPF), which also requires that infrastructure planning must be part of plan making. The Executive Councillor was recommended to adopt the study as part of the evidence base for the Local Plan and CIL

Decision of Executive Councillor for Planning and Sustainable Transport:

The Executive Councillor agreed:

To endorse the Cambridge and South Cambridgeshire Infrastructure Delivery Study for use as an evidence base document for the review of the Cambridge Local Plan and the Cambridge Community Infrastructure Levy (CIL).

Reason for the Decision:

As set out in the Officer's report.

Any Alternative Options Considered and Rejected:

Not applicable.

Scrutiny Considerations:

Following a presentation from John Baker, Executive Director of Peter Brett Associates, the Committee received a report from the Senior Planning Policy Officer regarding Cambridge City Council and South Cambridgeshire District Council Infrastructure Delivery Study.

The consultant responded to question from members as follows:

- i. The funding appears to peak in the mid period of the plan due to the reluctance of service providers to commit to long-term plans.
- ii. Developers were increasingly looking for infrastructure to be in place at the early stages of development projects and this creates a funding stream timing mismatch. Large spends would be required in the early years of the plan.
- iii. Members were reminded that this is an evolving document and initial costing had been based on the 2006 Plan and would need to be updated.
- iv. Funding for telecommunication appears to show conflicting information due to the differing requirements and extent of existing provision across the area.
- v. At present there was insufficient information on health care costing and therefore this is listed with a zero value.

Councillor Reid suggested that the energy infrastructure needs appeared to be based on the outdated 'predict and provide' approach. She suggested increasing the profile on low carbon and reduced energy solutions for future development within the plan.

In response to a question from Councillor Hipkin, Mr Baker stated that the test of what was critical to the plan would be based on deliverability. The critical elements would include any measures needed to ensure that acceptable development came forward. The viability of future developments would be dependant on balancing the relationship between funding streams and the need to provide affordable housing with the requirement for infrastructure.

The Committee resolved (*nem con*) to endorse the recommendations.

The Executive Councillor approved the recommendation.

Conflicts of interest declared by the Executive Councillor (and any dispensations granted)

Not applicable.

12/45/DPSSC Interim Planning Policy Guidance (IPPG) on The Protection of Public Houses in the City of Cambridge - Report on key issues arising from Public Consultation

Matter for Decision:

On 12th June 2012 the Development Plan Scrutiny Sub Committee approved the Interim Planning Policy Guidance (IPPG) on The Protection of Public Houses in the City of Cambridge for public consultation from 15th June until 27th July 2012.

Members' views are sought on a number of key issues that have been raised during the six-week period of public consultation.

Decision of Executive Councillor for Planning and Sustainable Transport:

The Executive Councillor agreed the proposed responses to the key issues as set out in Table 3.1 of the Officer's report.

Reason for the Decision:

As set out in the Officer's report.

Any Alternative Options Considered and Rejected:

Not applicable.

Scrutiny Considerations:

The Committee received a report from the Senior Planning Officer regarding the Protection of Public Houses in the City of Cambridge public consultation. In response to a member question he summarised the responses as individuals who had concerns about specific Public Houses or saw them as having a community value and other members of the public who suggested that non-viable businesses should be allowed to fail. Business responses suggested that they would not welcome onerous additional bureaucracy.

In response to members' questions the following points were clarified:

- i. Recent inspector interventions had developed a means of assessing how community support could contribute to the viability of an establishment. This would be referenced in the final report and the appeal decisions would be used as background information.
- ii. Poor management of a Public House could affect a pub's viability.
- iii. The final report would note the consultation responses.
- iv. The report focused on existing provision rather than new Public Houses. A policy could be included in the new Local Plan for new public houses.

- v. Suggested changes to the IPPG criterion 4(c) were discussed and it was agreed that the contents would be moved/simplified but not deleted from the guidance
- vi. Clarification was provided regarding the use of any specific wording suggested by consultees and reference to recent appeal decisions.

Members suggested that the final document needed to be flexible on matters such as car parks and garden space where their loss could be acceptable in some cases to ensure pub viability.

The Committee resolved to endorse the recommendations with the amendments discussed

The Executive Councillor approved the recommendation.

12/46/DPSSC Draft Consultation Response to South Cambridgeshire Local Plan - Issues and options Report

Matter for Decision:

- i. The City Council, South Cambridgeshire District Council and Cambridgeshire County Council have a long and effective history of joint working on planning matters, particularly on plan-making. As part of the duty to cooperate, the three councils have agreed to work collaboratively and in parallel on new Local Plans and a transport strategy for the Cambridge area. This approach will ensure that cross-boundary issues and relevant wider matters are addressed in a consistent and joined-up manner.
- ii. On 12th July 2012, South Cambridgeshire District Council published their Local Plan – Issues and Options Report for consultation, hereafter referred to as Issues and Options. This consultation forms the first stage in preparing an updated Local Plan for South Cambridgeshire that will set out the vision for the district for the period up to 2031.
- iii. The report sets out the Council's suggested consultation response to the Issues and Options to be submitted to South Cambridgeshire District Council. The representations are set out in Appendix A of the Officer's report.

Decision of Executive Councillor for Planning and Sustainable Transport:

The Executive Councillor agreed the comments as set out in Appendix A of the Officer's report and that these are subsequently submitted to South

Cambridgeshire District Council as Cambridge City Council's formal response to the consultation.

Reason for the Decision:

As set out in the Officer's report.

Any Alternative Options Considered and Rejected:

Not applicable.

Scrutiny Considerations:

The Committee received a report from the Senior Planning Officer regarding draft consultation response to the South Cambridgeshire Local Plan – Issues and Options report. She confirmed that cross-boundary issues had been taken into account in drafting representations and officers would remain engaged in working with South Cambridgeshire District Council to progress both Local Plans.

Members welcomed the quality of the representations and suggested the following additions:

- i. Q57 Gypsy and Traveller provision. The wording would be strengthened to reinforce a positive approach to closer working with South Cambridgeshire on shared provision, possibly in the boundary areas.
- ii. Q75 Retail Provision. Highlight the need for smaller, independent units to be encouraged in new development sites as per the policy option in the Cambridge Local Plan Towards 2031 – Issues and Options report.
- iii. Q103 Cycle Parking. A comment encouraging cycle parking provision should be added.

The Committee resolved to endorse the recommendations.

The Executive Councillor approved the recommendation.

Conflicts of interest declared by the Executive Councillor (and any dispensations granted)

Not applicable.

12/47/DPSSC Representations to the Transport Strategy for Cambridge and South Cambridgeshire (TSCSC)

Matter for Decision:

- i. Cambridgeshire County Council is consulting on what a new Transport Strategy for Cambridge and South Cambridgeshire (TSCSC) should look like. This is the first step in the process and the document (Appendix B of the Officer's report) highlighted some of the main issues and challenges for transport in the area, and asked what approach they should take in developing a new transport strategy to address these issues.
- ii. The Executive Councillor is recommended to agree the City Council's proposed representations to the County Council consultation on a Transport Strategy for Cambridge and South Cambridgeshire, as set out in Appendix A.

Decision of Executive Councillor for Planning and Sustainable Transport:

The Executive Councillor agreed the City Council's proposed representations to the County Council consultation on a Transport Strategy for Cambridge and South Cambridgeshire, as set out in Appendix A of the Officer's report and subject to the amendments discussed below.

Reason for the Decision:

As set out in the Officer's report.

Any Alternative Options Considered and Rejected:

Not applicable.

Scrutiny Considerations:

The Committee received a report from the Planning Policy and Transport Officer regarding the representations relating to the Transport Strategy for Cambridge and South Cambridgeshire. The officer tabled an amendment sheet updated the report.

Members raised the following points:

- i. The validity of the statistics for travel modes in other cities was questioned and members requested details on the source of the data.
- ii. Members suggested that the strategy lacked reference to the City of Cambridge ambitions for reduced carbon emissions and suggested this be added to the representations.
- iii. The strategy was thought to be unambitious, which might be acceptable for a holding document, but suggested that they would support a more challenging final document.
- iv. A additional comment supporting additional Park and Ride sites, possible located further afield, and/or expansion of existing provision was suggested. However, this needed to be mindful of any impact on rural bus provision.

- v. Members requested more clarity regarding Community Bus Subsidies and how this would work in an urban environment.
- vi. A stronger introduction to the representations was requested to reflect the need for a detailed transport strategy sooner rather than later. This would also need to acknowledge infrastructure funding issues.

The Committee resolved to endorse the recommendations. The Chair and Spokes to agree the final draft to include the above suggestions.

The Executive Councillor approved the recommendation.

Conflicts of interest declared by the Executive Councillor (and any dispensations granted)

Not applicable.

The meeting ended at 6.45 pm

CHAIR



To: Executive Councillor for Planning and Climate Change: Councillor Tim Ward
Report by: Head of Planning
Relevant scrutiny committee: Development Plan 16/10/2012
Scrutiny Sub Committee
Wards affected: All Wards

Assessment of the effectiveness of Percentage Renewable Energy (Merton rule) Policies Not a Key Decision

1. Executive summary

- 1.1 The 2006 Cambridge Local Plan includes a 'Merton Rule-style' policy requiring major new developments to meet at least 10% of their energy requirements through the use of on-site renewable energy (Policy 8/16). Similar policies have been adopted by South Cambridgeshire District Council, Huntingdonshire District Council and East Cambridgeshire District Council. While these policies have been successful in delivering renewable energy technologies into new developments where otherwise their use may have been unlikely, there has been little monitoring of the efficacy of these policies.
- 1.2 To this end, South Cambridgeshire District Council, working with the other Cambridgeshire authorities, commissioned consultants to carry out research into the impact of the Merton Rule-style policies in the four local planning authorities. This committee report outlines the main findings from this study.
- 1.3 The study also makes recommendations in terms of the future role of Merton Rule-style policies in the planning system. An option considering the retention of a Merton Rule approach was included within the carbon reduction policy options of the Local Plan Issues and Options Report.

2. Recommendations

- 2.1 This report is being submitted to the Development Plan Scrutiny Sub-Committee for prior consideration and comment before decision by the Executive Councillor for Planning and Climate Change.
- 2.2 The Executive Councillor is recommended:

- To consider the findings of the Merton Rule Assessment Study and to endorse its use as part of the evidence base for the review of the Local Plan.

3. Background

Background to Merton Rule-style renewable energy policies

- 3.1 The 'Merton Rule' refers to a planning policy first developed by the London Borough of Merton in 2003. The rule requires the use of on-site renewable energy generation to reduce the annual emissions of CO₂ in the built environment. It has been adopted by the majority of Councils, with local authorities in Scotland and Wales implementing their own versions of the policy.
- 3.2 Cambridge City Council adopted a Merton Rule-style policy as part of its 2006 Cambridge Local Plan, with further guidance on the application of the policy provided in the Council's Sustainable Design and Construction Supplementary Planning Document (2007). This policy sets out that "developers of major proposals above a threshold of 1,000 square metres or 10 dwellings will be required to provide at least 10% of the development's total predicted energy requirements on-site, from renewable energy sources. These requirements may be relaxed if it can clearly be demonstrated that to require full compliance would not be viable". Similar policies have been adopted by South Cambridgeshire District Council, Huntingdonshire District Council and East Cambridgeshire District Council.
- 3.3 Merton-style policies have brought renewable energy technologies and valuable additional carbon savings into new developments where otherwise this was unlikely. They have also helped to provide important experience of the role of renewable energy in new development in advance of the arrival of zero carbon standards from 2016, and to some degree, have also boosted the supply and support skills chains within the development of the microgeneration and larger scale renewable energy sector.
- 3.4 However, some important shortcomings have also been identified but, to date, have not been supported by evidence, notably:
 - Little, if any, monitoring/enforcement activity is carried out to ensure that the renewable energy specification approved as part of planning applications is delivered on the ground;
 - Very little, if any, follow-up evaluation is carried out to ensure that the installed renewable energy technologies are delivering the levels of carbon savings predicted as part of the information submitted with planning applications;

- A vacuum exists in terms of support to new property owners and occupiers in terms of living with, and maximising the benefits of, the installed renewable energy technologies.

3.5 To this end, South Cambridgeshire District Council, working with officers from the City Council and other districts with Merton Rule-style policies, procured consultants to carry out a review of the implementation of these policies across the districts. The specific objectives of the study were:

- To provide evidence of the effectiveness or otherwise of Merton Rule-style policies as implemented ‘on the ground’;
- To provide a technical and socio-economic appraisal of the renewable energy technologies installed as a consequence of these policies;
- To provide evidence of the influence of Merton Rule-style policies on the local supply chain;
- To conduct a thorough review of Merton Rule-style policies as currently applied within the LPAs;
- To recommend practical and achievable options for improving delivery outcomes in this policy area; and
- To provide a substantiated view on the future of this type of policy in the context of national policy and regulation.

A full version of the Merton Rule study can be found in Appendix A of this committee report.

Findings of the study

3.6 The study illustrated that the existence of Merton Rule-style policies has succeeded in their primary purpose of delivering renewable energy generation on new developments where otherwise this would not have been the case. The evidence, however, identifies a number of shortfalls in the current policy approach, notably:

- The need for significant specialist knowledge in assessing applicants’ proposals for meeting the policy requirements. The study found significant variation in the quality of information included within Energy Statements. It did, however note, that given the guidance provided in the City Council’s Sustainable Design and Construction SPD and its standard proforma for submitting energy calculations, there was less variation in Energy Statements for developments in Cambridge. The study recommends that this approach be adopted across the Cambridgeshire authorities to ensure consistency of approach.
- Developers have not yet bought into the idea of renewable energy being a standard and routine aspect of the design of new buildings. This particularly applies to new homes, where there was little evidence of designs being modified to make better use of

renewable technologies.

- Resident/occupier satisfaction levels were good for those technologies requiring minimal intervention; this typically applies to solar hot water and photovoltaic systems. By contrast, those systems requiring a higher level of user intervention registered a higher level of dissatisfaction, with, in some cases, technologies switched off. Issues such as incorrect specification of equipment and poor installation compounded this dissatisfaction.
- Monitoring and assessment of effectiveness on the ground was very difficult to achieve in a consistent and reliable way, especially for space heating systems.

3.7 The study concluded that the implementation of Merton Rule policies would be improved through close collaboration between local planning authorities, and specifically:

- Through the use of common wording of policies across local planning authorities; and
- By consistent use of the same template for processing energy statements, with the recommendation that Councils' adopt the template included within the City Council's Sustainable Design and Construction SPD.

3.8 The study also recommends developing a closer working relationship with developers themselves to encourage them to 'buy into' and support these policies. One recommendation is that Councils work with developers to provide new home owners and occupants with advice and information on how to get the best from their renewable energy systems. The Study also suggests that local planning authorities should use their policies to encourage developers to use local renewable energy suppliers, in an attempt to maximize the local economic benefits of Merton Rule policies. The monitoring of renewable energy system performance be sought through planning conditions

Future of Merton Rule-style policies

3.9 A key consideration for the study was the future of Merton Rule-style policies within local planning authorities Local Plans. There has been some debate about the future of these policies in light of the national Zero Carbon Agenda. Under the original definition of zero carbon development, where from 2016 all new development would have needed to deliver zero carbon emissions from all energy use in new homes, Merton Style policies would have clearly become redundant. However, given that the requirements of zero carbon have now been 'diluted' there could still be a role for these policies up to 2016.

- 3.10 The study recommends that if Merton Rule policies are to continue to have a role in planning policy that they should focus on those technologies with a proven track record of performance and ease of use for building occupants. To this end, the study recommends adopting a 'solar first' approach, with either solar thermal or pv being required for new homes, and pv being required for all non-residential development. It also recommends that a more flexible approach be adopted for large estates, for example University of Cambridge academic sites, so that a site-wide approach to specifying renewable energy can be considered as opposed to requiring every new building on a site to include 10% renewable energy. The arguments in favour of a 'solar first' approach include that they are mature technologies and are relatively simple to monitor and enforce. However, in the past national planning policy has been opposed to the use of policies that are technology specific, and developers tend to be opposed to such an approach. There is no specific wording in the National Planning Policy Framework that would support or object to this approach, and as such it is likely that it would be tested at examination.
- 3.11 Any continuation of, or amendment to, Merton Rule policies, would need to take account of other future policy options in relation to carbon reduction from new development and other evidence base, including the Decarbonising Cambridge Study (2010). The Decarbonising Cambridge Study examined options for cutting carbon emissions from new development in the city. This recommended that the Council adopt a policy requiring a level of on-site carbon reduction from new development that would go beyond the requirement contained within national zero carbon policy (70% as opposed to 44-60%). If a policy were to be developed requiring 70% on-site carbon reduction, then achievement of this level would undoubtedly require the use of renewable energy, therefore making the need for a Merton Rule style policy redundant. Beyond these on-site levels of carbon reduction, further measures would need to be implemented to enable developers to meet national zero carbon requirements, which come into force in 2016. Possible measures were considered in the work to investigate the development of a Cambridgeshire Community Energy Fund (2012) and Cambridgeshire Renewables Infrastructure Framework (2012), reports on which have been discussed at this committee.
- 3.12 A number of carbon reduction policy options were included in the Local Plan Issues and Options Report, as set out in Appendix B of this committee report. These included an option related to 70% carbon reduction one option related to continuing with a Merton Rule approach on top of national zero carbon requirements. Officers are currently working through the representations received to the Issues and Options Report, and policy recommendations will be discussed

with Members at this committee in the near future.

4. Implications

(a) Financial Implications

There are no direct financial implications arising from this report. Policy recommendations will be considered as part of the review of the Local Plan, which has already been included within existing budget plans.

(b) Staffing Implications (if not covered in Consultations Section)

There are no direct staffing implications arising from this report. The review of the Local Plan has already been included in existing work plans.

(c) Equal Opportunities Implications

The greater implementation of renewable energy as part of new developments has the potential to help alleviate fuel poverty amongst residents of Cambridge. With regards to an Equality Impact Assessment, the equal opportunities implications of future planning policies will be assessed as part of the Equalities Impact Assessment of the Local Plan.

(d) Environmental Implications

The environmental implications of the report include the reduction of carbon emissions associated with meeting the energy requirements of new development. This will help the City in meeting its carbon emission targets. Increasing the deployment of renewable and low carbon energy should, therefore, have a medium/high positive climate change impact.

(e) Procurement

There are no direct procurement implications arising from this report. South Cambridgeshire District Council procured the Merton Rule Study in line with their procurement policy.

(f) Consultation and communication

The Merton Rule study is a technical report and has not been subject to direct public consultation. However, the findings of the report have fed into the Local Plan Review and the development of future policies

in relation to carbon reduction/renewable energy provision. A consultation strategy for the Local Plan Review has already been approved by this Committee (November 2011), with the first stage of public consultation on the Issues and Options Report having been recently completed.

(g) **Community Safety**

There are no direct community safety implications arising from this report.

5. Background papers

These background papers were used in the preparation of this report:

- Element Energy and Terence O'Rourke: Decarbonising Cambridge: A renewable and low carbon energy study for Cambridge City Council, September 2010:
http://www.cambridge.gov.uk/public/docs/Decarbonising_Cambridge_final_report_220910.pdf

6. Appendices

- Appendix A: Climate Works Ltd and Impetus Consulting Ltd (2012). A review of 'Merton Rule' policies in four local planning authorities in Cambridgeshire.
- Appendix B: Extract from the Cambridge Local Plan Issues and Options Report (2012): Carbon reduction options.

7. Inspection of papers

To inspect the background papers or if you have a query on the report please contact:

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A review of 'Merton Rule' policies in four local planning authorities in Cambridgeshire

Final report

Prepared for: Richard Hales, South Cambridgeshire District Council.

Prepared by: Mark Letcher, & Sarah Smith, Climate Works Ltd, & Emma Jones, Impetus Consulting Ltd.

Date: 23rd May 2012. Last revised 29th June 2012.

Proof read by: Liz Vosper, Climate Works Ltd.

Report ref: 141-Merton Rule study Final.

This project has been developed as part of the Climate Change Skills Fund. The fund is managed by Sustainability East on behalf of Improvement East.

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Executive summary

Introduction

This report sets out the findings of research into the impact of Merton Rule-style policies in four Local Planning Authorities in Cambridgeshire. These policies require reduction in carbon emissions from new developments through the installation of on-site renewable energy generation. First developed by the London Borough of Merton in 2003, 'Merton Rule' policies have been adopted by the majority of councils in England.

The purpose of the study was to investigate the degree to which these policies are meeting their primary objectives of reducing carbon emissions and raising the profile of renewable energy, as well as their secondary objectives of benefitting building occupants through reduced fuel bills and providing local economic opportunities. It also investigated how policies have impacted council officers (in terms of administration and monitoring) and developers (in terms of meeting the policies' requirements).

Methodology

The study aimed to draw together a broad evidence base from a variety of sources to develop a composite picture of the efficacy and impact of Merton policies in the four LPA areas. This involved:

- ▶ A literature review relating to the national policy and regulatory context;
- ▶ Gathering data on all relevant planning applications within the 4 LPAs;
- ▶ Face to face and telephone interviews with LPA officers, developers, housing associations, estate managers, residents and tenants and supply side companies; and
- ▶ Running a stakeholder workshop to discuss initial findings.

Application of 'Merton' policies across the county

The research found that there are differences in understanding both between and within LPAs about the primary objectives of these policies (e.g. carbon reduction or profile raising). Implementation of these policies tends to be reliant on a few key individuals in each LPA, leading to inconsistency in the application of the policy. There is also a great deal of variation in the way developers provide LPAs with energy statements regarding intended compliance with these policies, making assessment time-consuming for officers. In addition, the lack of an automatic system for tracking Merton Rule planning applications through the planning system, or determining when construction has been completed, makes monitoring of the policy very difficult.

Are the policies meeting their objectives?

These policies are certainly resulting in renewable energy installation in private housing and non domestic developments. (In social housing, the renewable energy installations are being driven by the national

requirement for new social housing to comply with Code for Sustainable Homes Level 3.) However, developers have not fully embraced these technologies and see them as being off-putting to prospective purchasers.

It is difficult to accurately assess whether the policies are delivering the intended 10% of renewable energy, but our research indicates that it is unlikely. There are reported cases of biomass boilers sitting idle whilst the gas back-up system is used instead and at least one case of air source heat pumps remaining switched off due to noise issues.

In terms of the occupants' experiences, two prevailing views were identified. Where measures have been installed correctly, are free of maintenance issues, do not require high levels of user intervention to operate them efficiently and where explanatory information has been provided, we found high levels of satisfaction and, in some cases, considerable enthusiasm in support of renewables. By contrast we found that problems with the installation of renewables, lack of information about how to operate them effectively, and a need for greater than expected levels of user intervention can rapidly lead to dissatisfaction amongst occupants and concerns about running costs and the risk of households being pushed into fuel poverty. Gas condensing boilers are frequently used as the benchmark for evaluating the ease of use and performance of renewables by occupants and developers alike.

The policies are creating economic opportunities through the manufacture, supply and installation of renewable technologies. One manufacturer (based in Papworth, Cambridgeshire) estimates that one person year of employment in its manufacturing operation is created for approximately every 70 dwellings that have solar thermal panels installed. Installation and servicing of the products would further support employment. However, whilst there is considerable supply side capacity within Cambridgeshire, only one of the developers interviewed had sourced renewable technologies locally.

National drivers for Merton Rule policies

In terms of the national policy context, there is a strong case to be made for retaining Merton Rule-style policies in the run up to the zero carbon standard (currently 2016/2019 for domestic/commercial developments). National policies regarding building-integrated renewables have been diluted, whilst reasons for encouraging renewable energy capacity have, if anything, increased. These include contributing to national renewable targets, energy security, fuel poverty (with domestic energy prices having roughly doubled in the past five years) and reduction in carbon emissions. Developers will almost certainly be able to meet the 2013 Building Regulations (which have not yet been finalized) without needing to install renewables.

Parameters for a revised policy

As well as reducing carbon emissions, a revised policy should:

- ▶ Be good for occupiers (offering financial savings, protection against future energy price rises and a dependable, low maintenance technology);
- ▶ Provide the LPA with confidence that it has provided a dependable technology to occupiers;
- ▶ Be good for the local renewables sector;
- ▶ Be easy to apply and monitor; and

- ▶ Offer a clear standard for developers, providing them with certainty and reducing their feasibility/installation costs.

Suggested revisions to the policy

To meet these objectives, it is suggested that a technology-specific policy be adopted. Considering a wide range of variables including upfront cost, savings, carbon emissions reduction, ease of monitoring, level of occupant engagement required, avoiding overlap with the Building Regulations, end user acceptability and potential local economic impact, it is suggested that a revised policy requires 10% of total carbon emissions to be met through:

- ▶ PV and/or solar thermal in the domestic sector (with the policy applying to all new developments), with a requirement that a solar energy display or readout is provided for each property;
- ▶ PV in the non domestic sector (applying to all developments over 1000m²), with a requirement for there to be prominent signage, stating that the building is meeting part of its regulated energy demand from renewable energy, with a readout or display.

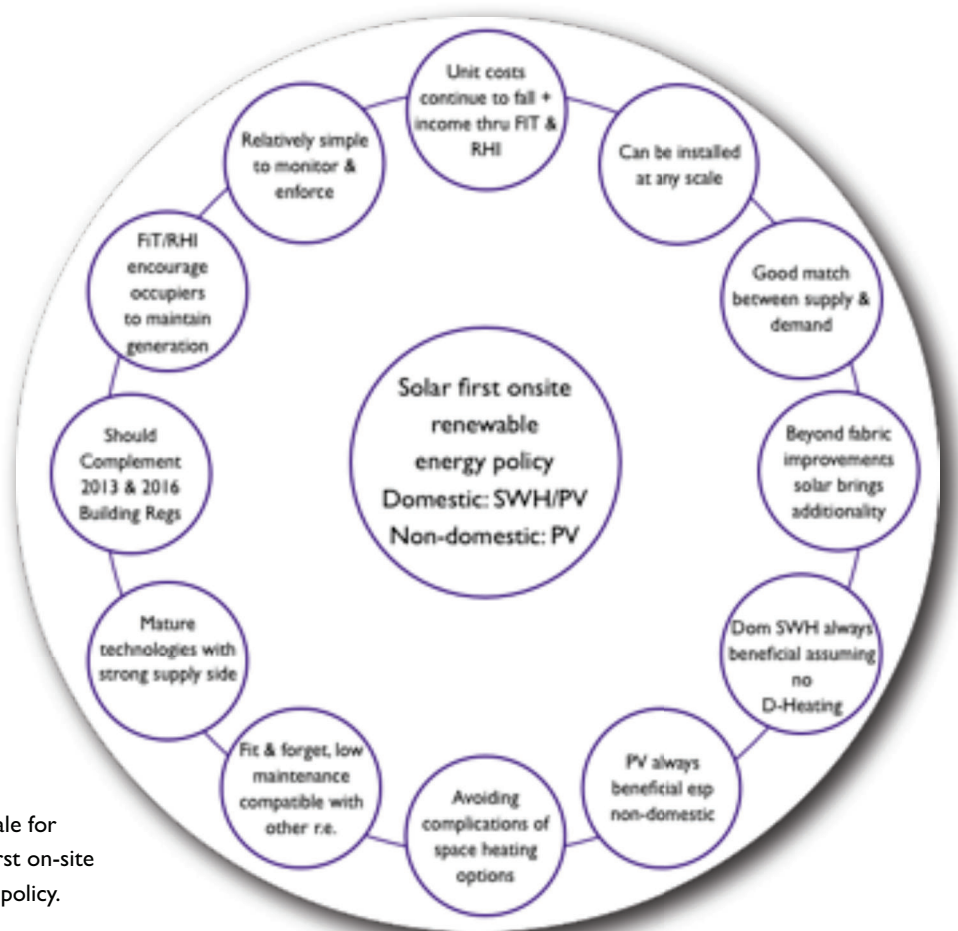
Options for maximizing the effectiveness of a revised policy

To maximize the effectiveness and minimize the bureaucracy of this policy, it is suggested that:

- ▶ All four LPAs use the template provided by Cambridge City Council for collecting information from developers on their applications, with councils providing applicants with some typical baseline figures to illustrate the estimated size and coverage of installations.
- ▶ For landlord estates such as universities, a more flexible, site-wide approach is adopted to take account of the different nature of these developments and the long-term relationship that the developer has with new buildings.
- ▶ Where heating is provided by a gas boiler, the heat should be distributed using a low temperature system to allow connection to a heat pump at a later date.
- ▶ Councils provide occupants (initial and future) with information about the operation and maintenance of renewable technology and how to get best value from it.
- ▶ Developers be strongly encouraged to use local companies for the supply, installation and maintenance contracts for renewable energy systems.
- ▶ There is an ongoing programme of stakeholder dialogue, involving developers and supply-side companies in the development and application of these policies. This will help ensure that developers fully understand the policy and with maximum benefit to the local economy.
- ▶ To facilitate monitoring, we suggest that building control officers are asked to report back on technologies installed. LPAs could also consider requiring submission of FIT and RHI certificates.

Rationale for a solar-first renewable energy planning policy

There is no single argument coming out of this research which solely makes the case for amending existing Merton Rule policies in Cambridgeshire. There are however, a number of relevant issues which together provide a composite argument or rationale for amending the current policies and which are illustrated below.



Composite rationale for adopting a solar-first on-site renewable energy policy.

Section 1 - Introduction, background & methodology

Introduction

This report sets out the findings of a study to review Merton Rule policies as implemented in four Local Planning Authorities (LPAs) in Cambridgeshire; South Cambridgeshire District Council, Huntingdonshire District Council, East Cambridgeshire District Council and Cambridge City Council. ,

It describes the methodology, findings, and conclusions of the research and presents options and guidance for local planning authorities seeking to develop Merton Rule policies.

The study has been undertaken by Climate Works Ltd in partnership with Impetus Consulting Ltd. The project has been developed as part of the Climate Change Skills Fund. The fund is managed by Sustainability East¹ on behalf of Improvement East.

Objectives

The broad objectives of this study were to review the implementation of Merton Rule policies within four local planning authorities, to evaluate the value and impact of these policies on the evidence of primary research, and from this to propose options for the further development of these policies.

The specific objectives of the study were:

- ▶ To provide evidence of the effectiveness or otherwise of Merton Rule policies as implemented 'on the ground';
- ▶ To provide a technical and socio-economic appraisal of the renewable energy technologies installed as a consequence of these policies;
- ▶ To provide evidence of the influence of Merton Rule policies on the supply-side locally;
- ▶ To conduct a thorough review of Merton Rule policies as currently applied within the LPAs;
- ▶ To recommend practical and achievable options for improving delivery outcomes in this policy area;
- ▶ To provide a substantiated view on the future of this type of policy in the context of current national policy and regulation.

¹ <http://www.sustainabilityeast.org.uk/> <http://www.improvementeast.gov.uk/>

Background

Scope and limitations of this research

This research has confined itself to the implementation of Merton Rule policies in the four LPA areas of South Cambridgeshire, Cambridge City, Huntingdonshire and East Cambridgeshire. Options for the future development of these policies are based on the evidence collected for this study with linkages where relevant to national policy frameworks and tools. The study has not sought to address the application of Merton Rule policies in other parts of the UK or to assess the impact or performance of these policies nationally.

The 'Merton Rule'

The 'Merton Rule' refers to a planning policy first developed by the London Borough of Merton in 2003. The rule requires the use of on-site renewable energy generation to reduce the annual emissions of carbon dioxide in the built environment.

In 2008 the Planning and Energy Act enabled all councils in England and Wales to adopt a Merton Rule and specify energy efficiency standards for new buildings which exceed those defined by the Building Regulations. The Merton Rule has been adopted by the majority of councils² in England including the Mayor of London, with local authorities in Scotland and Wales implementing their own versions of the policy.

The rule is commonly adopted within local planning policy as a requirement for a percentage reduction in the predicted emissions of carbon dioxide, or the predicted energy demand, in new buildings, through the use of on-site renewables. It is usually specified for new developments over a certain threshold size. Ten percent is commonly set as the emissions reduction required for new domestic developments of 10 units or more, and new commercial developments over 1000m².

Councils have adopted many variants of this basic policy for example by raising or lowering the percentage CO₂ reduction target to be met and the threshold size of developments to which the policy applies. In some cases the Merton Rule has been combined with a requirement to meet a level or levels of the Code for Sustainable Homes or BREEAM³.

In addition to the goal of reducing CO₂ emissions from new developments, when first introduced it was envisaged that the Merton Rule would promote the use of renewable technologies in the UK more generally whilst increasing their visibility and acceptability in the built environment.

Though Merton Rule policies have been widely adopted by councils, it is unclear whether they have been an effective tool for cutting emissions from new buildings and the degree to which they have increased on-site renewable energy capacity. And whether the renewable systems installed as a result of the policy consistently generate sufficient energy to meet the energy or CO₂ reduction target specified.

² In 2008 the Improvement and Development Agency for Local Government (IDeA) reported that 325 of the 390 councils in England had taken up the Merton Rule while all councils in Scotland and Wales followed their own version of it. Source: Review of the Merton Rule Conference, http://www.merton.gov.uk/environment/planning/planningpolicy/mertonrule/building_a_zero_carbon_future.htm

³ BREEAM: Building Research Establishment Environmental Assessment Method.

Though a number of studies have considered aspects of the implementation of Merton Rule policies, as far as the authors of this report are aware none have replicated the scope or objectives of this research.

In terms of planning policy much has altered since the London Borough of Merton introduced what became known as the 'Merton Rule' in 2003. Changes include the timetable zero carbon buildings, the introduction of the Clean Energy Cash-back scheme (Feed-in Tariffs) in April 2010, and more recently the launch of the National Planning Policy Framework (2012) and the Localism Bill (2011).

Locally, the Cambridgeshire Renewables Infrastructure Framework (CRIF)⁴ published in 2012, has examined the potential opportunities to generate renewable energy in Cambridgeshire, mapping where energy is used in the county and where it could be generated using renewables such as solar panels, wind turbines, and biomass combined heat and power plants.

Due in part to the introduction of Feed-in Tariffs renewable energy technologies (especially solar PV) are now much more commonplace and visible than they were in 2003. Over the same period the cost of energy for both non-domestic and domestic customers has also risen substantially with domestic prices more than doubling. There is a consensus that energy prices will continue to rise over the next decade. Drivers for the inclusion of renewables within the UK's energy mix such as energy security, resilience to price rises and the need to cut pollution from fossil fuels have if anything strengthened over this period.

As Merton Rule policies cannot exist in a vacuum and need to reflect the broader context in which they operate the changes outlined above and those which are now in-train provide the backdrop and context to this research.

Merton Rule policies in Cambridgeshire

Merton Rule policies were introduced by the four local planning authority partners in this project between 2006 and 2010. The full wording of the policies may be found in Appendix 1.

In South Cambridgeshire, Cambridge City and East Cambridge District Council, policies have been specified in terms of achieving a 10% reduction in the predicted energy requirements for new developments. In Huntingdonshire District Council the policy is worded in terms of a 10% reduction in predicted CO₂ emissions.

Each of the four local planning authorities involved in this project is either reviewing their Local Development Framework at present or will shortly commence doing so, hence the timing of this study.

Methodology

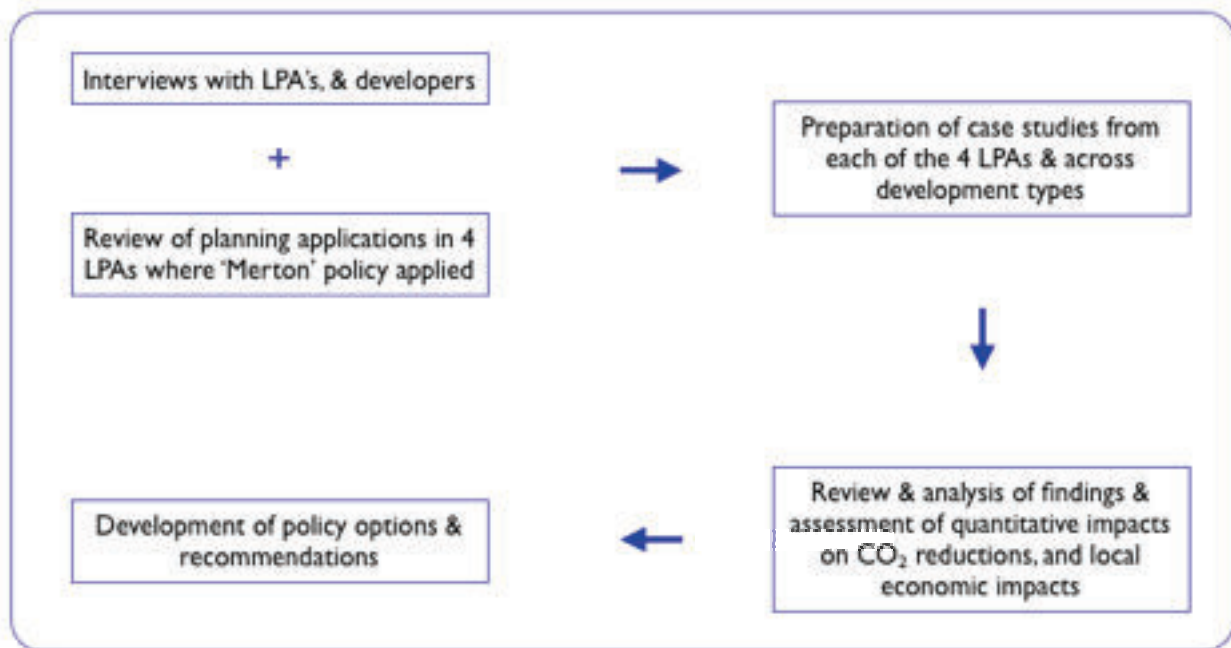
Overview

The intention at the start of this project was to produce a series of case studies of completed domestic and non-domestic developments for which Merton policies had applied. These were to be combined with the findings of interviews with council officers and developers to assess the value and impact of the policies including the energy, and CO₂ savings and the economic benefits within Cambridgeshire.

⁴ <http://www.crif.citizenscape.net/core/>

It was proposed that the case studies would be drawn from the four local planning authority areas and be broadly representative of main development types and scale applicable to these policies.

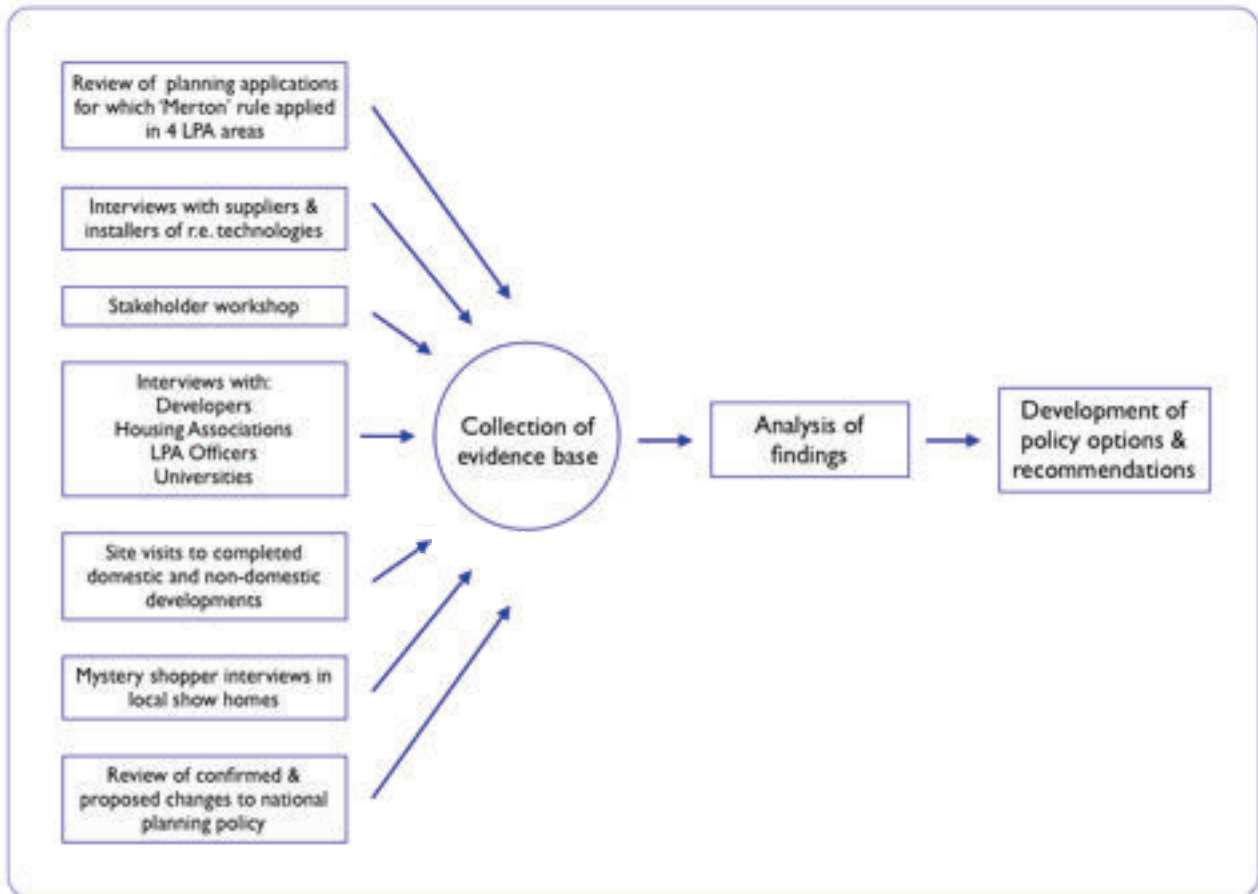
Figure 2 illustrates the proposed methodology.



In the early stages of the study it became clear that for a variety of reasons it was going to be difficult to identify a sufficient number of representative case studies to make this approach work. These were:

- ▶ In Huntingdonshire and East Cambridgeshire there were few planning applications where this policy had applied. This is partly due to the relatively short time the policies had been in place and the low levels of development over the last five years.
- ▶ In a significant proportion of the applications made across the four areas, for which these policies apply, construction has yet to start or be completed. This reflects the lower level of development activity since the economic downturn and the fact that developers have 'banked' land for use at a later date.
- ▶ There is currently no monitoring of the progress made towards completion of approved developments other than by Building Control officers at completion of the project. A further complication is that developers can opt to use their own independent Development Control inspectors. This meant that for many of the sites considered as potential case studies for this project the only way of determining whether a development had been completed (or started) was by a site visit.

In response to these issues a revised methodology was developed and agreed with the project partners. The intention was to assemble a broad base of evidence from a variety of sources, to build a composite picture of the efficacy and impact of Merton Rule policies in the four LPA areas. This is summarized in Figure 3.



Description of the revised methodology

Collation of data on planning applications

The objective of this task was to collate data on all planning applications, where Merton Rule policies had applied in the four LPA areas between 2008 and 2010.

Details of the applications and the energy statements contained within these were obtained from on-line searches of LPA websites, and by retrieving hard-copy records from LPA offices. Further information was provided by LPA officers themselves.

Twenty eight relevant applications were identified for the period 2008 to 2010. This was reduced to a shortlist of 15 applications by eliminating developments which have yet to be built or completed, where the energy statement was missing or incomplete, and where there was no named contact person connected with the development or in some cases because the contact had left and it was not possible to find a suitable replacement.

Using the shortlist developers were contacted for further information about the development and to arrange a site visit. A list of the developments reviewed for this part of the study may be found in Appendix 2.

Specifications of renewable energy systems reviewed

Technical specifications of the renewable technologies installed in the non-domestic buildings reviewed for this study may be found in Appendix 3.

Interviews with LPA Officers

Semi-structured interviews were conducted with officers from each of the four LPAs at the outset of the project with the objective of:

- ▶ Confirming the details of the policies as applied, and further information on the developments influenced by these policies;
- ▶ Assessing the process for evaluating applications and working with developers;
- ▶ Gathering the views of officers on the objectives, implementation and effectiveness of the policy.

Sustainability, planning policy, development control, building control, environment and urban design officers were all interviewed for this task.

Further details on the content of the interviews and officers who took part may be found in Appendix 3.

Interviews with developers

Developers were invited to be interviewed as part of this study for two reasons. Firstly, to gather their views on the application of Merton Rule-style policies, and their preferred (technical) means of complying with them, and secondly to understand how contracts for the installation and maintenance of renewable technologies are let, and whether local factors come into play when doing so.

Semi-structured interviews were conducted in person, by phone and at the stakeholder workshop with:

- ▶ Bedfordia Motor Holdings⁵;
- ▶ Hills Partnership;
- ▶ Leach Homes;
- ▶ Cambridge and County Developments;
- ▶ Bovis Homes;
- ▶ Gallagher Estates;
- ▶ Lend Lease Consulting.

Further details of the interviews with developers may be found in Appendix 3.

⁵ Bedfordia Motor Holdings own and manage a BMW/Mini Dealership, in Upper Cambourne, South Cambridgeshire. (Planning reference: S/01831/09), for which this policy applies.



Photo 1: Front elevation and biomass boiler, Richard Newcombe Court, Cambridge.

Interviews relating to Housing Associations

Semi-structured interviews were conducted with representatives from Cambridge and County Developments and Circle Anglia Ltd (now known as Circle).

Cambridge and County Developments (CCD) is a limited company and Industrial Provident Society (part of the CHS Group⁶), developing affordable homes for rent and shared ownership, for housing associations and local authority partners. Circle works with 12 partners, to manage 63,500 homes, and provide services for around 300,000 people across the UK.

The purpose of these interviews was firstly to discuss the impact of Merton Rule-style policies in comparison to other requirements such as to the Code for Sustainable Homes, and secondly, in the case of CCD, to discuss the renewable technologies installed at Richard Newcombe Court, a new residential care home in Cambridge. Recently opened this has been developed to Code Level 5, and includes a biomass boiler and PV array.

Further information about these interviews may be found in Appendix 3.

Interviews with domestic residents/tenants

Occupants of homes in which renewable energy technologies had been installed were invited to take part in face to face interviews at home.

⁶ <http://www.chsgroup.org.uk/page-view.php?>

The purpose of the interviews was to:

- ▶ Discover their views on living in homes with renewable energy systems (installed as a result either of Merton Rule policies or the Code for Sustainable Homes);
- ▶ Gather residents' opinions about the impact of the installed renewable energy systems on their fuel bills;
- ▶ Understand with what information and advice they had been provided about their renewable energy systems, and whether this included information on how to get best use from it;
- ▶ Whether they would recommend the technology installed in their home to others.

In all twenty householders were contacted by letter, of which six (in Great Shelford and Upper Cambourne) agreed and were available to be interviewed. All but one lived in homes incorporating renewable technologies installed in order to comply with a specified level of the Code for Sustainable Homes rather than a Merton Rule planning policy. One occupant had received a 'free' PV system as part of an installer offer under the Feed-in Tariff whereby the installer retains the Feed-in Tariff payments.

Further details on these interviews may be found in Appendix 3.

Mystery shopper visits

Mystery shopper visits were carried out in three show homes in South Cambridgeshire; two to Taylor Wimpey and one to Bovis Homes. For this exercise a member of the project team made enquiries about the purchase of a new 2-3 bedroom house.

The purpose of the visits was to find out:

- ▶ What information about renewable technologies is available 'as standard';
- ▶ Whether renewables can be specified as an option for new homes, and if so what technologies are available;
- ▶ What information sales representatives could provide about renewables, and the benefits and savings.

The findings of the visits are covered in Section 2.

Interviews with Anglia Ruskin University and the University of Cambridge

Representatives from both Anglia Ruskin University and the University of Cambridge were interviewed for this study. Both have dual roles in that they are responsible for the commissioning and development of new buildings, and managing large estates.



PV array on rear elevation of dwelling in Whittlesford, included in the occupant interviews.



The Alison Richard Building, the University of Cambridge.

Semi-structured interviews⁷ were used to gather views on the application of Merton Rule-style policies and discuss issues relating to two buildings, namely the Alison Richard Building (right)⁸ (University of Cambridge) and the Wrap - Lord Ashcroft Building⁹ (Anglia Ruskin).

The Alison Richard Building is a BREEAM Excellent building which meets with the city's Merton Rule policy with a ground source heat pump in combination with passive heating measures. The Wrap

meets the policy requirements with a PV array in combination with passive heating measures.

Stakeholder workshop

A half-day stakeholder workshop was included in the revised methodology to gather the views of stakeholders not interviewed in the earlier part of the project, and to allow further in-depth and facilitated discussion with key players.

Delegates were asked to consider how Merton policies work in practice now and how they might be developed in the future.

The event took place at the Smart Life Centre in Cambridge and was attended by sixteen delegates representing developers, consultancies, architects, renewable manufacturers and LPAs. Further information about the workshop and outputs from the discussions may be found in Appendix 3.

Assessment of economic impacts of Merton Rule-style policies in Cambridgeshire and the impact on renewable energy suppliers and installers

The purpose of this element of the study was to assess if Merton Rule policies have had a measurable impact on supply-side within the local economy in Cambridgeshire.

Details of renewable energy supply side businesses located in Cambridgeshire, were compiled into a spreadsheet which included those involved in the manufacture, supply, installation and servicing of renewable systems.

⁷ As used for the other developers.

⁸ Reference: 09/0699/FUL Cambridge.

⁹ Reference: 08/1575/FUL Cambridge.

The spreadsheet was populated through an online search of MCS (Microgeneration Certification Scheme) accredited companies in the county and companies listed on Yell.com, as well as from the findings of the interviews with developers.

Supply side companies were then interviewed to establish the impact of Merton Rule policies on their turnover/ business, numbers of staff etc. A number of developers and housing associations were also interviewed to establish how they procure the renewable technologies, how many are coming from within the area, and which companies undertake any servicing or repair work required.

Thirty-nine renewable energy supply side businesses were identified, of which eight appeared to be serving this new-build market in Cambridgeshire, and six of which agreed to be interviewed. The vast majority of listed renewable energy companies in Cambridgeshire have been set-up to retrofit measures into existing buildings in response to the Clean Energy Cash-back Scheme (Feed-in Tariffs).

The full list of companies and those interviewed may be found in Appendix 3.

The intention was to conduct at least ten interviews with companies in Cambridgeshire. In fact, we were only able to identify eight companies that appeared to be serving this market and to secure interviews with six of these, as follows:

Company	Technologies	Services
Viridian Solar – Stuart Elmes, Chief Executive	Solar PV and solar thermal panels	Manufacture and supply
Cambridge Eco-Living, Simon Wickham	SWH, ASHP	Supply, install, service
Cambridge Solar, Owen Morgan	SWH, PV, wind	Supply, install, service
Beechdale, Sunair Shahid	PV	Supply, install, service
Kershaw Contractors, Keith Oakes	SWH, PV, Heatpumps	Supply and install
Bowler Roofing, Tom Bowler	SWH, PV	Install (= roofing contractors)

(The vast majority of renewable energy companies in Cambridgeshire have been set up to retrofit measures onto buildings, mostly driven by Feed-in Tariffs).

The following developers, Housing Associations and contacts were interviewed:

- ▶ Leach Homes - John Newell;
- ▶ Wherry Housing Association (part of Circle 33) - Fiona Coulson;
- ▶ Bedfordia Motor Holdings - Adam Dolby at architects Taylor Design;
- ▶ Cambridge University - Mr John Neve;
- ▶ Cambridge and County Developments - Alison Turnbull;
- ▶ Anglia Ruskin University - Jerry Shoolbred;
- ▶ Hills Partnership - Ted Layton;
- ▶ Bovis Homes- Peter Lawrence (information provided at workshop);
- ▶ Gallagher Estates - Andy Lawson (information provided at workshop);
- ▶ Lend Lease Consulting - Paul Nicholson (information provided at workshop).

It proved difficult to make contact with private sector developers, and we were unable to contact Bellway Homes and Barrett Easter Counties despite identifying appropriate contacts.

Section 2 - Findings

Current implementation of Merton Rule policies by LPAs

Though the wording of the policies in the four LPA areas is broadly similar (see Appendix 1), this research has identified differences in understanding, both between and within the LPAs, about the objectives of these policies.

Whilst some view the primary objective to be carbon reduction, others see it to be increasing the total number of on-site renewable energy measures installed (and as a consequence raising the profile of renewable energy within the county). This discrepancy and, in some cases, a lack of clarity and consistency was raised as a concern by developers including the University of Cambridge and is discussed further below.

There is wide variation in the way in which developers provide LPAs with Energy Statements setting out how they intend to comply with the requirements of these policies. Energy Statements reviewed for this project varied from short, concise submissions to reports of 100 pages or more with substantial amounts of unnecessary padding.

This lack of consistency and the inclusion of irrelevant information increases the time and effort needed by officers to process applications. Developers were most consistent in their approach when using the template provided by Cambridge City Council.

The evidence from the four LPAs is that monitoring the progress of Merton Rule planning applications from the point at which approval is given, to completion of a new building/development is not straight-forward, and it is very difficult to assess what measures have been installed as a consequence of these policies. What is often a considerable time lag between approval and completion adds to this problem as does the absence of any requirement or system for Building Control officers to report back to officers with responsibilities for these policies on progress towards completion.

A further complication is that developers can and do opt to employ their own private Building Control inspectors putting the onus on LPA officers to track applications to the point of completion.

In South Cambridgeshire, Cambridge City, and Huntingdonshire, implementation of these policies is particularly dependent on key individuals. Usually this is Development Control officers working with officers with the lead responsibility for Merton Rule policies.

The advantage of this approach is that lead officers have built up considerable expertise and experience in this area. However, it risks inconsistency in the implementation of the policy and means that the departure of key officers could leave the LPA with a gap in expertise and less able to implement and enforce these policies effectively.

Developers

Impact of Merton Rule policies

Though there is insufficient evidence to quantify the impact of Merton policies in Cambridgeshire, it is clear from this study that they are resulting in on-site renewable technologies being installed in new developments, both domestic and commercial which might not otherwise have happened.

One of the development companies interviewed was clear that without these policies (or a requirement to build to a minimum level of the Code for Sustainable Homes/BREEAM), they would not be installing renewable technologies in new buildings constructed for the private sector market.

However, evidence from the interviews and the stakeholder workshop is that developers have yet to fully embrace the need for (and benefits of) renewable energy in new buildings. Renewable technologies are considered by at least one of the developers interviewed to be 'off-putting' to prospective purchasers, and to have a negative impact on the salability of new homes. In reaction to this, where possible, solar water heating and PV systems are installed on the rear of properties to reduce the negative impact on 'curb appeal'. This needs to be viewed in the context that solar water heating is a 'mature' technology that has been in use in UK for over 40 years, and delivers well defined (if modest) savings and benefits and domestic PV systems are now relatively common following the introduction of the Feed In Tariff.



Newly completed homes in Upper Cambourne incorporating solar hot water systems.

These comments by developers were borne out by the Mystery Shopper exercises in the three showrooms visited. Renewables were not a feature or an option in any of the homes on sale. Though helpful, the sales staff had no real knowledge of renewable technologies, other ways of improving the environmental performance of the homes, or the Code for Sustainable Homes. One representative from Taylor Wimpey explained that they had been thinking about compiling an energy leaflet explaining the benefits of the homes, but that most prospective buyers were interested in other features such as the number of bedrooms, garage etc.

A further observation is that in certain areas of Cambridgeshire such as Upper Cambourne, a substantial proportion of new social housing built to CSH Level 3 incorporates solar water heating, whereas new private sector housing (pre-dating the Merton Rule) is without any form of renewable energy.

Maintenance

A key concern for developers is the on-going maintenance of renewable systems once installed. Maintenance will normally be covered under warranty by the manufacturers and in the case of housing, by the guarantee provided with the property. Once this period has expired the developers interviewed for this project provide details of companies which occupiers can contact for servicing and maintenance queries.

This raises a number of issues. For developers the concern is that occupiers will require maintenance advice and support after their responsibility for the maintenance of the property comes to an end. There is also a concern that 'bad news' linked to renewables will damage developers' reputations (an issue which is discussed further below).

For LPAs seeking effective Merton Rule policies the issue is that installed measures may not be achieving their full output due to maintenance problems and faults.

For occupants maintenance issues create a problem that has to be addressed as well as reducing the financial savings/income generated by the system. Users with a poor understanding of the system may be unaware that it is failing to meet its full potential.

Developers were less concerned about maintenance of renewables in non-domestic buildings because these will tend to be bundled together with other building management/maintenance services.

Cost

The cost of installing renewable energy measures to meet Merton Rule policies is a concern for developers which was raised at the stakeholder workshop, with particular reference to housing. Developers perceive there to be no marketing or sales benefits from renewables, and consequently find it difficult to pass the capital costs on to purchasers.

Where there is flexibility over land valuation, it may be possible to offset a proportion of the additional costs. However, where planning applications are made on land already purchased or 'banked' this may not be an option.

This perceived lack of value for renewables can lead to a vicious circle. Renewables are not promoted to customers, consequently customers are unaware of the benefits they bring and so are reluctant to pay for them.

(As a result of the stakeholder workshop on 26th March 2012, during which this problem was discussed, the sole manufacturer of solar systems based in Cambridgeshire is now actively working with developers to help them market the benefits of installed renewable technologies to prospective customers and to offer customers options to install further, complementary technologies).

Acceptability of building integrated renewables in non-domestic buildings

Whilst many of the findings of this project related to domestic dwellings also apply to non-domestic buildings one difference is that within the commercial sector there appears to be greater acceptance of and flexibility towards the use of building integrated renewable technologies in non-domestic buildings.

This may be due to a greater emphasis on reducing building running costs (of which energy can be the most significant part) particularly in areas and at times when the supply of rented space exceeds demand.

In addition because there may be fewer issues to do with space (for measure installation) and user acceptability (such as visual impact), this may make it easier for developers to 'sell' building integrated renewables to commercial customers.

Modelling and assessing projected energy demand in non-domestic buildings

A further issue for LPAs and developers regarding non-domestic buildings is the design stage assessment of the total (end use) energy demand and CO₂ emissions. Where Merton Rule targets are specified as a percentage reduction in CO₂ emissions, total energy demand will determine the size of the installed system. Energy demand will be related to building type (office, warehouse etc) and the nature of the end use.

It is clear from this study that in many cases the end use energy demand may be unknown at the design/ planning stage. The University of Cambridge for example reported that when developing new research facilities, there is considerable variation in the actual energy demand depending on the size and nature of equipment installed.

The implications of this for LPA officers are discussed below under **Technical Issues**.

Housing Associations

Drivers for on-site renewables

For Housing Associations, the key driver for integrating renewable energy into new dwellings is compliance with the Code for Sustainable Homes. Under the Government's timetable for zero carbon buildings, Housing Associations have been required, since 2008, to achieve CSH Level 3 in order to receive a grant from the Homes and Communities Agency¹⁰.

Whilst Code 3 can technically be achieved through energy efficiency measures alone, to date the most cost effective route (and therefore the one generally adopted) has involved inclusion of some renewable technology, typically solar water heating, PV and heat pumps (air and ground source). In the examples considered for this project these renewable technologies would (if used correctly) result in CO₂ reductions that exceed the requirement of Merton Rule-style policies.

Maintenance

The Housing Associations interviewed proposed to deal with on-going maintenance of renewable energy systems by training their own maintenance staff or sub-contracting to a third party.

Maintenance was raised as a concern by one of the tenants interviewed for this project and is discussed below.

Universities

Anglia Ruskin

The University described complying with the 10% Merton Rule requirement as being 'fairly difficult'. Where compliance has been achieved through the installation of a PV system this has been registered under the Clean Energy Cash-back scheme.

The University aspires to achieve BREEAM excellent in new developments, though this is subject to cost.

¹⁰ The original plans were to increase this to Code level 4 by 2011, but early in 2011 it was announced that homes with HCA funding in 2011-2015 would continue to have to meet Code level 3. The Government has indicated that its objective is for standards in the private and public sector to be the same (as quoted in the Guardian - <http://www.guardian.co.uk/sustainable-business/scrap-house-building-core-standards>)¹⁰.

University of Cambridge

The University of Cambridge has a strong focus on reducing the energy use, costs, and carbon emissions arising from new buildings and from its entire estate. It is working to make these cuts by combining technical measures (e.g. energy efficiency measures, building energy management systems etc) in new and existing buildings with behavioural interventions. The latter include energy usage displays in the public access areas, training for staff, the provision of advice and information, as well as an extended handover period for new buildings.

The University argued strongly in favour of more flexibility in the implementation of Merton style policies, which they believe will lead to greater reductions in emissions. They would like the option of being able to locate new renewable technologies off-site at alternative locations and believe that overall this will result in a higher energy yield.

Where renewables may not be the most appropriate means of reducing emissions, they wish to be able to install equivalent carbon reduction measures in either new or existing buildings. (The Wellcome Trust made a similar case for flexibility at the Stakeholder Workshop).

Our research found that there will be instances where renewable technologies could be sited away from new buildings, but this will need to be determined on a case by case basis. There could also be significant opportunities for the council to work in partnership with the University, for example to share the generation of renewable heat between new and existing buildings or housing stock¹¹.

Occupants of homes with renewable technologies

This research has identified two prevailing views amongst the occupants of homes with renewable energy technologies installed.

Where measures have been installed correctly, are free of maintenance issues, require low levels of user intervention to operate efficiently, and where explanatory information has been provided, there were high levels of satisfaction and in some cases considerable enthusiasm in support of renewables.

All six of the occupants interviewed for this project described themselves as being very happy with their solar system (4 homes had solar water heating, and 2 had PV systems). All said they would recommend the technology to others and it would be a factor if moving home in the future. The solar water heating system was a deciding factor for two residents when choosing their current home.

Five of the six had been supplied with a booklet explaining their system on moving in (or when it was installed) but had received no further advice (which all thought would have been helpful) subsequently. None of the tenants interviewed knew the output of their systems or what energy or financial savings they should expect.

All but one person stated that the solar system had lowered their fuel bills. Savings were described as being 'significant' though only one person (with a solar water heating system) was able to provide financial information;

¹¹ One of the technical difficulties of making use of heat from renewable sources is that heat (and cooling demand) from new buildings can be relatively small making it less financially viable, whereas the heat demand in existing buildings can by comparison be large. Generally, it is more costly to move heat from one location to another than to transmit electricity.

that over a 9 week period during the previous summer (2011) their gas bill was £16. Overall the response from the occupants surveyed was very positive.

Though we were unable to interview occupants or tenants living in homes with forms of renewable generation other than solar, in the course of the research it became apparent that problems arising from poor specification or installation of measures, insufficient information about how to use a technology correctly, or the need for higher than anticipated levels of user intervention can lead to dissatisfaction and even hostility amongst users. When assessing the ease of use, running costs and overall satisfaction of renewables, developers and users often take gas condensing boilers as the benchmark.

Whilst this project was underway concerns were raised about the installation and use of Air Source Heat Pumps by one social housing provider in the county. Minutes of a BPHA (formerly Bedfordshire Pilgrims Housing Association) Board Meeting¹² (March 2012) highlight disquiet about high electricity bills, poor control over room temperature, unsuitable ducting (of warm air systems), and about servicing and training of service engineers. In February 2012 dissatisfaction amongst residents was reported in the local press¹³.

Specific issues to do with heat pumps fall outside the scope of this study¹⁴. However, it is clear that certain types of renewable energy generation require a higher level of input and resource to ensure they are correctly specified, installed, and operated than others e.g. PV systems. Without this they may fail to meet the requirements or expectations of the end user, in this case the building occupants. This puts a greater onus on LPAs to check that the renewable systems proposed by developers are appropriate. In the case of renewable heating ensuring that the user understands and accepts that the system cannot be operated in the same way as a gas condensing boiler is crucial.

Where the specification and installation are correct and users understand how to get the best from their systems the evidence is that overall satisfaction for technologies such as heat pumps can be very good. South Cambridgeshire District Council report success in retrofitting Air Source Heat Pumps into 85 council owned dwellings in off-gas areas¹⁵ with an on-going installation programme.

¹² <http://www.bpha.org.uk/repairsandmaintenance/Documents/Minutes%20from%20NIBE%20meeting%2022.03.12.pdf>

¹³ In February 2012 the Hunts Post reported, 'St Neots families in BPHA boiler battle'. 'Families in St Neots say they are being forced into fuel poverty by inefficient heating systems in their homes. Residents of Love's Farm, who live in homes built by Kier, say they are paying between £200 and £300 per month in electricity, and some now have debts of as much as £1,000 as a result. The NIBE system – which comprises an electric boiler and a heat pump – collects energy from warm inside air as it leaves the home via a ventilation system, and re-uses it to heat fresh incoming air and tap water. It has been promoted by its Swedish manufacturer as both cost-effective and environmentally friendly'. http://www.huntspost.co.uk/news/business-news/st_neots_families_in_bpha_boiler_battle_1_1197499

¹⁴ Refer to 'Detailed analysis from the first phase of the Energy Saving Trust's heat pump field trial', March 2012 for further information about the use of heat pumps in the UK. <http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/microgeneration/5045-heat-pump-field-trials.pdf>

¹⁵ The council has installed 85 air source heat pumps in their own dwellings all located in off-gas areas. Key factors in the installations being successful are ensuring that the dwellings have sufficient thermal insulation, and that residents understand how to get the best use and efficiency from the system. The design of the systems and instructions provided to the user are critical in this respect. The council anticipates a further 40 installations per year in off-gas areas up to 700 in total.

A further issue reported by occupants was to do with maintenance. A resident of a housing association property in Upper Cambourne (predating the introduction of the Merton policy), was anxious to highlight problems and frustration caused by a faulty PV system which had not functioned correctly since installation, and which despite being raised with the landlord on several occasions and one visit from a contractor had yet to be resolved.

Economic impacts and benefits - suppliers and installers

Manufacturers/suppliers/installers

There are numerous companies in Cambridgeshire offering services related to renewable energy technologies; 39 were identified in total (many, but not all of which are MCS accredited). Of these, only one is a manufacturer (of solar PV and solar hot water panels), the others being suppliers, installers or both. Some companies specialize in one technology (PV being the most common) while others offer services across a wider range of technologies.

The vast majority of these 39 companies do not appear to work on new developments (many have been set up in response to FITs to install PVs on existing buildings). Eight companies were identified whose websites included information on the services they can provide for new developments, six of which were contacted for this study. Of these six, only one has won business to supply/install renewable technologies in Cambridgeshire. This appears to be Cambridgeshire's only manufacturer of renewable technologies. The company is growing rapidly; turnover is currently £4 million with 40 employees, mostly based in Papworth. The company sells its panels throughout the UK and also supplies panels to other European countries.

Three other companies have aspirations to supply the new build market but, despite responding to several tenders, have been unsuccessful at winning any work in the county. The others contacted hope to develop this area in future but up until now have been fully occupied with retrofit installations driven by the Feed in Tariff.

Developers

Information was gathered from ten developers that are active within Cambridgeshire to find out how they procure renewable technologies. Only one, Wherry Housing Association, has procured from a Cambridgeshire-based organization. It sourced solar panels for its Cambourne development from a local manufacturer based in Papworth. The others have sourced technologies manufactured outside of the county (often abroad) and have used suppliers and installers from outside the county too (sometimes from neighbouring counties, sometimes from further afield such as Salford).

Existing contractors are sometimes used to undertake the installations and/or to supply the technologies. For example, Hills Partnerships reported tendering for a roofing contractor which is then responsible for sourcing the solar thermal units; Hills Partnership does not influence the sourcing of these units.

Most organizations tender for contracts without any consideration of appointing a local contractor. For example, Cambridge University will procure via the OJEU process. One of the commercial housing developers contacted, Bovis Homes, stated that, for a particular renewable technology, they tend to use the same supplier/manufacturer for all their developments, UK wide, since this achieves economies of scale. They will usually look to obtain a group deal at a regional level.

Merton Rule policies - technical issues

Defining energy use and carbon emission base-lines

As discussed above, there is an on-going question about how the total energy use and carbon emissions of new buildings are estimated by developers and checked by LPAs as part of the design/planning process. The main discrepancy is the methodology used to estimate Unregulated energy use and emissions in both domestic and non-domestic buildings.

It is apparent from the energy statements reviewed for this study that developers adopt a variety of methodologies to estimate end use energy demand and emissions. This creates a number of practical difficulties for LPA officers given the the task of checking submissions:

- ▶ How to determine if the methodology used by developers is sound;
- ▶ How to assess if projected energy demand for the proposed end use (where known) is correct - has the specified methodology been applied correctly?
- ▶ How to deal with applications where the end use of the building is not known (as may be the case for example with research laboratories/facilities).

The feedback from the LPA officers interviewed was that they have no set way of making these checks and that this may boil down to whether the developers' figures 'feel right' for the specified building type.

In the past reference documents such as the London Renewables Toolkit have been useful in providing typical energy demand figures for different building types, as have benchmark figures published by CIBSE (Chartered Institute of Building Services Engineers). The London Renewables Toolkit is now in urgent need of revision and updating and consequently is now of limited use in this respect.

Making an informed assessment of calculations produced by developers requires LPA officers to have a high level of technical understanding and expertise which often exceeds that needed for the other parts of their jobs, and which they may not have. This is particularly relevant given forthcoming changes to the Building Regulations, the range of technologies deployed and building types developed, and the different uses for given building types/designs.

Development of building design to incorporate on-site renewable technologies

The findings of this study support those of previous studies, that domestic dwellings are not being designed with the inclusion or renewable technologies in mind. For example, roof design is not being modified to increase the area of the south facing elevation and reduce shading from design features such as dormer windows.

Renewable technologies are still regarded as 'bolt-ons' to standard house designs. Nor it appears from this research is layout, orientation and built form of domestic dwellings being used to maximize the benefits of passive solar gain.

There was more evidence to suggest that non-domestic buildings are being designed to account for renewables. Richard Newcombe Court for example, a residential care home in Cambridge has been designed around the use of a biomass boiler with appropriate storage and delivery facilities. (A detailed discussion about

the reasons why house design is not evolving more rapidly can be found in the previous report produced by Climate Works Ltd for Bristol City Council¹⁶.

The use of modular solar water heating systems

The evidence from developers for this study is that solar water heating systems for use in domestic dwellings, are increasingly being supplied and fitted as modular units. The installation of the collectors is let as part of the roofing installation contract and the provision of the storage and distribution systems is let separately as part of the heating and water system. This appears to be the preferred means of installation (and manufacturers have developed modular systems to facilitate this).

Though we found no evidence of this causing maintenance problems (due in part to the short amount of time that systems have been operational), the issue of how 'split' systems of this type are maintained once the warranty has expired is something which will need to be addressed in due course.

Selection of renewable technologies

Developers participating in this project expressed a clear preference for Merton Rule policies which are not technology specific, giving them a free hand to select what they consider to be the most appropriate technology. The implications and limitations of this approach are discussed below.

Feed-in Tariffs

Only two of the developers participating in this research Cambridge and County Developments, and Anglia Ruskin University had opted to retain payments of the Feed-in Tariff for renewable electricity systems such as PV as a way of offsetting the installation cost. Cambridge and County Developments reported long delays in registering their PV system for payments.

There appeared to be no real interest from developers in using Feed-in Tariffs (or the Renewable Heat Incentive) to off-set the capital cost of measures.

Increasing the opportunities for renewable technologies in new buildings

A question raised by LPAs during this study was whether new buildings could be designed and constructed now to facilitate the installation of additional renewable technologies/capacity at a later date. An example is designing homes with low temperature heat distribution systems (i.e. low temperature radiators, or underfloor heating) for use with gas condensing boilers. This gives the option of replacing the gas system with an Air Source, or possibly Ground Source, Heat Pump when the gas the boiler reaches the end of its operational life. Correctly specified, installed and operated heat pumps offer the potential for a step change in heating efficiency¹⁷. The provision of low temperature distribution systems provides flexibility for occupants to opt for a lower carbon and potentially lower cost alternative to gas or oil heating and builds resilience to further above

¹⁶

<http://www.climate-works.co.uk/newsletter/autumn2011/BCC%20Building%20Standards%20Evidence%20Base%20-%20Final%2015-04-2011.pdf>

¹⁷ Heat pumps extract solar energy from the air, ground or water. Seasonal efficiencies can be in the order of 200 to 400% meaning that for each unit of electricity used to run the system 2 to 4 units of heat can be extracted. Heat pumps require a well insulated building and a low temperature distribution heat system to operate efficiently. They favour operation of long periods of time to produce low temperature heat, rather than the intermittent output of high temperature heat normally produced by a gas condensing boiler.

inflation price increases in fossil fuels. Doing this has cost implications for developers as distributing heat in this way is likely to be more expensive than using standard emitters (radiators). However, some developers are now opting for underfloor heating anyway as it is popular with home buyers and viewed as a positive selling feature in new dwellings.

Monitoring and enforcement of Merton Rule policies

Amongst public and private sector participants in this study there was a broad consensus that Merton Rule policies can only be enforced fully if some form of on-going performance monitoring is present.

There are two principal means of achieving this; either through the use of technical systems to log output, and provide data for analysis and manual or automated checking, or by requiring users to report regularly on energy generation and savings. In the workshop discussions with developers there was no appetite for either approach.

A key finding of this study is that though a site visit by LPA officers can confirm if a measure has been installed, without detailed and on-going monitoring of system output it is not possible to practically assess the contribution that is being made to energy demand and carbon savings. This applies to renewables installed in both domestic and non-domestic dwellings. The difficulties encountered in obtaining data for this study are an indication of the problem of monitoring Merton Rule policies.

In non-domestic buildings it is common for heat only technologies to be installed with back-up systems such as a gas boiler. Two of the examples reviewed for this study had such an arrangement with gas condensing boilers installed as the back-up to a heat pump and biomass boiler. Without monitoring it is not possible to say what proportion of the energy demand is being met by the lead renewable technology and what is being met by the back-up gas boiler.

Amongst some of the developers participating in the workshop there was a suggestion that Merton Rule policies are little more than a 'tick box' exercise, and that what counts is the installation of the technology rather than the energy generated over the lifetime of the measure(s). It was also suggested that where biomass boilers have been installed operators are not using them and defaulting back to gas boiler(s) installed as backup systems. Clearly, managing, maintaining and fueling the biomass boiler will entail considerably more time and effort and potentially more expensive (at least in the short term) than operating and maintaining a gas boiler.

For LPAs to be confident that renewables specified by developers meet not only the technical requirements of Merton policies (i.e. emission reductions) but also the non-technical requirements such as ease of use, some technologies, particularly heat only technologies such as biomass and heat pumps, will require a greater degree of input and checking by officers than others, to ensure the full aspirations of the policy are met.

A clear advantage of renewable electricity technologies such as PV systems, which are registered under the Clean Energy Cash-back Scheme, is that the scheme itself provides a degree of quality assurance and monitoring. Systems have to be installed by an MCS¹⁸ registered installer and fitted with a total generation meter¹⁹. Surplus energy generated by the system is 'exported' to the distribution network (grid) and will either be

¹⁸ Microgeneration Certification Scheme.

¹⁹ The total generation meter measures that total amount of electricity generated by the renewable system.

metered or deemed. Feed-in tariff payments should in most cases create the incentive needed to monitor systems performance (if not to report this to the LPA).

A simple means of checking the installation of renewables qualifying for payments under the Clean Energy Cash-back Scheme would be for developers to provide LPAs with copies of the MCS Registration certificate prior to the building being occupied.

Links to national and local planning policies

Full details about the complex changes to national planning policies are provided in Appendix 4. The key points that are relevant to this study are detailed below.

National Planning Policy Framework

The National Planning Policy Framework (NPPF) published in April 2012, sets out the Government's planning policies for England and how it expects these to be applied. It marks a significant shift in how planning policy is shaped and defined and the priorities which the Government expect LPAs to adopt.

Under 'Building a strong, competitive economy' the NPPF places strong emphasis on using the planning system to support economic growth:

'The Government is committed to ensuring that the planning system does everything it can to support sustainable economic growth. Planning should operate to encourage and not act as an impediment to sustainable growth. Therefore significant weight should be placed on the need to support economic growth through the planning system²⁰'.

Of relevance to Merton Rule policies, the NPPF states that local authorities should:

- ▶ When setting local requirement for buildings' sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards;
- ▶ Have a positive strategy to promote energy from renewable and low carbon sources.

At present the degree to which local authorities will be able to specify environmental performance criteria which exceed Building Regulations is unclear. The Government may provide further clarification, or as was the case when the requirement for on-site renewable energy in new developments was first proposed by the London Borough of Merton, it may be necessary for LPAs to bring forward policy amendments in order to establish and test what is allowable.

'Zero carbon' buildings and the Building Regulations

Domestic buildings

In July 2007 the Government announced that from 2016 all new homes will be 'zero carbon'. The policy announcement set out a timetable for progressive tightening of the Building Regulations in 2010, 2013 and 2016 to deliver a 'zero carbon' policy. Some of the carbon emissions reduction would be met through 'Allowable Solutions'. (Details of what is meant by Allowable Solutions may be found in Appendix 4).

²⁰ Paragraph 19, page 6 National Planning Policy Framework, April 2012. 'Sustainable economic growth' is not defined.

Since the policy was first announced, the definition of zero carbon has been watered down; it now excludes unregulated emissions arising from the use of appliances (which typically account for 40-50% of a dwelling's electricity consumption). In addition, ideas about what proportion can be met through Allowable Solutions are changing; initial plans were for this to be 30% whereas now figures of 40-56% are proposed (varying according to property type).

The 2010 building regulations delivered a 25% reduction in carbon emissions over the 2006 Building Regulations. The Government is currently consulting on the 2013 revision. Initial plans were for this to have delivered a 44% reduction over 2006 (equivalent in terms of energy to the Code for Sustainable Homes level 4). Experts in the field believe the actual figure will be in the region of 33-35%.

The cheapest means of complying with this for most new developments will involve some level of renewable energy. However, technically it is feasible for properties to be built to Code Level 4 (delivering a 44% carbon reduction) and above without incorporating renewables. (Some of the larger developers are involved in the 'AimC4' project which is looking at achieving Code 4 through fabric measures alone²¹. It is likely that the 2013 standard will issue guidance on this).

By 2016, assuming the zero carbon standard comes into play, then all new domestic developments will need to include some form of renewable energy generation to meet Building Regulations.

Non-domestic buildings

In parallel with developments related to domestic dwellings, the 2008 Budget set out a timetable for the adoption of zero carbon standards for new non domestic buildings. Targets were set for new schools to be 'zero carbon' by 2016, public sector buildings by 2018 and all other new non-domestic buildings by 2019. However, a definition on zero carbon in non-domestic buildings has yet to be reached²².

Analysis feeding into the consultation document considered four options for 2013 standards of which two are included for further consultation: an 11% or 20% improvement on Part L 2010. The consultation document makes it clear that the Government's preference is for the 20% uplift. However, it also states that more work is needed to examine the effects of both the 11% and 20% uplifts and on the renewables potential for different buildings.

Local policies

Any continuation of or amendments to existing Merton Rule policies will need to account for other relevant LPA policies. In its Decarbonising Cambridge study²³, Cambridge City Council has examined options for cutting pollution from the use of fossil fuels and specifically emissions from new residential development in the city. The study forms part of programme of activities and work to become '*A city in the forefront of low carbon living and minimising its impact on the environment from waste and pollution*'.

²¹ <http://www.aimc4.com/pagew.jsp?id=14>

²² 'An overall aggregate target for 2019 zero carbon on-site standards has not been set', paragraph 70, New non-domestic buildings.

²³ Decarbonising Cambridge: A renewable and low carbon energy study. Final Report August 2010. Element Energy Ltd. www.cambridge.gov.uk/democracy/mgConvert2PDF.aspx?ID=2315

The consultants Element Energy Ltd have proposed four policy options for achieving this objective including a reduction of 70% in Regulated Emissions²⁴ (from a Part L 2006 baseline) in new residential developments from 2013 onwards. This policy option allows for the use of on-site renewable energy technologies and directly connected low carbon heat such as district heating or Combined Heat and Power (CHP).

The council is now consulting on the proposals as well as the option of continuing with a Merton Rule type approach. Should this (70%) policy be adopted the council will need to decide if it supersedes a Merton Rule approach or operates in parallel with it (for situations where a 70% reduction is not achievable).

²⁴ Specified as Carbon Compliance Level of 70%, defined as the reduction of Regulated Emissions from a Part L 2006 baseline (TER) via onsite measures (including directly connected low carbon heat).

Section 3 - Analysis, policy options and guidance for LPAs

Analysis of findings

Context and linkages with other policies

- ▶ The Coalition Government has said that it remains committed to the introduction of 'zero carbon' homes by 2016 and non-domestic buildings by 2019. However, since taking office the definition of 'zero carbon' has been diluted. In the 2011 Budget unregulated emissions were taken out of the calculation for and definition of a zero carbon home. Taken together this is likely to result in less renewable energy capacity being installed in new buildings.
- ▶ To guarantee that new housing developments incorporate renewables after the next revision to Building Regulations takes effect in 2013, and before the 'zero carbon' standard in 2016, councils will need to have their own policies on renewable energy in new buildings in place. By 2016, assuming the zero carbon standard comes into play, then all new domestic developments will need to include renewables to meet Building Regulations. (The timeframe for achieving zero carbon in the non domestic sector is longer).
- ▶ Reasons for increasing the capacity of building integrated renewable energy, such as contributing to national renewable targets, energy security, rises in the cost of energy, the need to cut pollution from fossil fuels remain strong, and there is a case for retaining these policies, albeit in an amended format.

Policy objectives, application and monitoring

- ▶ There is variation between and within LPAs about whether the primary objective of Merton Rule policies is increasing installed renewable energy capacity or carbon reduction.
- ▶ Implementation of these policies tends to be reliant on a few key individuals in each LPA. This leads to inconsistency in the application of the policy, and is likely to result in patchy or inconsistent implementation should key individuals leave the LPA or change roles.
- ▶ There is wide variation in the way information related to these policies (energy statements) is presented by developers to LPAs. This creates unnecessary bureaucracy for officers. The use of a template (as in Cambridge City Council) significantly reduced the variation and amount of superfluous information presented by developers.
- ▶ There is no automatic system for tracking Merton Rule planning applications through the planning system or determining when construction of an approved application has been completed. This is compounded by what can be long time delays between approval and construction and the fact that Building Control officers do not routinely report back to Development Control officers or others with responsibility for these policies.

Moreover, developers can and do engage their own Building Control inspectors which limits the flow of information back to LPAs.

- ▶ The problems obtaining information about completed Merton Rule developments for this study illustrate how difficult it is at present to monitor the implementation of this policy and the level of resource that would be needed to provide full monitoring of the policy in its current form.
- ▶ Due to the difficulty of tracking applications through the planning system, the relatively short period of time these policies have been active and the relatively small number of applications which have fallen under the remit of these policies, it has not been possible to determine how many measures have been installed as a result of these policies or the total amount of energy generated/displaced or carbon emissions abated as a result.

Policy impact

The impact of the current Merton Rule policies at meeting their objectives is summarized below.

Objective	Achieved?	Comments
Primary		
To ensure installation of on-site renewable technologies on new developments that meet 10% of the building's energy needs	Yes	Merton Rule-style policies have led to the installation of renewable energy technologies which would not otherwise have been installed. However: <ul style="list-style-type: none"> ▶ There is no way to ensure that the 10% target is being met – see comments under monitoring, below. ▶ Housing Associations are installing renewable in response to the requirements to build to Code for Sustainable Homes level 3. (But n.b. there is evidence that developers are now able to meet Code for Sustainable Homes Level 3 without the inclusion building integrated renewables.)
Raise awareness of the benefits of renewable energy with developers and help renewable energy become a standard feature of new buildings.	No	Developers have not yet bought into the idea of renewable energy being a standard and routine aspect of the design of new buildings. This particularly applies to domestic dwellings where there was little evidence of designs being modified to make better use of renewable technologies.

Objective	Achieved?	Comments
To reduce fuel bill costs of occupants and thus raise awareness of benefits of renewable energy	Partially	<p>Interviews with occupants found there was generally a good level of satisfaction with solar hot water and PV systems and an unspecified reduction in fuel bills.</p> <p>However, problems with specification, installation of technologies, together with higher than anticipated levels of user intervention needed to operate the system can rapidly lead to dissatisfaction amongst users.</p> <p>Information provided by developers on the use of systems varied, though normally this was confined to an information booklet/advice sheets.</p>
Local economic benefit	Minimal	<p>Only one company has benefited from the Merton Rule policy.</p> <p>None of the developers we spoke to seeks to use local companies when procuring their renewable technologies.</p>
Other requirements of the policy		
Minimal workload for LPA officers	No	<p>High workload to assess applications. Large variation in energy statements.</p> <p>Very difficult for LPA officers to assess whether methodology for assessing energy demand is sound and has been applied correctly.</p>
Ease of monitoring / confidence that technologies are working and being used effectively	No	<p>Virtually impossible to assess; any attempts at monitoring would be very resource intensive. Key issue in non-domestic developments is that renewable heat measures will usually be accompanied by some form of back-up such as a gas boiler. Anecdotal evidence from the stakeholder workshop was that installed systems such as biomass boilers are not be used as specified and managers are defaulting back to the use of gas boilers.</p>

Passive design

- ▶ The evidence from this study is that developers are increasingly looking to include elements of passive heating and cooling into the design for new domestic and non-domestic buildings. This is partly in response to changes in the 2010 increment to the Building Regulations which favour a 'fabric first' approach.

- ▶ Whilst this is to be welcomed in terms of reducing energy demand and emissions in practice it is likely to be very difficult for Development Control officers to judge the effectiveness of the passive aspects of a design (all buildings are to some degree 'passive').
- ▶ It also presents a broader problem that if passive design is poorly implemented it can create significant new problems such as summer overheating. Again it is not practical for Development Control officers to assess the risk of problems of this nature occurring.

Flexibility

Universities and bodies such as the Wellcome Trust are both developers and landlords of new domestic and non-domestic buildings. In response to this study they have presented a strong case for being allowed more flexibility in the implementation of Merton Rule policies, notably greater freedom in choosing where to site additional renewable energy capacity and to consider the use of equivalent carbon reduction measures. Further guidance on how greater flexibility in this area could be achieved whilst balancing the requirements of LPAs is provided below.

Improving implementation of renewable policies through partnership working

- ▶ The implementation of any Merton Rule policy is likely to be improved through close collaboration between Local Planning Authorities within a given region, and specifically:
 - Through the use of common wording of policies across local authorities;
 - By consistent use of the same template for processing energy statements.
- ▶ The strongest advocates of Merton Rule policies could be developers themselves if they can be encouraged to 'buy into' and support these policies. Achieving this will require a partnership approach between developers and local planning authorities. Examples of how this might be achieved include:
 - Creating shared incentives such as council tax reductions/rebates;
 - The LPA working with developers to provide occupants with advice and information on how to get the best from their renewable systems;
 - Working with developers to use show homes to demonstrate renewable technologies which can be bought 'off-plan'²⁵;
 - Facilitating collaboration between developers and local suppliers of renewable measures to assist with the marketing and promotion of measures;
 - Establishing networks of local contractors to maintain installed systems;
 - Supporting community advocates to promote the benefits of renewables.
- ▶ There is also potential to build on work already underway (in Cambridge and South Cambridgeshire) to work strategically with the two Universities large estates such as the Wellcome Trust on the shared use of district heating, CHP and renewable heat.

²⁵ This idea has been proposed by South Cambridgeshire District Council and is in-train.

Proposals for amending Merton Rule policies

The findings of this study suggest that there is a strong case to be made for retention of Merton Rule type policies in the run up to the zero carbon standard (currently 2016/2019 for domestic/commercial developments). National policies regarding building-integrated renewables have been diluted, whilst reasons for encouraging the creation of new renewable energy capacity have, if anything, increased. These include contributing to national renewable targets, energy security, fuel poverty (with energy prices having roughly doubled in the past five-six years) and the need to cut greenhouse gas pollution from fossil fuels.

Furthermore, there are economic benefits linked to the manufacture, supply, installation and maintenance of renewable energy measures and there is potential to increase these further for the local economy. A local manufacturer of solar systems (based in Papworth, Cambridgeshire) estimate that one person year of employment in its manufacturing operation is created for approximately every 70 dwellings that have solar thermal panels installed. Installation and servicing of the products would further support local employment.

Within the PV sector, early indications suggest that the reduction in Feed-in Tariffs is leading to a loss of jobs linked to the supply and installation of PV systems.

We have shown that at present the Merton Rule-style policies are not fully meeting their objectives. Whilst the policies have undoubtedly resulted in the installation of renewable energy technologies, they are onerous to administer and almost impossible to monitor effectively. It is questionable whether they have delivered the 10% of renewable energy that they are intended to.

As well as reducing carbon emissions, a revised policy should:

- ▶ Be good for occupiers (offering financial savings, protection against future energy price rises and a dependable, low maintenance technology);
- ▶ Provide the LPA with confidence that it has provided a dependable technology to occupiers;
- ▶ Be good for the local renewables sector;
- ▶ Be easy to apply and monitor;
- ▶ Remain relevant and applicable during the transition to 'zero carbon' standards in domestic and non-domestic buildings.
- ▶ Offer a clear standard for developers, providing them with certainty and reducing their feasibility/installation costs.

We propose that a technology-specific policy be adopted as, depending on the technology chosen, it can meet these objectives better than the current policy.

In determining which technology to choose we have considered a wide range of variables including upfront cost, savings, carbon emissions reduction, ease of monitoring, level of occupant engagement required, avoiding overlap with the Building Regulations (i.e. focusing on domestic hot water and Unregulated Emissions) end user acceptability and potential local economic impact.

Technology specific policy, which technology best meets the policy objectives?

The table below summarizes the key features of five renewable technologies and passive design.

Policy objective	Technology					
	Solar water heating (SWH)	Photo-voltaic panels (PV)	Air source heat pump (ASHP)	Ground source heat pump (GSHP)	Biomass (wood)	Passive design
Cost effectiveness of carbon savings	✓ £4,800 for 6 tonnes CO ₂ (25 yr lifetime) =£800/tonne CO ₂	✓✓ £10,000 (including replacement inverter) for 25 tonnes CO ₂ (25 yr lifetime) = £400/tonne CO ₂ . Approaching grid parity.	✓✓ £8,000 for 16 tonnes CO ₂ (20 year lifetime) = £500/tonne CO ₂ .	✓ £13,000 for 16 tonnes CO ₂ (20 yr lifetime) = £815/tonne CO ₂ .	✓✓✓ £11,500 for 45 tonnes CO ₂ (15 yr boiler lifetime) = £260/tonne CO ₂	✓ But difficult to quantify savings
Cost effectiveness of financial savings	XX Saves around £55 a year; lifetime financial savings £1375. Cost = 3.5 x savings.	X Saves around £250 a year; lifetime savings without FITs = £6,250. Cost = almost 2x savings.	XX Saves around £130 a year. Lifetime financial savings of £2,600 (if performing at high efficiency; can potentially make a loss). Cost = 3x savings.	XXX Saves around £130 a year. Lifetime financial savings of £2,600 (if performing at high efficiency; can potentially make a loss). Cost = 5x savings.	X Lifetime financial saving £4,500 plus RHI. Does not pay for itself. Cost = 2.6x savings.	??
Upfront cost to developer	✓✓	X	✓	X	X	✓✓✓
Ease of monitoring / consistency of carbon savings	✓ Amount of heat delivered varies dependent on how much hot water demand there is and how the heating controls are used.	✓✓✓ Fairly standard performance assuming correct orientation and shading. Performance of PV systems will degrade gradually over the lifetime of the system.	X Very variable performance at present depending on efficiency, correct installation, appropriate controls and distribution system & good understanding by users.	X Variable performance though a more mature technology so fewer installation issues. Still requires good level of understanding by users.	✓✓ Should be fairly consistent IF the biomass boiler is used and fuel is of a high quality and consistent standard.	X Very hard to assess.

Policy objective	Technology					
	Solar water heating (SWH)	Photo-voltaic panels (PV)	Air source heat pump (ASHP)	Ground source heat pump (GSHP)	Biomass (wood)	Passive design
Suitable for most buildings	✓✓ Orientation and shading key issues. In flats, only usually suitable for top floor units.	✓✓ Orientation & shading key - shading more critical than solar thermal. In flats may be insufficient roof area to meet the target percentage requirement of all units.	✓✓ Requires well insulated building and low temperature heat distribution system, and thermal mass.	× Requires outside space to accommodate ground loops (horizontal), or appropriate ground structure for bore holes.	× Requires space for fuel storage, and access for delivery.	✓✓✓ But requires understanding of orientation, built form, use of thermal mass and control of infiltration and ventilation.
Low level of user engagement required (a 'fit & forget' technology)	✓✓ Doesn't need to be turned on or off. Needs to be checked every few years by accredited installer and antifreeze replaced (every 5 years).	✓✓✓ Doesn't need to be turned on or off. Requires no separate back-up system to be installed as this is effectively provided by the grid. Needs to be kept clean (& avoid trees over-shading). Inverter will need to be replaced during lifetime of the system.	× Requires high level of engagement and understanding by the user to get optimal performance.	× Requires high level of engagement and understanding by the user to get optimal performance.	× Annual servicing and maintenance and organization of fuel deliveries	✓✓✓ Some intervention required, and good level of understanding in passively heated and cooled buildings to get optimal performance.
Confidence that technology will be used	✓✓✓	✓✓✓	× Units may not be used due to noise and concern about fuel bills.	✓ Good understanding by users needed if use of secondary heating to be minimised.	× Where gas backup provided, anecdotal evidence that biomass boilers are not being used.	✓✓✓

Policy objective	Technology					
	Solar water heating (SWH)	Photo-voltaic panels (PV)	Air source heat pump (ASHP)	Ground source heat pump (GSHP)	Biomass (wood)	Passive design
Acceptability to user	✓✓ Plenty of designs available including options that blend well with roof.	✓✓ Designs can be chosen that blend well with the roof, including roof integrated systems	× Low levels & temperature of heat provided can be issue for householders used to gas central heating. Noise can be issue.	✓ Low levels & temperature of heat provided can be issue for householders used to gas central heating.	✓ User needs to be committed otherwise fuel purchase and delivery can be perceived as inconvenient.	✓✓✓ Users need to understand comfort and 'response' of the building particularly when compared to gas central heating.
Local economic benefits	✓✓✓ Local manufacturer.	✓✓✓ Local manufacturer.	×	×	×	×
Complements 2013 and 2016 Building Regulations	✓✓ Requirement for domestic hot water may reduce (as water use per head is tightened) but will not be eliminated.	✓✓✓ Plug loads not covered by zero carbon definition.	× Reduced requirement for space heating as fabric improves and ventilation losses controlled.	× Reduced requirement for space heating as fabric improves and ventilation losses controlled.	× Reduced requirement for space heating as fabric improves and ventilation losses controlled.	✓✓

Sources and notes on comparison table

- ▶ Energy, CO₂, and financial data from the Energy Saving Trust: www.energysavingtrust.org.uk/generate-your-own-energy based renewables installed in domestic dwellings.
- ▶ Installation costs are for one-off installations and do not allow for 'bulk' orders.
- ▶ Costs for PV system assume installed cost of between £3000 to £3,500 per kW_{peak}, and that the cost shown is for a 3kW_p system, and includes VAT at 5%. (Note, installation costs for PV systems continue to fall at the time of publication).
- ▶ Installation and saving figures are for domestic systems.
- ▶ Domestic heat pumps may be eligible for payments under the Renewable Heat Incentive due to be launched in 2013.
- ▶ Installation costs for heat only measures exclude payments under the Renewable Heat Premium Payment scheme.

Two technologies emerge as clear favorites – PV and solar thermal. PV is the best option in terms of lifetime savings and carbon emissions, whilst solar thermal can be delivered at a lower cost to the developer.

This research has shown that developers do not like technology-specific policies. However, monitoring renewable energy systems to ensure that they are achieving their specified output is difficult, costly, open to abuse, and in most cases impractical. Combined with the offer of greater flexibility for non-domestic estates, we believe this offers a practical compromise.

Proposed wording for an amended Merton Rule policy

Proposal - Introduce a revised Merton Rule policy. Ideally this should be worded identically across all four LPAs, to reduce confusion and make implementation easier.

Our proposed wording for this policy is:

Domestic dwellings

- i) New domestic dwellings will be required to meet 10% of total emissions (regulated and unregulated) using either solar thermal, or PV, or a combination of these technologies.
 - Where the installation of either of these technologies is not possible the developer must achieve a 10% reduction in emissions of carbon dioxide (in relation to the baseline for the property as defined by the Building Regulations and an assessment of unregulated emissions) through the installation of an alternative form of renewable energy.
- ii) This policy should apply to all new developments from one unit upwards. The installations should be per property (not an average across the development) where possible.
- iii) Systems should include a solar energy display or readout (for PV systems, this should be separate to the inverter) which should be fitted in a prominent location such as the kitchen, living room or hall²⁶.

Non-domestic buildings

- i) Commercial developments with a floor area of 1000m² or greater will be required to reduce emissions of carbon dioxide (over the requirements set by Building Regulations) by 10% through the installation of a building integrated PV system.
 - Where the installation of either of these technologies is not possible the developer must achieve a 10% reduction in emissions of carbon dioxide (in relation to the baseline for the property as defined by the Building Regulations) through the installation of an alternative form of renewable energy but preference should be given to PV.
- ii) For all installations there should be prominent signage stating that the building meets part of its energy requirement from renewable energy and a readout/display showing when the system is operational and current and cumulative energy generation.

²⁶ 11 For solar thermal, there are now wireless displays available such as the 'Clearline Aura' display - http://www.viridiansolar.co.uk/Products_Clearline_Aura.htm

Estates

For landlord estates such as the Universities and the Wellcome Trust we propose that a more flexible approach is adopted to take account of the different nature of these developments and long-term relationship that the developer has with new buildings.

We propose the following:

- i) The developer should have the option of installing a site-wide renewable energy solution that could include the full range of technologies including district heating or CHP.
- ii) The developer should have the option of installing a renewable energy system on another part of the estate which will deliver equivalent carbon reductions, provided they can provide evidence that:
 - The installation is technically feasible and is capable of being installed (e.g. obtaining planning permission);
 - The installation will provide additional capacity and would not have been installed anyway (in order to avoid multiple counting of single installations);
 - That prominent signage and a readout of the energy generated (as above) is displayed in the new building for all measures even when installed off-site.
- iii) Where developers can make a case that some alternative form of carbon abatement measure is preferable to additional renewable energy capacity this should be allowable provided:
 - They can provide robust evidence to show an equivalent carbon reduction over the full lifetime of the measure (that could have been installed in its place).
 - Appropriate and prominent signage is displayed in the building to explain what measures have been installed.

Further requirements for amended domestic and non-domestic policies

We suggest that following requirements should be specified as part of the amended policies:

- i) Where space heating (and supplementary hot water heating) is provided by a gas boiler, developers should be strongly encouraged to fit a low temperature distribution system (such as underfloor heating, or low temperature radiators) to allow for connection to an air, or ground source heat pump at a later date (e.g. when the existing boiler is due for replacement);
- ii) The calculation of Unregulated emissions in domestic dwellings by developers should be done using a single, approved methodology. We suggest using the methodology specified for this purpose within the Code for Sustainable Homes Technical Guidance;
- iii) Occupants should be provided with comprehensive information about the operation of renewable technology and how to get best value from it, and about maintenance. To ensure this applies both to the first occupants of the dwelling and future occupants, we suggest that the councils take on responsibility for providing this information;

- iv) Developers should be strongly encouraged to use local companies for the supply, installation and maintenance contracts for renewable energy systems.

Defining policies in terms of regulated and unregulated emissions

At present the Merton Rule policies adopted in the four LPA's are specified in terms of total energy use and emissions, that is Regulated and Unregulated emissions. There are arguments for and against retaining this definition (as set out in Appendix 5).

On balance it is our view that:

- ▶ For domestic dwellings emission reductions should be defined in terms of total emissions (regulated and unregulated), but that;
 - Developers should be required to use a single, approved methodology for calculating Unregulated emissions. We suggest using the methodology published in the technical guidance for the Code for Sustainable Homes.
- ▶ For non-domestic dwellings the policy is defined in terms of regulated emissions only. Whilst this reduces the total estimated energy demand and emissions for a new building, it also creates a more workable policy. In many cases the unregulated component of the energy demand will not be known at the point when planning approval is sought, and estimating and checking calculations for unregulated emissions is technically involved and in many cases it will be impractical for council officers to check these without specialist knowledge.

Accounting for proposed changes to Building Regulations

We suggest that any revisions to Merton Rule policies in Cambridgeshire should be designed to withstand the next planned revision to Building Regulations due to come into effect in 2013 such that designers are still required to specify solar technologies as part of their design specifications, but not required to include any additional measures.

This acknowledges that as Part L is tightened towards the 'zero carbon' standard in 2016/2019, the inclusion of some renewable energy within designs becomes more and more likely.

At present it is unclear exactly what form the next revision to the Building Regulations will take. Whatever changes take effect in the run up to 2016 (including any further shift towards a 'fabric first' approach), a requirement for domestic hot water and power will remain. By focusing a technological approach on these two areas the intention is to formulate a policy which can operate in parallel with the progressive development of the Building Regulations.

Aligning a solar-first policy with the National Planning Policy Framework

As discussed in the previous section of this report since the introduction of the National Planning Policy Framework (NPPF) there is uncertainty about the degree to which LPAs may now specify energy performance criteria for new buildings which exceed the Building Regulations. A solar-first approach is a departure from previous Merton Rule policies which have left technology selection in the hands of developers.

The NPPF states that when setting local requirement for the sustainability of buildings, local authorities should do so in a way which is:

- ▶ Consistent with the Government's zero carbon buildings policy and adopt nationally described standards;
- ▶ Have a positive strategy to promote energy from renewable and low carbon sources.

Based on the findings of this study and reasons set out in this report it is our view that there is a strong case for adopting a revised solar-first approach and that this will enable local authorities to meet both these objectives more effectively than current Merton Rule policies. However, in the absence of further guidance from the Government local authorities may need to bring forward policy proposals to test what is allowable under the NPPF.

Aligning a solar-first approach with district heating and CHP

Prior to the introduction of the National Planning Policy Framework, guidance set out in Planning Policy Statements, (particularly PPS1) put strong emphasis on the use of district heating and Combined Heat and Power (CHP) as part of coherent local strategies to reduce emissions from new building developments.

Appropriate use of district heating and CHP in new buildings presents a number of technical difficulties for developers which were not fully addressed in previous (PPS) guidance²⁷. In the absence of a demand for process heat or cooling (e.g. heat for industrial processes, industrial chilling, swimming pools etc), the need for heat in new buildings is often small, intermittent and may be insufficient to justify the capital expenditure and management costs of district heating/CHP systems. The requirement for heat in existing buildings will normally be far larger due to poorer fabric efficiency and greater ventilation losses.

For these reasons there may be instances where by combining heat loads from new and existing buildings and mixing domestic and non-domestic heat demand district heating/CHP is a viable option. One of the features of district heating/CHP is that it can be implemented in phases as new heat requirements become available.

District heating and CHP systems may be designed for use in combination with other forms of renewable energy such as domestic solar water heating²⁸ or may be designed to meet the year round requirement for heat replacing other options. District heating and CHP systems can also utilize renewable fuels such as biomass (wood chip) in place of natural gas, significantly increasing their carbon reduction potential.

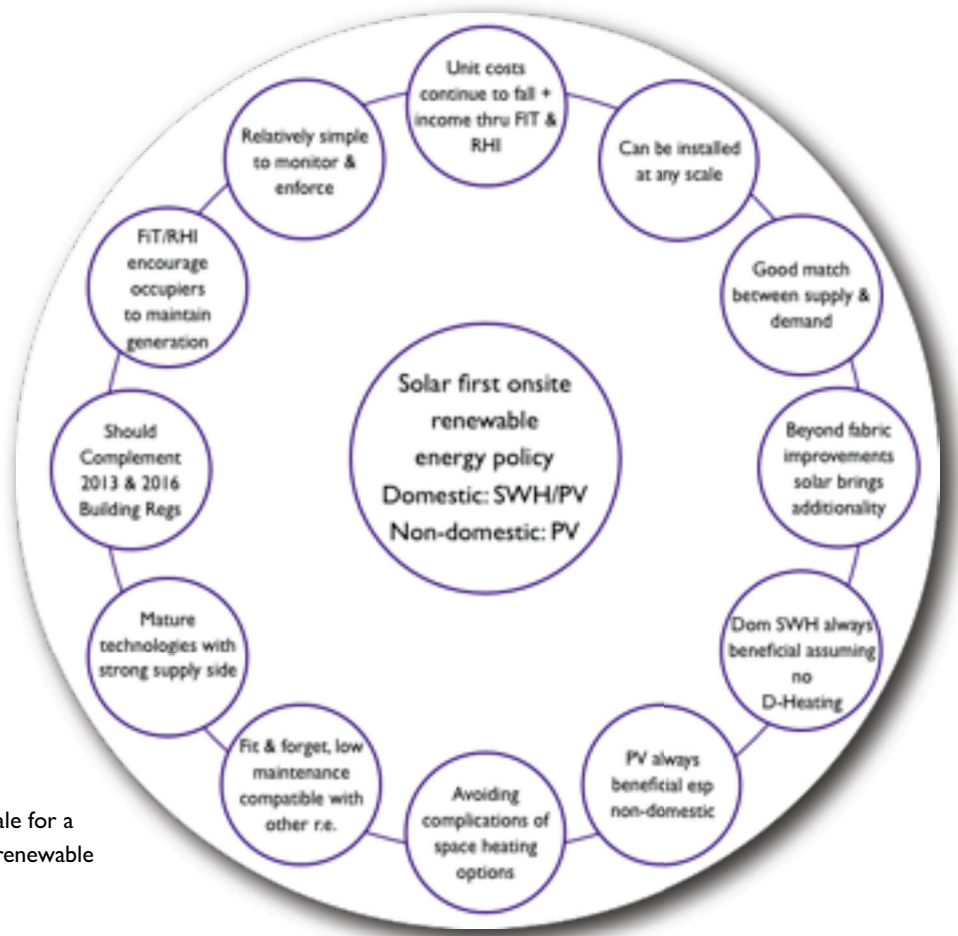
²⁷ District Heating and CHP networks favour applications where there is a consistent requirement for heat (base load). The space heating demand in domestic dwellings is generally intermittent and seasonal. In new buildings space heating demand is reducing as Building Regulations lower fabric and ventilation losses. The requirement for space heating in *existing* dwellings is generally much greater, but is still intermittent and seasonal. In non-domestic buildings space heating demand tends to be small and is often outstripped by a requirement for space cooling (which through a process of absorption chilling can also be delivered as part of a district heating/CHP system). For district heating and CHP to be technically viable it will often necessitate a significant, year round requirement for heat, or the combination of different heat loads and modular heat inputs to match supply and demand. Other variables include building density, financial incentives for the heat and electricity generated (e.g. Feed-in Tariffs, Renewable Heat Incentive, Renewable Obligation Certificates, tax incentives) and the cost of constructing the heat distribution network which may be the single largest capital cost.

²⁸ In some instances district heating/CHP networks are designed to be shut down or partially shut down in the summer when the requirement for hot water can be met using solar hot water systems.

Of the four LPAs involved in this study Cambridge City Council is actively seeking ways of developing district heating and CHP to deliver heat and power to new and existing buildings and processes in the city. For this reason we suggest that in considering the revised policy options above, LPAs adopt a flexible approach which leaves scope for developing district heating and CHP in cases where developers bring forward robust evidence of technical feasibility, emission reductions, and financial viability to support the use of district heating/CHP in conjunction with or in place of a solar-first approach.

Rationale for proposed amendments

There is no single argument, which alone carries the case for amending existing Merton Rule policies. However, there are, in our view a series of factors which when considered together weigh in favour of amending the current approach. This composite rationale is presented diagrammatically below.



Composite rationale for a solar-first on-site renewable energy policy.

Guidance on maximizing the effectiveness of revised policies

The following proposals are designed to maximize the effectiveness of on-site renewable energy policies in meeting their objectives.

- i. To facilitate the application of an amended policy, we suggest that the councils provide some typical baseline figures to illustrate the estimated size and coverage of installations.
- ii. We suggest that all four LPAs use the template provided by Cambridge City Council for collecting information from developers on their applications (including an Energy Statement). This will make applications more consistent and easier to check.

iii. To facilitate monitoring of the policy, we suggest that:

- ▶ Building control officers are asked to report back on technologies installed and, for solar technologies, report on their orientation and whether there are any shading issues. This can be a simple tick-box form that would only take a couple of minutes to complete.
- ▶ To supplement this, the LPAs could consider requiring submission of FIT and RHI certificates (assuming the latter comes into force) before new buildings are occupied as a straight-forward means of checking compliance with the policy.

iv. To ensure that occupants are getting the most out of their renewable technologies, we suggest that the councils take on responsibility for providing information to occupants about the renewable technologies installed on the property, the reasons for their installation, how to ensure they get the most out of their technologies and where to get further advice on reducing carbon emissions. Having a technology-specific policy will make this relatively easy. As well as this information being provided to the initial occupant, it should also be provided to subsequent occupants (e.g. alongside the set up of their council tax or business rates account), for the expected lifespan of the technology.

v. We suggest an ongoing programme of stakeholder dialogue is undertaken, involving developers and supply-side companies in the development and application of these policies:

- ▶ The former to ensure developers fully understand the policy, rationale behind it, and how the technologies work/what the benefits are.
- ▶ The latter to help ensure the local economy benefits as much as possible from these policies and to build on linkages already made to help the supply side support developers in terms of selling the benefits of renewable technologies to their prospective customers. This would include:

- Building on the work recently begun in South Cambridgeshire District Council for show homes on new developments which showcase a range of renewable energy technologies so that customers can select what measures they wish to include 'off plan'.

- Engaging with a programme of work initiated by a local manufacturer of solar systems as a direct result of this project's stakeholder workshop.



Template leaflets for use by developers

The company has produced a template leaflet for use by developers' sales staff to assist with selling the benefits of renewable energy to their potential customers (see leaflets, above). They have also started promoting the idea to developers that house builders should offer customers an upgrade option to increase the energy efficiency of their new home above that required by regulation (see leaflet).

- Looking at the options for a Council Tax rebate (or equivalent) for the first three years following installation for new homes incorporating renewable energy systems.
- Investigating the potential to require developers to provide twice yearly energy consumption data for new buildings incorporating renewable for the first three years following installation.
- Reviewing opportunities for developing joint schemes for the delivery of renewable heat and power in new and existing buildings.

Section 4 - Appendices

Appendix 1 - wording of current Merton Rule policies

Details of Merton Rule policies in the four local planning authorities.

South Cambridge District Council

Policy brought forward in Local Development Framework – Development Control Policies DPD (2007).

Policy NE/3 - Renewable Energy Technologies in New Development

All development proposals greater than 1,000m² or 10 dwellings will include technology for renewable energy to provide at least 10% of their predicted energy requirements, in accordance with Policy NE/2.

Policy NE/2 - Renewable Energy

The District Council will grant planning permission for proposals to generate energy from renewable sources, subject to proposals according with the development principles set out in Policies DP/1 to DP/3 and complying with the following criteria:

- ▶ *The proposal can be connected efficiently to existing national grid infrastructure unless it can be demonstrated that energy generation would be used on-site to meet the needs of a specific end user;*
- ▶ *The proposal makes provision for the removal of the facilities and reinstatement of the site, should the facilities cease to be operational (page 69).*

Cambridge City District Council

Policy included in the Cambridge Local Plan (2006).

Policy 8/16 – Renewable Energy in Major New Developments

Developers of major proposals above a threshold of 1,000 square meters or 10 dwellings will be required to provide at least 10% of the development's total predicted energy requirements on-site, from renewable energy sources. These requirements may be relaxed if it can be clearly demonstrated that to require full compliance would not be viable.

For the purposes of this policy renewable energy could include those technologies set out in the supporting text to Policy 8/17, and also passive solar design (page 94).

Policy 8/17 – Renewable Energy

The types of renewable energy technologies which may be suitable include:

- ▶ *Active solar thermal;*
- ▶ *Photovoltaic cells (PV);*
- ▶ *Wind Turbines;*

- ▶ Biomass for community heating or Combined Heat and Power (CHP);
- ▶ Ground Source Heat Pumps (page 95).

Huntingdonshire District Council

Policy brought forward in the Huntingdonshire Local Development Framework - Development Management DPD, submission in 2010.

Policy C2 - Carbon Dioxide Reductions

Proposals for major development will include renewable or low carbon energy generating technologies. These should have energy generating capacity equivalent to 10% of the predicted total CO₂ emissions of the proposal. This should be achieved on-site wherever possible, although off-site systems will be considered favorably where on-site provision is not feasible or viable or CO₂ emissions can be reduced by a greater percentage.

Site specific factors including viability, remediation of contaminated land and other exceptional development costs will be taken into account where appropriate. In cases where a reduction of at least 10% of CO₂ emissions cannot be achieved through incorporation of renewable or low carbon energy generating technologies, delivery of an equivalent reduction in CO₂ emissions may be acceptable through integration of energy efficiency measures over and above current building regulation requirements or policy requirements in relation to the Code for Sustainable Homes, whichever is higher. Alternatively 'allowable solutions' will be considered.

Where the proposal involves more than one building a consistent level of reduction across the development will be sought. Where an alternative approach is likely to be proposed, discussions should be undertaken with the Council before submission of a planning application.

For non-residential developments where the end user (and consequently the predicted total CO₂ emissions) is not known, an approach that assumes the most likely use should be taken. Where several different end users (in terms of their effect on total CO₂ emissions) are likely or an alternative approach is likely to be proposed, discussions should be undertaken with the Council before submission of a planning application (pages 3-4).

East Cambridge District Council

Policy brought forward in the Core Strategy Submission Development Plan Document (2008).

Policy EN 4 - Renewable energy

Development comprising 10 or more dwellings or 500m² of gross floorspace or more, is required to provide for at least 10% of the total predicted energy requirements on site from renewable energy sources. Proposals for renewable energy and associated infrastructure will be supported provided that individually, or cumulatively, there are no significant adverse effects on:

- ▶ *The environment and amenity (impacts can be minimised through careful siting, design and use of landscaping);*
- ▶ *The character of the countryside;*
- ▶ *The character of the townscape. Proposals should be sympathetic to the height and fabric of the building in the locality;*

- ▶ *Key views, in particular those of Ely Cathedral;*
- ▶ *Protected species; and*
- ▶ *Residential amenity (noise, fumes, odour, shadow flicker, traffic, broadcast interference).*

Sites of international nature conservation importance should not be adversely affected unless there are no alternative sites and there are imperative reasons of overriding public interest. Sites of national or local nature conservation importance and Green Belt areas should not be adversely affected unless any significant adverse effects are outweighed by wider social, economic and environmental benefits. Provision should be made for the removal of facilities and reinstatement of the site, should the facilities cease to operate (pages 95-96).

Appendix 2 - planning applications reviewed for this study

Applications from the four LPA areas reviewed for this study. Those in bold were shortlisted as potential case studies.

District	Ref	Description / Location
Cambridge City District Council	09/0899/ FUL	Coleridge Community College
Cambridge City District Council	09/0699/ FUL	7 West Rd, Cambridge University/ CB3 9DT
Cambridge City District Council	09/0179/ FUL	Former Cambridge Regional College/ CB5 8EG
Cambridge City District Council	09/1103/ FUL	Red House, 27-29 Station Road
Cambridge City District Council	08/0048/ OUT	Former Monsanto Site, Hauxton Rd
Cambridge City District Council	09/0494/ FUL	Richard Newcombe Court, formerly Simons House, Histon Road/ CB4 3HY
Cambridge City District Council	08/1575/ FUL	ARU, East Rd, CB1 1PT
Cambridge City District Council	09/0181/ FUL	Brunswick House, 61-69 Newmarket Road
Cambridge City District Council	09/0292/ FUL	Land adj 7 Severn Place
Cambridge City District Council	09/0931/ FUL	Old Maltings, Prospect Row
Cambridge City District Council	09/1179/ FUL	Rosie Maternity Hospital
Cambridge City District Council	09/0133/ FUL	Kings Hedges Primary School
Cambridge City District Council	09/0403/ REM	Neath Farm Business Park
Cambridge City District Council	09/0819/ FUL	Land adj 5 Wellington Court
South Cambridgeshire District Council	S/01831/09	Land East of Sheepfold Lane Roundabout, SHEEPFOLD LANE, CAMBOURNE
South Cambridgeshire District Council	S/01862/08	42 Red Lion Hotel, STATION ROAD EAST, DUXFORD
South Cambridgeshire District Council	S/01204/09	Land to the South of Wellcome Trust Genome Campus, In the Parishes of Ickleton and Hinxton/ CB10 1RQ
South Cambridgeshire District Council	S/01435/09	Cottenham Village College, HIGH STREET, COTTENHAM, CAMBRIDGESHIRE, CB4 8UA

District	Ref	Description / Location
South Cambridgeshire District Council	S/01901/09	Dwelling at 30, NEW ROAD, HASLINGFIELD
South Cambridgeshire District Council	S/01601/08	Former EDF Centre and Training Depot, ELY ROAD, MILTON
South Cambridgeshire District Council	S/00954/09	Kneesworth House Hospital At, OLD NORTH ROAD, BASSINGBOURN CUM KNEESWORTH
South Cambridgeshire District Council	S/00506/09	Land at APC Site, LONDON ROAD OLD A11, BALSHAM
South Cambridgeshire District Council	S/00710/09	Land at Arrington Nursery, ERMINE WAY, ARRINGTON
South Cambridgeshire District Council	S/00031/09	Land at Welcome Trust Campus, CAMBRIDGE ROAD, HINXTON
South Cambridgeshire District Council	S/01702/08	Land rear of, Brooklands, OVER ROAD, WILLINGHAM, CAMBRIDGESHIRE
South Cambridgeshire District Council	S/00572/09	Land to the Rear of 16, STATION ROAD WEST, WHITTLESFORD
South Cambridgeshire District Council	S/00990/09	Land to the South 8, STATION ROAD WEST, DUXFORD
South Cambridgeshire District Council	S/01465/09	Land to the West of 33, HIGH STREET, HAUXTON
South Cambridgeshire District Council	S/01688/08	Land to the West of, ERMINE STREET SOUTH, PAPWORTH EVERARD
South Cambridgeshire District Council	S/01624/08	Phase 2 Land to the West of, ERMINE STREET SOUTH, PAPWORTH EVERARD
South Cambridgeshire District Council	S/01199/09	Property at 310 Cambridge Science Park, MILTON ROAD, MILTON
South Cambridgeshire District Council	S/00775/09	Plot UC12, BACK LANE, CAMBOURNE
Huntingdonshire District Council	1101193FUL	Primrose Lane Hospital PE29 1WG
Huntingdonshire District Council	0802728FUL	Mayfield Rd

Appendix 3 - further information relating to study methodology

Interviews with LPA officers

The following officers were interviewed for this study:

South Cambridge District Council (20th Feb 2012)

- ▶ Richard Hales - Sustainable Communities Leader;
- ▶ Jonathon Dixon - Planning Policy Officer;
- ▶ Matt Hare - Senior Development Control Officer;
- ▶ Nick Kendall – Building Control Officer.

Cambridge City Council (20th Feb 2012)

- ▶ Emma Davies - Senior Sustainability Officer.

Huntingdonshire District Council (22nd Feb 2012)

- ▶ Chris Jablonski - Environment Officer;
- ▶ Mike Huntington - Urban Design Team Leader.

Topics and issues covered during interviews with LPA officers

Current Policy

- ▶ As officers do you feel you have a good understanding of what the policy (as currently worded/presented) is trying to achieve? Is the policy still feel relevant given recent policy changes on low carbon buildings and renewable energy?
- ▶ How do you think it fits with other policies which have come into effect in the last 2-3 years? E.g. Feed-in Tariffs, and forthcoming policies such as the Renewable Heat Incentive.
- ▶ Based on your experience what is the attitude of developers to the current policy?
- ▶ How easy do you find it to explain the current policy to developers?
- ▶ Have you detected any shift in the attitude of developers since the policy was first introduced?

Implementing Merton Rule Policies

- ▶ In general terms (and thinking about other policies) do you regard this as a straightforward policy to implement when working with developers? If not why not?
- ▶ Are there changes you would suggest to make it easier, without changing the direction or efficacy of the policy?
- ▶ How much consistency is there in terms of the information developers provide to show how they will comply with this policy?

- ▶ Do developers tend to provide too much/too little information, or information that is not relevant?
- ▶ How easy is it for you to test the assumptions/calculations presented by developers? Is this practical?
- ▶ Would there be any benefit in having a consistent approach to presenting energy statements and supporting information across the four LPAs?
- ▶ How much negotiation do you have with developers over the policy (whether it should apply or not) and about their method of compliance? Is this an iterative process?
- ▶ Do you have any sense (or evidence) that developers are modifying designs/design strategies as a result of this policy, and if so how and to what degree?
- ▶ What would be your attitude to a developer that offered to achieve an equivalent improvement in energy efficiency/level of carbon reduction through energy efficiency and passive measures?
- ▶ In your contact with developers would you normally discuss or require them to provide information to tenants/occupiers on how to get the greatest benefit from on site renewable technologies?
- ▶ And what about monitoring of system performance?
- ▶ And procurement? - Do you ask/encourage/expect developers to use local suppliers/installers?

Contact with developers

- ▶ Can you suggest developers working in this area that would be useful and relevant for us to contact as part of this study?

Developer interviews

Topics and issues addressed during interviews with developers

- ▶ What is the remit of your company? What type of properties/developments do you develop?
- ▶ Do you have specific energy/environmental policies for new domestic or commercial buildings?
 - Code for Sustainable Homes (CSH), % target for renewables, BREEAM rating etc.
- ▶ Thinking about policies for onsite renewables in this area, how many developments have you completed where this policy applied?
- ▶ Do you regard the 10% policy (Merton Policy) as difficult/challenging?
- ▶ Did/does the policy influence the design of domestic or non-domestic dwellings? If so how?
- ▶ In terms of selecting technologies and means of compliance how do you go about this?
- ▶ How do you go about selecting suppliers and installers for technologies and what do you do about maintenance contracts?
- ▶ Is there a policy about selecting local suppliers/contractors?

- ▶ What information on renewable energy technologies do you provide to tenants/occupiers/householders?
- ▶ Do you undertake any performance monitoring of systems? Technical or non-technical?
- ▶ Can you propose specific buildings/developments that could be appropriate as case studies for this project?
- ▶ What technologies were installed in this case?

Interviews with representatives of Housing Associations

Alison Turnbull (Project Manager) at Cambridge and County Developments was interviewed on 6th March 2012 to ascertain her views about the implementation of the policy (using the same issues and topics as those for Developers), and with reference to a residential care home Richard Newcombe Court in Cambridge²⁹. This is a Code for Sustainable Homes Level 5 building comprising a biomass heating system and roof mounted PV array.

Fiona Coulson (Assistant Director of Development) at Circle Anglia (known as Circle) was interviewed on 13th March 2012, regarding the impact of Merton policies on their new domestic developments and specifically the impact of Merton policies in comparison to the Code for Sustainable Homes.

Technical specifications of renewable energy systems in non-domestic buildings

Information on the renewable energy systems installed - as made available by developers.

Building/organisation	R.e. system	Specification
Alison Richard Building, University of Cambridge.	Ground source heat pump working in conjunction with gas condensing boiler	Heating output: 80.7kW Cooling output: 73.5kW Heat pump is not used to provide domestic hot water. Two gas boilers, with rated output of 275kW each.
The Wrap, Anglia Ruskin University.	PV array	Peak output of 26.64kW
Richard Newcombe Court	Biomass pellet boiler Roof mounted PV array	Not available.

Interviews with householders with installed renewables

The following issues were covered during interviews with householders.

- ▶ Have you been the only resident since the house was constructed?
- ▶ Was the renewable technology a factor for moving into this property?

²⁹ ²⁹ Reference: 09/0494/FUL, Cambridge City.

- ▶ Did the developer provide you any information/brief on how the system works/ how to get best value out of the system?
- ▶ Have you noticed a reduction in your fuel bills? Do you read your meter or monitor your fuel bills?
- ▶ Do you monitor the system/has anyone monitored the system?
- ▶ Do you know the output of the system/what is the output of the system?
- ▶ What is your opinion of the renewable energy technology in your home in terms of?
 - Overall satisfaction.
 - How easy it is to operate.
 - The impact on your fuel bills.
- ▶ Do you know about the Clean Energy Cash-back Scheme, also known as the Feed In Tariff?
- ▶ Was this explained to you at the handover (when you moved in)?
- ▶ Have you had to do any repairs? Who is responsible for this?
- ▶ Would renewable technology installed in a home be a factor in choosing your next home?
- ▶ Would you recommend renewable technologies to others?

Occupant interviews - details of locations and technologies

Address	No 71, Upper Cambourne (opp Taylor Wimpey Showroom)	No 23, Upper Cambourne (opp Taylor Wimpey Showroom)	No 74, Upper Cambourne (opp Taylor Wimpey Showroom)	Monk Drive, Upper Cambourne.	Smithy Way, Great Shelford	No 10, The Moraine, Whittlesford
Technology installed	Solar water heating	Solar water heating	Solar water heating	PV (retrofit)	Solar water heating	PV
Resident since house was constructed?	Yes	No	Yes	Yes	No	Yes

Meetings with the University of Cambridge and Anglia Ruskin University

University of Cambridge

A meeting took place on 6th March 2012 with Chris Lawrence, (M & E Services Project Manager), John Clark, (Planning Officer) and John Neve (Project Manager) at the University of Cambridge to discuss the

implementation of the Merton Rule policy from their perspective and specifically the development of the Alison Richard Building³⁰ in the city.

This building has achieved a BREEAM ‘Excellent’ rating, and complied with the Merton Rule-style policy through the installation of a ground source heat pump in combination with passive heating measures.

Anglia Ruskin University

Jerry Shoolbred, Clerk of Works at Anglia Ruskin University was interviewed by phone, to ascertain his perspective on the Merton Rule policy and with specific reference to the The Wrap - Lord Ashcroft Building³¹. The building complied with the policy through the installation of a PV array and passive heating measures.

Both discussions addressed the issues and themes described above under Developer interviews.

Stakeholder workshop

A half-day workshop for stakeholders was held on 26th March at the SmartLife Centre in Cambridge.

The outputs of the discussions as recorded on flip charts by groups working at tables and during the plenary discussions are reproduced (directly) below.

Agenda

Time	Item
10.30am	Registration
11.00am	Introduction to the workshop: Richard Hales, South Cambridgeshire District Council and Mark Letcher, Climate Works Ltd
11.15am	Workshop 1 - Experience of Merton policies to date
11.55am	Plenary discussion
12.25pm	Lunch
1.10pm	Engaging with customers about renewable technologies
1.40pm	Workshop 2 - Options for improving the policy
2.00pm	Plenary discussion
2.50pm	Closing remarks and workshop evaluation
3.00pm	End

³⁰ Reference: 09/0699/FUL Cambridge.

³¹ Reference: 08/1575/FUL Cambridge.

Workshop attendees

Name	Department	Job Title
Sarah Leggo	Roger Parker Associates	Sustainable Design
Jenny Nuttycombe	South Cambridgeshire D.C.	Planning Policy Officer
Mike Malina	Renergy Solutions Associates	Director
Stuart Elmes	Viridian Solar	CEO
Chris Jablonski	Huntingdonshire DC	Environment Team
Andy Lawson	Gallagher	Projects Director
Chas Graney	B & ES	Regional Manager
Vanessa Tilling	Sustainability East	
Margaret Reynolds	Architect	Architect
Adam Halford	Bidwells	Principal Planner
David Gilbey	E.On	Account Manager
Chris Lawrence	University Estate Management	M & E Services Project Manager
D Parsley	Wellcome Trust	Head of FM
Stephen Woolverton	Babarham Institute	Head of Engineering
Peter Lawrence	Bovis Homes	Senior Architect
Richard Hales	South Cambridgeshire D.C.	Sustainable Communities Team Leader
Emma Jones	Impetus Consulting Ltd	Director & workshop facilitator
Sarah Smith	Climate Works Ltd	Associate & workshop facilitator
Mark Letcher	Climate Works Ltd	Director & workshop facilitator

Outputs from the workshop discussions

Workshop 1 - Experience of policies to date

Table 1 - Issues

- ▶ Baseline;
 - how is it established?
 - Difficult on non-domestic;
 - Should be % - how far can we go?
- ▶ Could be specified in terms of carbon reduction;

- ▶ Retrofit – options for carbon reduction;
- ▶ Fewest mechanical better;
 - Maintenance/servicing;
 - Problems with ASHPs;
 - Flexibility – helpful at this stage.
- ▶ Can't pass on the cost of measures to customer;
- ▶ H.A 24 Cert Passivhaus + 12 %;
 - Shared ownership positive feedback.

Constraints

- ▶ Customers don't want to pay more;
- ▶ Code → flexibility;
- ▶ Code → Building regulations;
- ▶ Flexibility → prefer not to specify technology;
- ▶ Difficult to have policy that is (concise);
- ▶ Complete flexibility (advisable);
- ▶ Problem with some technologies;
 - Biomass in conjunction with gas;
- ▶ Developer not interested in shared ownership of R.E technology;
- ▶ Fabric can't get air tightness;
- ▶ MHRV – controlled ventilation;
 - NHBC people will want MHVR;
- ▶ R.E Economies of scale;
 - Problem with ASHPs – didn't use under floor;
- ▶ (Summer overheating);
- ▶ Building Regulations → Fabric;
- ▶ Water → Big Issue;
- ▶ Difficult to base decision on research;

- Lack of research.
- ▶ Options are limited;
 - Planning Constraints;
 - Turbine → ASHPs.

Table 2 - Issues

- ▶ 10 % mis-specification – tick box exercise;
- ▶ Biomass boilers installed but never used e.g. Large storage warehouse – roof covered in PVs = expensive, not the best solution;
- ▶ RSS abolition hasn't helped;
- ▶ Individual buildings rather than campus – not helpful, e.g. Wellcome Trust– doing job across campus not taken into account;
 - Aiming for 70% self generation in 7 years, concern = security of supply.
- ▶ Need some kind of allowable solution;
- ▶ Terminology;
- ▶ Scattergun approach – systems competing against each other;
- ▶ Need planners + engineers talking to each other;
- ▶ Planning and building control not joined up;
- ▶ Need some kind of follow up = onus back on user to report each year;
- ▶ Lost sight of basic principles of energy hierarchy – driven by FITs;
- ▶ Lots of technologies not working – embedded carbon out weighing the benefit;
- ▶ Life cycle: PVs = huge embodied energy – rare metals, how to recycle;
- ▶ Similarly, issues with heat pumps;
- ▶ H.A using exhaust air heat pump: very poor;
- ▶ Handover – lots of complaints; expectations.

Table 2 - Constraints

- ▶ Funding is an issue: Babraham = publicly funded hard to find money for capital works i.e.: sustainably;
- ▶ Wellcome: funding not an issue;
- ▶ Licensed to be a distributor network;

- ▶ University: CHP study – marginal benefits versus new buildings + more so as gas prices increase;
- ▶ RE Strategy building by building – is difficult to demonstrate payback/ carbon reduction;
- ▶ Passive design = best, but then end up with RE that's very small but expensive to make work, not a good solution in terms of carbon savings;
- ▶ Site wide approach would be better.

Customer feedback

- ▶ Required under Part L but not enforced;
- ▶ Proper handover required;
- ▶ Running 9 – 10 years at the university – involves users + maintenance departments – 3 year process;
- ▶ Measures have to be demonstrably successful;
- ▶ University committees – want info on performance of existing buildings – base future decisions on evidence;
- ▶ New technologies – need to be tested;
 - Someone needs to trial these, that's recognised.
- ▶ Design of systems has to be appropriate;
 - Joined up thinking.
- ▶ University – W.Cam site – looked at wind but needed to be offsite, not allowed; same with Anaerobic Digestion.

Table 3 - Issues

- ▶ Education is a big problem. If customers have a negative response to technologies due to lack of education – negative attitude spreads;
- ▶ Need training not just for end user but also for planners, H.A's and contractors → Planning supports take up;
- ▶ Policy helps to overcome barriers;
- ▶ Heating systems with back up is an issue, is there reliance on back up?
- ▶ Light touch approach to the policy, not policed;
- ▶ Builders can negotiate requirement away – 'bully' planners;
- ▶ On paper policy good, not in practice;
- ▶ Not always efficient to add renewables to a development just to check a box with policy, could achieve more by fabric first in some cases;

- R.E is usually an afterthought.
- ▶ Need a single policy and a single template;
- ▶ Code for Sustainable Homes;
 - Can build Code 3 and Code 4 without renewables.
- ▶ Vagueness in the policy, wording sometimes used - “where viable”, sometimes 10 % carbon other times 10 % reduction in energy acceptable;
- ▶ Policy needs to be secured and then sustained;
 - That way cost issues all end up passed down to the land value and developers can plan.
- ▶ 10 % of what?? Clarity needed;
 - SAP;
 - BREEAM;
 - Processes in industrial buildings;
 - SBEM;
 - Does it cover embodied energy also?
- ▶ Locally sourced technologies with low transport overheads should be used.

Workshop 1 - Plenary discussion

Issues/Problems/Opportunities

- ▶ Series of Policies: Why 10 %? Is there evidence this can be applied in all circumstances?
 - Is it Baseline or aspirations.
- ▶ Difficult to establish a baseline;
- ▶ Validation of 10 % - Tick box exercise?
- ▶ Technologies installed but never used (e.g. wood CHP with backup gas boiler);
- ▶ Need for consistency over time and geography → takes away argument that can't afford the measures;
- ▶ Lack of consistency – developers will look at 1 LA vs. another;
- ▶ If customer not prepared to pay (and they aren't) it comes from developers' profit: need to make profit for shareholders, S106, land for social housing;
- ▶ Site- wide / allowable solutions;
- ▶ Building by building is too narrow, results in less carbon reduction;

- ▶ Positive: Impact on up skilling and awareness is crucial;

Constraints

- ▶ Customer won't pick up addition cost of R.E;
- ▶ Dev → social housing 106;
- ▶ Application by building rather than 'estate';
- ▶ Energy hierarchy;
 - Reduce demand;
 - High cost R.E per unit .
- ▶ Process looks very difficult;
- ▶ Flexibility needed, e.g. university – turbine example;
- ▶ South Cams – looking to be more flexible, allowable solutions;
- ▶ 'Banking' or selling R.E/carbon capacity.

Client Feedback

- ▶ Importance of training users e.g. heat pumps;
- ▶ Training installers – no incentive for installers;
- ▶ End user engagement critical;
- ▶ ASHPs = additional heat;
- ▶ EST Solar Thermal Study – 80 % of users satisfied v unsatisfied;
- ▶ Non- domestic – Uni handover – called Soft Landing – a 3 year handover process.

Engaging with customers

- ▶ Need to create a buzz;
- ▶ It needs to be linked to who pays the bills
- ▶ Sustainable show homes in South Cambridgeshire, funded by S106. Could be problems with this, e.g. having to retrofit items post-procurement;
- ▶ Cambridge University – devolved budgets encourage reduced consumption, and information highlighted via publications;
- ▶ Wilmot Dixon – operates a buddy system for new households;
- ▶ Potential for Viridian to get involved in training up sales people from commercial developers?

- ▶ Viridian has worked to make their instructions simple and easily accessible.
- ▶ Could the policy require a visible display meter?
- ▶ Bovis are including smart meters in new properties; should help with awareness. But not the same impact as a display meter;
- ▶ New homes require a very simple explanation of the sustainability features and the benefits they bring;
- ▶ Sustainable show homes. Results in next year;
- ▶ Procurement issues – e.g. getting homes heat pump ready;
- ▶ Can you compel householders/occupants to provide billing info?
- ▶ Could make display units mandatory;
- ▶ Should policy put onus on engagement? Requirement for this?

Workshop 2 - developing the policy

Table 1

- ▶ Local groups (outside utility) to share information;
- ▶ Could be op in – comparison with councils. Hotel food (?) examples;
- ▶ British Gas – comparison;
- ▶ Awareness – positive psychology of making decisions;
- ▶ Solar panels on all new build – developer retains benefits until repaid;
- ▶ District heating – ESCO type approach;
- ▶ Confident in FITs – clarification on policy;
- ▶ Role of LA – should there be a share your experience (can't read word)?
- ▶ Soft landings approach;
- ▶ Council tax rebate incentive – John Lewis voucher, £ incentive;
- ▶ Embodied energy – push;
- ▶ Case for dropping minimum requirement to one dwelling. And refurbishment;
- ▶ Uttlesford – extensions to existing properties. Expect to improve whole development;
- ▶ Monitoring- RE not regulated. Sending in bills. Real time displays;
- ▶ Issue – use if being tested – further engagement;

- ▶ To be more than planning policy reflects higher level of engagement;
- ▶ Wellcome Trust – Energy Days. 5% year on year reduction. Give away real time displays. Mix of educational/technology.

Table 2

- ▶ More flexibility to consider off-site (certified) solutions or, e.g. sustainable construction methods;
- ▶ Meet the ‘visible’ requirement by having a sign or display about how its a low carbon building, rather than ‘eco-bling’;
- ▶ Focus on carbon as the overriding consideration → energy hierarchy. Then could use building regulations as a benchmark;
- ▶ Change the policy to 10% carbon reduction rather than renewable. This → technologies more likely to be used as ‘carbon follows cost’;
- ▶ NB There are B-Regs requirement for competence; scope to enforce this? (Big issue around lack of B-Regs enforcement);
- ▶ Benchmarks – use Carbon Trust figures (produce figures for different kinds of dwellings/occupants);
- ▶ Some kind of star rating for contractors based on their carbon achievements?
- ▶ If encouraging passive design, ensure mitigation measures included e.g. louvers to prevent over heating.

Table 3

- ▶ Two tiered approach:
 - Comply;
 - Pay into community fund.
- ▶ Council tax banding based on carbon output;
- ▶ Certainty = “You must do xx”. Why not 20%?
- ▶ Hierarchy of achievement;
- ▶ Architect responsibility – after thought?
- ▶ System wide communication.

Plenary discussion

- ▶ Need to make the policy attractive to developers and the end user;
- ▶ Require a realtime display to be installed? Will help with engagement. (NB Difference between real time display and smart meter). Radian example – solar meter = gold when exporting;

- ▶ Look at offsite options – e.g. for the University, AD on their farm, or a coastal wind turbine. (May come in with allowable solutions in 2016);
- ▶ Switch the policy to 10% carbon reduction rather than renewable;
- ▶ BUT - objectives of the policy is NOT just carbon – its about supporting a fledgling industry;
- ▶ Plus - Building Regs are becoming more onerous on carbon, so saying 10% more than B-Regs will get harder and harder. By 2016, = zero carbon;
- ▶ Use Building Regs as baseline;
- ▶ What is the policy actually about? Stimulating the economy and increasing capacity as well as carbon reduction;
- ▶ Don't be too prescriptive;
- ▶ LPAs should provide evidence on which technologies work in which situations – data. But = a fast moving area;
- ▶ Systems integration and controls – potential of these exceeds renewable;
- ▶ Council tax rebate in return for providing information?

Companies supplying & installing r.e. technologies in Cambridgeshire.

Search conducted via Yell.com for solar, energy, PV, heat pumps, wind turbines (no-listings) and renewable energy, plus all MCS companies listed within the Cambridgeshire and Peterborough postcodes.

Company	Address	Address	Postcode
Electrosolar Ltd	51 Manor Lane	Huntingdon	PE28 4EH
Adam Electrics Ltd	21 Davids Close	Peterborough	PE4 5AN
JD Carter Electrical Services	South View Barn, Bungalow Farm, Werrington Bridge Road,	Peterborough	PE6 7PP
Heatwave Services	6, Poplar Way,	Cambridge	CB2 5BS
Peterborough Boiler Services	Unit 5A-5B, Wharf Road Industrial Estate,	Peterborough	PE2 9P
Manor Solar	Old Station Yard, Station Rd,	Peterborough	PE6 8RQ
Rule and Parker	23A West Street,	St Ives	PE27 5PL
Mawgreen Solar & Electrical	30, Windsor Rd,	Peterborough	PE7 3JA

Company	Address	Address	Postcode
Cambridge Eco Living	69, Canterbury St,	Cambridge	CB4 3QG
Sunfox Energy	85, High St,	Cambridge	CB2 9HZ
Solar Panels Cambridge	29, Silver St, ,	St. Neots	PE19 5TS
Beechdale Energy	Kingston Barns, Bourn Road,	Cambridge	CB23 2NP
Stepp Energy	Unit 1, Wareley Rd,	Peterborough	PE2 9PF
Sovereign Solar Power	15, Challenger Way,	Peterborough	PE1 5EX
The Roman Touch	Cambridge Road,	Cambridge	CB22 3GN
Aurora Solar PV Ltd	16a, Stowgate,	Peterborough	PE6 8RW
Cambridge Solar	Ely Rd, Cambridge	Cambridgeshire	CB25 9PG
Viridian Solar	Atlas Building, Stirling Way,	Cambridge	CB23 3GY
Dynamic Solar	13, Barnwell Business Park, Barnwell Drive,	Cambridge	CB23 3GY
Buy PV Direct Ltd	Tindall Mill, Kirkgate,	Wisbech	PE13 5NE
Cambridge Renewable Energy Centre (run by Elliotts)	Unit 44, Viking Way	Bar Hill, Cambridge	CB23 8EL
David Lowe Plumbing and Heating	16, West End,	Ely	CB6 3TE
Midsummer Energy			CB5 8HR
Bowler Solar Energy Limited			CB2 5QP
Green Solar World Ltd			CB4 2RA
Energy My Way (CB) Ltd T/A Ene...	http://www.energymyway.co.uk/		
Solar PV Renewables			CB1 9AX
The Plumbing Company Limited			CB23 7DL
Eastern Solar Co UK Ltd T/A Ea...			CB21 5AB
Kershaw Contracting Services L...	Ian Macklin, Director -	energy.enquiries@kershaw-grp.co.uk	CB24 8SW
Anglia Ecoheat			CB21 5JD

Company	Address	Address	Postcode
Sitec Infrastructure Services ...			CB25 9TL
Playfords Ltd			CB24 8PS
Imtech Aqua Building Services ...			CB24 4RB
SS-Elite Services Limited			CB7 4EG
Intech Products Ltd T/A Classi...			PE19 2JL
Kevin Fisk Plumbing and Heatin...			PE19 8UQ
Celect Services Ltd			PE19 5HQ
TE Ramm & Co	01487 711811		
Elmore Plumbing and Heating Lt...			PE15 0TB

Appendix 4 - changes to planning policy & the definition of 'zero carbon'

National Planning Policy Framework

The National Planning Policy Framework (published in April 2012) sets out the Government's planning policies for England and how it expects these to be applied. It supersedes a set of Planning Policy Statements which taken as a whole, set out what the Government expected from planning policy in England previously.

The three PPSs with most relevance to this area were PPS1 - Climate Change, PPS22 Renewable Energy and PPS 3 Housing, though there was some overlap with other statements.

The National Planning Policy Framework (NPPF) marks a significant shift in terms of how planning policy is shaped and defined and the priorities which the Government expect LPAs to adopt.

Under the NPPF the planning system is intended to reflect three aspects of 'sustainable development' and intended to perform an economic, social and environmental role.

LPAs are expected to produce a Development Plan as the starting point for decision making. The NPPF clearly states that there should be a presumption in favour of sustainable development³². Importantly where the development plan is 'absent', 'silent' or 'out of date' the presumption is that permission will be approved unless the adverse impacts of going ahead would significantly outweigh the benefits, or specific policies in the document indicate that development should be restricted.

Under 'Building a strong, competitive economy' the NPPF puts strong emphasis on using the planning system to support economic growth.

*'The Government is committed to ensuring that the planning system does everything it can to support sustainable economic growth. Planning should operate to encourage and not act as an impediment to sustainable growth. Therefore significant weight should be placed on the need to support economic growth through the planning system'*³³.

Under the heading of **Meeting the challenge of climate change, flooding, and coastal change** the NPPF sets out expectations of local authorities:

To support the move to a low carbon future local authorities should:

- ▶ Plan new development in locations which reduce greenhouse gas emissions;
- ▶ Actively support energy efficiency improvements in existing buildings;
- ▶ When setting local requirement for building's sustainability, do so in a way consistent with the governments zero carbon buildings policy and adopt nationally described standards.

³² The NPPF refers to two definitions of sustainable development; 'meeting the needs of the present without compromising the ability of future generations to meet their own needs' and 'living within the planet's environmental limits; ensuring a strong, healthy and just society; achieving a sustainable economy; promoting good governance; and using sound science responsibly'. National Planning Policy Framework April 2012, Achieving Sustainable Development, page 2.

³³ Paragraph 19, page 6 National Planning Policy Framework, April 2012. What is meant by 'sustainable economic growth' is not defined.

Local authorities should expect new development applications to:

- ▶ Comply with the local plan unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable;
- ▶ Take account of landform, layout, building orientation, massing and landscaping to minimize energy consumption.

To increase use and supply of Renewable Energy Technology:

- ▶ Have a positive strategy to promote energy from renewable and low carbon sources;
- ▶ Design policies to maximize renewables while ensuring adverse impacts are addressed satisfactorily, including cumulative landscape and visual impacts;
- ▶ Consider identifying suitable areas for renewable sources;
- ▶ Support community-led initiatives for RE development;
- ▶ Identify opportunities for decentralization.

When determining applications, local authorities should:

- ▶ Not require applicants for energy development to demonstrate the overall need for renewable or low carbon energy and also recognize that even small-scale projects provide a valuable contribution to cutting GHG emissions;
- ▶ Approve the application if its impacts are acceptable;
- ▶ New development applications should be plan to avoid increased vulnerability to the range of impacts arising from climate change.

There is significantly less emphasis on the mitigation of climate change and carbon reduction than in the supplement to PPS1 (Climate Change). Unlike PPS1 there is no-longer a push to adopt district heating and CHP as part of a broader carbon reduction strategy.

The NPPF adopts a very different approach to the development of planning policy to that defined by Planning Policy Statements. It does not provide the level of detail set out for example in PPS1 (Climate Change) or PPS22 (Renewable Energy). Rather it sets framework objectives which local authorities are expected to take account of when producing Development Plans.

It remains to be seen how far local authorities will be able to go in setting environmental performance criteria ahead of the minimum standard defined by requirements such as Building Regulations, under the NPPF.

The timetable for zero carbon buildings

Zero carbon homes

In July 2007 the Government announced that from 2016 all new homes will be 'zero carbon'. The exact definition of 'zero carbon' was not specified at the time, though it was taken to mean that homes would produce net zero carbon emissions over a year.

The policy announcement set out a timetable for progressive tightening of the building regulations in 2010, 2013 and 2016 to deliver a 'zero carbon' policy. In response to this the Green Building Council developed a three strand approach to delivering zero carbon through:

- ▶ Fabric energy efficiency;
- ▶ Onsite generation of electricity or heat - known as 'carbon compliance'; and,
- ▶ Allowable Solutions - allowable forms of off-site generation.

The presumption behind this approach was that the design and construction of net zero emissions homes was not viable on a mass market scale, and therefore the target should be to reduce the carbon emissions of new homes by 70% (from 2006 levels) through improved efficiency and on site solutions. The remaining carbon emissions would be addressed through 'allowable solutions'.

The Zero Carbon Hub was subsequently established as an industry led body to develop the technical definitions needed to enable the house building industry to deliver zero carbon homes. The Hub produced a report on fabric energy efficiency standards for homes in 2009, which set out a pathway to significantly better insulated homes.

The Hub was also asked to produce a clear definition of the Carbon Compliance standard for new homes, that is, to decide what level of emissions reduction will be set as the minimum national standard to be achieved by new homes through a combination of fabric efficiency and on site low carbon or renewable solutions.

Initially it was proposed that carbon compliance would be equivalent to a 70% reduction in emissions. Following a review the Hub proposed the following carbon compliance emissions reductions for new homes (expressed as a percentage improvement over 2006 Building Regulations):

- ▶ 60% for detached houses;
- ▶ 56% for attached houses;
- ▶ 44% for low rise apartment blocks³⁴.

In the budget in March 2011 the Government made a further significant change what is meant by 'zero carbon' by removing unregulated emissions from the definition. Unregulated emissions refer to emissions not covered by Building Regulations, so-called 'plug loads' arising from the use of appliances.

³⁴ The percentage reductions shown are only approximate equivalents when expressed as percentage reductions relative to 2006 Building Regulations. A more accurate definition is in terms of the following limits: 10 kg CO_{2(eq)}/m²/year for detached houses, 11 kg CO_{2(eq)}/m²/year for attached houses, 14 kg CO_{2(eq)}/m²/year for low rise apartment blocks (four storeys and below).

In a typical home these will account for 40-50% of the total electricity consumption, and this percentage is currently rising as the number and size of household appliances and gadgets increases³⁵.

In July 2011 the Zero Carbon Hub published 'Allowable Solutions for Tomorrow's New Homes' which sets out what constitutes an 'Allowable Solution'.

These are grouped into three categories (refer to page 67):

- ▶ On-site solutions;
- ▶ Near site solutions;
- ▶ Off-site solutions.

Implications for planning policy

In terms of this project and the development of Merton Rule-style policies in the future, policy changes relating to zero carbon buildings are notable for two reasons.

Firstly, there has been a progressive dilution of the definition of zero carbon, since it was first proposed in 2008. Meeting a 'zero carbon' standard as currently defined will be significantly easier than it was when the standard was first announced and was then taken to mean 'net zero (annual) carbon emissions'.

Secondly, by taking unregulated emissions out of the definition of zero carbon, this reduces the need for renewable electricity generation in new homes, either directly as a building integrated system or indirectly as part of an 'allowable solutions' package of measures.

It also means that reductions in emissions arising from plug-load (unregulated energy use) now falls outside the scope of any direct planning policy intervention and will only be achieved through reductions in the carbon intensity of grid electricity.

Non-domestic buildings

In parallel with developments related to domestic dwellings, the 2008 Budget set out a timetable for the adoption of zero carbon standards for new non domestic buildings. Targets were set for new schools to be 'zero carbon' by 2016, public sector buildings by 2018 and all other new non-domestic buildings by 2019.

In June 2010, the European Union published the recast of the Energy Performance of Buildings Directive giving the targets for new public buildings to be 'nearly zero energy' by 2018 and for all new buildings to reach that target by 31 December 2020.

The EU close equivalent of 'zero carbon' - the 'nearly zero-energy building'- is defined as a building that has a very high energy performance, as determined in accordance with Annex I of their Directive. This states that it should reflect the annual energy use for 'typical needs' including heating, cooling and hot water. It further stipulates that the nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby.

³⁵ Though the energy efficiency of so-called white goods (as well as other appliances) is reducing per unit volume/capacity the size of appliances is also increasing. This together with increases in the number of household appliances and gadgets has led to a net increase in household electricity consumption.

In January 2012 the Government published a consultation on changes to the Building Regulations in England, in which it sets out the proposed changes to Building Regulations in 2013 which would apply to non-domestic buildings. The document makes it clear that at present a definition of zero carbon in non-domestic buildings has yet to be reached³⁶, but the Government has previously commissioned Aecom³⁷ to examine the options for reducing emissions using a combination of improvements in fabric and ventilation and packages of allowable solutions and provide recommendations for further consideration.

Though the detailed route and definitions to achieving a zero carbon standard in non-domestic buildings have yet to be published, the consultation published in January this year makes it clear that the 2013 revision to Building Regulations should be regarded 'as one step on the trajectory towards zero carbon'.

Changes to the Building Regulations are discussed below.

Building Regulations

Part L of the Building Regulations (Conservation of fuel and Power) were last revised in 2010. The Government is consulting now on the next revision to these which will come into effect in October 2013. This is expected to be the last revision prior to 2016 when the zero carbon standard (discussed below) for new domestic dwellings will apply.

Changes to the Building Regulations relating to new domestic dwellings

The next increment to the Building Regulations takes account of two pieces of work by the Zero Carbon Hub, namely;

- ▶ **Defining an Energy Efficiency Standard for Zero Carbon Homes** (November 2009)³⁸. This proposes an energy performance target for new buildings measured in terms of total space heating and cooling load. Importantly it is differentiated by building type and expressed as a maximum delivered energy demand by floor area. Apartments and mid terrace houses have a maximum energy demand of 39 kWh/m²/yr, and semi-detached, end of terrace and detached houses have a maximum energy demand of 46 kWh/m²/yr. These specific targets are referred to in the consultation document as the Fabric Energy Efficiency Standard (FEES or 'full FEES'). In response to this work, the Government committed to introducing a fabric standard for zero carbon homes, but up until now has not stated when or how such a standard will start to be introduced into the regulations.
- ▶ **Carbon Compliance for Tomorrow's New Homes**³⁹ (February 2011). This proposes limits on the CO₂ emissions of new homes over and above the fabric energy efficiency standard, expressed again as performance targets in kg CO₂/m²/year, and differentiated by building type. The assumption behind the Hub's work is that these targets would be met by building-integrated low and zero carbon generation technologies. The 2013 review assumes that these targets would apply from 2016.

³⁶ 'An overall aggregate target for 2019 zero carbon on-site standards has not been set', paragraph 70, New non-domestic buildings.

³⁷ Zero Carbon Non-domestic Buildings. Aecom January 2012, Department for Communities and Local Government.

³⁸ www.zerocarbonhub.org/building.aspx?page=2

³⁹ <http://www.zerocarbonhub.org/definition.aspx?page=8>

Implicit within these recommendations from the Zero Carbon Hub is a change in the method for assessing whether or not a new dwelling complies with Building Regulations. At present this is done by comparing the energy performance of the new dwelling with that of a notional building of the same size and type. Performance values (backstops) are set out for individual elements (providing some definition of a minimum standard). The domestic notional building is a 2002 compliant building, and the 2006 and 2010 standards asked designers to achieve a relative improvement on that specification.

A key issue addressed in the consultation is how to move from the current methodology to one based on absolute energy and CO₂ standards for different building types, which will apply from 2016. It has proposed two transitional arrangements:

- ii. A **'FEES plus efficient services' option**. The Regulations would be amended to include a fabric energy efficiency target alongside the existing CO₂ target. Designers would need to meet both the energy target relevant to their building type (a detached house, for example) and also a CO₂ target. While the energy target would be fixed by dwelling type, the CO₂ target would be bespoke to the building under consideration.
- iii. A **'Halfway point' option**, which is much closer to the proposed 2016 zero carbon levels. Here energy and CO₂ targets would be fixed by dwelling type.

The consultation states the Government's preferred route is for a hybrid approach to accompany the FEES plus efficient services option.

A further issue is how CO₂ targets are set. The relevance of CO₂ targets to this research is that they will have a bearing on whether designers choose to include renewable energy systems in new dwellings.

Again two options are proposed:

- i. **'FEES plus efficient services'**: This is a target emissions rate which is equivalent to applying the full 39/46 kWh/m²/year standards to the new home, with efficient services including a condensing boiler and 100% low energy lighting. To meet this target, the designer will have to meet an energy demand target and an overall CO₂ target. The designer would be free to choose how to achieve this extra saving over and above the fabric energy efficiency target.
- ii. **'Halfway point'**: This is a CO₂ target which is (approximately) half way between the Part L 2010 target and the full on site carbon compliance target being proposed by Zero Carbon Hub for 2016 for each dwelling type. Again, the designer would meet an energy target then achieve an extra reduction in emissions. Just as for the option above, the designer would be free to choose how to meet the CO₂ target provided that the energy target had been met. Because the 'halfway point' standards are more demanding, there is a greater difference between the energy demand target and the CO₂ target, giving the designer more options on how to meet the overall standards.

There is a significant difference in the CO₂ reductions resulting from the two approaches as shown in the table below:

	Mid terrace house	End of terrace house	Detached house	4-storey apartment block	4-storey apartment block	Aggregate % reduction CO ₂ emissions from 2010	Average cost per dwelling
FEES plus efficient services	4%	7%	15%	0%	12%	8%	£795
Half-way point rounded	26%	28%	29%	19%	28%	26%	£2,866
Fuel assumed	Gas				Electricity	Mix	

Table showing percentage reduction in CO₂ emissions when compared to 2010 Building Regulations. The figures use preliminary CO₂ emission factors. Source: 2012 consultation on changes to the Building Regulations in England, Table 2, and Table 3, pages 25 and 26.

Of the two options the Government has said that its preferred option is the FEES plus efficient services approach.

There are a number of unresolved issues here of which any amendments to existing Merton Style policies will need to take account. These are discussed below.

Changes to the Building Regulations relating to new non-domestic buildings

For new non-domestic buildings no change is proposed to the basic methodology for setting standards and the use of differentiated standards for different building types. The existing methodology of comparing the new building to a notional building will remain.

Analysis feeding into the consultation document considered four options for 2013 standards of which two are included for consultation:

- i. **An 11% improvement on Part L 2010.** This overall level of improvement is achieved by applying packages of fabric and services efficiencies to the notional buildings, then aggregating the resulting improvements across the most common build types to achieve the 11% improvement. This results in a range of improvements in the individual building types modelled of 8-12% over 2010 Building Regulations.
- ii. **A 20% aggregate improvement on Part L 2010.** This overall level of improvement is achieved when a more challenging package of fabric and services improvements is applied, and then a photovoltaic array equalling 1.6% of the floor area is added. Thus a 20 storey building would have a greater percentage of its roof area covered in photovoltaic panels than a 4 storey building with the same footprint/roof area. The range of resulting targets from the actual buildings modelled is somewhat wider for this option, from 15% in the five star hotel to 23% in the shallow plan office.

The consultation document makes it clear that the Government's preference is for a the 20% uplift. However, it also states that more work is needed to examine the effects of both the 11% and 20% uplifts and on the renewables potential for different buildings.

Definition of Allowable Solutions relating to 'zero carbon' buildings

Further information on measures which have potential to be listed as 'Allowable solutions', as produced by the Zero Carbon Hub.

On-site solutions

- ▶ Installation of smart appliances;
- ▶ Application of 'flexible demand' systems (supporting demand side management);
- ▶ Use of grid-injected biomethane linked to the site by Green Gas Certificates;
- ▶ Installation of communal heat accumulator (site based heat storage);
- ▶ Home electric vehicle charging;
- ▶ Electricity storage for the home (to store electricity generated from PV panels);
- ▶ On-site waste management (Vacuum waste collection systems);
- ▶ LED Street Lights for the site.

Near-site solutions

- ▶ Export of low carbon heat from site based district heating scheme (i.e. support for cost of pipe-work);
- ▶ Retro-fitting of low/zero carbon technologies to local communal buildings;
- ▶ Investment in creation or expansion of locally planned sustainable energy infrastructure (e.g. district heating or on-site wind turbines);
- ▶ Investment in local electric vehicle charging infrastructure;
- ▶ Investment in low carbon street lighting for local area;
- ▶ Local micro-hydro schemes;
- ▶ Communal waste management solutions;
- ▶ Local energy storage solutions.

Off-site solutions

- ▶ Investment in Energy-from-Waste plants (e.g. Anaerobic Digestion and Pyrolysis/Gasification plants);
- ▶ Investment in low carbon electricity generation assets up to a maximum determined scale e.g. excluding large scale off shore generation;
- ▶ Investment in district heating pipe-work to connect new loads to existing schemes or support new schemes;

- ▶ Investment in retro-fitting of low carbon technologies to communal buildings;
- ▶ Investment in embodied carbon reduction initiative Investment in low carbon cooling;
- ▶ Investments in energy storage and demand-side management/flexible demand projects to counter intermittent renewables.

Appendix 5 - regulated versus unregulated emissions

Arguments for and against specifying revised on-site renewable policy based on regulated emissions - domestic buildings

For regulated emissions	Against regulated emissions
<p>Simple - level defined by Building Regulations</p> <p>No specific methodology needed unlike calculation of unregulated emissions which requires separate methodology</p>	
<p>Easier for developers to achieve</p>	<p>Softening of current policy</p> <p>But next revision to Building Regulations should improve carbon reduction through other measures (i.e. fabric and ventilation)</p>
<p>Lower cost to developer</p>	<p>Cost difference could be reduced on larger scale developments with economies of scale</p>
	<p>Reduces the carbon saving potential of 'Merton' policies</p> <p>Regulated account for 40-50% of domestic emissions</p>
	<p>Inconsistent with proposal that policy revisions should focus on those areas not covered by Building Regulations (namely hot water and unregulated emissions)</p>
	<p>Lower installed r.e. capacity as a result of these policies</p>
	<p>Reduces resilience of occupiers/buildings to future price increases.</p>
	<p>This policy could provide only means by which LPAs can address unregulated emissions.</p>

Appendix B: Extract from the Cambridge Local Plan Issues and Options Report (2012): Carbon reduction options

Reduction of carbon emissions from new development

- 6.9 The achievement of national targets¹ for the reduction of carbon emissions will require action across all sectors of energy use. Within Cambridge, this will involve balancing the overall increase in emissions associated with new development with the opportunities that these developments offer for reducing carbon and greenhouse gas emissions, through measures such as improving energy efficiency and the provision of on-site renewable and low carbon energy generation. Consideration will also need to be given to the role of the Local Plan in supporting improvements to the existing building stock in Cambridge (see Option 50). There are also links with transport, in terms of encouraging the use of more sustainable modes.
- 6.10 The Decarbonising Cambridge Study considered the impact that setting targets for carbon reduction would have on the viability of new development. Such a policy approach would represent a move away from percentage renewable energy policies such as the Council's existing 10% renewable energy policy. It would take account of the hierarchical approach to reducing carbon emissions through improvements to building fabric and energy efficiency as well as provision of low carbon and renewable energy. It would also provide developers with greater flexibility in how to meet the levels of carbon reduction required. However, it is considered that there may still be merit in including a percentage renewable energy approach, similar to Policy 8/16 in the 2006 Local Plan, which requires 10% renewable energy to form part of the energy strategy for major developments, dependent on the levels of carbon reduction sought in the final plan. Under the government's initial proposals for zero carbon homes, which required zero regulated and unregulated carbon emissions from new homes, percentage renewable energy policies would arguably have become redundant. However, as part of the budget announcement of 2011, the definition of 'zero carbon' was relaxed to consider regulated emissions only. Add to this the recent consultation on future changes to Building Regulations, which proposed a further relaxation in the levels of carbon reduction required from new homes, and there may still be a role for percentage renewable energy policies in the future.
- 6.11 In light of the above, three options are put forward for possible future policy development, informed by the Council's evidence base. They are considered to be the most reasonable approaches that would help achieve the vision of the Plan for Cambridge to become a low carbon city and to achieve the aims of the NPPF for planning to help secure radical reductions in carbon emissions. There comes a point in levels of carbon reduction where

¹ As part of the Climate Change Act (2008) the UK has adopted a national target of reducing carbon emissions by 80% by 2050 with an interim target of a 50% reduction in carbon emissions by 2025

renewable energy provision becomes necessary to meet the required reduction, for example in line with the energy requirements of Level 4 of the Code for Sustainable Homes. However, the recent consultation on proposed changes to Part L of Building Regulations in 2013 recommends a lower level of carbon reduction than originally set out by government.² If this level were adopted nationally as part of Building Regulations, the utilisation of renewable or low carbon energy generation would no longer form a part of a development's carbon reduction strategy. While the hierarchical approach to reducing carbon emissions is fully supported, it is considered that the incorporation of renewable technologies into schemes should still form an important element of carbon reduction strategies in light of concerns surrounding fuel security and national targets for renewable energy generation. The Council's evidence base clearly shows that there are opportunities across the city for planning policy to help secure higher levels of carbon reduction than those being brought forward by changes to Building Regulations.

Option 44 – Detailed targets for on-site carbon emission reductions that relate to levels of the Code for Sustainable Homes being sought.

One option could be to develop a detailed policy requiring specific levels of on-site carbon reduction from all new major development sites in Cambridge. In line with Option 43 for the development of sustainable construction standards, for homes this would equate to a 44% reduction in carbon emissions for all development up to 2016. After 2016, the policy would need to reflect that new homes should be achieving 'zero carbon' status. For non-residential buildings, the timetable for zero carbon non-residential buildings (2019) would be followed.

Such an approach would be unlikely to have a significant impact on the viability of development, as it would be in keeping with the current levels of carbon reduction that will ensure development is on the path of meeting zero carbon policy by 2016 (for new homes) and 2019 (for non-residential development). However, this approach would not be fully in keeping with the vision of Cambridge as a low carbon city, and would not take account of the evidence base for climate change, which suggests higher levels of carbon reduction would be viable. It would also fail to meet the NPPF's aims for planning to help secure radical reductions in carbon emissions.

Option 45 – Detailed targets for on-site carbon emissions reductions in line with the findings of Decarbonising Cambridge

A second option could be to develop a detailed policy requiring specific levels of on-site carbon reduction from all major new residential

² Communities and Local Government (2006), Building a Greener Future: Towards Zero Carbon Development. This document recommended a 44% reduction (compared to 2006 Building Regulations and equivalent to Level 4 of the Code for Sustainable Homes) in carbon emissions be incorporated into 2013 Building Regulations. This has now been revised down to an approximate 33% reduction in carbon emissions utilising energy efficiency and improvements to building fabric.

development that seek to go beyond the levels of carbon reduction that will be brought in through changes to Part L of Building Regulations in 2013 and 2016 and zero carbon homes policy. Evidence contained within the Decarbonising Cambridge Study suggests that a level of carbon reduction in the order of 70% (above 2006 Building Regulations levels) would be a feasible level to set, bearing in mind impacts on viability. This would set a level of carbon reduction higher than the energy requirements of the Code for Sustainable Homes target being considered under Option 43, consistent with the recommendations of the Decarbonising Cambridge Study. Indeed such a target would be greater than the levels of on-site carbon reduction being sought nationally through zero carbon homes policy, which comes into force from 2016.

The pathway for zero carbon non-residential buildings is less well defined. As such, it is suggested that levels of carbon reduction follow planned changes to Building Regulations. Opportunities to go beyond these levels could be pursued for those sites that could connect to infrastructure such as district heating.

While this approach would be in keeping with the vision for a low carbon city, helping to meet the NPPF's aim for planning to secure radical reductions in emissions, there could be a concern from developers of the impact on viability of their proposals.

Option 46 – Leave carbon reduction to Building Regulations and continue to operate a percentage renewable energy policy

A third option could be to leave the setting of carbon reduction for new development to Part L of Building Regulations, but continue to require a percentage of carbon reduction to be brought about specifically through the use of renewable energy. This requirement would be in addition to levels of carbon reduction sought by Building Regulations.

This approach is being considered in light of the recent consultation on changes to the 2013 Part L Building Regulations, which includes an option that would decrease the level of carbon reduction originally intended as part of the transition towards zero carbon policy in 2016.

The advantage of such a policy approach is that it will help to deliver renewables if the level of carbon reduction incorporated into Building Regulations is reduced. Such an approach is considered as part of the emerging Merton Rule Study³. There could be concerns about the impact of such a policy on the viability of new development, and this would need to be taken into account.

Questions

³ Climate Works Ltd (2012), A review of Merton Rule-style policies in four LPAs in Cambridgeshire

- 6.8 Is there a need for a policy addressing this issue?
- 6.9 Which of the options do you prefer?
- 6.10 Are there any points which have been missed and you feel should be added (perhaps even an entirely new option)?
- 6.11 Are there any other reasonable alternatives that should be considered at this stage?



To: Executive Councillor for Planning and Climate Change: Councillor Tim Ward
Report by: Head of Planning Services
Relevant scrutiny committee: Development Plan Scrutiny Sub-Committee 16/10/2012
Wards affected: All Wards

Cambridge and South Cambridgeshire Employment Land Review: Update 2012

Not a Key Decision

1. Executive summary

1.1 In January 2012, Cambridge City Council and South Cambridgeshire District Council commissioned an update to the Councils' Employment Land Review. The aims of the report were to:

- Reconsider and update the findings from the Employment Land Review 2008, to focus on the period 2011-2031; and
- Review – in the light of evidence – existing Selective Management of the Economy policies in the Cambridge area.

1.2 The Employment Land Review provides an evidence base for developing policies and allocating sites in the review of the Local Plan and is also a material consideration in the determination of planning applications.

1.3 Development Plan Scrutiny Sub-Committee considered a summary of the initial findings of the review in June 2012, prior to the Issues & Options consultation on the new Local Plan.

1.4 The Employment Land Review update 2012 is attached at Appendix A of this report.

2. Recommendations

2.1 This report is being submitted to the Development Plan Scrutiny Sub-Committee for prior consideration and comment before decision by the Executive Councillor for Planning and Climate Change.

2.2 The Executive Councillor is recommended:

- a) To consider the findings of the Employment Land Review 2012;
- b) To endorse the Employment Land Review for use as an evidence base for the review of the Local Plan and as a material consideration in planning decisions (Appendix A).

3. Background

- 3.1 In 2007, an Employment Land Review was produced with South Cambridgeshire to provide evidence for the Local Plan review. This looked at the employment land requirements to 2026 in both districts. It concluded that there were 139 hectares of unconstrained land available for employment development in 2007, and that this may be insufficient to accommodate the indicative target for net growth in jobs.
- 3.2 A generous supply of land existed for high technology research and development uses in South Cambridgeshire. Within the city, losses of employment land have occurred over the last 10 years, especially within manufacturing land. The Review identified a short-term undersupply of industrial land, and a medium-term undersupply of office space in the city. Furthermore, much of the supply of employment land it identified was not in Cambridge, but in South Cambridgeshire, often not near the city.
- 3.3 In 2011, Development Plan Scrutiny Sub-Committee considered a Study that looked at the state of the Cambridge Cluster fifty years after its formation, June 2011. This report can be found here: <http://goo.gl/PW2b2>
- 3.4 The Cluster Study has an agenda for action linked to three high level recommendations:
 - Design and deliver new developments with social spaces, shared across the site;
 - Improve connectivity between Cambridge railway station, the city centre and the principal employment sites; and
 - Develop a holistic strategy and masterplan for the central area.
- 3.5 A review of the Employment Land Review was required in order to update it to the changed national and policy situation since 2007. Development Plan Scrutiny Sub-Committee considered a summary of the initial findings of the review in June 2012, prior to the Issues & Options consultation on the new Local Plan. This report can be found here: <http://goo.gl/v85te> and the initial summary can be found here: <http://goo.gl/MIQ8D>

- 3.6 The latest Employment Land Review is attached at Appendix A of this report. The conclusions have not changed since the previous report was brought before Development Plan Scrutiny Sub-Committee in June 2012.
- 3.7 The conclusions are based on a number of assumptions around forecasts of future jobs and employment density requirements, exact figures should be viewed circumspectly but the trends and more general conclusions can be seen with more confidence.
- 3.8 There is a close functional relationship between the City of Cambridge and surrounding South Cambridgeshire, which provides part of the setting to Cambridge, a rural hinterland to the City and includes a number of significant business parks that contribute to the Cambridge economy. The tightly drawn administrative boundary around Cambridge means that some jobs in the Cambridge Science Park are incorrectly assigned to Cambridge rather than South Cambridgeshire. This should be born in mind when considering the detailed figures, and emphasise the need to consider jobs provision in the Cambridge area in a joined up manner with South Cambridgeshire. The Employment Land Review update attempts to do this.
- 3.9 The aim of the update to the Employment Land Review is to look at demand for and supply of employment land in Cambridge and South Cambridgeshire and make a number of recommendations based on these findings. The update also specifically looks at the policy of Selective Management of the Economy in the context of the demand / supply findings as well as the findings of the Cluster Study.
- 3.10 The key messages coming out of the Employment Land Review update 2012 have not changed since the report was brought before Development Plan Scrutiny Sub-Committee in June 2012. Some of the high level conclusions are set out below:
- Overall, jobs growth and floorspace requirements are lower for 2011-2031 than those that informed the 2008 review over the period 2001-2021, but there will be considerable pressure for B1a (office) space in the city (including some that needs to be available on short-term leases). Demand for office space is particularly focused on two areas of pressure: the city centre, and the northern fringe around Cambridge Science Park. This demand is deriving from firms linked to the high tech cluster – either directly or as professional / financial service providers. In the city centre there is no more land. Intensifying the use of existing sites in the city centre is needed; allocating more land in peripheral locations will not help in relation to the core growth

dynamic (as the market for peripheral sites is quite different). There is, therefore, a need to look systematically at the potential for intensification of use in the city centre to create, over time, more office space. N.b. the definition for city centre used in the update takes in land outside the historic core, down towards Cambridge station. The potential for development in the northern fringe near the new Science Park Station will also be able to help meet office and R&D demand;

- There is also a need to focus on ensuring that existing commitments are brought forward for development, and that the existing vacant stock is improved to encourage re-use. The higher employment densities and lower jobs growth projections mean that there is no immediate imperative to compensate for the loss of the proposed employment allocations at Cambridge East;
- However, it will be important to ensure there is sufficient land for manufacturing in the area. Where possible, existing manufacturing sites within and close to Cambridge should be protected from loss to housing or retail, but equally it is important to recognise that market factors dictate that this will not be possible in all cases. Therefore alternative provision is necessary, including at Northstowe but also possibly in some locations that have not previously been seen as suitable for manufacturing, such as Cambridge Research Park. The increasing importance of hybrid buildings that enable flexibility of use needs to be recognised in the way in which sites are designated for different uses;
- There may be an expectation to factor development at Alconbury into employment land proposals for South Cambridgeshire. Alconbury is an important resource for the wider area and it should provide a lot of employment space in time, and may become attractive for some firms currently located in the Cambridge area, or considering moving to the area.
- It will be important to reappraise the role and potential of sites on the edge of Cambridge. As it stands, Cambridge East is ruled out while West Cambridge is under the University's control and will be developed, but gradually. To the north, there is scope for intensification on Cambridge Science Park, and using Chesterton Sidings and land in the Cowley Road area for high density employment uses. If these suggestions prove impossible, or additional provision on the northern fringe can only be made in

the longer term, then consideration needs to be given to finding new employment land in other sustainable locations.

3.11 In looking at Selective Management of the Economy policies, the Employment Land Review update makes the following concluding observations:

- One of the key assumptions on which the selective policies are based is that employment demand from firms exceeds the supply of land and premises in the Cambridge area, and therefore the local authorities can afford to be selective in the types of firms, and activities, that are accommodated here. Arguably this is no longer the case, and the forecasts suggest the area will experience slower growth than previously expected. Therefore it is important to be very careful about selectivity, to avoid it further slowing growth;
- Economic development objectives for the area support the high tech cluster and the growth of high value jobs. As currently drafted, the selective management of employment policies may be at variance with these objectives. Furthermore, the property market is largely doing the job of keeping out low value activities which do not need to locate in the Cambridge area: for example, it is too expensive to locate large scale distribution or low value manufacturing anywhere in the Cambridge and South Cambridgeshire area. So, planning policies which seek to prevent these kinds of activities are arguably quite pointless, and they are potentially damaging if they have unintended other consequences;
- There is a shortage of offices with B1a permissions in Cambridge. Unless this is addressed through a combination of intensification and making more land available in the more attractive locations, it could adversely affect projected employment growth, which is mainly in office sectors. The evidence suggests that a combination of applying local user restrictions and making space available beyond the immediate environs of Cambridge is not going to solve the problem of the demand/supply imbalance in the city;
- The size restrictions included in the selective policies – 300 sqm for non-local office users and 1,850 sqm for manufacturing – appear to be arbitrary. For example, it is difficult to see why a local high tech firm, wishing to establish a manufacturing plant locally which is bigger than 1,850 sqm, and which does not fall foul of environmental or other policies, should be prevented as a

matter of course from doing so by the selective management policies.

- The policy to retain the best manufacturing land in and around Cambridge has had little effect. Various long established sites have been lost, and this has increased the market pressure on other manufacturing sites, and made it more difficult to prevent further losses. One response to this would be to suggest that the policy needs to be more firmly applied. However, the property market view is that redeveloping industrial sites in Cambridge for industrial use is not viable, and simply will not happen, whatever the policy. The only exception would be an owner occupier which wants to remain in situ and expand or modernise. It may therefore be sensible to retain the policy but change it's wording to afford particular protection to occupiers that want to remain on site and are willing to invest in modernisation;
- If a distinction needs to be made between what is allowable in the immediate vicinity of Cambridge, and what is allowable further out of Cambridge, then a logical and clear boundary is the inner limit of the Green Belt, rather than the local authority boundary, because the latter excludes parts of the urban area; this would replace an administrative boundary with a functional one which ought therefore to be more meaningful; and
- There appears to be little point in the selective policy requiring research establishments new to the area to show a "special need to be located close to existing major establishments in related fields (such as the universities, the teaching hospital, or private research establishments), in order to share staff, equipment or data, or to undertake joint collaborative working". Given the objective to enable Cambridge's role as a world leader in research, it is difficult to see circumstances in which a new research institute should be turned away from the Cambridge area.

3.12 Selective Management of the Economy has been a key economic policy tool that has helped maintain Cambridge's international competitiveness over the years. Nevertheless the findings of the Employment Land Review update suggest there is the potential for a number of changes that would improve the policy.

3.13 In June and July 2012, the Council consulted upon the Issues and Options stage of the Local Plan Review. This incorporates the issues raised in the Employment Land Review update 2012. It will be for the

review of the Local Plan to make a judgement as to how to deal with the issues raised in this document.

- 3.14 Whilst the main purpose of the Employment Land Review is to inform the review of the Local Plan and policy development, it is also capable of being a material consideration when coming to a decision on planning applications. This could be to support decisions in line with existing policy. For example, the continued loss of industrial and storage land and the small demand for new industrial and storage land, evidenced by the Employment Land Review update 2012, will support the continued operation of Policy 7/3 of the existing Local Plan.

4. Implications

(a) Financial Implications

- 4.1 There are no direct financial implications arising from this report.

(b) Staffing Implications (if not covered in Consultations Section)

- 4.2 There are no direct staffing implications arising from this report. The review of the Local Plan is already included in existing work plans.

(c) Equal Opportunities Implications

- 4.3 There are no direct equal opportunities arising from this report. An Equalities Impact Assessment will be undertaken as part of preparing a new development plan for Cambridge.

(d) Environmental Implications

- 4.4 The report is looking at how employment needs can be accommodated in Cambridge, and the future of associated employment policy. Proper planning of employment growth can ensure a more sustainable pattern of development, resulting in greatly reduced carbon emissions for Cambridge. The Employment Land Review update 2012 will form a key piece of evidence to inform planning for employment growth, it therefore has the potential to high positive impact (+H).

(e) Procurement

- 4.5 The procurement of the Employment Land Review update is built into existing budgets.

(f) **Consultation and communication**

4.6 Consultation and communication over any change of policy relating to the issues raised by this report, has been and will continue to be undertaken as part of the Local Plan Review.

(g) **Community Safety**

4.7 There are no direct community safety implications arising from this report.

5. Background papers

- Cambridge and South Cambridgeshire Employment Land Review 2008: <http://goo.gl/SMHnQ>
- Cambridge Cluster at 50 Study: <http://goo.gl/67Vgu>
- Cambridge Local Plan – Towards 2031; Issues & Options Report June 2012: <http://goo.gl/WcDKr>
- Employment Land Review update 2012 – initial findings: <http://goo.gl/me8MU>

6. Appendices

Appendix A: Employment Land Review update and Review of Selective Management of Employment Policies 2012

7. Inspection of papers

To inspect the background papers or if you have a query on the report please contact:

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Appendix A: Employment Land Review Update and Review of Selective Management of Employment Policies 2012

Employment Land Review Update and Review of Selective Management of Employment Policies

Report to South Cambridgeshire District
Council and Cambridge City Council

July 2012

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Approved by:	Chris Green	Date:	July 2012
	Chief Executive		

Summary and overview

Context and Purpose

1. In January 2012, South Cambridgeshire District Council and Cambridge City Council jointly commissioned SQW – in association with Savills – to complete a programme of employment-related research to inform an on-going review of adopted planning policies. The commission was relatively small in scale and the intention was that it should draw primarily on existing evidence to:
 - reconsider and update the findings from the Employment Land Review (completed for the two districts by Warwick Business Management Limited in July 2008 (ELR2008)) to focus on the period 2011-2031
 - review – in the light of evidence – existing Selective Management of Employment policies in the Cambridge area.

Key findings

2. In terms of **demand** for employment land, the study found that:
 - whilst the current exercise and ELR2008 were a decade apart in their timeframes (i.e. 2011-31 and 2001-21 respectively), the more recent projections for Cambridge City and South Cambridgeshire are more cautious than those that informed ELR2008: the earlier exercise assumed substantial employment growth over the period 2001-2011 while the newer data suggest that particularly in Cambridge City, there was actually very little overall employment growth over this decade. For their respective 20-year periods, ELR2008 assumed the need to accommodate 40,000-50,000 jobs (over 2001-21) whereas new projections point to something around 35,000-40,000 jobs (for 2011-31)
 - in addition, the changing sectoral composition of projected employment growth *and* revised assumptions about employment densities (which have increased substantially) suggest that less additional space will be needed to accommodate each job that is created
 - overall, whereas ELR2008 identified a need for 550,000-600,000sqm of employment space (on 106-114ha of employment land) over the period 2001-21, this study has identified potential demand for 220,000-240,000sqm of employment space (on 55-60ha of employment land) over the period 2011-31.
3. In terms of the **supply** of employment land, the study observed that there is currently sufficient overall provision across Cambridge City and South Cambridgeshire. However the forecasts suggest there is likely to be a shortage of B1a space. Demand for office space is particularly focused on two areas of pressure: the city centre, and the northern fringe around Cambridge Science Park. The market signals are very clear that increasing provision

elsewhere will not on its own solve the problem – more has to be done to increase supply in those locations where firms most want to be.

4. The study also noted that the redevelopment of old manufacturing and storage sites for employment uses, whilst desirable from a planning policy perspective, often appears to be unviable. As a result, a good number of these sites are being lost, principally to housing. Even redevelopment of office sites is unlikely to be viable unless significant intensification of use is allowed.
5. In terms of the **selective management of employment policies**, the study noted that the Cambridge area had seen significant growth over the last two decades (particularly in South Cambridgeshire), including in high tech sectors, and – compared to elsewhere – resilience to recession. At one level, then, it might be possible to claim that the policies have had their desired effect. However it advised considerable caution in drawing this conclusion: the study could not comment on the counterfactual – what the growth profile might have looked like had those policies not been in place.
6. Based on the available evidence, the study argued for some changes to the selective management of employment policies. It made the following important observations:
 - the more cautious employment projections suggest that the underlying presumption in existing policy that demand greatly exceeds supply may now be questionable
 - in changed market conditions – and in the light of changes within the high tech cluster – the selective management of employment policies may no longer be wholly aligned with economic development objectives relating to the cluster’s continued growth and provision for high value jobs
 - the shortage of offices with open B1 permissions in Cambridge will adversely affect projected employment growth unless it is addressed through a combination of intensification and the provision of more land in the more attractive locations
 - the size restrictions included in the selective policies – 300 sqm for non-local office users and 1,850 sqm for manufacturing – appear to be arbitrary and inconsistent with the revealed needs of key local businesses
 - the policy to retain the best manufacturing land in and around Cambridge has had little effect, mainly because of viability issues; however, it is important to afford protection to occupiers which want to remain on site and are willing to invest in modernisation
 - if a distinction needs to be made between what is allowable in the immediate vicinity of Cambridge, and what is allowable further out of Cambridge, then a logical and clear boundary may be the inner limit of the Green Belt, rather than the local authority boundary, because the latter excludes parts of the urban area
 - given the overall character of the Cambridge cluster, there is little point in the selective policy requiring research establishments new to the area to show a “*special need to be located close to existing major establishments in related fields (such as the*

universities, the teaching hospital, or private research establishments), in order to share staff, equipment or data, or to undertake joint collaborative working”.

Wider developments

7. Alongside the technical assessment of demand for and supply of employment land, and the implications for selective management of employment policies, there are some broader changes that must be taken into account in planning appropriate employment provision over the next two decades:
- the importance of manufacturing provision – particularly in the vicinity of major research-based establishments – is growing and in time, this could become central to the competitiveness of the high tech cluster
 - homeworking – for all or part of the week – is becoming easier, more widely accepted and far more necessary, and it is profoundly changing the relationship between jobs and employment provision: the relationship between home and work is very different now from in 2001, and over the period to 2031, it is likely to evolve further
 - city centre locales *and* access to London are becoming key drivers of demand for employment provision and hence:
 - the area around Cambridge railway station and, prospectively, the area around the planned Cambridge Science Park station (on the northern fringe) are crucially important, particularly where these intersect with the route of the Cambridgeshire Guided Busway
 - employers within these locations are increasingly accepting of high employment densities and very limited parking provision (and this in turn links to the far greater incidence of homeworking as set out above)
 - the importance of professional and financial services is growing in relation to the high tech cluster and, indeed, more generally, and this itself has an important London dimension
 - the University of Cambridge needs to continue to be seen as a key player in the evolving spatial economy: it will be important that employment provision (and indeed infrastructure) is planned with the growth plans and timescales of the University firmly in view, and a good understanding of the implications of them. In this context, West Cambridge and North West Cambridge are both important.

High level conclusions and recommendations

8. Our high level conclusions and recommendations relating to the period 2011-31 are as follows:
- Overall, jobs growth and floorspace requirements are lower for 2011-2031 than those that informed ELR2008 (over 2001-21), **but** there will be considerable pressure for

B1a space in the city, and particularly in the city centre, where there is no more land. Hence there will be a need to intensify the use of existing sites, but to do so in an effective way (in our view, allocating more land in peripheral locations will not help in relation to this core growth dynamic as the market for peripheral sites is different).

- There is a need to focus on bringing forward existing commitments, which if successfully developed are probably sufficient for the foreseeable future. The higher employment densities and lower jobs growth projections mean that there is no immediate imperative to compensate for the loss of the proposed employment allocations at Cambridge East.
 - There is also a need to reduce the loss of employment land to other uses, which in the City in particular appears to be happening at an increasing rate across all Use Classes, otherwise additional allocations will become essential.
 - It will be important to ensure there is sufficient land for manufacturing in the area. Where possible, existing manufacturing sites within and close to Cambridge should be protected from loss to housing or retail, but equally it is important to recognise that market factors dictate that this will not be possible in all cases. Therefore alternative provision is necessary. The increasing importance of hybrid buildings (which enable flexibility of use) needs to be recognised in the way in which sites are designated for different uses.
 - There may be an expectation to factor development at Alconbury into employment land proposals for South Cambridgeshire. However, the market view at present appears to be that (i) the Enterprise Zone designation is not a particularly important incentive to firms, and (ii) initially at least, firms will be reluctant to go there because it is isolated. That view may well change over time, but it would be unwise for South Cambridgeshire District Council to assume now that it will provide an attractive alternative to locations within the district, particularly in the short term.
 - It will be important to reappraise the role and potential of sites on the edge of Cambridge. As it stands, Cambridge East is ruled out while West Cambridge is under the University's control and will be developed, but gradually. To the north, there is scope for intensification on Cambridge Science Park and/or finding a way to use Chesterton Sidings and/or the sewage works for high density employment uses. If these suggestions prove impossible, or additional provision on the northern fringe can only be made in the longer term, then consideration needs to be given to finding new employment land in other sustainable locations.
9. Over the next period, there will – in our view – be a need for some genuinely creative and forward-looking planning policies which will need to be implemented well – and this agenda is really quite demanding. Two aspects are absolutely crucial. First – as argued in the *Cambridge Cluster at 50* report and as evidenced through this study – there is a need for a long term masterplan for the wider city centre (i.e. from the area around Cambridge railway station in the south to Castle Park in the north, and including Cambridge Retail Park as well as all of the main retail centre); this needs to deal with the next stage of the area's development, assuming that the CB1 venture is largely built out. Second, we would argue for

something similar on the northern fringe, encompassing both Cambridge Science Park and the planned Cambridge Science Park station. This area will also need to be developed (and gradually redeveloped) carefully, with an imperative to intensify uses in line with an evolving 21st Century economy (with changing expectations around working practices) and to do so around the principal public transport nodes. For both areas, it is crucial that the plans consider how the public sector can facilitate appropriate development, not just indicate what development is appropriate (i.e. similar to the role that Cambridgeshire Horizons played in ensuring the development on the southern edge of Cambridge (around Addenbrooke's Hospital and Clay Farm) actually happened).

1: Introduction

Context and purpose

- 1.1 In January 2012, South Cambridgeshire District Council and Cambridge City Council jointly commissioned SQW – in association with Savills – to complete a programme of employment-related research to inform an on-going review of adopted planning policies. The commission was relatively small in scale and the intention was that it should draw primarily on existing evidence to:
- reconsider and update the findings from the Employment Land Review (completed for the two districts by Warwick Business Management Limited in July 2008 (ELR2008)) to focus on the period 2011-2031
 - review – in the light of evidence – existing Selective Management of Employment policies in the Cambridge area.

Approach

- 1.2 The original intention had been that a new set of employment forecasts – produced by Oxford Economics using the East of England Forecasting Model (EEFM) – would form a core part of the evidence base. However both local authorities expressed concerns with regard to some of the model’s underlying assumptions and in addition, the release of these data was seriously and repeatedly delayed. Therefore, initiated by the two districts, a bespoke set of employment projections was commissioned from Cambridge Econometrics (CE) using its Local Economy Forecasting Model (LEFM). CE updated the two projections which had previously been prepared for the Cambridgeshire Development Study in 2009: one of these was essentially a baseline projection while the second adopted alternative population assumptions consistent with established local policy. These projections were made available in April 2012 and the report that follows draws heavily on them.
- 1.3 In addition, this study has been informed by:
- a review of the wider Cambridge area’s commercial property market which was completed by Savills
 - a review of monitoring data linked to employment sites and premises held by the local authorities
 - a series of consultations with firms/agents with a strong knowledge of employment provision in and around Cambridge and, in the case of the firms, first hand and recent experience of local relocation and/or expansion: whilst the number of consultations was modest, the focus was on organisations with a real understanding of (and insight into) the specific issues in and around Cambridge
 - a review of the latest evidence deriving from Cambridgeshire County Council Research Group with regard to the recent performance of the high tech cluster.

Report structure

1.4 The structure of this report follows closely the requirements set out in the study's Terms of Reference. It is divided into four main chapters which are structured as follows:

- in **Chapter 2**, we consider the findings from the employment projections and the implications of them in relation to future demand for employment space and employment land over the period 2011-31; we also consider how these compare to the findings from ELR2008 and the implications that follow
- in **Chapter 3**, we focus on supply side issues and – drawing on Savills' work and our review of the local authorities' monitoring data – we explain how the supply side picture has changed since ELR2008, and to what effect
- in **Chapter 4**, we draw together the findings from the two preceding chapters alongside wider evidence on the changing relationship between demand and supply for employment land in the Cambridge area, and we distil some high level conclusions for the two local authorities
- finally, in **Chapter 5**, we draw out some more specific observations and recommendations relating to the two local authorities' current Selective Management of Employment policies.

1.5 In addition, this report is supported by four substantive annexes:

- **Annex A** provides a detailed analysis of the two sets of employment projections generated by Cambridge Econometrics as an input into this study and it compares these with those produced for the earlier Cambridgeshire Development Study (CDS)
- **Annex B** reviews a set of baseline projections published by Oxford Economics in April 2012¹ on the basis of EEFM and it compares these to the projections generated by CE in the context of this study
- **Annex C** presents a summary analysis of the high tech database maintained by Cambridgeshire County Council's Research Group
- **Annex D** presents, in full, the report on commercial property which was prepared by Savills as an input into this study.

¹ Note that our analysis was completed on the basis of the baseline projections published by OE in mid April 2012. A few weeks later, these baseline projections were replaced by another set in which the numbers for Cambridge City were really rather different. Annex B – and the references throughout this report – refer to the earlier set of published projections

2: Projected demand for employment space and employment land

Introduction

- 2.1 The last full Employment Land Review was completed by Cambridge City Council and South Cambridgeshire District Council in 2008 (ELR2008). As set out in the original Terms of Reference, the current study was intended to update this evidence base, using similar assumptions and approaches.
- 2.2 The process of translating employment forecasts to land requirements involves a series of logical steps, each of which relies on important assumptions. Whilst the steps have not changed since 2008, new evidence is available in relation to some of the key assumptions; this evidence is drawn both from local sources (i.e. consultation and other evidence which was gathered and reviewed in the course of this study) and national guidance (which itself has been informed by empirical evidence from elsewhere). These assumptions have important implications for the assessment of overall demand.
- 2.3 This chapter is essentially divided into two parts:
- **Part A** calculates demand for employment space and floorspace using the new projections and a preferred set of density/plot ratio assumptions: sometimes these are taken straight from ELR2008, but more often, different assumptions are used, based on more recent evidence and data
 - **Part B** compares the outcomes from this process with those set out in ELR2008. A direct comparison is difficult because ELR2008 relates to 2001-21 while the current exercise is focused on 2011-31. Therefore, to aid some level of comparison, a set of numbers is produced for 2001-21 but based on new forecasts and the assumptions applied in Part A. In addition, we develop a set of numbers for 2011-31 using new forecasts but applying the density assumptions from ELR2008; this helps to clarify the impact of the assumptions.

Part A: Translating employment forecasts to land requirements, 2011-2031

Step 1: Consider projected employment by SIC sectors and the types of property occupied by these sectors

Use of employment forecasts

- 2.4 ELR2008 relied on two sets of employment forecasts which were prepared by **BSL Experian** in 2003 and 2004. Both sets assumed “**enhanced growth**”: they were aspirational forecasts and they sought to illustrate the spatial implications of the 2001 Regional Economic Strategy.

Subsequently, the predictions from the 2003 forecast were adopted as indicative jobs targets in Policy E1 of the East of England Plan.

- 2.5 In 2012, we have been informed by two main sets of employment projections: a **baseline (trend)** projection developed by **Cambridge Econometrics (CE)** on the basis of its Local Economy Forecasting Model (LEFM) and a **policy-led projection** prepared by CE through LEFM. We have also sought to refer to a baseline projection developed by Oxford Economics on the basis of the East of England Forecasting Model (EEFM). All three sets of projections were prepared in April 2012. The two sets of projections generated by CE were essentially updates of those developed for the Cambridgeshire Development Study (2009). A full review of these different sets of projections is provided in Annex A.
- 2.6 [Note that since the completion of ELR2008, various other projections have been prepared. These include those that informed the South Cambridgeshire Economic Development Strategy, 2010-15 (which was prepared by PACEC in July 2010). In addition, over the last two months, CE has quantified additional high and low growth scenarios². We have not used these high and low growth scenarios in this study for two main reasons: they were not available at the time the work was undertaken; and in any case, it is important that employment land and floorspace requirements are assessed in relation to unconstrained baseline forecasts. In particular, if the low growth scenario were to be used, the requirements would not reflect forecast demand, and applying them could therefore constrain economic growth.]
- 2.7 From CE's 2012 baseline and policy-led employment projections, some important observations need to be made with regard to the scale of projected employment growth and its changing sectoral composition:
- overall, **Cambridge City** is projected to generate 14,740 net additional jobs (on the CE baseline projection) between 2011 and 2031 or 19,600 net additional jobs (on the CE policy-led projection); between 2001 and 2011, employment barely changed within Cambridge City³
 - **South Cambridgeshire** is projected to generate 22,400 net additional jobs (on the CE baseline projection) between 2011 and 2031 or 23,100 net additional jobs (on the CE policy-led projection); the data from CE suggest that approaching 13,000 jobs were created in the decade between 2001 and 2011^{4,5}

² These are described in Scenario Projections for the Cambridgeshire Local Authorities and Peterborough UA – Report to the Cambridgeshire Local Authorities and Peterborough UA, Cambridge Econometrics and SQW, July 2012

³ As referenced in Footnote 2, CE has quantified additional high and low growth scenarios for the Cambridgeshire districts. For reference, it is helpful to understand how these alternative scenarios compare to the baseline and policy-led projections. Under the high growth scenario, Cambridge City is projected to see a growth of 19,700 jobs between 2011 and 2031 (which is close to the policy-led projection); under the low growth scenario, this figure falls to around 9,200. Overall, Cambridge City stood out as the least sensitive district under the different scenarios

⁴ Over the decade 2001-2011, employment growth appears to have been concentrated in South Cambridgeshire, rather than Cambridge City. It is important to note that some of the growth of South Cambridgeshire was functionally within the urban footprint of Cambridge (e.g. that on the South Cambridgeshire part of Cambridge Science Park). However, over the decade, South Cambridgeshire also saw employment growth at a number of business park locations (e.g. Granta Park) which are some distance from Cambridge and other major population centres

- across **both districts**, the bulk of new jobs growth is expected in professional services (including R&D); computing services; health and social work; and “other” business services. Manufacturing employment is expected to remain stable or even rise slightly – in sharp contrast to the last decade (which saw significant manufacturing job loss).

Assumptions about the types of property occupied by these sectors

- 2.8 At the level of broad SIC codes (12 in total), ELR2008 made some assumptions about the proportion of jobs that were accommodated in property of different Use Classes. It was informed by the contents of Box D.1 from the government’s *Guidance Note on Employment Land Reviews*⁶ but this provided very general guidance only. The study referred to making “*additional assumptions*” but provided no explanation as to how these were derived.
- 2.9 In 2012, we have sought to adopt a more granular approach. Specifically, our starting point has been the 41 sectors identified through LEFM (as compared to the 12 used in 2008). We then referred to detailed employment data from the Business Register of Employment Survey (BRES), structured by 4-digit SIC code, to understand the detailed make-up of these sectors. In the light of this, we estimated the proportion of employment growth that was likely to need to be accommodated within premises/sites linked to different Use Classes.
- 2.10 For each of Cambridge City and South Cambridgeshire, the table below shows the projected absolute change in employment from 2011-31, by sector, with an estimate of the proportion of employment that may be accommodated within different B Use Class property/sites.

Table 2-1: Projected employment change, 2011-2031 ('000); and assumptions with regard to Use Classes⁷

	S Cambs: Baseline change	S Cambs: Policy-led change	Cambridge: Baseline change	Cambridge: Policy-led change	Assumptions regarding: B Use Classes
1 Agriculture etc	0.02	0.01	-0.04	-0.04	Non-B use
2 Coal	0.00	0.00	0.00	0.00	[No change]
3 Oil & Gas etc	0.00	0.00	0.00	0.00	[No change]
4 Other Mining	-0.01	-0.01	-0.01	-0.01	Non-B use
5 Food, Drink & Tob.	0.15	0.15	0.03	0.03	B1c/B2 - 100%
6 Text., Cloth. & Leath	0.00	0.00	-0.01	-0.01	B1c/B2 - 100%
7 Wood & Paper	-0.24	-0.24	-0.02	-0.02	B1c/B2 - 100%
8 Printing & Publishing	-0.01	-0.01	0.41	0.42	B1b - 50%; B2 - 50%

⁵ As referenced in Footnote 2, CE has quantified additional high and low growth scenarios for the Cambridgeshire districts. For reference, it is helpful to understand how these alternative scenarios compare to the baseline and policy-led projections. Under the high growth scenario, South Cambridgeshire is projected to grow by 29,200 jobs over the period 2011-31; the corresponding figure under the low growth scenario is 14,000 jobs

⁶ *Employment Land Reviews: Guidance Note* Office of the Deputy Prime Minister, 2004

⁷ Note that these data are presented here in disaggregated form in order to provide a clear statement of our methodology. However, we would advise strongly against reporting individual numbers from this table: all are modelled and at a fine level of spatial and sectoral disaggregation, they are subject to error. In Annex A, we provide information on absolute levels of employment for the two districts on the two projections, using a broader (and therefore more robust) sectoral classification

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Report to South Cambridgeshire District Council and Cambridge City Council*

	S Cambs: Baseline change	S Cambs: Policy-led change	Cambridge: Baseline change	Cambridge: Policy-led change	Assumptions regarding: B Use Classes
9 Manuf. Fuels	0.00	0.00	0.00	0.00	[No change]
10 Pharmaceuticals	0.06	0.06	0.04	0.04	B1b - 50%; B1c/B2 - 50%
11 Chemicals nes	-0.04	-0.04	0.00	0.00	B1b - 50%; B1c/B2 - 50%
12 Rubber & Plastics	-0.04	-0.04	-0.01	-0.01	B1c/B2 - 100%
13 Non-Met. Min. Prods.	-0.12	-0.12	-0.02	-0.02	B1c/B2 - 100%
14 Basic Metals	0.01	0.01	0.00	0.00	[No change]
15 Metal Goods	-0.05	-0.05	-0.04	-0.03	B1c/B2 - 100%
16 Mech. Engineering	-0.15	-0.15	-0.02	-0.02	B1c/B2 - 100%
17 Electronics	-0.07	-0.07	-0.14	-0.14	B1b - 50%; B1c/B2 - 50%
18 Elec. Eng. & Instrum.	-0.14	-0.14	-0.14	-0.13	B1b - 50%; B1c/B2 - 50%
19 Motor Vehicles	0.00	0.00	0.00	0.00	[No change]
20 Oth. Transp. Equip.	-0.19	-0.19	-0.01	-0.01	B1c/B2 - 100%
21 Manuf. nes	0.02	0.02	-0.01	-0.01	B1c/B2 - 100%
22 Electricity	0.00	0.00	0.00	0.00	Non-B use
23 Gas Supply	0.00	0.00	-0.08	-0.08	Non-B use
24 Water Supply	0.00	0.00	0.05	0.05	Non-B use
25 Construction	1.18	1.27	0.30	0.46	Non-B use
26 Distribution	0.56	0.59	0.53	0.61	B8 - 50%
27 Retailing	1.18	1.22	1.97	2.27	Non-B use
28 Hotels & Catering	0.64	0.68	0.25	0.44	Non-B use
29 Land Transport etc	0.08	0.09	0.14	0.21	B8 - 25%
30 Water Transport	0.00	0.00	0.00	0.00	[No change]
31 Air Transport	-0.02	-0.02	0.00	0.00	[No change]
32 Communications	0.13	0.14	0.13	0.15	B1c/B2 - 25%
33 Banking & Finance	0.08	0.08	0.11	0.16	B1a - 25%
34 Insurance	-0.02	-0.02	-0.01	-0.01	B1a - 100%
35 Computing Services	3.85	3.85	1.71	1.75	B1a - 50%; B1b - 50%
36 Prof. Services	9.09	9.15	2.49	2.72	B1a - 50%; B1b - 25%
37 Other Bus. Services	2.29	2.31	2.23	2.41	B1a - 25%
38 Public Admin. & Def.	0.03	0.07	-0.34	-0.08	B1a - 50%

	S Cambs: Baseline change	S Cambs: Policy-led change	Cambridge: Baseline change	Cambridge: Policy-led change	Assumptions regarding: B Use Classes
39 Education	0.44	0.52	1.14	2.59	B1a - 25%
40 Health & Social Work	2.16	2.45	2.71	4.32	B1a - 25%
41 Misc. Services	1.48	1.53	1.37	1.59	B1a - 25%
Total	22.35	23.11	14.74	19.60	

Source: SQW, based on data from CE

2.11 Working through the arithmetic, the implications are that:

- **in South Cambridgeshire:**
 - under the **baseline projection**, 22,350 additional jobs will need to be accommodated between 2011 and 2031; of these, 11,800 (53%) are assigned to B Use Classes
 - under the **policy-based projection**, 23,110 additional jobs will need to be accommodated between 2011 and 2031; of these, 12,000 (52%) are assigned to B Use Classes
- **in Cambridge City:**
 - under the **baseline projection**, 14,740 additional jobs will need to be accommodated between 2011 and 2031; of these, 5,700 (39%) are assigned to B Use Classes
 - under the **policy-based projection**, 19,600 additional jobs will need to be accommodated between 2011 and 2031; of these, 7,000 (36%) are assigned to B Use Classes.

2.12 Across the two districts, it is possible to estimate projected employment change by Use Class. The results of this process are summarised below.

Table 2-2: Projected employment growth ('000) by Use Class, 2011-31

Use Class	Cambridge City – Baseline	Cambridge City – Policy-based	South Cambs – Baseline	South Cambs – Policy based
Office – B1a	3.8	5.0	8.1	8.2
R&D – B1b	1.6	1.6	4.1	4.1
Industrial – B1c/B2	0.0	0.0	-0.7	-0.7
Warehouse – B8	0.3	0.4	0.3	0.3
All B Use Classes	5.7	7.0	11.8	12.0

Source: SQW – based on data from CE

Step 2: Convert employment estimates to floorspace requirements

2.13 The second step in the process requires a conversion from employment estimates to floorspace requirements.

- 2.14 In ELR2008, a series of assumptions were made in terms of employment densities, informed largely by Boxes D5 and D7 from then-DETR’s ELR Guidance Note (2004). In addition, an adjustment (which varied by Use Class) was made to distinguish between net lettable and gross floorspace. Subsequently, new guidance has been published with different assumptions and definitions⁸. The table below attempts to compare the assumptions that were used in ELR2008 with the latest available guidance.

Table 2-3: Changing assumptions with regard to employment densities

Use Class	Assumptions within ELR2008	Latest Guidance
Office – B1a/B1b	Net internal area per job (sqm): 19 <i>plus adjustment to derive a gross floorspace figure (20%)</i>	Net internal area per FTE (sqm): 12 Gross external area per FTE (sqm): c. 14
Industrial – B1c/B2	Net internal area per job (sqm): 38 <i>plus adjustment to derive a gross floorspace figure (10%)</i>	Gross internal area per FTE (sqm): 36 Gross external area per FTE (sqm): c. 45
Warehousing – B8	Net internal area per job (sqm): 78 <i>plus adjustment to derive a gross floorspace figure (5%)</i>	Gross external area per FTE (sqm): c. 70

Source: ELR2008; 2010 guidance produced by Drivers Jonas Deloitte; and published employment land reviews

- 2.15 The table is not easy to interpret as several different metrics have been used. However the direction of travel – explained in the 2010 guidance – is towards higher densities, with less space provided for each worker⁹.
- 2.16 The latest guidance is couched in terms of Full Time Equivalent jobs whereas the employment projections generated by CE are measured simply in terms of jobs. Therefore the CE numbers need to be scaled back. Based on data sourced from BRES over three years (which distinguishes between full time and part time employee jobs), the number of jobs has been multiplied by 0.85 in Cambridge City and 0.87 in South Cambridgeshire to generate an approximate estimate of FTE employment.
- 2.17 For each of Cambridge City and South Cambridgeshire, Table 2-4 takes the range of projected jobs growth (derived from the two CE projections); after adjusting these to generate FTE figures, it calculates a range for a net floorspace forecast (by applying the employment densities from Table 2-3).

⁸ *Employment Densities Guide*, Drivers Jonas Deloitte for Offpat and HCA, 2010

⁹ This conclusion – which derives from national guidance and empirical evidence presented in ELRs from across the greater south east – is also supported by local evidence. The local issues are explored further in chapters 3 and 4 of this report (e.g. there is evidence of local employers choosing to move within Cambridge from lower to higher density provision)

Table 2-4: Deriving estimates of forecast net floorspace change, 2011-31

Use Class	Employment density (sqm GEA)	Cambridge City jobs growth range ('000): Baseline – Policy-based	Net Floorspace Forecast ('000 sqm GEA) range	South Cambs jobs growth range ('000): Baseline – Policy-based	Net Floorspace Forecast ('000 sqm GEA) range
Office – B1a	14	3.8 – 5.0	45 – 59	8.1 – 8.2	98 – 100
R&D – B1b	14	1.6 – 1.6	19 – 20	4.1 – 4.1	50 – 50
Industrial – B1c/B2	45	0.0 – 0.0	0.7 – 1.5	-0.7 – -0.7	-27 – -27
Warehouse – B8	70	0.3 – 0.4	18 – 21	0.3 – 0.3	18 – 19
Total		5.7 – 7.0	83 – 101	11.8 – 12.0	139 – 143

Source: SQW – based on data from CE

2.18 Overall (for the two districts), Table 2-4 suggests a forecast net floorspace requirement over the period 2011-2031 of between 222,000 sqm (on the baseline projection) and 244,000 sqm (on the policy-led projection). In terms of the principal Use Classes – and again across the two districts – this can be broken down as follows:

- B1a – an increase of 144,000-160,000 sqm
- B1b – an increase of 69,000-70,000 sqm
- B1c/B2 – a reduction of 25,000-26,000 sqm
- B8 – an increase of 36,000-41,000 sqm.

2.19 These figures relate to net jobs growth only. In practice, we would expect to see some “churn” locally (as some businesses move to new sites and premises)¹⁰. Therefore the figures in Table 2-4 should, in principle, be adjusted upwards to create some flexibility.

Step 3: Using plot ratios, convert floorspace estimates to an estimate of site areas (and hence land required for B Use Classes)

Assumptions about plot densities

2.20 In working through this third translational element, ELR2008 made assumptions about plot densities, drawing on Box D7 from the 2004 government guidance. These are summarised below, and compared to the latest available guidance.

¹⁰ Our analysis of high tech businesses pointed to flux within the high tech business community which also suggests a need for property with short term leases (see Annex C)

Table 2-5: Changing assumptions with regard to plot densities

Use Class	Assumptions within ELR2008	Latest Guidance
Office – B1a/B1b	City – 6,809 sqm per ha Out of centre – 3,282 sqm per ha	Plot density assumptions are not addressed through the <i>Employment Densities Guide</i> – hence there is no definitive recent source. A review of published ELRs suggests a rule-of-thumb working assumption of 4,000 sqm per ha across all Use Classes. However most also comment that there can be substantial variability locally. Therefore the assumptions used in ELR2008 seem reasonable and are rolled forward here
Industrial – B1c/B2	4,200 sqm per ha	
Warehousing – B8	5,000 sqm per ha	

Source: ELR2008; 2010 guidance produced by Drivers Jonas Deloitte; and published employment land reviews

Testing the density assumptions

- 2.21 We have tested the density assumptions made in ELR2008 against actual densities achieved in two time periods – 2002-07 and 2007-11 – according to Cambridgeshire County Council’s monitoring data on completions, using both gross and net figures. The comparisons are shown in the table below.

Table 2-6: Comparison of plot densities (sqm per ha)

Densities/Use Class	Office – B1a/B1b	Industrial – B1c/B2	Warehousing – B8
Assumptions within ELR2008	City – 6,809		
	Out of centre – 3,282	4,200	5,000
Actual Cambridge (gross), 2002-07 average	5,420	5,852	5,614
Actual South Cambs (gross), 2002-07 average	3,120	3,660	3,182
Actual Cambridge (gross), 2007-11 average	6,859	18,122	3,776
Actual South Cambs (gross), 2007-11 average	3,071	2,680	2,225

Source: ELR 2008; 2010 guidance produced by Drivers Jonas Deloitte; and published employment land reviews; Cambridgeshire County Council monitoring data

- 2.22 Table 2-6 provides a useful cross check and suggests that the ELR density assumptions were broadly correct. The actual densities achieved for B1a and B1b space are similar to those assumed in ELR2008 for city and out of centre sites (assuming these terms are broadly equivalent to Cambridge and South Cambridgeshire local authority areas). The actual densities achieved for industrial and warehousing space in South Cambridgeshire appear to be lower than assumed by ELR2008, whereas those for industrial sites in the city are higher.
- 2.23 In relation to change over time, the densities achieved in South Cambridgeshire 2007-11 were somewhat lower than those achieved 2002-06, whereas those in Cambridge were higher during the latter part of the decade for all uses except warehousing. The increasing densities in Cambridge are consistent with rising land costs and with national trends. The reductions in South Cambridgeshire may reflect more the characteristics of major developments that occurred in each time period. Arguably, however, the differences between the two time periods are not sufficiently great, or consistent, to draw firm conclusions about change over time.

Applying the density assumptions

2.24 To apply the densities used in ELR2008 to our floorspace projections, there is clearly a need to split demand for B1 by location. In the analysis below, we have equated projected growth in Cambridge City with “city” (as per Table 2-7) and that in South Cambridgeshire with “out of centre”. In practice, some of the demand within Cambridge City will relate to “out of centre” provision and hence the employment land requirements within the district will be somewhat higher than shown in the table.

Table 2-7: Deriving estimates of forecast land requirements, 2011-31

Use Class	Plot density assumptions	Land requirement – Cambridge City - Baseline	Land requirement – Cambridge City – Policy-based	Land requirement – South Cambridgeshire – Baseline	Land requirement – South Cambridgeshire – Policy-based
Office – B1a – “city”	6,809 sqm per ha	6.7ha	8.7ha	-	-
R&D – B1b – “city”	6,809 sqm per ha	2.7ha	2.9ha	-	-
Office – B1a – “out of centre”	3,282 sqm per ha	-	-	30.0ha	30.6ha
R&D – B1b) – “out of centre”	3,282 sqm per ha	-	-	15.2ha	15.3ha
Industrial – B1c/B2	4,200 sqm per ha	0.2ha	0.4ha	-6.4ha	-6.4ha
Warehouse – B8	5,000 sqm per ha	3.6ha	4.3ha	3.6ha	3.8ha
Total		13.1ha	16.2ha	42.4ha	43.3ha

Source: Based on CE data

2.25 The implication from Table 2-7 is an overall requirement for additional employment land over the period 2011-31 of:

- between 13.1ha and 16.2ha in Cambridge City
- between 42.4ha and 43.3ha in South Cambridgeshire

Part B: Comparing the findings from the 2012 analysis with those which informed ELR2008

2.26 This study is concerned, fundamentally, with updating the findings from ELR2008 and hence a comparison of the findings from the two exercises is important. In terms of demand, ELR2008 focused on the period 2001-2021. The current study is focusing on the period 2011-2031. Hence we now have historic data relating to what was a forecast in 2008; and there is an overlap of a decade in relation to the two forecast periods. For that reason, it is important to try and compare the assumptions that were made at that time with regard to future employment growth and its conversion into demand for employment land with both (a) what actually happened in the early years; and (b) what is now expected to happen in the later ones.

Comparing the employment projections

2.27 The table below summarises employment projections for Cambridge City and South Cambridgeshire from a range of different sources. The two Experian BSL projections which underpinned ELR2008 are shaded in blue while the two new CE projections that have informed this study are shaded in green.

Source and date of forecast	2001	2011	2021	2031	Change 2001/11	Change 2011/21	Change 2021/31
CE Structure Plan update 2002	160	184.1	n/a	n/a	24.1	n/a	n/a
Exp BSL EG21 2003	159.2	183.9	208.6	n/a	24.7	24.7	n/a
Exp BSL EG21 2004	157.8	178.3	196.2	n/a	20.5	17.9	n/a
CE Baseline (CDS) 2009	164.6	176.4	193.0	210.4	11.8	16.6	17.4
CE policy-led (CDS) 2009	164.6	177.9	198.0	216.7	13.3	20.1	18.7
CE Baseline 2012	170.2	183.9	199.8	221.0	13.7	15.9	21.2
CE Policy-led 2012	170.2	184.0	206.2	226.7	13.8	22.2	20.5
OE Baseline (EEFM) 2012	163.7	181.0	215.8	236.6	17.3	34.8	20.8

Source: Forecast data from 2002, 2003 and 2004 are sourced from ELR2008; data for 2009 are sourced from the Cambridgeshire Development Study; forecast data for 2012 are sourced from either CE (specially commissioned) or OE (through EEFM)

2.28 From Table 2-8, it is apparent that for the period 2001-21, ELR2008 assumed employment growth of between 38,380 and 49,390 jobs; over the same period (more of which is now historic), the most recent projections from CE suggest employment growth of between 29,600 and 30,000 jobs – which is substantially lower. Two further observations are important:

- first, the major discrepancy between the projections informing ELR2008 and those generated for the present study relates to the first of the two decades (2001-11): the scale of employment growth between 2001 and 2011 has been lower than was anticipated. Conversely, the different forecasts for the period from 2011-21 are broadly similar in terms of absolute jobs growth
- secondly – as shown in Table 2-9 – over the period 2001-21, the figures for South Cambridgeshire are fairly consistent (with the exception, perhaps, of the projections from EEFM, which are much more bullish); by contrast, there are enormous discrepancies in the projections for Cambridge City where the jobs growth estimates range from under 7,000 (CE baseline 2012) to well over 30,000 (Experian BSL EG21 2003)¹¹.

¹¹ As an aside, it is also useful to compare the findings from the current set of projections from LEFM with the projections that underpinned the South Cambridgeshire Economic Development Strategy, 2010-15 (prepared by PACEC in 2010). The PACEC study noted a reduction in the number of jobs in South Cambridgeshire – from about 77,300 in 2008 to about 72,300 in 2010. Over the same period, the LEFM baseline projection (prepared two years later, in 2012) pointed to an increase in total employment over this period from 77,360 to 80,630 jobs. The second set of numbers is newer; it is informed by more empirical (rather than modelled) data; and it is based on a

Table 2-9: Jobs growth projections 2001-21 for Cambridge City and South Cambridgeshire ('000)

Source and date of forecast	Cambridge City 2001	Cambridge City 2021	Cambridge City Growth	South Cambs 2001	South Cambs 2021	S. Cambs Growth
Exp BSL EG21 2003	95.6	127.4	31.8	63.7	127.4	17.6
Exp BSL EG21 2004	91.8	114.4	22.5	66.0	81.8	15.8
CE Baseline (CDS) 2009	98.5	108.9	10.4	66.1	84.1	18.0
CE policy-led (CDS) 2009	98.5	114.0	15.5	66.1	84.0	17.9
CE Baseline 2012	101.8	108.5	6.7	68.4	91.3	22.9
CE Policy-led 2012	101.8	115.1	13.3	68.4	91.1	22.7
OE Baseline (EEFM) 2012	95.5	117.3	21.8	68.2	98.5	30.3

Source: Forecast data from 2002, 2003 and 2004 are sourced from ELR2008; data for 2009 are sourced from the Cambridgeshire Development Study; forecast data for 2012 are sourced from either CE (specially commissioned) or OE (through EEFM)

Box 2-1: Note on the employment impacts of the current recession

In the course of this study, we have reviewed a whole series of different employment projections – those listed in the table above, but also those generated to underpin the South Cambridgeshire Economic Development Strategy. With regard to the current recession, different projections vary substantially in terms of the employment implications. Generally speaking, the earlier projections (i.e. those prepared in 2009 or 2010) were gloomier than the later ones. The reason for this appears to be that employers have responded to recession by reducing hours (e.g. by moving from full time to part time arrangements) and pay, rather than by cutting the overall number of jobs (and therefore losing completely the skills of their workforce). Hence job numbers appear to have held up better than was originally expected. The reduction in hours and pay will, however, have an impact on the value of economic output (GVA). Further discussion of the overall employment impacts of recession is provided in the first three annexes.

Comparing the employment floorspace forecasts

2.29 As explained earlier, floorspace forecasts are essentially derived by mapping projected jobs growth onto Use Classes and then making assumptions about employment densities. Table 2-10 shows the floorspace forecasts quoted in ELR2008 for the period 2001-21 (shaded blue). For the two districts in combination, it summarises the findings for 2011-31 (shaded green and also presented (in more detail) in Table 2-4 above). In addition, it provides two new estimates:

- it uses the new forecasts and new assumptions to calculate floorspace forecasts for 2001-21 – exactly the same time period as covered by ELR2008 (with no shading)
- it applies the assumptions from ELR2008 to the new employment projections for 2011-31 (shaded pink)

different set of assumptions surrounding the impact of recession. It is noteworthy that only in the year from 2009 to 2010 does the LEFM baseline projection suggest that absolute employment fell in South Cambridgeshire

Table 2-10: Comparing employment floorspace forecasts ('000 sqm)

Source and date of forecast	Assumptions about employment densities	B1a/B1b	B1c/B2	B8	Total
ELR2008: Exp BSL EG21 2003: for 2001-21	As per ELR2008	High density: 370 Low density: 139	-119	44	554
ELR2008: Exp BSL EG21 2004: for 2001-21	As per ELR2008	High density: 436 Low density: 164	-81	-31	600
CE Baseline 2012: for 2001-21	Based on latest available guidance	B1a: 99 B1b: 14	-259	112	-34
CE Policy-led 2012: for 2001-21	Based on latest available guidance	B1a: 116 B1b: 15	-258	117	-10
CE Baseline 2012: for 2011-31	As per ELR2008	B1a: 271 B1b: 129	-28	49	421
CE Policy-led 2012: for 2011-31	As per ELR2008	B1a: 277 B1b: 119	-23	52	424
CE Baseline 2012: for 2011-31	Based on latest available guidance	B1a: 144 B1b: 69	-26	36	222
CE Policy-led 2012: for 2011-31	Based on latest available guidance	B1a: 160 B1b: 170	-25	41	244

Source: SQW – based on various sources

- 2.30 It is clear that the two sets of numbers for **2011-31** are significantly different. In derivation, the only differences between the two sets of numbers are the assumptions made about density (as shown in Table 2-3) and the use of total (as opposed to FTE) employment; the underlying employment forecasts are identical. This demonstrates just how important the density assumptions/methodologies actually are.
- 2.31 The differences between the two sets of numbers for **2001-21** are even greater: whereas ELR2008 indicated a requirement for well over 500,000 sqm, the “new” forecast suggests that overall, less employment provision is needed in 2021 than in 2001. This dramatic difference is explicable partly through the density assumptions, but two other factors are also at work:
- first, our new projections generate substantially lower overall employment growth for the period 2001-2021 than were used in ELR2008 (as shown in Table 2-9)
 - second, the new projections point to a loss of well over 8,000 manufacturing jobs over the period 2001-2021 whereas ELR2008 anticipated a loss of about 2,000; theoretically therefore, the retrenchment of the manufacturing sector “released” significant employment space (although as the supply side analysis completed by Savills demonstrates, much of this land is being lost to housing).

Comparing the employment land forecasts

- 2.32 The assumptions used to convert demand for employment space to demand for employment land are the same in ELR2008 and this study. Therefore the differences in outcome with

respect to demand for employment land are driven only by earlier stages in the analysis. The table below summarises the two sets of numbers for each of 2001-21 and 2011-31. It demonstrates again the importance of underlying density assumptions: with regard to 2011-31, those from ELR2008 generate a forecast of demand for employment land that is close to double that derived from the application of newer assumptions.

Table 2-11: Comparing employment land forecasts

Source and date of forecast	Assumptions about plot densities	B1a/B1b	B1c/B2	B8	Total
ELR2008: Exp BSL EG21 2003: for 2001-21	As per ELR2008; underpinning employment densities also from ELR2008	High density: 54.4ha Low density: 42.4ha	-28.4ha	8.9ha	105.7ha
ELR2008: Exp BSL EG21 2004: for 2001-21	As per ELR2008; underpinning employment densities also from ELR2008	High density: 64.0ha Low density: 49.9ha	-19.5ha	-6.3ha	113.9ha
CE Baseline 2012: for 2001-21	As per ELR2008; underpinning employment densities from new estimates	High density: 0.8ha Low density: 32.9ha	-61.8ha	23.0ha	-5.6ha
CE Policy-led 2012: for 2001-21	As per ELR2008; underpinning employment densities from new estimates	High density: 3.6ha Low density: 32.7ha	-61.5ha	23.4ha	-1.8ha
CE Baseline 2012: for 2011-31	As per ELR2008; underpinning employment densities also from ELR2008	High density: 18.0ha Low density: 84.6ha	-6.7ha	8.4ha	104.4ha
CE Policy-led 2012: for 2011-31	As per ELR2008; underpinning employment densities also from ELR2008	High density: 22.1ha Low density: 74.7ha	-5.6ha	10.4ha	101.7ha
CE Baseline 2012: for 2011-31	As per ELR2008; underpinning employment densities from new estimates	High density: 9.4ha Low density: 45.2ha	-6.2ha	7.2ha	55.5ha
CE Policy-led 2012: for 2011-31	As per ELR2008; underpinning employment densities from new estimates	High density: 11.5ha Low density: 45.9ha	-6.0ha	8.1ha	59.5ha

Source: SQW – based on various sources

3: Changes with regard to the supply of employment land and premises

Introduction

3.1 In relation to the supply of land and premises, the Terms of Reference for this piece of work required us to:

- review the evidence collated in ELR2008 in the light of the impact of the economic downturn, and extend the evidence to address the period up to 2031
- identify and consider the current vacancy rates of land and buildings (including the impact of public sector cuts)
- consider the impact of the loss of planned major development at Cambridge East and the potential for employment provision north of Newmarket Road
- update assessments of employment sites within Cambridge and close to Cambridge and comment on their continued use and potential protection from other uses
- identify whether there is still sufficient employment land in all Use Classes/market areas, and whether it is in the right location.

3.2 The evidence collected by Savills in relation to these matters is summarised below under each of these headings; Savills' full report (which contains considerably more detail) is provided at Annex D.

Review the evidence collated in ELR2008 in the light of the impact of the economic downturn, and extend the evidence to address the period up to 2031

3.3 In relation to supply side issues, the key findings from ELR2008 may be summarised as follows:

- First, ELR2008 identified three property market sub-areas:
 - **Cambridge** (as an area of high demand for housing, leisure and retail uses) where there is a need to safeguard existing employment sites in the face of competing higher value uses
 - **North and West of Cambridge** where demand is highest on the periphery and close to Cambridge and development is characterised by low density schemes for knowledge intensive R&D (B1b) and office (B1a) users
 - **South and East of Cambridge** where demand is being met through secure sites for bio-medical and bio-technology R&D (B1b) users.

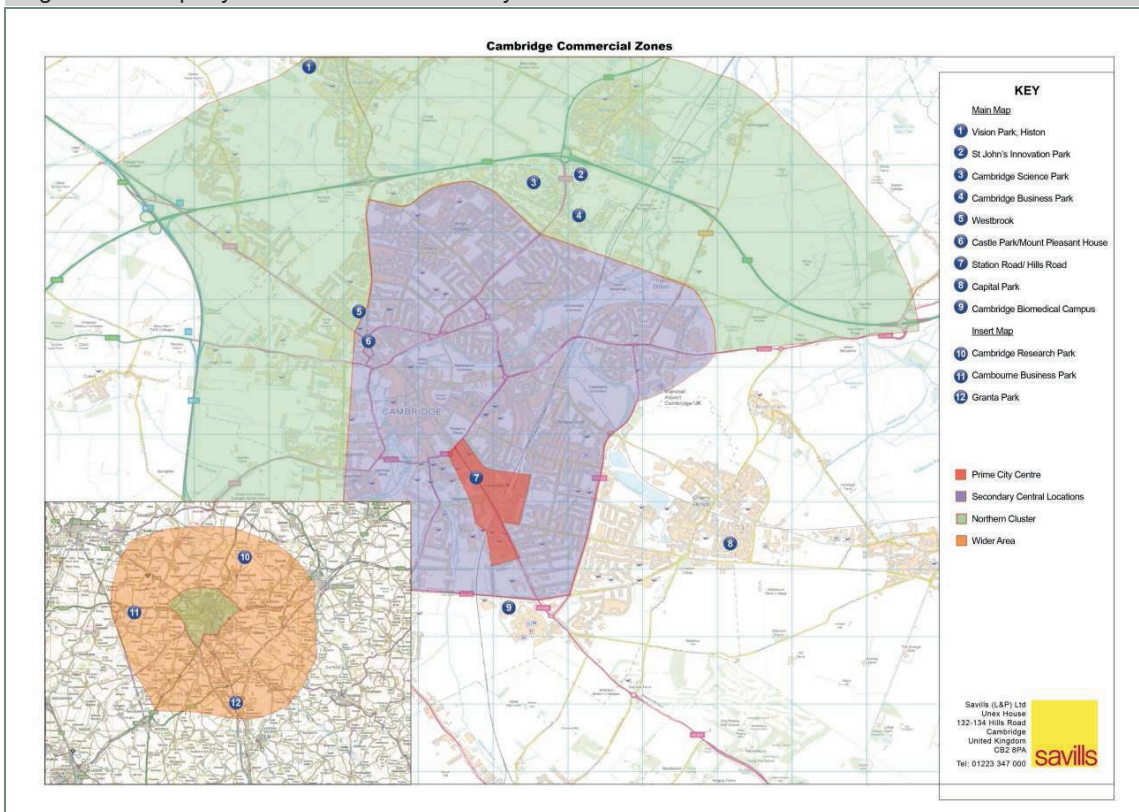
- Second, it identified the need for a larger margin of employment land to be established in order to ensure the availability of a sufficient quantity, quality and choice of sites throughout and beyond the plan period (with specific reference to the ICT and computing services high technology cluster as well as essential services and prime offices in Cambridge)
- Third, it emphasised the need for sustainable development – developing sites in sustainable locations, with good public transport access.

3.4 Over the last four years, much has changed – not least in the context of a significant economic downturn. Based on Savills’ analysis – and on a review of monitoring data provided through Cambridgeshire County Council – our principal conclusions relating to these three themes from ELR2008 are summarised below.

Property market areas

3.5 Overall, Savills concluded that **the three property market areas identified in ELR2008 are broadly still appropriate**; its own depiction of property market areas is shown in the graphic below.

Figure 3-1: Property market areas identified by Savills



Source: Savills

3.6 At the present time, development, investment and occupier interest has contracted into the most popular locations – Cambridge city centre (particularly the Hills Road/Station Road area, including CB1) and the northern fringe (around Cambridge Science Park, Cambridge Business Park and St John’s Innovation Centre).

- 3.7 Currently, the rest of the northern and western fringe of Cambridge is less popular. Vision Park (Histon), for example, has a large number of vacant units (it has been badly affected by the public sector cut backs) and some of the space there is now very secondary. Cambridge West was not sufficiently attractive to retain Microsoft, and the whole of the West and North West Cambridge area will develop according to the University's timescale – which is long term – not in response to short term market demands. Elsewhere, there is almost no land or premises availability on the eastern and southern fringes except on the Cambridge Biomedical Campus at the Addenbrooke's site (which is highly specialised and restricted).
- 3.8 Outside Cambridge, viability issues are constraining development: rental and capital values of commercial product drops significantly once beyond the inner boundary of the Green Belt. By way of an example, while city centre office rents peak at around £30 per sq ft, there is new industrial stock available at Buckingham Business Park (Swavesey) with deals deliverable at around £12 per sq ft.
- 3.9 As a consequence – and in the wider context of the economic slowdown – recent new developments of industrial and warehouse units at Papworth and Buckingham Business Park have not been commercial successes for the original developers. This has primarily been due to a significant drop in values since the downturn in late 2007, and it may be that the development appraisals of these sites will only “stack up” in very specific “boom” conditions in the future. On a more positive note, the majority of these units are now fully occupied by local businesses and whilst the schemes may not have been a financial success for the investors, the legacy of good quality stock surrounding Cambridge is a benefit for the local area.
- 3.10 Outside the city, firms looking for space contemplate the surrounding towns as alternative locations to those within South Cambridgeshire. For example, in the case of Buckingham Business Park, office occupiers would also contemplate offerings at Hinchingsbrooke Business Park, Huntingdon, and St Ives Business Park where modern accommodation can be easy to acquire.

Effect of the economic slowdown on the rate of development and take up

(i) Insights from Savills' data

- 3.11 Based on Savills' data, over the past two decades, office and R&D completions in Cambridge have totalled in excess of 368,000 sqm (4,000,000 sq ft) or an average of 18,400 sqm (200,000 sq ft) net per annum. Over this period, in conjunction with demolitions and changes of use, office stock in Cambridge has effectively increased by nearly 100%.
- 3.12 However, there have been clear peaks and troughs in terms of the delivery of this space. In the 5 year period 2002-2006 (the main period from which ELR2008 would have drawn data), there was an average of almost 31,740 sqm (345,000 sq ft) per annum of new office and R&D space developed. In contrast, between 2007 and 2011, completions have averaged approximately 9,200 sqm (100,000 sq ft) per annum.
- 3.13 Since the beginning of 2007, around 50% of the space developed has been speculative, with about 50% pre-let or pre-sold as purpose-built facilities. However, because of the time lag of

securing a site for development, obtaining planning consent and funding, in 2012 there is likely to be very limited speculative stock constructed in the office and R&D sectors and no new speculative development in the city or South Cambridgeshire in the industrial and warehouse sectors.

(ii) Insights from local authority monitoring data

- 3.14 Tables 3-1 to 3-3 below summarise the monitoring data compiled by Cambridgeshire County Council on completions for Cambridge and South Cambridgeshire (together and separately). The data are summarised for two time periods - 2002/03 to 2006/07, and 2007/08 to 2010/11 - and for each B Use Class.
- 3.15 The data confirm the slowdown in completions of office floorspace observed by Savills. The County Council data show that average annual gross completions of B1a space slowed from 14,886 sqm in the first half of the decade to 4,381sqm in the second half; and for B1b space, average annual completions declined slightly from 22,439 sqm to 21,159 sqm. Overall, therefore, the completion rate for B1a and B1b combined dropped, but not by as much as recorded by Savills (this may be partly due to the use of slightly different time periods). The net figures for B1a office completions show an actual decline of nearly 3,000 sqm per year in the second half of the decade due to loss of land to other uses. The loss amounted to 5,575 sqm a year in Cambridge City, offset by gains of 2,653 sqm a year in South Cambridgeshire.
- 3.16 For other B uses (B1c, B2 and B8) there was also a decline in completions in the second half of the decade, but it was relatively modest – in total for these three Use Classes, the average annual gross completions reduced from 23,310 sqm to 20,979 sqm. However, the gross figures conceal considerable net losses of both land (-35.24ha) and floorspace (-45,044 sqm) in the main manufacturing Use Classes (B1c and B2), which included net losses in both local authority areas. For B8 there was a net gain in floorspace of 26,260 sqm, despite a net loss of just over 3ha of land. All of the gains in B8 land and floorspace were in South Cambridgeshire, with losses occurring in both in Cambridge City.
- 3.17 Due to on-going economic concerns, it is difficult to see take up over the coming period recovering quickly to the rates achieved in the early 2000s.

Table 3-1: Cambridge & South Cambridgeshire completions 2002/03-2010/11 by Use Class:
Floorspace and Land

	B1	B1a	B1b	B1c	B2	B8	Total
Floorspace Gross sqm							
• 2002/03-2006/07	2,096	77,430	112,195	27,830	45,478	43,239	305,268
• Average per year	419	14,886	22,439	5,566	9,096	8,648	61,054
• 2007/08-2010/11	12,647	17,524	84,636	15,937	35,891	32,087	207,162
• Ave/year	3,124	4,381	21,159	3,984	8,973	8,022	51,791
Floorspace Net sqm							
• 2002/03-2006/07	2,096	10,707	83,376	-15,214	-2,412	12,143	90,696
• Average per year	419	2,141	16,675	-3,043	-482	2,429	18,139
• 2007/08-2010/11	11,801	-11,687	54,677	-2,359	-25,059	14,117	41,338
• Average per year	2,950	-2,922	13,669	-590	-6,265	3,529	10,335
	B1	B1a	B1b	B1c	B2	B8	Total
Land Gross ha							
• 2002/03-2006/07	0.41	21.45	31.03	10.01	8.35	10.99	82.23
• Average per year	0.08	4.29	6.21	2.00	1.67	2.20	16.45
• 2007/08-2010/11	4.45	8.52	25.53	4.42	8.78	14.01	65.71
• Average per year	1.11	2.13	6.38	1.11	2.20	3.50	16.43
Land Net ha							
• 2002/03-2006/07	0.41	1.18	16.25	-4.41	-10.82	-2.28	1.43
• Average per year	0.08	0.24	3.25	0.88	-2.16	0.46	0.29
• 2007/08-2010/11	4.34	-0.68	4.61	-0.08	-19.93	7.26	-4.47
• Average per year	1.09	-0.17	1.15	-0.02	-4.98	1.82	-1.12

Source: Cambridgeshire County Council monitoring data

Table 3-2: Cambridge City completions 2002/03-2010/11 by Use Class: Floorspace and Land

	B1	B1a	B1b	B1c	B2	B8	Total
Floorspace Gross sqm							
• 2002/03-2006/07	0	23,376	29,578	3,488	12,839	19,088	88,369
• Average per year	0	4,675	5,916	698	2,568	3,818	17,674
• 2007/08-2010/11	152	2,933	5,915	1550	19,109	2,228	31,735
• Ave/year	38	733	1,479	388	4,777	557	7,934
Floorspace Net sqm							
• 2002/03-2006/07	0	-34,769	22,106	-18,410	-15,327	-5,173	-51,573
• Average per year	0	-6,954	4,421	-3,682	-3,065	-1,035	-10,315
• 2007/08-2010/11	152	-22,300	-7,484	-7,809	12,705	-6,977	-31,865
• Average per year	38	-5,575	-1,871	-1,952	3,176	-1,744	-7,966
	B1	B1a	B1b	B1c	B2	B8	Total
Land Gross ha							
• 2002/03-2006/07	0	3.37	6.40	0.77	2.02	3.40	15.95
• Average per year	0	0.67	1.28	0.15	0.40	0.68	3.19
• 2007/08-2010/11	0	0.70	0.59	0.35	0.79	0.59	3.02
• Average per year	0	0.14	0.15	0.09	0.20	0.15	0.76
Land Net ha							
• 2002/03-2006/07	0	-13.11	3.10	-4.35	-7.47	-6.36	-28.20
• Average per year	0	-2.62	0.20	-0.87	-1.49	-1.27	-5.64
• 2007/08-2010/11	0	-6.38	-5.02	-1.13	-2.62	-0.93	-16.08
• Average per year	0	-1.60	-1.26	-0.28	-0.66	-0.23	-4.02

Source: Cambridgeshire County Council monitoring data

Table 3-3: South Cambridgeshire completions 2002/03-2010/11 by Use Class: Floorspace and Land

	B1	B1a	B1b	B1c	B2	B8	Total
Floorspace Gross sqm							
• 2002/03-2006/07	2,096	51,054	82,617	24,342	32,639	24,151	216,899
• Average per year	419	10,211	16,523	4,868	6,528	4,830	43,380
• 2007/08-2010/11	12,495	14,591	86,014	15,544	16,782	29,859	175,285
• Average per year	3,124	3,648	21,504	3,886	4,196	7,465	43,821
Floorspace Net sqm							
• 2002/03-2006/07	2,096	45,476	61,270	3,196	12,915	17,316	142,269
• Average per year	419	9,095	12,254	639	2,583	3,463	28,454
• 2007/08-2010/11	11,649	10,613	62,161	5,450	-37,764	21,094	73,203
• Average per year	2,912	2,653	15,540	1,363	-9,441	5,274	18,301
	B1	B1a	B1b	B1c	B2	B8	Total
Land Gross ha							
• 2002/03-2006/07	0.41	18.08	24.63	9.24	6.33	7.59	66.28
• Average per year	0.08	3.62	4.93	1.85	1.27	1.52	13.26
• 2007/08-2010/11	4.45	7.82	24.94	4.07	7.99	13.42	62.69
• Average per year	1.11	1.96	6.23	1.02	2.00	3.36	15.67
Land Net ha							
• 2002/03-2006/07	0.41	14.29	13.15	-0.06	-3.35	5.19	29.63
• Average per year	0.08	2.86	2.63	-0.01	-0.67	1.04	5.93
• 2007/08-2010/11	4.34	5.70	9.63	1.05	-17.31	8.19	11.61
• Average per year	1.09	1.43	2.41	0.26	-4.33	2.05	2.90

Source: Cambridgeshire County Council monitoring data

Development pipeline

(i) Insights from Savills' data¹²

- 3.18 On the face of it, there is currently a good development pipeline. Table 3-4 shows Savills' estimates of sites likely to come forward for development for office and R&D uses in the next few years. It includes sites with planning permission and where there is known (by Savills) to be the potential for development in the short term (primarily, funding is likely to be available).

Table 3-4: Development pipeline

Location	Grade A offices Sq m (sq ft)	R&D space Sq m (sq ft)	Total Sq m (sq ft)
Prime city centre	25,576 (278,000)	-	25,576 (278,000)
Northern fringe	2,116 (23,000)	17,112 (186,000)	19,228 (209,000)
Wider area – business parks	66,460 (722,400)	60,352 (656,000)	126,812 (1,378,400)
Wider area – other	3,114 (33,844)	844 (9,174)	3,958 (43,081)
Addenbrooke's	-	147,200 (1,600,000)	147,200 (1,600,000)
Total	97,266 (1,057,244)	225,507 (2,451,174)	322,773 (3,508,418)

Source: Savills

- 3.19 The Savills data in Table 3-4 cannot be compared directly with the long term availability of sites with planning permission and allocated, which would be defined by the local authorities as the 'pipeline'. Savills' approach is based on a market assessment of sites they believe to have realistic potential of being developed and occupied in the next few years, which in turn is based on a mixture of hard information and judgement. The Savills' 'pipeline' focuses on offices and R&D space, and excludes allocations where the timing of development remains very uncertain. In particular, it excludes strategic allocations of 20ha at Northstowe (15ha for B1a and b, and 5ha for B1c, B2 and B8) and at North West Cambridge.

(ii) Insights from local authority monitoring data

- 3.20 Tables 3-5-3.7 summarise the local authority development pipeline, including sites with planning permission and allocated in Cambridge City and South Cambridgeshire. The R&D figures are broadly comparable with Savills' data, whereas the office figures are higher. However, care should be taken interpreting the County Council floorspace data, since they are

¹² Note that Savills' Availability and Pipeline data are compiled by the firm's Cambridge based Commercial Agency and Valuation/Landlord & Tenant Professional Teams. 'Availability' data are sourced from surveyors, commercial property publications, desktop/internet based searches and verified via telephone conversations with other active participants in the market place. 'Pipeline' data are prepared to identify likely development opportunities, future availability and competing buildings for existing clients likely to be available within the 3-5 year period. Savills' definition of 'Pipeline' is not absolute and considers a number of factors including the current planning position, existing and required infrastructure provisions, site ownership issues, ground conditions, funding potential and market desirability which, in combination, need to provide Savills with the confidence that a building can be delivered within a medium term. For office and R&D facilities, it includes in its development pipeline a site if it is confident that the building could be delivered in up to a 4 year timeframe (which would include approximately an 18 month construction timetable). Savills' 'pipeline' data do not forecast beyond this timescale and whilst Savills is clearly aware of a number of key sites which could be included in an 'extended pipeline definition', these are regarded as long term sites deliverable after a minimum of 5 years. 'Extended Pipeline' is defined in terms of sites requiring significant master planning, employment allocation/planning consents, site assembly and infrastructure works

based on assumptions about densities of development where figures have yet to be established through the planning application process.

- 3.21 The Cambridgeshire County Council monitoring data show that the strongest pipeline is for B1b land and floorspace, although around three-quarters of the floorspace is accounted for by the planning permission for the Biomedical Campus at Addenbrookes. The pipeline for light manufacturing (B1c) is particularly small, although some of the unrestricted B1 may in practice be developed for this purpose.
- 3.22 In relation to the geographical distribution of the pipeline, there is slightly more land allocated for B1a in Cambridge City than in South Cambridgeshire, and considerably more floorspace in the pipeline (which is likely to reflect different density assumptions). Over three-quarters of the land already has planning permission, including all of the B1a land in South Cambridgeshire, which suggests that there is a strong short term supply. Unsurprisingly, given the pressure on land resources and prices, less than 8% of the pipeline land for manufacturing and storage use (B1c, B2 and B8) is in Cambridge City.
- 3.23 Overall, the total supply of B1a and B1b land exceeds the upper end of the 2011-31 forecasts in Table 2-11. However, the balance between B1a and B1b is not consistent with the forecasts, which anticipate relatively more demand from B1a users over the next 20 years (see Table 2-10).

Table 3-5: Local authority development pipeline: Cambridge City and South Cambridgeshire						
Pipeline category	B1	B1a	B1b	B1c	B2	B8
Land (ha)						
• Planning permission at 31/03/11	1.83	22.27	49.61	7.50	22.70	31.60
• Allocations	23.43	6.89	13.52	0.14	3.97	3.85
• Total land	25.26	29.16	63.13	7.64	26.67	35.45
Floorspace (sqm)						
• Planning permission at 31/03/11	7,600	116,457	207,120	14,328	42,880	35,814
• Allocations	76,994	40,824	59,300	920	22,473	21,448
• Total floorspace	84,594	157,281	266,420	15,248	65,353	57,262

Source: Cambridgeshire County Council monitoring data

Table 3-6: Local authority development pipeline: Cambridge City

Pipeline category	B1	B1a	B1b	B1c	B2	B8
Land (ha)						
• Planning permission at 31/03/11	0	8.52	27.01	1.88	0.17	0.32
• Allocations	0	6.89	5.56	0.14	1.47	1.35
• Total land	0	15.41	32.58	2.02	1.64	1.67
Floorspace (sqm)						
• Planning permission at 31/03/11	0	65,717	167,041	1,994	456	1,471
• Allocations	0	40,824	33,683	920	7,825	6,800
• Total floorspace	0	106,541	200,724	2,914	8,281	8,271

Source: Cambridgeshire County Council monitoring data

Table 3-7: Local authority development pipeline: South Cambridgeshire

Pipeline category	B1	B1a	B1b	B1c	B2	B8
Land (ha)						
• Planning permission at 31/03/11	1.83	13.75	22.60	5.62	22.53	31.28
• Allocations	23.43	0	7.96	0	2.50	2.50
• Total land	25.26	13.75	30.56	5.62	25.03	33.78
Floorspace (sqm)						
• Planning permission at 31/03/11	7,600	50,740	40,079	12,334	42,424	34,343
• Allocations	76,994	0	25,617	0	14,648	14,648
• Total floorspace	84,594	50,740	65,696	12,334	57,072	48,991

Source: Cambridgeshire County Council monitoring data

Implications

3.24 Tables 3-8 and 3-9 compare the gross and net completions data from Tables 3-1 to 3-3 with the gross and net pipeline data from Tables 3-5 to 3-7. Great care must be taken in interpreting these figures for several reasons, including:

- the past rate of completions may reflect restricted supply as much as the situation regarding demand and market conditions
- land in different locations will be developed at different densities, and future densities may be different from past densities

Table 3-8: Annual average rate of completions 2002/03 -2010/11 compared with current pipeline - land

Land (ha)	B1	B1a	B1b	B1c	B2	B8
Cambridge City & South Cambs						
• Average annual completions	0.54	3.33	6.28	1.60	1.90	2.78
• Land in pipeline	25.26	29.16	63.13	7.64	26.67	35.45
• Pipeline years	46.78	8.76	10.05	4.78	14.04	12.75
Cambridge City						
• Average annual completions	0	0.45	0.78	0.12	0.31	0.44
• Land in pipeline	0	15.41	32.58	2.02	1.64	1.67
• Pipeline years	-	34.24	41.77	16.83	5.29	3.80
South Cambridgeshire						
• Average annual completions	0.54	2.88	5.51	1.48	1.59	2.33
• Land in pipeline	25.26	13.75	30.56	5.62	25.03	33.78
• Pipeline years	46.78	4.77	5.55	3.80	15.74	14.50

Source: Cambridgeshire County Council monitoring data and SQW analysis

Table 3-9: Annual average rate of completions 2002/03 -2010/11 compared with current pipeline – land, net

Land (ha)	B1	B1a	B1b	B1c	B2	B8
Cambridge City & South Cambs						
• Average annual completions (net)	0.53	0.05	2.32	-0.50	-3.42	0.68
• Land in pipeline	25.26	29.16	63.13	7.64	26.67	35.45
• Pipeline years	47.66	583.2	27.21	-	-	52.13
Cambridge City						
• Average annual completions (net)	0	-2.17	-0.21	-0.61	-1.12	-0.81
• Land in pipeline	0	15.41	32.58	2.02	1.64	1.67
• Pipeline years	-	-	-	-	-	-
South Cambridgeshire						
• Average annual completions (net)	0.53	2.22	2.53	0.11	-2.30	1.49
• Land in pipeline	25.26	13.75	30.56	5.62	25.03	33.78
• Pipeline years	47.66	6.19	12.08	51.09	-	22.67

Source: Cambridgeshire County Council monitoring data and SQW analysis

- Both the gross and net figures are affected by the loss of all types of employment land to other uses during the decade. That is, the gross figures are probably higher to compensate for the loss of some existing employment sites to other uses, and the net figures are negative because losses exceed gains in all use classes in Cambridge, and in one use class (B2) in South Cambridgeshire. The rate of loss increased over the last decade, and this clearly cannot continue indefinitely into the future.
- 3.25 Table 3-8 suggests that the overall pipeline, based on gross completion rates over the period 2002/03 to 2010/11, is sufficient for 11.4 years supply, but net completion rates (excluding the negative totals) suggest there is sufficient for 42.7 years. The reality will lie somewhere between these two extremes. Similarly, the gross figures suggest that, based on the average annual completion rates of the last decade, a total of 329ha would be needed across all Use Classes over the 20 years, 2011-31. However, this figure is inflated by the fact that gross completions have been partly offsetting losses. In contrast the net figures (excluding negatives) suggest that a total of 72ha of land will be needed over the next 20 years for all Use Classes – a figure which is within the range suggested by the employment forecasts (Table 2-11).
- 3.26 More significant are the big differences between the different B Class Uses, and also between the City and South Cambridgeshire (although we would argue that the spatial distinctions are only appropriate for market areas, not based on administrative boundaries). Some key points which should be considered alongside other data (e.g. the employment projections and related estimates of land requirements) are as follows:
- First, the apparent plentiful supply of land for B1a offices in the City almost certainly reflects the fact that past completions have been constrained by limited supply, not market demand. Table 3-9 shows a net loss of B1a land over the last decade, which if continued into the future, and in the light of the forecast increase in demand for office premises from professional, business and financial services, would cause supply shortages
 - Second, the majority of B1b land in the pipeline shown in tables 3-8 and 3-9 is at Addenbrooke's. The Biomedical Campus is a vital asset for the high tech cluster, but it is highly constrained in terms of the type of acceptable uses, and also currently in terms of development process (there is no speculative development). However, since the monitoring data (which form the basis of the tables) were compiled, planning permissions have been granted for an additional 20 ha of land at Granta Park and Cambridge Research Park
 - Third, firms which qualify for B1(b) space can (and do) occupy B1(a) accommodation, but the reverse is not true
 - Fourth, according to the Savills data, the city centre and northern fringe, the two most popular areas with firms, each account for around 6% of the total amount of space expected to come forward for development in the short/medium term

- Fifth, based on gross completions, the pipeline of land for light manufacturing uses looks low relative to past take up, unless a high proportion of the unconstrained B1 land is used for this purpose (which on the face of it seems unlikely due to land values).

Quantity, quality and choice of sites

- 3.27 The information above on locational preferences and the viability of development in different locations suggests that at least for the next 10 years, issues concerning the quality and choice of sites and premises are likely to be more important to firms than the overall quantity of space. The facts are that the end user demand is narrowly focused on the city centre and core northern fringe, and relatively weak elsewhere. Partly for this reason, and partly because it is more difficult and expensive now to get funding, developers also currently find it unattractive to develop elsewhere in the sub-region, other than when end users are prepared to buy (much more difficult now) or take a long lease (much less common now).

Sustainable development

- 3.28 The need for sustainable development is a consistent thread running through ELR2008, including the need for green travel strategies for employment land and the intensification of development at sites near to established public transport.
- 3.29 Within the city centre and particularly in walking distance of the station and Cambridgeshire Guided Busway, occupiers are becoming increasingly accepting of limited parking provision with a “London” culture emerging where employees and even senior level staff/partners do not expect an allocated parking space as part of their employment package. By way of example, Mills and Reeve’s current premises comprise 35,000 sq ft (3,220 sqm) with a total allocation of 175 spaces. Their new offices at Botanic House total 52,000 sq ft (4,784 sqm) and only have an allocation of 50 spaces all of which will be allocated to visitors. By way of further example, Microsoft, whose facility is 78,000 sq ft (7,176 sqm), also only has 50 spaces allocated.
- 3.30 This shift in attitude will give confidence to developers looking to redevelop city centre sites and intensify the density of development that the final product will be acceptable to end occupiers with reduced parking ratios. Outside of the immediate city centre, parking remains an essential requirement for most occupiers: reduced provision will often result in the space being unacceptable to occupiers and/or nearby access and estate roads becoming “overspill” parking areas.
- 3.31 In addition, it is apparent that a “bicycle culture“ remains strong particularly with the 20-35 year old age group working within the R&D sector. This is particularly relevant for companies locating within the northern fringe science parks: companies often refuse to consider relocation outside of the city boundary for fear of losing staff.

Identify and consider the current vacancy rates of land and buildings (including the impact of public sector cuts)

- 3.32 The availability of R&D and office space has fluctuated with overall availability towards the end of 2011 decreasing, mainly because there was no new speculative development being completed and no significant releases of older space. The availability of Grade A space reduced throughout 2011 and now stands at its lowest point for 10 years. However, in 2012, the amount of vacant secondary space increased. A full schedule of current vacancies is included in Annex D. A summary of vacancies by location and type is shown in Table 3-10.

Table 3-10: Current floorspace availability by location

Location	Grade A office Sq ft	(Grade A office sqm)	Secondary office Sq ft	(Secondary office Sqm)	R&D Sq ft	(R&D sqm)	Total Sq ft	(Total sqm)
Prime City Centre	14,860	(1,367)	15,519	(1,428)	-	-	30,379	(2,795)
Secondary central area	25,022	(2,302)	118,581	(10,909)	11,484	(1,057)	155,087	(14,268)
Cambridge northern fringe	29,466	(2,711)	66,499	(6,118)	115,867	(10,660)	211,832	(19,489)
Wider area – business parks	111,294	(10,239)	44,454	(4,090)	108,068	(9,942)	263,816	(24,271)
Wider area – other	55,759	(5,130)	10,325	(950)	49,151	(4,522)	115,235	(10,602)
Total	236,401	(21,749)	255,378	(23,495)	284,570	(26,180)	776,349	(71,424)

Source: Savills

- 3.33 Table 3-10 shows that there is very little availability in the prime city centre location around Hills Road and Station Road. In the wider central area (e.g. Castle Hill, Westbrook Centre, Clifton Road, etc.), three-quarters of the vacant space is in secondary offices. In total, the central area accounts for less than a quarter of the total vacant office and R&D space in the area.
- 3.34 The northern fringe accounts for just over a quarter of total vacancies. Half of the northern fringe availability is R&D space on Cambridge Science Park and St John's Innovation Park, and most of the remainder is secondary office space in Vision Park in Histon. The latter has been particularly affected by closure and shrinkage of public sector functions (EEDA, Cambridgeshire Horizons, etc.).
- 3.35 Nearly half the vacant grade A office space in the Cambridge area is located on business parks in South Cambridgeshire, mainly at Cambourne. Similarly, nearly 40% of the vacant R&D space is on science parks in South Cambridgeshire – mainly Cambridge Research Park, but also some space is vacant on Granta Park.

Consider the impact of the loss of planned major development at Cambridge East and the potential for employment provision north of Newmarket Road

- 3.36 The area plan for Cambridge East provided for 10,000-12,000 dwellings, plus 4,000-5,000 jobs on 20-25 hectares of employment land.
- 3.37 As The Marshall Group now intends to continue to retain the Cambridge East site for its own business use¹³ for the foreseeable future, this removes the 20-25 hectares from the available supply. At this stage, due to lower levels of activity in the commercial development sector, this loss may not be as detrimental as it would have been if ‘boom’ economic conditions had been maintained since 2007. However, in the longer term, there may be significant implications from the loss of this quantity of land on the edge of Cambridge. It is not just the scale of land that is not now available, but its location that is important. The evidence of recent years is that firms want to be close to Cambridge, and therefore sites in and immediately around Cambridge are, in general, more popular than those further afield.
- 3.38 In addition to the airport, the future of The Marshall Group’s holding north of Newmarket Road remains uncertain. Information from Savills suggests that a residential scheme is being prepared for consideration and no further details or employment land proposals are anticipated.
- 3.39 More positively, an outline planning application for a first phase of Northstowe, to comprise 1,500 homes together with associated and complimentary uses, infrastructure and services, was submitted to South Cambridgeshire District Council at the end of February 2012. The revised Masterplan for the whole town and the development framework were also submitted. The first phase of the scheme includes 5 hectares (12.3 acres) of employment land including household recycling and foul water pumping stations.
- 3.40 The phased approach was triggered by the downturn in national and local economic prospects and the government spending review of October 2010, following which the A14 road improvement scheme was withdrawn. This phased approach should enable employment land to be provided in line with the expected gradual recovery in demand. Northstowe should in time provide a range of employment land for B1a, B1b, B1c, B2 and B8 uses. However, the range depends on the identity that Northstowe can establish with developers and employers. It is difficult to tell currently whether it will be perceived as a Cambridge location or in the same category as places such as Bar Hill, Cambourne and Waterbeach.

Update assessment of employment sites within Cambridge and close to Cambridge and comment on their continued use and potential protection from other uses

- 3.41 Based on the analysis completed by Savills, it is possible to make some summary observations with regard to specific employment sites:

¹³ And hence the associated jobs will also be retained

- *The land at Coldhams Lane*, identified in ELR2008 as “a site that comprises a former tip with up to 90 m of landfill which has potential for employment development for long term”, has recently been sold by Land Securities to Anderson Design and Build who we understand are not looking to pursue any employment uses for the site¹⁴
- Another site sale also mentioned in ELR2008 was the *National Extension College site at Purbeck Road* which Homerton College has recently purchased. This comprises a total of 3.13 acres with approximately 40,000 sq ft (3,680 sqm) of commercial space. There are no firm plans for the site’s redevelopment at this stage, although we suspect, due to the nature of the purchaser, there may be some form of student accommodation development anticipated in the future
- It has been recently announced that the *Spicers site in Sawston* is to be sold which provides a mix of industrial buildings of approximately 300,000 sq ft (27,600 sqm). Potentially these could be extended along with a mix of smaller commercial office and studio buildings
- *Neath Farm, Church End, Cherry Hinton*, which comprises a site of 2.02 acres, has consent for 40 new residential units. Previously, the site housed a number of dated, low eves height, high density industrial units. These were predominantly occupied by low value operators including food production and catering companies, some of which served the local Cambridge Market. A significant occupier on the estate, Wicked Cake Company, chose to relocate outside of Cambridge to Haverhill where it acquired a second hand facility of approximately 10,000 sq ft (920 sqm) as it was unable to identify cost effective space within the city for its requirement and it had a large three phase power requirement. [For reference, Haverhill rents are around 50% those of Cambridge and a contributing factor was the fact the senior staff from the company lived close to the town.]
- A further example of commercial site redevelopment in 2011 was the sale of former *BT Engineering Centre in Cromwell Road*. This 3 acre site to the east of the city centre followed on from other residential redevelopments in that street and sold with outline consent for 140 residential units.

3.42 Both the *Neath Farm* and *Cromwell Road* sites mentioned above were occupied by functionally obsolete and almost derelict commercial buildings; both were economically unviable for redevelopment in a commercial context, partly due to their location and partly because of the condition of surrounding properties.

3.43 In this context, it is important to note that ELR2008 emphasised the need to safeguard key employment sites within the city boundaries and resist redevelopment for alternative higher value uses, mostly likely residential. The evidence above, and from the monitoring data on land and floorspace losses, suggests that various sites have not been safeguarded in this way and have been, or are likely to be, developed for housing. The response, however, is not

¹⁴ Note that in 2006, the Cambridge Local Plan inspector concluded that Phase 2 of the former Blue Circle site should not be allocated for housing because of the over-riding risk arising from contaminated land. The current Issues and Options report, produced by Cambridge City Council states that it is “unclear how much of this would be developable; likely to be only suitable for commercial uses”

simply to apply the safeguarding policy more rigidly. It is very important to consider every site on its merits and, where possible to safeguard employment land. However, many city employment sites are either in fragmented ownership or housing older buildings which are unviable for redevelopment with a comparable (albeit new) employment product. In several cases, the cost of clearance, and sometimes of remediation and improved infrastructure, has made it impossible to fund redevelopment unless it is for a higher value activity.

Identify whether there is still sufficient employment land in all Use Classes/market areas, and whether it is in the right location

- 3.44 As discussed above, with regard to the provision of employment land, **the key issue appears to be more the quality and location of existing provision than the overall quantity of available land**, although based on past completion rates there does appear to be a shortage of land for light manufacturing. In practice – in current market circumstances – increasing the quantity of provision in virtually all locations outside the city is constrained by viability and funding issues.
- 3.45 In the paragraphs that follow, we make some concluding comments by summarising the picture by Use Class.

Offices (B1a)

- Given the economic downturn, the Cambridge office market has performed relatively well over the past 12 months with evidence of good levels of transactions compared to other UK towns and cities
- At the present time, development, investment and occupier interest has all contracted into the most popular locations: Cambridge city centre (particularly the Station Road/Hills Road area) and the northern fringe around Cambridge Business Park. A scarcity of modern accommodation in these prime locations and evidence of strong demand – particularly from the larger multinational R&D and professional service occupiers wishing to expand – means that supply will be constrained here
- According to Savills, take-up in 2011 amounted to 54,832 sqm (596,000 sq ft) as compared to the previous year of 33,580 sqm (365,000 sq ft). The average for the previous 5 years was around 39,560 sqm (430,000 sq ft). 2012 take-up is likely to be lower due to the lack of Grade A space
- The overall availability fell in 2011 from 101,200 sqm (1,100,000 sq ft) to 69,000 sqm (750,000 sq ft). However the majority of the vacant space is second-hand, Grade B stock located outside the city.
- There is limited supply of existing Grade A office accommodation in prime locations and opportunities for local businesses to relocate have been limited. This demand is generating pre-let activity and speculative construction. However, there is a good supply of (mainly secondary) offices and land in the wider area.

R&D uses (B1b)

- The Cambridge R&D sector has proved resilient during the recession for various reasons, including its diversity, its focus on international markets, and the attraction of small Cambridge firms to foreign purchasers. Nevertheless, in recent years some sectors have fared better than others: for example, the software, new media and greentech areas have done well, whereas the pharmaceutical sector has been less active
- As with the Office sector, there is a dearth of prime land supply in the city except at Addenbrooke's which is restricted to biomedical organisations only, but there is a reasonable supply in the wider area
- There is a lack of stock available for and combination of R&D and production, particularly in the city. This has not been important in the past due to the contraction of manufacturing in general, and the small proportion of high tech firms undertaking manufacturing. However, with the possible revival of manufacturing in UK, and a growing interest in local manufacturing by the high tech community, the situation may well reverse in future
- Financially successful high tech firms have been able to exercise more locational choice than business, financial and professional services, because they can occupy both B1a and B1b space (e.g. Microsoft in CB1)
- There is limited supply of existing Grade A R&D accommodation in prime (city centre) locations and opportunities for businesses to relocate have been limited; there is however provision at the Cambridge Biomedical Campus (albeit with use restrictions) and at sites outside the city. This demand for modern space is likely to lead to pre-lets and consequently construction particularly on the northern fringe.

Industrial and warehousing (B1c, B2 and B8)

- Whilst the Cambridge Office and R&D sectors have fared well in the economic downturn, the industrial sector has been slower to respond and its performance has more closely mirrored the wider region with the total take-up for 2011 recorded at approximately 250,000 sq ft (23,000 sqm)
- Within the city, availability remains extremely limited with less than 30,000 sq ft (2,760 sqm) of new build industrial space currently available and little suggestion of this being increased. Therefore occupiers are often forced to consider secondary older stock if they need to be within the A14 boundary
- The total industrial sector availability in the Cambridge area is approximately 575,000 sq ft (52,900 sqm), of which over 530,000 sq ft (48,760 sqm) is second hand space. Savills considers approximately 50% of this total space to be of poor quality and in need of re-development
- In the boom years of 2002-2007, significant new developments were undertaken in Papworth and at Buckingway Business Park, boosting supply around the city.

However, these speculative developments are unlikely to be repeated for some years, until the funding situation and the level of demand both improve considerably

- Therefore actual development of the pipeline of industrial stock outside the city, which in principle totals approximately 600,000 sq ft (55,200 sqm), is dependent on developers finding end users who will provide the appropriate covenant
- City centre industrial and warehouse space continues to be an attractive target for the development of alternative uses such as residential particularly as this stock becomes older and functionally obsolete.

4: Planning employment provision for the economy of the Cambridge area, 2011-31

Introduction and overview

- 4.1 Chapter 2 examined in some detail the nature and scale of anticipated employment growth in Cambridge City and South Cambridgeshire, primarily on the basis of two sets of employment projections; it converted these into an estimate of demand for employment floorspace and land by applying current (and well-evidenced) assumptions about employment densities and plot ratios; and it compared these with the findings from ELR2008. It observed that ELR2008 overestimated the scale of employment growth in the period 2001-2011 and it concluded (as a result *both* of more cautious employment projections *and* more demanding assumptions about employment densities) that the quantum of employment floorspace/land required over the period 2011-31 is a good bit less than that anticipated by ELR2008 for the period 2001-21.
- 4.2 Chapter 3 considered the changing picture with regard to the supply of employment provision, including with regard to the development pipeline. Its findings were complex and nuanced. In essence though, it observed ample supply across Cambridge City and South Cambridgeshire across most Use Classes, *other than* with regard to the provision of office space in prime, city-centre, locations. However it also noted that the redevelopment of employment sites for employment uses often appears to be unviable and that as a result, a good number of sites are being lost, principally to housing.
- 4.3 On the face of it, the observations made in the two preceding paragraphs could be seen to be inconsistent: employment growth prospects appear stronger in South Cambridgeshire than Cambridge City, but it is in Cambridge City (and particularly the city centre) that the pressures on supply are greatest. In our view, this apparent inconsistency is explicable in terms of two factors:
- underlying demand for prime sites in the city centre is high, as evidenced through high rental levels, but there is a supply constraint and hence not all demand translates into jobs
 - a good proportion of the South Cambridgeshire employment growth is in the northern fringe and this is effectively part of the city property market and growth dynamic.
- 4.4 Nevertheless, the arguments relating to demand and supply are – in both cases – complicated and the overall assessment varies by both Use Class and geography. From the perspective of South Cambridgeshire District Council and Cambridge City Council, the crucial issue is how these two different narratives relate to each other – and where, in turn, this leaves planning policy (particularly with regard to the scale and location of employment provision).
- 4.5 In this chapter – reflecting on the arguments from both preceding chapters but also drawing in wider evidence and analysis – we attempt to bring the different strands together through a

quantitative summary and then a more qualitative discussion before drawing out some high level conclusions and recommendations.

Quantitative stocktake

4.6 Based on the quantitative evidence, Table 4-1 below draws together the headline findings from both Chapters 2 and 3 with regard to the future demand for and supply of employment floorspace. It suggests that:

- with regard to B1c/B2 and B8, pipeline provision appears to be in excess of forecast demand. However, based on past completion rates and the viability issues around redeveloping existing employment sites, land for light manufacturing (B1c) is in short supply
- for B1b, Savills and Cambridgeshire County Council (through its monitoring data) appear to be in broad agreement with regard to the scale of available/pipeline provision and this is in excess of overall demand
- for B1a, the picture is complex. Comparing Savills' availability/pipeline estimates with demand points to a shortage of supply. However the Cambridgeshire County Council pipeline estimates are higher (particularly if open B1 permissions/allocations are considered alongside B1a). In practice the degree to which there is balance, surplus or deficit may well vary substantially by precise location and by how sites such as Northstowe are implemented.

Table 4-1: Different measures of current/future demand for and supply of employment floorspace ('000 sqm)

	B1	B1a	B1b	B1c/B2	B8	Total
Demand: CE Baseline 2012 – for 2011/31	n/a	144	69	-26	36	222
Demand: CE Policy-led 2012 – for 2011/31	n/a	160	170	-25	41	244
Supply: Savills – Currently available	n/a	45.2	26.2	n/a	n/a	71.4
Supply: Savills – Pipeline	n/a	97.9	225.5	n/a	n/a	323.4
Supply: CCC monitoring data – Pipeline	84.5	157.3	266.4	80.6	57.3	646.2

Source: SQW – Demand side data are based on CE's employment projections. Supply side data are provided by Savills or through Cambridgeshire County Council's monitoring data

Long term imperatives in the Cambridge area's spatial economy

4.7 Sitting somewhere between demand and supply – and based particularly on the consultations completed in the course of this piece of work but also earlier research on the Cambridge economy – there are, we think, five long term imperatives in relation to the dynamism of the Cambridge area's spatial economy. To a limited extent, these are already reflected in employment projections and *de facto* in the development pipeline, but they are worth drawing

out explicitly in order to frame and contextualise the recommendations that follow. They are presented below in no particular order.

1: Recognise the importance – but also the challenges – of manufacturing provision

- 4.8 In relation to the long term vibrancy of the Cambridge economy, the importance of manufacturing is growing – and this, we would argue, is a major change since ELR2008. This renaissance is a national phenomenon, underpinned in part by government policy. But it takes a particular form in the Cambridge area.
- 4.9 Over recent years, there has been a seemingly inexorable drive to export manufacturing activity – particularly to low wage locations like China and India. However wage levels in previously low wage economies are rising; the costs of shipping products are escalating rapidly; and the imperatives surrounding the reliability of supply are growing. Coupled with a discernible trend towards bespoke manufacturing, the rationale for repatriating production is clear. In terms of its research base, the Cambridge area is continuing to see substantial investment – most recently at Babraham. Harnessing and exploiting this research competence to the full will require a viable manufacturing sector. In addition, there is evidence of growth (and growth potential) in new sectors for which manufacturing provision may be important – for example, cleantech.
- 4.10 Yet as we saw in Chapter 3, manufacturing sites are repeatedly being lost to housing, particularly in Cambridge itself. The reason for this is that many of these sites are expensive to develop and the land values associated with manufacturing provision simply are not high when compared to some of the alternatives. There is therefore a clear market failure and planning policy ought to respond. In this context, our observation surrounding the increased incidence of hybrid (multi-purpose) buildings is also important: potentially, this could provide the basis for an evolving approach to 21st century provision.

2: Recognise the far higher incidence of homeworking

- 4.11 The 2009 Labour Force Survey found that in the East of England, 12% of the urban population and 18.2% of the rural population, worked primarily from home¹⁵. The number of homeworkers has increased significantly in recent years, particularly among professionals. In addition to those who work mainly from home, many firms now actively encourage their employees to spend a minority of their time working from home, and this general trend seems set to accelerate for three different reasons:
- working from home has become much **easier**, due particularly to the widespread availability of high speed broadband
 - working from home is now widely **accepted** as an integral part of “doing business”, simply because more people from more firms/organisations are doing it
 - working from home is now far more **necessary** as firms attempt to reduce their floorspace and/or as the costs (in time and money) of commuting grow.

¹⁵ LFS 2009 cited in Workhubs: smart workspace for the low carbon economy. Workhubs Network 2010

- 4.12 This increase in the incidence of homeworking – and the profound changes that are coming with it – was confirmed through our consultations. In essence, many Cambridge-based firms are “doing business differently” and their requirements in terms of land and premises provision are changing.
- 4.13 One consequence is far higher employment densities, particularly with regard to office space. When calculating land requirements in ELR2008, an average floorspace per job in offices of 19sqm was used, based on the 2004 *Employment Land Reviews Guidance Note* issued by the then ODPM. In the 2010 Offpat/CLG *Employment Densities Guide*, floorspace to job ratios were 12sqm per job in standard offices, 10sqm per job in business park and serviced offices, and 8sqm per job in call centres. Therefore, for standard offices, average employment densities appear to have increased by 50% in six years, and this trend seems set to continue.

3: Acknowledge the increasingly social character of work and the crucial importance of access to London, and the significance of both vis-à-vis the city centre

- 4.14 In parallel with the growth of home-working (and in part as both a cause and consequence of it), it is apparent that the premium attached to a city centre location is growing – partly to facilitate social interaction within the wider milieu and partly because of the imperative for good access to London; this observation too was confirmed through our consultations. Over recent years, the London economy has been far more buoyant than any other; London has grown throughout the recession; and with major investments – like cross rail and the Olympics – the continuing growth of London in terms of its influence seems certain. Many firms in Cambridge crave good London connectivity – in order to attract both staff and clients – and many are willing to pay a premium for it. The implications are clear – particularly vis-à-vis the use of (and access to) areas around Cambridge railway station and the planned Cambridge Science Park railway station.
- 4.15 As noted in Chapter 3, in the Station Road/Hills Road area (i.e. close to the railway station and the route of the Cambridgeshire Guided Busway), occupiers are increasingly accepting of the need for intensification (evidenced, for example, through very limited parking provision for both Mills and Reeve and Microsoft). The acceptability of intensification is crucial to enable more of the demand for city centre space to be met.
- 4.16 Equally, intensification of development on the northern fringe – the other popular area which should benefit from the planned Cambridge Science Park railway station – should also be possible through redevelopment at higher densities. For example, Phase 1 of Cambridge Science Park is one- and two-storey in extensive grounds, and is likely to be redeveloped over the period to 2031. Even without increasing the footprint, densities could therefore be increased by 50-100% without any damage to the quality of the environment¹⁶.
- 4.17 On the northern fringes there will also be scope for new development at relatively high density around the new station and guided busway interchange. Given the pressure on space in these locations, which are the most sustainable as well as the most popular office locations

¹⁶ We have insufficient information from which to derive quantified estimates of the impact on availability – but the general principle ought to be that higher densities would increase the available floorspace

in the area, it is absolutely imperative to make the most of the limited land resources available there.

4: Recognise the role played by professional and financial service providers in driving growth

- 4.18 A fourth imperative relates to the importance of professional and financial services – in relation to the high tech cluster and, indeed, more generally. Evidence suggests that within the Cambridge area, the venture capital sector has, for example, retrenched and it is actually weaker now than a decade ago. In part this is explained in terms of the availability of capital more generally, but it also reflects the growing importance of London in the high tech sphere. Although very difficult to evidence, our consultees alluded to potential latent demand from London-based professional and financial service firms for sites and premises in the Cambridge area (and some commented that this could itself be supportive of further growth in high tech sectors). The implication is that some appropriate provision could be made, recognising again the importance of the city centre milieu.

5: Acknowledge that the University of Cambridge will continue to shape the Cambridge economy profoundly, through long term investment

- 4.19 Finally, we would point to the significance of the University of Cambridge with regard to the evolving spatial economy. In many future-facing analyses, the role of the University is treated simply as an assumption and then largely ignored. However we think this is a mistake: over the period 2011-31, the University will have a major influence on the spatial economy – directly and indirectly. West Cambridge will develop and this will emerge as a real hub in its own right for a global University whose economic reach is growing. Equally, North West Cambridge is planned to provide around 60,000 sqm for higher education uses (Use Class D1) and 40,000 sqm of *sui generis* research institutes and commercial research uses (Use Class B1(b)). It will be important that other employment provision (and indeed infrastructure) is planned with the growth plans and timescales of the University firmly in view, and a good understanding of the implications arising from them.

High level conclusions and recommendations

- 4.20 Working through the implications of the arguments set out above – in the context of the analyses presented in Chapter 2 and 3 – we can draw out some high level conclusions and recommendations relating to the period 2011-31:
- Overall, jobs growth and floorspace requirements are lower for 2011-2031 than those that informed ELR2008 over the period 2001-21, **but** there will be considerable pressure for B1a space in the city (including some that needs to be available on short-term leases), and particularly in the city centre, where there is no more land. This demand is deriving from firms linked to the high tech cluster – either directly or as professional/financial service providers. The only way around this is to intensify the use of existing sites; in our view, allocating more land in peripheral locations will not help in relation to this core growth dynamic (as the market for peripheral sites is quite

different). There is, therefore, a need to look systematically at the potential for intensification of use in the city centre in order to create, over time, more office space

- There is also a need to focus on ensuring that existing commitments are brought forward for development, and that the existing vacant stock is improved to encourage re-use. The higher employment densities and lower jobs growth projections mean that there is no immediate imperative to compensate for the loss of the proposed employment allocations at Cambridge East
- However, it will be important to ensure there is sufficient land for manufacturing in the area. Where possible, existing manufacturing sites within and close to Cambridge should be protected from loss to housing or retail, but equally it is important to recognise that market factors dictate that this will not be possible in all cases. Therefore alternative provision is necessary, including at Northstowe but also possibly in some locations which previously have not been seen as suitable for manufacturing, such as Cambridge Research Park. The increasing importance of hybrid buildings which enable flexibility of use needs to be recognised in the way in which sites are designated for different uses.
- There may be an expectation to factor development at Alconbury into employment land proposals for South Cambridgeshire. Alconbury is an important resource for the wider area and it should provide a lot of employment space in time, and may become attractive to some firms currently located in the Cambridge area, or considering moving into the area. However, the market view at present appears to be that (i) the EZ designation is not a particularly important incentive to firms, and (ii) initially at least, firms will be reluctant to go there because it is isolated. That view may well change over time, but it would be unwise for South Cambridgeshire District Council to assume now that it will provide an attractive alternative to locations within the district, particularly in the short term. Even in the longer term it is likely to become attractive only relative to the periphery of South Cambridgeshire, not the area close to the city. Alconbury is not therefore a substitute for more local provision
- It will be important to reappraise the role and potential of sites on the edge of Cambridge. As it stands, Cambridge East is ruled out while West Cambridge is under the University's control and will be developed, but gradually. To the north, there is scope for intensification on Cambridge Science Park and/or finding a way to use Chesterton Sidings and/or land in the Cowley Road area for high density employment uses. If these suggestions prove impossible, or additional provision on the northern fringe can only be made in the longer term, then consideration needs to be given to finding new employment land in other sustainable locations.

5: Review of selective management of employment policies

Introduction

- 5.1 This final chapter reviews the existing selective management of employment policies in the Cambridge City Local Plan (adopted in 2006) and the South Cambridgeshire Core Strategy (adopted in 2007) in the light of the preceding discussion about the demand for, and supply of, employment land and premises. It also takes into account other sources of information, including interviews with a variety of firms/stakeholders undertaken for this study¹⁷, and concerns expressed in the *Cambridge Cluster at 50* study and the *Cambridgeshire Development Study*, both of which resulted from consultations at the time those studies were undertaken (2009 and 2011 respectively). The chapter concludes by identifying the potential benefits and problems which could result from changing the selective management of employment policies.

What do the existing policies say?

- 5.2 The selective management of employment policies for Cambridge City (2006 Local Plan policy 7/2) and South Cambridgeshire (2007 Core Strategy Development Control Policy ET/1) are almost identical, and restrict permitted employment uses to the following:
- a. All office uses occupying less than 300 sq m, and offices of over 300 sq m (Use Class B1a) if the occupier provides an essential local or sub-regional service or administrative facility with the majority of its business based in the Cambridge sub region. For Cambridge City only, additionally and exceptionally, regional services are also allowed “where there is a proven need for a regional function”. According to the Cambridgeshire and Peterborough Structure Plan 2003 (Policy P9/8), this excludes “national headquarters, call centres, or similar”.
 - b. High technology and related industries and services (Use Class B1b), primarily concerned with research and development, which show a special need to be located close to the universities or other established research facilities or associated services in the Cambridge Area. The definition of ‘high technology and R&D’ includes investigation, design and development, up to an including production for testing, but not mass production.
 - c. Educational uses and sui generis research establishments (Use Class D1) that can show a special need to be located close to existing major establishments in related fields (such as the universities, the teaching hospital, or private research establishments). Proposals for new research establishments, or the expansion of those existing, therefore must demonstrate a specific need to be located near the existing establishments in the Cambridge area.

¹⁷ This included firms/agents with a strong knowledge of employment provision in and around Cambridge and, in the case of the firms, first hand and recent experience of local relocation and/or expansion

- d. Other small-scale manufacturing and storage (Use Classes B1c, B2 and B8) which contribute to a greater range of local employment opportunities, particularly those contributing to the development of local skills. ‘Small-scale’ is defined as up to 1,850 sq m of space occupied by any one user on a site. Large scale expansion of such firms will not be permitted.

5.3 According to the South Cambridgeshire Core Strategy and the Cambridge City Local Plan, the main purposes of these restrictions are to:

- manage carefully development pressures by favouring those uses which need to be near Cambridge
- support existing businesses by applying positive policies towards the appropriate expansion of existing firms
- recognise innovation and enable Cambridge’s role as a world leader in higher education, research and knowledge-based industries.

What problems have been identified

5.4 Over the last two decades, the Cambridge area has grown quickly, including in high tech sectors, and – compared to elsewhere – it has proved resilient to recession. At one level, then, it might be possible to claim simply that the policies have had their desired effect. However it is important to recognise that we cannot comment on the “counterfactual” – what the growth profile might have looked like had those policies not been in place: we simply have no evidence on which to conclude that growth would have been either stronger or weaker without the selective management of employment policies. What is however clear is that over recent years, the nature of the high tech cluster has changed including – as noted in the *Cambridge Cluster at 50* study – the far greater functional importance of London connectivity and the networked business models.

5.5 Within this context – and drawing both on consultation evidence and our own reflections (from earlier work and the current study) – it is possible to identify some concerns with regard to the existing policies. These are outlined below:

- They **discriminate against a range of office uses which could contribute high quality, high value jobs to the Cambridge economy**. This includes, for example, HQ functions or professional services which may want to move to Cambridge because it is an attractive business location, rather than because they have existing local linkages. The recent employment projections for Cambridge show a lower level of growth in future than previously expected, particularly over the next 10 years. Much of the forecast growth is in office uses. Not all office uses can or should be accommodated in Cambridge, but the current policies could further restrict growth, over and above the effects of the economic downturn.
- They have **led to a situation in which there is a shortage of B1a offices, relative to demand**. Half of the currently available business space in Cambridge and South Cambridgeshire, and two thirds of the supply pipeline (see Table 3-4), is restricted to

R&D and related uses (i.e. the planning permission and/or control of the site is for B1b uses). It is very important to meet the needs of high tech firms, but many businesses in the high tech cluster do not qualify for B1b space – including, for example, specialist financial, business and professional services.

This situation is exacerbated by the fact that high tech firms which qualify for B1b space can also choose to locate in other B uses – including B1a offices. Examples include Microsoft moving to CBI and Redgate Technologies on Cambridge Business Park. This is further restricting the availability of office space for non-high tech offices uses, because standard office firms do not qualify for B1b space.

- **Manufacturing is enjoying something of a revival**, for reasons explained in Chapter 4, and more good quality manufacturing space is expected to be required in future than previously forecast. However, manufacturing space is in short supply in Greater Cambridge. In and around Cambridge there is very little available and there has been a steady loss of old manufacturing sites to higher value uses, mainly housing, despite policies to prevent this happening. The solution could in part be to apply these policies more rigorously, but the reality is that much of the loss is a reflection of market economics, which the planning system is largely powerless to counter (except by stopping any redevelopment of these sites). Further afield in South Cambridgeshire, there is more manufacturing space, but there is no new space in the short term pipeline (as defined by Savills) and half the existing space is of poor quality
- **Property agents claim that the selective policies cause confusion among developers and end users, even if they do not actually apply, and so may be deterring investment.** It has not been possible to identify specific examples, but in the current climate, anything that deters business investment is, arguably, a problem unless it is serving an essential and more important purpose.

How could these problems be addressed?

- 5.6 These issues have a variety of causes, only one of which is the selective management of employment policies in Cambridge and South Cambridgeshire. Market factors are particularly important in relation to the supply of manufacturing space, and also cause a mismatch between the spatial focus of demand and the distribution of supply.
- 5.7 However, the selective management of employment policies are restricting both demand and supply, and should therefore be reviewed, even if they are subsequently retained in whole or in part. Table 5-1 examines the advantages and disadvantages of retaining or removing/reducing the policy restrictions which have given rise to the above concerns.

Table 5-1: Selective policies – advantages and disadvantages

Policy restriction	Advantages	Disadvantages
The local user conditions applying to users occupying over 300 sqm	There is a limited amount of office space in Cambridge. Major firms can afford the prime locations, and may force out essential local services, including those which support the high tech cluster	Most of the employment growth forecast for the next 20 years is in office uses. If many of these are restricted, then where will the employment growth come from? Large, non-local office uses can provide high quality, high value jobs. If there is to be discrimination, it should be against large scale, low value uses, but these are unlikely to come to Cambridge anyway because it is too expensive.
The restrictions on manufacturing and storage in units over 1,850 sqm, <i>and</i> Restrictions on R&D and other high tech activities which include “mass production”	Large scale manufacturing takes up valuable employment land, employment densities are usually low, and there can be adverse environmental impacts	Manufacturing is enjoying a revival, including national policy support. High tech firms in particular should be encouraged to establish high value manufacturing activities locally. They can provide valuable jobs and economic diversification. Land and property prices will prevent low value large scale manufacturing locally, and other planning policies can prevent adverse environmental impacts. Mass production is not a helpful term in relation to planning policy. The implications of mass production of pharmaceuticals are completely different from the mass production of steel.
Restrictions on research establishments which cannot demonstrate a specific need to be located near existing research centres/institutes, universities or similar organisations	The Cambridge labour market is relatively small, therefore research establishments which have no local connections could simply cause more competition for scarce specialist resources, force up prices, and disadvantage established facilities, including the university	EA key objective of existing planning policy is to support Cambridge’s role as a world leader in higher education, research and knowledge based industries. It is not the role of planning policy to restrict labour market competition.

Source: SQW

Possible implications for high tech firms arising from any relaxation of selective management of employment policies

- 5.8 An important further perspective on selective management of employment policies concerns whether any relaxation could potentially have negative effects on high tech firms. In our view, high tech firms are not overly concerned with planning policy *per se* – just the consequences of it. In this context, we make two overarching observations:
- potentially negative effects could arise if high tech firms are seeking non-specialist office provision (because there could be more competition for B1a space)
 - restrictive planning policies are concerned with the use of available land, not the quantity of provision; hence, if sufficient land is allocated for B1b uses, relaxing the selective management of employment policies should have no effect.

Conclusions

- 5.9 In relation to the selective management of employment policies, some concluding observations can be made:

- One of the key assumptions on which the selective policies are based is that employment demand from firms exceeds the supply of land and premises in the Cambridge area, and therefore the local authorities can afford to be selective in the types of firms, and activities, that are accommodated here. Arguably this is no longer the case, and the forecasts suggest the area will experience slower growth than previously expected. Therefore it is important to be very careful about selectivity, to avoid it further slowing growth.
- Economic development objectives for the area support the high tech cluster and the growth of high value jobs. As currently drafted, the selective management of employment policies may be at variance with these objectives. Furthermore, the property market is largely doing the job of keeping out low value activities which do not need to locate in the Cambridge area: for example, it is too expensive to locate large scale distribution or low value manufacturing anywhere in the Cambridge/South Cambridgeshire area. So, planning policies which seek to prevent these kinds of activities are arguably quite pointless, and they are potentially damaging if they have unintended other consequences
- There is a shortage of offices with B1a permissions in Cambridge. Unless this is addressed through a combination of intensification and making more land available in the more attractive locations, it could adversely affect projected employment growth, which is mainly in office sectors. The evidence suggests that a combination of applying local user restrictions and making space available beyond the immediate environs of Cambridge is not going to solve the problem of the demand/supply imbalance in the city
- The size restrictions included in the selective policies – 300 sqm for non-local office users and 1,850 sqm for manufacturing – appear to be arbitrary. For example, it is difficult to see why a local high tech firm, wishing to establish a manufacturing plant locally which is bigger than 1,850 sqm, and which does not fall foul of environmental or other policies, should be prevented as a matter of course from doing so by the selective management policies. For example, according to the policy it is unclear why Domino was granted permission for a substantial extension to its Bar Hill premises; equally, if Marshalls was not a local firm and wanted to move into Cambridge now, the policy suggests it would not be allowed to do so.
- The policy to retain the best manufacturing land in and around Cambridge has had little effect. Various long established sites have been lost, and this has increased the market pressure on other manufacturing sites, and made it more difficult to prevent further losses. One response to this would be to suggest that the policy needs to be more firmly applied. However, the property market view is that redeveloping industrial sites in Cambridge for industrial use is not viable, and simply will not happen, whatever the policy. The only exception would be an owner occupier which wants to remain *in situ* and expand or modernise (Marshalls is probably the best example of retaining a site in current use because it wants to continue its business *in situ*, despite planning policies – and no doubt developer interest – in redevelopment for housing). It may therefore be sensible to retain the policy but change its wording

to afford particular protection to occupiers which want to remain on site and are willing to invest in modernisation

- If a distinction needs to be made between what is allowable in the immediate vicinity of Cambridge, and what is allowable further out of Cambridge, then a logical and clear boundary is the inner limit of the Green Belt, rather than the local authority boundary, because the latter excludes parts of the urban area; this would replace an administrative boundary with a functional one which ought therefore to be more meaningful
- There appears to be little point in the selective policy requiring research establishments new to the area to show a “special need to be located close to existing major establishments in related fields (such as the universities, the teaching hospital, or private research establishments), in order to share staff, equipment or data, or to undertake joint collaborative working”. Given the objective to enable Cambridge’s role as a world leader in research, it is difficult to see circumstances in which a new research institute should be turned away from the Cambridge area.

Annex A: Employment prospects for Cambridge City and South Cambridgeshire 2011 to 2031: Cambridge Econometrics (LEFM)

An analysis of Cambridge Econometrics' employment projections by industry and district¹⁸

- A.1 This annex provides an overview of employment projections prepared by Cambridge Econometrics (CE) in April 2012 for Cambridge City and South Cambridgeshire, covering the period 2011 to 2031. It provides a breakdown by main industry sector. Two sets of projections are analysed. The first set is essentially a trend, or 'baseline'. The second set incorporates anticipated new dwelling construction following the policies of the current Cambridge City Local Plan, South Cambridgeshire Local Development Framework and the East of England Plan 2006¹⁹ (Regional Spatial Strategy, RSS). In the subsequent analysis these projections are described as 'policy-led'.
- A.2 Both sets of projections are based on Cambridge Econometrics' Regional Economic Prospects outlook and reflect historic shares of job growth by district and industry sector. The 'baseline' takes into account the 2008-based sub-national population projections produced by the Office for National Statistics (ONS), which envisage relatively high rates of growth in the region and in Cambridgeshire. It is important to note that ONS' very recent 2010-based sub-national population projections have not been incorporated²⁰. These show a very much lower 2010 base population and subsequent rate of growth in Cambridge City and are currently the subject of challenge by Cambridgeshire County Council's demographers.
- A.3 The 'policy-led' projections take account of population growth associated with the housing trajectories planned by the District Councils for the period 2011 to 2031, as modelled by Cambridgeshire County Council's demographic team (CCCRG). However, due to limitations of the economic forecasting model it has been necessary to 'bolt on' the CCCRG forecast change in population by age group 2011 to 2031 to the CE 2010 base population profile. This is relatively straight forward for South Cambridgeshire, but in the case of Cambridge City it is important to note that the CE population estimate for 2010 exceeds that of CCCRG by over 6,000. Consequently the 'policy-led' projections for all years of the forecast period show a similar discrepancy when compared with the CCCRG population forecasts.
- A.4 The first section provides a broad overview of the projections and the second looks at employment in specific industry sectors. The third section provides a comparison with the

¹⁸ Published April 2012

¹⁹ The overall rate of development assumed is considered to be relatively optimistic. It should also be noted that there is uncertainty about the location of development within South Cambridgeshire, particularly that attributed to 'Cambridge East' in the RSS, as this site is no longer available. The population projections assume that an equivalent amount of housing will be provided elsewhere in the district.

²⁰ The scale of change is significant for Cambridge City. The ONS 2008-based projection indicated a population of 122,000 in 2011 increasing by 15,000 to 137,000 in 2031; the ONS 2010-based projection (published in March 2012) indicates a population of 105,000 in 2011 increasing by 1,000 net to 106,000 in 2031. Cambridgeshire County Council understands that the differences in both baseline population and future growth relate to the treatment of international migrants and visitors.

projections prepared for the Cambridgeshire Development Study (CDS) in spring 2009. An annex summarises the population growth assumed by the projections.

Part 1: Broad overview

- A.5 Table A-1 provides an overview of employment totals forecast for 2011, 2021 and 2031 for both Cambridge City and South Cambridgeshire, comparing the ‘baseline’ and ‘policy-led’ scenarios. The forecast ‘baseline’ employment for the former East of England region is also included.

Table A-1 : Employment projections, Cambridge City & South Cambridgeshire 2001 to 2031, '000

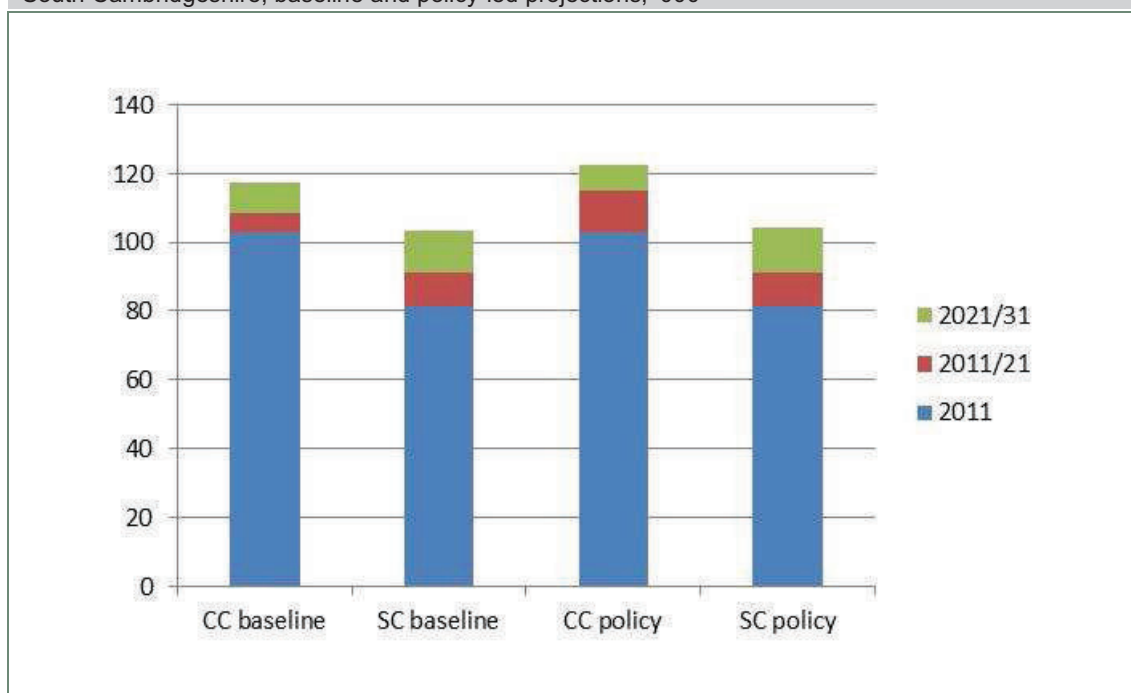
District/area	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Cambridge City (baseline)	101.8	102.7	108.5	117.5	5.7 (0.6%)	9.0 (0.8%)
Cambridge City (policy-led)	101.8	102.7	115.1	122.3	12.4 (1.2%)	7.2 (0.6%)
South Cambridgeshire (baseline)	68.4	81.2	91.3	103.5	10.1 (1.2%)	12.2 (1.3%)
South Cambridgeshire (policy-led)	68.4	81.3	91.1	104.4	9.8 (1.2%)	13.3 (1.5%)
East of England	2,685.0	2,849.7	3,081.8	3,391.4	232.1 (0.8%)	309.6 (1.0%)
CC/SC as % region (baseline)	6.3%	6.5%	6.5%	6.5%	6.8%	6.8%
CC/SC as % region (policy-led)	6.3%	6.5%	6.7%	6.7%	9.6%	6.6%

Source: Cambridge Econometrics. Note: All figures rounded independently.

- A.6 The table shows that over the period 2011 to 2021 Cambridge City is projected to grow by 5,700 jobs (equivalent to 0.6% per annum) according to the ‘baseline’ projection but by a significantly higher 12,400 jobs (1.2% per annum) when higher population growth is assumed, as under the ‘policy-led’ scenario. However, over the period 2021/31, when the ‘policy-led’ outlook assumes that new dwelling construction will slow down significantly within the City’s boundaries, higher job growth arises under the ‘baseline’ projection, (9,000 as compared with 7,200 jobs, or 0.8% per annum as compared with 0.6%).
- A.7 In the case of South Cambridgeshire the ‘baseline’ and ‘policy-led’ projections envisage similar levels and rates of employment growth over both 2011/21 and 2021/31 periods, around 10,000 jobs as between 2011/21 and 12,000 to 13,000 jobs between 2021 and 2031. Both projections record 1.2% growth per annum for the period 2011/21. The policy-led projection equates to 1.5% growth per annum for the period 2021/31, whilst the ‘baseline’ equates to 1.3% growth per annum.
- A.8 As compared with the former East of England region as a whole, the baseline indicates marginally higher job growth in the combined Cambridge City/South Cambridgeshire area over the forecast period, accounting for 6.8% of the total increase in employment 2011/31. The ‘policy-led’ forecast indicates a higher 9.6% share of growth in the period 2011/21, falling back to a 6.6% share as new house-building rates decrease in Cambridge City after 2021.

- A.9 Figure A-1 shows projected employment in 2011, 2021 and 2031 for both the ‘baseline’ and ‘policy-led’ scenarios for Cambridge City and South Cambridgeshire.

Figure A-1 : Employment in 2011 and projected change in jobs by 2021 and 2031, Cambridge City & South Cambridgeshire, baseline and policy-led projections, '000



Source: Cambridge Econometrics

Part 2 - Industry sector analysis

- A.10 This section examines the baseline and policy-led employment forecasts broken down by industry sectors²¹. Each district is discussed in turn.

Overview for Cambridge City

- A.11 Table A-2 provides an overview of projected employment change 2011 to 2021 and from 2021 to 2031 in Cambridge City, broken down by main industry sectors for the ‘baseline’ projection. Table A-3 provides a similar analysis for the ‘policy-led’ scenario. Figure A-2 provides a breakdown of change over the whole period 2011 to 2031 by industry sector, comparing the two forecasts.

Table A-2 : Main industry sectors Cambridge City: 2001 to 2031 projected employment, '000, (%)
Baseline

Industry sector	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Agriculture	0.1	0.1	0.1	0.1	-0.0 (-2.0%)	-0.0 (-1.8%)
Mining, quarrying etc	0.1	0.0	0.0	0.0	-0.0 (-10%)	0.0 (0.0%)
Manufacturing	6.6	4.1	4.0	4.2	-0.1 (-0.3%)	0.2 (0.5%)
Utilities	0.1	0.2	0.2	0.2	-0.0 (-1.1%)	-0.0 (-0.4%)

²¹ The analysis is based on the Standard Industrial Classification (SIC) 2003 rather than the more recent SIC 2007. This means that publishing and equipment repairs are classified as manufacturing rather than services.

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Industry sector	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Construction	3.0	2.9	3.1	3.2	0.2 (0.6%)	0.1 (0.4%)
Distribution & motor trade	3.8	2.4	2.6	3.0	0.2 (0.9%)	0.3 (1.2%)
Retailing	8.5	9.4	10.1	11.4	0.7 (0.7%)	1.3 (1.3%)
Hotels & catering	6.1	8.6	9.0	9.0	0.2 (0.2%)	0.0 (0.0%)
Land transport	1.5	1.9	1.9	2.0	0.0 (0.2%)	0.1 (0.6%)
Water & air transport	0.0	0.0	0.0	0.0	0.0 (0.0%)	0.0 (0.0%)
Communications	2.1	1.8	1.9	1.9	0.1 (0.4%)	0.1 (0.3%)
Finance & insurance	3.0	1.6	1.6	1.7	0.0 (0.1%)	0.1 (0.6%)
Computing services	5.6	4.3	5.1	6.0	0.8 (1.8%)	0.9 (1.8%)
Professional services (inc. R&D)	13.1	14.6	15.7	17.0	1.2 (0.8)%	1.3 (0.9%)
Other business services	5.6	6.5	8.0	8.7	1.5 (2.3%)	0.7 (0.9%)
Public administration & defence	4.7	3.3	2.8	2.9	-0.4 (-1.4%)	0.1 (0.4%)
Education	23.0	22.0	22.1	23.1	0.1 (0.1%)	1.0 (0.5%)
Health & social work	11.0	14.6	15.7	17.4	1.0 (0.7%)	1.7 (1.1%)
Miscellaneous services (inc. leisure)	4.0	4.1	4.5	5.5	0.4 (1%)	1.0 (2.1%)
Total	101.8	102.7	108.5	117.5	5.7 (0.5%)	9.0 (0.8%)

Source: Cambridge Econometrics. Note: All figures rounded independently.

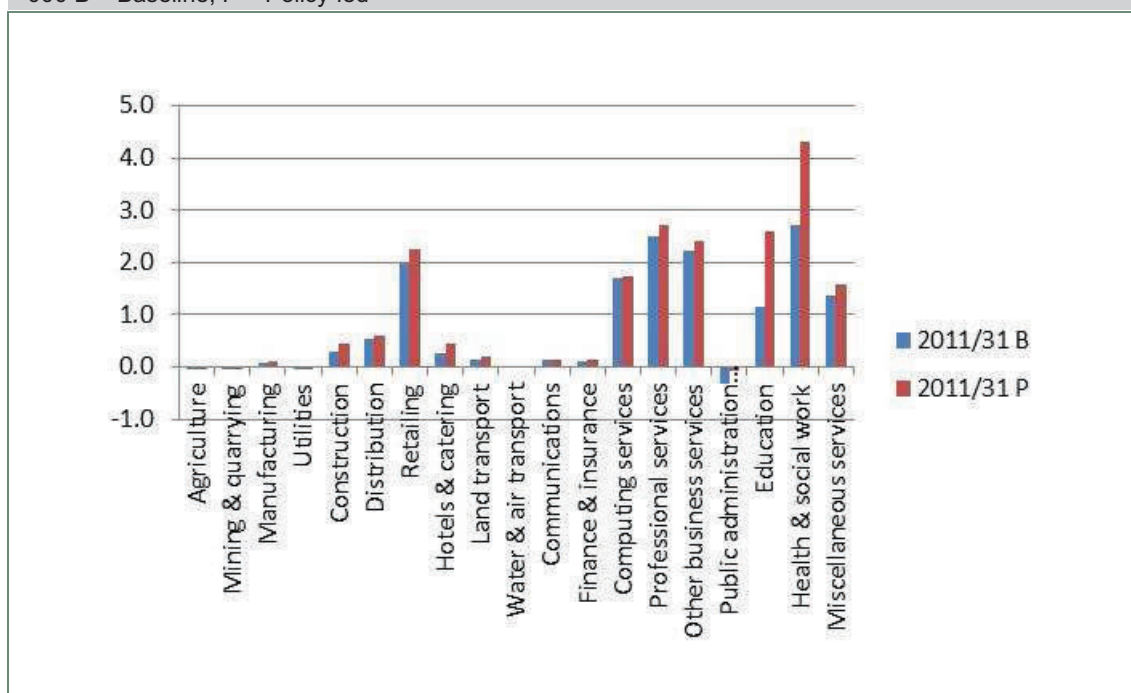
Table A-3 : Main industry sectors Cambridge City: 2001 to 2031 projected employment, '000, (%) Policy-led

Industry sector	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Agriculture	0.1	0.1	0.1	0.1	-0.0 (-2.0%)	-0.0 (-1.9%)
Mining, quarrying etc	0.1	0.0	0.0	0.0	-0.0 (-10%)	0.0 (0.0%)
Manufacturing	6.6	4.1	4.0	4.2	-0.1 (-0.2%)	0.2 (0.5%)
Utilities	0.1	0.2	0.2	0.2	-0.0 (-1.0%)	-0.0 (-0.5%)
Construction	3.0	2.9	3.3	3.4	0.4 (1.3%)	0.1 (0.2%)
Distribution & motor trade	3.8	2.4	2.8	3.0	0.3 (1.4%)	0.3 (1.0%)
Retailing	8.5	9.4	10.6	11.7	1.1 (1.2%)	1.1 (1.1%)
Hotels & catering	6.1	8.8	9.3	9.2	0.6 (0.6%)	-0.1 (-0.1%)
Land transport	1.5	1.9	2.0	2.1	0.1 (0.7%)	0.1 (0.4%)
Water & air transport	0.0	0.0	0.0	0.0	0.0 (0.0%)	0.0 (0.0%)
Communications	2.1	1.8	1.9	2.0	0.1 (0.6%)	0.0 (0.2%)
Finance & insurance	3.0	1.6	1.7	1.8	0.1 (0.6%)	0.1 (0.4%)

Industry sector	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Computing services	5.6	4.3	5.1	6.1	0.8 (1.9%)	0.9 (1.8%)
Professional services (inc. R&D)	13.1	14.5	16.0	17.3	1.5 (1.0%)	1.3 (0.8%)
Other business services	5.6	6.5	8.2	8.9	1.7 (2.7%)	0.7 (0.8%)
Public administration & defence	4.7	3.3	3.2	3.2	-0.1 (-0.2%)	-0.0 (-0.1%)
Education	23.0	22.0	24.2	24.6	2.2 (1.0%)	0.4 (0.2%)
Health & social work	11.0	14.6	17.5	19.0	2.9 (2.0%)	1.4 (0.8%)
Miscellaneous services (inc. leisure)	4.0	4.1	4.8	5.7	0.7 (1.8%)	0.9 (1.8%)
Total	101.8	102.7	115.1	122.3	12.4 (1.2%)	7.2 (0.6%)

Source: Cambridge Econometrics. Note: All figures rounded independently.

Figure A-2 : Projected change in employment by main industry sector, Cambridge City, 201 to 2031, '000 B – Baseline; P – Policy-led



Source: Cambridge Econometrics

Sectors losing employment

A.12 The baseline projection indicates that only one industry sector, public administration, is expected to experience a significant net loss of employment over the forecast period 2011 to 2031 in Cambridge City (around 400 jobs). However, in the policy-led forecast job losses in public administration are expected to be only modest, reflecting a link between population size and government jobs. Very modest losses are forecast for employment in agriculture and minerals, reflecting low levels of jobs attributed to these sectors in Cambridge – historically primarily comprising administrative jobs. It is very important to note a major difference from

the forecasts prepared for the CDS (discussed in detail later). This is the fact that manufacturing employment (as a whole) is now expected to increase slightly overall between 2011 and 2031, whereas in previous forecasts it was expected to continue its recent decline. A detailed analysis by individual industry sector suggests that a small increase in publishing jobs is forecast to outweigh continuing losses in engineering employment.

Growth sectors

A.13 Table A-2 shows the industry sectors projected to grow by more than 500 jobs between 2011 and 2031 under the 'baseline' scenario in Cambridge City:

- Health & social work: 2,700
- Professional services: 2,500 Note: includes legal, accountancy, technical consultancies, R&D
- Other business services: 2,200 Note: includes employment agencies, security, cleaning
- Retailing: 2,000
- Computing services: 1,700
- Miscellaneous services: 1,400 Note: includes leisure, personal services etc.
- Education: 1,100
- Distribution & motor trade: 500

A.14 Turning to the policy-led employment projection, the following sectors each record growth of 500 jobs or more between 2011 and 2031, (see Table A-3).

- Health & social work: 4,300
- Professional services: 2,800 Note: includes legal, accountancy, technical consultancies, R&D
- Education: 2,600
- Other business services: 2,400 Note: includes employment agencies, security, cleaning
- Retailing: 2,200
- Computing services: 1,700
- Miscellaneous services: 1,600 Note: includes leisure, personal services etc.
- Distribution & motor trade: 600
- Construction: 500

- A.15 The additional population growth incorporated in the ‘policy-led’ projection generates significantly higher job growth in health & social work and education sectors. However, the impact of higher population living in the City is more modest in terms of supporting additional jobs in other sectors such as retailing.
- A.16 It should be noted that no allowance has been made in either forecast for the relocation of Papworth Hospital to the Addenbrooke's site or the overall implementation of the ‘2020 Vision’. Nor has any allowance been made for additional Cambridge University employment planned for the North West Cambridge site which straddles the boundary with South Cambridgeshire.

Overview for South Cambridgeshire

- A.17 Table A-4 provides a summary of projected ‘baseline’ employment by industry sector for 2011, 2021 and 2031; Table A-5 provides a complementary breakdown of the ‘policy-led’ forecast of jobs. Figure A-3 compares employment change forecast by industry sector for both the ‘baseline’ and ‘policy-led’ projections.

Table A-4 : Main industry sectors: South Cambridgeshire: 2001 to 2031 projected employment, '000, (%) Baseline						
Industry sector	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Agriculture	1.0	1.1	1.1	1.1	0.0 (0.1%)	0.0 (0.1%)
Mining, quarrying etc	0.0	0.1	0.0	0.0	-0.0 (-1.7%)	-0.0 (-1.5%)
Manufacturing	15.0	9.5	9.1	8.7	-0.5 (-0.5%)	-0.4 (-0.4%)
Utilities	0.3	0.0	0.0	0.0	0.0 (0.0%)	0.0 (0.0%)
Construction	4.1	6.0	6.8	7.2	0.8 (1.4%)	0.4 (0.5%)
Distribution & motor trade	5.0	9.5	9.8	10.1	0.2 (0.2%)	0.3 (0.3%)
Retailing	2.6	3.8	4.3	5.0	0.5 (1.4%)	0.7 (1.5%)
Hotels & catering	2.6	5.3	5.8	6.0	0.5 (0.9%)	0.1 (0.2%)
Land transport	1.3	1.2	1.2	1.3	0.0 (0.1%)	0.1 (0.6%)
Water & air transport	0.2	0.1	0.1	0.1	-0.0 (-2.2%)	0.0 (0.0%)
Communications	1.4	0.6	0.7	0.7	0.1 (1.1%)	0.1 (0.9%)
Finance & insurance	0.5	1.1	1.1	1.2	0.0 (0.1%)	0.1 (0.4%)
Computing services	6.0	6.2	7.6	10.1	1.3 (2.1%)	2.5 (3.3%)
Professional services (inc. R&D)	11.3	15.8	19.9	24.9	4.0 (2.5%)	5.1 (2.6%)
Other business services	2.5	3.3	4.8	5.6	1.5 (4.4%)	0.8 (1.7%)
Public administration & defence	1.1	2.0	2.0	2.1	-0.1 (-0.3%)	0.1 (0.4%)
Education	3.3	4.8	4.9	5.2	0.1 (0.2%)	0.3 (0.7%)
Health & social work	7.5	7.5	8.5	9.7	1.0 (1.4%)	1.1 (1.3%)

Industry sector	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Miscellaneous services (inc. leisure)	2.8	3.2	3.8	4.7	0.6 (1.8%)	0.9 (2.4%)
Total	68.4	81.2	91.3	103.5	10.2 (1.2%)	12.2 (1.3%)

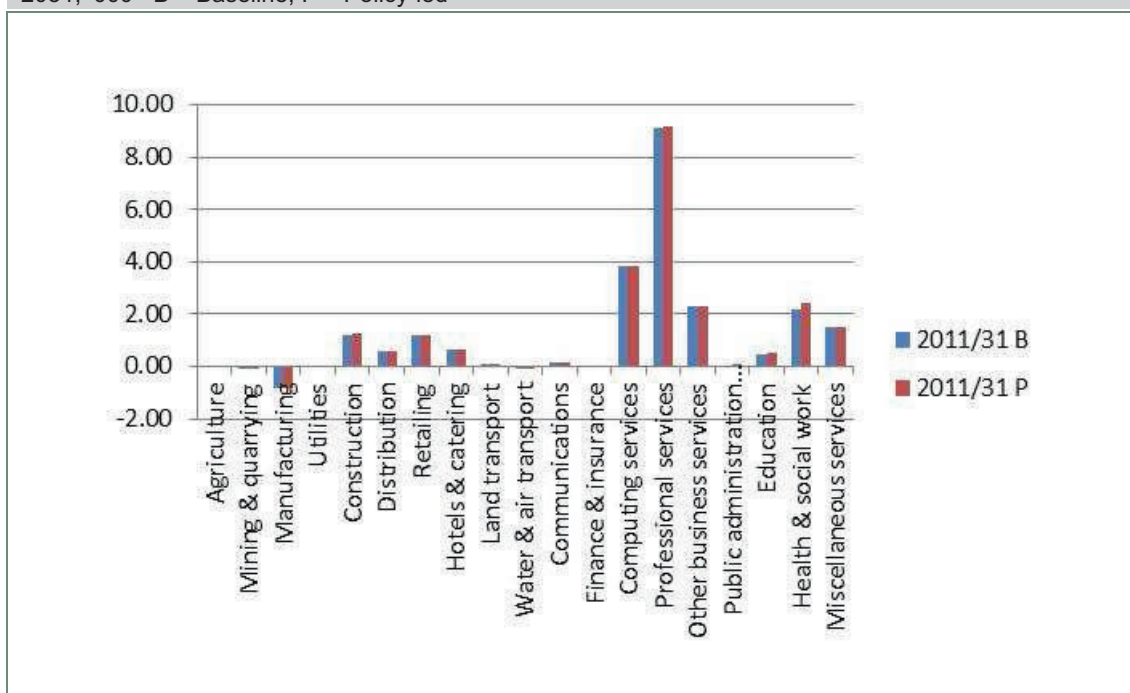
Source: Cambridge Econometrics. Note: All figures rounded independently.

Table A-5 : Main industry sectors South Cambridgeshire: 2001 to 2031 projected employment, '000, (%) Policy-led

Industry sector	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Agriculture	1.0	1.1	1.1	1.1	0.0 (0.0%)	0.0 (0.1%)
Mining, quarrying etc	0.0	0.1	0.0	0.0	-0.0 (-1.7%)	-0.0 (-1.5%)
Manufacturing	15.0	9.5	9.1	8.7	-0.5 (-0.5%)	-0.4 (-0.4%)
Utilities	0.3	0.0	0.0	0.0	0.0 (0.0%)	0.0 (0.0%)
Construction	4.1	6.0	6.8	7.3	0.8 (1.3%)	0.5 (0.7%)
Distribution & motor trade	5.0	9.5	9.8	10.1	0.2 (0.2%)	0.4 (0.4%)
Retailing	2.6	3.8	4.3	5.0	0.5 (1.3%)	0.7 (1.7%)
Hotels & catering	2.6	5.3	5.8	6.0	0.5 (0.9%)	0.2 (0.4%)
Land transport	1.3	1.2	1.2	1.3	0.0 (0.1%)	0.1 (0.7%)
Water & air transport	0.2	0.1	0.1	0.1	-0.0 (-2.2%)	0.0 (0.0%)
Communications	1.4	0.6	0.7	0.8	0.1 (1.1%)	0.1 (1.0%)
Finance & insurance	0.5	1.1	1.1	1.2	0.0 (0.0%)	0.1 (0.5%)
Computing services	6.0	6.2	7.6	10.1	1.3 (2.1%)	2.5 (3.3%)
Professional services (inc. R&D)	11.3	15.8	19.8	25.0	4.0 (2.5%)	5.2 (2.6%)
Other business services	2.5	3.3	4.7	5.6	1.5 (4.4%)	0.9 (1.8%)
Public administration & defence	1.1	2.0	2.0	2.1	-0.1 (-0.4%)	0.2 (0.8%)
Education	3.3	4.8	4.9	5.3	0.1 (0.1%)	0.5 (0.9%)
Health & social work	7.5	7.5	8.5	10.0	0.9 (1.3%)	1.5 (1.8%)
Miscellaneous services (inc. leisure)	2.8	3.2	3.7	4.7	0.5 (1.7%)	1.0 (2.7%)
Total	68.4	81.3	91.1	104.4	9.8 (1.2%)	13.3 (1.5%)

Source: Cambridge Econometrics. Note: All figures rounded independently.

Figure A-3 : Projected change in employment by main industry sector, South Cambridgeshire, 2011 to 2031, '000 B – Baseline; P – Policy-led



Source: Cambridge Econometrics

Sectors losing employment

- A.18 Only one sector, manufacturing, is forecast to lose significant numbers of jobs over the period 2011 to 2031. Both the 'baseline' and 'policy-led' projections show a loss of around 800 jobs over the twenty year period, around 0.5% per annum. However, this reduction is significantly less than forecast by CE in 2009; then the 'policy-led' projection of manufacturing jobs anticipated a loss of 3,400 jobs between 2011 and 2031 (reducing from 12,100 down to 8,600). It should be noted that Tables 4 and 5 indicate that manufacturing employment reduced very significantly between 2001 and 2011.
- A.19 Neither forecast incorporates the impact of closing the army base at Waterbeach, planned for 2013, nor the anticipated closure of the army's training base at Bassingbourn. These closures will not only impact directly in terms of reduced defence employment but will have spin-off implications for supporting activities.

Growth sectors

- A.20 The growth sectors identified by the 'baseline' and 'policy-led' scenarios in South Cambridgeshire are similar in terms of the employment growth anticipated and are listed as follows. Sectors forecast to grow by at least 500 jobs between 2011 and 2031 include:
- Professional services: 9,100 baseline; 9,200 policy-led. Note: includes legal, accountancy, technical consultancies, R&D
 - Computing services: 3,800 in both baseline and policy-led scenarios
 - Other business services: 2,300 baseline and 2,400 policy-led. Note: includes employment agencies, security, cleaning

- Health & social work: 2,100 baseline and 2,400 policy-led
- Miscellaneous services: 1,500 in both baseline and policy-led scenarios. Note: includes leisure, personal services etc.
- Retailing: 1,200 in both baseline and policy-led scenarios
- Construction: 1,200 baseline and 1,300 policy-led
- Hotels & catering: 600 baseline and 700 policy-led
- Distribution & motor trade: 500 baseline and 600 policy-led
- Education: 400 baseline and 600 policy-led

A.21 As with Cambridge City, no allowance has been made for the relocation of Papworth Hospital to the Addenbrooke's site in Cambridge in 2015. Nor has any allowance been made for additional Cambridge University employment in North West Cambridge (a site straddling the boundary with Cambridge City).

Land use implications of employment change & growth

A.22 Table A-6 provides a summary of the potential land-use implications of the employment forecasts for Cambridge City; Table A-7 provides a complementary analysis for South Cambridgeshire.

Table A-6 : Change in projected employment in Cambridge City 2011 to 2031, selected industry sectors and implications for land use

Selected industry sectors	Baseline forecast	Policy-led forecast	Potential land-use implications
Agriculture	Very small loss	Very small loss	Mainly office-based in City
Quarrying	Very small loss	Very small loss	Office based
Manufacturing	Net gain of around 100 jobs	Net gain of around 100 jobs	Losses in engineering and a gain in publishing. Unlikely that job losses will release land for employment uses
Construction	Gain of 300 jobs	Gain of 500 jobs	Most jobs likely to be on construction sites
Distribution	Gain of 500 jobs	Gain of 600 jobs	Requires land
Retailing	Gain of 2,000 jobs	Gain of 2,300 jobs	Significant empty retail space available but may need reconfiguring
Hotels & catering	Gain of 300 jobs	Gain of 500 jobs	Significant planning permissions for new hotels in City
Land transport	Gain of 100 jobs	Gain of 200 jobs	Most jobs peripatetic
Communications	Gain of 100 jobs	Gain of 100 jobs	Office and home based
Finance & insurance	Gain of 100 jobs	Gain of 200 jobs	Mainly office based
Computing services	Gain of 1,700 jobs	Gain of 1,800 jobs	Mainly office based

Selected industry sectors	Baseline forecast	Policy-led forecast	Potential land-use implications
Professional services	Gain of 2,500 jobs	Gain of 2,700 jobs	Office and laboratory space required
Other business services	Gain of 2,200 jobs	Gain of 2,400 jobs	Some office based jobs but many based at clients' premises (e.g. employment agency, security and cleaning jobs)
Public administration & defence	Loss of 300 jobs	Loss of 100 jobs	Office based.
Education	Gain of 1,100 jobs	Gain of 2,600 jobs	Excludes additional job growth at Cambridge University (West and North West Cambridge)
Health & social work	Gain of 2,700 jobs	Gain of 4,300 jobs	Domiciliary care involves peripatetic jobs; also institution based; excludes relocation of Papworth Hospital.
Miscellaneous services	Gain of 1,400 jobs	Gain of 1,600 jobs	Some use of retail premises as well as bespoke leisure facilities and offices

Source: Cambridge Econometrics and SQW

Table A-7 Change in projected employment in South Cambridgeshire 2011 to 2031, selected industry sectors and implications for land use

Industry sectors	Policy job change 2011/31	Baseline job change 2011/31	Land use implications
Agriculture	Very small gain	very small gain	No land use requirement
Mining & quarrying	Very small loss	very small loss	office based
Manufacturing	Net gain of around 100 jobs	net gain of around 100 jobs	add employment agency workers
Utilities	Very small loss	very small loss	office based
Construction	Gain of 460 jobs	Gain of 300 jobs	Mainly on site
Distribution	Gain of 600 jobs	Gain of 500 jobs	Require sites
Retailing	Gain of 2,300 jobs	Gain of 2,000 jobs	Significant empty retail space available
Hotels & catering	Gain of 450 jobs	Gain of 250 jobs	New hotels with planning permission
Land transport	Gain of 200 jobs	Gain of 140 jobs	No land use requirement
Water & air transport	nil	nil	No land use requirement
Communications	Gain of 150 jobs	Gain of 130 jobs	office based
Finance & insurance	Gain of 150 jobs	Gain of 110 jobs	office based
Computing services	Gain of 1,750 jobs	Gain of 1,700 jobs	office and home based
Professional services	Gain of 2,700 jobs	Gain of 2,500 jobs	office based
Other business services	Gain of 2,400 jobs	Gain of 2,230 jobs	agency, security and cleaning workers will be on customers' premises

Industry sectors	Policy job change 2011/31	Baseline job change 2011/31	Land use implications
Public administration & defence	loss of 100 jobs	loss of 340 jobs	office based
Education	Gain of 2,600 jobs	Gain of 1,140 jobs	schools, colleges and university
Health & social work	Gain of 4,300 jobs	Gain of 2,700 jobs	wide range of sites, including home. Adjust for Papworth relocation
Miscellaneous services	Gain of 1,600 jobs	Gain of 1,400 jobs	entertainment sites and high street locations
Total	Gain of 19,600 jobs	Gain of 14,750 jobs	

Source: Cambridge Econometrics and SQW

Summary – main issues arising

A.23 The ‘trend’ projections of employment for Cambridgeshire present a number of key issues and can be summarised as follows:

- Cambridge Econometrics expects job growth in Cambridge City and South Cambridgeshire to increase at a very similar rate to the region as a whole under the ‘baseline’ projection. ‘Policy-led’ growth is higher, especially in the period 2011/21.
- It is important to appreciate that the ‘policy-led’ scenario relates solely to assumptions regarding population growth linked to planned dwelling construction. For example, no allowances have been made for factors such as the move of Papworth Hospital from South Cambridgeshire to Cambridge City nor the closure of two army bases in South Cambridgeshire. At this stage no modelling has been carried out to assess the possible impact of the new Alconbury Enterprise Zone on employment prospects in South Cambridgeshire or the City.
- The economies of Cambridge City and South Cambridgeshire are closely bound with a number of key employment sites straddling the administrative boundary. It is important to appreciate that employment moves freely between the districts and there is some scope to use land allocations as a policy tool for relocating jobs.
- Four main industry sectors are projected to account for the bulk of new job growth in the combined Cambridge City and South Cambridgeshire area: professional services (including R&D), computing services, health & social work and ‘other business services’, (including employment agencies, contract packaging, security and cleaning). Each sector is expected to support at least 4,500 additional jobs between 2011 and 2031 under the baseline projection and at least 4,800 jobs under the policy-led scenario.
- In the combined area there are four sectors with more modest projected growth of between 1,500 and 3,500 jobs under the baseline forecast. These include retailing, miscellaneous services, construction and education. In addition, distribution is expected to increase by around 1,200 jobs.

- Manufacturing jobs are projected to decline by around 800 jobs between 2011 and 2031. This is a very much lower job loss than forecast by Cambridge Econometrics in early 2009. It appears that significant job losses have been incurred in the period 2001 to 2011. Changes in the organisation of labour means that some jobs in manufacturing may be carried out by people working for employers classified as ‘other business services’, such as employment agencies.

Part 3: Comparison with Cambridgeshire Development Study employment forecasts (2009)

A.24 This section compares the April 2012 employment forecasts with those produced by CE for the Cambridgeshire Development Study (CDS) in early 2009. Two forecasts were produced for the CDS; a baseline trend projection and a policy-led scenario, based on the Cambridgeshire district house-building rates incorporated in the 2006 East of England Plan dwelling targets²². However it should be noted that both the baseline and policy-led CDS forecasts in 2009 incorporated the following assumptions:

- The move of Papworth Hospital from South Cambridgeshire to Cambridge City was incorporated
- An allowance for additional Cambridge University jobs on the North West Cambridge site was made
- Agricultural employment estimates and forecasts were amended to incorporate DEFRA farm survey data. This had the consequence of maintaining job levels, rather than modelling a decline in employment.

A.25 A comparison of the Cambridge City forecasts for 2001 to 2031 is given in Table A-8 and Figure A-4 and South Cambridgeshire is covered in Table A-9 and Figure A-5.

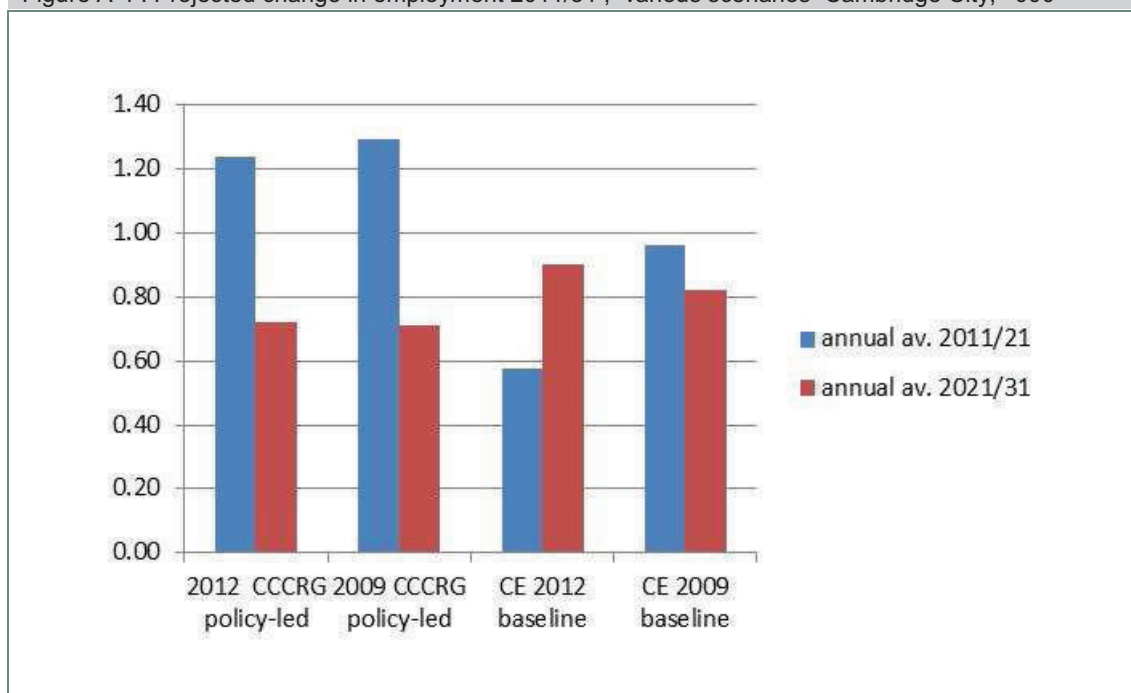
Table A-8 : Comparison of Baseline & Policy-led employment projections, 2009 and 2012 Cambridge City 2001 to 2031, '000

Model run	2001	2011	2021	2031	2011/21 annual average	2021/31 annual average
Baseline 2009	98.5	99.3	108.9	117.1	1.0	0.8
Baseline 2012	101.8	102.7	108.5	117.5	0.6	0.9
Policy-led 2009	98.5	101.0	114.0	121.1	1.3	0.7
Policy-led 2012	101.8	102.7	115.1	122.3	1.2	0.7

Source: Cambridge Econometrics. Note: All figures rounded independently.

²² The East of England Plan house building targets covered the period up to 2021; thereafter the CDS assumed that house-building rates would continue at similar annual levels to 2031. However, in the case of the Cambridge area South Cambridgeshire provided additional housing land to make up for a shortfall in the City itself.

Figure A-4 : Projected change in employment 2011/31 , various scenarios Cambridge City, '000



Source: Cambridge Econometrics

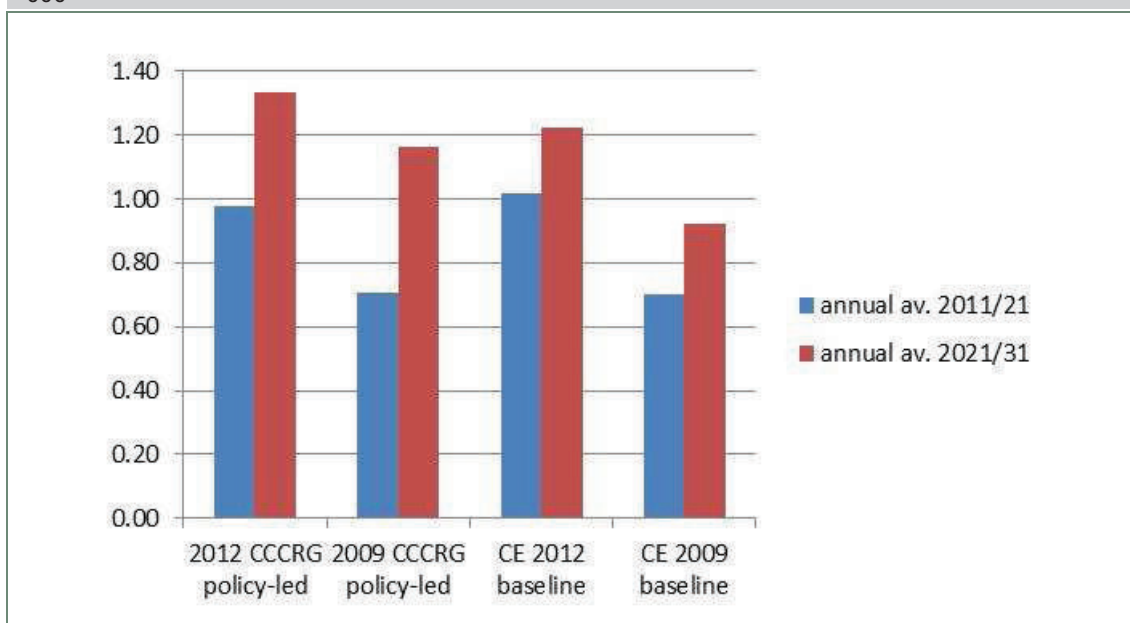
- A.26 As discussed above, both 2009 CDS scenarios were to some extent policy-driven in that they incorporated a number of assumptions about the relocation of employment from South Cambridgeshire to Cambridge City in the 2011/21 period.

Table A-9 : Comparison of Baseline & Policy-led employment projections, 2009 and 2012 South Cambridgeshire 2001 to 2031, '000

Model run	2001	2011	2021	2031	2011/21 annual average	2021/31 annual average
Baseline 2009	66.1	77.1	84.1	93.3	0.7	0.9
Baseline 2012	68.4	81.2	91.4	103.6	1.0	1.2
Policy-led 2009	66.1	76.9	84.0	95.6	0.7	0.9
Policy-led 2012	68.4	81.3	91.1	104.4	1.0	1.3

Source: Cambridge Econometrics. Note: All figures rounded independently.

Figure A-5 : Projected change in employment 2011 to 2031, various scenarios, South Cambridgeshire, '000



Source: Cambridge Econometrics

- A.27 As discussed above, both 2009 CDS scenarios assumed the relocation of employment from South Cambridgeshire to Cambridge City and this accounts for some of the difference in output as compared with the 2012 model runs.
- A.28 However, looking at the two districts together the 2009 'baseline' model indicated job growth of 34,000 between 2011 and 2031 as compared with 37,100 as output from the 2012 'baseline' run. The 2009 'policy-led' forecast for the combined area indicated an additional 38,700 jobs between 2011 and 2031. The 2012 policy-led run indicates job growth of 42,700 over the same period.
- A.29 The 2009 model runs were carried out just as the recession was starting and anticipated significant job losses and associated increased unemployment over the period through to 2011. However, it became clear through 2009 that many employers were managing to spread the impact of the recession through actions such as reducing hours and holding down wages. In practice unemployment did not rise as high as was initially forecast.
- A.30 This has had an impact on the current 2012 model runs. Although the recession has continued for a longer period than many observers contemplated in 2009, the impact on jobs has not been as severe as initially assessed.

Population projections

- A.31 This section summarises the underlying assumptions on population growth incorporated in the district employment projections. Table A-10 and Figure A-6 provide an overview.

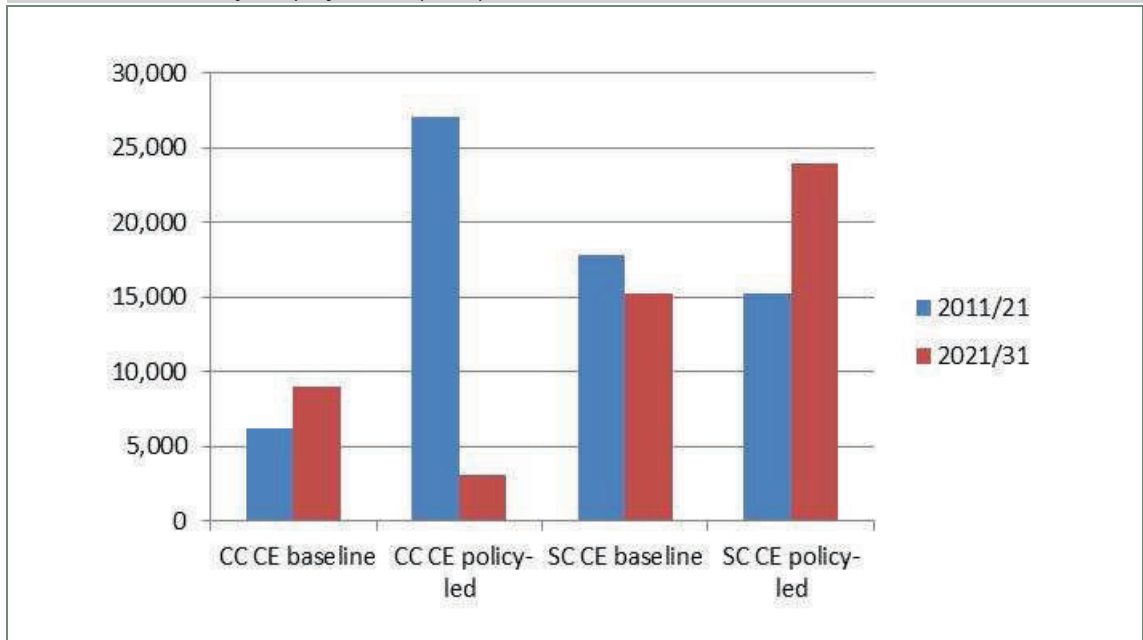
Table A-10 : Projected population in Cambridge City & South Cambridgeshire districts, 2011 to 2031 various scenarios, '000

District/model	2001	2011	2021	2031	2011/2021 (% p.a.)	2021/2031 (% p.a.)
Cambridge City						
CE baseline 2012	110.0	127.7	133.9	142.9	6.2 (0.5%)	9.0 (0.7%)
CE policy-led 2012	110.0	127.5	154.5	157.6	27.0 (2.1%)	3.1 (0.2%)
CCCRG 2011	110.0	121.3	147.4	151.0	26.1 (2.2%)	3.6 (0.2%)
South Cambridgeshire						
CE baseline 2012	130.7	148.2	166.0	181.2	17.8 (1.2%)	15.2 (0.9%)
CE policy-led 2012	130.7	149.5	164.7	188.6	15.2 (1.0%)	23.9 (1.5%)
CCCRG 2011	130.6	146.0	164.3	188.4	18.3 (1.3%)	24.1 (1.5%)
East of England	5,400.5	5,849.3	6,345.2	6,831.8	495.9 (0.8%)	486.6 (0.8%)
CC/SC share of region CE baseline	4.5%	4.7%	4.7%	4.9%	4.8%	5.0%

Source: Cambridge Econometrics

- A.32 Overall 'baseline' population growth in Cambridge City in the period 2011 to 2021 is expected to amount to 6,200; the policy-led growth incorporated in CE's 2012 model run amounts to 27,000. However, as available housing land is built out, population growth between 2021 and 2031 drops steeply. It amounts to 3,100 in the policy-led scenario as compared with a higher 9,000 under the 'baseline' assumptions.
- A.33 The 'baseline' population growth in South Cambridgeshire between 2011 and 2021 is projected to be 17,800, slightly higher than the policy-led projected growth of 15,200. (It is understood that the variance between the CE policy-led forecast and the CCCRG forecast relates to a different age profile at 2010). Over the period 2021/31 the 'baseline' growth amounts to 15,200, significantly lower than the policy-led increase of around 24,000.
- A.34 For the combined area 'baseline' population growth amounts to 24,000 between 2011 and 2021 and 24,200 between 2021 and 2031, (equivalent to 0.9% per annum 2011/21 and 0.8% per annum between 2021/31.) The 'policy-led' growth is significantly higher over the 2011/21 period, amounting to 42,200, equivalent to 1.5% per annum. This compares with anticipated regional population growth of 0.8% per annum. However, for the period 2021/31 the expected population growth falls to 27,000, reflecting the steep cut back in new house building in Cambridge City. The overall rate of growth is expected to be in line with the regional average, 0.8% per annum.

Figure A-6 : Population increase Cambridge City (CC) and South Cambridgeshire (SC), 2011 to 2031, CE Baseline & Policy-led projections (2012)



Source: Cambridge Econometrics

A.35 It should be noted that the CE model does not incorporate specific assumptions about dwelling numbers and hence new construction. To the extent that the ‘baseline’ modelling builds on ONS population projections the model will be complementary to CLG’s household projections. However, there is no direct one-to-one link.

Annex B: ‘Baseline’ employment prospects for Cambridge City and South Cambridgeshire 2011 to 2031: Oxford Economics (EEFM)

An analysis of Oxford Economics’ East of England Forecasting Model (EEFM) 2012 baseline employment projections

Introduction

- B.1 This annex provides an overview of employment projections for Cambridge City and South Cambridgeshire districts for the period 2011 to 2031, broken down by main industry sector. The projections have been produced by Oxford Economics (OE) and published alongside those of other districts constituting Local Economic Partnerships (LEPs) in April 2012, using the methodology developed for the East of England Forecasting Model (EEFM)²³. They take some account of the 2008-based sub-national population projections produced by the Office for National Statistics (ONS), but the migration assumptions have been made by OE. The latest ‘actual’ jobs data included relate to 2010²⁴ and therefore the dataset for 2011 is actually a forecast.
- B.2 It is important to note that the projections reflect historic shares of growth by district and industry sector applied to national and regional models of employment prospects. They are not ‘policy-led’ and consequently do not take account of either the adopted East of England Plan nor the more up-to-date housing trajectories for district council areas in Cambridgeshire. The 2006 Plan envisaged a ‘step change’ in the pattern of development in Cambridgeshire county, with greater emphasis on Cambridge City and South Cambridgeshire and lower shares and rates of growth in East Cambridgeshire, Fenland and Huntingdonshire than in recent years.
- B.3 The first section provides a broad overview and the second looks at specific industry sectors. The third section provides a comparison with Cambridge Econometrics’ (CE) baseline employment forecasts, also published in April 2012. An annex summarises the population growth assumed by both OE and CE trend projections.

Part 1: Broad overview

- B.4 The baseline forecast assumes that growth in GVA in the East of England will average 2.7% per annum 2011 to 2021 and average a lower 2.3% per annum between 2021 and 2031, averaging 2.5% over the twenty year period²⁵.

²³ Note that our analysis was completed on the basis of the baseline projections published by OE in mid April 2012. A few weeks later, these baseline projections were replaced by another set in which the numbers for Cambridge City were really rather different. Annex B – and the references throughout this report – refer to the earlier set of published projections

²⁴ Employee jobs data from ONS’ Business Register Employment Survey (BRES) for September 2010

²⁵ This compares with the EEFM GVA regional growth rates in the autumn 2010 baseline of 2.8% p.a. 2011/21 and 2.1% p.a. 2021/31. The 2001 to 2011 GVA growth p.a. in EEFM 2012 has been revised down to 1.5% from 2.2% in EEFM autumn 2010.

B.5 Table B-1 indicates a forecast increase of 30,500 jobs in Cambridge City and 25,200 in South Cambridgeshire between 2011 and 2031. In the period 2011 to 2021 this is equivalent to an average annual growth rate in both districts of 1.9% falling to 1.0% annual growth between 2021 and 2031²⁶. In contrast, annual average growth in the East of England as a whole is forecast to be lower: 1.1% between 2011 and 2021 and 0.4% between 2021 and 2031. Consequently the combined Cambridge City/South Cambridgeshire area accounts for an increasing share of the region's jobs over the forecast period. The two districts together accounted for 6.1% of the region's employment in 2001; by 2031 they are expected to account for 7.2%.

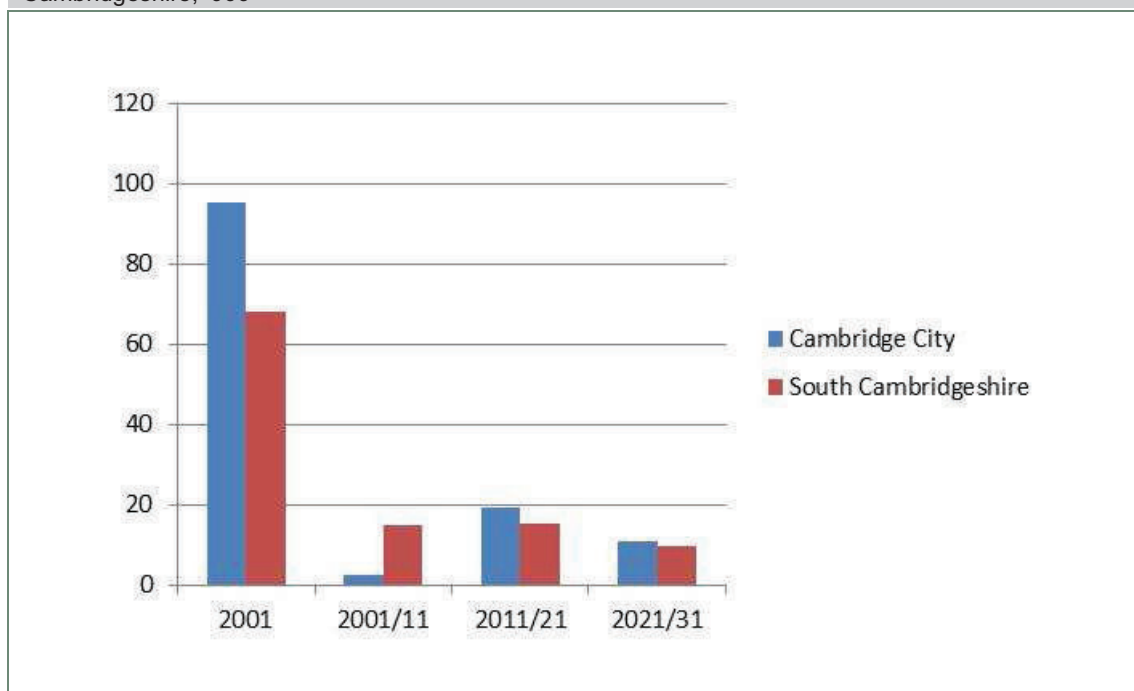
Table B-1 : Employment projections, Cambridge City & South Cambridgeshire districts 2001 to 2031, '000

District/area	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Cambridge City	95.5	97.9	117.3	128.4	19.4 (2.0%)	11.1 (0.9%)
South Cambridgeshire	68.2	83.1	98.5	108.2	15.5 (1.9%)	9.7 (1.0%)
Cambridge & South Cambs	163.7	181.0	215.8	236.6	34.8 (1.9%)	20.8 (1.0%)
East of England	2,662.7	2,844.4	3,150.5	3,290.2	306.1 (1.1%)	139.8 (0.4%)
CC/SC as % region	6.1%	6.4%	6.8%	7.2%	11.4%	14.9%

Source: OE EEFM 2012. Note: All figures rounded independently.

B.6 Figure B-1 shows the estimated and forecast employment growth by the decades between 2001 to 2031 for both districts.

Figure B-1 : Employment in 2001 and projected change in jobs 2011 to 2031, Cambridge City & South Cambridgeshire, '000



Source: Oxford Econometrics EEFM 2012 baseline

²⁶ Simple annual average % growth rate

Part 2: Industry sector analysis

B.7 The industry sectors in the EEFM 2012 are based on the Standard Industrial Classification 2007 (SIC 2007) and are not consequently directly comparable with SIC 2003, as used by Cambridge Econometrics (CE). In order to assist comparison with the CE job forecasts the OE industry sectors have been aggregated to broad groups, providing as close a match as possible. However, a number of important differences should be noted:

- In SIC 2003 ‘publishing’ is a manufacturing activity. In SIC 2007 it is a service, often combined with broadcasting – which is a ‘miscellaneous service’ in SIC 2003
- Waste and remediation activities are identified separately in SIC 2007 whereas in SIC 2003 they are again treated as a ‘miscellaneous service’ activity
- In SIC 2007 telecommunications are separated off from postal services; the latter are classified as land transport, along with warehousing.

Overview for Cambridge City

B.8 Table B-2 provides an overview of projected employment change forecast for the periods 2011 to 2021 and 2021 to 2031 by main industry sector in Cambridge City. Figure B-2 provides a breakdown of change by decade. The ‘% per annum’ figures are a simple year on year change.

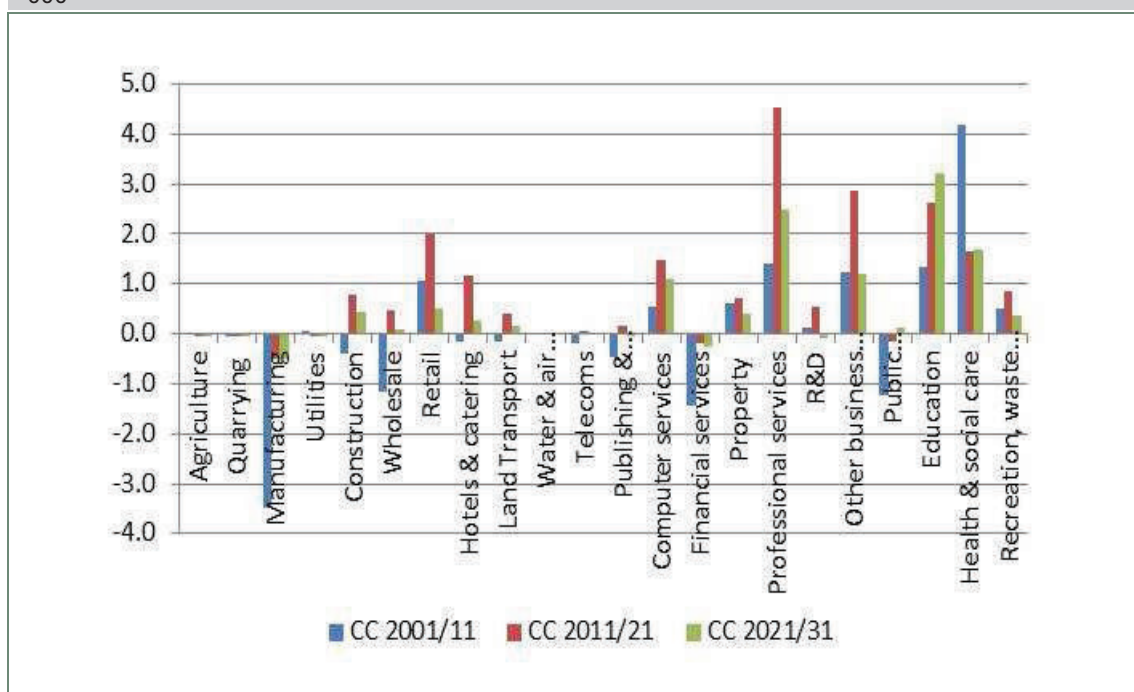
Table B-2 : Main industry sectors 2007 to 2031, projected employment in Cambridge City, ‘000, (%)

Industry sector (SIC 2007)	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Agriculture	0.1	0.1	0.1	0.1	0.0 (-1.0%)	0.0 (-1.7%)
Mining, quarrying etc	0.0	0.0	0.0	0.0	0.0 (-2.5%)	0.0 (-3.0%)
Manufacturing	6.4	2.9	2.4	1.9	-0.5 (-1.8%)	-0.5 (-2.1%)
Utilities	0.2	0.3	0.3	0.2	0.0 (-1.4%)	0.0 (-1.4%)
Construction	2.6	2.2	3.0	3.4	0.8 (3.5%)	0.4 (1.5%)
Distribution	3.6	2.5	3.0	3.0	0.5 (1.9%)	0.1 (0.3%)
Retailing	8.3	9.4	11.4	11.9	2.0 (2.1%)	0.5 (0.5%)
Hotels & catering	5.7	5.5	6.7	7.0	1.2 (2.1%)	0.3 (0.4%)
Land transport	2.2	2.0	2.4	2.6	0.4 (2.1%)	0.1 (0.6%)
Water & air transport	0.0	0.0	0.0	0.0	0.0 (0.7%)	0.0 (1.2%)
Telecommunications	1.0	0.8	0.9	0.9	0.1 (0.8%)	0.0 (0.0%)
Publishing & broadcasting	2.6	2.2	2.3	2.3	0.1 (0.7%)	0.0 (-0.1%)
Financial services	2.8	1.3	1.1	0.9	-0.2 (-1.5%)	-0.2 (-2.2%)
Computing services	3.3	3.9	5.3	6.4	1.5 (3.8%)	1.1 (2.1%)
Professional services	11.7	13.8	19.6	22.4	5.8 (4.2%)	2.8 (1.4%)

Industry sector (SIC 2007)	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Other business services	5.1	6.4	9.2	10.4	2.9 (4.5%)	1.2 (1.3%)
Public administration & defence	3.9	2.7	2.5	2.7	-0.1 (-0.5%)	0.1 (0.5%)
Education	22.0	23.4	26.0	29.2	2.6 (1.1%)	3.2 (1.2%)
Health & social care	10.1	14.3	15.9	17.6	1.7 (1.2%)	1.7 (1.1%)
Miscellaneous services (personal, waste, leisure etc)	3.8	4.3	5.2	5.5	0.9 (2.0%)	0.4 (0.7%)
Total	95.5	97.9	117.3	128.4	19.4 (2.0%)	11.1 (0.9%)

Source: Oxford Economics EEFM 2012. Note: All figures rounded independently.

Figure B-2 : Projected change in employment by main industry sector, Cambridge City, 2001 to 2031, '000



Source: Oxford Economics EEFM 2012

- B.9 In the table the ‘professional services’ sector includes R&D and property alongside ‘other professional services,’ such as accountancy and legal services. The figure identifies these three categories separately.
- B.10 The projections indicate that the manufacturing sector alone is forecast to experience a significant loss of employment over the period 2011 to 2031, amounting to 1,000 jobs. It is, however, important to note a significant caveat, relating to the organisation and employment of labour. There is evidence to indicate that manufacturing employers have increased their use of agency staff, especially for seasonal and short-term production. However, employment agency and ‘gangmaster’ labour is classified as ‘other business services’ employment irrespective of the actual work carried out. Product packing is also classified as a business service regardless of what is being packed. The other sector forecast to lose more than 250 jobs is financial services, with an anticipated loss of 400 over the twenty year period.

B.11 The broad sectors expected to expand significantly (2,500 jobs or more over the period to 2011/2031) include professional services, education, ‘other’ business services, health & social care, computer services and retailing. Other sectors forecast to increase by 1,000 or more jobs include hotels & catering, construction, miscellaneous services and property. The primary growth sectors are:

- Other professional services: 7,000
- Education: 5,800
- Other business services: 4,100
- Health & social care: 3,400
- Computing services: 2,600
- Retailing: 2,500

South Cambridgeshire

B.12 Table B-3 and Figure B-3 provide a complementary analysis of the EEFM 2012 forecasts for South Cambridgeshire.

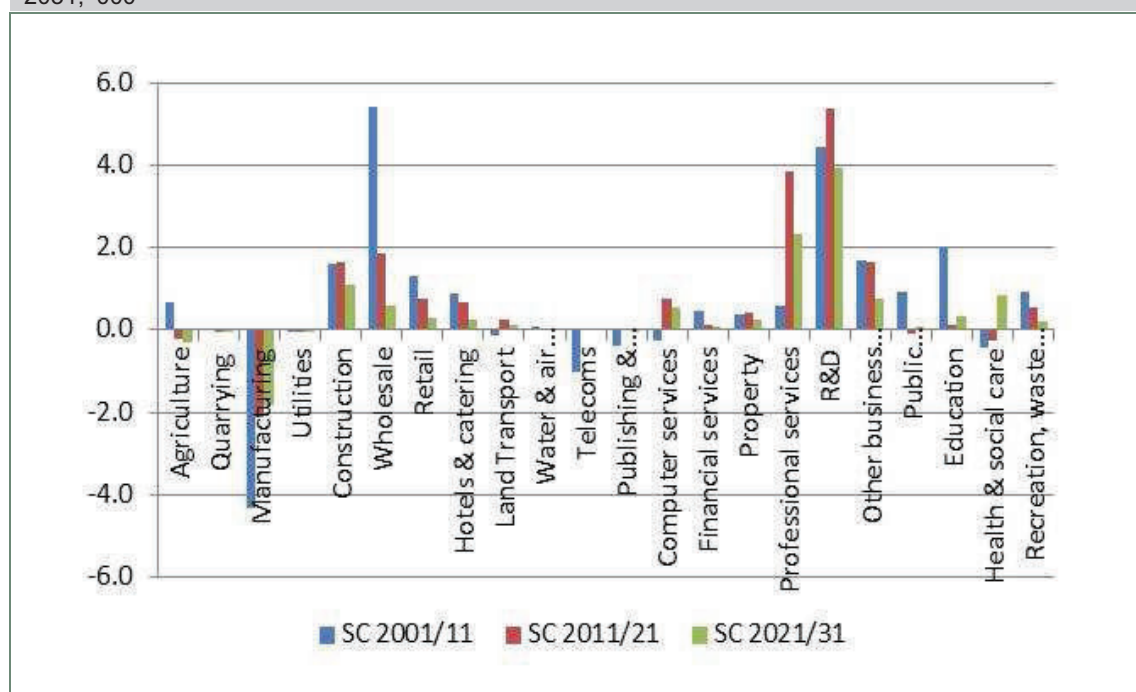
Table B-3 : Main industry sectors 2001 to 2031, projected employment South Cambridgeshire, '000, (%)

Industry sector (SIC 2007)	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Agriculture	0.11	1.8	1.6	1.3	-0.2 (-1.1%)	-0.3 (-1.7%)
Mining, quarrying etc	0.0	0.1	0.0	0.0	-0.0 (-2.5%)	-0.0 (-3.0%)
Manufacturing	14.3	9.9	7.8	6.0	-2.1 (-2.1%)	-1.8 (-2.3%)
Utilities	0.0	0.0	0.0	0.0	0.0 (-1.4%)	0.0 (-1.4%)
Construction	4.1	5.7	7.3	8.4	1.7 (2.9%)	1.1 (1.5%)
Distribution	4.9	10.3	12.2	12.8	1.9 (1.8%)	0.6 (0.5%)
Retailing	2.5	3.9	4.6	4.9	0.8 (2.0%)	0.3 (0.7%)
Hotels & catering	2.5	3.4	4.1	4.4	0.7 (2.0%)	0.3 (0.6%)
Land transport	1.6	1.4	1.7	1.8	0.2 (1.6%)	0.1 (0.6%)
Water & air transport	0.0	0.1	0.1	0.1	0.0 (0.7%)	0.0 (1.1%)
Telecommunications	1.2	0.1	0.1	0.1	0.0 (0.8%)	0.0 (0.0%)
Publishing & broadcasting	1.2	0.8	0.8	0.8	0.0 (0.6%)	0.0 (-0.1%)
Financial services	0.5	1.0	1.2	1.3	0.1 (1.4%)	0.1 (0.9%)
Computing services	4.2	4.0	4.7	5.3	0.7 (1.9%)	0.5 (1.1%)
Professional services	11.4	16.9	26.6	33.1	9.7 (5.7%)	6.5 (2.5%)
Other business services	2.4	4.1	5.7	6.5	1.6 (4.0%)	0.7 (1.3%)

Industry sector (SIC 2007)	2001	2011	2021	2031	2011/21 (% p.a.)	2021/31 (% p.a.)
Public administration & defence	2.3	3.2	3.2	3.3	-0.1 (-0.3%)	0.1 (0.3%)
Education	3.3	5.3	5.4	5.7	0.1 (0.2%)	0.4 (0.7%)
Health & social care	7.2	6.8	6.5	7.3	-0.3 (-0.4%)	0.8 (1.3%)
Miscellaneous services (personal, waste, leisure etc)	3.4	4.3	4.9	5.1	0.5 (1.2%)	0.2 (0.5%)
Total	68.2	83.1	98.5	108.2	15.5 (1.9%)	9.7 (1.0%)

Source: Oxford Economics EEFM 2012. Note: All figures rounded independently.

Figure B-3 : Projected change in employment by main industry sector, South Cambridgeshire, 2001 to 2031, '000



Source: Oxford Economics EEFM 2012

- B.13 Two sectors are forecast to lose significant numbers of jobs over the period 2011 to 2031: manufacturing, with a reduction of almost 4,000 jobs and agriculture, with a loss of around 500 jobs. However, as discussed under ‘Cambridge City’ above, it should be noted that in recent years increasing numbers of people working in these industries are contracted through employment agencies or ‘gangmasters’. As these direct employers are classified as a ‘business service’ it can be difficult to monitor with a degree of accuracy the actual workforce in some industries.
- B.14 The main growth sectors (with an additional 2,000 jobs or more forecast) in South Cambridgeshire are projected to be professional services, (16,200 jobs collectively in property, R&D and other professional services), construction, distribution and other business services. Industry sectors forecast to grow by at least 1,000 jobs in the twenty year period

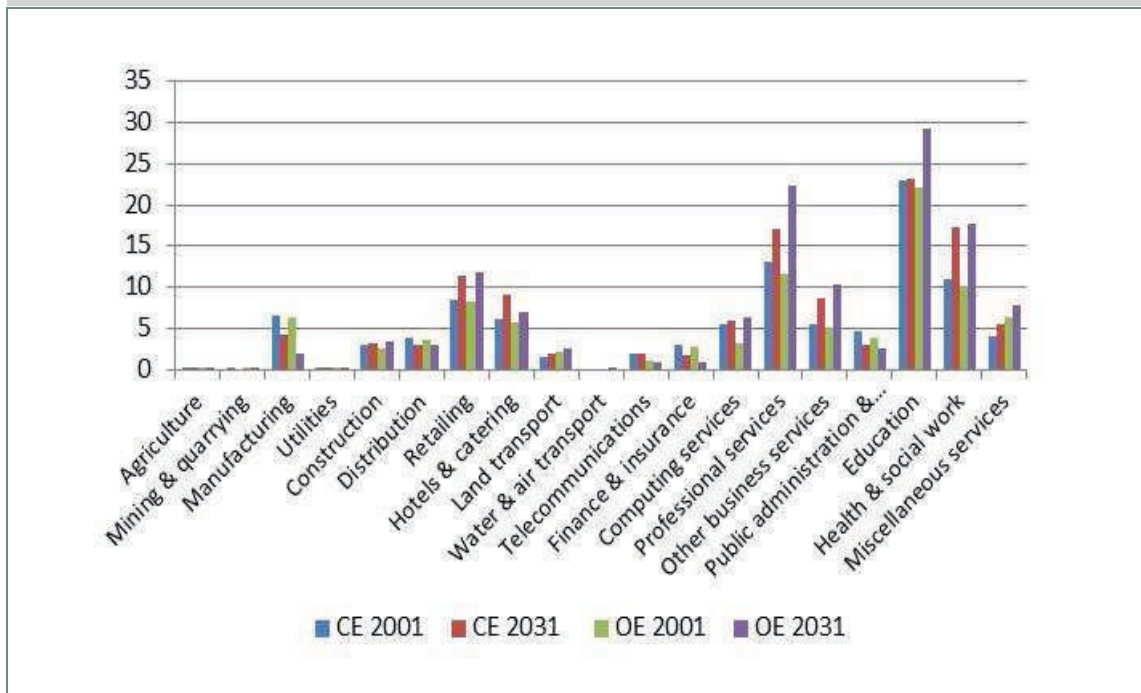
include computing services, retailing and hotels & catering. Specific employment increases for the main growth sectors 2011 to 2031 are:

- Research & development: 9,300
- Other professional services: 6,200
- Construction: 2,800
- Distribution: 2,500
- Other business services: 2,400

Comparison with Cambridge Econometrics Baseline Forecasts, 2012

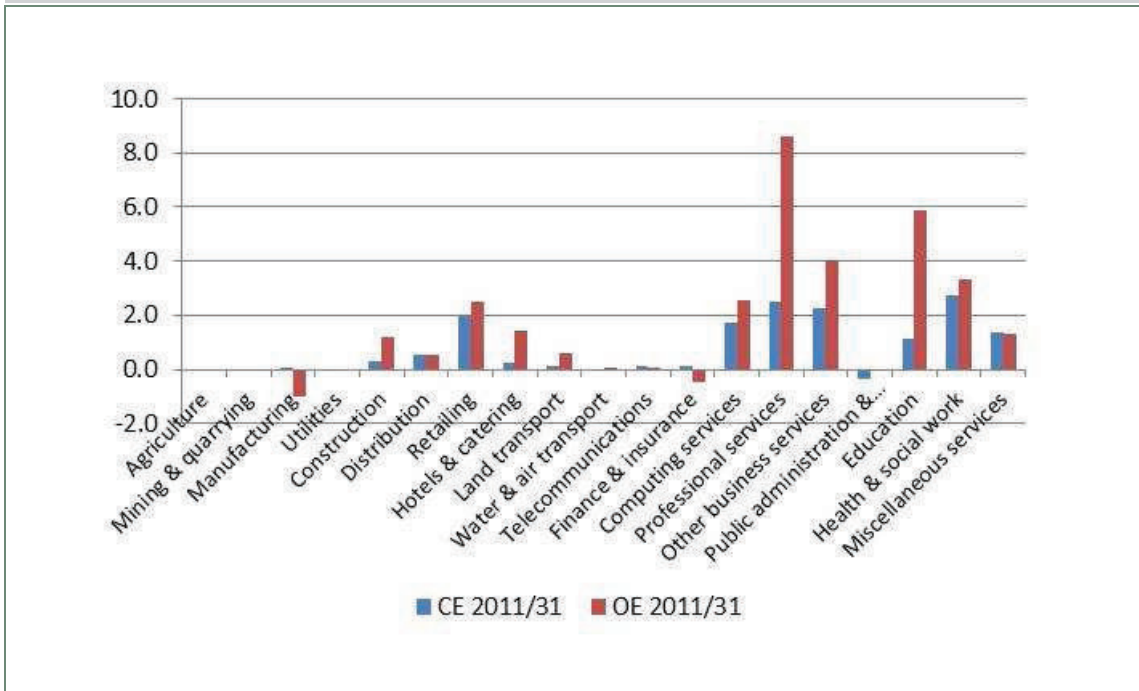
B.15 The following figures provide an overview of the differences between CE and OE baseline employment forecasts by main industry sector. In order to provide as close a match as possible CE’s ‘communications’ is matched against OE’s ‘telecommunications’, although the latter excludes postal services, which are covered by land transport jobs. CE’s ‘manufacturing’ includes publishing whereas in the OE forecasts this sector is included in ‘miscellaneous services’.

Figure B-4 : Projected employment by main industry sector, Cambridge City, 2001 & 2031, ‘000, CE & OE baselines 2012



Source: Oxford Economics EEFM 2012 and Cambridge Econometrics 2012 baseline

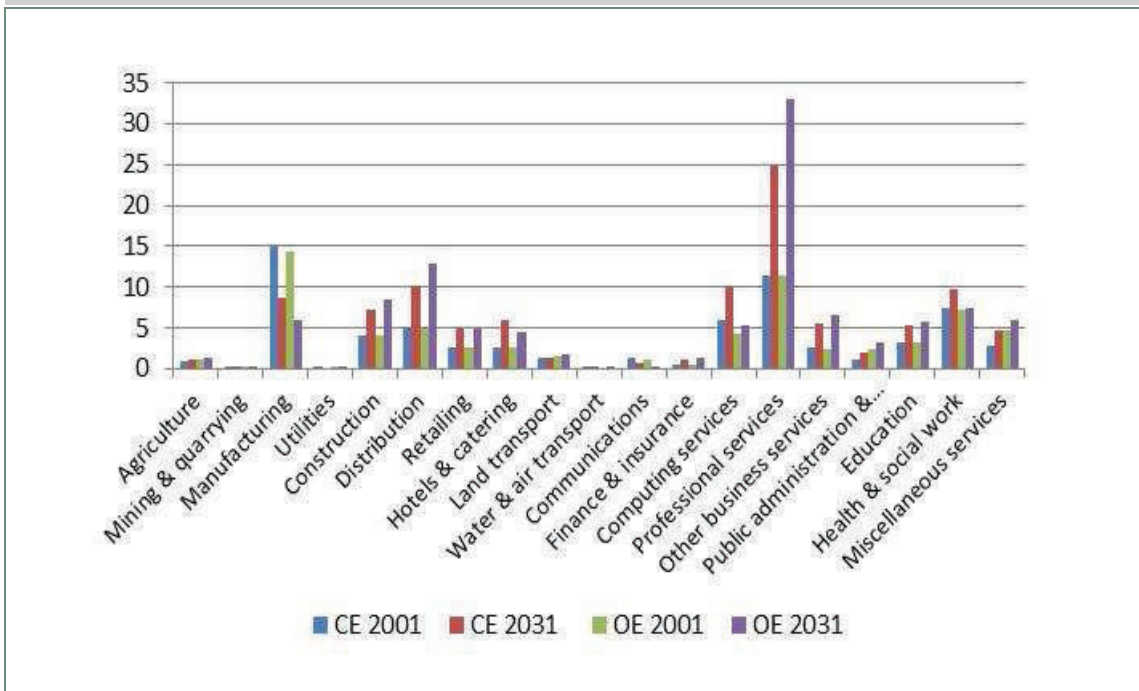
Figure B-5 : Projected change in employment by main industry sector, Cambridge City, 2011/2031, '000 CE & OE baselines 2012



Source: Oxford Economics EEFM 2012 and Cambridge Econometrics 2012 baseline

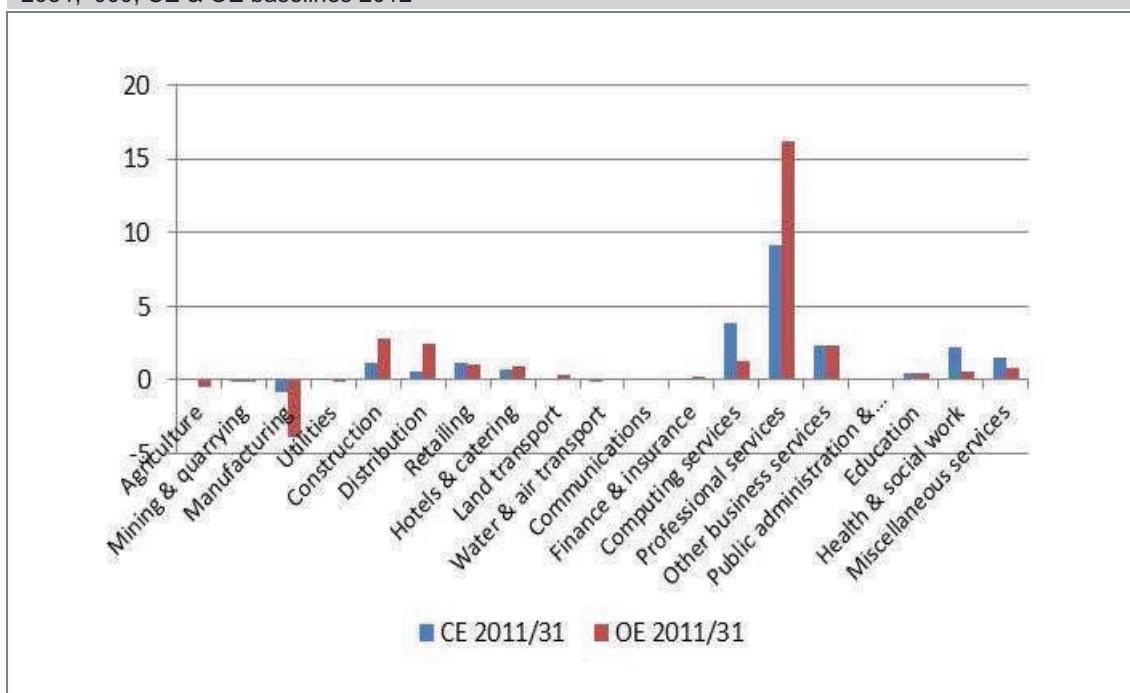
- B.16 The OE baseline forecast indicates significantly higher growth 2011/31 in professional services, education and other business services. The OE forecast also anticipates relatively higher job growth in hotels & catering, construction and computer services. The only sectors where the CE baseline forecast indicates relatively higher employment growth are miscellaneous services, telecommunications, financial services and manufacturing.

Figure B-6 : Projected employment by main industry sector, South Cambridgeshire, 2001 to 2031, '000, CE & OE baselines 2012



Source: Oxford Economics EEFM 2012 and Cambridge Econometrics 2012 baseline

Figure B-7 : Projected change in employment by main industry sector, South Cambridgeshire, 2011 to 2031, '000, CE & OE baselines 2012



Source: Oxford Economics EEFM 2012 and Cambridge Econometrics 2012 baseline

- B.17 Figure B-7 shows that the OE baseline forecast anticipates relatively higher job growth in South Cambridgeshire in professional services, construction, distribution and hotels & catering. However there are a number of sectors where the CE baseline forecast indicates higher job growth 2011/31. These include health & social care, miscellaneous services, computer services and retailing. The CE baseline anticipates fewer manufacturing job losses than OE.
- B.18 A summary of the CE and OE forecasts is shown in Table 4 for Cambridge City. This also includes the ‘headline’ figures from CE’s ‘policy-led’ forecast, reflecting the impact on employment of the current planned house building programme.

Table B-4 : Comparison of employment forecasts CE & OE, 2012, Cambridge City, '000

Model run 2012	2001	2011	2021	2031	2001/11	2011/21	2021/31
CE 2012 CCRG policy-led	101.8	102.7	115.1	122.3	0.9	12.4	7.2
CE 2012 baseline	101.8	102.7	108.5	117.5	0.9	5.7	9.0
EEFM 2012 baseline	95.5	97.9	117.3	128.4	2.4	19.4	11.1

Source: Oxford Economics and Cambridge Econometrics 2012

- B.19 The table shows clearly that OE’s baseline forecast anticipates significantly higher job growth in Cambridge City than does either CE’s baseline or ‘policy-led’ forecast for the period 2011 to 2031 overall. OE’s anticipated higher employment growth is particularly marked for the period 2011 to 2021.
- B.20 The complementary forecast for South Cambridgeshire is shown in Table 5. Again, CE’s ‘policy-led’ forecast incorporates the current housing trajectory planned for the district.

Table B-5 : Comparison of employment forecasts CE & OE, 2012, South Cambridgeshire, '000

Model run 2012	2001	2011	2021	2031	2001/11	2011/21	2021/31
CE 2012 CCCRG policy-led	68.4	81.3	91.1	104.4	12.9	9.8	13.3
CE 2012 baseline	68.4	81.2	91.3	103.5	12.8	10.1	12.2
EEFM 2012 baseline	68.2	83.1	98.5	108.2	14.9	15.5	9.7

Source: Oxford Economics and Cambridge Econometrics 2012

- B.21 OE forecasts significantly higher job growth in South Cambridgeshire for the period 2011/21 than CE. However, the OE baseline forecast job growth is lower in aggregate for the second decade 2021/31, with both the CE forecasts outstripping it.
- B.22 In the combined Cambridge area the OE baseline forecasts an additional 34,900 jobs 2011/21 as compared with the CE baseline of 15,800 jobs and the CE 'policy-led' scenario with 22,200. For the 2021/31 decade the OE baseline indicates an additional 20,800 jobs, which is similar to both the CE baseline of 21,200 and the CE policy-led scenario with 20,500 additional jobs.

Population forecasts compared

- B.23 The following tables and figures compare the underlying population growth incorporated in the CE and OE baseline forecasts, as well as the 'policy-based' CE forecast. All forecasts were published in April 2012. It should be noted that there is considerable uncertainty over the Cambridge City population in 2011. Cambridgeshire County Council's Research Group (CCCRG) produces independent estimates and for 2011 their total population figure amounts to 121,300 – i.e. well below the OE and CE levels. The Office for National Statistics (ONS) has recently published 2010-based sub-national population projections which revise the 2011 figure for the City down to 106,000. It is understood that international migration figures have been revised downwards significantly²⁷ in Cambridge. The CCCRG has challenged the new ONS figures – but it may not be possible to determine the 'true' resident population until the 2011 Census results are published in late 2012.

Table B-6 : Comparison of Population forecasts CE & OE, 2012, Cambridge City

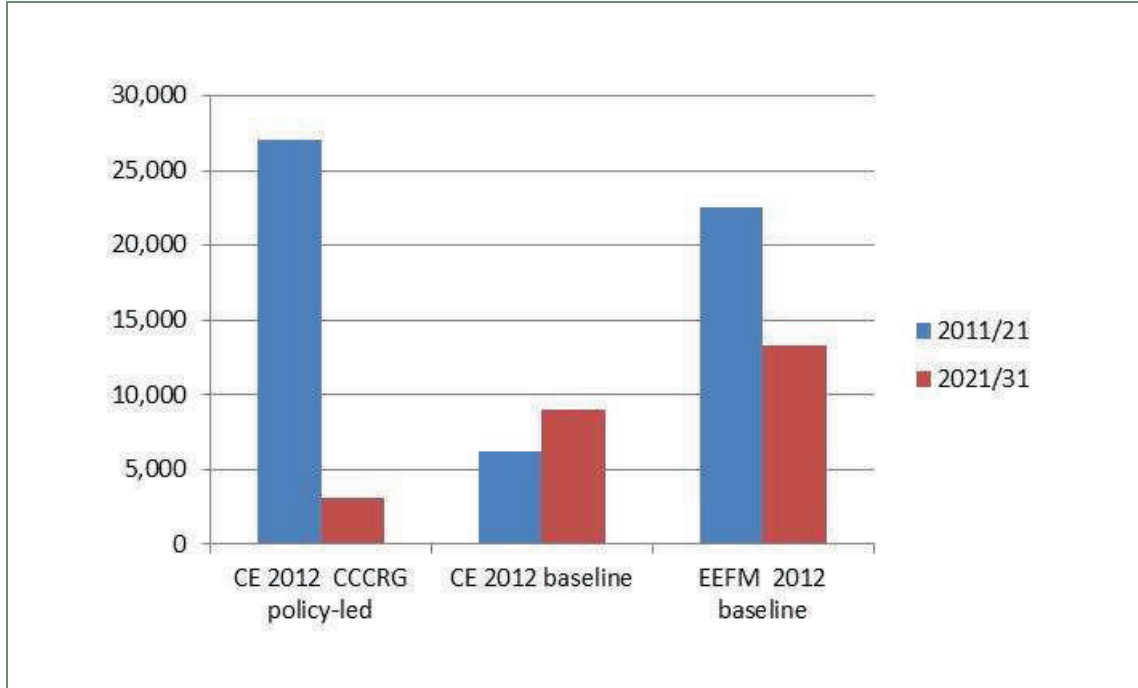
Model run 2012	2001	2011	2021	2031	2001/11	2011/21	2021/31
CE 2012 CCCRG policy-led	110,000	127,500	154,500	157,600	17,500	27,000	3,100
CE 2012 baseline	110,000	127,700	133,900	142,900	17,700	6,200	9,000
EEFM 2012 baseline	109,900	129,000	151,500	164,800	19,100	22,500	13,300

Source: Oxford Economics and Cambridge Econometrics 2012

- B.24 For Cambridge City, the OE baseline forecast anticipates population growth of 35,800 between 2011 and 2031. This is very much higher than the CE baseline which forecasts a population increase of 15,200. It is also higher than the CE policy-led forecast of an additional 30,100 population.

²⁷ Official population estimates only include non UK nationals if they live in an area for 12 months or more. It is possible that a significant number of non-UK nationals may be working in an area – yet not be counted as part of the resident population.

Figure B-8 : Projected population increase Cambridge City, 2011 to 2031, CE & OE forecasts 2012



Source: Cambridge Econometrics and Oxford Economics

Table B-7 : Comparison of Population forecasts CE & OE, 2012, South Cambridgeshire

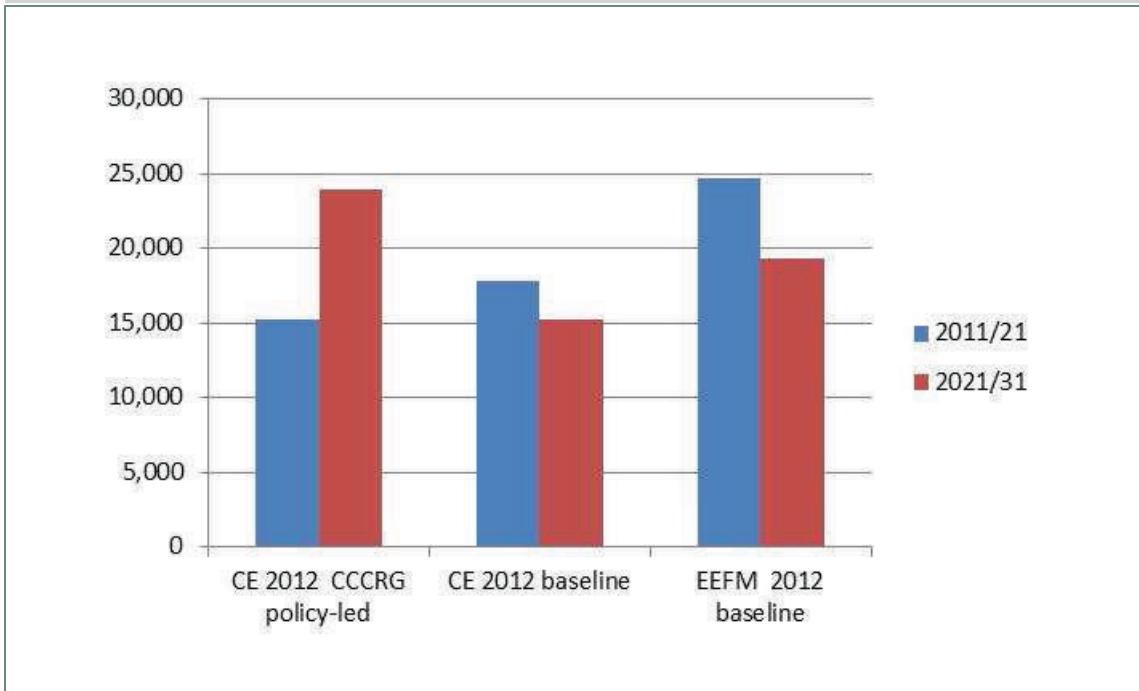
Model run 2012	2001	2011	2021	2031	2001/11	2011/21	2021/31
CE 2012 CCCRg policy-led	130,700	149,500	164,700	188,600	18,800	15,200	23,900
CE 2012 baseline	130,700	148,200	166,000	181,200	17,500	17,800	15,200
EEFM 2012 baseline	130,500	149,400	174,100	193,400	18,900	24,700	19,300

Source: Oxford Economics and Cambridge Econometrics 2012

- B.25 For South Cambridgeshire, the OE baseline indicates population growth of 44,000 between 2011 and 2031, higher than the CE baseline forecast of an additional 33,000 people. The CE ‘policy-led’ forecast records population growth of 39,100.
- B.26 The relatively high population growth incorporated in the OE forecasts is linked in part to modelled assumptions relating to average household size as well as new dwelling numbers. A high average household size will generate a larger population and stimulate additional job growth in industries dependent on population size/catchment. It is not, however, possible to compare the house-building figures incorporated in the OE baseline forecasts with the CE projections as the ‘LEFM’ does not include housing as a variable²⁸.

²⁸ LEFM – Local Economy Forecasting Model

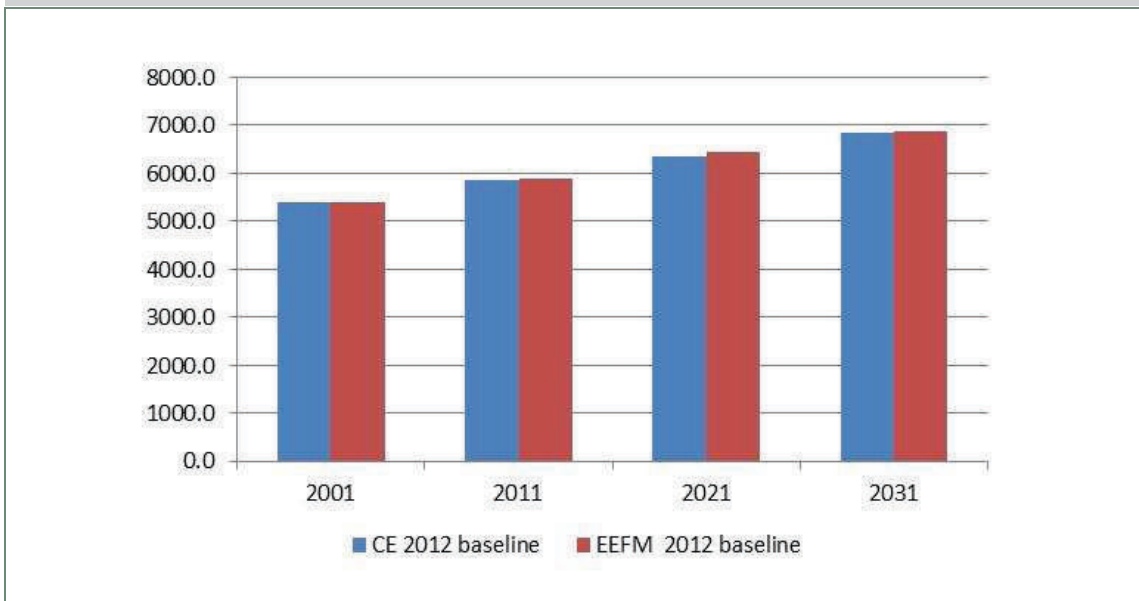
Figure B-9 : Projected population increase South Cambridgeshire, 2011 to 2031, CE & OE forecasts 2012



Source: Cambridge Econometrics and Oxford Economics

B.27 Finally, it is useful to compare the combined Cambridge area forecasts with those produced for the East of England as a whole. This comparison is restricted to the two baseline projections. The 2001 population is estimated to be 5,400,500 in both OE and CE projections. OE forecasts an increase of just under 1 million people between 2011 and 2031 to 6,885,300. CE forecasts the population increasing by 982,500 to 6,831,800 in 2031. CE anticipates slightly lower population growth than OE in the first decade 2011 to 2021, but higher growth between 2021 and 2031. This reflects the very different profiles of job growth over the twenty year outlook.

Figure B-10 : Projected population increase East of England, 2001 to 2031, CE & OE baseline forecasts 2012



Source: Cambridge Econometrics and Oxford Economics

Annex C: Analysis of the ‘hi tech business community’ in Cambridge City & South Cambridgeshire, 2008 & 2010

Introduction

C.1 This annex presents a summary of the ‘hi-tech business community’ in Cambridge City and South Cambridgeshire in both 2008 and as updated for 2010. It differs somewhat from previous analyses:

- Employment in university departments has been excluded. This is because it has proved very difficult to obtain data on a consistent basis in recent years; it is possible that postgraduate students have inadvertently been included in total numbers.
- In 2010, additional resources were directed at identifying hi-tech businesses operating in Cambridgeshire as compared with 2008. This resulted in the identification of a number of employers who had been operating for more than two years. This has resulted in a higher estimate of jobs and businesses in 2008 as compared with the last report.

C.2 However, in common with previous reports, the ‘hi-tech community’ is defined very broadly. It encompasses a number of businesses which are essentially providing specialist support activities, helping to sustain and support those businesses which are ‘core’ hi-tech. Such businesses include a growing number of legal practices specialising in Intellectual Property. They also include specialist recruitment agencies, wholesalers and some retailers.

Employment

Table C-1 : Employment in hi-tech community 2010, Cambridge Area

Hi-tech sector	Cambridge City	South Cambs	Cambridge Area
Chemicals	30	2,180	2,200
Specialist mechanical engineering	200	150	350
Computers & office machinery	110	1,240	1,350
Electronics engineering	580	1,630	2,210
Aero engineering	10	1,540	1,560
Instrument engineering	470	920	1,390
Electronic publishing	70	30	100
All other manufacturing	10	110	120
Specialist wholesaling	80	370	450
Specialist retailing	110	150	260
Telecommunications	180	670	850
Technical services & consultancy	670	1,620	2,290
Computer services	3,140	2,920	6,060
Education & training	20	10	30
Research & Development	5,190	6,470	11,660
Other services	530	610	1,140
Total	11,400	20,600	32,000
Manufacturing	1,480	7,790	9,270
Services	9,930	12,810	22,740

Source: Cambs CCRG

C.3 The table above indicates that hi-tech employment amounted to over 32,000 in the Cambridge area in 2010. Of this, around 11,400 jobs were located in Cambridge City and 20,600 were based in South Cambridgeshire. (It is important to note that these figures exclude all university-linked employment; around 6,000 people worked in ‘hi-tech’ university departments, such as the Cambridge University School of Clinical Medicine, the Cavendish Laboratory, the Department of Applied Mathematics and Theoretical Physics etc.).

C.4 Exploring these data further, we can make the following observations:

- Research & development was the biggest sector in employment terms, providing over 11,600 jobs. Of these around 5,200 were located in Cambridge City and just under 6,500 were based in South Cambridgeshire.
- Computer services were the second biggest sector with over 6,000 jobs in total. Of these around 3,150 were in Cambridge City businesses and 2,900 were in South Cambridgeshire companies.
- Technical services and consultancy employers provided just under 2,300 jobs in total; most were located in South Cambridgeshire (over 1,600) as compared with 670 jobs in Cambridge City.
- Two manufacturing sectors both accounted for just over 2,200 hi-tech jobs, chemicals (including pharmaceutical manufacture) and electronics engineering. Whilst almost all chemical manufacturing jobs were in South Cambridgeshire, Cambridge City continued to provide a significant number of electronics jobs – 580 as compared with around 1,600 in South Cambridgeshire. Aero engineering was dominated by Marshalls Aerospace. Technically located in South Cambridgeshire, this business literally straddles the administrative boundary with the City.
- Instrument engineering and computers & office machinery manufacture both accounted for around 1,400 jobs. Most of the office machinery employment was

located in South Cambridgeshire (1,240 jobs). The instrument engineering jobs were split 470 in Cambridge City and over 900 in South Cambridgeshire.

- A wide variety of businesses collectively provide over 1,100 jobs in ‘other services’. Jobs in these hi-tech support activities were split almost equally between Cambridge City and South Cambridgeshire in 2010, (530 in the City and around 600 in South Cambridgeshire).
- No other single sector contributed 1,000 or more hi-tech jobs in the Cambridge Area in 2010. Telecommunications businesses accounted for 850 jobs in total, with the bulk located in South Cambridgeshire (670 as compared with 180 in the City). Specialist wholesalers provided 450 jobs in the combined area, with most employment in South Cambridgeshire (370 of the total). Specialist mechanical engineering employers, many manufacturing prototypes or precision components for other local hi-tech businesses, accounted for around 350 jobs. Cambridge City contributed 200 of these.
- The remaining four hi-tech sectors each contributed 260 jobs or less in 2010.

C.5 The corresponding data set for 2008 are recorded in Table C-2. It is important to note that this table is not directly comparable with the 2008 analysis previously published. This is because a significant number of hi-tech businesses were contacted as potentially ‘new’ for the 2010 survey and reported that they had been operational in 2008.

Table C-2 : Hi-tech ‘community’ employment 2008, Cambridge Area

Hi-tech sector	Cambridge City	South Cambs	Cambridge Area
Chemicals	10	2,570	2,580
Specialist mechanical engineering	190	150	340
Computers & office machinery	130	1,070	1,190
Electronics engineering	710	1,750	2,460
Aero engineering	10	1,640	1,650
Instrument engineering	520	1,070	1,590
Electronic publishing	60	20	80
All other manufacturing	140	100	230
Specialist wholesaling	170	440	610
Specialist retailing	130	150	280
Telecommunications	180	640	820
Technical services & consultancy	610	1,650	2,250
Computer services	3,260	3,000	6,260
Education & training	20	20	40
Research & Development	4,560	6,730	11,290
Other services	600	490	1,090
Total	11,300	21,470	32,770
Manufacturing	1,770	8,360	10,130
Services	9,530	13,110	22,640

Source: Cambs CCRGd

C.6 Table C-2 indicates that **hi-tech employment in 2008 amounted to around 32,750 jobs in the Cambridge area as a whole**. Of these **11,300 were located in Cambridge City** and just under **21,500 were based in South Cambridgeshire**. An analysis of the changes between 2008 and 2010 is given in Table C-3.

Table C-3 : Change in hi-tech employment by sector, 2008 to 2010, Cambridge area

Hi-tech sector	Cambridge City	South Cambs	Cambridge Area
Chemicals	10	-390	-380
Specialist mechanical engineering	10	0	0
Computers & office machinery	-20	180	160
Electronics engineering	-130	-120	-250
Aero engineering	0	-90	-90
Instrument engineering	-50	-160	-200
Electronic publishing	10	0	20
All other manufacturing	-120	10	-110
Specialist wholesaling	-90	-70	-160
Specialist retailing	-20	0	-20
Telecommunications	0	30	30
Technical services & consultancy	70	-20	40
Computer services	-120	-80	-210
Education & training	0	-10	-10
Research & Development	640	-260	370
Other services	-70	120	50
Total	110	-870	-770
Manufacturing	-290	-570	-860
Services	400	-300	100

Source: Cambs CCRG Note: all figures rounded independently

C.7 **Overall (outside of the university sector), hi-tech ‘community’ employment is estimated to have fallen by just over 750 jobs between 2008 and 2010.** Around 100 jobs were gained in Cambridge City overall and almost 870 were lost in South Cambridgeshire.

C.8 **Hi-tech manufacturing employment declined by over 850 jobs, whereas jobs in services increased by around 100:**

- The only manufacturing sector to increase employment significantly was ‘computers and office machinery’, recording an additional 160 jobs overall. (This increase was restricted to South Cambridgeshire businesses). The manufacture of chemicals experienced a loss of almost 400 jobs, all in South Cambridgeshire. Electronic engineering businesses recorded significant job losses in both Cambridge City (down by around 130 jobs) and in South Cambridgeshire, (down by around 120 jobs). The significant reduction in ‘other manufacturing’ jobs primarily affected Cambridge City; it is primarily explained by a company relocating from Cambridge to South Cambridgeshire and down-sizing significantly.
- A number of hi-tech service sector businesses also recorded job losses between 2008 and 2010. Computer services employment reduced in both Cambridge (by around 120 jobs) and in South Cambridgeshire (by around 80 jobs). Specialist wholesaling jobs also declined in both districts, down by 90 jobs in Cambridge City and 70 in South Cambridgeshire. Research & development was the primary growth area amongst hi-tech services, with Cambridge City gaining around 640 jobs. In contrast South Cambridgeshire experienced a loss of over 260 R&D jobs. [However a detailed analysis at the level of individual employers shows that a major R&D company relocated from Cambridge Science Park (South Cambridgeshire) to the nearby Cambridge Business Park (Cambridge City). As a result hundreds of jobs were moved across the administrative boundary!] The ‘other services’ sector increased by just over 50 jobs and technical services & consultancy contributed an extra 40 jobs. A number of new businesses specialising in Intellectual Property issues were established in the period.

C.9 The analysis at an individual company level indicates that even in a two year period there have been many changes in employment. In addition there have been new start-ups, businesses closing or moving outside Cambridgeshire and also employers relocating within Cambridgeshire and particularly between Cambridge City and South Cambridgeshire.

C.10 The detailed analysis indicates that:

- Some 19 companies moved from Cambridge City (in 2008) to South Cambridgeshire (by 2010). In 2008 their Cambridge City employment totalled 669; by 2010 their employment (now in South Cambridgeshire) totalled 511.
- The movement from South Cambridgeshire to Cambridge City involved seven companies. In 2008, in South Cambridgeshire their employment totalled 881. By 2010, now in Cambridge City, the same 7 companies employed 683.

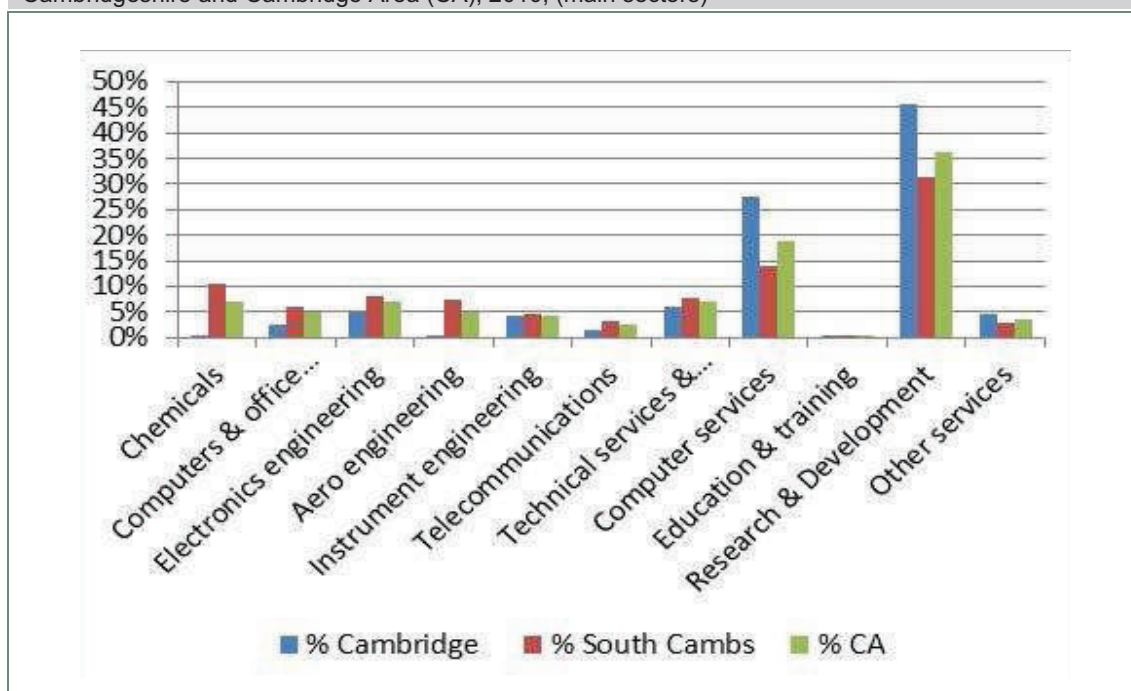
C.11 In the following tables and figures the breakdown of hi-tech employment in 2010 is depicted in percentage terms.

Table C-4 : Percentage breakdown of hi-tech community employment in Cambridge City & South Cambridgeshire 2010 (excluding university employment)

Hi-tech sector	% Cambridge	% South Cambs	% CA
Chemicals	0.2%	10.6%	6.9%
Specialist mechanical engineering	0.1%	0.7%	0.5%
Computers & office machinery	2.6%	6.0%	4.8%
Electronics engineering	5.1%	7.9%	6.9%
Aero engineering	0.1%	7.5%	4.9%
Instrument engineering	4.2%	4.4%	4.3%
Electronic publishing	0.6%	0.1%	0.3%
All other manufacturing	0.1%	0.5%	0.4%
Specialist wholesaling	0.7%	1.8%	1.4%
Specialist retailing	1.0%	0.7%	0.8%
Telecommunications	1.6%	3.3%	2.7%
Technical services & consultancy	5.9%	7.9%	7.2%
Computer services	27.5%	14.2%	18.9%
Education & training	0.2%	0.1%	0.1%
Research & Development	45.5%	31.4%	36.4%
Other services	4.6%	2.9%	3.5%
Total	100.0%	100.0%	100.0%
Manufacturing	13.0%	37.8%	29.0%
Services	87.0%	62.2%	71.0%
TOTAL	11,400	20,600	32,000

Source: Cambs CCRG

Figure C-1 : Percentage breakdown of employment in the Hi-tech community, Cambridge City, South Cambridgeshire and Cambridge Area (CA), 2010, (main sectors)



Source: Cambs CCRG

- C.12 In 2010, R&D accounted for over 45% of hi-tech jobs in Cambridge City as compared with a 31% share in South Cambridgeshire. Computer services contributed a 25% share of Cambridge City’s hi-tech employment and a 14% share of South Cambridgeshire’s hi-tech jobs. Chemicals and pharmaceutical manufacture accounted for almost 11% of South Cambridgeshire’s hi-tech jobs. Other sectors contributing 5% or more of hi-tech jobs included technical services & consultancy (6% in Cambridge City and around 8% in South Cambridgeshire), electronics engineering (5% in Cambridge and 8% in South Cambridgeshire), aero engineering (7.5% in South Cambridgeshire) and computers & office machinery manufacture (6% in South Cambridgeshire). **Overall hi-tech manufacturing jobs contributed almost 38% of South Cambridgeshire hi-tech community employment whereas in Cambridge City the share was 13%.** (If employment in hi-tech education was also included, the Cambridge City profile would be significantly more biased towards services).

Businesses

- C.13 This section examines the numbers of employers or businesses involved in the ‘hi-tech community’ in the Cambridge Area in both 2008 and 2010. Table C-5 and Figure C-2 provide an overview of the situation in 2010.

Table C-5 Employers in the Hi-tech Community, Cambridge Area 2010

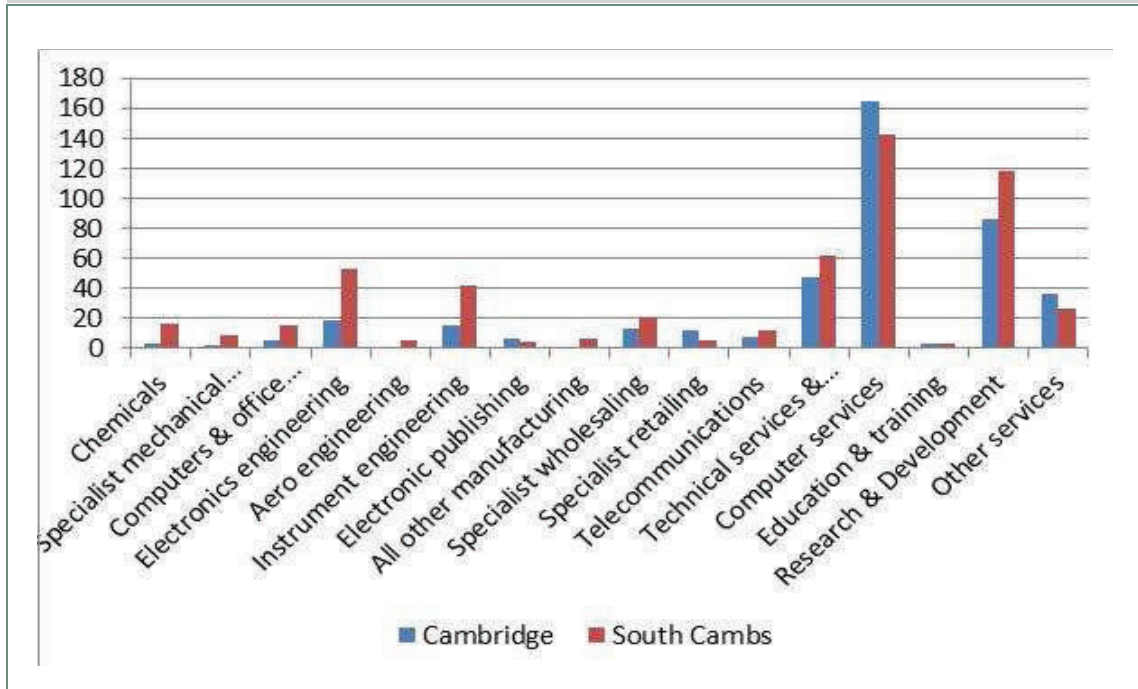
Business units 2010	Cambridge	South Cambs	Cambridge Area
Chemicals	3	17	20
Specialist mechanical engineering	2	9	11
Computers & office machinery	6	15	21
Electronics engineering	19	53	72
Aero engineering	1	6	7
Instrument engineering	16	42	58
Electronic publishing	7	4	11
All other manufacturing	1	7	8
Specialist wholesaling	13	21	34
Specialist retailing	12	6	18
Telecommunications	8	12	20
Technical services & consultancy	48	62	110
Computer services	165	143	308
Education & training	3	3	6
Research & Development	86	118	204
Other services	36	27	63
Total	426	545	971
Manufacturing	55	153	208
Services	371	392	763

Source: Cambs CCRG

- C.14 Again excluding higher education, the table indicates that **971 employers were identified in 2010 in the Cambridge Area**, split 426 in Cambridge City and 545 in South Cambridgeshire. Computer services accounted for 308 employers (165 in Cambridge and 143 in South Cambridgeshire); R&D employers accounted for 204 businesses in total (86 in Cambridge City and 118 in South Cambridgeshire). Other sectors with more than 50 employers included technical services & consultancy (110, split 48 in Cambridge and 62 in South Cambridgeshire), electronics engineering (72 companies, with 19 in Cambridge and 53 in

South Cambridgeshire), other services (63 businesses in total, split 36 in Cambridge and 27 in South Cambridgeshire) and instrument engineering (with 58 employers in total, split 16 firms in Cambridge and 42 located in South Cambridgeshire).

Figure C-2 : Employers in the hi-tech community, Cambridge Area, 2010



Source: Cambs CCRG

C.15 The profile of businesses in 2008 is recorded in the following table.

Table C-6 : Employers in the Hi-tech Community, 2008 Cambridge Area

Business units 2008	Cambridge	South Cambs	Cambridge Area
Chemicals	2	18	20
Specialist mechanical engineering	1	9	10
Computers & office machinery	5	17	22
Electronics engineering	21	53	74
Aero engineering	1	6	7
Instrument engineering	21	44	65
Electronic publishing	8	4	12
All other manufacturing	2	7	9
Specialist wholesaling	20	26	46
Specialist retailing	17	11	28
Telecommunications	9	17	26
Technical services & consultancy	43	61	104
Computer services	189	153	342
Education & training	5	5	10
Research & Development	86	124	210
Other services	36	29	65
Total	466	584	1050
Manufacturing	61	158	219
Services	405	426	831

Source: Cambs CCRG

C.16 The table shows a considerably larger number of employers in 2008 as compared with 2010. It is likely – as in previous years – that a number of very small, new businesses which have started between 2008 and 2010 have been missed. In consequence the 2010 profile probably slightly underestimates numbers of hi-tech employers.

C.17 The following table shows the change in numbers of hi-tech businesses over the period 2008 to 2010.

Table C-7 : Change in numbers of employers, net, hi-tech community, 2008 to 2010, Cambridge Area

Business units change 2008 to 2010	Cambridge City	SouthCambs	Cambridge Area
Chemicals	1	-1	0
Specialist mechanical engineering	1	0	1
Computers & office machinery	1	-2	-1
Electronics engineering	-2	0	-2
Aero engineering	0	0	0
Instrument engineering	-5	-2	-7
Electronic publishing	-1	0	-1
All other manufacturing	-1	0	-1
Specialist wholesaling	-7	-5	-12
Specialist retailing	-5	-5	-10
Telecommunications	-1	-5	-6
Technical services & consultancy	5	1	6
Computer services	-24	-10	-34
Education & training	-2	-2	-4
Research & Development	0	-6	-6
Other services	0	-2	-2
Total	-40	-39	-79
Manufacturing	-6	-5	-11
Services	-34	-34	-68

Source: Cambs CCRG

C.18 The table indicates a net loss of 79 hi-tech employers between 2008 and 2010, around 8% of the 2008 stock of hi-tech businesses, (1,050). Both Cambridge City and South Cambridgeshire recorded net losses of around 40 employers. The sectors experiencing the biggest net loss of firms include computer services (down 34 in the Cambridge Area overall, with Cambridge City losing 24 employers, net) as well as specialist wholesaling (down by 12 companies overall) and specialist retailing (down by 10 businesses overall). In total manufacturing experienced a net loss of 11 employers and services a net loss of 68 employers.

C.19 A detailed analysis shows that 74 firms operating in South Cambridgeshire in 2008 were no longer functioning anywhere in Cambridgeshire by 2010; similarly 54 companies operating in Cambridge City in 2008 were recorded as ‘gone’ by 2010. Very little is known about what happened to most of these 128 businesses. There is definite information that 12 businesses relocated from South Cambridgeshire to other areas of the country; the records note a similar relocation of 5 businesses from Cambridge City to other parts of Great Britain. The numbers of ‘new’ businesses identified as operating in the Cambridge Area by 2010 were significantly lower than the numbers recorded as ‘gone’.

Summary

- C.20 The period 2008 to 2010 is one where recessionary pressures were beginning to have an impact on employment in general. The analysis of employment in this annex indicates that hi-tech businesses were not immune; **a net loss of 760 jobs** is equivalent to 2.3% of the 2008 employment estimate. The net loss of 860 manufacturing jobs is equivalent to 8.5% of all hi-tech manufacturing employment in 2008 (just over 10,000). In contrast hi-tech service employment fell by 100, or 0.4% of the 2008 estimate of 22,600 jobs.
- C.21 The profile of hi-tech employment in the Cambridge Area has continued to change in a similar manner to that recorded in recent years. Generally speaking, manufacturing employment has declined whereas services have expanded in terms of numbers of jobs. **By 2010, hi-tech services accounted for 71% of all hi-tech jobs in the Cambridge Area, up from 69% in 2008.** In Cambridge City the percentage share of hi-tech jobs accounted for by services increased from 84.3% to 87%; in South Cambridgeshire the services' share increased from 61% to 62%.
- C.22 Computers & office machinery have performed relatively well as hi-tech manufacturing businesses. Employment increased overall – and in 2011 further expansion was announced by Domino Printing Sciences, one of the biggest employers in the sector. In contrast, significant job losses were recorded in chemicals, electronics and instrument engineering as well as in a range of 'other manufacturing' companies.
- C.23 Amongst hi-tech services, R&D employment increased overall and there was a small net increase in jobs in technical services & consultancy and in a range of 'other services', such as IP.
- C.24 In contrast to the relatively small net reduction in hi-tech employment (2.3%), the detailed survey of businesses identified **a significant reduction in the overall number of hi-tech businesses** – down by 8% in the Cambridge Area as a whole. The actual number of businesses operating in the Cambridge Area in 2008 who were recorded as 'gone' by 2010 amounted to 128 in total. Together with new businesses starting up, companies moving in from outside the Cambridge Area and local relocations there is evidence of considerable numbers of company movements within the hi-tech business community.
- C.25 The implications of this analysis for the Employment Land Review include:
- **Evidence of some businesses reducing employment** – with implications for possible relocations. Although manufacturing businesses are particularly affected there have also been net losses in other sectors such as computer services, specialist wholesaling and specialist retailing
 - **Evidence of some businesses expanding employment** – and seeking expansion in situ or through relocation. Within manufacturing, computer machinery & office equipment businesses have continued to expand. Research & development, telecommunications and technical services & consultancy businesses have also expanded employment overall

- A **high turnover of many small businesses**, with implications for demand for short-term leases on property
- A continued **increase in employment in many hi-tech service sectors**

C.26 There are considerable numbers of relocations within Cambridgeshire and particularly between Cambridge City and South Cambridgeshire. In terms of businesses there appear to have been relatively more companies relocating from Cambridge City to South Cambridgeshire than vice versa. This may reflect relative property values in the two areas.

Annex D: Cambridge Commercial Property Market Commentary & Trend Forecast regarding B1, B2 & B8 Use Classes

D.1 A report from Savills is provided on the following pages.

CAMBRIDGE COMMERCIAL PROPERTY MARKET COMMENTARY & TREND FORECAST REGARDING B1, B2 & B8 USE CLASSES

**IN RELATION TO
EMPLOYMENT LAND REVIEW**

ON BEHALF OF

SQW

Date: May 2012

Agent: Savills Commercial Limited
Unex House
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Cambridge
CB2 8PA
Tel: 01223 347000

Ref: CACO246230/PR/VC

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- Appendix 1 Office & R&D availability schedules**

1.0 INTRODUCTION & BACKGROUND

Savills have been commissioned by the SQW to prepare a review of the Cambridge commercial property market involving each of the key employment uses within the B1, B2 and B8 Use Classes as defined within the Town & Country Planning Act 1990.

In preparing our observations, we have sought to adopt a holistic approach blending market conditions, development viability and sector specific factors to ensure the commentary is properly balanced. The purpose of this report is therefore to gain a further understanding of employment sector activity, particularly since the middle of 2008 and utilising market sentiment to forecast trends in development over the medium and longer term up to 2031. This can only be achieved by first undertaking a review of each of the commercial sub-markets in Cambridge.

It is our understanding that SQW have requested Savills prepare this report in line with a wider Employment Land study commissioned by Cambridge City and South Cambridgeshire Councils. It is also our understanding that Savills report is required to provide an up to date commercial commentary to complement the statistical analysis being undertaken by SQW. The report should not be relied upon for any other purposes, but may be viewed by others.

This report has been prepared by Phillip Ridoutt BSc MRICS Associate Director with input from Rob Sadler BSc MRICS Director and Head of Cambridge Commercial Agency Team along with further assistance from Will Neale BSc MRICS Associate Office and Research & Development Specialist.

As one of the leading commercial property advisors in Cambridge we have transacted in excess of 300,000 sq ft of commercial office space in the city centre and Science Park office sectors alone in 2011 and have an understanding of the key current occupier requirements active in 2012 Cambridge and the surrounding area is a complex mix of various sub-markets which Savills fully understand along with the subtle nuances of the market. Our historic database management and knowledge of the of the market will enable us to forecast anticipated demand trends and assist with the compiling of any scenario modelling required.

1.1 Scope of Work & Approach

We summarise below the content requested, methodology for our work, outline of tasks undertaken and key inputs for each stage of the engagement. The activities undertaken for the commentary have included the following:-

- Identify and consider current information of vacancy rates of sites and buildings (including the impact of public sector cuts). This had led to an assessment of across the area of different types of property and land.
- A review of the current situation regarding key sites and the implications, focusing mainly on sites in and close to the Cambridge urban area, where supply is most constrained. We will consider particularly the implications of the loss of Cambridge East, and how to deal with sites which are constrained by the hiatus on the A14 improvements.
- In order to address the above tasks, we have primarily relied upon Savills in-house databases which record all key transactions, site availability and pipeline development in the city whilst also maintaining a close eye on potential further development and re-development plots.
- In addition an extensive website based review of external databases including Estates Gazette Interactive, Promis and Property Week internet searches to identify commercial properties and employment sites being actively marketed at the present time.

1.2 Background Documents & Information Assembly

A review of previously prepared relevant documents has been undertaken including:-

- Cambridge City and South Cambridgeshire Employment Land Review – July 2008.
- A review of employment land application and implementation spreadsheets provided.
- Undertake a review of leading independent data providers and competitors' research to cross reference our own data.
- Inception meeting with economic development department and representatives of Cambridge City and South Cambridgeshire Councils.
- A review of relevant planning and policy documents to support the forecast of future supply.
- A review of recent commercial property press articles over the past three years to identify transactions and trends in the market.

Further requirements of the study were to provide example summary case studies relating to key development sites and their utilisation.

2.0 ECONOMIC OVERVIEW & THE DEVELOPMENT MARKET

2.1 National Overview

2012 will be the year that rental growth begins to return outside London according to Savills March 2012 National Commercial Research.

It is becoming increasingly difficult to find anything further to say about prime investment yields, as they have now been broadly stable across all sectors for most of the last 12 months.

Investor demand for prime opportunities remains robust and heavily driven by the desire for income security. However, with all the leading macro-economic indicators now pointing to a recovery this year, we do believe that this all-consuming focus on safety should start to diminish.

With the majority of active investors focusing solely on prime, and viewing everything else as tertiary, has the traditional multi-tier stratification of the market been forgotten.

Savills have recently worked with Legal & General and Oxford Economics to examine the recovery prospects of every single one of the 406 local authority districts (LAD) in the UK. Some of the results were very predictable, with 19 out of the 20 best recovery prospects being in London or the South East.

It is the big regional cities that come out as well-placed to recover strongly, in many cases well-ahead of the regions that they sit in. Strong local private sectors and high rates of business formation will be just as important to economic and property market recoveries, as a limited dependence on public sector employment.

2.2 Cambridge Commercial Market

Whilst the wider regional land market remains relatively stagnant, employment sites both within the city boundary and on the outskirts remain in high demand and drops in values since the 2007 peak have not been as pronounced as in other areas. Occupier interest from each of the key commercial sectors including Office, R&D, Industrial and Storage and Distribution uses all remain strong and a fundamental lack of well located deliverable opportunities means that often requirements go unsatisfied in all but the very prime locations. Deliverability remains a key hurdle to successful development and this remains largely hindered by the lack of

availability of development funding for all but the very best projects backed by strong multi-national occupiers.

Market sentiment suggests that over the medium and long term, with a population over 125,000 and rising, the Cambridge sub-region is expected to see substantial economic and population growth which although temporarily placed on hold in light of delayed infrastructure improvements we still expect future growth including large new developments at Cambourne and Phase 1 at Northstowe.

Investor demand for prime locations such as Cambridge remains robust and heavily driven by the desire for income security and a 'safe haven'. Cambridge as a historic established location therefore remains attractive to both national and international investors. This is complemented by a strong base of local private investors and high rates of business formation which will ensure swift economic and property market recoveries.

3.0 THE CAMBRIDGE OFFICE MARKET (B1a)



Botanic House, Hills Road

3.1 Office Overview

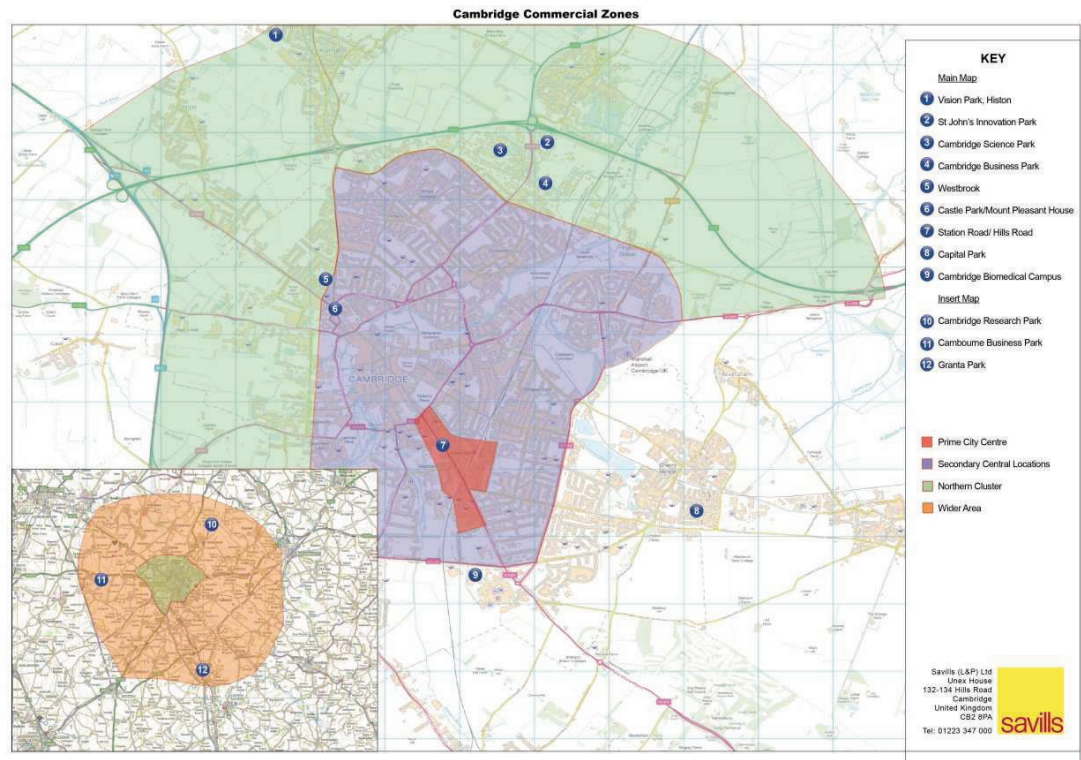
- Given the economic downturn, the Cambridge office market has performed relatively well over the past 12 months with good levels of transactional evidence as compared to other UK towns and cities.

- Take up in 2011 amounted to 596,000 sq ft as compared to the previous year of 365,000 sq ft. The average for the previous 5 years is around 430,000 sq ft. We expect 2012 take-up to be limited given the lack of Grade A space.
- The overall availability fell in 2011 from 1,100,000 sq ft to 750,000 sq ft. However the majority of the vacant space is second-hand, Grade B stock located outside the city.
- There is limited supply of existing Grade A office accommodation in prime locations and opportunities for local businesses to relocate have been limited. We expect this demand for modern space to drive pre-let activity and consequently speculative construction.
- There is a dearth of prime land supply in Cambridge restricting supply levels; however secondary land in the wider area is in good supply.
- Prime headline rental levels have been maintained in Grade A buildings, prime Business & Science Parks for city centre and northern fringe locations.
- Due to the lack of Grade A accommodation and reasonable demand, this has created healthy competition amongst prime office locations and is therefore driving rents in an upwards direction.
- Office rents in the City Centre stand at £28.50 per sq ft for existing stock and this is expected to rise in excess of £30.50 per sq ft in 2012 with proposed new office developments. The highest office rents out of town are achieving £26.50 per sq ft and are expected to remain at this level for 2012.
- A typical rent free incentive for city centre property on a 10 year term is circa 12- 15 months or circa 12-24 months for out of town.
- Cambridge benefits from an extremely dynamic office occupier market ranging from international household names to small entrepreneurial start-ups.

3.2 Subsectors, Locations & Availability

Whilst most cities and towns across the region are comparable in terms of factors affecting supply and demand and the tone of rents, it is important to understand the dynamics of the Cambridge market in isolation when considering speculative development. The Cambridge office market can be categorised into three key sub-market locations. Sub-sector one would comprise properties located in close proximity to the Cambridge mainline station in the

immediate city centre. Sub-sector two comprises the established Cambridge Science and Research Parks within the A11 and A14 and city boundaries. Sub-sector three comprises the ring of out of town Business Parks which are favoured by occupiers choosing to avoid the congestion of the city. A map showing the principal market areas is provided below.



The office/R&D availability in Cambridge has fallen in comparison to last year when it was 1.1 million sq ft to where it currently lies at circa 750,000 million sq ft. This reduction in stock shows the resilience of the Cambridge office market is apparent with companies such as appearing to be weathering these difficult conditions. There remains a longstanding absence of new development in Cambridge and there is currently 2.1 million sq ft of consented office space in the pipeline or deliverable within 3 – 5 years. Recent new developments include Botanic House, the Pace Development scheme on Hills Road which is nearing completion. The building will provide approximately 52,000 sq ft over 7 storeys and was pre-let to Mills & Reeve in November 2011 on a 15 year term at £29.00 per sq ft with 12 months rent free.

Works are well underway on the construction of Twenty One Station Road which has been pre-let to Microsoft at £30.40 per sq ft. Practical completion is expected later this year. The actual rent is £29.50 per sq ft plus £2,000 per parking space. There are a total of 54 parking spaces. Twenty One Station Road will provide 77,814 over 7 floors of Grade A accommodation. It is anticipated that this long awaited development in the Central Business District will cause a shift in the occupiers with Microsoft acting as an anchor tenant, laying the foundations for the next wave of activity, kick-starting the CB1 mixed use development.

At the end of 2011 take up amounted to 596,000 sq ft, compared to the previous year's figures of 365,000 sq ft. The average for the previous 5 years is around 430,000 sq ft and it is expected that 2012 take-up will be limited given the lack of Grade A accommodation.

Lack of good quality stock in the city centre is forcing occupiers to look at wider locations such as the northern fringe Business Parks which is enabling Landlord's to be more resilient with their quoting terms.

The wider out of town locations remain quiet and are therefore able to offer the tenant more favourable lease terms. These wider out of town locations are currently achieving rents between £18.00 - £26.00 per sq ft.

Small serviced office schemes remain popular in Cambridge and whilst a number of schemes are being contemplated for the city centre, the main offerings are currently located out of town and are focussed upon the pure office sector with established national operators such as Regus offering space at Vision Park and Cambourne.

3.3 Recent Office Transactions

- In February 2011, Birketts Solicitors took 7,077 sq ft within Thirty Station Road, on a 10 year lease with a break option at the end of the 5th year at a rent of £28.00 per sq ft. The tenant benefited from 3 months rent free. The building has recently been extensively refurbished to include the common parts.
- In March 2011, Gardiner Theobald took 1,675 sq ft at Twenty Station Road on a new 10 year terms with a break option at the end of the 5th year. The rent is £28.50 per sq ft and the tenant benefited from 3 months rent free.
- In March 2011, Reddie and Grose took 4,000 sq ft within Clarendon House on a 10 year lease to include a tenant break option at the end of the 5 year. The rent is £26.00 per sq ft. The tenant benefited from 6 months rent free.
- In August 2011 Booking.Com took 32,434 sq ft at Westbrook, Milton Road on a 10 year term to include a break at the end of the 6th year. The rent is £21.00 per sq ft and the tenant benefitted from 18 months rent free.
- In February 2012 Alert Me took 7,492 sq ft within Twenty Station Road on a new lease term to expire on the 11th March 2021. The lease included a tenant break in year 1.

The lease included a tenant break in years 3 and 6 and a landlord option to break in year 5. The rent is £27.00 per sq ft and the tenant benefitted from 3 months rent free.

- In July 2011 Ernst & Young took 12,738 sq ft within One Cambridge Business Park on a 10 year term. The rent is £23.50 per sq ft and the tenant benefitted from 15 months rent free.
- In December 2011 Maxim Integrated Products took 3,569 sq ft within Pioneer House, Vision Park on a new 5 year term to include a break clause in year 3. The rent is £18.00 per sq ft and the tenant benefitted from 6 months rent free.

A key driver for development of employment land is the appetite of property investors. Overall the current investment market generally is governed by security of income and is therefore particularly concerned with tenant covenant and the length of unexpired lease terms. It is clear that lack of credit is still an issue and this remains a limit in the secondary market. In the current market, investors are less likely to acquire vacant premises, due to the additional costs of holding such properties as a result of empty rates liabilities.

The Cambridge office investment market is traditionally strong, but there has been volatility in recent years. The prime office investment yield has recently been established at 6% net with the forward funding of the Microsoft Building at CB1 (referred to above) by Orchard Street Investments last year.

As an overview, from late 2007 property values fell dramatically although there were few transactions to support sentiment. Looking back there was not the volume of distressed sales that were anticipated but market activity improved in the spring of 2009 with the effect of stabilising values. In spring 2009 Savills investment department put prime provincial offices equivalent yields at 7%. Since that time yields hardened across all sectors with prime yields peaking in May 2010 at 5.75% for provincial offices, due to a fairly strong demand for prime investments but lack of product available. These fell back slightly to 6% in June 2010 where they have remained relatively static to stand at 6%.

4.0 THE CAMBRIDGE RESEARCH & DEVELOPMENT SECTOR (B1b)



The Jeffreys Building, St John's Innovation Park

4.1 Research & Development Overview

- The Cambridge Electronic and Software R&D sectors have continued strong growth. The Pharmaceutical sector has been less active.
- There is a lack of stock available for lower value production R&D space, particularly in the city centre.
- It is difficult to differentiate take up from the office sector due to the cross over of users.
- There is limited supply of existing Grade A R&D accommodation in prime locations and opportunities for businesses to relocate have been limited. We expect this demand for modern space to drive pre-let activity and consequently speculative construction particularly on the northern fringe.
- As with the Office sector, there is a dearth of prime land supply in Cambridge restricting supply levels; however secondary land in the wider area is in good supply.

- Prime headline rental levels have been maintained in Grade A buildings, prime Business & Science Parks for city centre and northern fringe locations.
- R&D prime rents for office style buildings on the science park are at £26.50 per sq ft for new developments. Science Village rents with fitted lab accommodation are available at quoting rents of £32 per sq ft.
- R&D operations in the software sector often utilise office buildings sometimes sharing space with conventional professional services.
- Cambridge R&D sector has a large percentage of small entrepreneurial start-up operations often with venture capital funding for specific single projects.
- Cambridge has a diverse R&D sector extending to Biotechnology, Pharmaceuticals, Electronic and Software Engineering and Information Technology.

4.2 Sub sectors, Locations & Availability

Since the early 1970's the Cambridge economy has been reliant on the Research and Development sector and hi-tech industries. Following the establishment of Cambridge Science Park there has been a proliferation of Research and Science Park development which has facilitated the expansion of these industries within the Cambridge area.

Cambridge's R&D sector now includes a wide range of companies working in Biotechnology, Pharmaceuticals, Electronic and Software Engineering and Information Technology. As they have done since the inception, the majority of companies who choose to locate in Cambridge are often attracted by the status of the University and agglomeration of complementary business's which assist with research and provide a highly skilled local workforce.

Cambridge's identity as an leading centre within Europe means a wide range of occupiers most of which are small companies conceived in the city employing just a few people often have expanded their roots as research projects stemming from the University and are now established in terms of larger companies. This sector is particularly fluid with highly skilled labour moving between companies and rapid expansion as products are developed.

Each of the key Science Parks often offer their own version of an incubation or enterprise centre whereby small scale new ventures can be launched. Examples of this include St

John's Innovation Centre which has a large proportion of electronics laboratory facilities and provides approximately 85,000 sq ft of space for 60 companies specifically designed for young companies requiring flexibility and costs certainty. Other examples of this initiative include the Babraham Institute, The Science Village at Chesterford Research Park and a Science Park Innovation Centre". At the present time these incubator centres remain very well occupied and are likely to remain strong for the foreseeable future.

There are two key sub-sectors within the Research & Development category with differing property requirements, they are broadly as follows:-

- Electronics and Software Development. This has been a key growth area particularly in the last 15 years and continues to see aggressive expansion in these times of wider economic turmoil. The majority of this R&D is focused upon the northern city centre and Cambridge Science Park. Due to the nature of this work, it is often the case that there is very little distinction in building type between Grade A office accommodation and this R&D sector. Put simply, a large percentage of this R&D work is carried out in pure office space. Any laboratory fit-outs often are small scale and without any significant plant which therefore means that office buildings are easily converted. Often referred to as being the centre of the 'Silicon Fen', the reputation of the city and its university attracts a high proportion of ICT companies ensuring Cambridge is at the forefront of technological advances.
- Bio-Technology and Pharmaceutical. This sub-sector is generally located to the southern fringe of the city and is often referred to as "South Cambridge Biotechnology Cluster", which is favoured by research based companies based at Granta Park, Babraham Park and Great Chesterford. This concentration will be strengthened with the development of the Medipark at Addenbrookes Hospital, designed to be a centre of excellence for medical research.

The Cambridge Cleantech sector continues to expand, although it is more diverse in terms of its property use than the other sectors and is spread across the whole city in pockets rather than being established in one particular location.

In addition to the influence of the University, Addenbrookes Hospital also attracts a number of high profile medical occupiers including Cancer Research UK, The Wellcome Trust Sanger Institute and Babraham Institute all situated amongst the southern fringe. In addition, there are a number of agricultural research companies located on the outskirts of the city including The National Institute of Agricultural Botany, and Beyer Crop Science.

The largest scheme currently under construction is the 203,500 sq ft purpose-built building for the Medical Research Council at the Addenbrookes site by the hospital. The building will be

used for the laboratory of Molecular Biology when completed at the end of 2012. This development forms part of the largest Biomedical Research Campus on a full 70 acre site next to Addenbrookes Hospital. Planning consent for development of the Campus was granted three years ago. Cambridge University Hospitals and its partners – Countryside Properties, Liberty Property Trust, the Medical Research Council and the University of Cambridge – can now begin the next stage of the site's expansion.

The Cambridge Biomedical Campus has consent for 2.3 million sq ft and will include the relocation of Papworth Hospital and will enhance Cambridge's reputation as an international centre for patient care, biomedical research and education. The developers are unlikely to consider any speculative buildings until at least the Papworth move completes and even then, smallest viable building would be around 60,000 sq ft.

As we continue to observe new enterprises within bio-technology, hi-tech engineering, pharmaceutical and general consultancy practice there is uncertainty in the market as to the anticipated levels of investment and whether the UK will still attract large research initiatives. Many firms particularly in the pharmaceutical and bio-technology sector have very specific space requirements and therefore would prefer to occupy purpose-built space which can only be delivered in out of town locations as it is often not practical for developers to construct speculatively in the city centre. Developers will also not be in a position to build lab space speculatively because of the expense involved and therefore any speculative development that is undertaken tends to be for traditional office uses only.

Since 2008, the key completion in the R&D sector of new stock was 108,000 sq ft R&D development facility for NAPP Pharmaceuticals at Cambridge Science Park

The quality of accommodation on the Cambridge Science Park is diverse in that a number of the buildings constructed in the early 1970's right up to the mid 1980's are now dated and lacking in profile and offer very low development density. For this reason we expect to see intensification of these sites and reutilisation of this employment land. Trinity Hall are the owners of a 21.6 acre site adjoining the Cambridge Science Park and in 1998 entered into an agreement with Trinity College for the development of the site as an extension to the Science Park. The site was subsequently developed with five buildings which were sold to Trinity College on ground leases but three plots remain totalling 5.58 acres.

In addition to vacant plots, there are a few redevelopment options on the Park. Whilst many of the small start up companies located on the Park do not require large amounts of sophisticated laboratory space, there is still a market for the smaller single storey hybrid office and laboratory units, however these are often considered key targets for re-development and these uses are

being drawn to more out of town locations which may include Vision Park and potentially Cambridge Research Park.

Whilst Cambridge Science Park itself has imposed use restrictions limiting to R&D, the definition becomes increasingly clouded particularly in the context of software development and when compared to pure office uses often the line is blurred.

Opposite the Science Park on The Crown Estate owned Cambridge Business Park where no user restriction exists there is a more diverse mix of occupiers where R&D companies such as Redgate Software mix with the likes of professional service providers Grant Thornton.

Demand for accommodation within the northern fringe and Cambridge Science Park will remain as a result of the prestige attached to it as a location. Therefore, while potential occupiers in the market are more limited than a few years ago, we are positive that the location will compete well over the next five to ten years and longer terms to 2031. . It is more likely to appeal to international occupiers and if the current tenants vacate it is likely new occupiers will be of significant standing. Key transactions include:-

- In July 2011 Jagex took 45,000 sq ft within 2020 Cambridge Science Park on a 15 year lease to include a break clause in year 13. The rent is £22.50 per sq ft and the tenant benefitted from 33 months rent free.
- In December 2011 Fahy Ghurteen Labs took 7,924 sq ft within Building 7300 at Cambridge Research Park on a new 6 year lease to include a tenant break option in the third year. The rent is £17.00 per sq ft and the tenant benefitted from 4 months rent free.
- In December 2011, Carl Zeiss took 15,633 sq ft within 509 Coldhams Lane on a term to expire on the 25th March 2019 to include a break option. The rent is £18.00 per sq ft rising to £21.35 in year 5.
- In 2011, Redgate Software expanded considerably on the Cambridge Business Park by taking a remaining 16,500 sq ft at Newnham House.
- In 2010 at the Peterhouse Technology Park ARM (Advanced RISC Machines) took an additional 30,000 sq ft on assignment and continued to monitor their ongoing growth and we understand they are also looking to further expand over the coming 2 – 3 years
- In 2011, Medimmune took an additional 22,000 sq ft at Granta Park. No further details were disclosed.

- In October 2010 Building 101, Cambridge Science Park - Letting of 11,500 sq ft to Citrix (existing tenant), for a new 10 year lease with a rent at £26.50 however tenant incentives have not been confirmed.
- In 2011, Tennyson House, Cambridge Business Park - Jeyes Group Ltd took 11,332 sq ft at Tennyson House, Cambridge Business Park on a new 10 year lease at a rent of £21.50 per sq ft. A rent free period of 12 months was secured by the tenant.
- Iconix, London Road, Pampisford - This small development of office and R & D space is situated a short distance from Junction 10 of the M11. Unit 1 comprises modern, well specified offices dating from 2007, where 4,860 sq ft of ground floor office space was sublet to EEF in December 2009 on an 8 year lease for an initial rent of £87,480 per annum equating to £18.00 per sq ft. By contrast, Unit 2 is a dated 1960s laboratory building adjacent in which Areas 1 and 2 were let to Xention for three years in January 2011 at a stepped rent to average £10.60 per sq ft.
- In May 2011, Qualcomm (UK) Ltd took 7,812 sq ft space in 334 – 335 Milton Road on an 11 year lease with a tenant option to break at year five, at a rent of £22.50 per sq ft. This property comprises a modern two storey office building.
- In March 2011, at Sovereign House, Vision Park which comprises a three storey office building totalling 36,786 sq ft. The second floor, totalling 12,120 sq ft, was let to GW Pharma for 10 years with tenant options to break in years five, seven and eight and nine month rent free at a rent totalling £218,160, equating to £18 per sq ft. Pioneer House is situated to the rear of the estate and approximately 10 years old. In June 2010, Suite 4, totalling 2,697 sq ft was let to General Dynamics for five years with three months rent free at a rent equating to £18 per sq ft.
- At the lower value end of the scale, Newmarket Road, Technopark provides buildings for light industrial and R & D use, thereby being of a higher specification than traditional industrial premises. Unit 3 let to Cytocell for R & D use in July 2011 for five years, with a rent review and option to break at the end of year five. The initial rent was £45,000 per annum although the landlord made an initial contribution towards air conditioning of £15,000. This equates to an effective rent over the first five years of £42,000 per annum or £9.54 per sq ft. This appears high in pure industrial terms, but reflects the R & D nature of the premises.

Investment sales in the R&D sector have been scarce over recent years and establishing the appropriate yields to apply is difficult due to the variation in product type. We have had regard to recent investment transactions in the area for office space but also identified the following:

- 509 Coldhams Lane - This vacant office and laboratory property of 15,565 sq ft was sold in August 2011 to Wrenbridge. The property has potential for extension to around 23,000 sq ft and was purchased for £3,000,000, this equates to a capital value of £193 per sq ft.
- 140 Cambridge Science Park, Milton Road, - This property comprises a 1980s office building that was refurbished in 2006 to a good modern standard. It is let to Jagex Ltd on an FRI lease until 2024 (13 years unexpired) at a rent of £525,000 per annum, subject to five yearly rent reviews and tenant's options to break in 2014 and 2019, subject to substantial penalties. It sold in September 2011 for £6,350,000, reflecting a net initial yield of 7.8%.
- 194, 196 and 198 Cambridge Science Park, Milton Road, - In August 2010 Legal & General paid £35 million for the peppercorn rent long leasehold interest at Units 194,196 and 198, prime office buildings of 108,800 sq ft with 357 car spaces, let to Napp Pharmaceutical Holdings Ltd at £22.50 per sq ft with almost 10 years unexpired reflecting a net initial yield of 6.6%.

5.0 THE CAMBRIDGE INDUSTRIAL & DISTRIBUTION SECTOR (B1c, B2 and B8)



Trafalgar Way, Bar Hill

5.1 Industrial & Distribution Summary Overview

- Whilst the Cambridge Office and R&D sectors have fared well in the economic downturn, the Industrial sector has been slower to respond and more closely mirrored the wider region with the total take-up for 2011 recorded at approximately 250,000 sq ft.
- Within the city centre, availability remains extremely limited with less than 30,000 sq ft of new build industrial space currently available and little suggestion of this being increased. Therefore occupiers are often forced to consider secondary older stock if they need to be within the A14 boundary.
- The total industrial sector availability within Cambridge sits at approximately 575,000 sq ft with over 530,000 of this being second hand space. Savills consider approximately 50% of this total space to be of poor quality and in need of re-development.
- In the boom years of 2002-2007 significant new developments were undertaken in Papworth and Buckingway boosting supply around the city centre.

- There is a good development pipeline of industrial stock outside of the city centre totalling approximately 600,000 sq ft, however for reasons mentioned below it is unlikely that any of this will be developed on a speculative basis.
- City centre industrial and warehouse space continues to be an attractive target for the development of alternative uses such as residential particularly as this stock becomes older and functionally obsolete.

5.2 Sub sectors, Locations & Availability

The central Cambridge Industrial and Distribution sector is predominantly tied to servicing the R&D sector, Offices and Colleges. This sector comprises occupier mixes broadly in line with that of most regional towns including trade suppliers, distributors, light manufacturers and general industrials user albeit most on a small scale. This is an essential component of the Cambridge economy, if not the most glamorous in profile terms.

Considered in a wider context, the Cambridge market is small compared to the regional key large scale distribution hubs of Peterborough and increasingly Bedford. Medium size requirements (from 15-50,000 sq ft) often extend along the A1, A10 and A14 corridors. The peripheral towns and villages around Cambridge which include Huntingdon, St Ives, Ely, Newmarket, Haverhill and St Neots provide a significant amount of accommodation occupied by small businesses (sub 10,000 sq ft) which service the Cambridge market. There is however an ongoing preference from most occupiers to stay within close proximity to the city centre if at all possible to secure their clients.

Around the city centre, there are also clear geographical sub-markets between those who choose to locate south of the city and those who choose to locate to the north. These distinct markets are caused by the practical obstacle created by physically trying to cross the city in commercial vehicles.

Cambridge has a number of large non office based employers, the most significant being Marshall of Cambridge Aerospace. In addition, the hi-tech printing industry maintains a strong profile in Cambridge and whilst conventional printing companies in the wider region often struggle, Cambridge success stories and large operators including Domino and Cambridge University Press ensure that the city's reputation remains strong in the printing industry. Savills currently have a number of requirements ranging from 20 -50,000 sq ft from these types of operators and Domino have recently successfully obtained consent for expansion of their existing Bar Hill site where 10 acres will be developed with an expectation to create 400 jobs over the next 10 years.

The number of large scale occupiers within the industrial and distribution sector are limited when compared to the wider region and this is primarily due to the shortage of large buildings in the city and immediate surrounding area. A number of allocated sites are restricted by the 1,850 sq m occupier threshold for B1c, B2 and B8 users which prevents large scale warehouse/distribution occupiers locating in Cambridge. There are however examples of where temporary flexibility regarding the lifting of this restriction for a 3 year period has assisted marketing albeit no clear examples where the removal has facilitated a new building.

If we focus attention on the more conventional warehouse and distribution sectors, Cambridge struggles to compete with the likes of Northampton, Huntingdon and St Neots where land values are significantly lower and therefore rents more attractive. The majority of more 'footloose' distribution occupiers therefore often discount Cambridge as a location on price grounds, however we have noted a number of these occupier businesses specifically serve the Cambridge markets and need to be in close proximity to the city.

To date, the majority of requirements appear to have originated from occupiers within Cambridge and a 10 mile radius. Enquiries range from 15,000 – 50,000 sq ft and most of these currently noted on our marketing schedules remain unsatisfied.

There is a clear underlying demand for good quality modern industrial/warehouse buildings within this size range and whilst at the beginning of 2011 there were a number of new buildings available for immediate occupation as we move into 2012, all of these buildings have been either let or sold and there are no new buildings currently under construction to take up this demand.

City centre industrial and warehouse space continues to be an attractive target for the development of alternative uses particularly private residential. As this stock becomes older and functionally obsolete, often the poorer older quality industrial stock suffers with poor loading provisions and the design of the building often has low floor to ceiling heights and poor insulation levels. It is generally economically unviable to consider significant refurbishment of the buildings as to improve to a modern standard this would often require the roof to be stripped from the building (the majority of which are fibre cement/asbestos construction, therefore costly to dispose of) and re-clad. To then try to repair/upgrade the floor, services, office accommodation and to improve the external appearance of the building perhaps by adding a modern profile clad often means the cost of refurbishment is comparable to demolition and re-development.

Site owners and commercial development companies are unable in the present climate to justify re-development of these sites for the following reasons:

- Value of existing stock. Even though they may be in a poor state of repair and functionally obsolete, the availability of freehold industrial stock within the city centre remains limited which means that values of existing stock and therefore the expectations of existing owners makes re-development unviable because of a price needed to purchase the existing facility.
- Business Rates Liabilities. This is a national issue. Prior to 2008, developers could construct new build facilities and not be liable to pay business rates when they were vacant. Speculative development in the current climate is not viable in part due to the burden of full business rates liability and the risk of a developer having to incur this whilst new stock is vacant.
- Depressed rental values and lack of availability of bank funding to small and medium sized businesses to purchase commercial property means that markets for both tenure remain muted. Whilst most occupiers preference is to have a modern new facility, in most businesses in the region cannot justify the commitment required to facilitate a new build development.

The impact of Energy Performance Certificates (EPC's) and how they may affect the potential let ability of industrial properties in the future rents to be guaranteed. Older stock clearly does not fair as well in respect of the EPC grading system; however at this time we are yet to see any direct correlation between rents achieved and EPC grading. This may however alter quickly if the Government introduces any tax incentives or penalties tied to EPC assessment which may well create an additional new variable to the re-development viability of existing city centre older stock.

Outside of the city centre a number of schemes have been completed within the last 5-7 years most notably into the west of Cambridge in Papworth and to the north along the A14 at Buckingway, Swavesey providing new accommodation in relatively close proximity to the city centre.

Cambridge has a total industrial stock of around 5,000,000 sq ft, which is relatively small compared to Peterborough, the region's main industrial centre.

Top industrial rents in Cambridge city centre stand at around £8 - £9 per sq ft with up to £11 per sq ft being achieved for trade counter units. The value drops considerably outside of the city centre to around £5.50 - £6.00 per sq ft for prime stock in line with wider regional rents.

It is generally considered that that the industrial sector is the least volatile of the three main commercial property sectors, however it consistently underperforms in the Cambridge market and struggles to attract support and investment.

The trade park and manufacturing sector has been significantly affected by the recession and this has had a negative impact on demand for industrial property most notably secondary property unsurprisingly, transaction levels during the recession are minimal with landlords accepting lower rents than previously in order to limit empty rates liabilities.

We have had regard to rental evidence of industrial property in the local area as follows:

- In 2011 activity at Dencora Business Centre which provides a scheme of industrial units. The most recent rental evidence on site is on Units B and H which provide 2,174 sq ft and 1,161 sq ft of industrial accommodation respectively and we understand are under offer at £10 per sq ft each.
- In May 2011 a terrace of light industrial units at 7-10 Nuffield Close total 10,388 sq ft was let for £70,119 per annum, reflecting £6.75 per sq ft.
- At Kings Court new modern units are located to on the far side of Cambridge Science Park. They provide industrial accommodation ranging in size from 4,878 sq ft to 10,093 sq ft and have been on the market for a number of years now. Fujifilm Sericol Global took 5,216 sq ft in Unit 5 on 5 year lease in early 2011 at £46,944 pa equating to £9 per sq ft gross internal with 4 months rent free. Applied Medical Technology took 4,878 sq ft in Unit 4 on a 5 year lease at £43,902 pa equating to £9 per sq ft gross internal with 3 months rent free in late 2010.
- In 2011 Unit B The Paddocks, Cherry Hinton which is situated in a small industrial estate to the south of the city centre and totals 3,538 sq ft let to JMF Logistics Ltd for five years at £19,919 per annum, equating to £5.63 per sq ft.
- In September 2010 Unit A, Ditton Walk which is a small industrial unit is situated on a small industrial estate off Newmarket Road. It comprises a steel portal frame warehouse of 12,972 sq ft with ancillary office accommodation and yard area. It was let in September 2010 to AIV Valves Europe for five years at £58,374 per annum, reflecting £4.50 per sq ft, having been on the market quoting £6.50 per sq ft.

The industrial current investment market as per the Office and R&D sectors generally is governed by security of income and is therefore particularly concerned with tenant covenant and the length of unexpired lease terms. It is clear that lack of credit is still an issue and this

remains a limit in the secondary market. In January 2011 Savills investment department put prime industrial investment yields at 6.25%, and our latest research suggests that in January 2012 these stand at 6.0%.

- Kings Court, Kirkwood Road, mentioned above provides industrial accommodation ranging in size from 4,878 sq ft to 10,093 sq ft. Cambridge Land Investment bought 999 year lease on 5,046 sq ft for £620,658 equating to £123 per sq ft in mid 2010.
- Sawston Trade Park is situated about 7 miles south of Cambridge and has good access to the A505 and M11. This multi-let industrial estate includes a mix of industrial and trade counter units let to tenants such as PlastiKote, Adcock Refrigeration and Cambridgeshire Bathrooms. The trade park was purchased by Howard Group in January 2011 for £5,400,000, reflecting a net initial yield of 8%.
- Titan House, Space 10 Papworth Business Park, Cambourne which provides a brand new industrial unit on a business park with good transport links totals 38,016 sq ft and is situated outside Cambridge. It was let to Ultra Electronics for 20 years, from July 2011, with tenant's option a break at year 10 and five yearly rent reviews at a rent of £237,600 per annum. It sold to a private investor for £2,800,000 reflecting a net initial yield of 8%.
- Units 5-6 Buckingway Business Park, Swavesey are situated on a modern business park at junction 28 of the A14 to the west of Cambridge. This property comprises an industrial unit of 12,280 sq ft, let to St Gobain Building Distribution Limited t/a Grahams until 2023 (12 years unexpired) at a rent of £95,000 per annum. It sold in May 2011 for £1,130,000, reflecting a net initial yield of 7.9%.

6.0 THE EMERGENCE OF HYBRID BUILDINGS



CGI, Hybrid Building at Cambridge Research Park

6.1 Defining Hybrid Buildings

A key emergence in the region over the past 2 – 3 years has been of the ‘hybrid’ research and development buildings. Examples of these can be found around the key Cambridge Science Parks and typically they comprise modern warehouse type construction with high quality office fit –out typically occupies 20 – 50% of the built space. Externally, the buildings will have the appearance of office building Business Park space with high quality landscaping, street furniture and external finishes. They will combine office functions, but also Research and Development and production facilities all under one roof. We anticipate these buildings being the most likely growth area of new build over the next 3-5 years. Office content will vary and there appears to be an emergence of a number of sub-markets within these including mid tech, low tech and high-tech buildings. To assist with the visualisation, we attach a CGI of the type of premises currently being contemplated.

6.2 Hybrid Sizes & Values

Occupiers will typically struggle to identify existing stock suitable for this process as they will often only be presented with dated industrial type properties in more traditional manufacturing type locations which are completely inappropriate for the quality of space

they require. Alternatively they will identify conventional office stock in Business Park sites which do not have the production capabilities within the same building forcing them to consider split sites. These facilities tend to range from approximately 15,000 – 20,000 sq ft at the smaller end of the scale rising up to 60,000 - 70,000 sq ft at the larger end.

As an un-established market, rental levels and freehold values for Hybrid buildings tend to be wider ranging based upon specification. They will lie between new distribution and office values which should equate to rents of approximately £11 - £15 per sq ft with capital values being in the region of £130.00 - £150.00 per sq ft. Clearly this will vary slightly depending upon the amount of office content and the remainder of fit-out, but this should provide an indication as to the anticipated figures.

Current hurdles we are identifying with the deliverability of hybrid buildings are that within the wider context developers still require a minimum of 10 and ideally 15 year commitment from an occupier. Whilst most occupiers anticipate committing to the building for that amount of time and the majority will have significant fit-out which they will wish to write off over a longer period of time. The influence of overseas parent companies, which own the majority of pharmaceutical and R&D companies in the region including American, German, Japanese and Sovereign Wealth countries provide another cultural hurdle. We understand that tax structure rules can preclude companies from taking a long term lease as this has a disproportionate effect on their liabilities. It is also a factor that intentional occupiers have a different corporate culture when it comes to property commitments where more common lease terms are around 3 – 5 years rather than 10 – 15 years and a number of these companies will place an absolute prohibition on long term commitment.

7.0 PUBLIC SECTOR CUTS

7.1 The Impact of public sector cuts nationally

The public sector has expanded dramatically in employment and spending terms over the last decade with many local economies becoming dependent on public sector despite strong aggregate economic growth from the late 1990's onwards. When considering the overall public sector perhaps it is important to remember that a strong dependency on one or two large public sector employers (e.g. military base or hospitals) in a city can significantly skew the figures.

Clearly the economic footprint of the public sector is significant. As the largest employer and single source of demand across the economy there is a marked impact on both the wider business base and upon the level of consumer spending.

The public sectors cuts raise many questions for analysis for investors and economists alike, including:

- How severe will they actually be?
- How many public sector jobs will be lost?
- Which sectors will be affected the most by the spending cuts?
- How will they be applied? For instance what would be the balance between wages, job cuts and procurement?
- Will the private sector response be enough to drive economic growth alone?

Aside from direct job losses in public services, the cuts in employment are likely to come from reduced procurement on goods and services. Clearly the public sector accounts for a strong proportion of total sales in both service and production activities, with the highest footprint in research and development, manufacture of medical and precision instruments and sewerage/refuse collection.

In general, the sectors with the highest dependency appear to be those directly supplying products to deliver public services, e.g. health equipment, machinery and fuel. Although the proportion of research and development sector output accounted for by the government seems very high, the majority of this originates from the health sector (56.6%). Whilst this sector also captures research grants and contracts to Universities and research funding to Non Departmental Public Bodies. In a European context, on average around 38% of total spending on R&D activities originates from Government institutes or higher education spending.

7.2 Cambridge Public Sector Cuts

Cambridge as a city is not hugely exposed to public sector in terms of the knock on effects to the wider city economy. It is suggested that with the skill levels of public sector workers being relatively high compared to the rest of the economy with a significant proportion having degree level of above qualifications, around 80% of those losing their jobs could be expected to be re-employed by other industries. However, this assumes that former public sector employees can adjust to the different conditions in the private sector, and demand exists.

Cambridge is well placed to recover quickly from the cuts largely because of the strength of the private sector labour markets with the core labour market characteristics having a solid enterprise export base, accessibility and connectivity.

Using the broad industry definition, the local authority with the highest proportion of employment within the public sector is Oxford at 51% which demonstrates the influence of major employers within the public sector, in this case the University of Oxford. Similarly this is reflecting the high ranking of Cambridge being the fourth highest local authority with 42.8% of employment within the public sector. Not surprisingly, higher education is very important in Cambridge, however for the purposes of this Employment Land Study we have not considered potential cuts in Higher Education.

We highlight the likely sectors within the Cambridge public sector that offer the most insightful narratives of how cuts will be met and the likely effect on jobs and vacant office space. A key cut is in business, innovation and skills, where the spending savings here have concentrated on efficiency and resource savings but also in the reduction of non departmental bodies and the abolishment of regional development agencies. This sector is particularly relevant in the context of EEDA and their holdings at Vision Park, Histon.

It is suggested cuts in other public services such as legal activities, advertising, accountancy, market research, call centres, secretarial support and recruitment agencies will contribute to the overall effect.

New business start ups have been emphasised as a key recovery route for the UK economy and will be in Cambridge. Some of those losing their jobs are likely to set up new business especially if the drive towards private provision of public services to improve efficiency is implemented which could provide opportunities for those previously working in the provision of such services in the public domain.

The cuts to public sector will impact on other Business's in Cambridge chiefly in two different ways;

- Supply chain effects. Whereby current procurement spending by one industry hits the sales of another industry with knock-on effects on other industries in the supply chain.
- Consumer spending effects. Whereby cutting jobs in one industry leads to reduced purchasing power and a fall in sales and other industries which knock on effects as those industries cut purchasers and jobs.

Translating these effects onto the Cambridge commercial property market needs careful consideration.

Whilst public sectors occupy a significant amount of commercial space within Cambridge, a large number of these facilities are specifically constructed for purpose and not easily

occupy able by alternative business. Examples of this may be the fire service building at Cambridge Research Park or existing MOD facilities.

It is also often the case that whilst there have been some high profile closures around Vision Park, in the majority of instances staff numbers within departments will contract rather than full closures and therefore this may result in the short to medium term in existing space held by the authorities just being more sparsely populated.

It is often the case with public bodies that long term leases are put in place at the outset to benefit from short term Landlord incentives which in the future may make the space difficult or costly to exit.

Therefore, there will be a significant time lag between actual job cuts being made and the availability of the space in the market. It may be the case that in order to exit existing facilities there will be requirements for up front payments either surrender premiums or dilapidation settlements.

8.0 THE ONGOING VIABILITY OF CAMBRIDGE'S MAJOR EMPLOYMENT SITES

8.1 Existing Allocated Site Activity

The Land at Coldhams Lane, identified in the Employment Land Review as a site that comprises a former tip with up to 90 m of landfill which has potential for employment development for long term and has recently been sold by Land Securities to Anderson Design and Build who we understand are not looking to pursue any employment uses at this time.

A further site sale also mentioned in the 2008 report was the National Extension College site at Purbeck Road which Homerton College have recently purchased. This comprises a total of 3.13 acres which was home to approximately 40,000 sq ft of commercial space. There are no firm plans for the site's redevelopment at this stage, although we suspect due to the nature of the purchaser there may be some form of student accommodation development anticipated in the future.

It has been recently announced that the Spicers site in Sawston is to be sold which provides a mix of industrial buildings of approximately 300,000 sq ft which potentially could be extended along with a mix smaller commercial office and studio buildings.

Commercial Site For Alternative Uses

Case studies of city centre sites which have been redeveloped include Neath Farm, Church End, Cherry Hinton which comprised a site of 2.02 acres which gained consent for 40 new residential units. Previously, the site housed a number of dated, low eves height, high density industrial units. This was predominantly occupied by low value operators including food production and catering companies some of which served the local Cambridge Market. Unfortunately, a significant occupier on the estate, Wicked Cake Company chose to relocate outside of Cambridge to Haverhill where they acquired a second hand facility of approximately 10,000 sq ft as they were unable to identify cost effective space within the city for their requirement and they had a large three phase power requirement. For reference, Haverhill rents are around 50% that of Cambridge and a contributing factor was the fact the senior personal of the company lived close to the town. This is often a significant contributor to relocation of businesses and the impact should not be underestimated for small and medium sized operations.

A further example of commercial site redevelopment in 2011 was the sale of former BT Engineering Centre in Cromwell Road. This 3 acre site to the east of the city centre followed on from other residential redevelopments in that street and sold with outline consent for 140 residential units.

Both of these sites were occupied by functionally obsolete and almost derelict commercial buildings and were economically unviable for redevelopment in a commercial context partially due to their location and also the condition of surrounding properties.

Reoccurring themes to continually be monitored within the Employment Land Review relate to the need to safeguard key employment sites within the city boundaries and resist when possible redevelopment for alternative uses mostly likely residential.

8.2 Northstowe, Cambridge East & Newmarket Road North Update

An outline planning application for a first phase of Northstowe to comprise 1,500 homes together with associated and complimentary uses, infrastructure and services as submitted to South Cambridgeshire District Council at the end of February 2012. The revised Masterplan for the whole town and the development frame work were also submitted. The first phase of the scheme includes 5 hectares (12.3 acres) of employment land including household recycling and foul water pumping stations.

The phased approach was triggered by the downturn in national and local economic prospects and the government spending review of October 2010, following which the A14 road improvement scheme was withdrawn.

This phased approach will hopefully speed up the delivery of the employment land where the developers anticipate a significant employment opportunity with a choice of jobs available across a range of sectors. Office and high technology research and development firms will be concentrated in a business hub linked to the town centre. In a further phase an additional employment area located to the park and ride will in particular provide a wider range of job opportunities.

Northstowe will need to develop a clear identity which will set the tone for the type of employers attracted to the location. At the present time, it remains to be seen to whether Northstowe is considered a Cambridge location or whether it develops its own identity as a stand alone town. It maybe the case that businesses perceive Northstowe in the same grouping as perhaps Bar Hill, Papworth and to a less extent St Ives rather than a Cambridge location. This will be paramount in the ability of Northstowe to attract the high quality office and R&D occupiers they anticipate. This renewed phased approach will hopefully assist with the allocation of appropriate amounts and type of employment land. Up to recently, there were concerns of the Northstowe development being delayed for a long period of time, however the joint promoters Gallagher and Homes and Communities Agency (HCA) hopefully have unlocked the site.

The area plan for Cambridge East provided for 10,000 -12,000 dwellings and 4,000 – 5,000 jobs on 20 – 25 hectares of employment land.

As The Marshall Group now intend to continue to commercially occupy the Cambridge East site for the foreseeable future, this could mean a supply reduction of the 20-25 hectares allocated as part of the redevelopment. At this stage, due to lower levels of activity in the commercial development sector, this loss may not be as detrimental as it would have been if 'boom' economic conditions were maintained since 2007. This substantial allocation may therefore be a useful 'strategic hold' for Cambridge for the long term²⁹.

In addition to the airport, the future of The Marshall Group's holding north of Newmarket Road remains uncertain. At this stage it has been indicated that a residential scheme is being prepared for consideration but no further details or employment land proposals are anticipated.

²⁹ Note that this is Savills' view only; it is not a statement of planning policy

It was suggested at the time in 2008 that the development of Northstowe and Cambridge East should be undertaken in parallel with residential and commercial developments partly because of suggestions that developments such as Cambourne had lagged behind in terms of the employment development. Whilst it is often the perception that developments can go hand in hand, it is often difficult to achieve as business occupiers are naturally reluctant to locate in an area where there is no housing or more importantly immediate amenities present. Often attempts are made by developers to stimulate the employment land development by heavily discounting values and subsidising this element of the scheme. However, in the current climate with section 106 agreements and proposed new levies on development this may be a step too far.

9.0 CONCLUSIONS & OBSERVATIONS

We are confident in the short term that due to a scarcity of modern accommodation in prime locations and further pent up demand from occupiers who in a number of cases are obliged to relocate from their premises and expand, that enquiry levels will increase over the coming years. These are likely to be focused primarily on the larger multinational R&D and professional service sector rather than local businesses and industrial uses. Looking forward, we feel that prices and values have effectively stabilised and Cambridge has not seen the significant discounts in both land and completed stock values that have been experienced in the wider region.

9.1 Medium and Longer term developer sentiment

At the present time there is no doubt that development, investment and occupier interest has all contracted into prime opportunities hence the success of the Cambridge city centre office market and the ongoing success of the Cambridge Science Park since the downturn.

Of greater concern are the ongoing viability issues with the development of any sites other than those in prime locations. If we consider the most recent new developments of industrial and warehouse units at Papworth, Buckingway Business Park and to a lesser extent Kings Hedges in the city centre, all three schemes have not been a commercial success for the original developers. This is primarily due to a significant drop in values since the downturn in late 2007, however it may be that the development appraisals of these sites will only stack up in very specific 'boom' conditions in the future. On a more positive note, the majority of these units are now fully occupied by local businesses and whilst the schemes may not have been a financial success for the investors, the legacy of good quality stock surrounding Cambridge is of course a key benefit.

Considering the longer term development requirements and extending the timescale of forecast from 2026 to 2031 at this stage it is difficult to identify any fundamental differences in strategy required over those time scales. The 2008 study clearly relied upon development data and employment data compiled throughout the boom years and therefore the logical progression if we consider data since 2008 for construction across all three sub-centres inevitably will identify a slower pace of delivery.

Compiling take up and development data at this depressed stage of the cycle is a useful exercise to illustrate average development completions over the last decade through the peaks and troughs of the cycle which should assist with a more accurate long term forecast rather than just considering the boom years.

9.2 Observations Linked to Employment Land Review 2008

The need for sustainable development is also a consistent thread running through the review and again interpretation of this to various employment sectors varies. One particular aspect of this appears to be congestion and the need for green travel strategies for employment land and therefore intensification of development at sites near to established public transport for example station road office development on the siting of more on the outside of the city centre are more commercial vehicle reliant distribution occupiers shows a common sense approach.

Within the city centre and particularly in walking distance of the station and guided bus, occupiers are becoming increasingly accepting of limited parking provisions with a “London” culture emerging where employees and even senior level partners do not expect an allocated parking space as part of their employment package. By way of example, Mills and Reeve solicitors’ current premises comprise 35,000 sq ft and has a total allocation of 175 spaces. Their new offices at Botanic House total 52,000 sq ft and only have an allocation of 50 spaces all of which will be allocated to visitors only. By way of further example, Microsoft whose facility is 78,000 sq ft also only has 50 spaces allocated.

This shift in attitude will give confidence to developers looking to redevelop city centre sites and intensify the density of development that the final product will be acceptable to end occupiers with reduced parking ratios. Outside of the immediate city centre, parking remains an essential requirement of most occupiers and reduced provision will often result in the space being unacceptable to occupiers or alternatively nearby access and estate roads become “overspill” parking areas.

A “bicycle culture” remains strong particularly with the 20 – 35 age group working within the R&D sector. This is particularly relevant for companies locating within the northern fringe

science parks and companies often refuse to consider relocation outside of the city boundary for fear of losing staff.

Rules governing the limitation on the occupancy of new premises in the city are often a source of confusion and uncertainty for business with the definitions being perceived as arbitrary and open to interpretation with a further paradox being suggested that the majority of key employers in the city are in fact multinational companies. The rules are often misquoted or used as propaganda by developers, landlords and agents to unrepresented occupiers in an effort to encourage or dissuade them to consider specific buildings or locations. In the current climate this additional level of uncertainty can lead to relocation or expansion plans being postponed.

Perhaps unsurprisingly it is therefore important that when considering existing and future employment site locations they are generally fit for purpose in terms of sustainability and scale, however it is also of paramount importance that the sites are deliverable from an economic viability stand point and this is likely to remain the sole most significant hurdle in the future for the B1c, B2 and B8 uses as well as B1a and b user who prefer to locate in new buildings outside of the city centre.

One key consideration for developers contemplating the development of employment sites outside of the established prime locations is that rental and capital values of commercial product drops significantly once outside of city boundary. By way of an example, with city centre office rents peaking at around £30 per sq ft there is modern new industrial stock available in Buckingway, Swavesey with deals deliverable at around £12 per sq ft.

Once the boundaries of Cambridge city are left, occupiers begin to contemplate locating in surrounding towns as alternative locations as they are unable to benefit 'The Cambridge Effect'. In the case of Buckingway Business Park, office occupiers would also contemplate offerings at Hinchinbrooke Business Park, Huntingdon, and St Ives Business Park where modern accommodation can be easy to acquire.

Therefore in the medium term it is important that the focus remains upon the deliverability of product which will require the selective management of prime commercial opportunities and an acceptance that many city centre prime sites in either broken ownership or housing older buildings are unviable for redevelopment with comparable albeit new employment product.

Over the past two decades office and R&D completions in Cambridge have totalled in excess of 4,000,000 sq ft or an average of 200,000 sq ft per annum. There have been clear peaks and troughs in terms of the delivery of this space and perhaps unsurprisingly since the economic slowdown towards 2007 between 2000 and 2011 completions averaged

approximately 100,000 sq ft per annum although the previous 5 year period 2002 – 2006 showed an average of almost 345,000 sq ft per annum.

It is difficult to see how this level will be sustained over the next decade although considering the past two decades when looked at in conjunction with demolitions and changes of use office stock in Cambridge has effectively increased by nearly 100%.

Since the beginning of 2007 around 50% of the space developed has been speculative, with about 50% pre-let or pre-sold as purpose-built facilities. We would however point out that because of the time lag of securing a site for development, obtaining planning consent and funding in 2012 we only anticipate limited speculative stock being constructed in the office and R&D sectors and no new speculative development in the city or south Cambridgeshire in the industrial and warehouse sectors.

The key hurdles to completing pre-let or pre-sale transactions with occupiers are as follows:-

- Lease Term Commitment - As Cambridge has a bias towards the R&D sector, often companies are funded by venture capitalists and focus upon specific product development which has a relatively short term development programme typically between 3-5 years. It is therefore problematic for many occupiers to commit to a fixed term of 10 or 15 years which is required by developers and lenders to finance construction.
- Parent Company Consent – Our understanding is that a large number of occupiers in the region are often ultimately owned by overseas parent companies, the majority of these being from the US, Germany, Japan or the Far East. They are often unwilling to commit to guarantee leases for their UK subsidiary companies and in the event that they do again they are not used to committing to 10 – 15 year terms. We have failed to conclude on a number of potential transactions where the UK based subsidiary has been prepared to proceed, but held back by their parent company.
- Timing of Development – Typically occupiers will require their buildings within a 6 – 9 month time frame and they also often need to undertake their own costly and time consuming fit-out programmes. It will often take up to 12- 18months to deliver a warehouse facility including gaining planning consents and longer for an office or R&D scheme. As an alternative, developers are now often achieving detailed planning consents on the sites they own and putting in place ‘fast track development agreements’ with contractors, many being confident of delivering an industrial

warehouse building within 9-months of commitment from an occupier and 12-18 months for office or R&D schemes.

The availability of R&D and office space has fluctuated with overall availability towards the end of 2011 decreasing albeit primarily as there was no new speculative development being completed and no significant releases of older space, however throughout 2012 a significant amount of small second hand units have returned to the market but the availability of Grade A space which fell throughout 2011 now stands at its lowest point for 10 years. A full schedule is attached as Appendix 1.

Appendix 1

Appendix 1 - Schedule of Availability

No	Address	From sq ft	To sq ft	Rent/psf	Type - Office/Lab	Grade
PRIME CITY CENTRE						
1	90 Hills Road, Cambridge	408	9,030	£27.50	Office	Grade A
2	24 Hills Road, Cambridge	2,880	5,830	£27.50	Office	Grade A
3	Lockton House, Clarendon Road, Cambridge	2,084	2,084	£21.54	Office	Grade B
4	Lockton House, Clarendon Road, Cambridge	5,240	5,240	£21.50	Office	Grade B
5	20 Station Road, Cambridge (Formerly the Leda House)	2,443	8,195	£28.50	Office	Grade B
Total			30,379			
SECONDARY CENTRAL LOCATION						
6	Westbrook Centre	TBC	10,000	£18.00 £20.00	Office	Grade B
7	Poseidon House, Castle Park, Castle Hill	2,510	8,900	£15.50	Office	Grade B
8	Blackhorse House, Castle Park	4,633	19,886	£16.50	Office	Grade B
9	Mount Pleasant House, Cambridge	5,012	5,012	£18.00	Office	Grade B
10	Units 5 & 6, Wellbrook Court, Cambridge	2,075	6,905	£18.50	Office	Grade B
11	St Andrew's House, St Andrew's Road, Cambridge	TBC	7,600	£22.00	Office	Grade A
12	Castle Street, 24 St Giles Court, Cambridge	4,173	10,109	£21.00	Office	Grade B
13	Eden House, Batemen Street, Cambridge	TBC	9,810	TBC	Office	Grade A
14	Henry Giles House, Chesterton Road, Cambridge	2,712	7,757	£12.00	Office	Grade B
15	Elizabeth House, 1 High Street, Chesterton, Cambridge	5,593	5,593	£17.33	Office	Grade B
16	Gibson House, 57-61 Burleigh Street, Cambridge	2,486	7,544	£16.00	Office	Grade B
17	Unit 200, Rustat House, Clifton Road, Cambridge	5,706	5,706	£20 refurbed	Office	Grade B
18	Unit 100, Rustat House, Clifton Road, Cambridge	5,741	11,484	£20.00	R&D	R&D
19	Gonville Place, 95-97 Regent Street, Cambridge	7,500	8,450	£24.00	Office	Grade B
20	Shaftsbury House, Shaftsbury Road, Cambridge	5,460	5,460	TBC	Office	Grade B
21	Homerton Business Park, Purbeck Road, Cambridge	2,776	7,530	£15.00	Office	Grade B
22	Lothbury House, Newmarket Road, Cambridge	2,248	7,612	£18.50	Office	Grade A
23	The Quorum, Barnwell Road, Cambridge	1,570	9,729	£15.50 - £16.00	Office	Grade B

SUBTOTAL Cambridge central 155,087

CAMBRIDGE - NORTHERN CLUSTER						
25	Newton House, Cambridge Business Park, Cambridge	5,500	11,000	£23.50	Office	Grade B
26	Byron House, Cambridge Business Park, Cambridge	6,987	6,987	£23.50	Office	Grade A
27	Cavendish House, Cambridge Business Park, Cambridge	TBC	22,479	£26.00	Office	Grade A
28	Unit 9b Cambridge Science Park, Milton Road, Cambridge	TBC	5,000	£23.00	Office / R&D	R&D
29	Unit 10, Innovation Centre, Cambridge Science Park, Milton Road, Cambridge	2,100	2,100	£39 pa all inclusive	Office / R&D	Grade A
30	Unit 11 Cambridge Science Park, Milton Road, Cambridge	1,313	1,313	TBC	Office / R&D	Grade A
31	Unit 15-16-17 Cambridge Science Park, Milton Road, Cambridge	1,270	3,843	TBC	Office / R&D	Grade A
32	Unit 18 Cambridge Science Park, Milton Road, Cambridge	2,561	2,561	TBC	Office / R&D	Grade A
33	Unit 23, Innovation Centre, Cambridge Science Park, Milton Road, Cambridge	354	354	£39 pa all inclusive	Office / R&D	Grade A
34	Unit 27 Cambridge Science Park, Milton Road, Cambridge	11,517	11,517	£11.50	Office / R&D	R&D
35	Unit 140 , Cambridge Science Park, Milton Road, Cambridge	12,589	26,238	£20.00	Office / R&D	R&D
36	Unit 201 Cambridge Science Park, Milton Road, Cambridge	3,871	3,871	TBC	Office / R&D	Grade A
37	Unit 302, Cambridge Science Park, Milton Road, Cambridge	1,488	1,488	TBC	Office	R&D
38	Unit 322, Cambridge Science Park, Milton Road, Cambridge	1,614	1,614	TBC	Office	R&D
39	Unit 325a, Cambridge Science Park, Milton Road, Cambridge	980	980	TBC	Office	R&D
40	Unit 326, Cambridge Science Park, Milton Road, Cambridge	5,780	5,780	TBC	Office	R&D
41	Unit 332, Cambridge Science Park, Milton Road, Cambridge	9,600	9,600	£23.00	Office	R&D
42	Unit 400 Cambridge Science Park, Milton Road, Cambridge	3,000	6,432	£21.80	Office	Grade A
43	Edinburgh House, St Johns Innovation Park, Cambridge	1,095	14,354	£22.5-£25	Office	R&D
44	Platinum Building, St John's Innovation Park, Cambridge	2,500	2,500	£21.50	Office	R&D
45	Vitrum Building, St Johns Innovation Park, Cambridge	6,322	6,322	£21.50	Office	R&D
46	Jeffreys Building, St John Innovation Park, Cambridge	3,950	10,000	£21.50	Office	Grade B

SUBTOTAL Northern Cluster 156,333

CAMBRIDGE - WIDER AREA BUSINESS PARKS						
47	Babraham Research Campus, Meditrina Building	300	300	TBC	R&D	Grade B
48	Babraham Research Campus, Meditrina Building	500	500	TBC	Office / R&D	Grade B
49	Babraham Research Campus, Meditrina Building	1,000	1,000	TBC	Office / R&D	Grade B
50	Trinity Court, Buckingway Business Park, Swavesey	1,633	6,719	£15.00	Office	Grade B
51	Unit 1 Carisbrooke Court, Buckingway Business Park, Swavesey	7,320	7,320	£11.00	Office	Grade B
52	Prospect House, Buckingway Business Park, Swavesey	3,664	9,685	TBC	Office	Grade B
53	Building 2020, Cambourne Business Park	6,500	18,846	£20.00	Office	Grade A
54	Building 2020, Cambourne Business Park	1,787	1,787	£20.00	Office	Grade A
55	Building 2030, Cambourne Business Park	8,797	8,797	£20.00	Office	Grade A
56	Building 2030, Cambourne Business Park	4,506	6,480	£19.00	Office	Grade A
57	Building 1020, Cambourne Business Park	8,000	16,135	£18.75	Office	Grade A
58	Building 2010, Cambourne Business Park	8,730	8,730	£19.00	Office	Grade A
59	Building 7200, Suite 7222, Cambridge Research Park, Cambridge	2,620	2,620	£18.50	R&D	Grade A
60	Building 7300, Cambridge Research Park, Cambridge	2,326	2,326	TBC	R&D	Grade A
61	Building 2000, IQ Cambridge Research Park, Cambridge	4,934	10,455	£16.50	R&D	Grade A
62	1000 IQ Cambridge Research Park, Cambridge	2,343	29,303	£18.50	Office	Grade A
63	Unit 9000, IQ Cambridge Research Park, Cambridge	6,596	65,790	£14.50	Office	Grade A
64	CPC4, Capital Park, Fulbourn	1,600	1,600	£22.50	Office	Grade A
65	CPC1, Capital Park, Fulbourn	3,250	4,816	TBC	Office	Grade A
71	Mortlock House, Station Road, Histon	3,732	10,571	£18.50	Office	Grade B
72	The Old Rectory, Church Lane, Fulbourn, Cambridge	8,112	8,112	TBC	Office	Grade B
73	W2, High Street, 7, Cambourne	5,437	12,618	£15.50	Office	Grade B
74	Compass House, Vision Park, Histon	2,240	8,932	£20.00	Office	Grade B
75	2nd Floor, Victory House, Vision Park, Histon	5,967	5,967	£20.00	Office	Grade B
76	First Floor, Victory House, Vision Park, Histon	7,444	7,444	£20.00	Office	Grade B
77	Ground Floor, Victory House, Vision Park, Histon	7,444	7,444	£20.00	Office	Grade B
78	Pioneer House, Vision Park, Histon	938	938	£18.50	Office	Grade B

79	Pioneer House, Vision Park, Histon - Unit 7	761	1,639	£18.50	Office	Grade B
80	Pioneer House, Vision Park, Histon - Unit 6	719	719	£18.50	Office	Grade B
81	Discovery House, Vision Park, Histon	4,519	4,519	£16.81	Office	Grade B
82	Enterprise House, Unit 5, Vision Park, Histon	1,500	3,532	£19.72	Office	Grade B
83	Trust Court, Unit 5, Vision Park, Histon	3,794	3,794	£17.00	Office	Grade B
84	Riverside Scheme Granta Park, Great Abingdon	2,650	27,360	£16.50- £18.50	Office / R&D	R&D
85	Broers Building	2,318	13,517	£26.75	Office	Grade A

SUBTOTAL Wider Area Business Parks 320,315

CAMBRIDGE - OUT OF TOWN						
86	Cambridge Technology Centre, Melbourn	690	24,500	£14.50	Office / R&D	R&D
87	The Da Vinci (DV) building, Melbourn Science Park, Melbourn	18,575	41,167	£19.50	Office	Grade A
88	The Courtyard, Melbourn Science Park, Melbourn	2,424	10,571	£16.00	Office	Grade A
89	Beech House, Unit B4, Melbourn Science Park,	2,021	2,021	£28.00	Office	Grade A
90	Beech House, Unit B5, Melbourn Science Park	2,000	2,000	£28.00	Office	Grade A
91	Brookfield Technology Centre, Cottenham	5,016	5,016	£11.78	Office	Grade B
92	Great Chesterford Court, Great Chesterford	636	5,309	TBC	Office	Grade B
93	Premier House, Linton, Near Cambridge	3,746	11,507	£11.50	Office / R&D	R&D
94	The clinic & Laboratory Centre, Bourn Hall, Bourn	4,648	13,144	TBC	R&D	R&D

SUBTOTAL Out of Town 115,235

GRAND TOTAL	495,457
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Pipeline Development

No	Address	From sq ft	To sq ft	Rent/psf	Type - Office/Lab	Grade
CAMBRIDGE - CENTRAL						
1	CB1, Station Road	TBC	53,000	TBC	Office	Grade A
2	50 & 60 Station Road, Cambridge	62,500	125,000	TBC	Office	Grade A
3	Academy House, Hills Road, Cambridge		30,762	TBC	Office	Grade A

SUBTOTAL Cambridge Central 278,000

CAMBRIDGE - NORTHERN CLUSTER						
4	Unit 428 Cambridge Science Park, Milton Road, Cambridge	TBC	36,000	TBC	R&D	R&D
5	Unit 436 Cambridge Science Park, Milton Road, Cambridge	TBC	40,000	TBC	R&D	R&D
6	Trinity Hall Land	TBC	110,000	TBC	R&D	R&D
7	Pony Paddock Site, St Johns Innovation Park, Cambridge	TBC	23,000	TBC	Office	Grade A

SUBTOTAL Northern Cluster 209,000

CAMBRIDGE - WIDER AREA BUSINESS PARKS						
8	Babraham Research Campus, Moneta Building	TBC	20,000	TBC	Office / R&D	Grade B
9	Building 4010 Cambourne Business Park	6,200	48,000	TBC	Office	Grade A
10	Plot 6000 Cambourne Business Park	TBC	108,350	TBC	Office	Grade A
11	Plot 5000 Cambourne Business Park	TBC	99,400	TBC	Office	Grade A
12	Plot 3000 Cambourne Business Park	TBC	152,650	TBC	Office	Grade A
13	Plot 4000 Cambourne Business Park	TBC	50,000	TBC	Office	Grade A
14	Cambridge Bio Medical Campus, Addenbrookes	10,000	1,600,000	TBC	R&D	R&D
15	Plot 3000, Cambridge Research Park, Cambridge	TBC	66,000	TBC	Office / R&D	R&D
16	Plot 4000, Cambridge Research Park, Cambridge	TBC	66,000	TBC	Office / R&D	R&D
17	Plot 5000, Cambridge Research Park, Cambridge	TBC	66,000	TBC	Office / R&D	R&D
18	Plot 6000, Cambridge Research Park, Cambridge	TBC	66,000	TBC	Office / R&D	R&D
19	Plot 8000, Cambridge Research Park, Cambridge	TBC	66,000	TBC	Office / R&D	R&D

CAMBRIDGE - WIDER AREA BUSINESS PARKS						
20	Lakeview, 8000 Cambridge IQ and land parcels	5,000	60,000	TBC	Office	Grade A
21	CPC2, Capital Park, Fulbourn	TBC	30,000	TBC	Office	Grade A
26	Iconix 4, 5, 5 & 6	17,900	70,000	£22.50	Office	Grade A
27	Granta Park Somerville Building	TBC	33,000	TBC	Office / R&D	R&D
28	Granta Park The Future Building, Great Abingdon, Cambridge	TBC	47,000	TBC	Office / R&D	R&D
29	Building 200, Great Abingdon, Cambridge	20,000	60,000	TBC	Office	Grade A
30	Building 400, Great Abingdon, Cambridge	20,000	24,000	TBC	Office	Grade A
31	Building 500, Great Abingdon, Cambridge	20,000	30,000	TBC	R&D	R&D
32	GP East - Bespoke Buildings, Great Abingdon, Cambridge	20,000	216,000	TBC	Office / R&D	R&D

SUBTOTAL Wider Area Business Parks 2,978,400

CAMBRIDGE - OUT OF TOWN						
35	Cygnus Business Park Phase 2, Swavesey	TBC	14,677	TBC	Office	Grade A
37	Dotterall Hall, Balsham	2,000	13,455	TBC	Office	Grade A
38	Rook Tree Farm, Great Wratting	1,205	7,740	TBC	Office	Grade A
39	Hillside Mill Quarry, Swaffham Bulbeck	822	5,712	TBC	Office	Grade A
40	Greenside House, Saxon Way, Bar Hill	4,587	9,174	TBC	R&D	R&D

SUBTOTAL Out of Town 50,758

GRAND TOTAL	3,516,158
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To: Executive Councillor for Planning and Climate Change: Councillor Tim Ward
Report by: Head of Planning Services
Relevant scrutiny committee: Development Plan Scrutiny Sub Committee 16/10/2012
Wards affected: All Wards

CAMBRIDGE LOCAL PLAN - TOWARDS 2031 Key Issues arising from Issues and Options Consultation & Timetable Update

Not a Key Decision

1. Executive summary

- 1.1 The Local Plan is a key document for Cambridge. The current Local Plan was adopted in 2006. It sets out a vision, policies and proposals for future development and land use in Cambridge to 2016 and beyond.
- 1.2 The review of the Local Plan is currently underway. The Issues and Option stage has recently been completed with consultation on the Issues and Options Report taking place for six weeks between 15 June to 27 July 2012. The Issues and Options Report set out a series of issues and options relating to the future planning and development of the city over the 20 years and asked for people's views including local residents and other key stakeholders. All documents were available on the Council's website and at libraries for people to view. A series of exhibitions were also held across the City and over 11,000 comments have been received from 858 respondents.
- 1.3 This report sets out the key issues arising from the consultation for information as well as the current timetable, joint working arrangements and approach to preparing the next stages of the Plan.

2. Recommendations

- 2.1 This report is being submitted to the Development Plan Scrutiny Sub-Committee for prior consideration and comment before decision by the Executive Councillor for Planning and Climate Change.
- 2.2 The Executive Councillor is recommended:

- a) To note the key issues arising from the consultation on the Issues and Options Report (Appendix A);
- b) To note the current timetable and ongoing approach to the duty to cooperate and joint working (paragraphs 3.21 to 3.23); and
- c) To endorse the approach to preparing the next stages of the Plan as set out in paragraph 3.11.

3. Background

- 3.1 The Local Plan is a key document for Cambridge. The current Local Plan was adopted in 2006, and it sets out a vision, policies and proposals for future development and land use in Cambridge to 2016 and beyond.
- 3.2 The Council agreed in March 2011 to press ahead with the review of the Local Plan, with the aim of having a new Local Plan adopted by April 2014. Since March 2011, the Localism Act and the National Planning Policy Framework (NPPF) have both come into effect. Whilst there have not been any substantial changes to the way plans are prepared, the abolition of Regional Spatial Strategies means that future levels of housing and employment provision should be set through Local Plans. The NPPF also gives a transitional period for Councils to update their plans to ensure consistency with the framework. Whilst the current Local Plan is considered to be in overall conformity with the NPPF, it is important that the Council continues to move forward with the review and make progress.
- 3.3 The preparation of a Local Plan involves a number of stages, including public consultation. As part of an early stage, the Council has undertaken a significant amount of evidence base studies in order to inform the development of issues and options including workshops and one to one meetings with various stakeholders. The Issues and Options stage pulls all of this information together in a report which outlines the types of issues facing the city over the next 20 years and the potential policy options that will need to be put in place to address those challenges.
- 3.4 The Issues and Options Report was agreed for consultation at Development Plan Scrutiny Sub Committee on 29 May 2012 (<http://www.cambridge.gov.uk/democracy/ieListDocuments.aspx?CId=184&MId=681&Ver=4>) and consultation took place for six weeks between 15 June to 27 July 2012. The report included a vision, strategic objectives, and specific chapters relating to the future spatial strategy, possible opportunity areas and other topic areas.

3.5 In accordance with the Consultation and Community Engagement Strategy¹, consultation arrangements included:

- Consultation for 6 weeks between 15 June to 27 July 2012;
- Letters and emails informing consultees of consultation dates and how to view and respond to the consultation material;
- A public notice;
- All documents were made available on the Council’s website and Customer Service Centre including a small exhibition;
- Libraries received hard copies for people to access and view;
- An article on the Issues and Options Report and consultation arrangements in the summer edition of Cambridge Matters, which is issued to every household in the city;
- A specific Local Plan news blog was developed in order to provide information as well as using the Council’s Twitter page to provide updates.
- An interactive response form was available online, as well as making electronic forms available. Letters and emails were also accepted as part of the process in order to maximise the number of responses. Comments on every part of the Issues and Options Report were also accepted.

3.6 A series of exhibitions across the city were also held:

Organisation/Event	Dates	Where
West Cambridge Exhibition	Tues 19 th June 3pm - 8 pm	West Cambridge Sports Pavillion, Wilberforce Road, CB3 0EQ
North Cambridge Exhibition	Sat 23 rd June 10am - 3pm	The Meadows Community Centre
East Cambridge Exhibition	Tues 26 th June 3pm - 8 pm	Barnwell Baptist Church
South West Cambridge Exhibition	Sat 30 th June 10am - 3pm	Trumpington Village Hall
South East Cambridge Exhibition	Tues 3 rd July 3.30pm - 8 pm	Cherry Hinton Village Centre
Central Cambridge Exhibition	Wed 4 th July 10am - 8 pm	Small Hall – Guildhall
Central Cambridge Exhibition	Sat 7 th July 10am - 3pm	The Big Weekend
North East Cambridge Exhibition	Tues 10 th July 3pm - 8 pm	Brown’s Field Community Centre
Central Cambridge Exhibition	Mon 16 th July 10am - 8 pm	Small Hall – Guildhall
East Cambridge Exhibition	Sat 14 th July 1pm - 5pm	Ross Street Community Centre

¹ Accessible at <http://www.cambridge.gov.uk/ccm/navigation/planning-and-building-control/planning-policy/local-plan-review/>

Organisation/Event	Dates	Where
South Cambridge Exhibition	25 th July 12pm to 2pm	Addenbrooke's Concourse

- 3.7 A further exhibition was organised at Newnham Croft Primary School on 13th July 2012. Whilst some exhibitions were more popular than others, over 350 people attended the exhibitions. The County Council were present at all exhibitions as part of the consultation on the first stage of the Transport Strategy.
- 3.8 A specific event was organised by FeCRA, primarily for Resident Associations, on 16 June 2012. This event was well attended and received. Officers also attended other resident association meetings to discuss the Issues and Options Report and how to respond. An exhibition stall was staffed at the Big Weekend on 7th July 2012 and the Travel to Work Electric Car Event on 5th July 2012. Leaflets were also given out at Cambridge Station on a number of separate occasions as well as at Addenbrooke's.
- 3.9 The Cambridge News also ran a series of articles during the consultation period and advertised the exhibitions.

Key Issues

- 3.10 Over 11,000 comments have been received to the Issues and Options Report and its accompanying Sustainability Appraisal from 858 respondents. This is an excellent response, and is very encouraging as part of the first main stage of consultation. All comments have been registered and a quality check of those comments is almost complete. This has been undertaken to ensure that all comments are tied to the relevant parts of the report.
- 3.11 Appendix A includes a summary of the key issues. The appendix has been structured by chapter of the Issues and Options Report and key issues pulled out for each option. This is just for information at this stage prior to more detailed reports being presented to Development Plan Scrutiny Sub Committee between November 2012 to January 2013. These future reports will analyse the comments received and options to take forward in more detail and seek a steer from Members on the approach to take forward in the draft plan. Officers then propose to draft the relevant policies for each chapter and present to Development Plan Scrutiny Sub Committee at the end of March 2013. The draft Plan for consultation will be considered by Environment Scrutiny Committee and Full Council in May 2013. A schedule of future reports to Development Plan Scrutiny Sub Committee is outlined in Appendix B.

3.12 The key issues which received most interest and comment relate to:

- The need for a joint plan with South Cambridgeshire District Council in order to plan for housing and employment provision across the two areas;
- Recognition of housing need but significant concern about the environmental impacts as well as the ability for appropriate infrastructure to be provided;
- Mixed support for further development in the Green Belt. Many respondents made the point that the Green Belt should be protected;
- The majority of the land within the broad locations are considered to be important to the setting and special character of the City;
- Support for the continued redevelopment at the station and the fringe sites developments at the Southern Fringe and North West Cambridge.
- Concern about the capacity in the City Centre, especially in relation to space and the quality of the public realm;
- Support for employment led development at Northern Fringe East although other uses have been suggested;
- General support for the opportunity areas put forward along with suggestions for other opportunity areas such as Mitcham's corner;
- Support for being ambitious in relation to climate change and water related policies although concern about viability and implementation;
- Support for options relating to design, historic environment, landscape and biodiversity;
- Mixed support for options relating to density, tall buildings, space standards and lifetime homes;
- Support for employment provision although concern about the lack of land for provision;
- Support for local, independent shops and diversity in centres;
- Support for a sub regional community stadium in principle although the majority of those in support live outside the city and are Cambridge United supporters. There was no overall support for a particular site;
- Support for an ice rink in Cambridge;
- Support for continued emphasis on non car modes;
- Support for a review of residential car parking standards to better reflect national guidelines; and
- Support for the option relating to timely provision of infrastructure.

- 3.13 A number of specific comments have been provided in relation to the Council's online consultation system. Officers have already provided comments to the company that supplies and maintains the system. Comments will also be taken on board as the consultation arrangements are made for the next round of consultation.
- 3.14 When considering joint issues affecting both Cambridge and South Cambridgeshire, information will be provided to this committee on the responses made on these issues to South Cambridgeshire's Local Plan consultation. This will provide a fully rounded view of the concerns of local residents in both authorities and other stakeholders.

Issues and Options 2 – Consultation on Site Options

- 3.14 In parallel to analysing the comments received to the Issues and Options Report and pulling the draft Plan together, consultation on site options for a range of uses is scheduled for January to February 2013. A separate report to this committee outlines the methodology for this work. The consultation will outline potential sites for allocation in the new Local Plan and give local residents and other stakeholders the opportunity to comment prior to consultation on the draft Plan in June and July 2013. It may also include other matters such as consultation on more detail in relation to car and cycle parking standards and space standards.
- 3.15 Part of this consultation will be joint with South Cambridgeshire District Council and will include site options on the edge of Cambridge as well as providing appropriate context on the development strategy alternatives for the wider Cambridge area.

Duty to Co-operate and Joint Working Arrangements

- 3.16 The Council has a duty to cooperate with South Cambridgeshire District Council, the County Council, other districts and public bodies as part of preparing the new Local Plan. This requirement introduced by the Localism Act, requires the Council to engage constructively, actively and on an on-going basis on 'strategic matters' regarding sustainable development or use of land that has or would have a significant impact on at least two planning areas. The NPPF says that Councils should work collaboratively with other bodies to ensure that strategic priorities across local boundaries are properly coordinated and clearly reflected in individual Local Plans.
- 3.17 The Council will be expected to demonstrate evidence of having effectively cooperated to plan for cross boundary impacts when the

Local Plan is submitted for examination, as will South Cambridgeshire District Council. The on-going approach to joint working is therefore now a specific legal requirement and it will be necessary to provide formal evidence of the cooperation as part of the plan making process. However, the NPPF is not prescriptive about how Councils work together or how evidence of co-operation should be presented.

- 3.18 Whilst Cambridge City Council and South Cambridgeshire District Council are preparing separate plans, this does not prevent a comprehensive approach being developed and sound arrangements have been put in place in order to ensure this. Given the close functional relationship between Cambridge and South Cambridgeshire, the Councils are working jointly to ensure that cross boundary issues and relevant wider matters are addressed in a consistent and joined up manner. The Councils have been working together throughout the preparation of the Issues and Options consultations on the Local Plans, and also the parallel consultation on issues for a new Transport Strategy for Cambridge and South Cambridgeshire.
- 3.19 In addition, the Council has constructively responded to South Cambridgeshire's Issues and Option consultation and consultation on the Transport Strategy. Both of the responses were agreed at Development Plan Scrutiny Sub Committee on 11 September 2012 (<http://www.cambridge.gov.uk/democracy/ieListDocuments.aspx?CId=184&MIId=686&Ver=4>).
- 3.20 It is recognised that there is a close link between planning for growth and development and for transport and accessibility to ensure that growth can be accommodated in the most sustainable way and that people can access the services and facilities they need in an efficient and affordable way. A key part of developing and delivering a sustainable development strategy for this area involves the preparation of a long-term transport strategy which takes into account planned growth. An important aspect of identifying the preferred development strategy will be testing the transport implications by modelling using the Cambridgeshire Sub Regional Model to assess likely implications of development in terms of impact on network, journey time, commuting patterns and impacts on accessibility. This will also consider what measures and enhancements might be put in place to help mitigate impacts of development and enhance accessibility. This work will take place as part of the preparation of the Transport Strategy and will form part of the evidence base to the new Local Plans.

Timetable

3.21 The Council will continue to work jointly with South Cambridgeshire District Council and the County Council as plan preparation continues. Officers have jointly reviewed the Local Plan and Transport Strategy timetables. The aim has been to align the Councils' timetables as far as possible at least to the Submission Local Plan stage. A revised timetable is included below, which shows that the Local Plan timetables are now aligned for Issues and Options 2 (January – February 2013) and Draft Local Plan consultation (June – July 2013) and only a month apart for the Submission stage (Cambridge – October 2013, South Cambs – November 2013). It also shows that the Transport Strategy will follow the Local Plan timetable, with the final Transport Strategy forming a supporting document for the plans.

Key Stages in preparing the new Local Plans / Transport Strategy	Cambridge	South Cambridgeshire	County Council
Issues and Options public consultation	June to July 2012	July to September 2012	June to September 2012
Site Options Consultation & Growth options for Assessment for Transport Strategy	January to February 2013	January to February 2013	January to February 2013
Public consultation on Draft Local Plan & Transport Strategy	June to July 2013	June to July 2013	June to July 2013
Submit the Local Plans to the Secretary of State	October 2013	November 2013	October 2013

3.22 The timetable after Submission of the Local Plan will be largely determined by the Planning Inspectorate and will be affected by availability of Inspectors (having regard to the demand from the many authorities now preparing new plans) and the way the Inspectorate wishes to run the two examinations, given the close functional relationship between Cambridge and South Cambridgeshire. Discussions are planned with the Inspectorate in Autumn 2012 which will help give more clarity on the likely adoption date of the respective Local Plans.

3.23 A report outlining the above position in relation to the duty to cooperate, joint working and current timetables was noted by the Joint Strategic Transport and Spatial Planning Group on 13 September 2013

(<http://www.cambridgeshire.gov.uk/CMSWebsite/Apps/Committees/Agendaltem.aspx?agendaltemID=5836>) and a further meeting of this group is being scheduled for the end of November to discuss the joint

Issues and Options 2 consultation (site options) prior to it being considered and agreed for consultation by Development Plan Scrutiny Sub Committee in December 2013 (South Cambridgeshire will also be holding a separate meeting in parallel). This joint consultation will also include site options on the edge of Cambridge, and for Cambridge will include site options for a range of uses across the urban area of the city.

Next Steps

- 3.24 More detailed reports analysing the comments received to the Issues and Options Report and seeking a steer on the way forward will be presented to Development Plan Scrutiny Sub Committee between November 2012 to January 2013. Following this, the draft plan will be put together and presented to Development Plan Scrutiny Sub Committee at the end of March 2013 prior to it being considered by Environment Scrutiny Committee and full Council in May 2013.
- 3.25 In parallel to this, officers will be undertaking site assessment work and preparing for Issues and Options 2 consultation in January 2013. A separate report on this will be presented to Development Plan Scrutiny Sub Committee in December 2012 and will be seeking agreement to consult between January to February 2013.

4. Implications

(a) Financial Implications

- 4.1 There are no direct financial implications arising from this report. The cost of preparing a new Local Plan is a significant one but this has been budgeted for.

(b) Staffing Implications (if not covered in Consultations Section)

- 4.2 There are no direct staffing implications arising from this report.

(c) Equal Opportunities Implications

- 4.3 There are no direct equal opportunity arising from this report. An Equalities Impact Assessment will be prepared as part of the draft Plan stage.

(d) Environmental Implications

- 4.4 There are no direct environmental implications arising from this report. The new Local Plan for Cambridge will assist in the delivery of high

quality and sustainable new developments along with protecting and enhancing the built and natural environments in the City. This will include measures to help Cambridge adapt to the changing climate as well as measures to reduce carbon emissions from new development. Overall there should be a positive climate change impact.

(e) Procurement

4.5 There are no direct procurement implications arising from this report.

(f) Consultation and communication

4.6 The consultation and communications arrangements for the Issues and Options consultation are set out in paragraphs 3.5 to 3.9. These are consistent with the agreed Consultation and Community Engagement Strategy for the Local Plan Review, 2012 Regulations and the Council's code of best practice on consultation and community engagement.

(g) Community Safety

4.7 There are no direct community safety implications arising from this report.

5. Background papers

These background papers were used in the preparation of this report:

- Cambridge Local Plan – Towards 2031 Issues and Options Report June 2012;
<http://www.cambridge.gov.uk/public/docs/local-plan-review-issues-and-options-report.pdf>
- National Planning Policy Framework, March 2012
<http://www.communities.gov.uk/publications/planningandbuilding/nppf>

6. Appendices

Appendix A – Key Issues arising from Issues and Options consultation

Appendix B – Forward Plan of Meeting for Development Plan Scrutiny Sub Committee

7. Inspection of papers

To inspect the background papers or if you have a query on the report please contact:

Author's Name: Sara Saunders
Author's Phone Number: 01223 - 457186
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**Appendix A – Key Issues arising from Cambridge Local Plan –
Towards 2031: Issues and Options Consultation**

CHAPTER 1 - INTRODUCTION	
SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
What is sustainable development for Cambridge	<ul style="list-style-type: none"> • New architecture that is embraced sympathetically with the historic buildings; • Protection of historic core; • Protection of Green Belt and green spaces; • More affordable homes for those working in Cambridge on lower incomes; • Retain its status as a world class centre of excellence.
Working with other authorities	<ul style="list-style-type: none"> • Plan needed but should be a joint plan with South Cambridgeshire District Council and the County Transport Strategy.
General consultation	<ul style="list-style-type: none"> • Document too long to include everyone.
What people like and think is special about Cambridge	<ul style="list-style-type: none"> • Small and compact city; • Historical buildings; • Green spaces; • Cycling accessibility; • The University of Cambridge's standing as a world renowned institution; • The river.

CHAPTER 2 – CAMBRIDGE 2031 VISION	
SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
Option 1: Cambridge 2031 Vision	<ul style="list-style-type: none"> • Considerable support for the Vision, even if only part (often most) of it; • Needs more mention of existing developments, not just new ones; • Needs to remain a compact ‘small town like’ city; • Cambridge should become a beacon for urban design and sustainable development; • Vision should address socio-economic inequalities; • Vision should explicitly mention protection of Green Belt; • No mention of diverse natural environment or wildlife in Vision; • Vision should reflect having healthy lifestyles as a priority; • Needs to better reflect housing needs, anticipated workforce and job growth; • Needs to tie into Vision for surrounding districts, particularly South Cambridgeshire; • More needs to be made of the exceptional heritage of the city and protecting historic buildings.
Strategic Objectives	<ul style="list-style-type: none"> • General support for the strategic objectives; • Still too much of a presumption that the Vision should be based on new development; • Not enough mention of the Green Belt; • More commentary on ‘what is sustainable’ – too ambiguous; • Protecting the ‘university town’ and green spaces should have higher priority; • Need to mention noise and light pollution; • Should be additional objective about minimising the need to travel through new communications and technology.

CHAPTER 3 – SPATIAL STRATEGY	
SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
General issues	<ul style="list-style-type: none"> • The Local Plan for Cambridge must be properly integrated with plans for South Cambridgeshire. Need to look holistically at the housing and economic market area rather than at the administrative area; • Predictions of growth are based on nothing more than speculated extensions that should not form the basis for a level of growth that would damage the special character of the city; • Development of brownfield sites should be maximised and the Green Belt must be preserved; • The new Local Plan should continue with the development strategy set out in the adopted Structure Plan – this remains the most sustainable approach; • Chesterton Fen needs to be developed properly with supporting infrastructure – consideration of the needs of residential boat dwellers must be included in the Local Plan (Conservators of the River Cam); • A core issue is whether we want Cambridge to remain a compact green city; • A radical overhaul of the transport system must go hand in hand with any further development; • Growth should be in excess of that presented in Option 5 (25,000) on the basis of technical work on housing need; • Employment sites should not be converted into housing; • Opportunities are being missed to provide more employment on sites such as Clay Farm and NIAB; • Look to improve the quality and density of existing residential areas; • Create areas for new housing and jobs using the connections formed by the Guided Busway; • Provide adequate and culturally sensitive sites for travelling communities – at least 1% of affordable housing should be earmarked for them.
Option 2: 12,700 new homes to 2031 – urban growth	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Strong level of support for this option; • Infrastructure cannot cope with any further housing provision above this level; • Green Belt land must be protected and under this option no further Green Belt release would be required; • The city should give priority to employment, with some of the 2,060 new homes provided in selected villages in South Cambridgeshire;

	<ul style="list-style-type: none"> • Growth needs to be limited if the Vision for Cambridge is to be achieved. • Current levels of growth will enable a significant level of growth without destroying the quality of the city; • Additional housing growth should be evenly distributed across the region, taking advantage of an improved public transport system; • Need to experience the results of existing developments before we commit to more. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • 12,700 too high – keep to the 10,612 already agreed; • Insufficient to meet identified levels of housing need.
<p>Option 3: up to 14,000 new homes to 2031</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Approach is consistent with enlarging the city whilst maintaining its key qualities; • This would help to meet some of the housing need of the city, particularly affordable housing; • This should be the absolute maximum level of growth that should be planned. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Cambridge cannot support this level of growth without harming the special character and setting of the city; • Infrastructure capacity cannot deal with this level of growth; • The Green Belt must be protected and any further release would set a dangerous precedent; • Insufficient to meet identified levels of housing need; • No further land should be released from the Green Belt on the basis on forecasts for population and housing projections and jobs, as these are an unreliable source of evidence; • Growth should focus on existing urban area with any shortfalls delivered within a new sustainable village located outside of the Green Belt in South Cambridgeshire; • Would result in negative environmental impacts, including adverse effects on landscape, biodiversity and accessible green infrastructure.
<p>Option 4: up to 21,000 new homes to 2031</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • This option would help bring homes and jobs closer together making the city more sustainable. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Cambridge cannot support this level of growth without harming the special character and setting of the city. It

	<p>would compromise the scale and identity of the city;</p> <ul style="list-style-type: none"> • Infrastructure capacity cannot deal with this level of growth; • The Green Belt must be protected and any further release would set a dangerous precedent; • Development would undermine the purposes of the Green Belt; • Not compatible with the principles of sustainability; • Growth should focus on existing urban area with any shortfalls delivered within a new sustainable village located outside of the Green Belt in South Cambridgeshire; • Would result in negative environmental impacts, including adverse effects on landscape, biodiversity and accessible green infrastructure.
<p>Option 5: up to 25,000 new homes to 2031</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • The Local Plan should be ambitious concerning housing; • This option would help bring homes and jobs closer together making the city more sustainable. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Cambridge cannot support this level of growth without harming the special character and setting of the city. It would compromise the scale and identity of the city; • Infrastructure capacity cannot deal with this level of growth; • The Green Belt must be protected and any further release would set a dangerous precedent; • Development would undermine the purposes of the Green Belt; • Not compatible with the principles of sustainability; • Growth should focus on existing urban area with any shortfalls delivered within a new sustainable village located outside of the Green Belt in South Cambridgeshire; • Would result in negative environmental impacts, including adverse effects on landscape, biodiversity and accessible green infrastructure; • Figure is unlikely to be achieved based on historic rates of development.
<p>Option 6: Plan for 10,000 new jobs to 2031</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Support for the lowest number of jobs as infrastructure and the character of city cannot cope with higher levels of growth; • The state of the global economy and fall in public sector employment means higher forecasts are unrealistic; • Encourage jobs growth elsewhere, in areas where they are more needed and / or have less of an impact on

	<p>commuting;</p> <ul style="list-style-type: none"> • Support for the lowest number of jobs as more jobs means more homes; • Future employment may not recover to pre-2000 levels; • Empty units around Cambridge and South Cambridgeshire demonstrate a surplus of units. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Support for a lower number of jobs as infrastructure and the character of city cannot cope with even lowest level of growth; • The Council should adopt an aspirational target and fulfil Cambridge’s potential as a globally significant high tech cluster; • Use longer term employment trends as historic data unreliable.
<p>Option 7: Plan for 15,000 new jobs to 2031</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Most realistic assessment of job creation; • A reasonable balance; • No more than 15,000 unless the infrastructure is improved; • The Council should identify space for these jobs; • Support for at least the same level of job growth as the past; • Supports existing economic plans for Cambridge. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Infrastructure and the character of city cannot cope with higher levels of growth; • More jobs means more homes are needed; • Would damage the character and environment of the city; • Encourage jobs growth elsewhere, in areas where they are more needed; • Too high, unrealistic; • Too many people; • The Council should adopt an aspirational target and fulfil Cambridge’s potential as a globally significant high tech cluster; • Future employment may not recover to pre-2000 levels; • The state of the global economy means these forecasts are unrealistic.
<p>Option 8: Plan for 20,000 new jobs to 2031</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Will proactively drive and support sustainable economic development; • The Council should adopt an aspirational target and fulfil Cambridge’s potential as a globally significant high tech cluster.

	<p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Infrastructure and the character of city cannot cope with higher levels of growth; • More jobs means more homes are needed; • Would damage the character and environment of the city; • Encourage jobs growth elsewhere, in areas where they are more needed; • Impact on commuting and congestion; • Future employment may not recover to pre-2000 levels; • Does not go far enough to support the Cambridge economy; • The state of the global economy means higher forecasts are unrealistic; • Would require Green Belt changes.
<p>Other general points relating to levels of employment provision</p>	<ul style="list-style-type: none"> • Growth in Cambridge will exacerbate the north / south divide; • Small scale enterprise should not be discouraged; • Current employment sites should be safeguarded; • Land is limited; • Cambridge should be a low growth city; • Should be planned jointly in the Cambridge sub-region; • Changes associated with increased efficiency and homeworking mean the forecasts are unrealistic; • Lower levels of job growth mean less commuting which means lower carbon emissions; • Should be flexible and not make assumptions about future growth; • An element of job growth will need to be provided will need to be provided in conjunction with new housing on the edge of the city; • No consideration of commuting to London; • Intensifying existing employment areas could help provide more jobs; • Growth in satellite villages / towns / business parks should be explored.
<p>General issues about broad locations</p>	<ul style="list-style-type: none"> • The need for additional housing and jobs provides the exceptional circumstances in Cambridge to justify the release of further land from the Green Belt; • If Green Belt land is to be released for housing, it should also be considered for Travellers' sites; • A traditional Green Belt policy is vital to the future of Cambridge. Once lost, it cannot be recovered; • Critical to maintain the 'green fingers' that penetrate Cambridge in order to preserve the setting and special character of the city;

	<ul style="list-style-type: none"> • Exceptional circumstances do not apply when adequate land for development is available in South Cambridgeshire; • The sequential approach to development in the current Local Plan must continue since it is the most sustainable approach to growth and has been endorsed by an Inspector. This will require a coordinated approach between the city and South Cambridgeshire District Council; • Very strong opposition from residents to further development of the Green Belt – need to analyse the impact of existing changes before any additional change is considered; • Need to avoid the loss of separation of surrounding villages; • Some feeling that only the airport represents a possible development site; • The environment of the city and its setting attracts businesses to Cambridge – this needs to be protected; • Release of further land from the Green Belt would contradict the Vision of a compact city; • Needs to be a better use of existing land, particularly within urban centres, e.g. building over surface car parks and intensifying land use through mixed use developments.
<p>Option 9: Development within Urban Area of Cambridge</p>	<ul style="list-style-type: none"> • Support for this approach as it supports a higher density, sustainable city; • Prioritise new development towards brownfield sites in order to preserve the Green Belt; • Land for the 2,060 new homes should be allocated for new employment with new homes focussed towards SCDC; • Suggestion that the Council has over-estimated SHLAA capacity within the existing built up area of the city and as such land will need to be released from Green Belt to meet housing need.
<p>Option 10: Broad Location 1 – Land to the North and South of Barton Road</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • The release of sensitive Green Belt land around Cambridge is not unprecedented e.g. North West Cambridge; • There is a clear need for additional housing and affordable housing in Cambridge, exacerbated by the lack of development at Cambridge East; • The site could be sensitively developed to address issues surrounding flood risk, visual impact and transport impact; • The location would encourage sustainable modes of transport; • Development would be accompanied by additional open space (including a wildlife reserve and country park) and recreation facilities, and community facilities and local shops.

	<p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Substantial Green Belt release has only recently been sanctioned so further release should not be contemplated. There should be a settling in period of at least 10 years to allow for the impact of current developments on the edge of Cambridge to be assessed; • Parts of the site are in Flood Zone 3 and are at high risk of flooding. Development would exacerbate flood risk in an area already prone to flooding; • The land is in a highly sensitive area of the Green Belt, which is important to the setting of the city and adjacent conservation area and forms an important approach to the city. Forms a vital part of the Quarter to Six Quadrant; • Would lead to an unacceptable level of traffic on Barton Road, which is already heavily congested. Other transport infrastructure in the area would not be able to cope with the proposed levels of development; • Insufficient infrastructure in this area of the city to deal with proposed level of development, especially schools; • Loss of recreation facilities should be resisted and is contrary to the NPPF; • The site has already been rejected by a Planning Inspector as part of the 2006 Local Plan Examination; • Would destroy the last remaining vista of the historic core and the last remaining stretch of road into Cambridge not subject to urban sprawl; • The area is important for wildlife, including threatened species; • The area should not be designated for housing but for playing fields and recreation; • The site contains the remnants of the West Field and almost certainly contains archaeological remains dating at least as far back as the Roman occupation.
<p>Option 11: Broad Location 2 – Playing fields off Grantchester Road</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • No relevant responses. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Substantial Green Belt release has only recently been sanctioned so further release should not be contemplated. There should be a settling in period of at least 10 years to allow for the impact of current developments on the edge of Cambridge to be assessed; • The loss of playing fields should be resisted and is contrary to the NPPF; • Parts of the site are liable to flooding (functional floodplain)

	<p>and development would exacerbate flooding to neighbouring properties;</p> <ul style="list-style-type: none"> • The land is in a highly sensitive area of the Green Belt, which is important to the setting and character of the city. Forms a vital part of the Quarter to Six Quadrant; • Access to the site is poor, with Grantchester Road being too narrow and winding to accommodate the level of development proposed; • Would lead to an unacceptable level of traffic on Barton Road and Fen Causeway, which are already heavily congested. Other transport infrastructure in the area would not be able to cope with the proposed levels of development; • Insufficient infrastructure in this area of the city to deal with proposed level of development; • Would lead to the loss of a green finger running into the centre of Cambridge; • Could lead to the loss of the allotments, which represent an important facility for the community; • Would destroy the village feel of Newnham; • Would have a detrimental impact on the River Cam Corridor and Grantchester Meadows; • The area is important for wildlife, including threatened species. The site forms an important wildlife corridor linking to the Backs and Grantchester Meadows; • Development of this site has been rejected in the past, and the reasons for this remain unchanged.
<p>Option 12: Broad Location 3 – Land West of Trumpington Road</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • No support for this option. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • The area forms a sensitive part of the Green Belt and should remain as such. It plays a very important part in the overall setting of the city and its rural edge is a vital characteristic of Cambridge that should be protected; • Development in this area would dominate the world renowned Grantchester Meadows, which forms an essential amenity for the city and its residents; • The loss of playing fields should be resisted and is contrary to the NPPF; • Trumpington Road would not be able to cope with the additional traffic generated by such a development; • The site forms an important part of the river valley wildlife corridor. The area is important for wildlife, including threatened species; • Development would lead to the loss of high quality

	<p>agricultural land;</p> <ul style="list-style-type: none"> • Development would have a negative impact on the Southacre Conservation Area; • The trees along Trumpington Road form part of a Woodland Wildlife Site; • Development of this site has been rejected in the past and nothing has changed to overturn this decision.
<p>Option 13: Broad Location 4: Land west of Hauxton Road</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Good access; • Minimal landscape impact. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Erodes value of Trumpington Meadows; • Impact on traffic; • South west approaches essential to distinctive character; • Loss of Green Belt and impact on setting of city; • Reserved for country park and agricultural open space; • Impact on local nature reserves; • Pressure on local services; • Noise from stadium; • Southern Fringe growing rapidly already; • Destruction of planned new urban edge; • Will attract people from south of city, not helping local employment and housing problems; • Motorway noise and pollution impact on new development; • New retail should be in city centre; • Allow new development to be completed and settled before more is contemplated; • Flooding; and • Coalescence with Hauxton / Harston.
<p>Option 14: Broad Location 5: Land south of Addenbrooke’s Road</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Good transport network nearby; • Deliver new affordable homes; • The site is available and could be delivered in the plan period; • Will assist the delivery of high levels of employment growth in Cambridge; • Help meet housing needs; • A sustainable location high in the development sequence established in the 2003 Structure Plan; • Would not harm the purposes of the Green Belt; • Would allow for enhancement of approach to Cambridge; • Would allow for enhancement of nearby habitats and increased access to the countryside; • Good access to centre by public transport;

	<ul style="list-style-type: none"> • Help meet employment needs, provide jobs and contribute to the high tech cluster; • New community facilities and open space; and • Would reinforce ribbon development on Shelford Road. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Loss of Green Belt • Green Belt erosion in a place where loss is already planned; • Traffic impact; • Area already overdeveloped; • Coalescence with Great Shelford; • Flooding; • Nearby County Wildlife Site; • Noise and air quality measures needed; • Destruction of planned new urban edge; • Impact on setting of the city and surrounding landscape; • Allow new development to be completed and settled before more is contemplated; and • Planning inspectors have ruled Addenbrooke’s Road is a sensible Green Belt boundary.
<p>Option 15: Broad Location 6: Land south of Addenbrooke’s Road and between Babraham Road and Shelford Road</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Can deliver high quality affordable homes close to Addenbrooke’s and existing transport routes; and • Would deliver new infrastructure to help serve existing uses. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Traffic impact; • Impact on biodiversity; • Loss of Green Belt; • Harm to purposes of Green Belt; • Coalescence with Great Shelford; • Impact on setting of city; • Impact on infrastructure; • Highly visible from the Gog Magog hills to the south; • Impact on Nine Wells Nature Reserve; • Undermine the new planned edge for the city; • New community isolated from existing; • Impact on open landscape; • Roads nearby are narrow and at or near capacity; • Could constrain the very long term development of the Biomedical Campus; • Site slopes upwards away from the city; and • Loss of quiet paths used by walkers etc.
<p>Option 16: Broad Location 7: Land</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Lower lying sections may have less impact;

<p>between Babraham Road and Fulbourn Road</p>	<ul style="list-style-type: none"> • Development could minimise the starkness of Addenbrooke’s; • Help meet need for dwellings and jobs growth; • Most capacity for development out of the broad locations; • Can provide significant open space and recreation areas; • Good access to all modes of transport and Addenbrooke’s; • Allow expansion of Peterhouse Technology Park and support the Cambridge economy; and • Sites within the broad location are deliverable within the plan period. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Impact on Green Belt; • Impact on wildlife; • Impact on vistas of the Gog Magog hills; • Impact on views from the Gog Magog hills; • Impact on traffic; • Impact on Site of Special Scientific Interest; • Slope should be preserved; • Damage to green corridors; • Area has high/very high landscape value; and • Impact on tranquillity of the countryside.
<p>Option 17: Broad Location 8 – Land east of Gazelle Way</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Damage would be less here than on most of the other proposed sites; • Preferred option as development would not involve views of the historic core of the city; • Qualified support to sympathetic development of this region; • Area has had planning permission granted in the past and might not be such a loss to the Green Belt as other sites around the city; • Stronger possibility for development provided a clear corridor could be retained for Teversham village. The southern part north of Fulbourn Road could be integrated with Cherry Hinton & new development to form a worthwhile and well-serviced extension to the city. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Not possible to assess capacity of this location without knowing how many dwellings could be accommodated in South Cambridgeshire; • Adverse effects on the setting & special character of Cambridge; • Development would have a significant impact on landscape; • Attractive rolling agricultural land giving good views of

	<p>Cambridge.</p> <ul style="list-style-type: none"> • Need Green Belt to preserve the boundaries of the city, for wildlife, for the visual restfulness from endless housing that it provides; • Development would encroach into countryside and adversely impact on the concept of Cambridge as a compact city contrary to Green Belt purposes; • Risk of sprawl to engulf Fulbourn and Teversham; • Impact on existing road network - Cherry Hinton Road, Newmarket Road and Coldham’s Lane are some of the most congested in the city; • Inadequate public transport to support development.
<p>Option 18: Broad Location 9: Land at Fen Ditton</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • It is suggested that an area of search for development of c.25ha could be made available for 450-500 new homes (160-200 affordable homes), within close proximity to the village to facilitate integration but taking sufficient account of Fen Ditton's heritage assets. A Green Belt/ landscaped buffer could be retained between the development site/ village and the A14. To enhance travel by non-car modes, a foot/ cycle bridge across the Cam could be investigated providing a convenient cross and linkage between the site and the forthcoming Cambridge Science Park Station and extended link with the Cambridge Guided Busway. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Not possible to assess capacity of location without knowing how many dwellings can go in South Cambridgeshire; • One of the most beautiful landscapes in Cambridge; • Proposed development would have negative impact on a Site of Special Scientific Interest and Fen Ditton Conservation Area, which contains Listed Buildings and Buildings of Local Interest; • Village of Fen Ditton is of value as an amenity asset for the city with its proximity to the river and green corridor adjacent; • Open & rural nature of land between Chesterton on the fringe of the city and Fen Ditton is highly prized as essential open space; • Land link formed by Stourbridge Common and Ditton Meadows is valued as essential open space for other intensively developed parts of the city; • This is low, flat agricultural land with the noise and visibility of the A14 as the predominant features. • Fulfils a number of Green Belt functions, not only in respect of the setting of the historic, compact city, but also in terms

	<p>of maintaining the rural setting of Fen Ditton itself;</p> <ul style="list-style-type: none"> • Landscape is of high and very high sensitivity in Green Belt terms; • Importance of Green Belt has been examined through South Cambridgeshire District Council Local Development Framework and through various planning applications, which have dismissed development as inappropriate. • Negative impact on East Cambridge road network, which is one of the most congested in the city; • Existing public transport links are minimal (2 buses a day) and unable to support an enlarged settlement travelling for employment; • The infrastructure could not support any further development. • Additional housing development in this area would effectively subsume Fen Ditton into the city; • Previous Local Plan Inspectors have concluded that the consolidation of existing ribbon development would be undesirable, and it is evident that the area plays an important role in preventing coalescence between Fen Ditton and Cambridge. <p>•</p>
<p>Option 19 / Figure 3.15: Broad Location 10: Land between Huntingdon Road and Histon Road</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • This land coming forward for development is supported; • It would be less damaging, given the development that has already taken place, than on most of the other sites being considered; • Difficult to argue the case for leaving an increasingly isolated area of farmland bounded by some of the busiest roads in the county undeveloped given the precedent of Orchard Park and NIAB2. • With the A14 so close, this areas has a much more urban feel than other Green Belt sites around the city; • The best of the proposed fringe sites with the guided bus. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Not possible to assess capacity of this location without knowing how many dwellings could be accommodated in South Cambridgeshire; • Girton would also be at risk of being subsumed as a suburb of the conurbation; • Highly sensitive location whose contribution to the Cambridge Green Belt is well documented; • The NIAB development is going ahead so it is unnecessary to use up a piece of land of high importance to the Green

	<p>Belt;</p> <ul style="list-style-type: none">• Very close to the A14 so it is not going to be a pleasant place to live.
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Chapter 4 – Strategic Spatial Options – Key Issues

CHAPTER 4 – STRATEGIC SPATIAL OPTIONS	
SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
Option 20: Green Belt	<ul style="list-style-type: none"> • A large proportion of comments state that the Green Belt and open spaces are special, should be protected and not built upon; • A policy for protection of the Green Belt is vital; • There should be a presumption against development within the Green Belt in the Local Plan.
Option 21: Setting of the city	<ul style="list-style-type: none"> • Green Belt and '5 green corridors' are key to preserving the setting of the city; • Needs to be a clear distinction between green corridors, Green Belt and the 'urban edge'; • Care needs to be taken with development on the edge of the city, to protect the Green Belt; • Some question the deliverability and whether it will work as intended.
Option 22: Green Infrastructure	<ul style="list-style-type: none"> • Green infrastructure should include private and community gardens; • A sizable amount of general support for the policy; • Greater public access to green infrastructure needed.
Option 23: Comprehensive policy for the River Cam corridor	<ul style="list-style-type: none"> • Generally a very good level of support for the policy; • Support for a waterspace study; • The majority of the objections based on a concern about increased pressure on the river as a result of this policy.
Option 24: City Centre	<ul style="list-style-type: none"> • City Centre capacity (or lack of) is a reoccurring theme – no space for development; • Must maintain the historic centre; • Difficult to advance the City Centre in terms of number of people and commercial interest etc. without impacting its beauty and historical importance; • Some support from Colleges for policy; • Many concerns about Park, Bridge and Magdalene Streets. • Some support for Market Square and Peas Hill suggestions. • Too many buses in City Centre – some responses suggest banning them altogether. • Less chain shops, more variety is cited as a desire by numerous respondents. • Any changes need considerable consultation with public.
Option 25: Maintain the current hierarchy	<ul style="list-style-type: none"> • Many support need for hierarchy, and many call for review to widen the scope for the Local Plan to identify additional retail centres;

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of centres with new additions	<ul style="list-style-type: none"> • A couple of larger retailers do not see the need to revisit the hierarchy; • The general need for a policy is supported by most.
Option 26: Change the position of some local centres within the hierarchy	<ul style="list-style-type: none"> • A couple of larger retailers do not see the need to revisit the hierarchy; • Objections tend to centre around fears that local and district centres / shops may lose protection; • The general need for a policy is supported by most.
Option 27: Residential communities	<ul style="list-style-type: none"> • Very strong support for this option.
Option 28: Station Area	<ul style="list-style-type: none"> • Generally, the principle for development in this area is supported; • Care needs to be taken to ensure area does not become over developed; • Car parking highlighted as an issue for the area; • Pick up and drop off point required in the area; • Questions asked as to whether more office space is needed in this area; • More residential development needed; • More cycle parking is needed.
Option 29: Southern Fringe	<ul style="list-style-type: none"> • Some objections to any more expansion of Addenbrooke's; • Some support for the retention of land for the purpose of expansion of Addenbrooke's; • Mostly support for the option.
Option 30: Addenbrooke's Hospital	<ul style="list-style-type: none"> • Significant numbers saying that the development of Addenbrooke's as a centre of excellence is vital; • Critical to the economy; • Some query whether the site can handle much more expansion / footfall; • Staff car parking an issue raised; • A danger of 'over-concentration' of medical resources on the site; • Access by bicycle to the site is difficult.
Option 31: North West Cambridge	<ul style="list-style-type: none"> • Some concerns about the impact this policy is having and will continue to have on this area of the city, particularly in transport terms; • Must be consistent with the North West Area Action Plan; • Generally the reps are supportive of having a policy; • Ample cycle infrastructure should be designed into any development on the site.
Option 32: West Cambridge	<ul style="list-style-type: none"> • Greater cycle access to the site desired; • Some saying employment would support more intense development; • Further university development also a reoccurring theme

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	<p>in support of the policy;</p> <ul style="list-style-type: none"> • In general, a policy for the site is largely supported; • Better to densify this site than build elsewhere on Green Belt; • The surrounding Green Belt (either side of the site) should be protected.
<p>General comments on the Northern Fringe East</p>	<ul style="list-style-type: none"> • Mixed use aspect is critical, requiring local retail, commercial and domestic elements; • Support for the new Cambridge Science Park Station; • Need for an exciting wider vision for the area to complement the delivery of the new station; • Water treatment works should be downsized and recreated as a practical demonstration of a modern high tech sewage works; • Need to consider increased use of energy from waste; • Need to include provision of a new relief road linking Cowley Road and Fen Road; • Support for the Chisholm Trail cycle route and cycle and pedestrian bridge; • There is scope at Northern Fringe East for higher density but there must be full consultation with the local community to ensure that it does not detract from the character of the wider area; • Proposals for the Northern Fringe East will need to consider impacts on local biodiversity and identify suitable mitigation and enhancement options; • Water treatment works should be moved to free up valuable development land; • In order to meet the growth that is currently envisaged, Anglian Water has investment plans in place to expand and upgrade the wastewater treatment works at Cambridge. This work is currently at feasibility stage and could involve relocation of assets on the site. This does not necessarily mean that the footprint of the works will become smaller. In any event, Anglian Water cannot envisage any situation where housing development on or close to the Anglian Water site would be acceptable; • Need to understand the impact of the development on traffic problems in Fen Road; • CamToo will destroy Stourbridge Common and Ditton Meadows. Furthermore, the creation of a bridge link to Chesterton does not depend on a sporting facility; • Need to consider the impact of CamToo on biodiversity, landscape and visual amenity; • Land should not be safeguarded for a busway across Stourbridge Common and Ditton Meadows as it would

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	<p>impact on landscape quality and amenity;</p> <ul style="list-style-type: none"> • Need to move the waste water treatment works; • Need for high quality cyclist and pedestrian facilities, including a high-quality cycle route to Waterbeach and completion of the Chisholm Trail; • Need to consider the wider impact on the level crossing on Fen Road and the need for alternative access arrangements; • Need for consideration of the mix of uses, particularly the desire and need for residential use and hotel development in the locality as a result of station development; • Route required to reduce pressure on Chesterton High Street; • Gentrification with improvements to landscape, sewerage, drainage and access.
<p>Option 33: Northern Fringe East</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • The three authorities need to work closely together to produce site-specific detailed analysis of the land use, transport, urban design and environmental planning options for the area’s future use; • Need for unified development of the area; • Priority should be given to employment; • Need to provide a new relief road to link Cowley Road to Fen Road; • Need to improve access for and safety of cyclists and pedestrians; • Support the delivery of development at Northern Fringe East, which should not involve any further land being released from the Green Belt. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Need to consider revising the Northern Fringe East to include the Fen Road area; • Need for flexibility to be built into any site specific policy for the area to ensure that redevelopment proposals can respond to market conditions operating at the time of delivery of development; • Need to clarify the boundaries of the site; • Need to clarify the approach to building heights in this location; • Need for detailed environmental assessment to ensure no adverse effects.
<p>What should the boundary be for this area?</p>	<ul style="list-style-type: none"> • The railway sidings and the land between the railway and Fen Road should be included leaving the river corridor between Fen Road and the river; • Bounded by the A1309, the line of the former railway line

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	<p>to the south of the Cambridge Business Park, the River Cam, taking in both sides of Fen Road, and the A14;</p> <ul style="list-style-type: none"> • The railway line to the East should be the boundary, but the plan must allow for road access to Fen Road across the railway line; • The boundary should include Chesterton Fen, with a common interest in waste recycling and vehicle maintenance; • The boundary should include Chesterton Fen, there is scope for marina development independent of the CamToo project; • The boundary for commercial use should extend east of the railway up to Fen Road with an appropriate link road. To the east of Fen Road, it could be developed as a nature reserve; • The whole area on the map should be included; • No further than the city's northern boundary.
<p>What should be the vision for the future of this area?</p>	<ul style="list-style-type: none"> • Possibility for a trans-shipment centre to enable lorries of unsuitable sizes to be kept out of the city centre; • Science Park reaching maturity. A demonstration of sustainable development and as a flagship for the city of the 21st century; • Well designed city district, with high density buildings and areas of greenery. A good mix of locally owned shops, businesses and leisure facilities. Transport geared towards bicycles and pedestrians, with provision of the Chisholm Trail; • Preservation of the village of Chesterton with a prosperous community, incorporating industry, transport infrastructure, the commons, the river and leisure pursuits; • This is an area where more intensive development could provide real benefits and resolve adequate access to Chesterton Fen at the same time. It is also a site where taller buildings could be appropriate as long as they do not overpower Chesterton; • Planning of Northern Fringe East must take the Fen Road area into account, particularly in terms of transport infrastructure; • The operation of the waste water treatment works must not be prejudiced by any other development in the area; • The new station should meet the highest standards of design. Car parking should be multi-storey and partly underground. Space above the station should be used for shops and offices. The road layout should be planned strategically using minimum space. Separate road access to Chesterton Fen should be provided and pedestrian and

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	<p>cycle access points carefully considered to minimise the impact on existing residents and green spaces;</p> <ul style="list-style-type: none"> • Area needs to be considered as a key transport interchange.
<p>What should the key land uses be within this area?</p>	<ul style="list-style-type: none"> • Employment-led, rather than provision of housing for commuters; • Provision of the community stadium at Northern Fringe East; • Sustainable industry with some on-site retail provision; • Residential, with supporting transport infrastructure; • Mixed use development incorporating employment, retail and residential uses; • Upgraded waste water treatment works, mixed use to maximise benefits of the station development and upgraded sewerage; • Upgraded transport infrastructure, particularly for Fen Road area; • Waste compatible development near to waste water treatment works and safeguarding of land for sustainable transport infrastructure.
<p>Do you think land in this area should be safeguarded for sustainable transport measures?</p>	<ul style="list-style-type: none"> • Support for safeguarding land for sustainable transport measures; • Support for provision of the new railway station as part of a key transport interchange; • Endorsement of the extension of the guided busway or similar dedicated link along the railway line to Cambridge Station; • Improved bus links; • Monorail provision could be revisited; • Cycle route provision is essential; • Impact on on-street parking in wider area needs to be dealt with; • A new river crossing for pedestrians and cyclists is desirable; • New bridleways should also be included.
<p>Are there any other reasonable alternatives that should be considered at this stage?</p>	<ul style="list-style-type: none"> • Provision of a Community Stadium; • Provision of residential development, with supporting transport and other infrastructure.
<p>Cambridge East – general comments</p>	<ul style="list-style-type: none"> • The airport pollutes the city and is too near to built-up areas; • Designate the site in the plan as an airport; • Any future development should factor in the need for high quality provision for cycling in order to reduce impacts on

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	<p>the local transport infrastructure;</p> <ul style="list-style-type: none"> • Retain the existing approach of 4 major growth areas, ensuring public transport connectivity; • Consider the need for provision for household recycling centre and a commercial waste management facility in the Cambridge East area.
<p>Option 34: Cambridge East – Retain current allocation</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Housing is needed; • If this area is built out, consideration must be given to how people travel in to Cambridge as Newmarket Road is highly congested; • Marshall should be encouraged to relocate. <p>OBJECTIONS TO THE OPTION:</p> <ul style="list-style-type: none"> • Marshall confirms its intention to remain at Cambridge Airport for the foreseeable future; • We should not continue an approach predicated on Marshall moving away from Cambridge Airport, including the land North of Newmarket Road; • This option will have negative impacts on biodiversity according to the Sustainability Appraisal.
<p>Option 35: Cambridge East – Safeguarded Land</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Cambridge and its sub-region have a history of buoyant growth over many years. Growth will continue. Designating Cambridge East as safeguarded land reflects its inherent qualities as a sustainable location and will give flexibility in the longer term; • Support the retention of the allocation in the interests of safeguarding a direct cycleway between Cambridge East and Lode; • Marshall should be encouraged to relocate. <p>OBJECTIONS TO THE OPTION:</p> <ul style="list-style-type: none"> • Delays decision-making with associated waste and costs incurred from business uncertainty; • Transport infrastructure is inadequate to deliver a sustainable development in this location; • This option will have negative impacts on biodiversity according to the Sustainability Appraisal.
<p>Option 36 – Cambridge East – return land back to the Green Belt</p>	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • If Marshall decides to leave, the land should be returned to Green Belt. Currently, Marshall provides a green lung and barrier between the city and Cherry Hinton, as most of the land is grass around a runway, not intensively developed; • The land was only taken out of the Green Belt because it

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	<p>was to be used for housing. As it is not to be used for housing (for the foreseeable future) it should be returned to Green Belt;</p> <ul style="list-style-type: none"> • The airport should remain where it is; • Option 36 is likely to deliver significant benefits in addressing key sustainability issues relating to transport, water, flood risk, landscape and biodiversity as compared to protecting this area for future development. <p>OBJECTIONS TO THE OPTION:</p> <ul style="list-style-type: none"> • Housing in sustainable locations is needed over Green Belt; • Successive studies have confirmed that land at Cambridge East does not fulfil any Green Belt function. The 2012 Green Belt Study by LDA Design confirms that. Green Belt boundaries are to endure and should only be altered in response to exceptional circumstances. None exists (Marshall); • Site is of little value ecologically in comparison to other Green Belt sites; • The Green Corridor opposite Teversham should be retained as Green Belt: the rest of the site should be Safeguarded Land outside Green Belt designation.
<p>Whilst in South Cambridgeshire District Council, what issues do you think there are for the city with development coming forward on land north of Newmarket Road?</p>	<ul style="list-style-type: none"> • Land north of Newmarket Road remains an obvious site for development, providing public transport along Newmarket Road corridor can be improved; • There should be a much more serious look at potential for enhanced flood risk caused by building on green areas. Permission for new development should only be granted if consistent with Strategic Objective 2 (reduction of flood risk); • A good opportunity for development - probably housing, but also a site for a football stadium; • This development would put yet more pressure on traffic on Newmarket Road; which is badly designed, badly congested and the least attractive approach to the city. The whole area from Barnwell Bridge to Elizabeth Way roundabout needs remodelling, including the retail park which could be reduced in size, with a service road to reduce pressure on the main road. Some scope for housing development if the retail area was reduced; • Development north of Newmarket Road should safeguard the open spaces between Cambridge and Fen Ditton to preserve an extensive area of open land in this part of the city and South Cambridgeshire given the increasingly intensive developments that are likely in the immediately adjacent urban areas; • Sustainable transport infrastructure is key to the

Chapter 4 – Strategic Spatial Options – Key Issues

	development of this area;
Are there any other reasonable alternatives that should be considered at this stage?	<ul style="list-style-type: none">• Retain Cambridge Airport and add new option to protect and develop the airport further.

CHAPTER 5 – OPPORTUNITY AREAS	
SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
Option 37: Mill Road	<ul style="list-style-type: none"> • Strong support for the option; • Mill Road has a distinctive character; • Need to preserve 'local retail' and prevent too many food & takeaway outlets; • Mill Rd is independent but not diverse; • Too many HMOs in area; • Restrict stores with significant (large) amounts of delivery required – as this blocks road for other users; • More regular road closures – such as is done for the Winter Fair – should be encouraged; • Support for controlling mix and size of units and types of uses strong; • Reduce street clutter in area; • Inadequate cycle parking in the area; • More family houses needed in the area; • Chisholm Trail vital for Mill Road depot housing development; • Good support for housing on the depot site.
Option 38: Eastern Gate	<ul style="list-style-type: none"> • Generally good support for the option although some uncertainty as to whether the plans will work (particularly in terms of traffic); • Currently the area is designed for cars, so attracts cars – consider making some parts public transport only?; • Call to extend area as far as Park and Ride site at Newmarket Road.
Option 39: Cambridge Railway Station to the City Centre and Hills Rd Corridor	<ul style="list-style-type: none"> • Good support for this general; • Some concern about impact traffic from CB1 is already having, and will continue to have; • A lot of support for improving conditions for pedestrians, cyclists and public transport; • An SPD for the area is needed; • Remove unnecessary street clutter in the area.
Option 40: South of Coldham's Lane	<p>ARGUMENTS IN SUPPORT OF THIS OPTION:</p> <ul style="list-style-type: none"> • Good to use land, which is otherwise wasted, for community purposes; • Good support for not using the site for housing; • This area of Cambridge would benefit hugely from a relaxing area such as this – it doesn't have much by the way of green space; • Would be an excellent family location; • Would boost the local economy;

Chapter 5 – Opportunity Areas – Key Issues

	<ul style="list-style-type: none"> • Site would be safer with public controlled access than it is at present, with no control; • Very few opportunities to enjoy natural water resources near Cambridge – would be a valuable resource; • Helps encourage exercise and sport; • Support for further industrial and employment uses of the site too. <p>OBJECTIONS TO THIS OPTION:</p> <ul style="list-style-type: none"> • Site’s wildlife and biodiversity needs protecting; • Dangerous site – cliffs; • Contaminated land issues; • Development on land ‘west of Rosemary Lane’ will compromise the efficiency of airport; • Increased anti-social behaviour; • Increased traffic to area; • Impact on Spinney School; • Cycle, walking and public transport routes need improving.
Other Opportunity Areas to be considered:	<ul style="list-style-type: none"> • North Newtown; • East Road area; • Mitcham’s Corner; • Perse playing fields and telephone exchange.

Chapter 6 – Sustainable Development, Climate Change, Water and Flooding – Key Issues

CHAPTER 6 – SUSTAINABLE DEVELOPMENT, CLIMATE CHANGE, WATER AND FLOODING	
SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
Option 41: Innovative and sustainable communities	<ul style="list-style-type: none"> • Strong support - Should be fundamental approach to all new development; • Cambridge should lead by example; • Recent unpredictable weather patterns confirm the need for extreme caution. New development should not make the situation (re: flooding) worse.
Option 42: Comprehensive sustainable development policy	<ul style="list-style-type: none"> • Strong support for development of this policy; • Learn from the best examples in Europe where this approach is much further advanced; • Policy needs to cover existing communities, infrastructure and buildings as well as new development; • A clear policy integral to the Local Plan will help assist with the design of development proposals; • Should place emphasis on smarter use of land, especially public realm; • Should include conservation and enhancement of the historic environment; • Promote local food production; • Need to consider behavioural change; • There is a need for a definition of sustainable development, which should then be fed through to all other policies.
Option 43: Sustainable Construction Standards	<ul style="list-style-type: none"> • Support for the policy – Cambridge should lead by example; • Standards should rise over time and higher standards should be sought from large scale development; • Concern surrounding how such an approach can be achieved where development incorporates historic buildings and redevelopment of existing buildings; • Need to give consideration to impact on viability and alignment with Building Regulations and zero carbon policy; • Consider alternatives to the Code and BREEAM.
Option 44: Detailed targets for on-site carbon reduction related to the levels of the Code for Sustainable Homes being sought	<ul style="list-style-type: none"> • General support for this approach; • Some feeling that this would not be ambitious enough.
Option 45: Detailed targets for on-site carbon	<ul style="list-style-type: none"> • Support for stronger level of policy intervention – Cambridge should lead by example; • Preferred on the grounds of long-term sustainability;

Chapter 6 – Sustainable Development, Climate Change, Water and Flooding – Key Issues

reduction in line with the findings of the Decarbonising Cambridge report.	<ul style="list-style-type: none"> • Support for approach for non-residential development being linked to Building Regulations.
Option 46: Leave carbon reduction to Building Regulations and continue to operate a percentage renewable energy policy	<ul style="list-style-type: none"> • General support for this approach; • Concerns over the impact of this approach on the viability of development; • On-site renewables are not always the most efficient option – policy should allow for off-site renewables to be taken into account; • Policy should focus on carbon reduction and not on-site renewables.
Option 47: Establishment of a Cambridgeshire Community Energy Fund	<ul style="list-style-type: none"> • Concern that this is a way of allowing developers to do something on the cheap. Focus should be on on-site carbon reduction; • Support for the development of a fund – projects for investment should include retrofit; • Support from some developers for the establishment of such a fund as a way of assisting them with meeting their zero carbon requirements; • More detail required on how such a fund would be governed and administered.
Option 48: Renewable and low carbon energy generation	<ul style="list-style-type: none"> • General support for development of a positive approach to renewable and low carbon energy; • Some concern from developers about the impact of connecting to district heating on the viability of development (although aspiration is supported); • Support for designation of strategic district heating areas – look to connect existing properties as well as new; • Consider opportunities to work with the local universities to deliver pilot renewable energy projects.
Option 49: Climate change adaptation	<ul style="list-style-type: none"> • Strong level of support for policy development; • Urban greening very important; • Need to consider long-term maintenance requirements for some adaptation measures (e.g. SuDs); • Further detail regarding setting tree canopy requirements needed; • Should be applied to existing communities as well as new development.
Option 50: Consequential improvements policy	<ul style="list-style-type: none"> • Some support for the development of such a policy; • Concern over the cost implications for householders and landowners of such a policy; • Need for care when dealing with heritage assets; • Make reference to the Cambridge Retrofit project.

Chapter 6 – Sustainable Development, Climate Change, Water and Flooding – Key Issues

<p>Option 51: Develop a comprehensive integrated water management policy</p>	<ul style="list-style-type: none"> • Very important policy to develop – strong level of support; • Concern that requirement to set aside 10-15% of development area for open space/multi-functional surface water management could impact on viability of development.
<p>Option 52: Water efficiency – water neutrality</p>	<ul style="list-style-type: none"> • Clear need for a policy dealing with water conservation; • General support but with questions as to whether this policy would be achievable; • Need to consider approach to engaging the existing community in water reduction; • Concern from developers over impact on viability of new development; • Support Option 53 up to 2022 moving up to Option 52 after 2022.
<p>Option 53: Water efficiency – 80 litres/head/day</p>	<ul style="list-style-type: none"> • Clear need for a policy dealing with water conservation; • Concern from some that this approach would not go far enough in dealing with issues of water shortage and its wider impact; • Support from those who see this as a more realistic option than option 52; • Need to consider approach to engaging the existing community in water reduction; • Concern from developers over impact on viability of new development; • Support Option 53 up to 2022 moving up to Option 52 after 2022.
<p>Option 54: Water efficiency – 105 litres/head/day</p>	<ul style="list-style-type: none"> • Clear need for a policy dealing with water conservation; • Concern that this approach would not go far enough in dealing with issues of water shortage and its wider impacts; • Need to consider approach to engaging the existing community in water reduction; • Support from developers as less focussed on seeking enhanced measures.
<p>Option 55: Water efficiency – non-domestic buildings – full credits for water efficiency</p>	<ul style="list-style-type: none"> • Support from those who feel that the highest possible standards should apply across all new development regardless of use; • Concern from developers around the impact on the viability of new non-residential development as well as refurbishment of existing buildings.
<p>Option 56: Water efficiency – non domestic buildings – BREEAM</p>	<ul style="list-style-type: none"> • Support from developers as this represents a lower cost option and is less likely to impact on viability; • Other stakeholders object to this approach on the grounds that it would not go far enough in dealing with issues of water shortage and its wider impacts.

Chapter 6 – Sustainable Development, Climate Change, Water and Flooding – Key Issues

<p>Option 57: Develop a comprehensive flood risk reduction policy</p>	<ul style="list-style-type: none"> • Strong level of support with policy development seen as vital; • Need for clarification as to how policy would be applied to extensions/refurbishments.
<p>Option 58: Develop a water body quality policy</p>	<ul style="list-style-type: none"> • Strong level of support for development of such a policy.
<p>Option 59: Develop a green roof policy</p>	<ul style="list-style-type: none"> • Some support for this approach from residents and other stakeholders due to their multiple benefits; • There are some concerns surrounding the impact on the viability of new development, conflict with renewable energy provision and the long-term maintenance costs of green roofs; • The Local Plan should not be too prescriptive.

Chapter 7 – Delivering High Quality Places – Key Issues

CHAPTER 7 – DELIVERING HIGH QUALITY PLACES	
SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
Option 60: Delivering High Quality Places	<ul style="list-style-type: none"> • Strong support from most responses – seen as a vital policy; • Need to show significance of city townscape; • Extra policy needed to require pre-app preparation and consultation on development briefs for all major developments; • Policy needed to prevent demolition of buildings until development starts; • Hard to define high quality design; • Developers need to respect the current ‘style of the city’ and not impact upon this with design that is not akin to it.
Option 61: Criteria based responding to context policy	<ul style="list-style-type: none"> • Generally supportive of the policy; • Scale is critical; • Some of the terminology needs to be altered to make clearer (“grey infrastructure for example); • The policy doesn’t give enough scope for innovative development; • Ensure internal space requirements are adequate.
Option 62: Criteria based policy for delivering high quality places	<ul style="list-style-type: none"> • Only include public art as an integral part of major new developments; • Needs to be made clear at what scale of development these policies are aimed at – criteria not relevant to all schemes; • Cambridge should develop a ‘local identity’ in design; • Add safe walking and cycling routes to the criteria.
Option 63: Criteria based policy for the design of buildings	<ul style="list-style-type: none"> • Why is refurbishment covered here? Surely this should be covered in Option 66; • Many recent buildings not reached ‘high quality’ of design; • Contemporary and ‘historical’ designs can both be suitable for a new or old site if design is good.
Option 64: The design of the public realm, landscape and other external spaces	<ul style="list-style-type: none"> • Good support for the option in principle; • Shared space can cause issues between drivers, cyclists and pedestrians; • Need to avoid street clutter too; • Need to upgrade the public realm in context with the city and its historic nature; • Open space needs to be provided, not commuted sums.
Option 65: Requirement for the production of	<ul style="list-style-type: none"> • Some concern that it could lead to another tier of design and access statements – this will cause delays and expense;

Chapter 7 – Delivering High Quality Places – Key Issues

<p>design codes in respect of growth areas for all outline planning applications</p>	<ul style="list-style-type: none"> • Only suitable for large scale development; • Would need greater public consultation and awareness; • Should encourage walking and cycling.
<p>The importance of public art provision in new developments</p>	<ul style="list-style-type: none"> • Considered desirable, not essential, so no need for specific, individual policy; • Should only be part of major new sites.
<p>Option 66: Criteria based policy for alterations and extensions to existing buildings</p>	<ul style="list-style-type: none"> • Existing buildings need to respect their context; • There may be instances where large buildings are appropriate (i.e. to accommodate larger families). Should recognise this; • Should this section consider alterations for the purpose of improves sustainability / energy efficiency?

Chapter 8 – Protecting and Enhancing the Historic and Natural Environment – Key Issues

CHAPTER 8 – PROTECTING AND ENHANCING THE HISTORIC AND NATURAL ENVIRONMENT	
SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
Option 67: Protecting and enhancing the historic and natural environment (Strategic priority)	<ul style="list-style-type: none"> • The city should have a heritage policy and a discrete environment policy; • Reference should be made to minimising light pollution; • Hazards to heritage assets should be clearly defined so that aims become meaningful; • Option 67 would not be adequate to form a strategic historic environment policy for the Cambridge Local Plan; • Concerns at the loss of green spaces and the need for more trees.
General Comments	<ul style="list-style-type: none"> • Seeks specific inclusion of college playing fields as part of Cambridge’s distinctive historic environment; • Victorian/Edwardian suburbs such as North Newtoun should be given special consideration and mention in the Local Plan and their heritage assets protected; • Support the clear distinction between the historic setting of Cambridge and rural area beyond and suggest it is a good reason to retain the Green Belt.
Option 68: Protection and enhancement of Cambridge’s historic environment	<ul style="list-style-type: none"> • Recent development of tall buildings has detracted from the skyline. High rise should not be a feature of Cambridge; • Historic buildings, rivers and green spaces are essential to the character of Cambridge; • Cambridge’s historic environment is what makes it special, it is internationally important; • This section tries to cover too much ground and should be split up. Too many issues to be covered by one policy; • ‘Views’ which have been used extensively to argue against development in large areas of the city need to be carefully considered. There is no definition of ‘local’ or ‘strategic’ views; • Support the protection of the wider setting of the city; • There is also a need to maintain the usability of historic buildings, heating and insulation for example; • Buildings may not just have architectural merit but also may be important in terms of local history; • The 2006 Local Plan should be a template for any new policy; • The policy should not be unnecessarily prescriptive or restrictive and should support ‘sustainable development’; • A policy on Article 4 directions;

Chapter 8 – Protecting and Enhancing the Historic and Natural Environment – Key Issues

	<ul style="list-style-type: none"> • Enhance protection of conservation areas; • Protection and enhancement should include ‘in line with ecological needs’; • Protection of views should include views that are created; • The current policies on Listed Buildings and Conservation Areas are fine and should be replicated together with a policy on archaeology; • There is a need to retrofit energy efficient improvements to Cambridge’s historic stock; • There may be instances where ‘wider public benefit’ should be taken into account in relation to proposed development to historic buildings; • Enhancement must include stringent approval of materials; • A separate policy on the setting of designated heritage assets would be useful • There is a need to recognise that Buildings of Local Interest are undesignated heritage assets. Consequentially the wider public benefit required to outweigh their loss will be less than for designated heritage assets; • More important to protect the historic environment where it is damaged e.g. Newmarket Road.
<p>Option 69: Protection of Buildings of Local Interest and Development of a Local List</p>	<ul style="list-style-type: none"> • There are no requirements stated within the NPPF relating to local lists. A specific policy dealing with Buildings of Local Interest is out of step with the NPPF; • Colleges depend on being able to use and modify their buildings in order to achieve their educational purpose. Colleges are not simply curators of buildings decided by others to be of local interest at the expense of practicality; • There is no reason why, in a compact city such as Cambridge where over 1000 buildings are listed and almost ¼ of the city covered in Conservation Areas, Buildings of Local Interests should be considered so valuable to the city’s heritage that they should be given a higher level of protection than that contained within the NPPF; • The Council’s reason for designation of Buildings of Local Interest needs to be far more transparent and there should be a statement of what is significant about each Building of Local Interest.
<p>Option 70: Works to a heritage asset to</p>	<ul style="list-style-type: none"> • There are occasions when maintaining the existing use may require a more substantial loss of significance to a

Chapter 8 – Protecting and Enhancing the Historic and Natural Environment – Key Issues

<p>address climate change</p>	<p>heritage asset than a new use;</p> <ul style="list-style-type: none"> • It is not clear what the third bullet point (in the case of change of use; ensuring the sympathetic reuse of the heritage asset) brings to the consideration of climate change and heritage assets; • Supplementary Planning Guidance on this issue might be sufficient, and would be beneficial in providing more detailed advice; • The option should be more weighted to protect the historic asset; • Conservation and renewal need to allow for embodied energy; • The age and importance of the building should not be used as an argument for no action or too little action to reduce carbon emissions of such buildings; • Adaptation to the works or the historic fabric should primarily use traditional materials; • Traditional methods/materials may not be the most appropriate or sustainable ways of enhancing the performance of historic buildings.
<p>Option 71: Shopfronts and signage policy</p>	<ul style="list-style-type: none"> • Shopfronts and signage should be required to be sympathetic and positive in relation to the character of the building; • There still needs to be much work done with corporate brands like Phones 4U for example; • Some shops require shutters or bollards to deter robbers; • A policy allied to a review of the Shopfront Design Guide would be appropriate; • There is no need for a Local Plan policy on shop fronts and guidance. Advice on these and other ‘advertisement’ issues could be provided in SPD guidance; • Commercial development in the historic city centre must be controlled in order to maintain a sense of place; • Support aligned to a policy supporting small units and diversity of use types; • Current policy seems to be sufficient; • There should be a presumption against chains using their house style and an effort made to harmonise shop fronts in the City Centre (e.g. Tesco, Mcdonalds); • Remove shutters from premises that have them and don’t permit new ones; • The use of advertising billboards on busy pavements should be stopped.
<p>Option 72: Criteria</p>	<ul style="list-style-type: none"> • We need to emphasise the city’s heritage and approve only mid-height buildings;

Chapter 8 – Protecting and Enhancing the Historic and Natural Environment – Key Issues

<p>based tall buildings policy</p>	<ul style="list-style-type: none"> • The historic core is particularly unsuitable for tall buildings; • This could be used in conjunction with Option 73 (identifying specific areas suitable for tall buildings) to create individual, iconic and slightly taller buildings in some areas and groups of significantly taller buildings away from the city’s historic core; • Overall bulk of buildings must also be considered carefully; • Tall buildings do not fit with Cambridge and should only be allowed in exceptional cases; • The criteria must be much more demanding without being restrictive. High quality materials and craftsmanship should be included. Aesthetic values such as colour, texture, contrast, detail and massing need to be taken into account. Tall buildings should only be for extraordinary exceptions; • Support the development of the policy supported by guidance setting out design and locational criteria in order to assess the suitability of development proposals on a case by case basis; • Tall buildings can work well in the right place if proper thought is given to design; • It would be better to have a policy that precludes tall buildings unless they can clearly demonstrate that they will not result in harm to the setting of historic buildings or the historic core, including more distant views of the city’s skyline; • Need to know what the Council’s definition of tall is.
<p>Option 73: Policy identifying specific areas suitable for tall buildings</p>	<ul style="list-style-type: none"> • Tall buildings can provide a positive contribution to the street scene, the Compass House site within the Eastern Gate would be an area suitable for tall buildings; • Specifying areas for tall buildings is unnecessary, development should respond to local character and distinctiveness.
<p>Option 74: Limits on building heights</p>	<ul style="list-style-type: none"> • Specifying a maximum height for buildings is unnecessary. An upper limit might encourage developers to build to just below it; • A policy which limits building heights is needed; • Need a policy like this to protect the historic core; • The limit should be 5 storeys; • Needs to be one height restriction over the historic core and a less onerous but proportionate one over the rest of the city; • A policy like this would limit innovative design and would reduce the opportunity to make the most efficient use of

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	<p>land which in turn would impact on development viability;</p> <ul style="list-style-type: none"> • A criteria based approach that deals with tall buildings on a case by case basis would be better; • Height should relate to function and purpose so a rigid limit is not appropriate; • One of the attractions of Cambridge is its human scale. The gradual encroachment of tall buildings negatively impact on this; • Area wide restrictions on building heights would be unnecessarily prescriptive; • Need to safeguard the historic skyline; • It is essential that building height and density is in keeping with neighbouring areas, particularly where domestic buildings are concerned; • There should be guidelines on the height of buildings permitted; • Height should be measured in absolute terms and not by number of storeys as residential and commercial buildings have different floor heights; • Missing comment about rooftop visual garbage (air conditioning, lifts, aerials) that can be detrimental to views; • Preservation of views of open space needs to include the River Cam corridor.
<p>Question 8.16: Do you have any suggestions as to the height limit that could be set across the city, should Option 74 be the policy approach adopted? Should a policy cover just the historic core, or should it cover the wider city?</p>	<ul style="list-style-type: none"> • 6 storeys applied across the city centre and views into it; • Policy needs to apply across the whole city; • A maximum height above sea level should be proposed; • 4 storeys in the historic centre, 6 in the areas built up before WW2 and 12 – 14 further out, except where they would impinge on the beautiful skyline; • Maximum height in general – 20m. Exceptions might be allowed in the city centre where height can contribute positively in a visual scene. Tapering of buildings is preferred to vertical blocks; • Need a policy tailored to different areas of Cambridge. No tall buildings in the city centre and a height limit on all buildings in neighbouring heritage/conservation areas; • Centrally limits should be 6 storeys and 4 in suburban areas; • 5 storey maximum to the whole city; • The height limit policy should be restricted to the inner core. Outside the inner core the height limit should take its guidance from existing tall buildings e.g. Foster’s Mill. This would ensure there are suitable zones for office and

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	<p>residential buildings;</p> <p>TO NOT EXCEED CURRENT BUILDING HEIGHTS.</p>
<p>Option 75: Cambridge Airport Public Safety Zone and Safeguarding Zones</p>	<ul style="list-style-type: none"> • The air navigation orders must already deal adequately with this part of the city; • Government advice requires an appropriate policy regarding the public safety zone; • This policy is unnecessary, a number of buildings that exceed the safety zone restriction have been built in the city in recent years; • The policy is needed, there is a strong likelihood that air traffic at the airport will increase over the plan period.
<p>Option 76: Paving over Front Gardens</p>	<ul style="list-style-type: none"> • Simply require paved over gardens to have adequate soakaways for their drainage systems; • Ideally soft paving should always be used; • This will continue to increase our capacity to reduce flood risk; • All developments, not just front gardens should increase porosity by use of adequate materials and soakaways; • Support clear guidance on the factors that need to be considered when contemplating paving over front gardens, including the impact of the character of the area and surface water runoff; • Support for a policy because of the negative visual impact of paving over front gardens; • The removal of walls in conservation areas to facilitate extra parking is something that should be resisted; • Silly to go for green roofs if we are concreting front gardens; • With stringent restrictions on parking in the city, there should not be any restrictions on people parking in front of their houses; • Given that this is often permitted development the policy is unnecessary. If it is a concern in conservation areas, it should be flagged up in Conservation Area Management Plans; • There needs to be clear control on this and potentially rear gardens as well.
<p>Option 77: Protection of sites of nature conservation importance</p>	<ul style="list-style-type: none"> • There were several general statements of support for this policy which is seen as important; • Object to the appropriate assessment of sites that are not covered by the Conservation Regulations 1994 (e.g. county or city wildlife sites). This requirement would be unnecessarily onerous and could impact on the viability of development; • Development proposals near such sites should not be ‘assessed’, they should be thrown out automatically.

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	<p>There should be no development on wildlife sites;</p> <ul style="list-style-type: none"> • Policy/policies should ensure that development will only be supported where it can be adequately demonstrated that proposals will not have an adverse effect on biodiversity, where required suitable mitigation measures must be acceptable and deliverable; • The policy is needed and it needs to be enforced robustly; • Better protection is needed for green spaces and commons within the city; • Measures to enhance biodiversity should promote native species.
Option 78: Protection of priority species and habitats	<ul style="list-style-type: none"> • Several statements of support in favour of a policy for the protection of priority species and habitats; • When a case is made for protection of a species that are not on the Section 41 list it must also be considered; • No need for a Local Plan policy, detailed guidance should be provided in SPD guidance on Nature Conservation issues.
Option 79: Enhancement of biodiversity as part of all development proposals	<ul style="list-style-type: none"> • It should be amended to allow pooling of biodiversity gain in adjacent sites, nearby green spaces and adjacent corridors; • The requirement to minimise the impacts of development on biodiversity and provide net gains in biodiversity is included in the NPPF. It is not necessary to repeat the policy in the Local Plan, it should be incorporated into Option 64 (Design) and the wording should reflect the wording in the NPPF; • Guidance in this regard including opportunities to reduce costs through identifying and replicating successful approaches should be developed.
Option 80: Enhancement of Biodiversity as part of major developments	<ul style="list-style-type: none"> • Less desirable than Option 79 as it does not apply to all developments;
Option 81: Include reference to biodiversity within Option 64 (the design of the public realm, landscape and other external spaces)	<ul style="list-style-type: none"> • Less desirable than Option 79 as it does not apply to all developments; • It would be better if Option 79 was added to Option 64; • The requirement to minimise the impacts of development on biodiversity and provide net gains in biodiversity is included in the NPPF. It is not necessary to repeat the policy in the Local Plan, it should be incorporated into Option 64 (Design) and the wording should reflect the wording in the NPPF;

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	<ul style="list-style-type: none"> • So long as ‘public realm’ includes developments of less than 10 houses, a unified approach is welcome; • Several statements of support for a policy of this nature; • Some sites have not been designated despite their wildlife value e.g. Chesterton Sidings; • No need for a policy but detailed guidance should be provided in an SPD on Nature Conservation issues; • Support the inclusion of a biodiversity enhancement programme but suggest it should be wider than the options presented; • Worth noting the value of allotments.
Option 82: Support for strategic biodiversity enhancement proposals	<ul style="list-style-type: none"> • This option is essential to support the creation of a viable and functioning ecological network across the city to deliver the Green Infrastructure Objectives; • Large sites need to have this assessment; • The 2011 Green Infrastructure Strategy will provide a useful starting point for the identification of proposals.
Option 83: Trees	<ul style="list-style-type: none"> • Several statements in support of this policy option; • A replacement policy would be more sensible than preventing trees from being harmed; • The ‘wherever possible’ element could allow developers to wriggle out of their responsibility; • In favour of the retention of hedges and veteran trees; • A flexible approach should be promoted; • The criteria for judging whether a tree should be felled needs to be stronger; • The policy should recognise the role of trees in the setting and character of the city and its neighbourhoods, and in providing visual amenity, environmental and social benefits; • When a large tree is removed a greater number of smaller trees should be planted, to ensure similar levels of habitat; • The Council’s proposed policy should incorporate the flexibility provided in the NPPF (Paragraph 118) where the loss of veteran trees might be outweighed by the benefits of new development; • Policy needs to account for the felling of trees in anticipation of development; • There should be ongoing maintenance of trees provided as part of large developments.
Option 84: General Pollution Policy	<ul style="list-style-type: none"> • General statements in support of a policy option on pollution; • One overarching policy dealing with pollution is sufficient; • A preferred approach would be that a general policy on

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	<p>pollution be supported by SPD guidance on the individual issues of air quality, noise and contaminated land;</p> <ul style="list-style-type: none"> • Light pollution is a growing menace; • Additional recent damage to the health of people living near major roads from extra development needs to be recognised; • ‘External lighting’ should include internal lighting that is visible externally.
Option 85: Air Quality Policy	<ul style="list-style-type: none"> • A preferred approach would be that a general policy on pollution be supported by SPD guidance on the individual issues of air quality, noise and contaminated land; • Don’t build housing next to the M11/A14; • Pollution by contractors’ vehicles and plant also needs to be addressed; • This option needs to cover current air quality not just that for new development; • Additional recent damage to the health of people living near major roads from extra development needs to be recognised.
Option 86: Noise Policy	<ul style="list-style-type: none"> • Several general statements of support for a noise pollution policy; • Several mentions of noise pollution caused by the airport including that separate mention should be made of aviation noise; • Several mentions made of traffic generated noise including that noise reduction measures should include reduction measures for existing sources of noise (e.g. traffic from the M11); • Policy should look at existing industrial sources of noise; • Eliminate noise at the source (e.g. car alarms); • Sound insulation needs to be improved in modern properties; • The A14 upgrade would surely have a detrimental effect on noise.
Option 87: Contaminated Land Policy	<ul style="list-style-type: none"> • Research into prior uses can identify potential hazards at an early stage and avoid the necessity of remedial work during construction; • A preferred approach would be to include a general policy on pollution matters with guidance on individual issues within SPD guidance; • There should be a presumption that all brownfield sites are contaminated and a detailed assessment should be required in each case. When remediation is required on phased developments it should be a condition that the whole site is remediated at the outset, not on a phased basis;

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	<ul style="list-style-type: none"> • There should be more stringent control of radioactive waste around the city. Sites central to and around Cambridge still release radioactive waste.
Option 88: Light pollution policy	<ul style="list-style-type: none"> • The requirement for a need assessment, site survey and modelled levels of light spill should not be required for all types of development as this would be unnecessarily onerous and costly for small developments. The requirement should only apply to major development, development with floodlighting or in countryside locations; • Street lights should go off at 2am; • New lighting should be low energy; • All cycle routes in urban areas should be lit with normal street lighting; • The policy should give consideration to energy saving, impact on biodiversity but also public safety and crime prevention; • Particularly important in the western part of the city, because of the impact on observatories; • A preferred approach would be to include a general policy on pollution matters with guidance on individual issues within SPD guidance; • ‘External lighting’ should include internal lighting that is visible externally (stairwells); • There should be an additional requirement for an ecological assessment of the impact of any proposed lighting scheme; • Policy should take account of heritage street lighting and the lighting character of an area; • Missing mention of safety and designing out crime.
Option 89: Detailed visual pollution policy	<ul style="list-style-type: none"> • Street clutter is a persistent problem; • No need for a separate policy, other policies in the plan allow these matters to be addressed; • The design of buildings can involve visual pollution; • Require commercial premises use lower lighting when shut.

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CHAPTER 9 – DELIVERING HIGH QUALITY HOUSING	
SECTION OF ISSUES AND OPTIONS REPORT	Key Issues
General comments – Affordable Housing	<ul style="list-style-type: none"> • Privately rented housing is not considered sufficiently in this chapter; • Forecasting of demographic trends is needed to underpin housing chapter; • Should recognise need of ageing population; • Housing cooperatives should be considered; • Commuted payments towards affordable housing should not be collected in lieu of delivery of affordable housing.
Option 90: 40% or more Affordable Housing	<ul style="list-style-type: none"> • General support for this approach, which is well established; • Concern that insufficient affordable housing would be delivered; • Concern was expressed about the impact on viability.
Option 91: Proportion of Affordable Housing – 50% or more	<ul style="list-style-type: none"> • Support for a higher percentage than the existing 40% approach; • Concern that insufficient affordable housing would be delivered; • Concern was expressed about the impact on viability.
Option 92: Proportion of Affordable Housing – 30% or more	<ul style="list-style-type: none"> • Concern was expressed that 30% would be insufficient to meet local need.
Option 93: Lower qualifying threshold for Affordable Housing provision	<ul style="list-style-type: none"> • Need to reduce the threshold to deliver more affordable housing; • A threshold of 10 dwellings was suggested; • Concern was expressed about the impact on viability.
Option 94: Maintain current threshold for Affordable Housing threshold	<ul style="list-style-type: none"> • Need to reduce the threshold to deliver more affordable housing; • Insufficient affordable housing has been delivered under the current approach;
Question 9.3: Should there be any other variants to this, for example , where schemes have less than 15 dwellings, the proportion of affordable housing sought might be less than 40%?	<ul style="list-style-type: none"> • Smaller sites should be subject to a lower percentage of affordable housing, e.g. 20 – 30%; • A tiered approach dependent on the size of the site; • More self-build or community building; • No, as this would diminish delivery of smaller sites; • 40% should be the norm, unless proven that

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	<p>the development is not viable.</p>
<p>Question 9.4: Do you agree with the approach to clustering affordable housing, or do you feel an alternative approach would be more suitable?</p>	<ul style="list-style-type: none"> • Reducing clustering would help community cohesion; • Clustering can have related management issues; • Clustering can affect the viability of developments.
<p>Option 95: Affordable Housing contribution for new student accommodation</p>	<ul style="list-style-type: none"> • Would contribute to overall need; • This option does not recognise that for a proportion of students it is their permanent home whilst at Cambridge • Would it really lessen pressure on housing stock?; • It could impact on viability, slowing down development; • Would place additional pressure on the housing market and upon the colleges/universities; • The policy should be restricted to require delivery of affordable housing from speculative developers.
<p>Option 96: No Affordable Housing contribution from new Student Accommodation</p>	<ul style="list-style-type: none"> • Would not place additional pressure on the housing market and upon the colleges/universities; • Students put pressure on the city's services and should contribute affordable housing.
<p>Option 97: Specified Tenure Mix</p>	<ul style="list-style-type: none"> • The minimum of 75% of the 40% to be housing for rent should be retained; • This would place added constraints on the market.
<p>Option 98: Tenure mix specified through the SHMA and Affordable Housing SPD</p>	<ul style="list-style-type: none"> • Tenure mix should not be set out in the Local Plan since flexibility is required to take account of changes in housing requirements and also other factors such as funding provision and Central Government specifications.
<p>Option 99: Employment related housing</p>	<ul style="list-style-type: none"> • Option 99 could help prevent new housing simply being taken by London commuters; • Encourages local working; • What happens when a person in employment related housing leaves the employer?; • Many people prefer to live away from their work; • Opposed to the creation of enclaves;

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	<ul style="list-style-type: none"> • There is clearly a need for affordable housing provision, but there is a lack of evidence that locally specific circumstances exist to require employment related housing; • It is important to explore the possibility of specific institutions and employers providing housing specifically for their staff, particularly for the University and its colleges; • It would need to ensure that low paid employees were not excluded from this housing; • It should be secondary to enforcing the provision of affordable housing; • Disincentive to economic development and growth; • Need to specify key worker housing; • Should not negate need for affordable housing; • College employees should be included if housing is provided by University of Cambridge; • A % of affordable housing should be given over to key workers and University and College workers should be included on a list of key workers.
<p>Option 100: Housing mix – General policy</p>	<ul style="list-style-type: none"> • Option 100 is preferable to Option 101 as it would allow local circumstances, needs and the housing market to determine the appropriate mix on each site; • Support, but need to avoid high density and very tall buildings; • Strong vision for an area is needed, developed in close consultation with residents.
<p>Option 101: Housing mix – specific levels policy</p>	<ul style="list-style-type: none"> • Support, but need to encourage 3 bed dwellings or more for families; • Support more provision suitable for the elderly; • Support, but need minimum unit sizes; • Support provision of housing cooperatives; • Support, but need to avoid high density and very tall buildings; • Option 100 is preferable to Option 101 as it would allow local circumstances, needs and the housing market to determine the appropriate mix on each site;

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	<ul style="list-style-type: none"> • It would lead to poor design; • The detail in the policy is critical – the character of the site and area, the market and the Strategic Housing Market Assessment are vital; • General approach is supported, with the mix in developments determined at the point of planning permission, responding to the market, local need and viability; • Should ensure adequate unit sizes, including provision of sufficient 3 bed + units; • The types of accommodation on sites depends on location. It would be preferable to retain flexibility; • The mix of housing must not lead to high density or high rise; • There is a need to understand who needs what size dwelling in Cambridge; • Mix is a key lever for affordable housing; • Properties should be based on size, not number of bedrooms; • Need for more family housing; • Need for housing for the elderly; • Occupancy levels are important; • Space standards are vital.
<p>General comments – Housing Density</p>	<ul style="list-style-type: none"> • Increasing density will impact on local transport infrastructure and services; • Cambridge is a compact city and any further efficient use of land should be supported through provision of high quality cycle provision. High levels of car parking should be resisted: • There is a clear and demonstrable need for this policy if new developments are considered; • The policy would need to suit local circumstances; • Cross-boundary approach is needed with South Cambridgeshire; • The population of Cambridge should not expand any further; • Setting density is in conflict with residential space standards; • There is a need for a policy, but one which sets maximum rather than minimum densities;

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	<ul style="list-style-type: none"> • Setting densities should be avoided and each site density assessed on its own merits. Arbitrary thresholds could easily result in inappropriate developments in sensitive areas; • Any density policy must include safeguards to ensure that the new development fits in with the existing development context; • Setting density is in conflict with residential space standards; • An additional option is required which seeks generally higher densities in central areas, but stresses the importance of also safeguarding the historic core of the city, and lower densities on the fringes of the city to respect the adjoining Green Belt, to ensure that the compact nature of Cambridge is not harmed and the need for family housing is also met; • Higher densities should only be possible in areas with good transport infrastructure.
<p>Option 102: No specific density policy or requirements – design led approach</p>	<ul style="list-style-type: none"> • This option will provide more capacity to deal with growth; • It would allow local context and the housing market to determine the appropriate density on each site. This would result in more contextually appropriate development than Options 103, 104 and 105, which lack flexibility; • Density must be dependent on site and context. Tall buildings must be dealt with by separate policy; • Density is vitally important to the well-being of the city’s residents; • Some sites where high densities have been achieved have given rise to problems with inadequate internal and external spaces and car parking; • Need to avoid cramming development into sites whether following a design-led or dwellings per hectare approach; • Need to specify a maximum density.
<p>Option 103: Establish minimum threshold densities in the City Centre</p>	<ul style="list-style-type: none"> • Denser housing is needed; • Option 102 would allow local context and the housing market to determine the appropriate density on each site. This would result in

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	<p>more contextually appropriate development than Options 103, 104 and 105, which lack flexibility;</p> <ul style="list-style-type: none"> • There should be an option to set maximum densities, rather than minimums; • Densities should be dealt with on a case-by-case basis.
<p>Option 104: Establish a minimum threshold of average net density within 400 metres of district and local centres on high quality public transport routes and transport interchanges</p>	<ul style="list-style-type: none"> • 50 dwellings per hectare is a realistic level in such areas; • Option 102 would allow local context and the housing market to determine the appropriate density on each site. This would result in more contextually appropriate development than Options 103, 104 and 105, which lack flexibility; • There should be an option to set maximum densities, rather than minimums; • Densities should be dealt with on a case-by-case basis.
<p>Option 105: Minimum density of 30 dph for all development sites</p>	<ul style="list-style-type: none"> • This option was not supported by any respondents; • Option 102 would allow local context and the housing market to determine the appropriate density on each site. This would result in more contextually appropriate development than Options 103, 104 and 105, which lack flexibility; • There should be an option to set maximum densities, rather than minimums; • Densities should be dealt with on a case-by-case basis.
<p>General comments – Residential Space Standards</p>	<ul style="list-style-type: none"> • Need to ensure a wide mix of sizes of property with adequate internal and external spaces to be family-friendly; • Need to prevent developers from squeezing too much into a development to create unacceptable living standards; • A number of respondents considered that Options 106 and 108 would represent a good combination of policies, whilst others considered that Options 107 and 109 would represent a good combination; • Need for a policy on standards for shared outdoor space for blocks of flats; • Need to build consumer awareness; • The first bedroom should always be big

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	<p>enough for two people to accommodate changes in circumstances;</p> <ul style="list-style-type: none"> • Properties need private outdoor space of a reasonable depth and width; • Need for a long-term view of the immeasurable value of private gardens.
<p>Option 106: Minimum standards based on the level of occupancy (bedspaces)</p>	<ul style="list-style-type: none"> • Current developments do not provide sufficient space for ordinary living; • This option should be combined with Option 107 as there are good aspects in both options; • Minimum space standards for principal rooms are desirable but the areas counting towards meeting the standard should have minimum headroom of at least two metres, preferably 2.1. There might be some relaxation for under eaves space but this should be minimal. Gross area for such rooms without any regard to height is not acceptable. All designated bedrooms should be large enough to accommodate an adult, their storage and dressing space; • Option 106 is preferred to Option 107, which could produce properties that are difficult to adapt or sell in future. Spacious houses sell well and in general people are getting taller and proportionately larger; • Minimum space standard should be based on occupancy levels; • Space standards should be determined by the market. Those able to buy or rent in the open market can exercise choice in terms of the balance between standards, space, affordability and location; • Imposing minimum space standards could adversely affect viability and deliverability of constrained sites, and would reduce the total number of units delivered in the city and the ability to deliver affordable homes and community facilities; • Evidence from the Home Builders Federation shows that whilst dwelling sizes may be smaller in the UK, the average occupancy level of new housing within the UK is amongst the lowest in Europe; • Increasing the size of homes necessarily increases costs to purchasers; • This can be carried out through development

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	<p>control mechanisms for new development and does not need a specific policy. There is no need to repeat other legislation in the Local Plan.</p>
<p>Option 107: Minimum space standards based on a range of dwelling types.</p>	<ul style="list-style-type: none"> • Too many dwellings are far too small; • Ceiling heights and principal rooms need minimum height and sizes. There is also a need for cycle, outdoor amenity and garden space; • Developers will not voluntarily do this; • It is in the interests of residents and the non-overdevelopment of a site to do this; • This option should be combined with Option 107 as there are good aspects in both options; • Minimum space standards for principal rooms are desirable but the areas counting towards meeting the standard should have minimum headroom of at least two metres, preferably 2.1. There might be some relaxation for under eaves space but this should be minimal. Gross area for such rooms without any regard to height is not acceptable. All designated bedrooms should be large enough to accommodate an adult, their storage and dressing space; • Option 106 is preferred to Option 107, which could produce properties that are difficult to adapt or sell in future. Spacious houses sell well and in general people are getting taller and proportionately larger; • Space standards should be determined by the market. Those able to buy or rent in the open market can exercise choice in terms of the balance between standards, space, affordability and location; • Imposing minimum space standards could adversely affect viability and deliverability of constrained sites, and would reduce the total number of units delivered in the city and the ability to deliver affordable homes and community facilities; • Evidence from the Home Builders Federation shows that whilst dwelling sizes may be smaller in the UK, the average occupancy level of new housing within the UK is amongst the lowest in Europe; • Increasing the size of homes necessarily

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	<p>increases costs to purchasers;</p> <ul style="list-style-type: none"> • This can be carried out through development control mechanisms for new development and does not need a specific policy. There is no need to repeat other legislation in the Local Plan.
<p>Option 108: Minimum space standards for private outdoor amenity space only</p>	<ul style="list-style-type: none"> • There should not be a minimum standard for private outdoor amenity space. This should be determined by the market; • There could be recommended standards for minimum private outdoor amenity space standards but with flexibility to tailor to specific circumstances, for example, it could be reduced if the site is constrained, or if there is a high proportion of public amenity space in close proximity; • To impose a specific minimum requirement will be to constrain development sites coming forward, and will diminish the delivery of housing on certain sites. Each application should simply continue to be considered on merit as at the present time; • The space provided should be appropriate to the development and its location. Gardens that are contiguous have greater amenity and ecological value than separate fragments of land. The overall open space requirement coupled with a common-sense approach on a case by case basis can produce better results; • Minimum space standards need to be set out for outdoor amenity space, though not to the exclusion of other space standards.
<p>Option 109: General provision of outdoor amenity space</p>	<ul style="list-style-type: none"> • Those able to buy or rent in the open market can exercise choice in terms of the balance between standards, space, affordability and location; • Imposing minimum space standards could adversely affect viability and deliverability of constrained sites, and the ability to deliver affordable homes and community facilities; • Evidence from the Home Builders Federation shows that whilst dwelling sizes may be smaller in the UK, the average occupancy level of new housing within the UK is amongst the lowest in Europe; • Increasing the size of homes necessarily increases costs to purchasers;

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	<ul style="list-style-type: none"> • Whilst well-intentioned, this option may allow too many loopholes to be meaningful; • The space provided should be appropriate to the development and its location. Gardens that are contiguous have greater amenity and ecological value than separate fragments of land. The overall open space requirement coupled with a common-sense approach on a case by case basis can produce better results.
<p>Option 110: No space standards specified.</p>	<ul style="list-style-type: none"> • Those able to buy or rent in the open market can exercise choice in terms of the balance between standards, space, affordability and location; • Imposing minimum space standards could adversely affect viability and deliverability of constrained sites, and the ability to deliver affordable homes and community facilities; • Evidence from the Home Builders Federation shows that whilst dwelling sizes may be smaller in the UK, the average occupancy level of new housing within the UK is amongst the lowest in Europe; • Increasing the size of homes necessarily increases costs to purchasers; • Standards are critical, no action is not a good option; • The space provided should be appropriate to the development and its location. Gardens that are contiguous have greater amenity and ecological value than separate fragments of land. The overall open space requirement coupled with a common-sense approach on a case by case basis can produce better results;
<p>General comments – Lifetime Homes and Wheelchair Housing Design Standard</p>	<ul style="list-style-type: none"> • All new homes should include the provisions of lifetime homes as the costs are modest and it will only have the effect of slightly increasing the area of the dwelling; • Support a combination of 112 and 113, say 10% wheelchair housing design standard and a further 15% to Lifetime Home standard. This would improve our performance on this issue (an important one given our ageing population and historical failure to anywhere near meet the needs of the disabled), while not imposing too high a standard for developers; • Support Option 112 if the proportion of new

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	<p>homes to meet Lifetime Homes Standards is increased from 15%;</p> <ul style="list-style-type: none"> • Space needs are greater not only for physically disabled people but for people with other forms of disability e.g. learning disability, for example when they require a carer or carers all the time or for most of the time. Autistic people may not be able to go out very often because of the lack of adequate support and it has been known for some time that many disabled children (including autistic children) need extra room at home so that they can play; • It should be a mandatory assessment with a system of awards; • Fiscal incentives should be introduced to make attractive to many of those living in larger houses (e.g. single occupation of family homes) to downsize/smartsize, freeing up accommodation to those who have families.
<p>Option 111: Lifetimes Homes standard applied to all development</p>	<ul style="list-style-type: none"> • All new homes should be designed for safe and comfortable movement in and around them. If Cambridge were to adopt a Housing Design standard that required specific justification for raised thresholds, steps or narrow doorways, most of the Lifetime Homes criteria would become the norm, and people would not be excluded from parts of their own or their friends' houses by mobility problems; • Options 111 and 113 impose a requirement for 100% Lifetime Homes and a proportion of housing to meet Wheelchair Housing Design Standards, which would result in an unnecessarily adverse impact on the viability of the development, and would increase the challenge of successfully developing constrained sites. The requirement for Lifetime Homes and Wheelchair Housing Design Standards should reflect local needs and the characteristics of a site; • Option 112 would be more appropriate, although additional flexibility should be incorporated to ensure that viability is not adversely affected, by including the wording "unless not viable";

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<p>Option 112: A proportion of new homes to meet Lifetime Homes standard</p>	<ul style="list-style-type: none"> • Option 112 would be more appropriate than Option 111, although additional flexibility should be incorporated to ensure that viability is not adversely affected, by including the wording "unless not viable"; • With changing demographics and health needs and with the aim of helping people to continue to live independently, we should aspire to design homes that are as flexible as possible; • All new housing should be built to Lifetime Homes standard.
<p>Option 113: A proportion of new homes that meet the Wheelchair Housing Design Standard</p>	<ul style="list-style-type: none"> • There are increasing numbers of disabled and elderly people; • Needs can change very swiftly, so housing should be adaptable to suit those changing needs; • Options 111 and 113 impose a requirement for 100% Lifetime Homes and a proportion of housing to meet Wheelchair Housing Design Standards, which would result in an unnecessarily adverse impact on the viability of the development, and would increase the challenge of successfully developing constrained sites. The requirement for Lifetime Homes and Wheelchair Housing Design Standards should reflect local needs and the characteristics of a site; • Option 112 would be more appropriate, although additional flexibility should be incorporated to ensure that viability is not adversely affected, by including the wording "unless not viable".
<p>Option 114: Criteria based policy for small scale residential development and infill development in the rear of gardens</p>	<ul style="list-style-type: none"> • Measured policy option which does not preclude development where appropriate and design standards are high; • Option 114 is preferable to Option 115, which does not provide sufficient flexibility to consider local circumstances for infill development in rear gardens. Option 114 provides adequate criteria to ensure such development is appropriate; • The option helps provide additional housing with a variety of designs to enhance the city's landscape; • It reduces the pressure on Green Belt land;

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	<ul style="list-style-type: none"> • Gardens are a precious commodity and a defining quality to areas; • Loss of amenity space coupled with problems posed by flooding make this option unwise; • Deterioration of quality of life.
<p>Option 115: Policy to restrict infill development in rear gardens</p>	<ul style="list-style-type: none"> • Protection should be given to gardens with mature trees; • Gardens are vital for biodiversity; • Gardens are a precious commodity and a defining quality to areas; • Gardens are an important part of reducing flood risk; • Very specific local circumstances could support this approach; • There is a presumption against development of gardens; • Deterioration of quality of life; Whilst welcoming a tougher policy stance on infill development in rear gardens, this should not preclude redevelopment on derelict sites; • Option 114 is preferable to Option 115, which does not provide sufficient flexibility to consider local circumstances for infill development in rear gardens. Option 114 provides adequate criteria to ensure such development is appropriate; • This option does not result in a balanced approach; • The amount of green space in residential areas needs addressing; • Need to restrict infill in existing areas of high density development;
<p>General comments – Housing in Multiple Occupation</p>	<ul style="list-style-type: none"> • The designation of three storeys seems out of date with so many houses having loft conversions; • Inhabitants of large HMOs are often transient and some landlords do not keep their properties in a good state of repair; • Want to avoid HMOs outnumbering local family homes so support the proposed policy; • Would like to see specific policy that deters the conversion of large family homes to HMOs; • The need for a policy was largely supported by respondents. Particular reference was made to the need for a cap on the number of HMOs

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	<p>in a given area.</p> <ul style="list-style-type: none"> • Where respondents objected, it was based on the impact that restrictive criteria on HMOs could have on the Cambridge housing market; and upon the difficulty of enforcing such a policy. A number of Colleges and Anglia Ruskin University responded in objection due to the impact restrictions could have on students’ access to housing; • There should be a requirement for all licensed HMOs to lodge contact details for their owners and managers with local police or on the City Council website, so neighbours can have immediate access in cases of anti-social behaviour or emergencies; • Restrictions on car ownership and parking permits should be considered; • The value of shared housing needs protecting rather than restricting; • Many small houses in Romsey don’t count as HMOs due to being on two storeys, but are overcrowded and provide poor living conditions; • Housing stock should be used efficiently, rather than being restricted; • Largest properties need improved regulation, without limiting the contribution that flexible shared housing makes to local housing provision; • There should be a review and improvement plan for the private rented sector.
<p>Option 116: Criteria based policy for HMOs</p>	<ul style="list-style-type: none"> • Car parking is often a vexed issue with HMOs, so it is welcome to see it covered in the criteria; • HMOs can be an active nuisance, particularly when occupied by students. Restrictive criteria are welcomed; • HMOs need to be of a reasonable quality to safeguard residents and reduce impacts on neighbours; • HMOs are an essential sector of the housing stock at the lower end of the housing market. A positive approach should be taken to provision. Para 9.67 states 20% of HMOS are occupied by students. Therefore HMO policy should link in to a supportive policy for the provision of new student accommodation as

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	<p>the demand for both types of housing increases;</p> <ul style="list-style-type: none"> • HMOs are an important part of the housing market in Cambridge. Cost of housing prices many young people out of the market. There is a shortage of affordable housing and 8,210 people on the Council's waiting list. HMOs play an important role in meeting housing needs and enabling workers who cannot afford to buy to live in the city close to where they work. Restrictions on HMOs will worsen affordability and push rents up; • There should be a cap on HMOs; • There is the need to consider cumulative impact of HMOs in a given area, as they impact on availability of family housing and weaken the sense of community in a locality; • The threshold for converting small housing units to HMO should be lowered.
General comments – Specialist Housing	<ul style="list-style-type: none"> • Support for large, high quality retirement homes; • Need for bungalows for the elderly; • Housing cooperatives should be given more consideration; • Need to separate specialist housing from affordable housing categories.
Option 117: Specialist Housing	<ul style="list-style-type: none"> • Support for the principle of the option; • Residents of specialist housing should have good access to safe and secure open space. It is important to health and well-being; • Whilst supporting the need for a policy, caution should be exercised in specifying amenity space requirements for accommodation for the elderly; • Specialist accommodation should be available within communities so that people can remain within their existing community even if they require more care; • Any policy relating to specialist housing must take into account the market's ability to deliver such provision and other site-specific demands; • Specialist housing should be close to a local centre.
General comments – Opportunities to provide new	<ul style="list-style-type: none"> • There should always be the presumption particularly for buildings of historic interest

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housing	<p>and in conservation areas that any conversion returns the house or building to its original use;</p> <ul style="list-style-type: none"> • Identify empty houses to be repaired and brought back into use (perhaps using council loans to be paid back once a house is let or sold); • Identify derelict sites on residential streets, which could be used for small amounts of housing (e.g. the old tapes shop on Gwydir Street); • Older buildings and those not in use should be renovated to address housing needs before there are schemes for large scale housing developments that lack community infrastructure.
Option 118: Opportunities for providing new housing	<ul style="list-style-type: none"> • This option was supported by all respondents to this issue. Concern was raised that it should be designed to avoid short-term thinking and to ensure that opportunistic development does not result in a skewing of the overall housing mix in a given area; • Emphasis should be less on the need to create new units of accommodation and more on the need to retain the existing variety of stock suitable for different household sizes.
General comments – provision for Gypsies and Travellers	<ul style="list-style-type: none"> • Concern that the Traveller population is being under-estimated and that this will increase the level of unmet need for Traveller provision, including land, locally; • Gypsies and Travellers are the largest minority group comprising 1% of the population in our region, yet the Council suggests only 1 pitch is required between 2011-2031. The Cambridge Sub-Region Gypsy and Traveller Accommodation Needs Assessment (GTAA) 2011) seriously underestimates the need for permanent pitches in Cambridgeshire. The Assessment was carried out by the local authorities themselves as a technical exercise; • The gradient of inequalities may be steeper than reported here. The recent inequalities report from the DCLG includes the following statement in relation to life expectancy "...a recent study stated that the general

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	<p>population were living up to 50% longer than Gypsies and Travellers”;</p> <ul style="list-style-type: none"> • Wording should be more careful on whether Gypsies and Travellers travel; • There is a need for Travellers to have better access to education; • This statement does not sufficiently recognise the extent to which Travellers have been forced into Council accommodation against their wishes and in a way which erodes their culture, and nor does it reflect the detrimental effects of being forced into council housing; • A significant part of the demand for new pitches is from Gypsies and Travellers moving from bricks and mortar into private sites. The numbers seriously underestimate the numbers involved; • Needs to be independent consultation with the Traveller community; • Consideration should be given to a transit site near Addenbrooke’s; • Need to continue working with South Cambridgeshire to progress pitch provision.
<p>Option 119: Criteria based policy for the location of Gypsy and Traveller sites</p>	<ul style="list-style-type: none"> • The requirement that 'There should not be an unacceptable adverse impact on the amenity of nearby residents or the appearance or character of the surrounding area.' allows for prejudice to determine objections by other residents; • The approach to Traveller sites should be as similar as possible to that for housing; • Protection of residential amenity is paramount; • Green Belt land should not be used for Traveller site provision.
<p>Sites for Gypsy and Traveller provision</p>	<ul style="list-style-type: none"> • Specific site allocations must be made; • Support planning permission for pitches at the existing Smithy Fen site in Cottenham; • Improve current sites and improve transport links to these sites; • Large sites should be possible to allow the Traveller community to thrive in large, mutually supportive, extended family groupings. Amenity blocks and provision for chalets as well as trailers and caravans are all

	<p>necessary. Without permission for sufficient amenity blocks proper sanitation will not be possible leading to inhumane living circumstances;</p> <ul style="list-style-type: none"> • The Council could substantially enhance the prospects for traveller development through a policy to connect the Fen to Cowley Road, providing more direct connection to the trunk road network for heavy vehicles. Given the presence of the railway sidings this is likely to be along the northern boundary of Network Rail's land; • Spend grant funding on provision of new permanent sites with proper amenities; • Provide sites on brownfield uncontaminated sites; • Take on ideas from other existing sites where there is high quality internal and external landscaping to improve amenity for both traveller and settled communities. <p>Sites within the urban area:</p> <ul style="list-style-type: none"> • Land off Coldham's Lane might be suitable for Traveller Site provision; • A transit site should be found near to Addenbrooke's; <p>Sites within the Green Belt</p> <ul style="list-style-type: none"> • Areas on the edge of the city should be set aside for new provision; • A transit site should be found near to Addenbrooke's; • Need to consider the area adjacent to the new station at Northern Fringe East. The three authorities need to consider this jointly; • Provision should be made in South Cambridgeshire or elsewhere in the county; • Beside Babraham Road Park and Ride site.
<p>Question 9.51: Should land in the Green Belt be considered for Gypsy and Traveller provision?</p>	<p>There was limited support for the provision of sites in the Green Belt. Concerns included:</p> <ul style="list-style-type: none"> • The Green Belt should not be released for this purpose; • Sites should be provided in South Cambridgeshire beyond the Green Belt; • Any significant areas of Green Belt released for housing should also make provision for

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	Gypsies and Travellers.
General comments – Residential Moorings	<ul style="list-style-type: none"> • The majority of respondents supported the need to identify areas for new moorings, with reference made to marina provision. Concern was raised that moorings should be provided within the city boundary with standards enforced, equivalent to those which would be required of land dwellings. For example, coal and diesel should not be burned emitting fumes at one to two metre height.
Option 120: Residential moorings	<ul style="list-style-type: none"> • Many respondents supported the need for residential moorings despite having concerns about the reality of their development and potential for knock-on impacts in a given area (as outlined in the arguments against this option; • New residential moorings should not be at the expense of short-stay tourist moorings; • New residential moorings should not be to the detriment of the riverscape; • Need to consider impact on parking in a locality; • Need to consider amenity of local residents; • Risk of air and water pollution.
Sites for residential moorings	<ul style="list-style-type: none"> • Fen Ditton; • Land to the west of the River Cam off Fen Road formerly designed as a Waste Transfer Station under the Cambridgeshire and Peterborough Minerals and Waste Plan 2009. Low lying floodplain with limited excavation required and significant capacity for moorings; • Land to the south-east of Clayhithe Bridge, Waterbeach, owned by the Conservators of the River Cam and let for seasonal cattle grazing. Probably Green Belt; • North side of the River Cam, near Fen Road; • Further mooring on the south side of the river could be provided on Stourbridge Common, but a better path should be provided.

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CHAPTER 10 – BUILDING A STRONG AND COMPETITIVE ECONOMY	
SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
Option 121: Building a strong and competitive economy	<ul style="list-style-type: none"> • Essential that the Council continues to support the University of Cambridge which supports Cambridge’s economy, social and cultural life and environment; • Sustainable development for homes and jobs close to Cambridge will help build a strong and competitive economy; • Should plan for growth outside Cambridge, close enough to benefit from links to the University; • Need for growth should not be assumed at this stage; • The report downplays Anglia Ruskin University’s role; • Cambridge’s economy too skewed towards public sector; • The number of people and jobs need to be balanced; • Emphasis on strong sectors will exacerbate city’s imbalance; • Encourage affordable employment space; • Limited land means much employment growth will have to go in surrounding districts; • Need to support economy of Cambridge sub-region; • Good transport links between employment sites important.
Vision - Employment	<ul style="list-style-type: none"> • Should concentrate on quality over quantity; • Important to translate vision into policies that deliver new homes and supports the economy; • Need to support creation of new high tech firms; • Lack of land is surely and argument against further growth; • Growth cannot go hand in hand with maintaining quality of life; • The Vision should reference green spaces that contribute to compactness and attractiveness of the city; • The role of education establishments should be strengthened, flexibility around their growth is important; • Growth should be encouraged elsewhere; • Should not become a dormitory town for London or a shopping centre for the east of England; • A more balanced economy creating jobs for those with lower level qualifications.
Selective management of the economy – general comments	<ul style="list-style-type: none"> • Should look at growth of professional, service and retail industries commensurate with high tech growth; • Amend policy to allow small scale companies involved in research, development and production to support commercialisation of research; • Existing policy isn’t restrictive enough, growth should be encouraged in other areas of the country;

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	<ul style="list-style-type: none"> • This policy has helped keep Cambridge a nice place to live; • High tech manufacturing and HQs require major investment in rail and road infrastructure to be competitive; • Manufacturing development is unlikely to be viable given high costs in Cambridge; • Need to preserve Cambridge’s special character; • Should support live-work units and studios for inner areas; • Building higher, where existing buildings are only one or two storey would help create capacity.
<p>Option 122: Continue with selective management of the economy unamended</p>	<ul style="list-style-type: none"> • Support for employment uses which provide a service for the local population; • The current policy is working; • Focus on strengths and locate larger, land hungry, businesses outside Cambridge; • Reserve land for uses that support high tech industry; • Only relax if local economy is stalling; • Should apply only to new buildings, not conversions, or retrofitting existing buildings; • Unduly restrictive and restricts employment growth in the city; • Amend slightly to allow manufacturing and HQ development associated with the cluster; • Based on looking back and playing it safe.
<p>Option 123: Amend selective management to include some additional uses</p>	<ul style="list-style-type: none"> • High tech HQs should be encouraged, will encourage employment diversity and organic growth; • Support the wider economy; • Promote high end manufacturing; • Increased flexibility may help retain commercialisation of research; and • HQ operations are important to grow large companies; • High tech HQs could just contain back office staff; • High tech HQs and manufacturing should be considered separately; • High tech manufacturing growth needs to be coordinated with surrounding districts, Alconbury is a potential location; • Existing policy allows for high tech HQs to locate to Cambridge; • High tech manufacturing growth will impact on traffic in Cambridge; • Will increase pressures on land supply, increasing prices and rents; • Should apply only to new buildings, not conversions, or retrofitting existing buildings; • Unduly restrictive and will continue to restrict employment growth in the city.
<p>Option 124:</p>	<ul style="list-style-type: none"> • Let the market decide;

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<p>Discontinue the policy of selective management of the economy</p>	<ul style="list-style-type: none"> • Current policy discourages development of employment space that no longer meets modern standards, restricting supply of office space; • Current policy too restrictive; • Current policy contrary to the spirit of the Use Class Order; • Current policy unfairly discriminates against non-local users; • Should maintain focus on high tech service sector; • Free for all would allow industrial sprawl; • Encourage businesses with real roots in Cambridge that will remain through the bad times as well as the good.
<p>Protection of industrial and storage space – general comments</p>	<ul style="list-style-type: none"> • Without protection, no industrial site can fight off residential land values; • Plans should be able to rapidly respond to changing circumstances; • Policies should not seek to protect sites where there is no reasonable prospect of the site being used for that purpose; • Increased flexibility, but not to change to offices, but for cultural activities or even housing; • Vital need for small workshops as initial homes for new businesses.
<p>Option 125: Continue with protection of industrial and storage space unamended</p>	<ul style="list-style-type: none"> • The effectiveness of its implementation should be enhanced; • Critical to success of Cambridge economy; • Traffic generated by these uses tend to be outside rush hours; • Once lost, potential is gone forever; • Cambridge’s strengths lie in service sector; • These uses that have significant transport impacts, should be relocated outside Cambridge; • Empty sites could have office uses on them; • Some protected industrial sites do not have much industry on them; • Fails to provide sufficient flexibility.
<p>Option 126: Amend the policy of protection of industrial and storage space by deleting all protected sites</p>	<ul style="list-style-type: none"> • Amend criteria to assess sites; • Increased flexibility where employment sites are surplus to requirements; • Cambridge’s strengths lie in service sector; • Will allow redevelopment to residential, adding to congestion, and reducing employment opportunities for low skilled workers; • Once sites are lost from employment use, they are lost forever.
<p>Option 127: Amend the policy of protection of</p>	<ul style="list-style-type: none"> • Should apply where there are persistent vacancies; • Improve job diversity; • Increased flexibility;

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<p>industrial and storage space to encourage other forms of employment development</p>	<ul style="list-style-type: none"> • Counter productive to enforce unviable uses to remain on a site; • Loss of best industrial sites; • Important to sustainable live/work plans; • Cambridge’s strengths lie in the service sector; • Still not sufficiently flexible.
<p>Protection of office space – general comments</p>	<ul style="list-style-type: none"> • Focus on supporting redevelopment/upgrading of existing stock; and • Increased offices in the historic core will impact congestion and the environment.
<p>Option 128: Do not protect office space</p>	<ul style="list-style-type: none"> • Not necessary, market forces can achieve a sustainable balance; • Increased flexibility for owners; • Many existing empty offices, and new offices going up near station; no need to protect offices.
<p>Option 129: Protection of office space</p>	<ul style="list-style-type: none"> • Important to sustainable live/work plans; • Not necessary, market forces can achieve a sustainable balance; • Reduced flexibility for owners, impacting on Cambridge economy; • Many existing empty offices, and new offices going up near station; no need to protect offices.
<p>Promotion of cluster development – general comments</p>	<ul style="list-style-type: none"> • Discontinue policy as of no apparent value; • Strong support for cluster development, especially knowledge-driven, creative or high tech industries; • The new station will help the cluster expand; • Clusters assist networking; • Promoting clusters is in line with the NPPF; • Provision of incubator units can help some entrepreneurs; • Provides a positive statement of the type of development the Council wishes to see; and • Needs to mention growth of SMEs.
<p>Option 130: Continue to promote cluster development</p>	<ul style="list-style-type: none"> • Provides reassurance to potential occupiers that sites will be occupied by related uses; • Justifies the principle of development on some sites; and • Carry forward existing policy; • Cluster should grow naturally.
<p>Option 131: Do not promote cluster development</p>	<ul style="list-style-type: none"> • Should look at what businesses are actually doing; • Carry forward existing policy.
<p>Promotion of shared spaces – general comments</p>	<ul style="list-style-type: none"> • Not a matter for Local Plan policy; • Not necessary or desirable; • Lack of facilities on commercial developments leads to extra journeys during the day; • Gardens for communal lunches;

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	<ul style="list-style-type: none"> • Only realistic on larger employment sites; • Occupiers may have to subsidise; and • Increased costs to developers will increase rents.
Option 132: Promote shared social spaces	<ul style="list-style-type: none"> • Cannot be left to market forces, will only be of interest to developers with a long term interest; • Requires a long term commitment to them; • Community is important in workplaces; • Support for residential over commercial premises to enliven areas after hours; • No arguments against the option.
Option 133: Do not promote shared social spaces	<ul style="list-style-type: none"> • No arguments against the option; • Requires a long term commitment to them; • Support for residential over commercial premises to enliven areas after hours.
Densification of employment areas – general comments	<ul style="list-style-type: none"> • Development should be planned in coordination with the transport strategy; • Densification should be complemented by fast connecting transport links, particularly at peripheral locations; • Smarter use of land; • Densification should not undermine value of open spaces and social areas, should be considered on a case by case basis, not a blanket policy; • Higher densities promote walking and cycling; • Densification where good public transport exists or can be provided; • Care must be taken of the historic environment in Cambridge; • Brownfield development is better than Greenfield; • Increased traffic from denser developments; • Criteria based policy may be effective.
Option 134: Densify existing employment areas	<ul style="list-style-type: none"> • Support with adequate weight given to possible detrimental effects (traffic, noise, visual intrusion); • Will reinforce transportation, density and sustainability goals; • Preferable to erosion of green spaces and Green Belt; • Makes best use of employment land supply. • No arguments against the option.
Option 135: Do not densify existing employment areas	<ul style="list-style-type: none"> • Additional pressure to erode green spaces and Green Belt.
Retail development sites	<p>No specific sites were suggested, but the following suggestions were made:</p> <ul style="list-style-type: none"> • Redevelop Newmarket Road retail warehousing to use land more efficiently;

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	<ul style="list-style-type: none"> • Distributed local shopping centres should be actively encouraged to reduce carbon emissions and ease congestion in the city. Suggestions within the city include Chesterton and Trumpington; • Trumpington near new housing developments, around Business Parks or near new Chesterton Station; • Concentrated in City Centre through infill. Suggest Hobson Street to complement planned improvements as part of the Better Bus Area Initiative. Existing shops would benefit from improved street frontage and greater footfall; • Redevelopment at Mitcham’s Corner; • Waitrose should be in the Trumpington centre and this should be re-classified as a District Centre; • Classify Beehive Centre as a District Centre; • City Centre should be the focus for new comparison floorspace in line with NPPF and the sequential approach; • Retail provision in the new housing areas with access by all forms of transport.
Option 136: General shopping policy that applies to all centres	<ul style="list-style-type: none"> • A number of objections to Option 136 which proposes a general policy for all centres. Preference for Option 137, which separates criteria for different types of centre, as different centres perform different roles and functions in the retail hierarchy; • Objection to larger retail developments providing smaller units. This would be an unnecessary restriction on development. Not in line with NPPF; • The growth of internet shopping is likely to reduce use of retail outlets in the city and reduce the need for increasing retail jobs; • There should be no loss of shops without justification; There is a need for economic vitality in all parts of the city, not just the City Centre; • The city requires more and smaller local shops outside the City Centre; • Economic downturn means that there does not seem to be any sort of justification for additional floorspace; • Object to control of floorspace by percentage of A1 use; During an economic climate where there should be a drive for town centre vitality and viability, such policies are considered too restrictive.
Option 137: Separate policy options for different types of centre	<ul style="list-style-type: none"> • Lots of support for this option which proposes a specific policy for each of the different types of centre and recognises the role and function of each type of centre would be different.
Option 138:	<ul style="list-style-type: none"> • Mixed views on this option;

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Neighbourhood shops	<ul style="list-style-type: none"> • Support for retail facilities in the community; • Neighbourhood shops are fundamental and currently get little attention; • Neighbourhood shops make a huge contribution to the quality of life, but conditions are hard for them. Any encouragement for them is to be supported; • Individual properties outside of town centres need to have flexibility to react to changing economic demands and thereby prevent properties standing empty where there is an alternative viable use; • Should not support unsustainable businesses, anti-competitive.
Option 139: No policy on neighbourhood shops	<ul style="list-style-type: none"> • Mixed views on this option; • Support for local shops which serve the community and to prevent loss of pubs / restaurants. These are community assets; • Shouldn't support economically unviable shops; • Market forces should determine viability; • Need a flexible policy – market forces will ultimately determine the issue; • Needs to be realism in the approach to whether a shop continues to be viable or not.
Option 140: New foodstore in North West Cambridge	<ul style="list-style-type: none"> • Generally supported but some objection – do not believe that a policy is needed in this respect; • Support as this would formalise the Informal Planning Policy Guidance; • The foodstore if approved should have a filling station; • Scope for a bus connecting to out of centre stores; • 2,000 square metre maximum requirement is too low and contrary to the findings of the Council's evidence base and the requirements for the NIAB site; • A policy on this could also apply to the University site.
Option 141: Convenience shopping	<ul style="list-style-type: none"> • Little support for such a policy; • Any policy should accord with an up to date evidence base and the NPPF; • Don't believe a policy is needed in this respect; • Let the market decide; • No need for a policy as it lacks flexibility and would discourage economic growth and competition. New convenience development should be considered against the requirements of the sequential and impact tests in NPPF; • Some support - agree that only small scale development of floorspace is desirable.
Option 142: Retail warehousing	<ul style="list-style-type: none"> • Lots of views that bulky goods should be sold outside the City Centre, and that there may be a need for a further retail warehouse park, but away from Newmarket Road due

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	<p>to the congestion, noise, pollution, road safety;</p> <ul style="list-style-type: none"> • Suggestions for new locations – in South Cambridge(shire), site North of Marshall’s, somewhere near guided busway, park and ride sites as they already have parking; • Ruling out the delivery of further retail parks is shortsighted, given the expansion of the city. Are all of the city’s residents expected to fit down Newmarket Road? • Absence of retail warehouse parks will probably simply increase electronic shopping; • It is not realistic or appropriate to plan for the ‘relocation’ of the Beehive Centre; • Some objection to retail warehousing generally as it leads to car use, pollution etc; • Support policy in principal but could be strengthened to categorically disallow provision of non bulky goods retail outside of allocated centres. The cumulative impact of out of centre retailing is a major concern and must be prohibited beyond genuine bulky goods, in order to prevent future harm to the City Centre; • Should not be wasting such a large amount of space on car parking. Have shops close to City Centre and collection or delivery of purchases can be arranged e.g. John Lewis at Trumpington; • Car parking on Newmarket Road is a waste of space – could be served by a multi-storey to release land for business use or small industrial units. Residential use appears to be ruled out by soil contamination.
<p>Option 143: Continued development of University of Cambridge’s Faculty Sites</p>	<ul style="list-style-type: none"> • Essential that the Council continues to support the University of Cambridge which supports Cambridge’s economy, social and cultural life and environment; • Support further faculty development provided the option is monitored; • North West Cambridge will prove to be very sustainable for students; • Strongly support but add Madingley Rise to list of faculty sites; • Support but should also support other Higher and Further Education colleges such as Westminster College and Abbey College; • Mill Lane is a prime site for more student accommodation as part of mixed use; • The University of Cambridge should downsize as it has outgrown the nest; • The Colleges equally contribute to economy as they have their own governance, property and staff; • Addenbrooke’s has grown enough;

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	<ul style="list-style-type: none"> • North West Cambridge and West Cambridge developments do not meet the needs of the Colleges in the city centre.
Option 144: University Of Cambridge staff and student housing	<ul style="list-style-type: none"> • Strong support for the option but it is not an alternative to Option 145; • Adequate housing for the University and Colleges is fundamental to their continuing success; • Support provided open character of colleges maintained; • Should acknowledge role of small HMOs; • Change of Use Class C3 gives no protection to family housing; • Need to consider the needs of Higher and Further Education Sector as a whole not just the two Universities.
Option 145: Expand existing Colleges rather than plan for new Colleges at North West Cambridge	<ul style="list-style-type: none"> • The University supports growth in both locations in order to provide for student needs; • North West Cambridge is too remote from existing colleges. New colleges won't help existing colleges with their shortfall in student accommodation; • Some uncertainty whether new colleges would emerge at North West Cambridge
Option 146: Anglia Ruskin Faculty Development	<ul style="list-style-type: none"> • ARU needs to expand its postgraduate provision and wants to stay on East Road and Young Street site and is unlikely to relocate; • The Master Plan for East Road should be allowed to evolve; • ARU have a satellite site in South Cambridgeshire District at Whitehouse Lane which is in the Green Belt; • Any satellite should be as close as possible; • Relocate student residences from East Road to create more space rather than developing a second campus; • ARU should be expanded in Chelmsford and find a third site in Norfolk or Suffolk; • ARU is important to local economy but has lost a lot of green space at East Road. They should look to Fulbourn and further afield if they want to expand further; • Petersfield should not become ARU's campus; • There should be no more ARU campuses in the city.
Option 148: Anglia Ruskin - Support for student hostel provision but remove affordable housing exemption	<ul style="list-style-type: none"> • Support the policy but it should not be confined to Cambridge University and Anglia Ruskin University; • Policy 7/9 has been successful; • Its time to reverse policy and push for more affordable housing; • Support but could allow a reduced affordable housing percentage on sites with hostels rather than no affordable housing provision; • Affordable housing is vital in Cambridge and should take priority over Anglia Ruskin University; • Removing the exemption will put more pressure on

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	<p>students to find accommodation in shared houses;</p> <ul style="list-style-type: none"> • Some students like to live in shared houses as they feel more integrated within the community than is the case with hostels.
Option 149: Speculative student hostel accommodation limited to ARU and Cambridge University	<ul style="list-style-type: none"> • It is inequitable to discriminate against non University Colleges; • Language Schools should not be excluded.
Option 150: Speculative student hostel accommodation widened to include other established educational institutions	<ul style="list-style-type: none"> • Support, so additional student accommodation can be provided for other types of institution like Abbey College; • Support, other than the criteria for external amenity space which is difficult on brownfield sites; • Change needed as current policy inequitable; • It applies equally to specialist schools such as language schools; • Policy should include student and staff housing for these institutions.
Option 151: Specialist colleges such as secretarial and tutorial colleges	<ul style="list-style-type: none"> • Support introduction of new policy to enable specialist schools to provide financial and cultural benefits; • Language schools make an important contribution to the economy; • All specialist schools should be treated the same way.
Option 152: Language Schools	<ul style="list-style-type: none"> • Option 152 preferred provided large residential houses are not lost. Keep controls to prevent too many specialist schools opening; • Both types of school should provide adequate hostels; • Retain a policy on language schools but widen to include other types of school. Restrict as far as legally possible opening of other new schools; • It is inappropriate to refer to behaviour when considering whether a policy towards expansion is appropriate.
Option 153: Additional hotel provision based on a high growth scenario of around 2,000 new bedrooms	<ul style="list-style-type: none"> • Support provision of higher growth in hotel rooms but it shouldn't be used as a cap; • Strongly support option, as there is a huge demand for more rooms for business and the University. The deficit is far greater than that for residential; • Support the policy for at least 2,000 additional bedrooms but add some flexibility for the location within Addenbrooke's; • Support the policy provided it is managed and monitored. Need more staying visitors not day-trippers; • Support option and it might allow less successful hotel sites to be released for residential or care homes if the high

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	<p>forecast is not achieved;</p> <ul style="list-style-type: none"> • Our door should be open but we should not be actively seeking hotels; • Go for lower number of bedrooms as it would encourage less traffic; • Petersfield has been targeted for budget hotels which will cause gridlock on Newmarket Road; • The City Centre cannot accommodate much more growth and this will add to parking issues. Develop new hotels on the edge of the city where guests can use Park and Ride.
Option 154: Additional hotel provision based on a medium growth scenario of around 1,500 new bedrooms	<ul style="list-style-type: none"> • A policy is not required for this matter as market forces should decide.
Option 155: Location of new hotels	<ul style="list-style-type: none"> • Small boutique hotel at Mill Lane; • Suitability of one at the airport is supported; • NPPF at paragraph 23 calls for vitality in town centres. Cambridge suffers from overcrowding rather than lack of vitality. NPPF advises look to edge of city when City Centre sites unavailable; • Mill Lane isn't a viable location for a 5 star hotel.
Option 156: Support the development of existing City Centre hotels and conversion of suitable City Centre properties to hotels	<ul style="list-style-type: none"> • Oppose the view that large houses with 5+ bedrooms are unsuited to family accommodation; • City centre redevelopment will hit conservation issues; • Possible sites include Bingo Hall on Hobson Street, Llandaff Chambers over Mandela House, Sainsbury's in Sidney Street if they moved, GA building on Hills Road /Station Road corner, 32-38 Station Road.
Option 157: Treat serviced apartments as hotel uses	<ul style="list-style-type: none"> • These are not part of the housing market and should be recognised as hotel uses.
Option 158: Prevent the change of use of newly built permanent residential accommodation to a use for short term letting	<ul style="list-style-type: none"> • Support as it makes the process transparent; • Depends how you define short term. Letting for less than 6 months would be OK.

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Option 159: Use licensing to control serviced apartments	<ul style="list-style-type: none"> • Looks to be best if local authority has the powers; • Depends how you define short term. Letting for less than 6 months would be OK; • Use of serviced apartments provides flexibility in housing market if they can't sell or do a long let.
Option 160: Retention of hotels in the City Centre	<ul style="list-style-type: none"> • Support if there is flexibility to exit the market; • Support retention of hotels in the centre, which needs to be defined.
Option 161: Do not include a policy to retain hotels in the City Centre	<ul style="list-style-type: none"> • Likely to get a better hotel offer by freeing up the market rather than adding constraints to it.
Option 162: Visitor Attractions	<ul style="list-style-type: none"> • Support particularly the development of Kettle's Yard area as secondary tourist destination for people staying in the city; • Cycle parking standards must be applied to attractions; • Not appropriate in city - develop sports and leisure attractions in hotels beyond city e.g. as at Bar Hill.

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SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
Option 163: A green and pleasant city with vibrant and culturally diverse neighbourhoods	<ul style="list-style-type: none"> • Support for this option however <ul style="list-style-type: none"> ○ Neighbourhoods should also be relaxing; ○ Green spaces should be multi-functional and support the objectives of the Cambridgeshire Green Infrastructure Strategy; • The areas should include proper management of the natural environment and ‘wildlife corridors’; • Community facilities should be protected and enhanced but not preclude the possibility of change of use, multi use or relocation based upon a strategic assessment in Cambridge. The policy itself should be sufficiently flexible to meet changing circumstances.
Protection of open space - general comments	<ul style="list-style-type: none"> • Make protection and enhancement (including better management) a priority; • Support the ongoing protection of open spaces; • Support the maintenance of a green network of open space linking areas of Cambridge together along the Cam; • No intrusive developments along the Cam; • Development that can be seen from the River Cam and as such would spoil the character of the Cam should be resisted; • Relationship between the city and its open spaces is a defining aspect of Cambridge; • Recognise important transport function of paths alongside the Cam; • Support for Local Green Space designations and the need for guidance on green areas; • Risk of existing areas becoming overused if new provision is not made available; • Provide new spaces and not allow developers to pay contributions; • Allotments are essential and should be provided for along with design requirements.
Option 164: Protection of open space	<ul style="list-style-type: none"> • Support for much tighter criteria regarding the satisfactory replacement of existing areas (including direct and indirect benefits); • Resist loss of open space; • Open spaces form part of the historic character of Cambridge and should be protected accordingly; • Much stronger policy is needed to prevent loss of open spaces under current Local Plan; • Need to continue with current policy protection and protect green lungs within the city and the urban edge (e.g. playing

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	<p>fields);</p> <ul style="list-style-type: none"> • Overly restrictive policy that prevents development which respects environmental quality; • Potential of expansion of local schools provides an opportunity to enhance the quantity of provision; • Remove reference to Green Belt as this is not open to the public and is already protected as a separate designation; • Policy fails to weigh up the public benefit against the loss of public open space; • Lack of up-to-date evidence supporting existing open space policy; • Allowing protected open space for recreational reasons only to be replaced elsewhere should not be permitted. Where is elsewhere?
<p>Option 165: Update the standards in line with the Open Space and Recreation Strategy 2011</p>	<ul style="list-style-type: none"> • Support principle for allotment provision for all residential developments; • Maxima not minima provision should be sought; • Allotment provision: <ul style="list-style-type: none"> ○ Unviable or not desirable and would provide long-term issues to do with servicing and maintenance; ○ Unrealistic in built-up area; • New open spaces provided should be adopted and maintained by public organisations to ensure public access
<p>Option 166: Maintain the current standards for open space and recreation provision</p>	<ul style="list-style-type: none"> • Cambridge has many open spaces and recreational areas; • Allotment provision unviable or not desirable and would provide long-term issues to do with servicing and maintenance; • Inadequate in light of growth plans including allotment provision.
<p>Option 167: On-site provision</p>	<ul style="list-style-type: none"> • Support is conditional on <ul style="list-style-type: none"> ○ Having clear reasons for not providing an onsite contribution; ○ Presumption in favour of onsite provision; ○ Off-site provision only in exceptional conditions; ○ Very clear guidance; ○ Onsite provision is completed before occupation; ○ No planning permission unless onsite provision is provided • Green spaces should be multi-functional and support the objectives of the Cambridgeshire Green Infrastructure Strategy; • Dislike for off-site contributions; onsite provision should be provided wherever possible and weighted according to ward deficit; • Need to consider leisure facilities which provide play and sports facilities; • Accessibility of open space needs to be considered.

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<p>Protection of existing leisure facilities – general comments</p>	<ul style="list-style-type: none"> • Need to consider wider social and recreational needs of a community with consideration of accessibility; • Policy criteria should consider: <ul style="list-style-type: none"> ○ Stringent tests and consultation of existing and potential users of leisure facilities; ○ Facility use and reasons behind current performance; • Need to provide new leisure facilities in existing built-up areas; • No recognition that alternative uses outweigh retention of existing leisure facility; • Include sites on Community Asset Registers; • Growth must be accompanied with new leisure facilities; • Local need should not be defined by landowners and developers. Local opinions should take priority; • Contributions to support the new facilities are essential; • Increase access of sporting facilities owned by University, colleges and schools to the public.
<p>Option 168: Protection of existing leisure facilities</p>	<ul style="list-style-type: none"> • General support for the policy option; • Policy needs further clarification particularly in relation to the terms used.
<p>New leisure facilities – general comments</p>	<ul style="list-style-type: none"> • Support for securing community use of sports facilities built on educational sites; • Need to clarify definition of leisure facilities; • Include sites on Community Asset Registers; • Assessment of the long-term viability of leisure facilities.
<p>Option 169: New leisure facilities</p>	<ul style="list-style-type: none"> • General support for the policy option with some suggesting clarification; • Policy needs further clarification and clarification of the terms used; • Local people should be involved with the design and management of new facilities.
<p>Community facilities – general comments</p>	<ul style="list-style-type: none"> • Policy needed to provide the planning criteria to assess proposals for new public houses and separate from Option 176 New Community Facilities; • More emphasis on venues for use by various age groups for community activities; • Support for community interaction; • Many different views on what should and should not be included in the definition of community facilities; • Definition should include community kitchens, swap shops, free shops, tool libraries, charity cafés, local shops and pubs, private huts and places of worship, affordable community dance halls, boat clubs; • Inclusion of educational facilities dependent on local needs; • Highways and private places made open to the public.
<p>Option 170:</p>	<ul style="list-style-type: none"> • Support for protecting community facilities;

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Protection of existing community facilities	<ul style="list-style-type: none"> • Policy needs to enable new provision; • Include sites on Community Asset Registers with reference in Local Plan; • Need to take account of a balance between densification and local community needs; • Consider extending the marketing period to 18 or 24 months; • The means of access to new facilities remains the same as the previous facility.
Public Houses – general comments	<ul style="list-style-type: none"> • Public houses are vital to the vitality of the high street. The change of use for pubs needs to be stopped; • Support for and against protecting public houses; • Need to protect public house gardens; • Failure to reflect community and historical value of pubs regarding their replacement; • More positive approach should be adopted; • Facilitate restaurant in former pubs becoming pubs against instead of alternative uses.
Option 171 - Public Houses: Market led approach	<ul style="list-style-type: none"> • With this option, there would be no clear means by which developers could establish that the premises were not viable as a pub business; • If business was truly viable then it would not be up for closure – protection of some public houses would be futile; • Pubs represent important community facilities and must be protected; • Pubs need to be given a chance to be viable – market forces can be variable.
Option 172 - Protection for all Public Houses	<ul style="list-style-type: none"> • With this option, there would be no clear means by which developers could establish that the premises were not viable as a pub business; • This option would not be a true reflection of current market trends and would lead to an increase in disused pubs which may never reopen; • This approach may not offer complete protection of public houses as they could simply become a restaurant before changing into an alternative use; • Support for this approach – loss of public houses could lead to isolation of communities.
Option 173 - Safeguarding Public Houses	<ul style="list-style-type: none"> • Support for this approach as it would provide a clear means by which a developer can objectively establish viability; • This option would provide a much needed safeguard against unwelcome closures and unsuitable conversions; • Independent assessment of a pub’s viability is very important; • Concern that the policy could become overly restrictive – needs to be flexible to reflect economic realities and the values and benefits of alternative uses; • Presumption in favour of maintenance is a very good idea.
Option 174 –	<ul style="list-style-type: none"> • This approach should be adopted;

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Extend safeguarding of public houses to former public houses	<ul style="list-style-type: none"> • To try and bring properties back into pub use when they have been out of this use for a considerable time is a disproportionate policy response.
Option 175 – Allow flexible re-use of public houses	<ul style="list-style-type: none"> • Former public houses identified as such and in use as a community facility should be able to revert back to this use without the need for a planning application.
New community facilities – general comments	<ul style="list-style-type: none"> • Lack of attention paid to existing deficits in community facilities; • Needs an option with more emphasis on making good shortfall in existing communities; • No reference to applications for entirely new public houses.
Option 176: New community facilities Option 177: The provision of community facilities through new development	<ul style="list-style-type: none"> • Option 176 and 177 are complimentary; • Relocation of hospice to Southern Fringe; • Shared facilities are not always possible due to conflicting demands and needs; • A new sixth form college needed in North West Cambridge; • Shortfall in the provision for climbing in Cambridge; • Support for a policy.
Faith Facilities	<ul style="list-style-type: none"> • Support for carrying out a survey; • Council should adopt a policy supporting the provision of faith facilities; • No specific policy required.
Arts and cultural activities – general comments	<ul style="list-style-type: none"> • Theatres should not be included in a description of leisure facilities but in cultural facilities. Viability may apply to leisure facilities but not with the same weight for cultural facilities; • This option should be link to transport strategy; • Facilities need to be protected and enhanced as the sub-region expands; • Proven need is crucial; • Opportunity for a legacy building; • Designate Cultural Quarters; • Need an innovative arts and archive centre.
Option 178: Support for arts and cultural activities	<ul style="list-style-type: none"> • Support for this option but further clarification is required and real demand for venue exists; • Consider former public houses identified for redevelopment to be converted into arts and culture centres;
Provision for sub-regional sporting, cultural and community facilities – general comments.	<ul style="list-style-type: none"> • There is a need for general purpose halls and rooms that are sufficiently flexible to be used for a variety of activities; • Shortfall in the provision for climbing in Cambridge; • Developing Canoe Trails and access provision for canoeists; • Need for a multi-lane rowing facility; • The PMP 2006 report for Cambridge Horizons identified a gap in the sports provision within the Cambridge sub-region ; • Support for an 8-10,000 capacity stadium;

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	<ul style="list-style-type: none"> • No need for Cambridge to provide facilities for the area which should be provided elsewhere; • Affordable ice rink needed.
<p>Option 179: A new Sub-regional stadium</p> <p>*It should be noted that these figures do not include responses made on the Community Stadium to the South Cambridge Local Plan – Issues and Options consultation.</p>	<ul style="list-style-type: none"> • 119 out of 139 respondents to this question supported a new sub-regional stadium. Of the 119 supporters, 30% were Cambridge residents, with the remainder living outside the city. Many of the supporters appeared to be supporters of Cambridge United FC. The 20 objectors came from the following areas: 5 each from Trumpington & Grantchester; 7 from Cambridge & the remainder from Coton, Hauxton & Haslingfield. • Those supporting the proposed new sub-regional stadium also suggested a number of other sites for the delivery of the stadium , for example Cambridge East and NIAB. • Community Stadium would benefit the area; • Clear need for a Community Stadium ‘live entertainment’ facility with indoor training pitch and ancillary commercial space; • Shortfall in provision and support for a climbing wall; • Develop canoe trails and provision for canoeists; • Support for full size boating lake; • Many people supporting <ul style="list-style-type: none"> ○ Support the proposed 8-10,000 capacity stadium; ○ Support the venue to be suitable for other sports as well e.g. rugby and hockey. • Many people responding indicated that Abbey Stadium should not be retained citing reasons such as the lack of training facilities and poor transportation links. Site could provide much need housing. • Responses indicated that the development of Abbey Stadium for housing was conditional on: <ul style="list-style-type: none"> ○ Not causing further transport issues; ○ The area being enhanced; ○ Replacement sports facilities are provided and improved upon and with suitable affordable housing; ○ Replacement sports facilities are first provided; • Other responses to indicated that the development of Abbey Stadium should not include a supermarket or offices; • No need for Cambridge to provide regional facilities; • Location of stadium at Trumpington Meadows is unsuitable mainly due to transport issues; • Stadium would alter the village character of Trumpington; • Location of stadium South of Cambridge unsuitable; • Abbey Stadium was supposed to provide a Community Stadium in 1999;

	<ul style="list-style-type: none"> • Community Stadium is unviable; • Loss of Green Belt; • Many people objecting suggested an alternate location including: <ul style="list-style-type: none"> ○ North of Marshalls; ○ Abbey Stadium; ○ Newnham; ○ Southern Fringe • Support the venue to be suitable for other sports as well e.g. rugby and hockey; • Abbey Stadium should be retained as a Community Stadium or as a community facility rather than high-density housing. CUFC should not move from the Abbey Stadium. Relocation may not overcome issues of congestion and parking in a residential area; • Developing Abbey Stadium for housing was not acceptable but retained/improved or it should be for another type of sports facility; • The proposal: <ul style="list-style-type: none"> ○ Conflicts with the definition given the commercial background of the project; ○ Lack sufficient parking; ○ Fail to take account of local communities and Trumpington’s village setting; ○ Should be more inclusive e.g. facilities should permit amateur and recreational sport activities with less focus on football and open to other sections of the community; ○ Raises concern about the additional retail and housing; ○ Need to increase access for Cambridgeshire schools; • Grosvenor's proposals are unacceptable: <ul style="list-style-type: none"> ○ Increased traffic and parking congestion in the surrounding area and additional burden on Park and Ride; ○ Increased burden on schools (new school at Trumpington Meadows cannot meet the additional need); ○ Significant additional erosion of the Green Belt; ○ Encroachment on the nature reserve at Byron's Pool; ○ Significant impact on the sustainability of neighbouring sports and social venues; ○ Significant additional strain on Parish of Haslingfield; ○ Reduction in quality of life of local residents caused by noise, light, traffic and litter from the venue. • Alternative locations included Northstowe and Waterbeach, NIAB, Cambridge East, Cambridge Airport, University Site at Madingley Road, Newnham, Cowley Road
Option 180: Ice Rink	<ul style="list-style-type: none"> • An ice rink would support sustainable communities; • Need for an Ice Rink is economically viable and will improve Cambridge’s sports facilities;

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	<ul style="list-style-type: none"> • Financial support available; • No reasonable alternative to an ice rink; • Proposal should form part of a general sports complex with good transport links, education and research facilities; • Funding available, only a site is needed; • Possible Locations: Not in the city, not Abbey Stadium, not North West Cambridge, cycling distance of the City Centre, West Cambridge, Science Park, near railway station, Abbey Stadium site, suburb / outskirts location with good transport links. • Doubts over viability and therefore needs to be proven. : Ice rinks elsewhere have closed. Needs to be financially neutral; for Cambridge City Council and Council Tax payers; • Ice rinks are environmentally unfriendly; • Loss of Green Belt, congestion in and around Trumpington Park and Ride and Addenbrooke’s.
<p>Option 181: Concert Hall</p>	<ul style="list-style-type: none"> • Lack of large scale concert venue in Cambridge; • Concert hall would be supported locally; • Proposals should include a conference hall and multi-purpose venue; • Should be large enough to cater for big London and international orchestras, touring opera and ballet companies, as well as high end artists and acts; • Multi-purpose venue would be more viable; • Other existing venues could be better used; • Concert hall should be provided in collaboration with the University; • Replace Corn Exchange with concert hall; • Must be easily accessible/close to good transport links; • The Council must collaborate with neighbouring authorities to develop best solution for future and existing population. Community stadium, ice rink and concert hall proposals should not be considered in isolation; • Possible locations: Clay Farm, Station area, close to schools. Mill Road – the old Picture House, outside city boundaries; suburbs/outskirts location with good transport links; • Concert hall alone requires need/justification; • Multi-purpose venue to include conferencing and leisure more viable and will support Cambridge’s tourism and conferencing reputation; • Difficult to justify – other venues are available and there is insufficient demand to justify a purpose-built venue; • No need – Cambridge is already well served with suitable conference venues; • Loss of Green Belt, congestion in and around Trumpington Park and Ride and Addenbrooke’s.

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CHAPTER 12 – PROMOTING AND DELIVERING SUSTAINABLE TRANSPORT AND INFRASTRUCTURE	
SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
Option 182: Timely provision of infrastructure	<ul style="list-style-type: none"> • Lots of support for the principle of the policy – getting infrastructure into development early is key; • Feeling that the policy hasn't always been successful / implemented strongly enough in the past and caused congestion issues.
Option 183: Promote non-car modes of travel	<ul style="list-style-type: none"> • Strong agreement from many; • This needs to be applied to existing areas as well as new developments; • Needs of motorists should not be ignored; • Sustainable links to surrounding villages important; • Chisholm Trail is given as example by many as a key to achieving this.
Option 184: Appropriate infrastructure	<ul style="list-style-type: none"> • Support from many respondents; • Getting the infrastructure in 'before use' is outlined by a number of respondents as vital; • Viability of getting the infrastructure in place prior to development being in use brought up as a potential issue (by developers).
Option 185: Low emission vehicle infrastructure	<ul style="list-style-type: none"> • Some concern about low emission vehicle infrastructure being provided for "all development" – viability could be an issue in smaller sites. Take up of electric cars is slow; • The market should decide when low emission and electric cars should be provided for, not this plan; • Good support for car clubs and car club spaces; • Car club spaces should have cycle parking next to them.
Option 186: Maintain the current level of provision	<ul style="list-style-type: none"> • Some support for the current level of provision; • Existing policy can be improved; • Provide for car ownership but not usage.
Option 187: New residential car parking standards	<ul style="list-style-type: none"> • Car parking spaces are needed, even if the cars are only used occasionally; • Provide for car ownership but not usage. Car ownership cannot be controlled; • Higher levels of car parking could conflict other policies aimed at sustainable travel.
Option 188: Completely new standards for all development	<ul style="list-style-type: none"> • Some support for this option; • Local circumstances need to be taken into account; • Higher levels of car parking could conflict other policies aimed at sustainable travel.
Option 189 : Car free development	<ul style="list-style-type: none"> • Unrealistic option; • Will push parking problems elsewhere;

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	<ul style="list-style-type: none"> • Cambridge doesn't offer enough alternatives, yet; • Some support for pursuing / investigating the possibility.
Option 190: Incorporate car free development into existing policy	<ul style="list-style-type: none"> • On the whole, less opposition to this option than to 189 – seen as more flexible and viable.
Option 191: Location, design and quality	<ul style="list-style-type: none"> • Shortage of cycle parking around the city – especially City Centre; • Lack of visitor cycle parking at new developments; • Strong support for the policy; • Standards should be stronger and enforced more; • Cycle parking needs to be more convenient; • Some over provision in terms of student and university provision.
Option 192: Update the cycle parking standards in the 2006 Local Plan	<ul style="list-style-type: none"> • Support for the policy; • Vital for making cycling attractive as a mode of transport; • Adopt tougher standards – using best examples from elsewhere (such as Netherlands) to guide; • Some overprovision in terms of student and university provision.
Option 193: Development only where the impact on the network is able to be mitigated against	<ul style="list-style-type: none"> • Reflect paragraph 32 of the NPPF more closely in this option – only permit development where “residual cumulative impacts of development are not severe”; • Generally strong support for the need for the policy. • Don't just aim to mitigate, as things can be improved in some instances; • Development that results in increased “trips” by sustainable modes should not be seen as negative.
Option 194: Modal split targets for new development	<ul style="list-style-type: none"> • Should be ambitious; • Might be too inflexible to create a citywide target.
Option 195: Do not set city wide modal split target for new development	<ul style="list-style-type: none"> • Sites in Cambridge differ too much for one target – it seems more logical to base targets on local considerations (i.e. ease of public transport access);
Option 196: Set a Travel Plan threshold	<ul style="list-style-type: none"> • Strong support; • 10 units is a sensible threshold for this; • Reduces uncertainty for developers.
Option 197: Do not set a Travel Plan threshold	<ul style="list-style-type: none"> • Each development, no matter the size, should be required to provide a travel plan, unless it can demonstrated that it is not required / appropriate.
Option 198: Cambridge Airport - Aviation Development	<ul style="list-style-type: none"> • A policy supportive of employment and aviation will help enhance the economic growth of the Cambridge area. Access by air is important to global companies in Cambridge and will help attract further similar investment. Marshalls is an important employer;

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	<ul style="list-style-type: none"> • Support policy not to expand because of concerns about increased air traffic and impact on residential amenity and climate change and an increase in noise pollution; • Likely to help minimise the impact on environment and biodiversity. • Development of the airport should be welcomed not restricted; • We must consider the economic benefits of a thriving local airport; • Specific reference could be made to pollution – noise and air; • Residents living under the flight path suffer negative impacts; • Increase in air traffic would be detrimental; • We need to support such an established employer; • Aerobatics causes more disturbance than commercial flights; • Noise caused by aviation activity is a blight.
<p>Option 199: Telecommunications criteria based policy</p>	<ul style="list-style-type: none"> • Agree that consultation should take place before installation near a school or college; • Should prevent masts/sites within an agreed distance (say 50m) of any residential property; • There should be a policy that limits electromagnetic field intensities; • Has the impact of existing masts been assessed locally? • It is insufficient to state that ‘significant interference’ should be used as a test, a tighter definition should be used. The requirement to consult should not be limited to immediate neighbours of the site; • The provision of telecommunications infrastructure can have a major impact on transport network requirements; • The Council needs to encourage the installation of fibre optics across the city; • It is insufficient to state that ‘significant interference’ should be used as a test, a tighter definition should be used. The requirement to consult should not be limited to immediate neighbours of the site; • Works should include the highway authority where appropriate, and also the SuDs approval body.
<p>Option 200: Mullard Radio Astronomy Observatory, Lord’s Bridge – Consultation Areas</p>	<ul style="list-style-type: none"> • It is an important site of international importance and should be protected; • Add the proposal to re-open the Oxford-Cambridge rail link, it used to run through this site. • It could rule out important sites.
<p>Option 201 – Provision of</p>	<ul style="list-style-type: none"> • Green Infrastructure and open spaces provision could enhance biodiversity and it is therefore welcomed;

Chapter 12 – Promoting and Delivering Sustainable Transport and Infrastructure – Key Issues

Infrastructure and Services	<ul style="list-style-type: none">• Improvements and provision for infrastructure would need to be proportionate and related to the scale of development proposed taking account of the developments own impact on local infrastructure whilst not providing infrastructure to make up existing deficiencies;• All new developments need infrastructure and services• Developers should be required to support the provision of infrastructure;• It is important to ensure policies are robust so that they cannot be challenged by developers;• Support and note that the list in Option 201 is ‘not exhaustive’;• Planning obligations/CIL are one of a number of essential sources to deliver the Cambridgeshire Green Infrastructure Strategy and the 2006 Nature Conservation Strategy;• New developments usually generate traffic and other problems, which create costs to existing users; it is not acceptable for a developer to offload these externalities onto the taxpayer, and so the CIL/S106 payments ensure that these costs are properly accounted for;• Infrastructure must be in place before any development is occupied.• Major developments should meet their own infrastructure needs and this provision should be completed before the overall scheme is complete;• The policy should ensure developer contributions to non-vehicular infrastructure should be encouraged;• The Plan should provide a realistic and deliverable strategy which identifies the key infrastructure constraints and highlights how any constraints will be overcome. It is essential that the development strategy can be delivered and implemented with reasonable confidence;• Any policy should ensure that contributions from developers should only be sought where necessary to make a scheme acceptable in planning terms and should be fair and reasonable in both scale and kind. The level of contributions sought should strike a balance between the need for funding and the impact on the viability of development;• There is no statement about how the policy will be monitored and enforced;• There is a lack of transparency and a democratic deficiency with regard to how S.106 monies are collected
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**Chapter 12 – Promoting and Delivering Sustainable Transport and Infrastructure –
Key Issues**

	and spent.
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SUSTAINABILITY APPRAISAL	
SECTION OF ISSUES AND OPTIONS REPORT	KEY ISSUES
General	<ul style="list-style-type: none"> • The SA has been undertaken at too high a level. • Strong support for Option 2 in the SA; • Using pre 2008 growth figures is unsound due to the changes in the economic climate since then; • Each individual Broad Location has received mixed responses in the SA.

Appendix B: Cambridge Local Plan Review – Towards 2031 Key Issues arising from Issues and Options Consultation and Timetable Update

Forward Plan of Meetings of Development Plan Scrutiny Sub Committee

Meeting	Items	Information
13 November 2012	<ul style="list-style-type: none"> Cambridge Local Plan – Towards 2031: Analysis of comments and options 	<ul style="list-style-type: none"> To consider the key issues arising from the Issues and Options consultation and provide a steer on the approach to take forward. Topics include: Vision & Objectives, Climate Change, Water and Flooding.
6 December 2012	<ul style="list-style-type: none"> Cambridge Local Plan – Towards 2031: Analysis of comments and options Annual Monitoring Report 2012 	<ul style="list-style-type: none"> To consider the key issues arising from the Issues and Options consultation and provide a steer on the approach to take forward. Topics include: Design, Landscape, Public Realm, Biodiversity, Trees, Pollution, Historic Environment, Transport, Infrastructure; To approve the Annual Monitoring Report for publication.
13 December 2012	<ul style="list-style-type: none"> Cambridge Local Plan – Towards 2031: Issues and Options 2 (Site Options Consultation) 	<ul style="list-style-type: none"> To approve the Issues and Options 2 Report on Site Options for consultation. This consultation will focus on potential sites to be allocated for different types of land use, such as housing, employment, retail and will give local residents and other stakeholders the opportunity to comment prior to consultation on the draft Plan in June and July 2013.
22 January 2013	<ul style="list-style-type: none"> Cambridge Local Plan – Towards 2031: Analysis of 	<ul style="list-style-type: none"> To consider the key issues arising from the

	comments and options	Issues and Options consultation and provide a steer on the approach to take forward. Topics include: Housing, Retail, Employment, Tourism, Open Space, Higher Education, Community Facilities.
19 February 2013	No items timetabled.	No items timetabled.
25 March 2013	<ul style="list-style-type: none"> Cambridge Local Plan – Towards 2031 	<ul style="list-style-type: none"> To consider the draft chapters of the Cambridge Local Plan – Towards 2031.
27 March 2013	<ul style="list-style-type: none"> Cambridge Local Plan – Towards 2031 	<ul style="list-style-type: none"> To consider the draft chapters of the Cambridge Local Plan – Towards 2031.



To: Executive Councillor for Planning and Climate Change: Councillor Tim Ward
Report by: Head of Planning Services
Relevant scrutiny committee: Development Plan Scrutiny Sub Committee 16/10/2012
Wards affected: All Wards

CAMBRIDGE LOCAL PLAN - TOWARDS 2031 Issues and Options 2 – Proposed Methodology for Assessing Sites

Not a Key Decision

1. Executive summary

- 1.1 The next stage of consultation for the Local Plan Review, is Issues and Options 2 in January / February of 2013. This consultation will focus on potential sites to be allocated for different types of land use, such as housing, employment, retail.
- 1.2 This report sets out a proposed methodology for assessing sites for possible inclusion as allocations within the Cambridge Local Plan – Towards 2031. It is intended to be both rigorous and transparent. At the core of the appraisal is a pro forma which will be used to assess the suitability and deliverability of sites, and which fully integrates sustainability appraisal.

2. Recommendations

- 2.1 This report is being submitted to the Development Plan Scrutiny Sub-Committee for prior consideration and comment before decision by the Executive Councillor for Planning and Climate Change.
- 2.2 The Executive Councillor is recommended:
 - a) To endorse the methodology for assessing sites to be included as allocations within the Cambridge Local Plan as set out in Appendix A.

3. Background

- 3.1 A separate report to Committee sets out the overall timetable for review of the Local Plan and progress to date. The focus of this report is in relation to sites. As with the 2006 Local Plan, the new Local Plan

will contain site allocations for different types of land use such as housing, employment, retail and designations for uses such as open space. These sites will be identified on the Proposals Map.

- 3.2 The Issues and Options Report which was consulted upon in June / July of this year set out broad locations for development and the location of some Opportunity Areas, however it did not propose detailed boundaries of potential sites for different types of land use. For many topic areas a question was asked in the Issues and Options Report calling for any potential sites. Another round of consultation is planned to ask the public, developers and stakeholders for their views on potential sites before any decisions are taken. This consultation is planned for six weeks in January and February 2013.
- 3.3 In order to identify potential sites, a methodology has been developed, which is set out in Appendix A. Only sites that are available, and suitable in planning and sustainability terms will be consulted upon, as these are the reasonable alternatives. The viability of sites, particularly housing sites, will also be assessed which may rule out further sites. The Strategic Environmental Assessment (SEA) Directive requires that 'reasonable alternatives' are considered. The Government's SEA Practical Guide (2006) is clear that only reasonable, realistic and relevant alternatives need to be put forward.
- 3.4 To assess the suitability of sites, a pro forma has been developed which sets out a list of criteria, against which each site will be assessed. The pro forma has been developed to fully integrate the Sustainability Appraisal (SA), and the criteria in the pro forma take into account the social, environmental and economic sustainability themes identified in the SA Scoping Report. The pro forma also builds upon the assessment that was carried out on potential housing sites in the Strategic Housing Land Availability Assessment (SHLAA).

Approach to Fringe Sites

- 3.5 The methodology sets out the difference in approach to sites within the urban area of Cambridge, and those at the edge of the City. The fringe sites were identified as broad locations within the Issues and Options Report. These broad locations were identified jointly with South Cambridgeshire District Council, because in most cases the sites cross the boundary and are within both Districts.
- 3.6 Part of the consultation in early 2013 will be joint with South Cambridgeshire District Council and will include site options on the edge of Cambridge as well as providing appropriate context on the development strategy alternatives for the wider Cambridge area.

Again, at this stage, all reasonable alternatives need to be considered and consulted upon before any decisions are taken.

Next Steps

- 3.7 Officers will be undertaking site assessment work and preparing for Issues and Options 2 consultation in January 2013. Joint working will take place with officers at South Cambridgeshire District Council, and the County Council. The draft Issues and Options 2 consultation will be presented to Development Plan Scrutiny Sub Committee in December 2012 and will be seeking agreement to consult between January to February 2013.

4. Implications

(a) Financial Implications

- 4.1 There are no direct financial implications arising from this report. The cost of preparing a new Local Plan is a significant one but this has been budgeted for.

(b) Staffing Implications (if not covered in Consultations Section)

- 4.2 There are no direct staffing implications arising from this report.

(c) Equal Opportunities Implications

- 4.3 There are no direct equal opportunity arising from this report. An Equalities Impact Assessment will be prepared as part the draft Plan stage.

(d) Environmental Implications

- 4.4 There are no direct environmental implications arising from this report. The new Local Plan for Cambridge will assist in the delivery of high quality and sustainable new developments along with protecting and enhancing the built and natural environments in the City. This will include measures to help Cambridge adapt to the changing climate as well as measures to reduce carbon emissions from new development. Overall there should be a positive climate change impact.

(e) Procurement

- 4.5 There are no direct procurement implications arising from this report.

(f) Consultation and communication

4.6 The consultation and communications arrangements for the Issues and Options 2 consultation will be agreed at Development Plan Scrutiny Sub Committee in December 2012.

(g) **Community Safety**

4.7 There are no direct community safety implications arising from this report.

5. Background papers

These background papers were used in the preparation of this report:

- Cambridge Local Plan – Towards 2031 Issues and Options Report June 2012 (can be accessed at: <http://www.cambridge.gov.uk/public/docs/local-plan-review-issues-and-options-report.pdf>)

6. Appendices

Appendix A – Cambridge Local Plan – Towards 2031: Proposed Methodology for Assessing Sites for Allocation in the Local Plan

7. Inspection of papers

To inspect the background papers or if you have a query on the report please contact:

Author's Name: Myles Greensmith
Author's Phone Number: 01223 457171
Author's Email: Myles.greensmith@cambridge.gov.uk

APPENDIX A

CAMBRIDGE LOCAL PLAN REVIEW – TOWARDS 2031

PROPOSED METHODOLOGY FOR ASSESSING SITES FOR ALLOCATION IN THE NEW LOCAL PLAN

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Appendix 1 – Proposed Cambridge City Sites Assessment Pro forma

Introduction

- 1.1 The Local Plan Issues and Options Report which was consulted upon in June / July 2012 set out broad locations for development and the location of some Opportunity Areas, however it did not set out detailed boundaries of potential sites for different types of land use. Another round of consultation is planned to ask the public, developers and stakeholders for their views on potential sites. This consultation is planned for six weeks in January and February 2013.
- 1.2 This paper sets out the proposed methodology for the assessment of potential sites to be allocated in the Cambridge Local Plan – Towards 2031. Once the Local Plan is adopted these allocations will be shown on the Proposals Map. In order to properly evaluate the suitability and deliverability of sites a rigorous and transparent method of assessment is required. This assessment will involve the use of a pro forma, assessing each site in relation to a number of social, economic, environmental, planning and site deliverability criteria.
- 1.3 The sites being considered include those entirely within the City boundary, and also potential sites at the fringe of the City. For the fringe sites which cross the boundary into South Cambridgeshire District Council (SCDC), a joint assessment will take place.

Identification of Sites within Cambridge

- 1.4 A number of sources will be used to arrive at a list of sites to assess. These include the following sources, although this is not an exhaustive list:
 - Sites allocated in the existing adopted Local Plan 2006, associated Area Action Plans, and Supplementary Planning Documents, which have not been developed.
 - Sites identified in the following studies:
 - Strategic Housing Land Availability Assessment (SHLAA) May 2012.
 - Employment Land Review 2007 and 2012 update.
 - Cambridge Sub Region Retail Study and its 2012 Cambridge Retail and Leisure Study update.
 - Gypsy and Traveller Provision in Cambridge: Site Assessment
 - Cambridge Hotel Futures: Headline Findings Issues & Options Report April 2012
 - Inner Green Belt Boundary Study 2001; Green Belt Study 2002; 2012 Green Belt Reappraisal.
 - Other documents eg those produced by Cambridgeshire Horizons.
 - Any sites and site boundaries identified by the Council within the Issues and Options Consultation (June 2012).

- Any sites subsequently submitted by landowners and developers or their agents in their responses to the Council's Issues and Options consultation June-July 2012.
 - Any sites identified by the Council's own internal directorates, other Councils, statutory government agencies, and statutory undertakers.
- 1.5 Sites may be suitable for allocation for the following uses or a mix of these uses:
- Housing
 - Employment
 - Retail
 - Leisure uses
 - Community facilities
 - Tourism uses
 - Gypsy and Traveller sites
- 1.6 In addition, some sites to be consulted upon will be designations in the Local Plan including Open Space sites and the boundaries of District and Local Centres. These would be shown on the Proposals Map along with other constraints.
- 1.7 In the case of minerals and waste, it is for the County Council to allocate sites.

Proposed Site Assessment Process – Development of Sites Appraisal Pro forma

- 1.8 To properly evaluate the suitability and deliverability of sites a rigorous and transparent method of assessment is required. This includes full evidence and justification. It is proposed to use a pro forma to assess each site. The draft pro forma can be found in Appendix 1. The purpose of the pro forma is to set out all of the constraints and other considerations that the Council will take into account in deciding whether to allocate a site or not.
- 1.9 The pro forma was developed to fully integrate the Sustainability Appraisal (SA), and the criteria in the pro forma take into account the social, environmental and economic sustainability themes identified in the SA Scoping Report. The Scoping Report set out a draft pro forma (in Chapter 16) which was subject to consultation with the statutory environmental consultees. The pro forma in the Scoping Report was the starting point for the development of the sites appraisal pro forma in Appendix 1. Making sure that the criteria take into account the SA is the most effective way of ensuring that the SA is central to the appraisal of sites. Consultants URS, who are carrying out the Sustainability Appraisal (SA) of the Local Plan review, have been involved in developing the pro forma to ensure that it meets the requirements of SA and the Strategic Environmental Assessment (SEA) Directive.

- 1.10 The pro forma was also developed to be compatible with the assessment of housing sites which was carried out in the Strategic Housing Land Availability Assessment (SHLAA). The sites appraisal pro forma has however been taken a step further to include performance measures for each criterion. As a result, all the housing sites identified by the SHLAA will need to be assessed again to see whether they have the potential for allocation in the Local Plan using the sites appraisal pro forma.
- 1.11 The sites appraisal pro forma also includes additional criteria relating to planning suitability of the site.

Content and Use of Sites Appraisal Pro forma

- 1.12 The sites appraisal pro forma includes basic information about the site, including a map, a photo, site area, and current uses. It then includes a number of criteria relating to social, environmental and economic factors which relate to the location of the site, and criteria relating to the planning suitability of the site. The performance of the site in relation to the criteria will be assessed and a traffic light system of red (negative), amber, green (positive) has been used to provide a visual representation of the scoring of the site.
- 1.13 The first part of the pro forma is a high level sieve (Level 1). It contains the criteria which could potentially prevent any development of the site, for example the site is within the flood plain. If a 'show stopper' is identified, the site may not need to be progressed to assessment under the second part of the pro forma (Level 2). A conclusion will be reached after the Level 1 assessment as to whether the Level 2 assessment needs to take place. If there is uncertainty, for example mitigation measures might overcome problems identified with the site, a Level 2 assessment will be carried out to ensure that the process is robust.
- 1.14 At the end of the Level 2 assessment, a conclusion will be reached as to whether the site has significant development potential, some development potential or no development potential. The conclusion will also discuss whether the proposed use is the most suitable, or whether a different land use on the site would be more suitable. For example a mixed use may have more potential than a pure housing site. The conclusion may also identify parts of the site that are more sensitive to development than others, or whether only part of the site is suitable for development.
- 1.15 Broad viability assessment will be carried out as part of the review of the Local Plan and in relation to the Community Infrastructure Levy (CIL). In addition housing sites which have been identified as having development potential will be subject to viability assessment. This will be carried out by consultants Dixon Searle and will involve using an

accepted residual land value appraisal model. This will also evaluate all sites identified as being deliverable or developable in the Council's SHLAA.

Site Assessment

- 1.16 Site assessments will be undertaken by officers within the planning policy team, with assistance from other experts within the Council and at the County Council, and the Highways Agency. Areas of expertise which will be drawn upon include biodiversity, landscape, urban design, historic environment, cycling, environmental health, and County Council expertise in highways, education and minerals and waste.

Identification of Fringe Sites jointly with SCDC

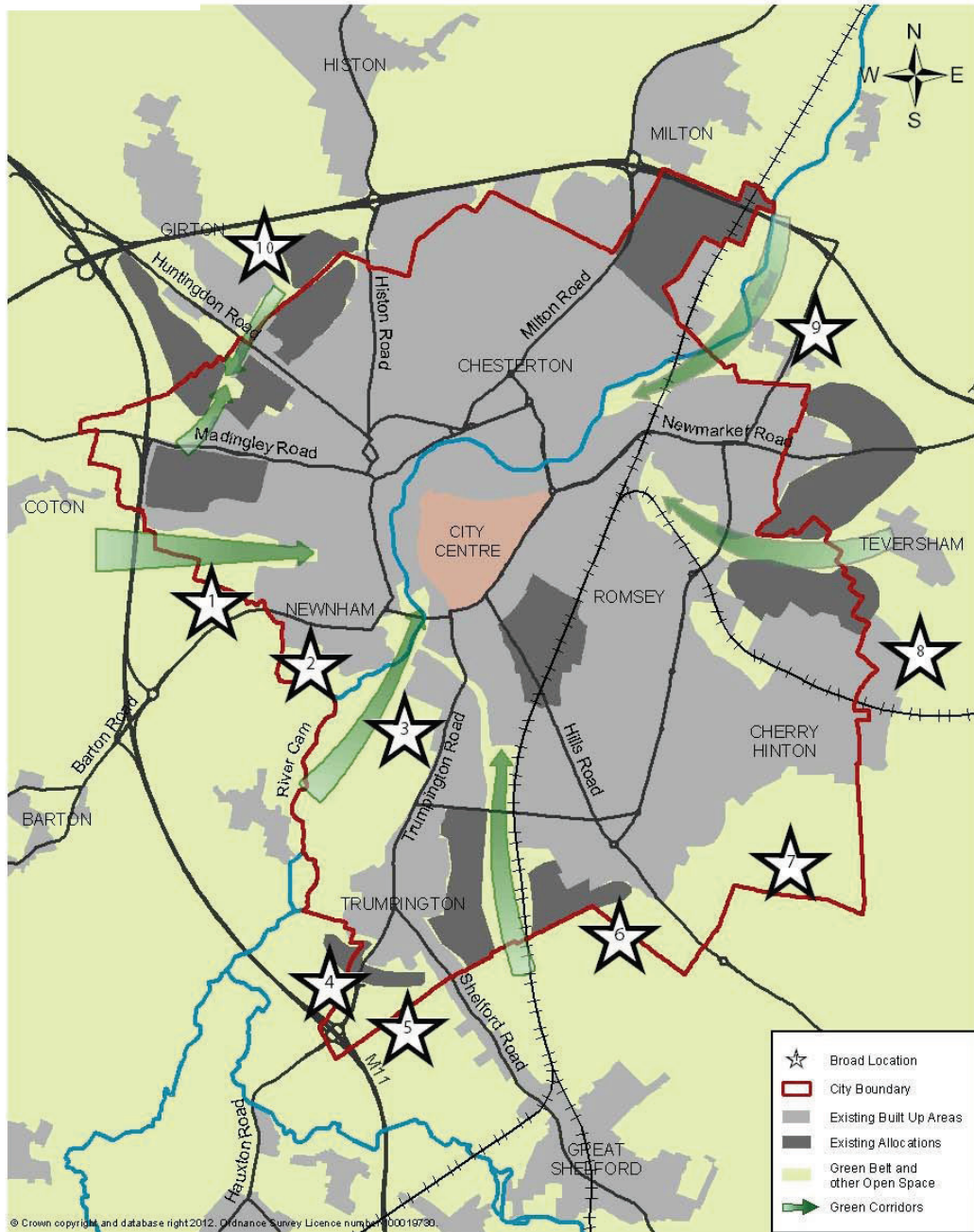
- 1.17 Joint working has already taken place with SCDC to identify 10 possible broad locations where new development could be accommodated at the edge of Cambridge. These were shown in the Issues and Options Reports for both Local Plans. These locations are shown in Figure 1 and are as follows:

Broad Location 1 – Land to the north and south of Barton Road
Broad Location 2 – Playing fields off Grantchester Road, Newnham
Broad Location 3 – Land west of Trumpington Road
Broad Location 4 – Land west of Hauxton Road
Broad Location 5 – Land south of Addenbrooke's Road
Broad Location 6 – Land south of Addenbrooke's and between Babraham Road and Shelford Road
Broad Location 7 – Land between Babraham Road and Fulbourn Road
Broad Location 8 – Land east of Gazelle Way
Broad Location 9 – Land at Fen Ditton
Broad Location 10 – Land between Huntingdon Road and Histon Road

- 1.18 Following consultation on both Councils' Issues and Options Reports, the views of the public will be assessed and taken into account in assessing suitability for development.
- 1.19 The next step will be to identify whether there are any sites within the broad locations which would be reasonable alternatives for development. The SEA Directive requires that the effects of 'reasonable alternatives' are covered. The Government's SEA Practical Guide (2006) is clear that only reasonable, realistic and relevant alternatives need to be put forward. This document suggests a hierarchy of alternatives. This hierarchy approach is being followed for the urban fringes.
- 1.20 Key to the identification of sites will be appraisal of the inner Green Belt and the overall sustainable development strategy for the sub region, and work is being carried out jointly with SCDC on these matters. In addition a joint site assessment pro forma is being developed with

SCDC as a way of assessing the suitability of the fringe sites. This will take into account both the City's site appraisal pro forma and SCDC's appraisal criteria, including SA criteria, which they have used to appraise the other sites in their Issues and Options Report. The assessment of fringe sites will be undertaken jointly with SCDC, with input from specialists in both Councils.

Figure 1: Broad Location Options



Consultation on Sites

- 1.21 The City Council recognises the importance of consultation and has often gone beyond what is required by Government guidance as was shown during the production of the SHLAA. The Council is proposing to consult for 6 weeks on the proposed sites.
- 1.22 Following the assessment of sites, a document will be produced setting out all of the potential sites for allocation. A joint document will be produced with SCDC in relation to the joint fringe sites as well as providing appropriate context on the development strategy alternatives for the wider Cambridge area.
- 1.23 The Issues and Options 2 consultation document will therefore include the Cambridge sites, joint fringe sites and any other matters such as car and cycle parking standards and space standards. In addition a Sustainability Appraisal Report will be produced by consultants to be consulted upon alongside. This will explain how SA has been taken into account in the identification of sites and will also look at the cumulative effects of potential sites in Cambridge, at the fringes and in the wider area.
- 1.24 The reports will be taken to Development Plan Scrutiny Sub Committee (DPSSC) in December 2012 for approval. Public consultation will then take place in January 2013 for 6 weeks. At the same time, SCDC will be consulting upon the joint fringe sites and any other issues as part of their Issues and Options Report 2.
- 1.25 Consultation on the draft submission plan will follow in June/July 2013, where the public will have another opportunity to comment on any sites which have been identified as allocations.

Appendix 1 – Proposed Cambridge City Sites Assessment Pro forma

Site Information	
Site reference number(s):	
Site name/address:	
Functional area (taken from SA Scoping Report):	
Map	
Photo	
Site description:	

Current use:
Proposed use(s):
Site size (ha): x.xx Assumed net developable area:
Assumed residential density:
Potential residential capacity:
Site owner/promoter:
Landowner has agreed to promote site for development?:
Site origin: SHLAA Call for Sites, Green Belt Assessment, ELR, Allocated Site , Other
Relevant planning history:

Level 1		
Part A: Strategic Considerations		
Flood Risk		
Criteria	Performance	Comments
<p>Is site within a flood zone?</p> <p><i>The assessment will address whether the proposed use is considered suitable for the flood zone with reference to the Council's Strategic Flood Risk Assessment.</i></p> <p><i>In line with the requirements of the NPPF a sequential test will be applied when determining the allocation of new development in order to steer development to areas with the lowest probability of flooding (Zone 1).</i></p> <p><i>Sites that fall within Flood Zone 3 will only be considered where there are no reasonably available sites in Flood Zones 1 or 2, taking into account the flood risk vulnerability of land uses and applying the Exceptions Test as required.</i></p>	<p>R = Flood risk zone 3 A = Flood risk zone 2 G = Flood risk zone 1</p>	<p><i>Quantify extent of risk by proportion of site affected.</i></p>
<p>Is site at risk from surface water flooding?</p> <p><i>In addition to identifying whether site is in a high risk flood zone, consideration needs to be given to the risk of surface water flooding on the site. The Surface Water Management Plan for Cambridge (2011) shows that the majority of the City is at high risk of surface water flooding. Development, if not undertaken with due consideration of the risk to the development and the existing built environment, will further increase the risk. Consideration should also be given to the scope for appropriate mitigation, which could reduce the level of risk on site and potentially reduce flood risk elsewhere (for example from site run-off).</i></p>	<p>R = High risk, A = Medium risk G = Low risk</p>	<p><i>Take account of scope for appropriate mitigation, which could reduce the level of risk on site and potentially reduce flood risk elsewhere (for example from site run-off).</i></p>
Land Use / Green Belt		
Criteria	Performance	Comments
<p>Will allocation make use of previously developed land (PDL)?</p> <p><i>The NPPF promotes the effective use of land by reusing land that has been previously developed, provided it is not of high environmental value.</i></p>	<p>R = Not on PDL A = Partially on PDL G = Entirely on PDL</p>	<p><i>Provide percentage of the amount of land on PDL.</i></p>

<p>Will the allocation lead to loss of land within the Green Belt?</p> <p><i>There is a small amount of Green Belt within the built up area of the City, such as Stourbridge Common, Coldham's Common and along the River Cam corridor. The Green Belt at the fringe of the City is considered in more detail in the joint pro forma with SCDC which looks at sites on the fringe of the City.</i></p>	<p>R = Site is in the Green Belt G = Site is not in the Green Belt</p>	<p><i>The NPPF emphasises the need to protect the Green Belt and states that inappropriate development in the Green Belt should not be approved except in very special circumstances.</i></p>
Impact on national Nature Conservation Designations		
Criteria	Performance	Comments
<p>Would allocation impact upon a Site of Special Scientific Interest (SSSI)?</p> <p><i>The assessment will take into account the reasons for the SSSI's designation and the potential impacts that development could have on this.</i></p>	<p>R = Site is on or adjacent to an SSSI with negative impacts incapable of mitigation A = Site is on or adjacent to an SSSI with negative impacts capable of mitigation G = Site is not near to an SSSI with no or negligible impacts</p>	<p><i>Ecologist to complete.</i></p>
Impact on National Heritage Assets		
Criteria	Performance	Comments
<p>Will allocation impact upon a Scheduled Ancient Monument (SAM)?</p> <p><i>Scheduling is the process through which nationally important sites and monuments are given legal protection. National planning policy requires substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, to be wholly exceptional. As such consideration needs to be given to the impact that development could have on any nearby SAMs, taking account of the proposed development use and distance from the centre of the site to it. Development that is likely to have adverse impacts on a Scheduled Ancient Monument (SAM) or its setting should be avoided.</i></p>	<p>R = Site is on a SAM or allocation will lead to development adjacent to a SAM with the potential for negative impacts incapable of mitigation A = Site is adjacent to a SAM that is less sensitive / not likely to be impacted/ or impacts are capable of mitigation G = Site is not on or adjacent to a SAM</p>	<p><i>Conservation Officers to complete</i></p>
<p>Would development impact upon Listed Buildings?</p> <p><i>Listed buildings are categorised as either Grade 1 (most important), Grade 2* or Grade 2. Consideration needs to be given to the likely impact of development on the building and its setting taking account of the listing category, the distance</i></p>	<p>R = Site contains, is adjacent to, or within the setting of such buildings with potential for significant negative impacts incapable of appropriate mitigation A = Site contains, is adjacent to, or within the setting of such buildings with potential for negative impacts capable</p>	<p><i>Conservation Officers to complete. Identify grade of buildings affected (Grade 1, 2*, or 2).</i></p>

<p><i>from the listed building, the proposed use, and the possibility of mitigation.</i></p>	<p>of appropriate mitigation G = Site does not contain or adjoin such buildings, and there is no impact to the setting of such buildings</p>	
Part B: Deliverability and Viability Criteria		
Criteria	Performance	Comments
<p>Is the site allocated or safeguarded in the Minerals and Waste LDF?</p> <p><i>Reference needs to be made to the Minerals and Waste LDF in order to determine whether development of the site could prejudice any future Minerals and Waste sites. NB: Land that falls within an 'Area of Search' should be flagged up, but this would not necessarily rule out the allocation of a site.</i></p>	<p>R = Site or a significant part of it falls within an allocated or safeguarded area, development would have significant negative impacts A = Site or a significant part of it falls within an allocated or safeguarded area, development would have minor negative impacts G = Site is not within an allocated or safeguarded area.</p>	<p><i>County Minerals & Waste Staff to complete</i></p>
<p>Is the site located within the Cambridge Airport Public Safety Zone (PSZ) or Safeguarding Zone (SZ)?</p>	<p>R = Entire site is within the PSZ or SZ A = Part of site within PSZ or SZ G = Site is not within the PSZ or SZ</p>	<p><i>Location within a zone will not in itself prevent development, it depends upon the nature of the development and its height.</i></p>
<p>Is there a suitable access to the site?</p> <p><i>The assessment needs to consider whether the site is capable of achieving appropriate access that meets County Highway standards for scale of development.</i></p>	<p>R = No A = Yes, with mitigation G = Yes</p>	<p><i>CCC Highways to complete</i></p>
<p>Would allocation of the site have a significant impact on the local highway capacity?</p> <p><i>Consideration should be given to the capacity of the local highway network and the impacts the development is likely to have on it.</i></p>	<p>R = Insufficient capacity. Negative effects incapable of appropriate mitigation. A = Insufficient capacity. Negative effects capable of appropriate mitigation. G = No capacity constraints identified that cannot be fully mitigated</p>	<p><i>CCC Highways to complete</i></p>
<p>Would allocation of the site have a significant impact on the strategic road network capacity?</p> <p><i>Consideration should be given to the capacity of the strategic road network and the impacts the development is likely to have on it.</i></p>	<p>R = Insufficient capacity. Negative effects incapable of appropriate mitigation. A = Insufficient capacity. Negative effects capable of appropriate mitigation. G = No capacity constraints identified that cannot be fully mitigated</p>	<p><i>Highways Agency for strategic roads</i></p>
<p>Is the site part of a larger site and could it prejudice development of any strategic sites?</p> <p><i>Comments should flag up</i></p>	<p>R = Yes G = No</p>	

<p><i>whether the site is part of a larger development site or whether it is located in close proximity to a strategic site. Consideration of this at allocation stage can help ensure coordination of development.</i></p>		
<p>Are there any known legal issues/covenants that could constrain development of the site?</p> <p><i>A summary of any known legal issues that could constrain the development of the site should be given. Issues that should be considered are; whether the site is in multiple ownership, the presence of ransom strips, covenants, existing use agreements, owner agreement or developer agreement.</i></p>	<p>R = Yes G = No</p>	<p><i>Multiple owners, ransom strips, covenants, existing use agreements etc</i></p>
<p>Timeframe for bringing the site forward for development?</p> <p><i>Knowledge of the timeframe for bringing forward development will help inform whether allocation of the site would have the potential to contribute to the Council's required land supply for housing/employment land etc.</i></p>	<p>R = Beyond 2031 (beyond plan period) A = Start of construction between 2017 and 2031 G = Start of construction between 2011 and 2016</p>	<p><i>Beyond plan period, or construction likely to start first 5 years, or within 5-19 years</i></p>
<p>Would development of the site require significant new / upgraded utility infrastructure?</p>	<p>R = Yes, significant upgrades likely to be required but constraints incapable of appropriate mitigation A = Yes, significant upgrades likely to be required, constraints capable of appropriate mitigation G = No, existing infrastructure likely to be sufficient</p>	<p><i>Improved utility infrastructure is likely to be required as follows.</i> <i>Electricity</i> <i>Gas</i> <i>Water</i> <i>Waste water</i> <i>Broadband</i></p> <p><i>If any mitigation is deemed necessary this will be funded by the developer.</i></p>
<p>Would development of the site be likely to require new education provision?</p>	<p>R = School capacity not sufficient, constraints cannot be appropriately mitigated. A = School capacity not sufficient, constraints can be appropriately mitigated G = Non-residential development / surplus school places</p>	<p><i>To be completed by County Education Schools Planning Officer</i></p>
<p>Level 1 Conclusion</p>		
<p>Level 1 Conclusion (after allowing scope for mitigation)</p> <p><i>Include an assessment of the suitability of the proposed use. Also whether the development of</i></p>	<p>RR = Very significant constraints or adverse impacts R = Significant constraints or adverse impacts</p>	<p>Add brief commentary here</p>

<p><i>this site for this use would be in line with emerging policy in the Local Plan – from the Issues and Options Report and key issues emerging from consultation responses.</i></p>	<p>A = Some constraints or adverse impacts G = Minor constraints or adverse impacts GG = None or negligible constraints or adverse impacts</p>	
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Level 2		
Accessibility to existing centres and services		
Criteria	Performance	Comments
<p>How far is the site from edge of defined Cambridge City Centre?</p> <p><i>A key element of sustainable development is ensuring that people are able to meet their needs locally, thus helping to encourage a modal shift. This criteria has been included to provide an indication of the sustainability of the site. Sites located closer to the City Centre, where the majority of services are located, are expected to score more highly in sustainability terms.</i></p>	<p>R = >800m A = 400-800m G = <400m</p>	<p><i>City Centre boundary shown on Proposals Map in Cambridge Local Plan 2006.</i></p>
<p>How far is the site from the nearest District or Local centre?</p> <p><i>A key element of sustainable development is ensuring that people are able to meet their needs locally, thus helping to encourage a modal shift. Criteria measuring the distance of a site from its nearest district/local centre has been included to provide an indication of the sustainability of the site and to determine the appropriate density of development of a site.</i></p>	<p>R = >800m A = 400-800m G = <400m</p>	<p><i>District and Local Centre boundaries shown on Proposals Map in Cambridge Local Plan 2006.</i></p>
<p>How far is the nearest health centre or GP service?</p> <p><i>Local services are essential to the quality of life of residents and employees. In planning for new development, consideration needs to be given to the proximity of development to local services so that new residents can access these using sustainable modes of transport. As such, measuring the distance of a site from the nearest health centre/GP service has been included to provide an indication of the sustainability of the site.</i></p>	<p>R = >800m A = 400-800m G = <400m</p>	
<p>Would development lead to a loss of community facilities?</p>	<p>R = Allocation would lead to loss of community facilities G = Development would not</p>	

	lead to the loss of any community facilities or replacement /appropriate mitigation possible	
How far is the nearest secondary school? <i>In planning for new development, consideration needs to be given to the proximity to schools so that new residents can access these using sustainable modes of transport. As such, measuring the distance of a site from the nearest secondary school has been included to provide an indication of the sustainability of the site. Development will also be required to contribute to the provision of new local services.</i>	R = >3km A = 1-3km G = <1km or non-housing allocation	<i>Name the school. National standards require free school transport for specified groups of pupils if over 2 miles (3.2 km from home to school).</i>
How far is the nearest primary school? <i>In planning for new development, consideration needs to be given to the proximity to schools so that new residents can access these using sustainable modes of transport. As such, measuring the distance of a site from the nearest primary school has been included to provide an indication of the sustainability of the site. Development will also be required to contribute to the provision of new local services.</i>	R = >800m A = 400-800m G = <400m or non-housing allocation	<i>Name the school.</i>
Accessibility to outdoor facilities and green spaces		
Criteria	Performance	Comments
Is the site defined as protected open space or have the potential to be protected	R = Yes G = No	
If the site is protected open space can the open space be replaced according to CLP Local Plan policy 4/2 Protection of Open Space	R = No G = Yes	<i>The site owner must provide details of how this can be achieved</i>
If the site does not involve any protected open space would development of the site be able to increase the quantity and quality of publically accessible open space /outdoor sports facilities and achieve the minimum standards of onsite public open space provision?	RR = No, the site by virtue of its size is not able to provide the minimum standard of OS and is located in a ward or parish with identified deficiency. R = No, the site by virtue of its size is not able to provide the minimum standard of OS. G = Assumes minimum on-	Includes all types of public open space and outdoor sports facilities. Use a GG entry when this opportunity has been identified in a SHLAA submission or where such provision could connect existing open spaces or utilise significant areas of land in Flood Zone 2 or 3. <i>The site owner must provide details of how onsite</i>

	<p>site provision to adopted plan standards is provided onsite</p> <p>GG = Development would create the opportunity to deliver significantly enhanced provision of new public open spaces in excess of adopted plan standards</p>	<p><i>provision will be provided where there are doubts over onsite provision, especially in wards with existing OS deficiencies.</i></p>
<p>How far is the nearest outdoor sports facilities?</p> <p><i>A key objective of national planning policy is for planning to promote healthy communities. Good accessibility to sports facilities is likely to encourage healthier lifestyles. Inclusion of criteria that measures distance from the site to outdoor sports facilities has therefore been included to provide an indication of the sustainability of the site. The assessment should also give consideration as to whether the size of the site and scale of development are likely to require a contribution to the provision of new local services such as new outdoor sports facilities via S106 contributions.</i></p>	<p>R = >3km A = 1 - 3km G = <1km; or allocation is not housing</p>	
<p>How far is the nearest play space for children and teenagers?</p> <p><i>Proximity to high quality play spaces makes an important contribution to the health and well-being of children. As such, measuring the distance of a site from the nearest children's play space has been included to provide an indication of the sustainability of the site. The assessment should also give consideration as to whether the size of the site and scale of development are likely to require a contribution to the provision of new local services such as new play space via S106 contributions</i></p>	<p>A = >400m from children and teenager's play space G = <400m; or allocation is not housing</p>	
<p>How far is the nearest accessible natural greenspace of 2ha?</p> <p><i>Proximity to high quality open spaces makes an important contribution to the health and</i></p>	<p>R = >400m G = <400m; or allocation is not housing or employment</p>	<p><i>Based upon Natural England's Accessible Natural Greenspace Standard (ANGST).</i></p>

<p><i>well-being of communities. In planning for new development, consideration needs to be given to the proximity of development to parks/open space/multi-functional greenspace so that new residents can access these using sustainable modes of transport. As such, measuring the distance from the site to such spaces (as identified in the Council's Open Space Strategy) has been included to provide an indication of the sustainability of the site.</i></p> <p><i>The assessment should also give consideration as to whether the size of the site and scale of development</i></p>		
Supporting Economic Growth		
Criteria	Performance	Comments
<p>How far is the nearest main employment centre?</p> <p><i>National planning policy promotes patterns of development which facilitate the use of sustainable modes of transport. Proximity between housing and employment centres is likely to promote the use of sustainable modes of transport. Criteria has therefore been included to measure the distance between the centre of the site and the main employment centre to provide an indication of the sustainability of the site.</i></p>	<p>R = >3km A = 1-3km G = <1km or allocation is for or includes a significant element of employment or is for another non-residential use</p>	<p><i>City centre, established business estates and key office locations and local centres in City as defined in Employment Land Review (ELR)</i></p>
<p>Would development result in the loss of employment land identified in the Employment Land Review?</p> <p><i>The ELR seeks to identify an adequate supply of sites to meet indicative job growth targets and safeguard and protect those sites from competition from other higher value uses, particularly housing. Proposals for non employment-uses for sites identified for potential protection in the ELR should be weighed up against the potential for the proposed use as well as the need for it.</i></p>	<p>R = Significant loss of employment land and job opportunities not mitigated by alternative allocation in the area (> 50%) A =Some loss of employment land and job opportunities mitigated by alternative allocation in the area (< 50%). G = No loss of employment land / allocation is for employment development</p>	<p><i>Retained business estates, office locations and other portfolio sites defined in ELR</i></p>
<p>Would allocation result in development in deprived areas of Cambridge?</p> <p><i>The English Indices of Deprivation 2010 are measures of multiple deprivation at the small area level. The model of multiple deprivation which</i></p>	<p>A = Not within or adjacent to the 40% most deprived Super Output Areas within Cambridge according to the Index of Multiple Deprivation 2010. G = Within or adjacent to the 40% most deprived Super Output Areas within</p>	

<p><i>underpins the Indices of Deprivation 2010 is based on the idea of distinct domains of deprivation which can be recognised and measured separately. These domains are experienced by individuals living in an area. Inclusion of this criteria will identify where development may benefit areas where deprivation is an issue.</i></p>	<p>Cambridge according to the Index of Multiple Deprivation 2010.</p>	
Sustainable Transport		
Criteria	Performance	Comments
<p>What type of public transport service is accessible at the edge of the site?</p> <p><i>National Planning Policy promotes the need to support a pattern of development which facilitates the use of sustainable modes of transport. Access between residential, employment and retail uses and high quality public transport routes is pivotal to achieving that aim. As such the inclusion of criteria that measures the distance of a site from the nearest high quality public transport route will provide an indication of the sustainability of the site. In assessing the performance of this criteria, reference should be made to the Cambridge City Local Plan definition of 'high quality public transport routes'.</i></p>	<p>R = Service does not meet the requirements of a high quality public transport (HQPT) A =service meets requirements of high quality public transport in most but not all instances G = High quality public transport service</p>	<p><i>Based upon the assessment which has been made by the City, using HQPT definition in the 2006 Cambridge Local Plan.</i></p>
<p>How far is the site from an existing or proposed train station?</p> <p><i>National Planning Policy promotes the need to support a pattern of development which facilitates the use of sustainable modes of transport. Access between residential, employment and retail uses and high quality public transport routes is pivotal to achieving that aim. As such the inclusion of criteria that measures the distance of a site from the nearest train station will provide an indication of the sustainability of the site.</i></p>	<p>R = >800m A =400 - 800m G = <400m</p>	<p><i>State distance from approximate centre of site including proposed Cambridge Science Park Station.</i></p>
<p>What type of cycle routes are accessible near to the site?</p> <p><i>National Planning Policy stresses the importance of developments being located and designed where practical to give</i></p>	<p>RR = No cycling provision and traffic speeds >30mph with high vehicular traffic volume.</p>	<p><i>Describe in commentary. City Cycling Officer to complete taking into account speed of traffic and accident records and width of facility and nature of any sharing with</i></p>

<p><i>priority to pedestrian and cycle movements. The inclusion of criteria that measures the distance of a site from the nearest cycle route will provide an indication of the sustainability of the site.</i></p>	<p>R = No cycling provision or a cycle lane less than 1.5m with medium volume of traffic. Having to cross a busy junction with high cycle accident rate to access local facilities/school. Poor quality off road path.</p> <p>A = Medium quality off-road path.</p> <p>G = Quiet residential street speed below 30mph, cycle lane with 1.5m minimum width, high quality off-road path e.g. cycleway adjacent to guided busway.</p> <p>GG = Quiet residential street designed for 20mph speeds, high quality off-road paths with good segregation from pedestrians, uni-directional hybrid cycle lanes.</p>	<p><i>pedestrians.</i></p>
<p>Air Quality, pollution, contamination and noise</p>		
<p>Criteria</p>	<p>Performance</p>	<p>Comments</p>
<p>Is the site within or near to an AQMA, the M11 or the A14?</p> <p><i>The planning system has a role to play in the protection of air quality by ensuring that land use decisions do not adversely affect, or are not adversely affected by, the air quality in any AQMA, or conflict with or render ineffective any elements of the local authority's air quality action plan. There is currently one AQMA within Cambridge. Inclusion of criteria that measures the distance between the site and the AQMA, as well as between the site and roads with the highest traffic volumes causing poor air quality, will provide an indication of the sustainability of the site.</i></p>	<p>R = Within or adjacent to an AQMA, M11 or A14</p> <p>A = <1000m of an AQMA, M11 or A14</p> <p>G = >1000m of an AQMA, M11, or A14</p>	<p><i>Environmental Health to complete and consider scope for appropriate mitigation</i></p>
<p>Would the development of the site result in an adverse impact/worsening of air quality?</p> <p><i>National planning policy requires preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of air pollution.</i></p>	<p>R = Significant adverse impact</p> <p>A = Adverse impact</p> <p>G = Minimal, no impact, reduced impact</p>	<p><i>Environmental Health to complete and consider scope for appropriate mitigation</i></p>

<p>Are there potential noise and vibration problems if the site is developed, as a receptor or generator?</p> <p><i>National planning policy requires preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of noise pollution. Criteria has been included to assess whether there are any existing noise sources that could impact on the suitability of a site, which is of particular importance for residential development. The presence of noise sources will not necessarily render a site undevelopable as appropriate mitigation measures may be available, and will also depend on the proposed development use.</i></p>	<p>R = Significant adverse impacts incapable of appropriate mitigation A =Adverse impacts capable of adequate mitigation G = No adverse effects or capable of full mitigation</p>	<p><i>Environmental Health to complete and consider scope for appropriate mitigation</i></p>
<p>Are there potential light pollution problems if the site is developed, as a receptor or generator?</p>	<p>R = Significant adverse impacts incapable of appropriate mitigation A =Adverse impacts capable of adequate mitigation G = No adverse effects or capable of full mitigation</p>	<p><i>Environmental Health to complete and consider scope for appropriate mitigation</i></p>
<p>Are there potential odour problems if the site is developed, as a receptor or generator?</p>	<p>R = Significant adverse impacts incapable of appropriate mitigation A =Adverse impacts capable of adequate mitigation G = No adverse effects or capable of full mitigation</p>	<p><i>Environmental Health to complete and consider scope for appropriate mitigation</i></p>
<p>Is there possible contamination on the site?</p> <p><i>Contaminated land is a material planning consideration, and Land Use History Reports are available from the Council's Environmental Health Scientific Team. The presence of contamination will not always rule out development, but development should not be permitted in areas subject to pollution levels that are incompatible with the proposed use. Mitigation measures can be implemented to overcome some contaminated land issues, although this may have an impact on the economic viability of the development. Further investigation will be required to</i></p>	<p>R = All or a significant part of the site within an area with a history of contamination which, due to physical constraints or economic viability, is incapable of appropriate mitigation during the plan period A =Site partially within or adjacent to an area with a history of contamination, or capable of remediation appropriate to proposed development G = Site not within or adjacent to an area with a history of contamination</p>	<p><i>Environmental Health to complete and consider scope for appropriate mitigation</i></p>

<p><i>establish the nature of any contamination present on sites and the implications that this will have for development.</i></p>		
<p>Protecting Groundwater</p>		
<p>Criteria</p>	<p>Performance</p>	<p>Comments</p>
<p>Would development be within a source protection zone (EA data)?</p> <p><i>Groundwater sources (e.g. wells, boreholes and springs) are used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area.</i></p>	<p>A =Within SPZ 1 G = Not within SPZ1 or allocation is for greenspace</p>	<p><i>Explain significance in comments box</i></p>
<p>Protecting the townscape and historic environment (<i>Landscape addressed by Green Belt criteria</i>)</p>		
<p>Criteria</p>	<p>Performance</p>	<p>Comments</p>
<p>Would allocation impact upon a historic park/garden?</p> <p><i>Historic parks and gardens that have been registered under the 1983 National Heritage Act have legal protection. There are 11 historic parks and gardens in Cambridge. National planning policy requires substantial harm to or loss of designated heritage assets of the highest significance, including historic parks, to be wholly exceptional. As such this criteria has been included to allow consideration of whether development on the site would have an adverse impact on a historic park or garden its setting.</i></p>	<p>R = Site contains, is adjacent to, or within the setting of such areas with potential for significant negative impacts incapable of appropriate mitigation A = Site contains, is adjacent to, or within the setting of such areas with potential for negative impacts capable of appropriate mitigation G = Site does not contain or adjoin such areas, and there is no impact to the setting of such areas</p>	<p><i>Conservation officer to complete</i></p>
<p>Would development impact upon a Conservation Area?</p> <p><i>The Planning (Listed Buildings and Conservation Areas) Act 1990, imposes a duty on planning authorities to designate as conservation areas ‘areas of special architectural or historic interest that character or appearance of which it is desirable to preserve or enhance’. Cambridge’s Conservation Areas are relatively diverse. As such consideration needs to be given to the potential impact that development may have on the setting, or views into and out of a Conservation Area.</i></p>	<p>R = Site contains, is adjacent to, or within the setting of such an area with potential for significant negative impacts incapable of appropriate mitigation A = Site contains, is adjacent to, or within the setting of such an area with potential for negative impacts capable of appropriate mitigation G = Site does not contain or adjoin such an area, and there is no impact to the setting of such an area</p>	<p><i>Conservation officer to complete</i></p>
<p>Would development impact upon buildings of local interest</p>	<p>A =Site contains, is adjacent to, or within the setting of such buildings with potential</p>	<p><i>Conservation officer to complete</i></p>

<p><i>There are over 1,000 buildings in Cambridge that are important to the locality or the City's history and architectural development. Local planning policy protects such buildings from development which adversely affects them unless:</i></p> <ul style="list-style-type: none"> - <i>The building is demonstrably incapable of beneficial use or reuse;</i> - <i>or there are clear public benefits arising from redevelopment.</i> <p><i>As such the presence of a locally listed building on a site would not necessarily rule development; however detailed justification would be required to demonstrate acceptability of schemes at the planning application stage.</i></p>	<p>for negative impacts capable of appropriate mitigation G = Site does not contain or adjoin such buildings, and there is no impact to the setting of such buildings</p>	
<p>Would development impact upon archaeology?</p>	<p>A =Known archaeology on site or in vicinity G = No known archaeology on site or in vicinity</p>	<p>County Archaeological staff to complete.</p>
<p>Biodiversity and Green Infrastructure</p>		
<p>Criteria</p>	<p>Performance</p>	<p>Comments</p>
<p>Would development impact upon a locally designated wildlife site i.e. (Local Nature Reserve, County Wildlife Site, City Wildlife Site)</p> <p><i>Sites of local nature conservation include Local Nature Reserves, County Wildlife Sites and City Wildlife Sites. Local authorities have a Duty to have regard to the conservation of biodiversity in exercising their functions. As such development within such sites, or that may affect the substantive nature conservation value of such sites, will not normally be permitted. Where development is permitted, suitable mitigation and/or compensatory measures and nature conservation enhancement measures should be implemented.</i></p>	<p>R = Contains or is adjacent to an existing site and impacts incapable of appropriate mitigation A =Contains or is adjacent to an existing site and impacts capable of appropriate mitigation G = Does not contain, is not adjacent to or local area will be developed as greenspace</p>	<p>Ecology Officer to complete</p>
<p>Does the site offer opportunity for green infrastructure delivery?</p> <p><i>Green infrastructure plays an important role in delivering a wide range of environmental and quality of life benefits for local communities. As such criteria has been included to assess the</i></p>	<p>R = Development involves a loss of existing green infrastructure which is incapable of appropriate mitigation. A =No significant opportunities or loss of existing green infrastructure capable of appropriate</p>	<p>Ecology Officer to complete</p>

<p><i>opportunity that development on the site could have on creating and enhancing green infrastructure delivery.</i></p>	<p>mitigation G = Development could deliver significant new green infrastructure</p>	
<p>Would development reduce habitat fragmentation, enhance native species, and help deliver habitat restoration (helping to achieve Biodiversity Action Plan targets?)</p> <p><i>A number of Biodiversity Species and Habitat Action Plans exist for Cambridge. Such sites play an important role in enhancing existing biodiversity for enjoyment and education. National planning policy requires the protection and recovery of priority species populations, linked to national and local targets. As such development within sites where BAP priority species or habitats are known to be present, or that may affect the substantive nature conservation value of such sites, will not normally be permitted. Where development is permitted, suitable mitigation and/or compensatory measures and nature conservation enhancement measures should be implemented.</i></p>	<p>R = Development would have a negative impact on existing features or network links incapable of appropriate mitigation A =Development would have a negative impact on existing features or network links but capable of appropriate mitigation G = Development could have a positive impact by enhancing existing features and adding new features or network links</p>	<p>Ecology Officer to complete</p>
<p>Are there trees on site or immediately adjacent protected by a Tree Preservation Order (TPO)?</p> <p><i>Trees are an important facet of the townscape and landscape and the maintenance of a healthy and species diverse tree cover brings a range of health, social, biodiversity and microclimate benefits. Cambridge has in excess of 500 TPOs in force. When considering sites that include trees covered by TPOs, the felling, significant surgery or potential root damage to such trees should be avoided unless there are demonstrable public benefits accruing from the development that outweigh the current and future amenity value of the trees.</i></p>	<p>R = Development likely to have a significant adverse impact on the protected trees incapable of appropriate mitigation A =Any adverse impact on protected trees capable of appropriate mitigation G = Site does not contain or adjoin any protected trees</p>	<p>Tree Officers to complete</p>
<p>Any other information not captured above?</p>		
<p></p>		

Level 2 Conclusion		
Level 2 Conclusion (after allowing scope for mitigation)	R = Significant constraints or adverse impacts A = Some constraints or adverse impacts G = Minor constraints or adverse impacts	
Overall Conclusion	R = Site with no significant development potential (significant constraints and adverse impacts) A = Site with development potential (some constraints or adverse impacts) G = Site with development potential (few or minor constraints or adverse impacts)	<i>Housing sites ranked A or G will be taken forward for viability assessment by consultants.</i>
Viability feedback (from consultants)	R = Unlikely to be viable, A = May be viable G = Likely to be viable	

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