



# Greater Cambridge Local Plan

## Strategic Spatial Options for Testing – Methodology

November 2020

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# 0 Non-technical Summary

## 0.1 Purpose

This document sets out the strategic (non-site specific) spatial options to be tested through the Greater Cambridge Local Plan process, and the methodology used to identify them. The spatial options include different distributions of jobs and homes to meet different potential growth requirements.

The document is intended to demonstrate that a robust and transparent process has been followed for identifying and testing strategic spatial options, following the requirements of relevant legislation and national policy, as well as local objectives.

Once identified, the strategic options will be tested in terms of transport, climate change and other impacts and be subject to sustainability appraisal. This testing will then inform the selection of a preferred option for the Local Plan.

For further detail please see 1. Introduction.

## 0.2 Identifying the reasonable alternatives

### Growth level options

Consideration of national policy requirements and relevant economic and demographic evidence has resulted in the determination of three growth scenarios for the plan period 2020-41 which are consistent for jobs and homes, as set out in the table below.

Table 1: Growth options, 2020-41 (rounded up to the nearest hundred)

Growth scenario	Employment (jobs)	Housing (dwellings)
Minimum	45,800	36,700
Medium	58,500	42,000
Maximum	79,500	57,000

Note: a typographical error was identified in the Employment Land Review during the period of testing the strategic options, such that the final 'higher' employment growth forecast (used in the growth options as the maximum) is for 78,800 jobs which

generates an associated growth of 56,500 homes. The differences between the figures included in the table above for testing and these revised figures are not considered to be significant in the context of this strategic testing stage.

For further detail see 1.3. Identifying the reasonable alternatives.

### **Strategic spatial options**

A full assessment of potential strategic spatial options was undertaken. Drawing on this assessment, the following options are being taken forward for testing as strategic spatial options:

- 1   Densification of existing urban areas
- 2   Edge of Cambridge - outside the Green Belt
- 3   Edge of Cambridge - Green Belt
- 4   Dispersal - new settlements
- 5   Dispersal - villages
- 6   Public transport corridors
- 7   Supporting a high-tech corridor by integrating homes and jobs
- 8   Expanding a growth area around transport nodes

For further detail see 1.4 Identifying the reasonable spatial strategy options, and Appendix 3: Identifying the full range of reasonable spatial options.

## **0.3   Description of strategic spatial options and options numbers for testing**

This section describes, for each strategic spatial option and growth scenario, the distribution of growth between the sources of supply described in 3. Strategic options methodology.

Broad descriptions of the strategic spatial options are set out below:

### **Spatial Scenario 1: Focus on Densification of existing urban areas**

This approach would focus new homes and jobs within Cambridge, because it is the main urban area and centre for services and facilities. The primary location for development within the urban area is at North East Cambridge: this is the last major brownfield site within Cambridge urban area and is being taken forward separately via an Area Action Plan.

### **Spatial Scenario 2: Focus on Edge of Cambridge: outside Green Belt**

This approach would create new homes and jobs in extensions on the edge of Cambridge, using land not in the green belt. The only large site on the edge of Cambridge not in the Green Belt is Cambridge Airport.

### **Spatial Scenario 3: Focus on Edge of Cambridge: Green Belt**

This approach would create new homes and jobs in extensions on the edge of Cambridge, involving release of land from the Green Belt.

### **Spatial Scenario 4: Focus on New Settlements**

New settlements would establish a whole new town or village, providing homes, jobs and supporting infrastructure in a new location, and would need to be supported by strategic transport infrastructure connecting to Cambridge.

### **Spatial Scenario 5: Focus on Dispersal: Villages**

This approach would spread new homes and jobs out to the villages.

### **Spatial Scenario 6: Focus on Public transport corridors**

This approach would focus homes and jobs along key public transport corridors and around transport hubs, extending out from Cambridge. This could be by expanding or intensifying existing settlements, or with more new settlements.

### **Spatial Scenario 7: Supporting a high-tech corridor by integrating homes and jobs (southern cluster)**

This approach would focus new homes close to existing and committed jobs within the life sciences cluster area around the south of Cambridge, including homes at existing villages and at new settlements.

### **Spatial Scenario 8: Expanding a growth area around transport nodes**

This approach would focus new homes at Cambourne and along the A428 public transport corridor, on the basis that Cambourne is due to be served by a new East West Rail station and that Cambourne and the villages along the corridor are due to be served by the Cambridgeshire Autonomous Metro.

For further detail see 2.1 Description of the strategic options.

The 2.2 Strategic spatial options numbers for testing section sets out in table form the distribution of the balance to find that corresponds with 2.1 Description of the strategic options. For the Minimum and Medium growth levels historic delivery rates were used, and for the Maximum growth level higher delivery rates were used (see Key point to note).

## **0.4 Compiling the strategic spatial options**

This report sets out in full the approach taken to identifying strategic spatial options (i.e. the non-site-specific distribution of growth) for each reasonable option identified above, including:

- Identifying the minimum, medium and maximum growth balance to find through new allocations (note that a 10% buffer is applied to the housing growth levels identified above); and
- for each reasonable alternative, distributing growth between a range of broad areas of supply.

To inform the approach taken to distributing growth, a number of factors are taken into account, including:

- Overarching principles – derived from legislation and national policy relevant to testing of options
- Spatial principles – derived from national policy
- Opportunities and constraints - including factors such as existing and proposed transport infrastructure, assumed delivery rates, and environmental constraints

- Outline approach – setting out the approach to determining the balance to find in relation to growth levels, and key assumptions relating to sources of supply, including broad locations, capacity, availability, delivery and further evidence required for later stages of the plan-making process
- Compiling the strategic options for testing – setting out how the options were compiled, drawing on the above sections, and in particular noting the spatial principles that governed the distribution of development within each option

Drawing together the above factors, the strategic spatial options were compiled and the following information is set out for each:

- Description - of the option
- Spatial principles/benefits - associated with the option
- Resulting option assumptions – derived from the spatial principles/benefits

To ensure that consistent levels of homes and jobs were tested, slightly differing approaches were taken to distributing jobs than was taken for homes, relating to the following points:

- there is significantly greater uncertainty in terms of jobs delivery in comparison with housing delivery,
- the Local Plan will allocate land (not jobs) for business use (Use Class B) jobs, which only form a proportion of total jobs.
- due to the level of existing commitments, it is likely much of the growth will take place at committed sites, but for modelling these strategic spatial options a proportion of the business use jobs have been identified in the new growth locations guided by the different spatial scenarios.

Further detail on this point is set out at 3.4.2 How much? – Identifying the number and location of jobs, with additional detail provided within Appendix 7.

### **Key point to note: housing delivery rates**

To support an evidence-based approach to identifying reasonable spatial options, historic delivery rates for homes were used in the first instance. However, using these in early testing under a maximum growth scenario led to unrealistic and



unreasonable spatial choices to support a deliverable and sustainable plan to 2041. For example, using such historic rates would mean that, say, ten new settlements would be needed to provide sufficient delivery to achieve the maximum option by 2041, which it would clearly be unrealistic to deliver simultaneously. Further to this, considering sustainability objectives would suggest it would be more sustainable to concentrate growth in a smaller number of locations which could support greater infrastructure provision and generate greater critical population mass. This challenge is also relevant, albeit to a lesser extent, when distributing growth for the minimum and medium options.

Drawing on the above, while the distribution of growth under the minimum and medium growth scenarios relates to cautious historic delivery rates as used in published housing trajectory calculations, the distribution of growth under the maximum growth scenario assumes higher delivery rates evidenced in specific locations within Greater Cambridge. In doing so, the Councils are not indicating that they have evidence to demonstrate that such a step change increase in housing delivery rates is achievable. Further exploration of whether and how such an increase could be achieved, including through the forthcoming Housing Delivery Study referred to in this document, will be required before pursuing this approach further through the plan process.

For further detail see 3.3.2 Constraints.

# 1 Introduction

## 1.1. Purpose

This document sets out the strategic (non-site specific) spatial options to be tested through the Greater Cambridge Local Plan process, and the methodology used to identify them. The spatial options include different distributions of jobs and homes to meet different potential growth requirements.

The document is intended to demonstrate that a robust and transparent process has been followed for identifying and testing strategic spatial options. This will thereby support the selection of a justified preferred spatial strategy, and associated site allocations, in a way that meets the statutory and national policy requirements set out below.

Once identified, the strategic options will be tested in terms of transport, climate change and other impacts and be subject to sustainability appraisal. This testing will then inform the selection of a preferred option for the Local Plan.

The document includes the following sections:

- What do we have to do? [section 1.2]
  - explains the influences on the steps taken to identifying strategic spatial options
- Identifying the reasonable alternatives [section 1.3]
  - sets out the approach taken to identifying the range of reasonable growth level and strategic spatial options for testing.
- Description of the strategic options [section 2.1]
- Strategic spatial options numbers for testing [section 2.2]
- Strategic options methodology [section 3]
  - sets out in full the approach taken to identifying strategic spatial options

## 1.2. What do we have to do?

### 1.2.1 Strategic Environmental Assessment Regulations

As set out in [Planning Practice Guidance](#), the identification and testing of growth level and spatial options, including strategic options, forms a key part of how the Local Plan meets the requirements of the [Planning and Compulsory Purchase Act 2004](#) to carry out an appraisal of the sustainability of the proposals in each development plan document – a Sustainability Appraisal. Sustainability Appraisals incorporate the requirements of the [Environmental Assessment of Plans and Programmes Regulations 2004](#), more commonly known as the Strategic Environmental Assessment (SEA) Regulations. The key requirement within the Regulations is to complete a report to “identify, describe and evaluate the likely significant effects on the environment of...implementing the plan or programme; and its reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme”. Guidance on applying the SEA Directive, on which the Regulations are based, clarifies that ‘only reasonable, realistic and relevant alternatives need to be put forward’<sup>1</sup>.

Drawing on the above, this paper, in informing the identification of strategic options, seeks to ensure that:

- All reasonable growth and spatial option alternatives have been identified, and
- all growth and spatial options identified are reasonable, realistic and relevant<sup>2</sup>, and take into account the objectives (so far as is appropriate at this stage) and the geographical scope of the Greater Cambridge Local Plan.

### 1.2.2 Climate Act 2008 (as amended 2019)

The Local Plan is subject to a wide range of legislation, for which most has been taken into account in the wording of national planning policy and guidance (explored below). However, perhaps the most relevant which is not fully reflected in the NPPF is the Climate Act 2008 as amended in 2019, which includes a target of net zero

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<sup>1</sup> Office of the Deputy Prime Minister, 2004. Practical guidance on applying European Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment, Appendix 6

<sup>2</sup> Ibid.

carbon Green House Gas emissions by 2050. The implications of the Act are that a key part of Local Plan options testing will be to consider the impact on carbon emissions and climate change, and to understand the role of the options in responding to the journey towards zero carbon by 2050. The implications of the Act are identified as relevant in the sections below.

### **1.2.3 National Planning Policy Framework**

The National Planning Policy Framework (NPPF) reflects the SEA Regulations requirements to assess reasonable options. In particular, paragraph 35 of the NPPF states that plans are sound if they are “Justified – an appropriate strategy, taking into account the reasonable alternatives, and based on proportionate evidence”.

Further to this, for the purpose of this paper, the plan-making process and spatial principles set out in the NPPF have influenced:

- confirmation of reasonable alternatives, and
- assumptions made within each alternative, and the evidence used to inform this.

Further details of this are provided within the 1.3 Confirming the reasonable alternatives and 3. Strategic options methodology sections. A full analysis of NPPF influences on development and assessment of spatial options is set out at Appendix 1: Spatial principles informing identification of and assumptions within strategic spatial options.

### **1.2.4 Emerging objectives for the Local Plan**

As noted above, the SEA Regulations state that the reasonable options should take into account ‘the objectives...of the plan or programme’. At this early stage in the Greater Cambridge Local Plan process fixed objectives have yet to be confirmed; however, the First Conversation consultation identified four big themes that will influence how homes, jobs and infrastructure are planned, drawing on the feedback

the councils received from Councillors, communities and businesses while preparing the document<sup>3</sup>.

The big themes are:

- Climate change – how the plan should contribute to achieving net zero carbon, and the mitigation and adaptation measures that should be required through developments.
- Biodiversity and green spaces – how the plan can contribute to our ‘doubling nature’ vision, the improvement of existing and the creation of new green spaces.
- Wellbeing and social inclusion – how the plan can help spread the benefits of growth, helping to create healthy and inclusive communities.
- Great places – how the plan can protect what is already great about the area, and design new developments to create special places and spaces.

The high-level nature of the big themes mean that they do not translate clearly into informing confirmation of reasonable alternatives, or specific assumptions made within each option. Objectives for the Plan will be developed alongside assessment and engagement regarding a preferred strategic option, and will inform later stages of the plan-making process.

In addition to the above themes, the Greater Cambridge Local Plan Sustainability Appraisal Scoping Report identifies fifteen Sustainability Appraisal objectives. An analysis of these, as matched against the Big Themes referred to above (see Appendix 1), concluded that for the purposes of informing the compilation of strategic spatial options they did not add substantively to the NPPF spatial principles referred to above.

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<sup>3</sup> Note that these themes were identified before the Covid-19 pandemic, the impacts of which will need to be integrated into the further development of the Local Plan.

### **1.3. Identifying the reasonable alternatives**

This section sets out the approach taken to identifying the range of reasonable growth level and strategic spatial options for testing.

#### **1.3.1 Identifying growth level options**

A consistent approach has been taken to identify lower and higher housing and jobs growth levels for testing. This work is set out in Greater Cambridge Housing and Employment Relationships Report.

#### **1.3.2 National policy requirements**

The NPPF sets out that evidence on growth levels should (NPPF paragraph numbers shown in brackets):

- identify objectively assessed (i.e. policy-off) needs for housing and other uses (11)
- be up to date, taking into account market signals (31)
- consider economic growth potential (80)
- consider the role of key sectors and clusters in driving potential future growth in Greater Cambridge (82)

The NPPF sets out that Local Plans should:

- support the Government's objective of significantly boosting the supply of homes, by enabling a sufficient amount and variety of land to come forward where it is needed (59)
- provide, as a minimum, a number of homes 'informed by a local housing need assessment, conducted using the standard method in national planning guidance – unless exceptional circumstances justify an alternative approach which also reflects current and future demographic trends and market signals' (60)
- Account for any unmet needs arising from neighbouring areas (11, 27)

### 1.3.3 Identifying a reasonable low growth option

#### Considerations

The nationally set standard method provides the basis for the Councils' minimum housing need. Currently, this amounts to 1,743 additional homes a year. This has been set as the minimum growth option as it is the minimum number of additional homes that the Local Plan must cater for. Work has been undertaken to identify the total number of jobs and related employment land needed to correspond with this level of additional housing growth.

The approach the councils are taking to the Duty to Cooperate, including on the issue of unmet need, is set out in the [Greater Cambridge Duty to Cooperate Proposed Approach, June 2020](#). At this point neighbouring authorities have not asked the councils to consider taking any unmet needs. If such a request arose, they would be under obligation to consider this, but are not necessarily obliged to agree to provide for those needs. Equally, the councils are not currently making a request to neighbouring authorities to take any needs arising from Greater Cambridge.

#### Identified reasonable low growth option

As described above, the low growth option is the minimum level of housing growth the councils should be planning for as set out in the NPPF.

### 1.3.4 Identifying reasonable medium and high growth options

#### Considerations

National guidance indicates that there will be circumstances where it is appropriate to consider whether actual housing need is higher than that derived from the standard method. None of the examples provided<sup>4</sup> are directly applicable to circumstances in Greater Cambridge. However, in accordance with national objectives to consider an area's economic growth potential, the continuing strength of the Greater Cambridge economy as evidenced in the Cambridgeshire & Peterborough Independent Economic Review ([CPIER](#)) provided justification for exploring higher employment and related housing figures. A key aim for the

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<sup>4</sup> Planning Practice Guidance, *Housing and Economic Needs Assessment*, Paragraph: 010 Reference ID: 2a-010-20190220

Cambridgeshire and Peterborough Combined Authority is that economic output will double over the next 25 years, with an uplift in GVA from £22bn to over £40bn<sup>5</sup>.

The Greater Cambridge Employment Land Review & Economic Evidence Base Study considered a range of approaches to identifying employment futures for Greater Cambridge, drawing on the available historic employment data. At this point in time the report has not considered the economic impacts of the Covid-19 pandemic. This evidence base will be kept under review including in relation to the impacts of Covid-19.

The assessment included consideration of data informing the CPIER. The CPIER's future employment forecast was not used directly as an option because it provides an aggregated view of the whole Cambridgeshire & Peterborough economy, rather than a sector-by-sector view at a Greater Cambridge level.

The approach followed in the Councils' Employment Land Review is based on consideration of realistic employment forecasts for Greater Cambridge that would take account of the continued fast economic growth seen in recent years. The work uses recent and longer-term historic growth rates to forecast the future performance of the Greater Cambridge economy and key sectors within it. These key sectors were identified through an examination of which parts of the economy have driven growth in the recent past. The findings of this work set out a range of employment forecasts, with the upper level – 'higher' - outcome placing greater weight on fast growth in the recent past, particularly in key sectors, and the lower level – 'central' – outcome considered the most likely, taking into account long term patterns of employment.

The 'central' employment forecast was selected as the basis for a 'medium growth' option and the 'higher' employment forecast was selected as a 'maximum growth' option.

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<sup>5</sup> *Cambridgeshire and Peterborough Devolution Deal*. March 2017.



Additional employment generates a demand for additional housing from those who move into an area to take up those jobs. To provide a consistent understanding of the homes that might be required to support jobs, alongside an understanding of the minimum housing need and the jobs that that minimum would support, these employment figures were converted into housing growth figures (the *Greater Cambridge Housing and Employment Relationships Report*).

To translate jobs growth to housing growth it is necessary to apply a number of assumptions, including in particular commuting assumptions. In the first instance, the *Greater Cambridge Housing and Employment Relationships Report* used a default assumption of Census 2011 commuting patterns (noting that the Census remains the most up to date comprehensive source of commuting data until publication of Census 2021 data) to inform the identification of:

- housing growth levels generated by the Central and Higher employment growth forecasts. Applying these existing commuting assumptions provides an understanding of the number of homes that might need to be provided to meet those higher forecasts, both within Greater Cambridge and in locations outside of Greater Cambridge.
- the jobs growth supported by the Standard Method housing figure. Existing commuting patterns are assumed to be carried forward under the standard method, where it is used by adjoining districts as part of their own plan making.

For the Central and Higher employment growth forecasts, the *Greater Cambridge Housing and Employment Relationships Report* also undertook a sensitivity test to understand the total additional housing growth generated by additional jobs above those supported by the Standard Method, if that growth were to be delivered in full within the Greater Cambridge area. This assumed that all those workers filling the additional jobs would live within Greater Cambridge (a 1:1 commuting ratio) rather than assuming further in-commuting from neighbouring districts. Across Greater Cambridge, using the 1:1 ratio for additional jobs shows housing growth for Greater Cambridge around 114 dwellings per annum (dpa) higher for the Central forecast

and 141 dpa (for the Higher forecast) than when using the Census 2011-based commuting assumptions.

For the purposes of testing of strategic options, the minimum and medium option assumes the continuation of 2011 Census commuting patterns, relying on this as a default assumption. For the maximum growth option, the Councils assumed the 1:1 commuting assumption, in order to test a maximum housing growth level for Greater Cambridge to go with the maximum jobs forecast. Applying these assumptions at this strategic options stage does not prejudice a decision on which approach the Councils might take on this issue when determining a preferred growth level option for the plan itself.

### 1.3.5 Growth levels for testing

Drawing on the above, the range of reasonable growth options to be taken forward for testing is as follows:

Table 2: Growth options, 2020-41 (rounded up to the nearest hundred)

<b>Growth scenario</b>	<b>Employment (jobs)</b>	<b>Housing (dwellings)</b>
<b>Minimum</b>	45,800	36,700
<b>Medium</b>	58,500	42,000
<b>Maximum</b>	79,500	57,000

Note: a typographical error was identified in the Employment Land Review during the period of testing the strategic options, such that the maximum employment growth forecast is for 78,800 jobs and 56,500 homes respectively. The differences between the figures included in the table above for testing and these revised figures are not considered to be significant in the context of this strategic testing stage.

The jobs for 2020-2041 identified in the table above are for all jobs. Allocations for employment land (business uses such as offices, research and development and industrial uses) in Local Plans only account for a relatively small proportion of overall jobs. Local Plans do not allocate land for the very significant proportion of jobs arising in other population-driven sectors such as shops, leisure and education.

Guided by the Employment Land Review, the split of jobs between business uses and non-business uses are set out in the table below.

Table 2: Growth options for jobs, 2020-41

<b>Requirement</b>	<b>Minimum</b>	<b>Medium</b>	<b>Maximum</b>
Total jobs requirement	45,800	58,500	79,500
Business use jobs requirement	10,765	20,625	26,735

Further detail on the approach to testing growth levels within the strategic spatial options is set out at 3.4.2 How much? - Establishing the number of homes to find and 3.4.3 How much? – Identifying the number and location of jobs.

### **1.3.6 Covid-19 impacts**

This work is being kept under review, and at this point in time it has not considered the economic impacts of the Covid-19 pandemic.

## **1.4. Identifying the reasonable spatial strategy options**

This section identifies the full range of reasonable spatial strategy options for testing.

These aspects are summarised below, and explored in full at Appendix 3: Identifying the full range of reasonable spatial options. This document seeks to:

- assess whether the spatial choices set out in the Greater Cambridge Local Plan: First Conversation consultation are indeed reasonable; and
- identify whether there are any additional reasonable spatial options that should be added to the First Conversation choices.

In considering the reasonable options it is important to note that it is not practicable or reasonable to identify every potential minor variation of a spatial strategy. The intention of these options will be to test the main choices available, acknowledging that the final preferred scenario may represent a hybrid of these.

### **1.4.1 Greater Cambridge Local Plan First Conversation options**

The Greater Cambridge Local Plan First Conversation (Issues and Options) consultation was held in January-February 2020. The consultation included the following six high level spatial choices:

- Densification of existing urban areas
- Edge of Cambridge - outside the Green Belt
- Edge of Cambridge - Green Belt
- Dispersal - new settlements
- Dispersal - villages
- Public transport corridors

The spatial choices above were identified by the Councils as reasonable options drawing upon the development strategy options considered for the Councils' current Local Plans, as well as considering spatial options identified in the recent Cambridgeshire & Peterborough Independent Economic Review (CPIER) and other approaches taken nationally.

The consultation acknowledged that the best scenario could potentially involve some growth in all of these locations but in different proportions depending upon the prioritisation of the themes in the plan.

#### **1.4.1.1 Sustainability Appraisal of First Conversation spatial choices**

The [Sustainability Appraisal](#) assessed these choices at a high level against each Sustainability Appraisal objective. However, many of the potential effects identified are dependent on the exact location, layout and design of development.

In summary, the Sustainability Appraisal found that:

- Densification: performs well against the Sustainability Appraisal objectives compared with many of the other options, but not against all Sustainability Appraisal objectives.
- Edge of Cambridge – Outside the Green Belt: performs well against most of the Sustainability Appraisal objectives, with no potential significant negative effects identified.

- Edge of Cambridge – Green Belt: performs well against most Sustainability Appraisal objectives, although not quite as well as Densification and Edge of Cambridge – Outside the Green Belt but generally better than Dispersal: New Settlements, Public transport corridors, and Dispersal: Villages.
- New Settlements and Public transport corridors: perform similarly, although the effects against individual objectives differ.
- Dispersal – Villages: is likely to be the least sustainable option, as it consistently scores poorly against a number of Sustainability Appraisal objectives compared with the alternatives.

In practice, the actual effects are heavily dependent upon the precise location and scale of development, the quality of design and the delivery of supporting infrastructure. Therefore, these high-level results need to be treated with a considerable degree of caution.

#### **1.4.1.2 Testing of First Conversation options**

Assessment of the First Conversation options at Appendix 2: Identifying the full range of reasonable spatial options confirmed that all six First Conversation options should be taken forward for strategic options testing.

#### **1.4.2 Identifying any additional reasonable spatial options**

Consideration of identifying any additional reasonable spatial options included sifting of a long list of 97 ideas (set out at Annex B of Appendix 2: Identifying the full range of reasonable spatial options) and full testing of 29 shortlisted ideas (set out at Annex C of the same document).

Full assessment identified the following options as being reasonable and substantively different to the First Conversation options as above.

- Principle B04: Integrate uses including housing and employment
- Option C03: Supporting an existing high-tech corridor
- Option C13: All development located in the high-tech growth area (All in Science Vale)
- Principle E03: Housing in close proximity to employment/innovation centres
- Principle B05: Explicitly rely on existing or proposed transport infrastructure

- Option C08: Expanded growth area
- Option E08: A428 Corridor
- Principle D24: Nature First
- Principle E21: Nature Recovery Network

A cross-check review and further exploration of the options identified as being reasonable and substantively different to the First Conversation options is set out at Annexes D and E of Appendix 3: Identifying the full range of reasonable spatial options. These tasks identified the following options as being reasonable, substantively different to First Conversation options, and distinct from each other. These options are therefore added as options for testing at a strategic level:

- Supporting a high-tech corridor by integrating homes and jobs
- Expanding a growth area around transport nodes

#### **1.4.3 List of reasonable spatial options for testing**

Drawing on the above, the following options are to be taken forward for testing as strategic spatial options:

- Densification of existing urban areas
- Edge of Cambridge - outside the Green Belt
- Edge of Cambridge - Green Belt
- Dispersal - new settlements
- Dispersal - villages
- Public transport corridors
- Supporting a high-tech corridor by integrating homes and jobs
- Expanding a growth area around transport nodes

Further to the above considerations, the Sustainability Appraisal consultants, and legal advisors, have been involved in discussions as to whether the strategic spatial options identified appropriately cover reasonable alternatives.

## 2 Strategic Spatial Options for testing

### 2.1. Description of the strategic options

This section describes, for each strategic spatial option and growth scenario, the distribution of growth between the sources of supply identified in the 3. Strategic Options Methodology section. These include the option focus source of supply, and where that supply is exhausted, based upon reasoned estimates of capacity (set out at 3.4.4 Where: Establishing sources of new supply), additional sources of supply to make up balance.

#### 2.1.1 Spatial Scenario 1: Focus on Densification of existing urban areas

##### 2.1.1.1 Outline description

This approach would focus new homes and jobs within Cambridge, because it is the main urban area and centre for services and facilities. The primary location for development within the urban area is at North East Cambridge: the last major brownfield site within Cambridge urban area is at North East Cambridge which is being taken forward separately via an Area Action Plan.

##### 2.1.1.2 Detailed description

###### **Minimum (historic delivery rates)**

Broad areas to include:

*Option focus source of supply*

- North East Cambridge (delivery by 2041 assumption, using historic delivery rates)
- Cambridge urban area (low density) – not total capacity, only enough dwellings to fulfil balance to find

###### **Medium (historic delivery rates)**

Broad areas to include:

*Option focus source of supply*

- North East Cambridge (delivery by 2041 assumption, using historic delivery rates)
- Cambridge urban area (medium density)

*Additional sources of supply to make up balance*

- Cambridge Airport (initial phase post 2030, outside Green Belt, using historic delivery rates)
- Edge of Cambridge - Green Belt (equivalent to one site / broad location, using historic delivery rates) – not total capacity, only enough dwellings to fulfil balance to find

**Maximum (higher delivery rates)**

N.B. Assumes additional delivery by 2041 at committed new settlements.

Broad areas to include:

*Option focus source of supply*

- North East Cambridge (delivery by 2041 assumption, using delivery rates as included in the housing trajectory in the draft North East Cambridge Area Action Plan (July 2020))
- Cambridge urban area (at high density)

*Additional sources of supply to make up balance*

- Cambridge airport (initial phase post 2030, outside Green Belt, higher delivery rates) – delivery by 2041 constrained to provide only enough dwellings to fulfil balance to find

## **2.1.2 Spatial Scenario 2: Focus on Edge of Cambridge: outside Green Belt**

### **2.1.2.1 Outline Description**

This approach would create new homes and jobs in extensions on the edge of Cambridge, using land not in the green belt. The only large site on the edge of Cambridge not in the Green Belt is Cambridge Airport.

### **2.1.2.2 Detailed description**

**Minimum (historic delivery rates)**

Broad areas to include:

*Option focus source of supply*

- Cambridge airport (initial phase post 2030, outside Green Belt, using historic delivery rates)



*Additional sources of supply to make up balance*

- North East Cambridge (delivery by 2041 assumption, using historic delivery rates)
- One site at a Rural Centre outside of the Green Belt to make up balance to find

**Medium (historic delivery rates)**

Broad areas to include:

*Option focus source of supply*

- Cambridge airport (initial phase post 2030, outside Green Belt, using historic delivery rates)

*Additional sources of supply to make up balance*

- North East Cambridge (delivery by 2041 assumption, using historic delivery rates)
- Two smaller new settlements of 4,500 dwellings on public transport corridors to meet the balance to find (delivery by 2041, using historic delivery rates)
- Balance to find spread across the Rural Centre (30%) and Minor Rural Centres (70%) outside of the Green Belt

**Maximum (higher delivery rates)**

N.B. Assumes additional delivery by 2041 at committed new settlements.

Broad areas to include:

*Option focus source of supply*

- Cambridge airport (initial phase post 2030, outside Green Belt, using higher delivery rates)

*Additional sources of supply to make up balance*

- North East Cambridge (delivery by 2041 assumption, using delivery rates as included in the housing trajectory in the draft North East Cambridge Area Action Plan (July 2020))
- One larger new settlement of 9,000 dwellings on a public transport corridor (delivery by 2041, using higher delivery rates but constrained to ensure that the strategic option homes total equals the balance to find. This does not affect the total homes all time figure)

- One smaller new settlement of 4,500 dwellings on a public transport corridor (delivery by 2041, using higher delivery rates but constrained to ensure that the strategic option homes total equals the balance to find. This does not affect the total homes all time figure)

### **2.1.3 Spatial Scenario 3: Focus on Edge of Cambridge: Green Belt**

#### **2.1.3.1 Outline Description**

This approach would create new homes and jobs in extensions on the edge of Cambridge, involving release of land from the Green Belt.

#### **2.1.3.2 Detailed Description**

##### **Minimum (historic delivery rates)**

*Option focus source of supply*

- Edge of Cambridge - Green Belt (equivalent to three sites / broad locations, with development limited to ensure that the strategic option homes total equals the balance to find.

##### **Medium (historic delivery rates)**

Broad areas to include:

*Option focus source of supply*

- Edge of Cambridge - Green Belt (equivalent to five sites / broad locations, using historic delivery rates)

*Additional sources of supply to make up balance*

- Minimal balance to find located within Cambridge urban area.

##### **Maximum (higher delivery rates)**

N.B. Assumes additional delivery by 2041 at committed new settlements.

Broad areas to include:

*Option focus source of supply*

- Edge of Cambridge - Green Belt (equivalent to five sites / broad locations, using higher delivery rates, with development limited to ensure the strategic option equals the balance to find).

## 2.1.4 Spatial Scenario 4: Focus on New Settlements

### 2.1.4.1 Outline Description

New settlements would establish a whole new town or village, providing homes, jobs and supporting infrastructure in a new location, and would need to be supported by strategic transport infrastructure connecting to Cambridge.

### 2.1.4.2 Detailed Description

#### **Minimum (historic delivery rates)**

Broad areas to include:

*Option focus source of supply*

- Two smaller new settlements of 4,500 dwellings on a public transport corridor (delivery by 2041, using historic delivery rates constrained to ensure that the strategic option homes total equals the balance to find. This does not affect the total homes all time figure).

#### **Medium (historic delivery rates)**

Broad areas to include:

*Option focus source of supply*

- Three new settlements on public transport corridors (delivery by 2041, using historic delivery rates constrained ensure that the strategic option homes total equals the balance to find. This does not affect the total homes all time figures), including:
  - Two larger new settlements of 9,000 dwellings
  - One smaller new settlement of 4,500 dwellings
- One smaller new settlement of 4,500 homes on the road network (delivery by 2041, using historic delivery rates constrained ensure that the strategic option homes total equals the balance to find. This does not affect the total homes all time figures).

#### **Maximum (higher delivery rates)**

N.B. Assumes additional delivery by 2041 at committed new settlements.

Broad areas to include:

### *Option focus source of supply*

- Three new settlements on public transport corridors (delivery by 2041, using higher delivery rates constrained ensure that the strategic option homes total equals the balance to find. This does not affect the total homes all time figures), including:
  - Two larger new settlements of 9,000 dwellings
  - One smaller new settlement of 4,500 dwellings
- One smaller new settlement of 4,500 homes on the road network (delivery by 2041, using higher delivery rates constrained ensure that the strategic option homes total equals the balance to find. This does not affect the total homes all time figures).

## **2.1.5 Spatial Scenario 5: Focus on Dispersal: Villages**

### **2.1.5.1 Outline Description**

This approach would spread new homes and jobs out to the villages.

### **2.1.5.2 Detailed Description**

#### **Minimum, medium and high growth options (historic delivery rates)**

N.B. High growth option assumes additional delivery by 2041 at committed new settlements.

### *Option focus source of supply*

- 40% of balance to find at Rural Centres
- 40% of balance to find at Minor Rural Centres (while this the same percentage of growth in total, because there are many more Minor Rural Centres than Rural Centres the absolute growth in each village is significantly greater for each Rural Centre).
- 17% of balance to find at Group villages
- 3% of balance to find at Infill villages

## 2.1.6 Spatial Scenario 6: Focus on Public transport corridors

### 2.1.6.1 Outline Description

This approach would focus homes and jobs along key public transport corridors and around transport hubs, extending out from Cambridge. This could be by expanding or intensifying existing settlements, or with more new settlements.

### 2.1.6.2 Detailed Description

#### **Minimum (historic delivery rates)**

*Option focus source of supply*

- North East Cambridge (delivery by 2041 assumption, using historic delivery rates)
- One smaller new settlement of 4,500 homes on a public transport corridor (delivery by 2041, using historic delivery rates constrained ensure that the strategic option homes total equals the balance to find. This does not affect the total homes all time figure).
- Minimal balance to find spread across eighteen villages sited along existing or proposed public transport corridors

#### **Medium (historic delivery rates)**

Broad areas to include:

*Option focus source of supply*

- North East Cambridge (delivery by 2041 assumption, using historic delivery rates)
- One larger new settlement of 9,000 homes on a public transport corridor (delivery by 2041, using historic delivery rates)
- Balance to find spread across eighteen villages sited along existing or proposed public transport corridors

#### **Maximum (higher delivery rates)**

N.B. Assumes additional delivery by 2041 at committed new settlements.

Broad areas to include:

### *Option focus source of supply*

- North East Cambridge (delivery by 2041 assumption, using delivery rates as included in the housing trajectory in the draft North East Cambridge Area Action Plan (July 2020))
- One larger new settlement of 9,000 homes on a public transport corridor (delivery by 2041, using higher delivery rates)
- Balance to find spread across eighteen villages sited along existing or proposed public transport corridors

## **2.1.7 Spatial Scenario 7: Supporting a high-tech corridor by integrating homes and jobs (southern cluster)**

### **2.1.7.1 Outline Description**

This approach would focus new homes close to existing and committed jobs within the life sciences cluster area around the south of Cambridge, including homes at existing villages and at new settlements.

### **2.1.7.2 Detailed Description**

#### **Minimum (historic delivery rates)**

Broad areas to include:

#### *Option focus source of supply*

- One smaller new settlement of 4,500 homes on a public transport corridor within the southern cluster area (delivery by 2041, using historic delivery rates)
- Balance to find distributed equally between the five villages located within the core southern cluster area that are also on a public transport corridor.

#### **Medium (historic delivery rates)**

Broad areas to include:

#### *Option focus source of supply*

- One smaller new settlement of 4,500 homes on a public transport corridor within the southern cluster area (delivery by 2041, using historic delivery rates)

- Balance to find spread across five villages sited along existing or proposed public transport corridors within the core southern cluster area (70%), and further villages within Southern Cluster core area not on PT corridors (including Group villages (20%) and Infill villages (10%).

#### **Maximum (higher delivery rates)**

N.B. Assumes additional delivery by 2041 at committed new settlements.

Broad areas to include:

##### *Option focus source of supply*

- One larger new settlement of 9,000 homes on a public transport corridor within the southern cluster (delivery by 2041, using higher delivery rates)
- Balance to find spread equally across five villages sited at existing or proposed public transport nodes within the southern cluster.

##### *Additional sources of supply to make up balance*

- Cambridge airport (initial phase post 2030, outside Green Belt, using higher delivery rates)
- North East Cambridge (delivery by 2041 assumption, using delivery rates constrained to ensure that the strategic option homes total equals the balance to find. This does not affect the total homes all time figure).

## **2.1.8 Spatial Scenario 8: Expanding a growth area around transport nodes**

### **2.1.8.1 Outline Description**

This approach would focus new homes at Cambourne and along the A428 public transport corridor, on the basis that Cambourne is due to be served by a new East West Rail station and that Cambourne and the villages along the corridor are due to be served by the Cambridgeshire Autonomous Metro.

### **2.1.8.2 Detailed Description**

#### **Minimum (historic delivery rates)**

Broad areas to include:

*Option focus source of supply*

- Expansion of Cambourne by the equivalent of one smaller new settlement (delivery by 2041, using historic delivery rates)
  - completions and commitments + 4,500 dwellings = 11,300 (and close to further development of 3,500 at Bourn Airfield New Village)
- Balance to find spread across three villages sited along the A428 public transport corridor

**Medium (historic delivery rates)**

Broad areas to include:

*Option focus source of supply*

- Expansion of Cambourne by the equivalent of one smaller new settlement (delivery by 2041, using historic delivery rates)
  - completions and commitments + 4,500 dwellings = 11,300 dwellings (and close to further development of 3,500 at Bourn Airfield New Village)
- Balance to find spread across three villages sited along the A428 public transport corridor (60%) and four further Minor Rural Centre/Group villages sited within 5km of Cambourne (40%).

*Additional sources of supply to make up balance*

- North East Cambridge (delivery by 2041 assumption, using historic delivery rates)

**Maximum (higher delivery rates)**

N.B. Assumes additional delivery by 2041 at committed new settlements.

Broad areas to include:

*Option focus source of supply*

- Expansion of Cambourne by the equivalent of one larger new settlement (delivery by 2041, using higher delivery rates)
  - completions and commitments + 9,000 dwellings = 15,800 dwellings (and close to further development of 3,500 at Bourn Airfield New Village)
- Balance to find (accounting for sources of supply below) spread across:
  - three villages sited along the A428 public transport corridor (60%)



- one Minor Rural Centre and three Group villages within 5km of Cambourne (40%)

*Additional sources of supply to make up balance*

- Cambridge airport (initial phase post 2030, outside Green Belt, using higher delivery rates)
- North East Cambridge (delivery by 2041 assumption, using delivery rates constrained to ensure that the strategic option homes total equals the balance to find. This does not affect the total homes all time figure).

## 2.2. Strategic spatial options numbers for testing

### Homes

#### Balance to find

- Growth requirement comprises: homes requirements 2020-2041, derived from Greater Cambridge Employment Land Review and Greater Cambridge Housing and Employment Relationships Report
- Total figure to find (growth requirement + 10% buffer) comprises: growth figure + a 10% buffer
- Supply comprises: existing commitments including permissions and adopted allocations, a windfall allowance, plus Wellcome Genome Campus (with resolution to grant permission) and minus Cambridge uncertain allocations
- Committed new settlements - additional delivery comprises: under the higher delivery rates assumption incorporated into the maximum growth scenario for all options, a further 8,600 dwellings could be delivered from the existing committed new settlements by 2041. This figure is therefore included in the calculation to identify the balance to find under the maximum growth scenario. Further detailed information is provided in Appendix 6.
- Balance to be made in new allocations = Total figure to find – supply – committed new settlements (if relevant)

## **Strategic options**

For each option and each growth scenario, the balance to be made in new allocations is distributed across the sources of supply as informed by the spatial principles referred to above. For more detail regarding the sources of supply, including capacity, availability and delivery, see 3.4.4 Where? Establishing sources of new supply.

Columns under the heading 'All time' refer to the period 2020 until build out has completed of all planned growth.

The minimum and medium growth scenarios include historic delivery rates. The maximum growth scenarios include higher delivery rates. For more detail see 3.4.2 How much? - Establishing the number of homes to find.

## **Villages**

Village categories are applied in the following options, relying on general sustainability of villages: 1. Densification; 2. Edge of Cambridge - Non Green Belt; 3. Edge of Cambridge - Green Belt; 4. New Settlements; and 5. Villages. For these options, village rows are set out as follows, if development has been assumed to have been located in that category:

- Villages Total
- Rural centres
- Minor rural centres
- Group
- Infill

Village categories are not applied in the following options as these rely on proximity to public transport nodes: 6. Public Transport Corridors, 7. Supporting a high-tech corridor by integrating homes and jobs (southern cluster) and 8. Expanding a growth area around transport nodes.

### 2.2.1 Spatial Scenario 1: Focus on Densification of existing urban areas

#### Balance to find

<i>Calculation / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Growth requirement	36,700	N/A	42,000	N/A	57,000	N/A
Total figure to find (growth req. + 10% buffer)	40,300	N/A	46,200	N/A	62,700	N/A
Supply	36,400	N/A	36,400	N/A	36,400	N/A
Committed new settlements - additional delivery	0	N/A	0	N/A	8,600	N/A
Balance to be made in new allocations	3,900	N/A	9,800	N/A	17,700	N/A

#### Strategic options

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	2,000	2,000	5,600	5,600	6,800	6,800
North East Cambridge	1,900	8,300	1,900	8,300	8,000	8,300
Cambridge Airport (safeguarded land)	-	-	1,900	9,500	2,900	9,500
Green Belt Fringe	-	-	400	400	-	
New settlements on public transport corridors	-	-	-	-	-	
New settlements on road network	-	-	-	-	-	
Villages Total	-	-	-	-	-	-
Total	3,900	10,300	9,800	23,800	17,700	24,600

## 2.2.2 Spatial Scenario 2: Focus on Edge of Cambridge: outside Green Belt

### Balance to find

<i>Calculation / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Growth requirement	36,700	N/A	42,000	N/A	57,000	N/A
Total figure to find (growth req. + 10% buffer)	40,300	N/A	46,200	N/A	62,700	N/A
Supply	36,400	N/A	36,400	N/A	36,400	N/A
Committed new settlements - additional delivery	0	N/A	0	N/A	8600	N/A
Balance to be made in new allocations	3,900	N/A	9,800	N/A	17,700	N/A

### Strategic options

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	-	-	-	-	-	-
North East Cambridge	1,900	8,300	1,900	8,300	8,000	8,300
Cambridge Airport (safeguarded land)	1,900	9,500	1,900	9,500	3,800	9,500
Green Belt Fringe	-	-	-	-	-	-
New settlements on public transport corridors	-	-	5,000	9,000	5,900	13,500
New settlements on road network	-	-	-	-	-	-
Villages Total	100	100	1,000	1,000	-	-
Rural Centres	100	100	300	300		
Minor Rural Centres			700	700		

Total	3,900	17,900	9,800	27,800	17,700	31,300
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### 2.2.3 Spatial Scenario 3: Focus on Edge of Cambridge: Green Belt

#### Balance to find

<i>Calculation / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Growth requirement	36,700	N/A	42,000	N/A	57,000	N/A
Total figure to find (growth req. + 10% buffer)	40,300	N/A	46,200	N/A	62,700	N/A
Supply	36,400	N/A	36,400	N/A	36,400	N/A
Committed new settlements - additional delivery	0	N/A	0	N/A	8600	N/A
Balance to be made in new allocations	3,900	N/A	9,800	N/A	17,700	N/A

#### Strategic options

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	-	-	300	300	-	-
North East Cambridge	-	-	-	-	-	-
Cambridge Airport (safeguarded land)	-	-	-	-	-	-
Green Belt Fringe	3,900	3,900	9,500	9,500	17,700	17,700
New settlements on public transport corridors	-	-	-	-	-	-
New settlements on road network	-	-	-	-	-	-
Villages Total	-	-	-	-	-	-
Total	3,900	3,900	9,800	9,800	17,700	17,700

## 2.2.4 Spatial Scenario 4: Focus on New Settlements

### Balance to find

<i>Calculation / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Growth requirement	36,700	N/A	42,000	N/A	57,000	N/A
Total figure to find (growth req. + 10% buffer)	40,300	N/A	46,200	N/A	62,700	N/A
Supply	36,400	N/A	36,400	N/A	36,400	N/A
Committed new settlements - additional delivery	0	N/A	0	N/A	8,600	N/A
Balance to be made in new allocations:	3,900	N/A	9,800	N/A	17,700	N/A

### Strategic options

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	-	-	-	-	-	-
North East Cambridge	-	-	-	-	-	-
Cambridge Airport (safeguarded land)	-	-	-	-	-	-
Green Belt Fringe	-	-	-	-	-	-
New settlements on public transport corridors	3,900	9,000	7,350	22,500	13,150	22,500
New settlements on road network	-	-	2,450	4,500	4,550	9,000
Villages Total	-	-	-	-	-	-
Total	3,900	9,000	9,800	27,000	17,700	31,500

## 2.2.5 Spatial Scenario 5: Focus on Dispersal: Villages

### Balance to find

<i>Calculation / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Growth requirement	36,700	N/A	42,000	N/A	57,000	N/A
Total figure to find (growth req. + 10% buffer)	40,300	N/A	46,200	N/A	62,700	N/A
Supply	36,400	N/A	36,400	N/A	36,400	N/A
Committed new settlements - additional delivery	0	N/A	0	N/A	8600	N/A
Balance to be made in new allocations:	3,900	N/A	9,800	N/A	17,700	N/A

### Strategic options

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	-	-	-		-	
North East Cambridge	-		-		-	
Cambridge Airport (safeguarded land)	-		-		-	
Green Belt Fringe	-		-		-	
New settlements on public transport corridors	-		-		-	
New settlements on road network	-		-		-	
<b>Villages Total</b>	<b>3,900</b>	<b>3,900</b>	<b>9,800</b>	<b>9,800</b>	<b>17,700</b>	<b>17,700</b>
Rural Centres	1,560	1,560	3,920	3,920	7,080	7,080



Minor Rural Centres	1,560	1,560	3,920	3,920	7,080	7,080
Group	663	663	1,666	1,666	3,009	3,009
Infill	117	117	294	294	531	531
Total	3,900	3,900	9,800	9,800	17,700	17,700

## 2.2.6 Spatial Scenario 6: Focus on Public transport corridors

### Balance to find

<i>Calculation / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Growth requirement	36,700	N/A	42,000	N/A	57,000	N/A
Total figure to find (growth req. + 10% buffer)	40,300	N/A	46,200	N/A	62,700	N/A
Supply	36,400	N/A	36,400	N/A	36,400	N/A
Committed new settlements - additional delivery	0	N/A	0	N/A	8600	N/A
Balance to be made in new allocations:	3,900	N/A	9,800	N/A	17,700	N/A

### Strategic options

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	-	-	-	-	-	-
North East Cambridge	1,900	8,300	1,900	8,300	8,000	8,300
Cambridge Airport (safeguarded land)	-	-	-	-	-	-
Green Belt Fringe	-	-	-	-	-	-
New settlements on public transport corridors	1,900	4,500	2,500	9,000	5,100	9,000
New settlements on road network	-	-	-	-	-	-
Villages Total	100	100	5,400	5,400	4,600	4,600
Villages on Public Transport Corridors	100	100	5,400	5,400	4,600	4,600

Total	3,900	12,900	9,800	22,700	17,700	21,900
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## 2.2.7 Spatial Scenario 7: Supporting a high-tech corridor by integrating homes and jobs (southern cluster)

### Balance to find

<i>Calculation / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Growth requirement	36,700	N/A	42,000	N/A	57,000	N/A
Total figure to find (growth req. + 10% buffer)	40,300	N/A	46,200	N/A	62,700	N/A
Supply	36,400	N/A	36,400	N/A	36,400	N/A
Committed new settlements - additional delivery	0	N/A	0	N/A	8600	N/A
Balance to be made in new allocations:	3,900	N/A	9,800	N/A	17,700	N/A

### Strategic options

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	-	-	-	-	-	-
North East Cambridge	-	-	-	-	4,900	8,300
Cambridge Airport (safeguarded land)	-	-	-	-	3,800	9,500
Green Belt Fringe	-	-	-	-	-	-
New settlements on public transport corridors	2,500	4,500	2,500	4,500	5,100	9,000
New settlements on road network	-	-	-	-	-	-
Villages Total	1,400	1,400	7,300	7,300	3,900	3,900
Villages sited along existing or proposed public transport	1,400	1,400	5,110	5,110	3,900	3,900

corridors within the core southern cluster area						
Further villages within Southern Cluster core area not on PT corridors: Group	-	-	1,460	1,460		-
Further villages within Southern Cluster core area not on PT corridors: Infill	-	-	730	730		-
Total	3,900	5,900	9,800	11,800	17,700	30,700

## 2.2.8 Spatial Scenario 8: Expanding a growth area around transport nodes

### Balance to find

<i>Calculation / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Growth requirement	36,700	N/A	42,000	N/A	57,000	N/A
Total figure to find (growth req. + 10% buffer)	40,300	N/A	46,200	N/A	62,700	N/A
Supply	36,400	N/A	36,400	N/A	36,400	N/A
Committed new settlements - additional delivery	0	N/A	0	N/A	8600	N/A
Balance to be made in new allocations:	3,900	N/A	9,800	N/A	17,700	N/A

### Strategic options

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	-	-	-	-	-	-
North East Cambridge	-	-	1,900	8,300	4,900	8,300
Cambridge Airport (safeguarded land)	-	-	-	-	3,800	9,500
Green Belt Fringe	-	-	-	-	-	-
New settlements on public transport corridors	2,500	4,500	2,500	4,500	5,100	9,000
New settlements on road network	-	-	-	-	-	-
Villages Total	1,400	1,400	5,400	5,400	3,900	3,900
Villages sited along the A428 public transport corridor	1,400	1,400	3,240	3,240	2,340	2,340

Further Minor Rural Centre/Group villages sited within 5km of Cambourne	-	-	2,160	2,160	1,560	1,560
Total	3,900	5,900	9,800	18,200	17,700	30,700

## Jobs

Counting homes, for the purposes of monitoring past delivery, and for estimating overall supply and future delivery, is relatively simple. In comparison, counting jobs is much more difficult for the following reasons:

- Jobs change is subject to far more variables than house building, and as a result is volatile and fast changing.
- Local Plans cannot make provision for jobs directly, but rather make provision for employment land (which can accommodate business floorspace, measured in square metres) to support jobs. As such it can only be estimated how many jobs such land might support.
- Allocations for employment land in Local Plans only account for a relatively small proportion of overall jobs – employment allocations are for jobs in B use classes (covering office, research and development and industrial uses). These don't currently account for the very significant proportion of jobs arising in other population-driven sectors such as shops, leisure and education.

For the purposes of modelling transport impacts in particular, it is necessary to consider specific distributions of jobs (rather than likely delivery of floorspace) as jobs are a key determinant of travel patterns. The Councils have therefore provided distributions of B use class jobs for each spatial option to the transport modelling team, for them to apply alongside standard assumptions for population driven non B use jobs sectors. The total number of jobs in each spatial option matches the maximum, medium or minimum jobs level as appropriate, in order that the modelling provides consistent testing of total homes and job numbers across each of the spatial options.

An explanation of the methodology used and the resulting distribution of jobs for each spatial option is set out in Appendix 7.



### 3 Strategic options methodology

This section sets out in full the approach taken to identifying strategic spatial options (i.e. the non-site specific distribution of growth) for each reasonable option identified above at section 1.4.3. List of reasonable options for testing, including:

- Identifying the minimum, medium and maximum growth balance to find through new allocations; and
- for each reasonable alternative, distributing growth between a range of broad areas of supply.

#### 3.1. Overarching principles

The following principles will be used to guide the spatial options development:

- Not to predetermine any key element of the spatial strategy, such that no single broad spatial location for growth is included in all options.
- Be reasonable, defined as realistic, options, including:
  - informed by high-level estimates of the capacity and availability of broad spatial locations, taking into account environmental constraints,
  - informed by evidence-based assumptions about delivery rates, and
  - based on a consistent set of assumptions (such as incorporating committed transport schemes, and consistent assumptions about housing density).
- Take a policy-off approach in respect of spatial policy designations such as Green Belt and development frameworks (this approach assumes that these policy designations do not apply to enable a fuller consideration of development opportunities. Note the exception to this principle is Spatial Option 2: Edge of Cambridge – non Green Belt option, which explicitly seeks to explore a scenario in which the Green Belt was retained in its current form, in order to test all reasonable options, and also to address the NPPF principle referred to below at 3.2. Spatial principles).

#### 3.2. Spatial principles

The NPPF has been used to identify a number of additional spatial principles to take into account in compiling the strategic spatial options. Further to this, a cross check

was also undertaken of the implications of Greater Cambridge Local Plan First Conversation Big Themes and Greater Cambridge Local Plan Sustainability Appraisal Objectives on principles for developing the strategic spatial options, including whether these had further implications for the strategic spatial options beyond those identified in relation to the NPPF. The conclusion to this exercise was that these did not add substantively to the NPPF principles set out below. For further detail refer to Appendix 1.

The NPPF spatial principles are set out below (with relevant NPPF paragraph numbers in brackets) and have informed:

- specific assumptions included within each strategic option, and
- the evidence required to inform these specific assumptions, if necessary.

### **Flexible plan-making to allow for change**

- Principle: Plans should be sufficiently flexible to adapt to rapid change (11)
- Options assumption: A flexibility buffer of 10% is added to each growth level option for testing (for homes).

### **Account for environmental constraints**

- Principle: Take into account environmental constraints as set out in NPPF footnote 6, such as habitat sites, heritage assets, and flood risk (11)
- Options assumption: Account for environmental constraints when identifying strategic options. Note the approach to this is explained below at 3.3.2 Constraints.
- Evidence:
  - Constraints mapping to inform options development.
  - Strategic Flood Risk Assessment/Water Cycle Study and Habitat Regulations Assessment consultants to comment on options as they are developed.

### **Account for cross boundary impacts**

- Principle: Account for any unmet needs arising from neighbouring areas (11, 27)

- Options assumption: As set out in the [Greater Cambridge Duty to Cooperate Proposed Approach, June 2020](#), the councils are engaging on an ongoing basis with neighbouring authorities under the duty to cooperate, including to understand whether any neighbours are asking the councils to take any unmet needs. At the time of writing, no neighbouring authorities have asked the councils to do so.
- Principle: Take account of neighbouring authority proposals to locate strategic growth close to the boundary of Greater Cambridge (24-27).
- Options assumption: A list of neighbouring adopted and emerging Local Plans and the strategic growth included within them is set out at Appendix 4. It is not considered that these proposals should substantively affect the development of the strategic options.

#### **Deliverable, including in the first five years**

- Principle: Take into account understanding of delivery rates and land availability when considering reasonable growth level options, and when distributing growth between options (35, 72).
- Options assumptions:
  - Include evidence-based assumptions about delivery rates when distributing growth between sources of supply.
  - Incorporate broad awareness of available sites when distributing growth between sources of supply.
  - Identify the likely pattern of development at the end of the plan period, but also once all development has been built out, acknowledging that larger scale development sites such as new settlements have longer lead in times and will often be built out over longer than a plan period, but can provide certainty with regard to the development industry, investment in infrastructure and funding sources.
- Evidence:
  - Greater Cambridge Housing Trajectory and Five Year Housing Land Supply document (November 2019) sets out assumptions about delivery rates based upon historic rates.

- Housing and Economic Land Availability Assessment Call for Sites provides awareness of sites submitted to the Councils for development, to provide an awareness of available sites, but not be tied to them.
- Principle: Take into account the need to maintain a five-year housing supply when distributing growth between sources of supply in strategic options (67, 73, 75).
- Options assumption:
  - Include a proportion of smaller sites in nearly (see below) every option, to support maintaining a five-year housing land supply.
  - Notwithstanding this policy requirement, distributing a large proportion of the growth requirement to lots of smaller sites may not support Climate Act requirements to support zero carbon targets. Given that the Act is a statutory requirement in tension with national policy requirements, options are included that include greater concentrations of growth with fewer smaller sites, on the basis that it may better support the achievement of zero carbon.

### **Include proportion of small sites**

- Principle: Local Plan to identify land to accommodate “at least 10% of housing requirement on sites no larger than one hectare; unless it can be shown, through the preparation of relevant plan policies, that there are strong reasons why this 10% target cannot be achieved” (68).
- Options assumption:
  - Further work is being carried out to understand the implications of this for Greater Cambridge. However, initial calculations indicate further sites will be required. The implication of this will be that a preferred spatial strategy will require an element of growth in the urban area and villages to provide for this requirement. Note that at this strategic spatial options stage, the options have been made intentionally distinct, and none is expressly intended to form a preferred option. As such, the small sites principle has been considered qualitatively for each strategic option, but a 10% requirement has not informed distribution of growth.

- Notwithstanding the above, distributing a large proportion of the growth requirement to lots of smaller sites may not support Climate Act requirements to support zero carbon targets. Given that the Act is a statutory requirement in tension with national policy requirements, options are included that include greater concentrations of growth with fewer smaller sites, on the basis that it may better support the achievement of zero carbon.

### **Integrate development with infrastructure**

- Principles:
  - Consider relationship with existing and/or planned infrastructure (72)
  - Locate growth closest to existing or proposed transport infrastructure (102,103)
  - Locate growth in locations that minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities (104)
- Options assumption: Within the constraints of each strategic option, locate growth close to existing/planned infrastructure
- Evidence:
  - Transport Study - the Transport Existing Conditions Report identifies existing transport provision, and also planned transport network improvements that could influence growth locations. See also 3.3.1.1 Existing and planned transport infrastructure below.
  - Sustainable settlement sizes review (see Appendix 4) – has considered what are sustainable sizes and locations for communities in a Greater Cambridge context, including considering infrastructure provision and NPPF Design principles (72, 127)
  - Infrastructure Delivery Plan and Viability Study

### **Support sustainability of rural settlements**

- Principles:
  - In rural areas, consider opportunities to support local services, perhaps in one location to support services in nearby villages (78)

- Options assumption: When locating supply at existing settlements in rural areas, incorporate assumptions about locating growth first in settlements with the greatest range of services and access to infrastructure.

### **Make effective use of land**

- Principles:
  - Make as much use as possible of previously-developed or 'brownfield' land (117)
  - Optimise the density of development, promoting a significant uplift in minimum density standards in town and city centres and other locations well served by public transport (123,137)
- Options assumption: Within all options, make assumptions about the capacity of existing urban areas, including in ways that seek to maximise densities.

### **Account for the importance of Green Belt**

- Principles:
  - Only alter Green Belt boundaries in exceptional circumstances (136)
  - Before concluding that exceptional circumstances exist to justify changes to Green Belt boundaries, the strategic policy-making authority should be able to demonstrate that it has examined fully all other reasonable options for meeting its identified need for development (137)
  - When drawing up or reviewing Green Belt boundaries, the need to promote sustainable patterns of development should be taken into account (137)
  - Consider the consequences for sustainable development of channelling development towards urban areas inside the Green Belt boundary, towards towns and villages inset within the Green Belt or towards locations beyond the outer Green Belt boundary (137)
  - Where it has been concluded that it is necessary to release Green Belt land for development, plans should give first consideration to land which has been previously-developed and/or is well-served by public transport (137)

- Options assumptions:
  - Within the range of options tested, to support exploration of whether exceptional circumstances for changes to Green Belt boundaries exist (assumed to relate to relative sustainability impacts), include options that locate development outside of Cambridge Green Belt boundaries (i.e. assuming that exceptional circumstances don't exist to justify changes to Green Belt boundaries) and also options that locate development within Cambridge Green Belt boundaries (i.e. assuming that exceptional circumstances do exist to justify changes to Green Belt boundaries).
  - Within options that locate development within Green Belt boundaries, give first consideration to sources of supply that are previously-developed and/or are well-served by public transport.
- Evidence: A detailed study of the Cambridge Green Belt will be carried out, to identify the contribution land makes to Green Belt purposes, in order to understand the level of harm that would be caused by development in different areas of the Green Belt. This will be a key consideration when considering Green Belt land release later in the plan process, but will not be completed in time to form a part of the consideration of Strategic Spatial Options.

### 3.3. Opportunities and constraints

#### 3.3.1. Opportunities

##### 3.3.1.1. Existing and planned transport infrastructure

Existing and future transport connections within Greater Cambridge have been identified to inform the compilation of the strategic spatial options, supporting the NPPF principle of integrating development with transport infrastructure.

Existing transport connections are identified on Map 1a. in Appendix 8.

Further to this and as shown on Map 3a. at Appendix 8, a number of transport infrastructure schemes are proposed in order to support ongoing growth around

Greater Cambridge and the wider area, creating six current or future public transport corridors radiating out from Cambridge as set out below. Awareness of these six corridors, including the level of certainty of delivery of schemes, has been taken into account in compiling the options (schemes within Cambridge urban area have been identified for completeness but have not informed compilation of options).

### **Cambridge urban area**

- Medium term future (~2031): Greater Cambridge Partnership (GCP) City Access projects
- Shorter term future (~2025): Cambridge South Station
- Longer term future (~2030): Cambridgeshire Autonomous Metro (CAM) tunnels section

### **North of Cambridge**

- Existing/shorter term future (~2025): Waterbeach Station/Waterbeach New Town station on Kings Lynn to Kings Cross rail line
- Shorter term future (~2025): GCP Waterbeach to Cambridge North scheme

### **East of Cambridge**

- Shorter term future (~2026): GCP Cambridge Eastern Gateway scheme
- Longer term future (2030+?): CAM East Regional route to Mildenhall
- Longer term future (~2030?): improvements to rail line to Newmarket

### **South East of Cambridge**

- Existing: Cambridge to Liverpool Street rail line
- Shorter term future (~2025): GCP Cambridge South East Transport Scheme
- Longer term future (2030+?): CAM South East regional route to Haverhill

### **South West of Cambridge**

- Existing: Cambridge to Kings Cross rail line

### **West of Cambridge**

- Shorter term future (~2025): GCP Cambourne to Cambridge scheme
- Longer term future (~2030): East West Rail line with station at Cambourne
- Longer term future (2030+?): CAM West regional route to St Neots



## **North West of Cambridge**

- Existing: Cambridgeshire Guided Busway to St Ives

### **3.3.1.2. Existing employment locations**

Existing scientific and other employment locations have been mapped to support identification of development opportunities close to them, addressing the NPPF spatial principle of locating jobs and homes in close proximity. Existing employment locations are identified on Map 3a. in Appendix 8.

### **3.3.1.3. Existing services**

Mapping of existing services in villages in particular supports the NPPF spatial principle of incorporating assumptions about locating growth first in settlements with the greatest range of services and access to infrastructure. As a proxy for identifying the services themselves, South Cambridgeshire Local Plan 2018 settlement category designations of Rural Centres, Minor Rural Centres, Group Villages and Infill Villages have been used.

### **3.3.1.4. Environmental opportunities**

The Greater Cambridge Local Plan Green Infrastructure Opportunity Mapping will in due course identify broad priority zones for green infrastructure. The relationship of these priority areas with the strategic spatial options set out in this paper will be considered in order to inform discussion around a preferred option.

## **3.3.2. Constraints**

### **3.3.2.1. Delivery rates**

#### **Overview**

To account for the NPPF requirement for Local Plans to be deliverable, housing delivery assumptions have been incorporated into the strategic options, and as such are a constraint on the level of growth that can be delivered within the plan period of 2020-2041. Evidence of historic housing delivery rates for different types of development have been used to inform the assumptions included in the strategic options. Reference to the specific assumptions arising is made in the relevant sections under 3.4.4 Where? Establishing sources of new supply. The approach to

delivery assumptions is set out in full for homes in Appendix 6 and for jobs in Appendix 7.

### **Strategic sites delivery in relation to plan period**

Notwithstanding the need to account for what can be delivered by the end of the plan period, the build out of a new settlement of several thousand homes will continue across more than one plan period. Depending on the assumptions for build out rates, any new strategic sites allocated in the Greater Cambridge Local Plan might only deliver a proportion of their new homes by 2041, at which point it would make up a certain proportion of overall growth within the plan period. However, by the time it had been completed, that new strategic site would form a much larger proportion of the overall pattern of development within Greater Cambridge. Jobs at new settlements will also be delivered throughout their development, with only a proportion anticipated by 2041.

To account for the dual needs - of ensuring that options are deliverable to 2041, while maintaining awareness of the overall impact of options once all development is built out, the options tables for homes in the Strategic spatial options numbers for testing section and the options table for jobs in Appendix 7 show development figures for homes and jobs to 2041 and homes and jobs 'all built out'.

### **Enabling sustainable choices**

In relation to the dual needs set out above, while it is clearly realistic and therefore reasonable to use historic housing delivery rates in principle to inform the distribution of growth in the strategic spatial options, using these in early testing under a maximum growth scenario led to unrealistic and unreasonable spatial choices to support a deliverable plan to 2041.

For example, using such historic rates would mean that, say, ten new settlements would be needed to provide sufficient delivery to achieve the maximum option by 2041, which it would clearly be unrealistic to deliver simultaneously. Further to this, considering sustainability objectives would suggest it would be more sustainable to concentrate growth in a smaller number of locations which could support greater infrastructure provision and generate greater critical population mass. This challenge

is also relevant, albeit to a lesser extent, when distributing growth for the minimum and medium options.

As such, it is considered that the maximum growth scenario is only reasonable if delivery rates can be increased beyond historic rates. The Councils do not currently have evidence to demonstrate that a step change increase in delivery rates is achievable. As such, achieving this would likely require a significantly different model of delivery. Further evidence on this will be provided by the Housing Delivery Study referred to elsewhere in this document.

Drawing on the above, while the distribution of growth under the minimum and medium growth scenarios relates to cautious historic delivery rates as used in published housing trajectory calculations, the distribution of growth under the maximum growth scenario relates to higher delivery rates evidenced in specific locations within Greater Cambridge. To reiterate, the Councils do not have evidence to demonstrate that a step change increase in delivery rates is achievable. Further exploration of whether and how such an increase could be achieved will be required before pursuing this approach further through the plan process.

#### **Relationship of 10% buffer and assumed delivery rates**

Following NPPF principles a 10% buffer has been added to the homes requirement under each growth scenario to provide a flexible plan. Clearly were this buffer not to be applied the balance to find under each scenario would be lower, making each scenario easier to complete using historic delivery rates. However, given that the final plan will likely have to provide for a buffer to ensure flexibility, it is considered reasonable to explore at this point the impacts of growth options including a buffer, which therefore brings with it the challenges explored above regarding delivery rates.

Further detail on delivery rates is set out for each source of supply at 3.4.4 Where? Establishing sources of new supply.

### **3.3.2.2. Environmental constraints**

Environmental constraints provide a rough visual guide to where would be appropriate or not to locate development when considered at a strategic level. The list of environmental constraints considered include:

#### **Absolute constraints**

- Flood Zones
- Special Areas of Conservation
- Sites of Special Scientific Interest
- Historic Parks and Gardens
- County Wildlife Sites
- Country Parks
- Ancient Woodlands

#### **Constraints to consider**

- Conservation Areas
- Listed Buildings
- Scheduled Ancient Monuments
- Sites safeguarded for minerals

A range of baseline mapping is included in the Sustainability Appraisal Scoping Report, which is also relevant, particularly regarding development constraints. Environmental constraints are identified in the figures included within [Greater Cambridge Local Plan Sustainability Appraisal Scoping Report](#).

## **3.4. Outline approach**

The approach to identifying growth levels and strategic spatial options includes the following steps when considering homes and jobs. Key assumptions and constraints for each step are set out in detail in the sections below.

### **3.4.1 Establishing the Baseline**

The first step in this process is to document the baseline, capturing the current situation regarding the distribution of homes and jobs. A baseline paper, setting out the total amount and location of existing population, homes and jobs across Greater

Cambridge is included in Appendix 5. Maps have been prepared to illustrate the location of existing development, and are included in Appendix 8.

A key feature for this plan is the level of development already committed. The [Greater Cambridge Housing Trajectory \(April 2020\)](#) sets out anticipated delivery from existing housing commitments that have been assessed as either deliverable and / or developable, based on the definitions in the glossary of the NPPF (February 2019). The [Greater Cambridge Authority Monitoring Report 2018-2019](#) (August 2020) sets out business land and floorspace commitments. There are high levels of existing employment commitments, from existing allocations or land with planning permission.

### 3.4.2 How much? – Establishing the number of homes to find

The sections below set out the steps taken to identify the housing growth needing to be identified through new allocations.

#### Homes

Stage	Step	Minimum	Medium	Maximum
A: Growth requirement	Homes requirement	36,603	41,915	56,935
B: Growth requirement + flexibility buffer	Homes requirement + 10% buffer ( $B = A \times 1.1$ )	40,263	46,106	62,629
C: Existing commitments	Permissions and adopted allocations	30,807	30,807	30,807
D: Windfall allowance	Windfall allowance	5,600	5,600	5,600
E: Balance to be made in new allocations	$E = B - (C+D)$	3,856 (rounded to 3,900)	9,699 (rounded to 9,700)	26,222 (rounded to 26,300)

#### A: Growth requirement

Minimum, medium and maximum options are proposed for testing as set out in the 1.3.1. Identifying growth level options section. Please note that while the requirement and commitments figures set out above are unrounded, for the purposes of identifying the strategic options the balance to find has been rounded up to the nearest 100 dwellings.

### *Further work required*

- Outputs from the Housing Delivery Study regarding delivery rates of different types of site and overall ability to deliver dwelling numbers.
- Outputs from various other workstreams that will clarify environmental capacity and therefore ability to accommodate growth e.g. Water Cycle Strategy.

### *Sensitivity testing*

Further sensitivity tests (as set out above at 1.3.1 Growth levels for testing) could be added at a later stage to consider:

- Deliverability led scenario if the maximum growth level was shown to be beyond deliverable numbers, or subject to environmental constraints.

### **B: 10% buffer**

As noted above at 3.2 Spatial principles, NPPF paragraph 11a requires that “plans should...be sufficiently flexible to adapt to rapid change”. To respond to this, a buffer of 10% is added to the relevant housing growth requirement under each scenario.

### **C: Existing commitments**

The amount of housing committed in Greater Cambridge for 2019-2033 is set out in the [Greater Cambridge Housing Trajectory \(April 2020\)](#). The housing trajectory also identifies the anticipated completions in 2019-2020 and highlights the number of remaining dwellings that will be delivered post 2033 from the adopted allocations and sites with planning permission. Assumptions have been made for the delivery of these sites post 2033.

Based on the assumption that the completions predicted for 2019-2020 will be delivered as anticipated in the housing trajectory, for the plan period of 2020-2041, it is anticipated that 30,043 dwellings (net) will be delivered in Greater Cambridge from housing commitments consisting of adopted allocations and sites with planning permission.

However, within this, there is some uncertainty regarding twelve adopted allocations in Cambridge that are anticipated to deliver 736 dwellings by 2041, and this does not

take account of any dwellings from the outline planning application (with a planning committee resolution to grant planning permission) for up to 1,500 dwellings at the Wellcome Genome Campus.

For the purposes of considering the spatial development strategy options for testing, the Councils have excluded the anticipated delivery from the adopted Cambridge allocations where no progress has been made and included the anticipated delivery from the Wellcome Genome Campus development in the commitments. This results in the following:

<b>Anticipated Completions 2020-2033</b>	<b>Anticipated Completions 2033-2041</b>	<b>Cambridge allocations, with no progress towards delivery</b>	<b>Wellcome Genome Campus</b>	<b>TOTAL</b>
23,797	6,246	-736	1,500	30,807

The distribution of these commitments is as follows:

	<b>Percentage</b>
Cambridge Urban Area	6.4%
Edge of Cambridge	26.0%
New Settlements (including Cambourne West and Wellcome Genome Campus)	55.6%
Rural Area	12.1%

Further information on the methodology used to calculate the amount and location of housing commitments is set out in Appendix 5.

#### **D: Windfall allowance**

The NPPF provides guidance on the consideration of housing windfall sites.

In the [Greater Cambridge Housing Trajectory and Five Year Housing Land Supply \(November 2019\)](#) document, the Councils reviewed and updated their windfall allowances to enable them to anticipate housing delivery from housing developments

that are not allocated and do not currently have planning permission. Given the different nature of the two local authority areas as either predominantly urban or predominantly rural, the windfall allowances for each area have been calculated separately. However, in reviewing the windfall allowances, the Councils have consolidated the two slightly different methodologies so that they are consistent where possible.

The Councils consider that the following windfall allowances are appropriate for Greater Cambridge:

- Cambridge, 130 dwellings per year.
- South Cambridgeshire, 220 dwellings per year.

Based on the [Greater Cambridge Housing Trajectory \(April 2020\)](#), the windfall allowances are included within anticipated delivery from 2025-2026 until the end of the plan period.

#### *Further work required*

The Housing Delivery Study will consider the delivery of windfalls, and provide evidence for a future windfall allowance(s).

### **3.4.3 How much? – Identifying the number and location of jobs**

Counting homes, for the purposes of monitoring past delivery, and for estimating overall supply and future delivery, is relatively simple. In comparison, counting jobs is much more difficult for the following reasons:

- Jobs change is subject to far more variables than house building, and as a result is volatile and fast changing.
- Local Plans cannot make provision for jobs directly, but rather make provision for employment land (which can accommodate business floorspace, measured in square metres) to support jobs. As such it can only be estimated how many jobs such land might support.
- Allocations for employment land in Local Plans only account for a relatively small proportion of overall jobs – employment allocations are for jobs in B use classes (covering office, research and development and industrial uses).



These don't currently account for the very significant proportion of jobs arising in other population-driven sectors such as shops, leisure and education, although note that as of September 2020 there has been a reorganisation of use classes including the introduction of Use Class E replacing Use Class B.

The Greater Cambridge Employment Land and Economic Development Evidence Study (the ELR) explores the supply and demand for employment space in the Greater Cambridge area. It applies a range of methods, including the forecasts referenced earlier in this report, to consider the amount and type of floorspace needed in the area during the plan period. It reviews in detail the existing supply commitments, and considers whether they will meet the demand identified. It makes quantitative and qualitative recommendations, to provide a flexible supply, which encourages business growth and inward investment, and aligns with market feedback and past completions trends.

For the plan period, the ELR anticipates that 609,319 sqm (net) of business floorspace could be delivered in Greater Cambridge from business floorspace commitments consisting of adopted allocations and sites with planning permission, and the Wellcome Genome Campus expansion.

For the purposes of modelling transport impacts in particular, it is necessary to consider specific distributions of jobs (rather than likely delivery of floorspace) as jobs are a key determinant of travel patterns. The Councils have therefore provided distributions of B use class jobs for each spatial option to the transport modelling team, for them to apply alongside standard assumptions for population driven non B use jobs sectors. The total number of jobs in each spatial option matches the maximum, medium or low minimum level as appropriate, in order that the modelling provides consistent testing of total homes and job numbers across each of the spatial options.

Given the significant level of existing B use commitments, all B use jobs needed for each of the growth level options could be accommodated primarily from existing commitments (albeit the Councils recognise that there are nuances relating to specific use classes and geographical locations which may affect this). As it is

expected that new housing allocations or new settlements necessary to deliver the housing growth levels being considered would be accompanied by 'B use' jobs, officers amended the model inputs to reduce delivery of jobs on existing commitments and include delivery of jobs in new growth locations, while maintaining the same overall level of jobs for each spatial option and growth level.

The approach to completing this task is set out at Appendix 7.

#### **3.4.4 Where? Establishing sources of new supply**

The following section sets out the full range of broad supply locations considered to exist in Greater Cambridge, and identifies assumptions about them, including:

- Broad locations
- Capacity
- Availability
- Delivery
- Further evidence required for later stages of the plan-making process.

##### **3.4.4.1 Densification supply - Cambridge urban area / new settlements**

###### **Broad locations**

The most significant source of supply from densification of existing urban areas will come from Cambridge urban area.

Further to this, the last major brownfield site within Cambridge urban area is at North East Cambridge which is being taken forward separately via an Area Action Plan.

This is not included in the commitments above, but is included as a specific site within the strategic options.

A further potential source of densification supply for the First Conversation consultation was assumed to be at the existing / in progress or planned new settlements of Cambourne, Northstowe, Waterbeach New Town and Bourn Airfield New Village.

## Capacity

For Cambridge Urban Area, an internal densification workshop was held in May 2020 to determine if there was additional capacity that could be added to the 14,000-dwelling baseline identified in the Cambridge Local Plan 2018. The workshop considered potential sites regardless of current use or proposed allocation. These sites included large employment and retail sites; low density areas of housing; undeveloped safeguarded land; and any other large sites/areas suitable to deliver housing.

A set of location-based typologies were compiled to help calculate the additional amount of housing that these sites could provide. These were based upon a set of typologies used in the [Cambridge Strategic Housing Land Availability Assessment \(2013\)](#) and updated with input from the [North East Cambridge Typologies Study and Development Capacity Assessment \(2020\)](#).

Using the corresponding typology, applicable to the site's location, the different densities were applied to each identified site, and any homes already counted in the commitments through allocations or planning permissions were deducted. A summary of the total additional capacity identified from these sites is provided in the table below.

Capacity source	Low density	Medium density	High density
	4,000	7,500	11,000

For North East Cambridge, capacity assumptions suggest that this site could provide around 8,300 dwellings and 20,000 'B use' jobs in total.

Officers have assumed that 'B use' jobs provided at North East Cambridge will be all B1 uses, based on the draft North East Cambridge Area Action Plan (July 2020). The area will include B2 and B8 uses, but no additional jobs will be provided, although existing businesses may be re-located within the area.

### **Availability**

North East Cambridge is being actively promoted by developers, and is being progressed via the Area Action Plan process. On the other hand, full development is subject to the separate relocation consent process for the Waste Water Treatment Works.

Around 2,000 dwellings have been proposed to the Greater Cambridge Local Plan Call for Sites in Cambridge's urban area. Sites considered through the Densification Study are in addition to these proposals, and availability of such sites will need to be established before progressing to the next stage of the Local Plan process.

### **Delivery**

For Cambridge urban area, making assumptions consistent with the delivery rates for edge of Cambridge sites and as set out in Appendix 6, results in the below capacity to 2041. These figures have been calculated using the same site by site detail as used to calculate the capacity, but with delivery rates applied to each site(s).

<b>Capacity source</b>	<b>Low density</b>	<b>Medium density</b>	<b>High density</b>
	3,780 (rounded down to 3,700)	5,600	6,830 (rounded down to 6,800)

For North East Cambridge, taking information from the housing trajectory included in the draft Area Action Plan (July 2020) and making some assumptions for 2040-2041 suggests that 8,070 homes (rounded down to 8,000 homes) could be delivered within the plan period to 2041<sup>6</sup>. This housing trajectory in the draft Area Action Plan assumes much higher annual build out rates than historically assumed for strategic

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<sup>6</sup> The housing trajectory in the draft Area Action Plan only considers a plan period to 2040 and indicates that 8,000 dwellings could be delivered by then. For the purposes of this paper, it has been assumed that the 2040+ anticipated dwellings are delivered evenly over the five years from 2040 to 2045 and therefore that a further 70 dwellings could be delivered in 2040-2041, resulting in 8,070 dwellings anticipated by 2041.

sites and assumes delivery soon after adoption of the Area Action Plan. The draft Area Action Plan explains that it takes account of ongoing engagement with landowners / developers, current expectations of the housing and employment market, efficient building processes such as modular housing, the housing types to be delivered, and housing tenures which support quick delivery such as build to rent. The draft Area Action Plan also highlights that the Councils are not advocating the housing trajectory as set out, but are instead seeking comments on it. Therefore, in light of this, for Minimum and Medium growth scenarios within all of the strategic options, delivery of North East Cambridge has been assumed to have the lead-in time and build out rates in line with other strategic sites on the edge of Cambridge.

In each of the strategic spatial options for testing, this paper makes clear which delivery assumption has been used for Cambridge urban area or North East Cambridge if it is included in that scenario.

#### **Further work required**

- Through the Housing and Economic Land Availability Assessment we will continue to develop the evidence regarding densification in Cambridge and new settlements.
- The Strategic Heritage Impact Assessment will identify views/areas of Cambridge and its wider setting that are particularly sensitive to the development of taller buildings and identify assets where the impact of taller buildings on their significance would be harmful.
- The Housing Delivery Study will provide a definitive perspective on lead in times and build out rates for new settlements and also other sites of different sizes and types based on their location.

#### **3.4.4.2 Edge of Cambridge - non Green Belt**

##### **Broad locations**

There is only one large scale brownfield site on the edge of Cambridge outside of the Green Belt: Land at Cambridge Airport.

Capacity testing of Green Belt locations (explained below) identified further capacity, but these did not comprise large enough unconstrained parcels which could

contribute to a non-site specific source of supply on the edge of Cambridge for the purposes of this strategic options testing.

### **Capacity**

Land at Cambridge Airport was taken out of the Green Belt as part of Cambridge East Area Action Plan, and is safeguarded for development in the Cambridge and South Cambridgeshire Local Plans 2018. The Area Action Plan identified that this site would be suitable for a new urban quarter of approximately 10,000 to 12,000 dwellings. Permission has since been granted at Land North of Newmarket Road also known as Wing or Marleigh (1,300 homes) and the Councils' planning committee has resolved to grant planning permission for Land North of Cherry Hinton (1,200 homes). Taking these homes off the maximum of 12,000 dwellings assumed to be located at Cambridge East produces an estimated residual capacity of 9,500 homes on the edge of Cambridge outside of the Green Belt.

For the purposes of testing the strategic spatial options, it has been assumed that that 675 existing 'B use' jobs will be lost from this site if the spatial option includes Cambridge Airport as a location for new growth, and that up to 5,000 new 'B use' jobs will be re-provided within the new development depending on the level of growth anticipated on this site. Officers have assumed that 'B use' jobs provided at Cambridge Airport will largely be B1 uses, with a small proportion of B2 and B8 uses.

### **Availability**

Land at Cambridge Airport is being actively promoted by the landowner through the Greater Cambridge Local Plan. In addition to this site, around 1,500 dwellings have been proposed to the Greater Cambridge Local Plan Call for Sites on the edge of Cambridge outside of the Green Belt.

### **Delivery**

Based on approximately 7.5 years from allocation to first completions and delivery rates of 250 dwellings a year, as set out at Appendix 6, it is anticipated that 1,935 homes (rounded down to 1,900 homes) could be completed at Cambridge Airport by 2041.

However, to deliver the maximum housing growth scenario for Greater Cambridge and a development strategy by 2041 that could be considered sustainable, higher build out rates than previously achieved will be needed. Taking a reasonable approach to this principle, by continuing to assume approximately 7.5 years from allocation to first completions, but doubling the build out rate for Cambridge Airport to 500 dwellings per year, results in anticipated delivery at Cambridge Airport by 2041 of 3,870 homes (rounded down to 3,800 homes).

Continuing to assume a lead in time of approximately 7.5 years for Cambridge Airport, also means that based on the Greater Cambridge Housing Trajectory (April 2020) the existing parts of Cambridge East that are already coming forwards at land north of Newmarket Road and land north of Cherry Hinton will have been completed before Cambridge Airport starts delivering.

At 2.1 strategic spatial options for testing, this paper makes clear whether the historic or higher delivery rates have been used for Cambridge Airport if it is included in that scenario.

#### **Further work required**

- Further capacity testing of this site will be undertaken as part of the Housing and Economic Land Availability Assessment.
- The Housing Delivery Study will provide a definitive perspective on lead in times and build out rates for strategic sites on the edge of Cambridge.

#### **3.4.4.3 Edge of Cambridge - Green Belt**

##### **Broad Locations**

The aim of testing at this stage will be to consider the relative sustainability of meeting development needs on the edge of Cambridge. Specific areas or sites will not be identified. Instead testing will consider levels of development and broad locations.

##### **Capacity**

Theoretical capacity for edge of Cambridge – Green Belt has been established using a high-level evidence-based approach, as explained below.

The approach taken includes drawing a buffer from the edge of the Built Up Area of Cambridge (based on the approximate furthest distance from Cambridge City boundary to the furthest point of largest edge of Cambridge committed site), and then removing land affected by commitments, environmental constraints, and major roads.

Given the intention of identifying a maximum capacity for the Green Belt, the capacity identified implies that development in this source of supply could adjoin the development frameworks of villages that lie within the Green Belt. While this is against the purposes of the Cambridge Green Belt, it is considered that this is a realistic result of testing this option to its full extent. In compiling the options care has been taken to avoid double counting of capacity, such that, for example, the focus on Edge of Cambridge: Green Belt option does not include any development at the villages source of supply.

This approach has identified a maximum capacity of 40,080 dwellings.

The currently adopted Local Plans and the previously adopted plans allocated land for housing within three/four areas of the edge of Cambridge – North West Cambridge (approximately 3,000 dwellings) and NIAB (approximately 2,780 dwellings), Cambridge East (approximately 2,500 dwellings), and Cambridge Southern Fringe (approximately 3,900 dwellings).

Cambridge Southern Fringe, which consists of Trumpington Meadows, Glebe Farm, Clay Farm and Bell School, is the furthest advanced in terms of delivery and therefore can be used to inform assumptions for new sites on the edge of Cambridge. These four smaller sites on the southern edge of Cambridge are anticipated to deliver approximately 3,900 dwellings when wholly completed on approximately 98 hectares of land, therefore an average density of approximately 40 dwellings per hectare.

The maximum capacity of 40,080 dwellings would therefore equate to about 10 additional sites/broad locations on the edge of Cambridge that are the same size as



Cambridge Southern Fringe. Officer judgement suggests that within the strategic options testing it would not be reasonable to test more than six new strategic sites of approximately 3,900 dwellings on the edge of Cambridge as an absolute maximum, providing a total of 23,400 dwellings. Therefore as there is one new strategic site on the edge of Cambridge outside the Green Belt at Cambridge Airport, where that is included in a spatial option, only a maximum of five sites of approximately 3,900 dwellings on the edge of Cambridge within the Green Belt should be included in the spatial option, providing a total of 19,500 dwellings.

### **Availability**

Around 22,000 dwellings have been proposed to the Greater Cambridge Local Plan Call for Sites on the edge of Cambridge within the Green Belt. This suggests that the independently derived capacity figure is not unreasonable to test as being potentially available.

### **Delivery**

Based on approximately 7.5 years from allocation to first completions and delivery rates of 250 dwellings a year, as set out at Appendix 6, it is anticipated that 1,935 homes (rounded down to 1,900 homes) could be completed at each of the five or six sites / broad locations of approximately 3,900 dwellings.

However, to deliver the maximum housing growth scenario for Greater Cambridge and a development strategy by 2041 that could be considered to be sustainable, higher build out rates than previously achieved will be needed. Taking a reasonable approach to this principle, by continuing to assume approximately 7.5 years from allocation to first completions, but doubling the build out rate for each of the sites / broad locations to 500 dwellings per year, results in anticipated delivery by 2041 of 3,870 homes (rounded down to 3,800 homes).

At 2.1 Description of the strategic spatial options, this paper makes clear whether the historic or higher delivery rates have been used for any new sites / broad locations within the Green Belt on the edge of Cambridge if one or more of these developments have been included in that scenario.

### **Further work required**

- The Housing and Economic Land Availability Assessment will provide a definitive perspective of capacity on the edge of Cambridge within the Green Belt.
- The Housing Delivery Study will provide a definitive perspective on lead in times and build out rates for strategic sites on the edge of Cambridge.
- A detailed study of the Cambridge Green Belt will be carried out, to identify the contribution land makes to Green Belt purposes, in order to understand the level of harm that would be caused by development in different areas of the Green Belt. This will be a key consideration when considering Green Belt land release later in the plan process.

#### **3.4.4.4 New settlements (stand-alone)**

##### **Broad Locations**

No assumption has been made as to the location of such new settlements other than in broad locations. The assessment does however make assumptions regarding the transport and other services that they would have available.

Given NPPF spatial principles, set out at 3.2 Spatial principles, it is considered that the most sustainable locations for new settlements is along existing or proposed public transport corridors. Beyond this, consideration has also been given to opportunity locations for new settlements close to the strategic road network but not on public transport corridors.

For the purposes of options testing it is assumed that there might be opportunities for seven new settlements sited on the public transport corridors identified at 3.3.1.1 Existing and planned transport infrastructure (including new settlement-scale expansions to committed new settlements). Further to this, it is assumed that there might be potential for one new settlement close to the road network but not on a public transport corridor.

## Capacity

Further work has been completed to identify the scale of new settlement options for testing (see Appendix 4). This includes consideration of the relative sustainability of different new settlement sizes. The key outcomes of this work include:

- recommendation that a settlement of around 4,500 homes would be the minimum to be sustainable in Greater Cambridge and that the most sustainable option is to provide settlements of at least this size even in proximity to Cambridge.
- Notwithstanding the above, it is acknowledged that the location and pattern of development of new communities will influence the appropriate size and smaller developments may be appropriate in certain circumstances.
- Larger settlements are likely to be more sustainable to an extent, as they are likely to be more self-contained, although the goal of self-containment needs to be approached with a degree of realism.

Drawing on the above, within the strategic options two scales of new settlement have been included: 4,500 homes, reflecting the recommendation from Appendix 4, and 9,000 homes, reflecting the further recommendation that larger settlements are likely to be more sustainable. While officers are not aware of evidence supporting specific higher thresholds, 9,000 – doubling 4,500 is considered a reasonable larger size, since it is similar to Northstowe or Waterbeach New Town in scale. In addition, within the options, further expansion of development at committed new settlements is also considered at Cambourne, in increments of 4,500 and 9,000 homes in addition to dwellings already existing or committed. This results in a settlement of the following sizes at Cambourne:

- completions and commitments + 4,500 dwellings = 11,300 (and close to further development of 3,500 at Bourn Airfield New Village)
- completions and commitments + 9,000 dwellings = 15,800 (and close to further development of 3,500 at Bourn Airfield New Village)

For the purposes of testing the strategic spatial options, a new settlement of 9,000 new homes is anticipated to deliver up to 2,500 new jobs in 'B uses' and a new settlement of 4,500 new homes is anticipated to deliver up to 1,500 new jobs in 'B uses', depending on the level of growth anticipated at each new settlement. Officers

have assumed that 'B use' jobs provided at new settlements will largely be B1 uses, with a small proportion of B2 and B8 uses.

### **Availability**

Around 127,000 homes have been proposed at new settlement locations to the Greater Cambridge Local Plan Call for Sites. This suggests that availability is not a constraint on delivery of new settlements.

### **Delivery**

Notwithstanding the seven opportunities for new settlements suggested above, officer judgement suggests that within the strategic options testing it would not be reasonable to test more than four new settlements within South Cambridgeshire as an absolute maximum, on the basis that:

- four new settlements are currently being progressed through the planning system (Cambourne, Northstowe, Waterbeach New Town, Bourn Airfield New Village), suggesting that there is administrative and delivery capacity to progress this number of new settlements simultaneously within the district; but
- the committed new settlements referred to above will continue to build out across future plan periods, such that new settlements identified through the Greater Cambridge Local Plan would be in addition to the four already being progressed simultaneously. It is therefore not considered reasonable to test more than four new settlements, in addition to those already being delivered.

Deliverability will also be a key consideration in relation to new settlements. Based on approximately 5 years from allocation to first completions and delivery rates of 250 dwellings a year, as set out at Appendix 6, it is anticipated that 2,560 homes (rounded down to 2,500 homes) could be completed at each new settlement by 2041.

Using the above delivery assumptions, under a high growth scenario in relevant options several new settlements might be required to meet a target for the plan period 2020-2041. Therefore, to deliver the maximum housing growth scenario for Greater Cambridge and a development strategy by 2041 that could be considered sustainable, higher build out rates than previously achieved will be needed. Taking a

reasonable approach to this principle, by continuing to assume approximately 5 years from allocation to first completions, but doubling the build out rate for each of the new settlements to 500 dwellings per year, results in anticipated delivery by 2041 of 5,120 homes (rounded down to 5,100 homes).

At 2.1 Description of the strategic options, this paper makes clear whether the historic or higher delivery rates have been used for any new settlements if one or more new settlements have been included in that scenario.

*Additional delivery at committed new settlements (higher delivery rates)*

For the existing committed new settlements, the Greater Cambridge Housing Trajectory (April 2020) with a continuation of the existing build out rates for 2033 to 2041, anticipates that there is none or very little additional capacity for delivery from these sites beyond what is already included in the commitments. However, to deliver the maximum housing growth scenario for Greater Cambridge and a development strategy by 2041 that could be considered to be sustainable, higher build out rates than previously achieved will be needed.

Assuming that Northstowe and Waterbeach New Town can deliver higher build out rates than have been achieved in the past on new settlements (but which have been demonstrated on the edge of Cambridge), these existing commitments could deliver more dwellings within the plan period. Assuming that phases 2 and 3 of Northstowe, and the whole of Waterbeach New Town, can deliver up to 500 dwellings a year, these developments could deliver a further 3,819 homes and 4,000 additional homes respectively, without any additional land.

Assuming that Bourn Airfield New Village and Cambourne West can deliver higher build out rates than have been assumed in the Greater Cambridge Housing Trajectory (April 2020), and therefore at similar build out rates to those assumed in the housing trajectory for other strategic sites, these existing commitments could again deliver more dwellings with the plan period. Assuming that the whole of each of these developments can deliver up to 300 dwellings a year, Bourn Airfield New Village could deliver 870 additional homes whereas Cambourne West would not deliver any additional homes, without any additional land.

Overall, a further 8,689 dwellings could be delivered from the existing committed new settlements by 2041. This has been rounded down to 8,600 dwellings when used within the options. Further detailed information is provided in Appendix 6.

Following the same principles, 1,840 additional 'B use' jobs would be provided by 2041 (as set out in Appendix 7).

**Further work required:**

- Housing and Economic Land Availability Assessment and Broad Location Study to identify potential options and therefore guide scale of potential new settlements to consider.
- The Housing Delivery Study will provide a definitive perspective on lead in times and build out rates for new settlements.

#### **3.4.4.5 Villages**

**Locations**

Options testing makes assumptions regarding the distribution of village growth around South Cambridgeshire villages. This takes a broad locations approach, assuming growth levels at different types of villages<sup>7</sup>.

The different categories of villages are described below, with the number of villages within each category identified in brackets<sup>8</sup>:

*Rural Centres (5)*

The largest, most sustainable villages of the district. They have good access to a secondary school (either within the village or accessible by good public transport), employment opportunities, a variety of services and facilities and have good public transport services to Cambridge or a market town.

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<sup>7</sup> Note that any expansion of a village to form a new settlement would form part of the new settlements option.

<sup>8</sup> South Cambridgeshire Local Plan 2018, Chapter 2 – Spatial Strategy

### *Minor Rural Centres (13)*

These have a lower level of services, facilities and employment than Rural Centres, but a greater level than most other villages in South Cambridgeshire, and often perform a role in terms of providing services and facilities for a small rural hinterland.

### *Group villages (32)*

Generally less sustainable locations for new development than Rural Centres and Minor Rural Centres, having fewer services and facilities allowing only some of the basic day-to-day requirements of their residents to be met without the need to travel outside the village. All Group Villages have at least a primary school.

### *Infill villages (56)*

Generally amongst the smallest villages in South Cambridgeshire. These villages have a poor range of services and facilities and it is often necessary for local residents to travel outside the village for most of their daily needs. These villages generally lack any food shops, have no primary school and may not have a permanent post office or a village hall or meeting place.

Beyond these categories, in compiling the different scenarios, consideration has also been given to whether villages are fundamentally constrained by environmental constraints, whether they are in or outside of the Green Belt, and their location or not at nodes along public transport corridors.

### *Villages within and outside of the Green Belt*

As set out at 3.2 Spatial principles, different options either account for or ignore Green Belt boundaries. Villages' location within or outside of the Green Belt has been taken into account when compiling options that account for Green Belt boundaries.

### *Villages on public transport corridors*

Nineteen villages have been identified as located at existing or potential nodes along transport corridors. This information has informed the compilation of the Public Transport Corridor option in particular.

### **Capacity**

Officer judgement has been used to identify what might be reasonable capacity assumptions at the different types of villages.

### **Availability**

Around 56,000 dwellings have been submitted to the Greater Cambridge Local Plan Call for Sites process at village locations. For the purposes of strategic options testing, availability of village sites is therefore not treated as a constraint at this point.

### **Delivery**

Within the rough judgements about capacity above, and the assumption that larger amounts of development in villages would be distributed across two or more sites, it is not anticipated that delivery rates would limit the amount of growth that could be distributed to villages.

### **Further work required:**

- Housing and Economic Land Availability Assessment and Broad Location Study to identify scale of potential village growth options.



## **3.5. Compiling the strategic options for testing**

### **3.5.1 Overview**

This section outlines the approach to compiling the strategic options for testing, which is the process of distributing the balance of growth to find in each option between the sources of supply, as per the tables at 2.2 Strategic spatial options numbers for testing.

In completing this task it is acknowledged that:

- there are a large number of possible permutations of each reasonable spatial option
- there is no single 'right' answer to identifying strategic options
- strategic spatial options are explicitly non-site specific, and it is therefore important not to be overly precise in developing options

Given all of the above, the approach set out below to compiling the options draws on all of the relevant evidence described elsewhere in this document in order to avoid making unjustified assumptions, whilst accepting that officer judgement is involved.

The approach taken to compiling options brings together the following elements which are described in full below:

- Spatial principles specific to each scenario - guiding the fundamental choices about where to locate development within the sources of supply
- Spatial principles relevant to all scenarios - guiding and influencing choices about growth locations, and
- Resulting distribution of development

### **3.5.2 Spatial principles – relevant to specific scenarios**

Whilst the purpose of an option may be to test maximising development at a certain type of location, it will not always be possible to meet the level of development being considered in that single location type. It will therefore be necessary to add growth in other locations to that scenario.

The benefits/purposes of each option therefore provide spatial principles which guide assumptions made about the location of growth within an area of supply. In particular these principles guide where growth should be located in each option when assumed capacity at the ‘focus of growth’ source of supply has been exhausted.

For First Conversation options the benefits/purposes have been taken from the First Conversation itself. For additional options the benefits/purposes of the option are set out in Appendix 3: Identifying the full range of reasonable spatial options.

### **3.5.3 Spatial principles – relevant to all scenarios**

NPPF spatial principles not addressed elsewhere in this document are set out below. For each option an explanation is provided as to whether and how the option addresses that principle:

- Within the constraints of each strategic option, locate growth close to existing/planned infrastructure.
- When locating supply in rural areas, incorporate assumptions about locating growth first in settlements with the greatest range of services and access to infrastructure.
- Consider requirements for a proportion of smaller sites, to support maintaining a five-year housing land supply. As noted elsewhere in this paper, distributing a large proportion of the growth requirement to lots of smaller sites may not support Climate Act requirements to support zero carbon targets. Given that the Act is a statutory requirement in tension with national policy requirements, options are included that include greater concentrations of growth with fewer smaller sites, on the basis that it may better support the achievement of zero carbon.
- Green Belt assumption – an explanation of the approach taken to Green Belt is included for each option.

### **3.5.4 Resulting distribution of development**

For each option and each growth scenario, the balance to find is distributed across the sources of supply as informed by the spatial principles referred to above.

## **3.6. Strategic options – principles governing distribution**

This section describes, for each strategic spatial option and growth scenario, the principles governing the distribution of growth between the sources of supply. The actual distribution is described in section 2.1, and set out in numerical terms in section 2.2.

### **3.6.1 Spatial Scenario 1: Focus on Densification of existing urban areas**

#### **3.6.1.1 Description**

This approach would focus new homes and jobs within Cambridge, because it is the main urban area and centre for services and facilities. The primary location for development within the urban area is at North East Cambridge: the last major brownfield site within Cambridge urban area is at North East Cambridge which is being taken forward separately via an Area Action Plan.

#### **3.6.1.2 Spatial principles/benefits**

- A. Reduces the need to use greenfield land to accommodate growth.
- B. Living in central, well-connected and vibrant areas is important for many people.
- C. Reduces the need to travel by car and so makes a positive contribution to addressing climate change.
- D. Sites growth near to existing centres, which can continue to support their vitality and viability.

#### *Resulting option assumptions*

Sources of supply bringing the most similar benefits (see letter references for shared benefits) - and therefore next sources of supply to be considered under scenarios where more growth needs to be found - in order, are:

- Edge of Cambridge: outside Green Belt (A, C, D)
- Edge of Cambridge: Green Belt (C, D)
- New settlements on public transport corridors (C)

### **3.6.1.3 Spatial principles – relevant to all scenarios, and resulting option assumptions**

*Within the constraints of each strategic option, locate growth close to existing/planned infrastructure*

By locating growth in the urban area it is assumed that this will be close to existing infrastructure.

*When locating supply in rural areas, incorporate assumptions about locating growth first in settlements with the greatest range of services and access to infrastructure.*

Growth beyond the edge of Cambridge is located at new settlements of a scale that could generate demand for new services on public transport corridors.

*Consider requirements for a proportion of smaller sites*

This option focuses development in Cambridge urban area, some of which is likely to come forward via smaller sites. The spatial principles associated with this option do not support locating development at village sites within this option.

*Green Belt assumption*

The purpose of this option is to focus growth in and as close to the urban area of Cambridge as a sustainable location. Green Belt constraints have therefore not been accounted for in compiling this option.

## **3.6.2 Spatial Scenario 2: Focus on Edge of Cambridge: outside Green Belt**

### **3.6.2.1 Description**

This approach would create new homes and jobs in extensions on the edge of Cambridge, using land not in the green belt. The only large site on the edge of Cambridge not in the Green Belt is Cambridge Airport.

### **3.6.2.2 Spatial principles/benefits**

- A. Benefits from the services and infrastructure at the existing centre, maximising the potential for sustainable transport.
- B. Large scale urban extensions present the opportunity for new on-site infrastructure, such as schools, local centres and green spaces that can bring benefits to the existing and new community.

C. Cambridge Airport has previously been identified as suitable location for a new urban quarter to Cambridge and was removed from the Green Belt in earlier plans. It is identified as safeguarded land for longer term development in the 2018 Local Plans if it becomes available.

D. Makes use of brownfield land.

### *Resulting option assumptions*

Sources of supply bringing the most similar benefits (see letter references for shared benefits) - and therefore next sources of supply to be considered under scenarios where more growth needs to be found - in order, are:

- Cambridge urban area (A, ~B, D)
  - NB only North East Cambridge is included within this option as a source of supply, as additional sites within Cambridge do not share B above.
- Edge of Cambridge – Green Belt (A, B, but the Green Belt status of this source of supply is contradictory to the purpose of testing this option, so this source is ignored)
- New settlements on public transport corridors (A, B)

### **3.6.2.3 Spatial principles – relevant to all scenarios, and resulting option assumptions**

*Within the constraints of each strategic option, locate growth close to existing/planned infrastructure*

By locating growth in the urban area it is assumed that this will be close to existing infrastructure.

*When locating supply in rural areas, incorporate assumptions about locating growth first in settlements with the greatest range of services and access to infrastructure.*

The purpose of this option is to base the sustainability of a settlement on its access to existing or proposed transport infrastructure. As such, the settlement hierarchy status of villages has been discounted for the purpose of this option.

### *Consider requirements for a proportion of smaller sites*

This option focuses development in Cambridge urban area, some of which is likely to come forward via smaller sites. The spatial principles associated with this option do not support locating development at village sites within this option.

### *Green Belt assumption*

Given that the explicit purpose of this option is to test the impacts of growth outside of the Green Belt, within this option all development is located outside of Green Belt boundaries.

## **3.6.3 Spatial Scenario 3: Focus on Edge of Cambridge: Green Belt**

### **3.6.3.1 Description**

This approach would create new homes and jobs in extensions on the edge of Cambridge, involving release of land from the Green Belt.

### **3.6.3.2 Spatial principles/benefits**

- A. Benefits from the services and infrastructure at the existing centre, maximising the potential for sustainable transport.
- B. Large scale urban extensions present the opportunity for new on-site infrastructure, such as schools, local centres and green spaces that can bring benefits to the existing and new community.

### *Resulting option assumptions*

Next sources of supply are not applicable – for this strategic spatial option the balance to find is met within the option focus source of supply under all growth level options.

### **3.6.3.3 Spatial principles – relevant to all scenarios, and resulting option assumptions**

*Within the constraints of each strategic option, locate growth close to existing/planned infrastructure*

The spatial principles relating to this option result in a pattern of development either close to existing or large enough to support new infrastructure.

*When locating supply in rural areas, incorporate assumptions about locating growth first in settlements with the greatest range of services and access to infrastructure.*

Not applicable – no development has been located within the rural area for this option.

*Consider requirements for a proportion of smaller sites*

The spatial principles associated with this option do not support locating development at village sites within this option. The high growth scenario for this option includes development in Cambridge urban area, some of which is likely to come forward via smaller sites.

*Green Belt assumption*

Given that the explicit purpose of this option is to test the impacts of growth within the Green Belt, Green Belt boundaries have been ignored for the purposes of this option.

### **3.6.4 Spatial Scenario 4: Focus on New Settlements**

#### **3.6.4.1 Description**

New settlements would establish a whole new town or village, providing homes, jobs and supporting infrastructure in a new location, and would need to be supported by strategic transport infrastructure connecting to Cambridge.

#### **3.6.4.2 Spatial principles/benefits**

- A. Provides an opportunity for significant new infrastructure to be delivered.
- B. Provides an opportunity for substantial growth in a new location connected to the transport network.
- C. May avoid removing land from the Green Belt

*Resulting option assumptions*

Next sources of supply are not applicable – for this strategic spatial option the balance to find is met within the option focus source of supply under all growth level options.

#### **3.6.4.3 Spatial principles – relevant to all scenarios, and resulting option assumptions**

*Within the constraints of each strategic option, locate growth close to existing/planned infrastructure*

It is assumed that new settlements will be located on existing or proposed public transport corridors.

*When locating supply in rural areas, incorporate assumptions about locating growth first in settlements with the greatest range of services and access to infrastructure.*

Not relevant – to an extent, new settlements will be of a sufficient size to generate their own services.

*Consider requirements for a proportion of smaller sites*

This option provides an opportunity for substantial growth in a new location connected to the transport network, which thereby provides an opportunity for significant new infrastructure to be delivered. As such it is not considered appropriate to include village sites within this option.

*Green Belt assumption*

Given that one of the benefits of this option is that it may avoid removing land from the Green Belt, for the purposes of this option it is assumed that no development takes place within the Green Belt.

### **3.6.5 Spatial Scenario 5: Focus on Dispersal: Villages**

#### **3.6.5.1 Description**

This approach would spread new homes and jobs out to the villages.

#### **3.6.5.2 Spatial principles – relevant to specific scenario**

- A. Can help to sustain existing facilities and infrastructure in the village.
- B. Can help provide for a diversity of population in the village.

*Resulting option assumptions*

Distribute growth across all villages to fully test the implications of dispersal.



Next sources of supply are not applicable – for this strategic spatial option the balance to find is met within the option focus source of supply under all growth level options.

### **3.6.5.3 Spatial principles – relevant to all scenarios, and resulting option assumptions**

*Within the constraints of each strategic option, locate growth close to existing/planned infrastructure*

Allocate new growth proportionate to level of facilities and services as measured by South Cambridgeshire Local Plan 2018 settlement category designation.

*When locating supply in rural areas, incorporate assumptions about locating growth first in settlements with the greatest range of services and access to infrastructure.*

Allocate new growth proportionate to level of facilities and services as measured by South Cambridgeshire Local Plan 2018 settlement category designation.

*Consider requirements for a proportion of smaller sites*

By definition this option includes small sites. Given that this option is specifically intended to test the impacts of dispersal, it is not considered appropriate to apply Climate Act implications to this option.

*Green Belt assumption*

Given that the purpose of this option is to test dispersal of growth to its full extent, Green Belt constraints have not been accounted for.

## **3.6.6 Spatial Scenario 6: Focus on Public transport corridors**

### **3.6.6.1 Description**

This approach would focus homes and jobs along key public transport corridors and around transport hubs, extending out from Cambridge. This could be by expanding or intensifying existing settlements, or with more new settlements.

### **3.6.6.2 Spatial principles – relevant to specific scenario**

- A. Concentrates development on transport corridors where there are opportunities for high quality public transport.
- B. Supports expansion of economic benefits outwards from Cambridge.

### *Resulting option assumptions*

Within the primary sources of supply for this option:

- North East Cambridge (as a development opportunity located in Cambridge urban area on an existing public transport corridor)
- Distribute growth across new settlement opportunities and villages sited on or close to existing or proposed public transport hubs/nodes.
- Take account of public transport nodes rather than corridors per se. In particular this affects consideration of East West Rail which is intended to only include one new station within South Cambridgeshire – at Cambourne.

Next sources of supply are not applicable – for this strategic spatial option the balance to find is met within the option focus source of supply under all growth level options.

#### **3.6.6.3 Spatial principles – relevant to all scenarios, and resulting option assumptions**

*Within the constraints of each strategic option, locate growth close to existing/planned infrastructure*

The definition of this option is to locate growth near public transport hubs.

*When locating supply in rural areas, incorporate assumptions about locating growth first in settlements with the greatest range of services and access to infrastructure.*

The purpose of this option is to base the sustainability of a settlement on its access to existing or proposed transport infrastructure. As such, the settlement hierarchy status of villages has been discounted for the purpose of this option.

*Consider requirements for a proportion of smaller sites*

Including some growth at villages in this option should help support provision of smaller sites.

*Green Belt assumption*

The purpose of this option is to consider the sustainability of focusing growth along transport corridors radiating out from Cambridge, which will likely result in Green Belt

development. Green Belt constraints have therefore not been accounted for in compiling this option.

### **3.6.7 Spatial Scenario 7: Supporting a high-tech corridor by integrating homes and jobs (southern cluster)**

#### **3.6.7.1 Description**

This approach would focus new homes close to existing and committed jobs within the life sciences cluster area around the south of Cambridge, including homes at existing villages and at new settlements.

#### **3.6.7.2 Spatial principles – relevant to specific scenario**

- A. Supports the continued success of the life sciences cluster area around the south of Cambridge.
- B. Sites growth near to existing centres of employment, potentially reducing the need to travel by car and so making a positive contribution to addressing climate change.
- C. Could support housing availability within the area south of Cambridge, an issue highlighted by employers within the area.

#### *Resulting option assumptions*

Within the primary sources of supply for this option:

- Distribute growth across new settlement opportunities and villages sited on or close to existing or proposed public transport hubs/nodes.
- Take account of public transport nodes rather than corridors per se.

Sources of supply bringing the most similar benefits (see letter references for shared benefits) - and therefore next sources of supply to be considered under scenarios where more growth needs to be found - in order, are:

- Edge of Cambridge – non-Green Belt (B)
- Cambridge urban area (B)

### **3.6.7.3 Spatial principles – relevant to all scenarios, and resulting option assumptions**

*Within the constraints of each strategic option, locate growth close to existing/planned infrastructure*

New settlement location/s assumed to be on public transport corridors.

*When locating supply in rural areas, incorporate assumptions about locating growth first in settlements with the greatest range of services and access to infrastructure*

Allocate new growth within villages proportionate to level of facilities and services as measured by South Cambridgeshire Local Plan 2018 settlement category designation.

*Consider requirements for a proportion of smaller sites*

Including some growth at villages in this option should help support provision of smaller sites, but this is constrained by the number of villages located within the southern cluster area.

*Green Belt assumption*

The purpose of this option is to consider the sustainability of focusing growth close to existing and committed jobs which will likely result in Green Belt development. Green Belt constraints have therefore not been accounted for in compiling this option.

## **3.6.8 Spatial Scenario 8: Expanding a growth area around transport nodes**

### **3.6.8.1 Description**

This approach would focus new homes at Cambourne and along the A428 public transport corridor, on the basis that Cambourne is due to be served by a new East West Rail station and that Cambourne and the villages along the corridor are due to be served by the Cambridgeshire Autonomous Metro.

### **3.6.8.2 Spatial principles – relevant to specific scenario**

- A. Locates growth near to planned rail and metro public transport provision, potentially reducing the need to travel by car and so making a positive contribution to addressing climate change.

- B. Locates growth close to existing centres of population or large-scale growth commitments, adding to the critical mass of population that could generate demand for further services and employment provision.

#### *Resulting option assumptions*

Within the primary sources of supply for this option:

- Distribute growth across new settlement opportunities and villages sited on proposed public transport hubs/nodes.
- Take account of public transport nodes rather than corridors per se. In particular this affects consideration of East West Rail which is intended to only include one new station within South Cambridgeshire – at Cambourne.

Sources of supply bringing the most similar benefits (see letter references for shared benefits) - and therefore next sources of supply to be considered under scenarios where more growth needs to be found - in order, are:

- Cambridge urban area (A, B)
  - NB only North East Cambridge is included within this option as a source of supply, as additional sites within Cambridge do not share B above.
- Edge of Cambridge – non-Green Belt (B)

#### **3.6.8.3 Spatial principles – relevant to all scenarios, and resulting option assumptions**

*Within the constraints of each strategic option, locate growth close to existing/planned infrastructure*

New settlement location/s assumed to be at Cambourne, which is on a proposed public transport corridor.

*When locating supply in rural areas, incorporate assumptions about locating growth first in settlements with the greatest range of services and access to infrastructure*

The purpose of this option is to base the sustainability of a settlement on its access to existing or proposed transport infrastructure. As such, the settlement hierarchy status of villages has been discounted for the purpose of this option.

*Consider requirements for a proportion of smaller sites*

Including some growth at villages in this option should help support provision of smaller sites.

*Green Belt assumption*

The purpose of this option is to consider the sustainability of focusing growth along transport corridors radiating out from Cambridge which will likely result in Green Belt development. Green Belt constraints have therefore not been accounted for in compiling this option.

## **List of appendices**

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## Appendix 1: Spatial principles informing identification of and assumptions within strategic spatial options

### National Planning Policy Framework (NPPF) 2019 principles

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
2. Achieving sustainable development	8	Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):			Options should seek to take opportunities taken to secure net gains across each of the sustainable development objectives (8)



Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		<p>a) <b>an economic objective</b> – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;</p> <p>b) <b>a social objective</b> – to support strong, vibrant and healthy communities, by ensuring that a sufficient</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		<p>number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and</p> <p>c) <b>an environmental objective</b> – to contribute to protecting and enhancing our natural, built and</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.			
The presumption in favour of sustainable development	11	Plans and decisions should apply a presumption in favour of sustainable development.  For <b>plan-making</b> this means that: a) plans should positively seek opportunities to meet the development needs of		Growth options should provide for objectively assessed needs for housing and other uses – implies that such assessments should be policy-off (11)	Account for any unmet needs arising from neighbouring areas (11) Be sufficiently flexible to adapt to rapid change – see commentary re. flexibility buffer (11)

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		<p>their area, and be sufficiently flexible to adapt to rapid change;</p> <p>b) strategic policies should, as a minimum, provide for objectively assessed needs for housing and other uses, as well as any needs that cannot be met within neighbouring areas<sup>5</sup>, unless:</p> <p>i. the application of policies in this Framework that protect areas or assets of particular importance provides a strong reason for restricting the overall scale, type or distribution of development in the plan area<sup>6</sup>; or</p> <p>ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits,</p>			<p>Take into account absolute environmental constraints as set out in NPPF footnote 6, such as habitat sites and flood risk, and consider impact on significant policy constraints such as Green Belt (11)</p>

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		when assessed against the policies in this Framework taken as a whole.			
Maintaining effective cooperation	24-27	<p>In relation to tests a) and c) above, the NPPF sets out that:</p> <p>Local planning authorities and county councils (in two-tier areas) are under a duty to cooperate with each other, and with other prescribed bodies, on strategic matters that cross administrative boundaries. (NPPF paragraph 24)</p> <p>Effective and on-going joint working between strategic policy-making authorities and relevant bodies is integral to the production of a positively prepared and justified strategy. In particular, joint working should help to determine</p>			<p>Take account of requests to take development needs from a neighbouring authority. (27)</p> <p>Take account of neighbouring authority proposals to locate strategic growth close to the boundary of Greater Cambridge. (24-27)</p>

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		where additional infrastructure is necessary, and whether development needs that cannot be met wholly within a particular plan area could be met elsewhere (NPPF paragraph 26)			
Evidence	31	The preparation and review of all policies should be underpinned by relevant and up-to-date evidence. This should be adequate and proportionate, focused tightly on supporting and justifying the policies concerned, and take into account relevant market signals.		Strategic options should: Be informed by up to date evidence, which take into account market signals. (31)	
Preparing and reviewing plans	32	Local plans and spatial development strategies should be informed throughout their preparation by a			Strategic option assumptions should seek to support economic, social and environmental

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		sustainability appraisal that meets the relevant legal requirements. This should demonstrate how the plan has addressed relevant economic, social and environmental objectives (including opportunities for net gains). Significant adverse impacts on these objectives should be avoided and, wherever possible, alternative options which reduce or eliminate such impacts should be pursued. Where significant adverse impacts are unavoidable, suitable mitigation measures should be proposed (or, where this is not possible, compensatory measures should be considered).			objectives (including opportunities for net gains). (32)

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
Examining plans	35	Plans are 'sound' if they are (NPPF paragraph 35): a) <b>Positively prepared</b> – providing a strategy which, as a minimum, seeks to meet the area's objectively assessed needs <sup>19</sup> ; and is informed by agreements with other authorities, so that unmet need from neighbouring areas is accommodated where it is practical to do so and is consistent with achieving sustainable development; b) <b>Justified</b> – an appropriate strategy, taking into account the reasonable alternatives, and based on proportionate evidence; c) <b>Effective</b> – deliverable over the plan period, and based on effective joint		Complete evidence on delivery rates (35)	Points raised at paragraphs 8,11, 24-27, 32, plus: c. deliverable over the plan period – options should take into account understanding of delivery rates when considering reasonable growth level options, and when distributing growth between options. (35)



Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		working on cross-boundary strategic matters that have been dealt with rather than deferred, as evidenced by the statement of common ground; and d) <b>Consistent with national policy</b> – enabling the delivery of sustainable development in accordance with the policies in this Framework.			
Identifying land for homes	67, 73, 75	67. Planning policies should identify a supply of specific, deliverable sites for years one to five of the plan period. With an appropriate buffer, as set out in paragraph 73.  73. Local planning authorities should identify and update annually a supply of specific		Use up to date housing trajectory evidence to inform options assumptions about delivery (67, 73, 75)	Take into account the need to maintain a five year housing supply when distributing growth between sources of supply in strategic options. (67, 73, 75)

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		<p>deliverable sites sufficient to provide a minimum of five years' worth of housing against their housing requirement set out in adopted strategic policies, or against their local housing need where the strategic policies are more than five years old.</p> <p>75. To maintain the supply of housing, local planning authorities should monitor progress in building out sites which have permission. Where the Housing Delivery Test indicates that delivery has fallen below 95% of the local planning authority's housing requirement over the previous three years, the authority should</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		prepare an action plan in line with national planning guidance, to assess the causes of under-delivery and identify actions to increase delivery in future years.			
Small sites	68	Small and medium sized sites can make an important contribution to meeting the housing requirement of an area, and are often built-out relatively quickly. To promote the development of a good mix of sites local planning authorities should: a) identify, through the development plan and brownfield registers, land to accommodate at least 10% of their housing requirement on sites no larger than one hectare;			Integrate an appropriate assumption about small sites provision within strategic options (although note Climate Act requirements affecting this assumption. (68)

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		unless it can be shown, through the preparation of relevant plan policies, that there are strong reasons why this 10% target cannot be achieved;			
New Settlements	72	The supply of large numbers of new homes can often be best achieved through planning for larger scale development, such as new settlements or significant extensions to existing villages and towns, provided they are well located and designed, and supported by the necessary infrastructure and facilities. Working with the support of their communities, and with other authorities if appropriate, strategic policy-making authorities	Include strategic options that incorporate larger scale development. (72)	Complete evidence on sustainable communities sizes and locations in a Greater Cambridge context. (72)	When considering broad areas for larger scale development, consider relationship with existing and/or planned infrastructure. (72) Make realistic assumptions of likely rates of delivery of larger scale development (cf. need to maintain five year land supply). (72)

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		<p>should identify suitable locations for such development where this can help to meet identified needs in a sustainable way. In doing so, they should:</p> <p>a) consider the opportunities presented by existing or planned investment in infrastructure, the area's economic potential and the scope for net environmental gains;</p> <p>b) ensure that their size and location will support a sustainable community, with sufficient access to services and employment opportunities within the development itself (without expecting an unrealistic level of self-containment),</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		<p>or in larger towns to which there is good access;</p> <p>c) set clear expectations for the quality of the development and how this can be maintained (such as by following Garden City principles), and ensure that a variety of homes to meet the needs of different groups in the community will be provided;</p> <p>d) make a realistic assessment of likely rates of delivery, given the lead-in times for large scale sites, and identify opportunities for supporting rapid implementation (such as through joint ventures or locally-led development corporations); and</p> <p>e) consider whether it is appropriate to establish</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		Green Belt around or adjoining new developments of significant size.			
Rural growth and communities	78	To promote sustainable development in rural areas, housing should be located where it will enhance or maintain the vitality of rural communities. Planning policies should identify opportunities for villages to grow and thrive, especially where this will support local services. Where there are groups of smaller settlements, development in one village may support services in a village nearby.	Include strategic options that incorporate rural growth. (78)		When locating growth in rural areas in the strategic options, consider opportunities to support local services, perhaps in one location to support services in nearby villages. (78)
Economic growth	80	Planning policies and decisions should help create the conditions in which businesses can		Growth options evidence informed by Employment Land Review which	

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development. The approach taken should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future. This is particularly important where Britain can be a global leader in driving innovation <sup>40</sup> , and in areas with high levels of productivity, which should be able to capitalise on their performance and potential.		considers potential for future growth in Greater Cambridge (80)	



Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
Economic locational requirements	82	Planning policies and decisions should recognise and address the specific locational requirements of different sectors. This includes making provision for clusters or networks of knowledge and data-driven, creative or high technology industries; and for storage and distribution operations at a variety of scales and in suitably accessible locations.		Growth options evidence informed by Employment Land Review which considers role of key sectors and clusters in driving potential future growth in Greater Cambridge (82)	
Promote health and wellbeing	91	Planning policies and decisions should aim to achieve healthy, inclusive and safe places which: a) promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other –	Include strategic options that support provision of new, or enable access to existing, community infrastructure (91) Include strategic options that enable active travel (91)		

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		<p>for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages;</p> <p>b) are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of clear and legible pedestrian routes, and high quality public space, which encourage the active and continual use of public areas; and</p> <p>c) enable and support healthy lifestyles, especially where this would</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		address identified local health and well-being needs – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.			
Community infrastructure	92	To provide the social, recreational and cultural facilities and services the community needs, planning policies and decisions should: a) plan positively for the provision and use of shared spaces, community facilities (such as local shops, meeting places, sports venues, open space, cultural buildings,	Include strategic options that support provision of new, or enable access to existing, community infrastructure (92) Include strategic options that integrate uses including housing and employment (92)		

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		<p>public houses and places of worship) and other local services to enhance the sustainability of communities and residential environments;</p> <p>b) take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community;</p> <p>c) guard against the unnecessary loss of valued facilities and services, particularly where this would reduce the community's ability to meet its day-to-day needs;</p> <p>d) ensure that established shops, facilities and services are able to develop and modernise, and are retained for the</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		benefit of the community; and e) ensure an integrated approach to considering the location of housing, economic uses and community facilities and services.			
Transport principles	102	Transport issues should be considered from the earliest stages of plan-making and development proposals, so that: a) the potential impacts of development on transport networks can be addressed; b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale,	Include strategic options explicitly relying on existing or proposed transport infrastructure (102) Include strategic options that enable active travel and public transport opportunities (102)		Within the constraints of each strategic option, locate growth closest to existing or proposed transport infrastructure. (102)

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		<p>location or density of development that can be accommodated;</p> <p>c) opportunities to promote walking, cycling and public transport use are identified and pursued;</p> <p>d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and</p> <p>e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
Transport principles	103	The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.	Include strategic options explicitly relying on existing or proposed transport infrastructure (103) Include strategic options that enable active travel and public transport opportunities (103)		Within the constraints of each strategic option, locate growth closest to existing or proposed transport infrastructure. (103)

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
Transport principles	104	<p>Planning policies should:</p> <p>a) support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities;</p> <p>b) be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;</p> <p>c) identify and protect, where there is robust evidence, sites and routes</p>			<p>Within the constraints of each strategic option, locate growth in locations that minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities. (104)</p>



Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development; d) provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans);			
Effective use of land	117	Planning policies and decisions should promote an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Strategic policies should set out a clear strategy for accommodating objectively	Include strategic options that make as much use as possible of previously-developed or 'brownfield' land. (117)	Complete evidence about capacity of existing urban areas, including considering densification opportunities. (117)	

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		assessed needs, in a way that makes as much use as possible of previously-developed or 'brownfield' land.			
Density	122	122. Planning policies and decisions should support development that makes efficient use of land, taking into account: a) the identified need for different types of housing and other forms of development, and the availability of land suitable for accommodating it; b) local market conditions and viability; c) the availability and capacity of infrastructure and services – both existing and proposed – as well as their potential for further improvement and	Include strategic options that are focused on existing urban areas. (122)	Complete evidence about capacity of existing urban areas, including considering densification opportunities. (122)	

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		<p>the scope to promote sustainable travel modes that limit future car use;</p> <p>d) the desirability of maintaining an area's prevailing character and setting (including residential gardens), or of promoting regeneration and change; and</p> <p>e) the importance of securing well-designed, attractive and healthy places.</p> <p>123. Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies and decisions avoid homes being built at low densities, and ensure that developments make</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		<p>optimal use of the potential of each site. In these circumstances:</p> <p>a) plans should contain policies to optimise the use of land in their area and meet as much of the identified need for housing as possible. This will be tested robustly at examination, and should include the use of minimum density standards for city and town centres and other locations that are well served by public transport. These standards should seek a significant uplift in the average density of residential development within these areas, unless it can be shown that there are strong reasons why</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		<p>this would be inappropriate;</p> <p>b) the use of minimum density standards should also be considered for other parts of the plan area. It may be appropriate to set out a range of densities that reflect the accessibility and potential of different areas, rather than one broad density range; and</p> <p>c) local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards).			
Design principles cf. new development	127	<p>Planning policies and decisions should ensure that developments:</p> <p>a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;</p> <p>b) are visually attractive as a result of good architecture, layout and</p>		Consider NPPF Design principles when appraising what a sustainable settlement size is. (127)	

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		<p>appropriate and effective landscaping;</p> <p>c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);</p> <p>d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		<p>e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and</p> <p>f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users<sup>46</sup>; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.</p>			
Green Belt	133	133. The Government attaches great importance	Include strategic options that take	Complete evidence about capacity of	



Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		<p>to Green Belts. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.</p> <p>134. Green Belt serves five purposes:</p> <ul style="list-style-type: none"> <li>a) to check the unrestricted sprawl of large built-up areas;</li> <li>b) to prevent neighbouring towns merging into one another;</li> <li>c) to assist in safeguarding the countryside from encroachment;</li> <li>d) to preserve the setting and special character of historic towns; and</li> </ul>	<p>account of existing Cambridge Green Belt. (133)</p> <p>Include strategic options that consider densifying existing urban areas (137)</p>	<p>existing urban areas, including considering densification opportunities. (117)</p>	

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		<p>e) to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.</p> <p>136. Once established, Green Belt boundaries should only be altered where exceptional circumstances are fully evidenced and justified, through the preparation or updating of plans. Strategic policies should establish the need for any changes to Green Belt boundaries, having regard to their intended permanence in the long term, so they can endure beyond the plan period.</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		<p>137. Before concluding that exceptional circumstances exist to justify changes to Green Belt boundaries, the strategic policy-making authority should be able to demonstrate that it has examined fully all other reasonable options for meeting its identified need for development. This will be assessed through the examination of its strategic policies, which will take into account the preceding paragraph, and whether the strategy:</p> <p>a) makes as much use as possible of suitable brownfield sites and underutilised land;</p> <p>b) optimises the density of development in line with the policies in chapter 11 of</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		<p>this Framework, including whether policies promote a significant uplift in minimum density standards in town and city centres and other locations well served by public transport; and</p> <p>c) has been informed by discussions with neighbouring authorities about whether they could accommodate some of the identified need for development, as demonstrated through the statement of common ground.</p> <p>138. When drawing up or reviewing Green Belt boundaries, the need to promote sustainable patterns of development</p>			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		should be taken into account. Strategic policy-making authorities should consider the consequences for sustainable development of channelling development towards urban areas inside the Green Belt boundary, towards towns and villages inset within the Green Belt or towards locations beyond the outer Green Belt boundary. Where it has been concluded that it is necessary to release Green Belt land for development, plans should give first consideration to land which has been previously-developed and/or is well-served by public transport. They should also set out ways in			

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		which the impact of removing land from the Green Belt can be offset through compensatory improvements to the environmental quality and accessibility of remaining Green Belt land.			
Climate Change	148	The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing	Include strategic options that enable active travel and public transport opportunities. (148)		

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		buildings; and support renewable and low carbon energy and associated infrastructure.			
Climate Change	150	New development should be planned for in ways that: a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and b) can help to reduce greenhouse gas emissions, such as through its location, orientation and			Strategic options to avoid areas of flood risk. (150)

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards.			
	151	To help increase the use and supply of renewable and low carbon energy and heat, plans should: a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts); b) consider identifying suitable areas for renewable and low carbon	Include strategic options that maximise the potential for decentralised energy systems (ie significant scales of development at higher densities) (151)		



Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		energy sources, and supporting infrastructure, where this would help secure their development; and c) identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.			
Planning and flood risk	157	All plans should apply a sequential, risk-based approach to the location of development – taking into account the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property.			Location choices within each strategic option to avoid areas of flood risk. (157)
15. Conserving	170	Planning policies and decisions should contribute	Include strategic options that focus		Location choices within each strategic

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
and enhancing the natural environment		to and enhance the natural and local environment by: a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland	growth on existing urban areas, thereby reducing impact on countryside and natural capital. (170)		option to avoid protected sites of biodiversity importance. (170)
Heritage	185	Plans should set out a positive strategy for the	Include strategic options that make a		

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for...Options assumptions
		<p>conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. This strategy should take into account:</p> <p>a) the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation;</p> <p>b) the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;</p> <p>c) the desirability of new development making a positive contribution to</p>	<p>positive contribution to local character and distinctiveness (ie. don't increase the scale of existing settlements such that they change their role in the existing settlement hierarchy). (185)</p>		

Theme	Reference	Text	Implications for...Strategic options list	Implications for...Evidence informing options	Implications for... Options assumptions
		<p>local character and distinctiveness; and</p> <p>d) opportunities to draw on the contribution made by the historic environment to the character of a place.</p>			

## **Cross check of impact of Greater Cambridge Local Plan First Conversation Big Themes and Greater Cambridge Local Plan Sustainability Appraisal Objectives on strategic spatial options**

Greater Cambridge Local Plan First Conversation 'Big Themes' and within these Key Issues', and Greater Cambridge Local Plan Sustainability Appraisal Objectives were identified and matched together. Following this, consideration was given to whether a similar principle impacting on compilation of the strategic options had been established from the NPPF review above. Finally, consideration was given to whether the Big Themes or Sustainability Appraisal objectives had implications for the strategic spatial options beyond those identified in relation to the NPPF.

<b>'Big Theme' (from Local Plan First Conversation)</b>	<b>'Key Issue' (from Local Plan First Conversation)</b>	<b>Greater Cambridge Local Plan Sustainability Appraisal objective (ordered by 'Key Issue')</b>	<b>Impact on strategic options from NPPF (NPPF paragraph reference)</b>	<b>Implication for strategic options, beyond that identified from national policy</b>
Climate change	Mitigation <i>(Reducing our impact on the climate as far as possible)</i>	SA 12: To minimise Greater Cambridge's contribution to climate change	Include strategic options that enable active travel and public transport opportunities. (148)	None
Climate change	Adaptation – Water <i>(Ensuring that our communities can evolve as our climate changes - to more extreme weather, a hotter climate, and a changing ecology)</i>	SA 10: To achieve sustainable water resource management and enhance the quality of Greater Cambridge's waters SA 11: To adapt to climate change, including minimising flood risk.	Take into account absolute environmental constraints as set out in NPPF footnote 6, such as habitat sites and flood risk, and consider impact on significant policy constraints such as Green Belt (11)	None
Biodiversity and green spaces	Improving the Green Space Network	SA 5: To conserve, enhance, restore and connect wildlife, habitats, species and/or sites of biodiversity or geological interest.	Take into account absolute environmental constraints as set out in NPPF footnote 6, such as habitat sites and flood risk, and consider impact on significant policy constraints such as Green Belt (11)	None

<b>'Big Theme' (from Local Plan First Conversation)</b>	<b>'Key Issue' (from Local Plan First Conversation)</b>	<b>Greater Cambridge Local Plan Sustainability Appraisal objective (ordered by 'Key Issue')</b>	<b>Impact on strategic options from NPPF (NPPF paragraph reference)</b>	<b>Implication for strategic options, beyond that identified from national policy</b>
Biodiversity and green spaces	Achieving Biodiversity Net Gain on Future Developments			No spatial implication relevant to compiling strategic spatial options.
Biodiversity and green spaces	Tree Cover	N/A		No spatial implication relevant to compiling strategic spatial options.
Wellbeing and social inclusion	Involving Communities in Planning for Their Future		N/A	No spatial implication
	Creating Safe and Inclusive Communities	SA 3: To encourage social inclusion, strengthen community cohesion, and advance equality between those who share a protected characteristic (Equality Act 2010) and those who do not.	N/A	No spatial implication relevant to compiling strategic spatial options.

<b>'Big Theme' (from Local Plan First Conversation)</b>	<b>'Key Issue' (from Local Plan First Conversation)</b>	<b>Greater Cambridge Local Plan Sustainability Appraisal objective (ordered by 'Key Issue')</b>	<b>Impact on strategic options from NPPF (NPPF paragraph reference)</b>	<b>Implication for strategic options, beyond that identified from national policy</b>
	Encouraging Healthy Lifestyles	SA 2: To maintain and improve access to centres of services and facilities including health centres and education. SA 4: To improve public health, safety and wellbeing and reduce health inequalities	When locating growth in rural areas in the strategic options, consider opportunities to support local services, perhaps in one location to support services in nearby villages. (78) Include strategic options that support provision of new, or enable access to existing, community infrastructure (91) Include strategic options that enable active travel (91) Include strategic options that are focused on existing urban areas. (122)	None



<b>'Big Theme' (from Local Plan First Conversation)</b>	<b>'Key Issue' (from Local Plan First Conversation)</b>	<b>Greater Cambridge Local Plan Sustainability Appraisal objective (ordered by 'Key Issue')</b>	<b>Impact on strategic options from NPPF (NPPF paragraph reference)</b>	<b>Implication for strategic options, beyond that identified from national policy</b>
	Air Quality	SA 13: To limit air pollution in Greater Cambridge and ensure lasting improvements in air quality.		No spatial implication relevant to compiling strategic spatial options.
Great Places	Protecting the Best of What Already Exists	SA 6: To conserve and enhance the character and distinctiveness of Greater Cambridge's landscapes and townscapes, maintaining and strengthening local distinctiveness and sense of place. SA 7: To conserve and/or enhance the qualities, fabric, setting and accessibility of Greater Cambridge's historic environment.	N/A	No spatial implication relevant to compiling strategic spatial options.
Great Places	Creating Beautiful New Buildings and Places	N/A	N/A	No spatial implication relevant to compiling strategic spatial options.

<b>'Big Theme' (from Local Plan First Conversation)</b>	<b>'Key Issue' (from Local Plan First Conversation)</b>	<b>Greater Cambridge Local Plan Sustainability Appraisal objective (ordered by 'Key Issue')</b>	<b>Impact on strategic options from NPPF (NPPF paragraph reference)</b>	<b>Implication for strategic options, beyond that identified from national policy</b>
Jobs	Space for Businesses to Grow	SA 14: To facilitate a sustainable and growing economy	Growth options evidence informed by Employment Land Review which considers potential for future growth in Greater Cambridge (80)	None
Jobs	Protecting Existing Employment Land			No spatial implication relevant to compiling strategic spatial options.
Jobs	Creating a Range of Jobs	SA 15: To deliver, maintain and enhance access to diverse employment opportunities, to meet both current and future needs in Greater Cambridge.	Growth options evidence informed by Employment Land Review which considers role of key sectors and clusters in driving potential future growth in Greater Cambridge (82)	Options include different sources of supply which would support a range of employment types

<b>'Big Theme' (from Local Plan First Conversation)</b>	<b>'Key Issue' (from Local Plan First Conversation)</b>	<b>Greater Cambridge Local Plan Sustainability Appraisal objective (ordered by 'Key Issue')</b>	<b>Impact on strategic options from NPPF (NPPF paragraph reference)</b>	<b>Implication for strategic options, beyond that identified from national policy</b>
Jobs	Where Jobs are Created	N/A	Growth options evidence informed by Employment Land Review which considers role of key sectors and clusters in driving potential future growth in Greater Cambridge (82)	None
Jobs	How Our City, Town and Village Centres Evolve and Adapt	N/A	None	No spatial implication relevant to compiling strategic spatial options.
Jobs	Managing the Visitor Economy	N/A	None	No spatial implication relevant to compiling strategic spatial options.

<b>'Big Theme' (from Local Plan First Conversation)</b>	<b>'Key Issue' (from Local Plan First Conversation)</b>	<b>Greater Cambridge Local Plan Sustainability Appraisal objective (ordered by 'Key Issue')</b>	<b>Impact on strategic options from NPPF (NPPF paragraph reference)</b>	<b>Implication for strategic options, beyond that identified from national policy</b>
Homes	The Need for New Homes	SA 1: To ensure that everyone has the opportunity to live in a decent, well-designed, sustainably constructed and affordable home	Growth options evidence (including housing) informed by Employment Land Review which considers role of key sectors and clusters in driving potential future growth in Greater Cambridge (82) Include strategic options that integrate uses including housing and employment (92)	None
Homes	Affordable Homes	SA 1: To ensure that everyone has the opportunity to live in a decent, well-designed, sustainably constructed and affordable home	None	No spatial implication relevant to compiling strategic spatial options.
Homes	Diverse Housing for Diverse Communities	SA 1: To ensure that everyone has the opportunity to live in a decent, well-designed, sustainably constructed and affordable home	None	No spatial implication relevant to compiling strategic spatial options.

<b>'Big Theme' (from Local Plan First Conversation)</b>	<b>'Key Issue' (from Local Plan First Conversation)</b>	<b>Greater Cambridge Local Plan Sustainability Appraisal objective (ordered by 'Key Issue')</b>	<b>Impact on strategic options from NPPF (NPPF paragraph reference)</b>	<b>Implication for strategic options, beyond that identified from national policy</b>
Homes	The Needs of Gypsies and Travellers and Caravan Dwellers	SA 1: To ensure that everyone has the opportunity to live in a decent, well-designed, sustainably constructed and affordable home SA 4: To improve public health, safety and wellbeing and reduce health inequalities	None	No spatial implication relevant to compiling strategic spatial options.
Homes	Housing Quality	SA 1: To ensure that everyone has the opportunity to live in a decent, well-designed, sustainably constructed and affordable home	None	No spatial implication relevant to compiling strategic spatial options.

<b>'Big Theme' (from Local Plan First Conversation)</b>	<b>'Key Issue' (from Local Plan First Conversation)</b>	<b>Greater Cambridge Local Plan Sustainability Appraisal objective (ordered by 'Key Issue')</b>	<b>Impact on strategic options from NPPF (NPPF paragraph reference)</b>	<b>Implication for strategic options, beyond that identified from national policy</b>
Infrastructure	Reducing the Need to Travel and Increasing Access to Sustainable Transport Options	SA 2: To maintain and improve access to centres of services and facilities including health centres and education. SA 4: To improve public health, safety and wellbeing and reduce health inequalities	Within the constraints of each strategic option, locate growth closest to existing or proposed transport infrastructure. (103) Within the constraints of each strategic option, locate growth in locations that minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities. (104)	None

<b>'Big Theme' (from Local Plan First Conversation)</b>	<b>'Key Issue' (from Local Plan First Conversation)</b>	<b>Greater Cambridge Local Plan Sustainability Appraisal objective (ordered by 'Key Issue')</b>	<b>Impact on strategic options from NPPF (NPPF paragraph reference)</b>	<b>Implication for strategic options, beyond that identified from national policy</b>
Infrastructure	Securing New Infrastructure to Accompany New Homes and Jobs	SA 2: To maintain and improve access to centres of services and facilities including health centres and education. SA 4: To improve public health, safety and wellbeing and reduce health inequalities	Include strategic options that incorporate larger scale development. (72) Complete evidence on sustainable communities sizes and locations in a Greater Cambridge context. (72) When considering broad areas for larger scale development, consider relationship with existing and/or planned infrastructure. (72)	None

<b>'Big Theme' (from Local Plan First Conversation)</b>	<b>'Key Issue' (from Local Plan First Conversation)</b>	<b>Greater Cambridge Local Plan Sustainability Appraisal objective (ordered by 'Key Issue')</b>	<b>Impact on strategic options from NPPF (NPPF paragraph reference)</b>	<b>Implication for strategic options, beyond that identified from national policy</b>
No directly relevant 'Big Theme'		SA 8: To make efficient use of Greater Cambridge's land resources through the re-use of previously developed land and conserve its soils.	Include strategic options that make as much use as possible of previously-developed or 'brownfield' land. (117) Include strategic options that focus growth on existing urban areas, thereby reducing impact on countryside and natural capital. (170)	None
No directly relevant 'Big Theme'		SA 9: To conserve mineral resources in Greater Cambridge.		Minerals sites identified as environmental constraint for consideration.



## **Appendix 2: Identifying the full range of reasonable spatial options**

# Greater Cambridge Local Plan: Identifying the full range of reasonable spatial options

Greater Cambridge Shared Planning  
June 2020

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## Purpose

This document seeks to identify the spatial development options to be considered in the preparation of the Greater Cambridge Local Plan. In doing so it seeks to address the requirements of Strategic Environmental Assessment Regulations, such that 'only reasonable, realistic and relevant alternatives [are] put forward'<sup>9</sup>.

To achieve this, the document seeks to:

- assess whether the spatial choices set out in the Greater Cambridge Local Plan: First Conversation consultation are indeed reasonable; and
- identify whether there are any additional reasonable spatial options that should be added to the First Conversation choices as assessed above.

This review forms an appendix to the Greater Cambridge Local Plan: strategic spatial options for testing - methodology note. That note sets out how the identified list of reasonable spatial options will then be translated into strategic (non-site specific) options for testing.

## Method

### Central questions to answer

For assessing First Conversation identified options, and for considering potential additional options, the central questions to answer are whether each idea is:

- Realistic, relevant and reasonable, in a Greater Cambridge context; and
- Substantively different to other identified spatial options.

The approaches taken to reviewing First Conversation options and potential additional options are set out below.

### Assessing spatial choices set out in Greater Cambridge Local Plan: First Conversation consultation

Prior to the First Conversation consultation, consideration was given to whether the spatial choices it identified were reasonable and distinct from each other. In particular, given that these options were developed specifically for a Greater Cambridge context, it can be assumed that each option is both realistic and relevant.

At this next stage of seeking to identify the full range of reasonable options for strategic (non-site specific) testing, it is considered appropriate to assess whether

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<sup>9</sup> Office of the Deputy Prime Minister, 2004. Practical guidance on applying European Directive 2001/42/EC "on the assessment of the effects of certain plans and programmes on the environment, Appendix 6

the likely spatial distribution of growth implied by each option is indeed reasonable, and whether the distributions generated by the options are sufficiently different from each other to enable testing at a strategic level for transport and other impacts.

The spatial options identified within the Greater Cambridge Local Plan First Conversation consultation were:

- [Densification of existing urban areas](#)
- [Edge of Cambridge - outside the Green Belt](#)
- [Edge of Cambridge - Green Belt](#)
- [Dispersal - new settlements](#)
- [Dispersal - villages](#)
- [Public transport corridors](#)

### **Testing of First Conversation options**

To answer the central questions set out at 2.1, the following steps have been completed for each First Conversation option:

- A. Identify aim/desired effects of that option
- B. Identify the likely spatial distribution of growth generated by the option
- C. Assessment of whether the option is reasonable<sup>10</sup> in a Greater Cambridge context, based on a high-level judgement drawing on officer knowledge, including consideration of:
  - Broad compatibility with national planning policy
  - absolute constraints (including land capacity, flood risk and habitats of national or international importance)
  - viability and deliverability

### **Cross-check: review of the uniqueness of the reasonable additional options**

Cross-check to assess if the likely spatial distribution of growth generated by First Conversation options are substantively different to each other.

### **Identifying additional reasonable spatial options**

A review has been completed of a range of approaches to identifying spatial options, including a review of national policy, plan-making practice within the UK, and of ideas put forward from other sources.

### **Sources considered, and definitions**

The paragraphs below list the sources considered to help identify additional spatial options, and the nature of the ideas derived from them.

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<sup>10</sup> Note again as at 2.2 that all First Conversation options are assumed to be relevant and realistic, given that they were developed specifically for a Greater Cambridge context.

## **Revisit of sources that informed First Conversation options – spatial options**

Sources that informed the First Conversation options included the strategy in the adopted Cambridge and South Cambridgeshire Local Plans and the Cambridgeshire & Peterborough Independent Economic Review.

These sources set out Cambridgeshire-specific spatial options of the same nature as the First Conversation options (i.e. a distribution of growth requirements at different broad locations within a settlement hierarchy), and therefore can be compared consistently with First Conversation options and either confirmed or rejected as being additional and reasonable. Example options considered include:

- A1: Densification
- A2: Fringe Development

## **National Planning Policy Framework - spatial principles**

As a national policy document, the NPPF does not set out specific spatial options that can be directly translated into locally specific options. Rather, it “provides a framework [perhaps best described as principles] within which locally-prepared plans for housing and other development can be produced”<sup>11</sup>. Given this, Appendix 2 to the Greater Cambridge Local Plan: strategic spatial options for testing - methodology note identifies a number of spatial principles set out in the NPPF.

This review considers whether the principles are incorporated into one or more First Conversation option. Example NPPF spatial principles considered include:

- B4: Integrate uses including housing and employment
- B5: Explicitly rely on existing or proposed transport infrastructure

## **Plan-making practice in the UK – spatial options**

This included reviewing spatial options explored in Local Plan consultations from a range of plans in different contexts. These are of the same nature as the First Conversation options, and therefore can be compared consistently with First Conversation options and either confirmed or rejected as being additional and reasonable.

Example strategy options considered include:

- C3: Supporting an existing high-tech cluster
- C8: Expanded Growth Area

## **Ideas proposed from other sources, including spatial concepts**

Ideas were drawn from a range of sources including:

- Wolfson Prize for Economics 2014
- Cambridge Futures, 2000
- The Cambridge to Oxford Connection: Ideas Competition
- 5th Studio for NIC, 2017. Cambridge, Milton Keynes and Oxford Future Planning Options Project

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<sup>11</sup> Ministry of Housing, Communities and Local Government, 2019. National Planning Policy Framework, para. 1.

- Ideas from staff within Greater Cambridge Shared Planning
- Responses to First Conversation options

Some of the ideas arising from these other sources can be considered as spatial options or principles as per the descriptions above. However, some could best be described as spatial concepts, in that they relate to the organisation of development at a more granular level in comparison to the broad distribution of development envisaged for spatial options. Such spatial concepts could potentially be applied within a number of (broad distribution) spatial options.

Example spatial concepts considered include:

- D02: New living campus clusters
- D06: Edge Intensification

For the purpose of this review, spatial concepts have been considered in the same way as the spatial options and principles, in order to consider whether they in fact have implications for the broad distribution of growth. However, further exploration of spatial concepts may be undertaken separately, alongside testing of strategic options, to inform the spatial organisation of development that could be delivered under each of the broad options. Later in the plan-making process, the preferred strategy may include a combination of spatial options – i.e. broad distribution of growth across the Greater Cambridge area - and spatial concepts - guiding the spatial organisation of development in the preferred locations.

Having identified a range of different approaches, the review completed the tasks set out below:

### **Sifting of long list**

To focus the review on ideas that warranted substantive consideration, sifting was completed of the long list of 95 ideas. Ideas were sifted out where they:

- clearly duplicate one or more spatial options identified within the Greater Cambridge Local Plan First Conversation consultation
- suggest an option without a clear spatial focus (eg. C06: Dispersal plus urban growth; E07: Blended Spatial Strategy). Whilst it is likely that the preferred spatial scenario taken forward in the Local Plan will include more than one type of location within Greater Cambridge, to consider impacts at a strategic level there is a need for clear differentiation between options.

Commentary is provided to justify the judgement made. Where the answer was unclear the option is put forward for full consideration.

## **Full testing of shortlisted options**

For each spatial idea identified for full testing through this review, the following steps have been completed:

- A. Identify aim/desired effects of that idea
- B. Assessment of whether the option is likely to be relevant in a Greater Cambridge context, to help inform an assessment of whether the option is reasonable
- C. Dependent on task B, identify the potential spatial distribution of growth generated by it in a Greater Cambridge context
- D. Drawing on task C, assessment of whether the likely distribution of growth generated by an option is substantively different to the existing spatial options identified in the First Conversation document, as translated into strategic spatial options
- E. If the option passes steps B and D, an assessment of whether the option is reasonable in a Greater Cambridge context, based on a high-level judgement drawing on officer knowledge, including consideration of:
  - Broad compatibility with national policy
  - absolute constraints (including land capacity, flood risk and habitats of national or international importance)
  - viability and deliverability

## **Time Horizon**

Build out of a number of the larger scale ideas assessed within this review would continue across more than one plan period, as larger scale development usually has a long lead in time from planning permission to the start of construction. On the other hand, the Greater Cambridge Local Plan will need to meet a set homes requirement by the end of its plan period.

To support an approach to testing ideas that acknowledges this tension:

- larger-scale longer-term ideas have been identified within the description of each idea,
- For steps C and D set out above consideration has been given separately to a limited plan period, and to the overall effect of the idea once built out.
- For step E, consideration is given to the overall effect of the idea, with reference made within the deliverability assessment to likely build out in relation to the plan period.

Conclusions about which options are reasonable in relation to the Greater Cambridge Local Plan are set out in Summary of findings below.



## **Cross-check: review of the uniqueness of the reasonable additional options**

Cross-check to assess if the additional options that are considered reasonable are substantively different to each other.

## **Further consideration of reasonable additional options**

This section considers further the reasonable additional options compared through the cross-checking step, in order to confirm which should be taken forward for testing as strategic spatial options.

## **Summary of findings**

### **Testing of First Conversation options**

Assessment of the First Conversation options is set out at Annex A. This assessment confirmed that all six First Conversation options should be taken forward for strategic options testing.

### **Identifying any additional reasonable spatial options**

#### **Sifting of long list**

The sifting of the long list is set out in full at Annex B. Based on this sifting, out of a long list of 97 options, the 29 options listed below were put forward for full consideration:

#### **Revisit of sources that informed First Conversation options**

- A0 Current strategy
- A03 Dispersal (sub-regional)

#### **Spatial principles set out in the National Planning Policy Framework**

- B04 Integrate uses including housing and employment
- B05 Explicitly rely on existing or proposed transport infrastructure
- B12 Proportionate growth approach: Focus growth in locations that make a positive contribution to local character and distinctiveness

#### **Plan-making practice in the UK**

- C03 Supporting an existing high-tech corridor.
- C08 Expanded growth area
- C13 All development located in the high-tech growth area (all in Science Vale)
- C18 Locating development in particular settlements where it could help fund projects
- C22 Spokes and hubs
- C25 'String' settlement/ settlement cluster
- C26 'Wheel' settlement cluster

### **Ideas proposed from other sources**

- D01 Garden City, growing an existing city
- D02 New living campus clusters
- D03 Town cluster; village cluster; village
- D06 Edge Intensification
- D11 String City
- D13 Minimum growth
- D18 Virtual Highway
- D20 Copenhagen Green Finger Plan
- D21 Net zero growth
- D22 Spatial urbanism approach

### **Responses to First Conversation options**

- E02 Housing in close proximity to employment/innovation centres
- E03 Tied cottages /key worker housing
- E05 The 'Gruene Finger'
- E06 Focus development to the east side of the city
- E08 The A428 Corridor
- E16 Brownfield Sites First
- E21 'Nature recovery network'

### **Full testing of shortlisted options**

Full testing of the shortlisted options is set out at Annex C. This assessment identified the following options as being reasonable and substantively different to the First Conversation options.

- Principle B04: Integrate uses including housing and employment
- Option C03: Supporting an existing high-tech corridor
- Option C13: All development located in the high-tech growth area (All in Science Vale)
- Principle E03: Housing in close proximity to employment/innovation centres
- Principle B05: Explicitly rely on existing or proposed transport infrastructure
- Option C08: Expanded growth area
- Option E08: A428 Corridor
- Principle D24: Nature First
- Principle E21: Nature Recovery Network

### **Cross-check and further exploration of the reasonable additional options**

The cross-check review and further exploration of the options identified as being reasonable and substantively different to the First Conversation options is set out at

Annexes D and E. This cross-check identified the following options as being unique. These options are therefore recommended to be added as a new option for testing at a strategic level:

- Supporting a high-tech corridor by integrating homes and jobs
- Expanding a growth area around transport nodes

### List of options for testing

The list of options for testing is set out at Annex E, including descriptions. The options are as follows:

- Densification of existing urban areas
- Edge of Cambridge (incorporating outside and within the Green Belt)
- Dispersal - new settlements
- Dispersal – villages
- Public transport corridors
- Supporting a high-tech corridor by integrating homes and jobs
- Expanding a growth area around transport nodes

### Emerging themes and areas for further work

In considering the long and short lists of potential additional options, a number of themes and ideas have arisen, including:

- Options that are not additional but can inform the nature of existing options
- Area-specific options
- Clustered growth concepts
- Larger scale, longer term ideas

#### **Assessed options that can inform the nature of existing options**

A number of assessed options were considered not to be additional to existing options, but prompted consideration of the nature of the existing options for testing, including:

##### **Densification**

Relevant options considered included:

- Option A02: Densification
- Principle B08: Optimise the density of development
- Option C17: Raising Densities
- Concept D04: Town Centre Intensification
- Concept D05: Suburban Intensification

Ideas arising include:

- Consider a range of densification options including a maximum density option
- Consider a range of densification locations, including town centre and suburban opportunities

##### **Edge of Cambridge:**

Relevant options considered included:

- Concept D01: Garden City, growing an existing city

Ideas arising include:

- The Garden City idea considered extends an existing city along public transport corridors, such that the idea almost merges with Option D20: Copenhagen Green Finger Plan. See discussion below.

### **Transport corridors**

Relevant options considered included:

- Concept D20: Copenhagen Finger plan
- Concept C25: 'String' settlement/ settlement cluster
- Concept D22: Spatial Urbanism approach
- Concept D03: Town cluster; village cluster; village (VeloCity)

Ideas arising include:

- The Copenhagen Green finger plan extended the city along public transport corridors providing continuous broad corridors of development separated by green wedges. It is proposed to consider this scenario within the Public Transport Corridors option.
- Concepts D03: Town cluster; village cluster; village and D22: Spatial Urbanism approach both define sustainable locations to an extent in relation to assumptions about reasonable cycling distances to public transport nodes/local centres. Further consideration may be given to these concepts in parallel to the strategic options testing process.

### **Area specific options**

Relevant options considered included:

- Principle B04: Integrate uses including housing and employment
- Option C03: Supporting an existing high-tech corridor
- Option C13: All development located in the high-tech growth area (All in Science Vale)
- Principle E03: Housing in close proximity to employment/innovation centres
- Option C08: Expanded growth area
- Option E08: A428 Corridor

The above options and principles were considered to be additional to the typology focused First Conversation options. Amalgams of them were put forward for testing as two strategic spatial options.

### **Clustered growth concepts**

Relevant concepts considered included:

- Concept D02: New living campus clusters
- Concept D03: Town cluster; village cluster; village (VeloCity)
- Concept D11: String City

As noted at [2.2.1 Sources considered, and definitions](#), most of the ideas proposed from other sources are spatial concepts rather than options in themselves. In testing the impact of these on the broad distributions of growth many are in effect hybrids of existing options. As noted above, further consideration may be given to these concepts in parallel to the strategic options testing process.

### **Larger scale, longer term ideas**

As introduced at [2.3.4 Time Horizon](#), a number of ideas considered were of a larger scale and therefore longer term than others. Relevant concepts considered included:

- FC4: Dispersal – new settlements
- D01: Garden City, growing an existing city
- D02: New living campus clusters
- D11: String City

Given that to be found sound at Examination, Local Plans must be deliverable over the plan period, this factor is of significance in assessing whether larger scale, longer term ideas provide reasonable options.

As such, it is difficult to conceive how very large-scale ideas such as D01 and D11, which both conceive of city-scale growth, could be initiated within the relatively limited horizon of a ~20 year plan period.

In this regard, intentionally scalable approaches such as D02: New living campus clusters, which conceives of small scale new settlements located close to one another that eventually form clusters, would appear to have particular benefits in balancing the tension between short term deliverability and long-term sustainability. As noted above, further consideration may be given to this concept in parallel to the strategic options testing process.

## **Annex A. Assessment of First Conversation options**

### **Densification of existing urban areas**

#### **Source**

- Greater Cambridge First Conversation website: [Densification of existing urban areas](#)

#### **Description (from source)**

This approach would focus new homes and jobs within Cambridge, because it is the main urban area and centre for services and facilities. This would be done by encouraging intensive use of brownfield land, building taller buildings, building on existing residential back gardens or in-between existing buildings, or redeveloping underused sites at higher densities. It could also look to increase the density in planned new settlements.

#### **A. Purpose/effects (from source)**

##### **Advantages:**

- Reduces the need to use greenfield land to accommodate growth.
- Living in central, well-connected and vibrant areas is important for many people.
- Reduces the need to travel by car and so makes a positive contribution to addressing climate change.
- Sites growth near to existing centres, which can continue to support their vitality and viability.

##### **Challenges:**

- Needs to respond to the character of Cambridge, and protect its historic environment and green spaces, therefore not suitable in all areas.
- Land assembly can be challenging with multiple landowners often involved.

## B. Potential distribution of growth in a Greater Cambridge context



### Description

Growth focused in urban areas of Cambridge (including at North East Cambridge), Cambourne, Northstowe, Waterbeach New Town and Bourn Airfield New Village.

## C. Reasonable?

### Reasonable: national policy?

Yes – compatible with NPPF para. 117 and others on making effective use of land.

### Reasonable: absolute constraints?

- Capacity: Partly.
  - Yes – it is assumed that there is some capacity for densification in Cambridge urban area and planned new settlements.
  - No – it is assumed that under medium or high growth scenarios there may not be sufficient capacity in densification locations to meet all development requirements.
- Environmental constraints: Unknown – assume Partly.
  - Given that the intention of this option is to locate development within existing urban areas it is assumed that this would not be impacted significantly by environmental constraints such as flooding and significant habitats.
  - Impacts on heritage assets within Cambridge in particular would need to be considered when assessing capacity for densification.

### **Reasonable: viable and deliverable?**

- Viability: Unknown, assume yes
  - Whilst development of brownfield land usually involves higher site preparation costs to address issues such as land contamination, development in Cambridge in particular, as a location with high land values, is assumed likely to be viable.
- Deliverability: Unknown, assume challenging
  - As noted above at Step A, land assembly can be challenging with multiple landowners often involved.

### **Edge of Cambridge - outside the Green Belt**

#### **Source**

- Greater Cambridge First Conversation website: [Edge of Cambridge - outside the Green Belt](#)

#### **Description (from source)**

This approach would create new homes and jobs in extensions on the edge of Cambridge, using land not in the green belt. The only large site on the edge of Cambridge not in the Green Belt is Cambridge Airport (N.B. North East Cambridge is considered within FC1: Densification of existing urban areas).

#### **A. Purpose/effects (from source)**

##### **Advantages:**

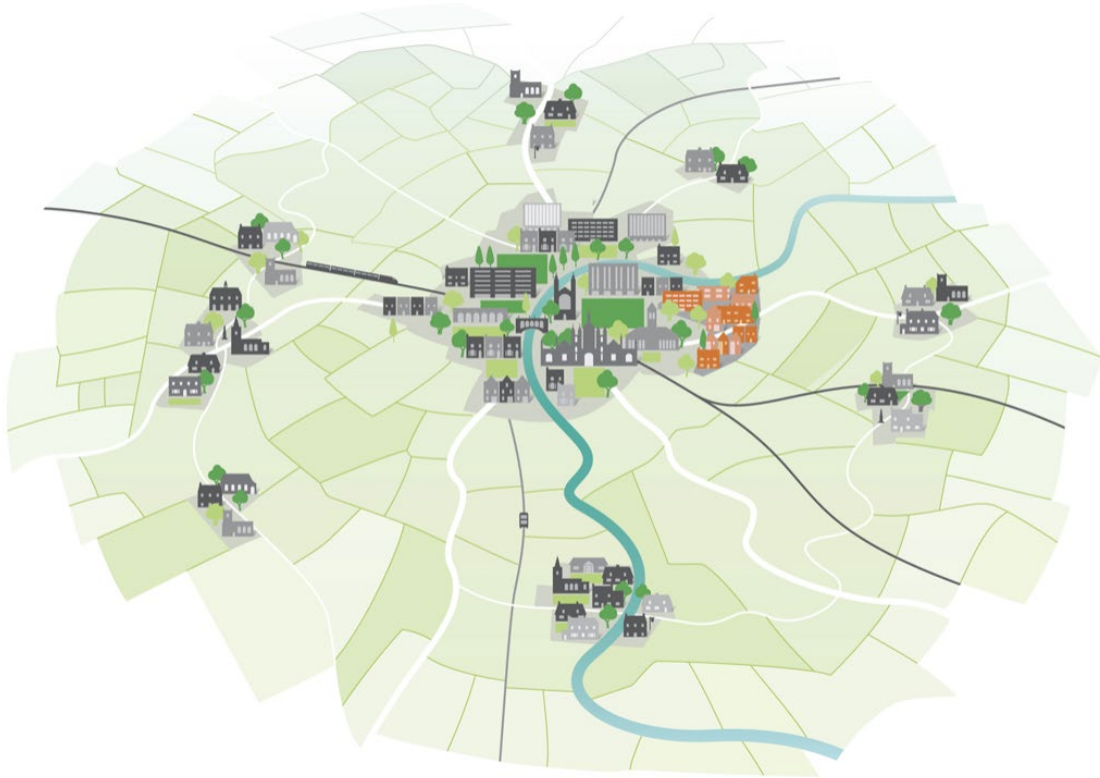
- Benefits from the services and infrastructure at the existing centre, maximising the potential for sustainable transport.
- Large scale urban extensions present the opportunity for new on-site infrastructure, such as schools, local centres and green spaces that can bring benefits to the existing and new community.
- Cambridge Airport has previously been identified as suitable location for a new urban quarter to Cambridge and was removed from the Green Belt in earlier plans. It is identified as safeguarded land for longer term development in the 2018 Local Plans if it becomes available.
- Makes use of brownfield land.

##### **Challenges:**

- Confirmation whether safeguarded land at Cambridge Airport can be developed within the next 20 years will be important as part of considering whether to allocate it in the new Local Plan.



## B. Potential distribution of growth in a Greater Cambridge context



### Description

See description above.

## C. Reasonable?

### Reasonable: national policy?

Yes – compatible with NPPF para. 136 regarding only making changes to Green Belt boundaries in exceptional circumstances. and para. 117 on making effective use of land.

### Reasonable: absolute constraints?

- Capacity: Partly.
  - Yes – there is capacity at Cambridge Airport safeguarded for development in the adopted Local Plans; there is also capacity at North East Cambridge.
  - No – it is assumed that under medium or high growth scenarios there may not be sufficient capacity at these locations to meet all development requirements.
- Environmental constraints: Yes.
  - In order for Cambridge Airport to be identified as safeguarded land for development in Local Plans suggests that this location has passed sufficient testing to suggest that significant scales of development can take place without generating significant adverse environmental impacts. The impacts of proposed development at this location will

again be subject to testing through the ongoing plan-making processes.

**Reasonable: viable and deliverable?**

- Viability: Yes
  - Development in Cambridge in particular, as a location with high land values, is likely to be viable.
  - Land at Cambridge Airport and is being actively promoted by the landowner, which implies that development is both viable and deliverable.
- Deliverability: Partly
  - Land at Cambridge Airport and is being actively promoted by the landowner, which implies that development is both viable and deliverable.
  - As noted at Step A, confirmation whether safeguarded land at Cambridge Airport can be developed within the next 20 years will be important as part of considering whether to allocate it in the new Local Plan.

**Edge of Cambridge - Green Belt**

**Source**

- Greater Cambridge First Conversation website: [Edge of Cambridge - Green Belt](#)

**Description (from source)**

This approach would create new homes and jobs in extensions on the edge of Cambridge, involving release of land from the Green Belt.

**A. Purpose/effects (from source)**

Advantages:

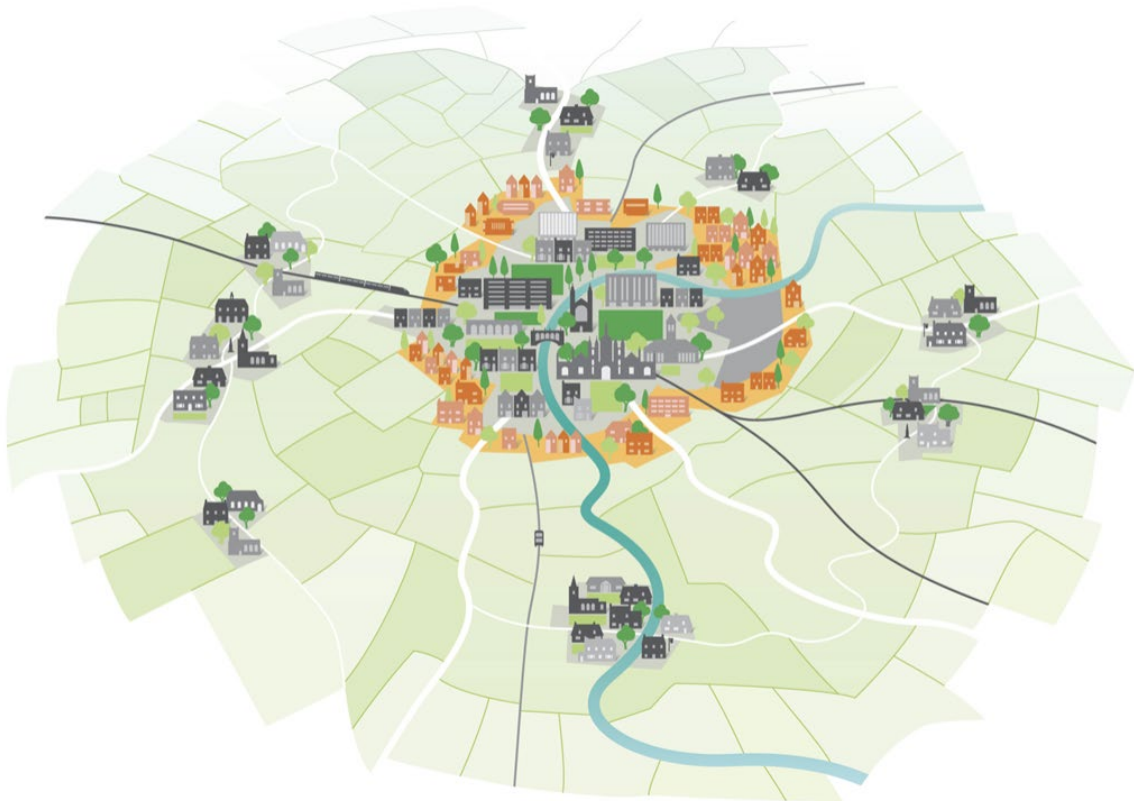
- Benefits from the services and infrastructure at the existing centre, maximising the potential for sustainable transport.
- Large scale urban extensions present the opportunity for new on-site infrastructure, such as schools, local centres and green spaces that can bring benefits to the existing and new community.

Challenges:

- Potential major impact on the landscape and loss of agricultural land.
- Requires the use of greenfield land on the edge of urban areas, which around Cambridge would require the release of Green Belt land. National planning policy is clear that Green Belt boundaries should only be altered where

exceptional circumstances are fully evidenced and justified, through the preparation or updating of plans. This includes a requirement that all other reasonable options, including working with neighbouring districts, have been fully explored. It also says that when reviewing Green Belt boundaries, the need to promote sustainable patterns of development should be taken into account.

## **B. Potential distribution of growth in a Greater Cambridge context**



### **Description**

Focus growth on edge of Cambridge in Green Belt locations.

## **C. Reasonable?**

### **National policy**

Partly

- No – a growth option focused on Green Belt land would not be compatible with NPPF para. 136 on only making changes to Green Belt boundaries in exceptional circumstances.
- Yes – it may be that testing identifies this option as the most environmentally sustainable, which might support exceptional circumstances for removing land from the Green Belt.

On balance, it is considered important to test the sustainability benefits of options including land in the Green Belt so as to test all reasonable options, including not prejudging whether there are exceptional circumstances for amending Green Belt boundaries. The Councils will follow all requirements set out in the NPPF paras 137/8 when considering development options in relation to Green Belt.

**Reasonable: absolute constraints?**

- Capacity: Partly
  - Yes - There is undeveloped land on the edge of Cambridge within the Green Belt.
  - No – it is assumed that under medium or high growth scenarios there may not be sufficient capacity at these locations to meet all development requirements.
- Environmental constraints: Unknown – assume yes.
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints.

**Reasonable: viable and deliverable?**

- Viability: Yes
  - Development on the edge of Cambridge, as a location with high land values, is likely to be viable.
- Deliverability: Yes
  - Development on green field sites relatively close to existing infrastructure should support deliverability.

**Dispersal - new settlements**

**Source**

- Greater Cambridge First Conversation website: [Dispersal - new settlements](#)

**Description (from source)**

New settlements would establish a whole new town or village, providing homes, jobs and supporting infrastructure in a new location, and would need to be supported by strategic transport infrastructure connecting to Cambridge.

*Larger-scale/longer term idea*

**A. Purpose/effects (from source)**

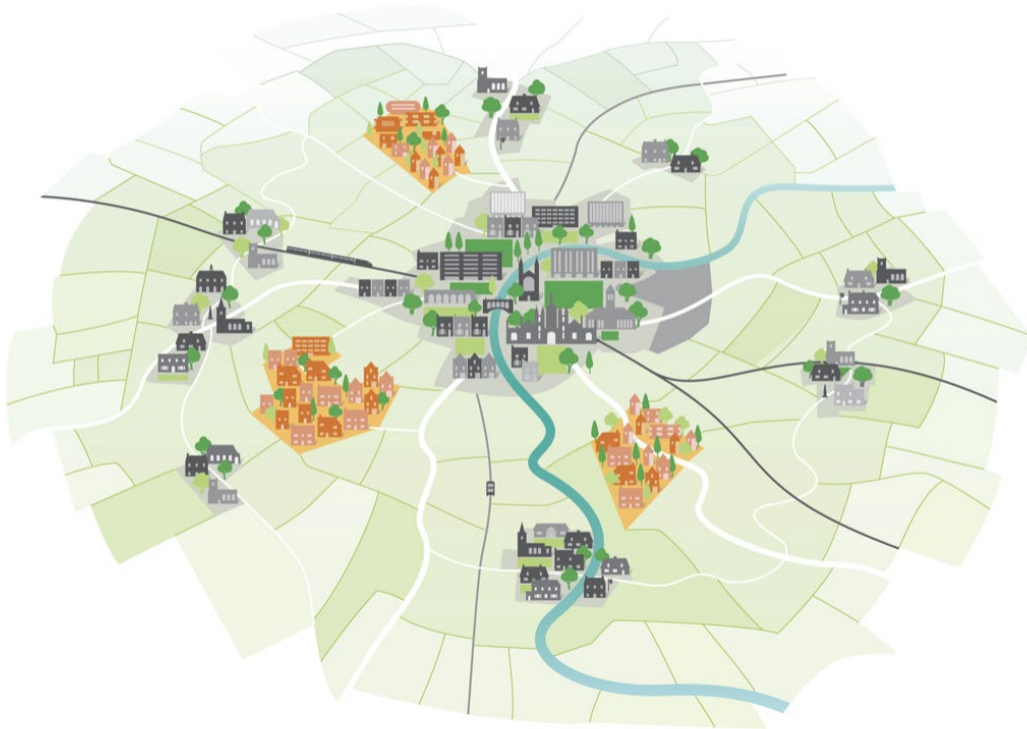
Advantages:

- Provides an opportunity for significant new infrastructure to be delivered.
- Provides an opportunity for substantial growth in a new location connected to the transport network.
- May avoid removing land from the Green Belt

Challenges:

- Potential major impact on the landscape and loss of agricultural land.
- Can take longer to become reality, due to starting from scratch.
- Where it relies on proposed new transport infrastructure, even where it is included in the plans of the transport authorities, the level of certainty over delivery and timing of that infrastructure is crucial.

## B. Potential distribution of growth in a Greater Cambridge context



### Description

- Plan period: First phases of new settlements supported by strategic transport infrastructure connecting to Cambridge.
- Built out: towns and villages connected to Cambridge supported by strategic transport infrastructure connecting to Cambridge.

## C. Reasonable?

### National policy

Yes – compatible with NPPF para. 72 on the potential benefits of planning for larger scale growth including new settlements.

### Reasonable: absolute constraints?

- Capacity: Yes
  - There is undeveloped land within Greater Cambridge which in theory has capacity for additional new settlements.
- Environmental constraints: Unknown – assume yes.

- It is assumed that some growth is permissible but still limited by absolute environmental constraints.

### **Reasonable: viable and deliverable?**

- Viability: Unknown – assume partly
  - Following allocation in the South Cambridgeshire Local Plan, proposed new settlements at Waterbeach and Bourn are progressing through the application process, implying that developing new settlements in South Cambridgeshire is currently viable.
  - Cost and capacity of transport options may have a significant impact on viability.
- Deliverability: Unknown – assume challenging
  - Deliverability is very much dependent on transport costs/improvements, especially if these need to be implemented in advance of new development.
  - New settlements usually have a long lead in time from planning permission to the start of construction. As such, confirmation of how much of a new settlement could be developed within the next 20 years will be important as part of considering whether to allocate it in the new Local Plan.

## **Dispersal - villages**

### **Source**

- Greater Cambridge First Conversation website: [Dispersal - villages](#)

### **Description (from source)**

This approach would spread new homes and jobs out to the villages.

### **A. Purpose/effects (from source)**

Advantages:

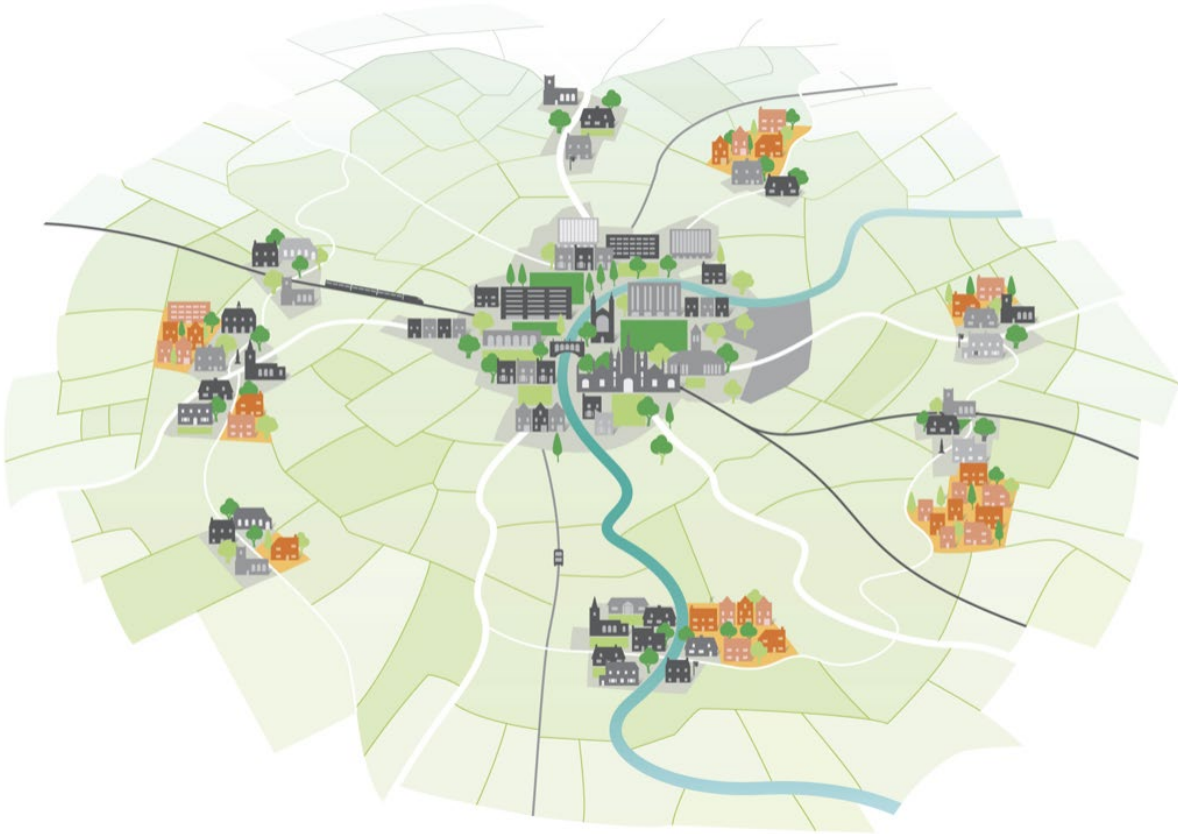
- Can help to sustain existing facilities and infrastructure in the village.
- Can help provide for a diversity of population in the village.

Challenges:

- Can result in increased commuting by car, and travel to access to services and facilities, particularly if the village is away from main transport corridors.
- Small sites are unlikely to significantly contribute to improvements to infrastructure so services capacity within or accessible to a particular village is important.
- Potential impact on village character needs to be considered.
- Some of the larger better served villages are surrounded by the Green Belt.



## B. Potential distribution of growth in a Greater Cambridge context



### Description

New homes and jobs dispersed across villages in South Cambridgeshire.

## C. Reasonable?

### National policy

Partly:

- Yes – compatible with NPPF para. 78 in promoting sustainable development in rural areas.
- No – a strategy dispersing all growth might not be compatible with NPPF environmental requirements.

### Reasonable: absolute constraints?

- Capacity: Yes
  - There is undeveloped land around villages in Greater Cambridge which in theory provides capacity for further development.
- Environmental constraints: Unknown – assume yes.
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints.

### Reasonable: viable and deliverable?

- Viability: Yes

- As evidenced by Annual Monitoring Reports, over many years, smaller developments in South Cambridgeshire villages have continued to progress through the planning system, proving their ongoing viability.
- Deliverability: Unknown – assume partly
  - As evidenced by Annual Monitoring Reports, over many years, smaller developments in South Cambridgeshire villages have continued to progress through the planning system, demonstrating their ongoing deliverability in general. Clearly specific sites will have different constraints which may affect deliverability.
  - Developer contributions on individual smaller sites do not generate substantive contributions to support major transport and other infrastructure provision. As such, an option that focused growth towards very many smaller sites might result in cumulative impacts on the transport network, for which it might be hard to collect sufficient funds to mitigate. Over time this could lead to an infrastructure deficit that might make such a strategy undeliverable in the long term.

## **Dispersal - Public transport corridors**

### **Source**

- Greater Cambridge First Conversation website: [Public transport corridors](#)

### **Description (from source)**

This approach would focus homes and jobs along key public transport corridors and around transport hubs, extending out from Cambridge. This could be by expanding or intensifying existing settlements, or with more new settlements.

### **A. Purpose/effects (from source)**

Advantages:

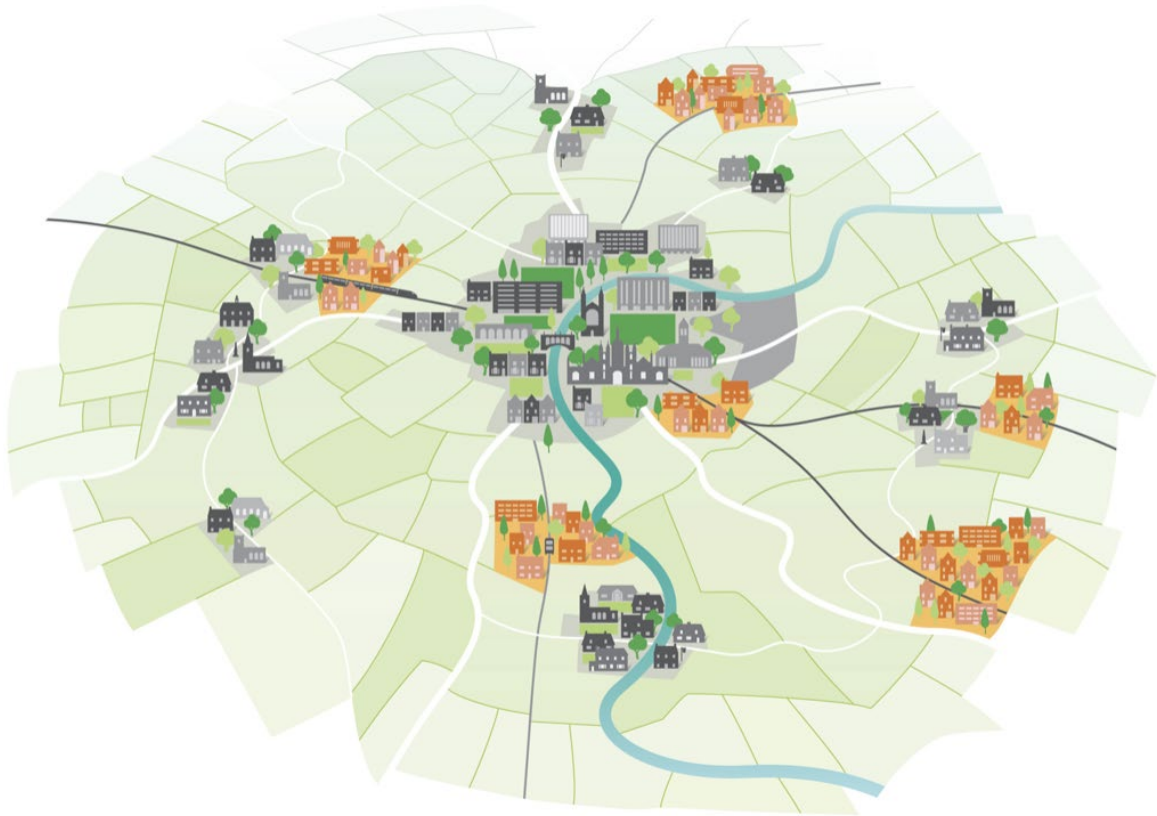
- Concentrates development on transport corridors where there are opportunities for high quality public transport.
- Supports expansion of economic benefits outwards from Cambridge.

Challenges:

- Requires the use of land along transport corridors, which may include locations within the Green Belt. This approach has implications for fundamentally changing the nature of the Cambridge Green Belt.
- Weight to be given to proposed new strategic transport infrastructure, even where it is included in the plans of the transport authorities, will depend on the level of certainty over delivery and timing of that infrastructure.



## B. Potential distribution of growth in a Greater Cambridge context



### Description

Expansion or intensification of existing settlements, or new settlements, along key existing or proposed public transport corridors linking to Cambridge. Corridors could include those on the Cambridgeshire Guided Busway, current Greater Cambridge Partnership corridors (and proposed Cambridgeshire Guided Busway Corridors), or existing or proposed rail corridors.

## C. Reasonable?

### National policy

Yes – compatible with NPPF para. 102 on realising opportunities from existing or proposed transport infrastructure.

### Reasonable: absolute constraints?

- Capacity: Yes
  - There is undeveloped land along existing or proposed transport corridors within Greater Cambridge which in theory has capacity for additional new settlements. There is also undeveloped land around villages along existing or proposed transport corridors within Greater Cambridge which in theory has capacity for development.
- Environmental constraints: Unknown – assume yes.

- It is assumed that some growth is permissible but still limited by absolute environmental constraints.

### **Reasonable: viable and deliverable?**

- Viability: Unknown – assume yes
  - Following allocation in the South Cambridgeshire Local Plan, proposed new settlements at Waterbeach and Bourn are progressing through the application process, implying that developing new settlements in South Cambridgeshire is currently viable.
  - As evidenced by Annual Monitoring Reports, over many years, smaller developments in South Cambridgeshire villages have continued to progress through the planning system, proving their ongoing viability.
  - Locating growth close to public transport nodes should reduce additional transport infrastructure investment required to support development, and thereby increase viability.
- Deliverability: Unknown – assume mixed
  - Locating growth close to public transport nodes should reduce additional transport infrastructure investment required to support development, and thereby increase deliverability.
  - Some proposed transport infrastructure projects in the Greater Cambridge area are yet to have funding or be confirmed. As such, confirmation whether such projects could be completed in time to support associated development within the next 20 years will be important as part of considering whether to allocate growth on these routes in the new Local Plan.
  - New settlements usually have a long lead in time from planning permission to the start of construction. As such, confirmation whether a new settlement could be developed within the next 20 years will be important as part of considering whether to allocate it in the new Local Plan.

### **Cross-check: review of the uniqueness of the First Conversation options**

<i>Option</i>	<i>Likely distribution of growth</i>	<i>Unique?</i>
FC1: Densification of existing urban areas	Growth focused in urban areas of Cambridge, Cambourne, Northstowe, Waterbeach and Bourn	Yes
FC2: Edge of Cambridge- outside the Green Belt	Growth focused at Cambridge Airport	Partly: Yes – in contrast with FC3, this option would use brownfield land, with likely significantly lower

		<p>impacts on e.g. landscape.</p> <p>No – likely that transport and infrastructure effects of locating growth at edge of Cambridge outside Green Belt would be similar to FC3.</p>
FC3: Edge of Cambridge - Green Belt	Growth focused on edge of Cambridge at various locations within Green Belt	<p>Partly:</p> <p>Yes – in contrast with FC2, this option would use greenfield land, with likely significantly higher impacts on e.g. landscape.</p> <p>No – likely that effects of locating growth at edge of Cambridge outside Green Belt would be similar to edge of Cambridge: Green belt locations.</p>
FC4: Dispersal - new settlements	Growth at new towns and villages	<p>Partly:</p> <p>No - Potential for overlap with Public Transport Corridors, given that new towns and villages would need to be connected to Cambridge and/or other higher order settlements by public transport to make them sustainable.</p> <p>Yes – Public Transport Corridors envisages growth at</p>

		villages located on public transport nodes in addition to new settlements.
FC5: Dispersal – villages	Growth spread between the villages	Yes
FC6: Public transport corridors	Expansion or intensification of existing settlements, or new settlements, along key existing or proposed public transport corridors linking to Cambridge. Corridors could include those on the Cambridgeshire Guided Busway, current Greater Cambridge Partnership corridors (and proposed Cambridgeshire Guided Busway Corridors), or existing or proposed rail corridors.	Partly – see above at FC4

## Conclusion

As set out above, the First Conversation options have been assessed to consider whether they are both reasonable and substantively different to each other, in order to be taken forward for strategic options testing. The conclusions are as follows:

<i>Option</i>	<i>Reasonable?</i>	<i>Unique?</i>	<i>Take forward for strategic testing?</i>
FC1: Densification of existing urban areas	Yes	Yes	Yes
FC2: Edge of Cambridge- outside the Green Belt	Yes	Yes	Yes
FC3: Edge of Cambridge - Green Belt	Partly	Yes	Yes
FC4: Dispersal - new settlements	Yes	Partly	Yes
FC5: Dispersal – villages	Yes	Yes	Yes

FC6: Public transport corridors	Yes	Partly	Yes
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Drawing on the above, all First Conversation options are carried forward to be tested as strategic spatial options.

**Annex B. Sifting assessment of long list of additional ideas**

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
A0	Current strategy	Cambridge Local Plan 2018 / South Cambridgeshire Local Plan 2018	(Cambridge Local Plan 2.27) The preferred sequential approach for new development can be described as: (first) being within the existing urban area of Cambridge; (second) being within the defined fringe sites on the edge of Cambridge; (third) within the six small-scale Green Belt sites proposed to be released from the inner Green Belt boundary, four of which are within the city; (fourth) within existing and newly identified new settlement locations at Cambourne, Northstowe, Bourn Airfield and Waterbeach; and lastly in identified villages.	Yes	Not explicitly included in First Conversation consultation.
A01	Base Case	Cambridgeshire & Peterborough Independent Economic Review - Final Report	This is a 'business as usual' approach. We expect houses to be built in the areas set aside in local plans. Transport links are upgraded in a way that seems reasonable based on current trends and timelines.	No	Repeat of current strategy
A02	Densification	Cambridgeshire & Peterborough Independent Economic Review - Final Report	This assumes that more houses get built, and jobs get created, in the urban areas of Cambridge and Peterborough, without significantly expanding boundaries. This would mean using remaining brownfield space on the edges to create high-density accommodation. It requires taller buildings in these areas to increase the number of people who can live and work within an area of land.	No	Same as Densification.
A03	Dispersal (sub-regional)	Cambridgeshire & Peterborough Independent Economic Review - Final Report	A dispersal strategy is where new houses and jobs are created outside of the primary urban areas of Cambridge and Peterborough, mainly in the market towns. It could also involve the creation of new towns and villages where previously there was only farmland/countryside.	Yes	The First Conversation consultation did not include any options considering growth extending beyond Greater Cambridge boundaries.

Ref.	Option/Principle/Concept name	Source	Description	Sifting: take forward for full testing?	Sifting comments
A04	Fringe Growth	Cambridgeshire & Peterborough Independent Economic Review - Final Report	In the fringe growth scenario, large expansions happen on the outside of Cambridge and Peterborough, while the level of housing density within cities is left unchanged. A fringe growth approach significantly expands the urban footprint of the cities.	No	Same as Edge of Cambridge: Outside Green Belt and Edge of Cambridge: Green Belt
A05	Transport Corridors	Cambridgeshire & Peterborough Independent Economic Review - Final Report	A transport corridors approach focuses on developing jobs and housing along transport corridors which radiate out of the main cities. Transport corridors can include fast bus, tram, or train links, providing rapid transit into cities.	No	Same as Public Transport Corridors
B01	incorporate larger scale development	NPPF	One or more strategic options should...incorporate larger scale development, supported by necessary infrastructure and facilities.	No	All options except Dispersal – villages, imply concentrations of significant growth.
B02	incorporate rural growth	NPPF	One or more strategic options should...incorporate growth in rural areas where it will enhance or maintain the vitality of rural communities.	No	Dispersal - new settlements and Public transport corridors options imply a focus of growth in rural areas.
B03	Support provision of new, or enable access to existing, community infrastructure	NPPF	One or more strategic options should...support the provision of new, or enable access to existing, community infrastructure.	No	All options except Dispersal – villages, imply concentrations of significant growth which will support the creation of new infrastructure. Densification option locates growth close to existing infrastructure.



Ref.	Option/Principle/Concept name	Source	Description	Sifting: take forward for full testing?	Sifting comments
B04	Integrate uses including housing and employment	NPPF	One or more strategic options should... ensure an integrated approach to considering the location of housing, economic uses and community facilities and services.	Yes - needs further consideration	Partly: <ul style="list-style-type: none"> <li>• Yes - Densification of existing urban areas, Edge of Cambridge - outside the Green Belt, Edge of Cambridge - Green Belt concentrate housing and employment growth in settlements where employment is already concentrated;</li> <li>• Yes - Dispersal - new settlements would create new jobs and homes in a single location.</li> <li>• No - At a wider scale, an additional option could seek to focus more housing growth towards broad areas of employment growth.</li> </ul>
B05	Explicitly rely on existing or proposed transport infrastructure	NPPF	One or more strategic options should...take opportunities from existing or proposed transport infrastructure...for example in relation to the scale, location or density of development.	Yes - needs further consideration	Partly: <ul style="list-style-type: none"> <li>• No - Public transport corridors explicitly relies on existing and proposed transport infrastructure.</li> <li>• No - Dispersal - new settlements acknowledges need to connect new settlements to main centres via transport infrastructure.</li> <li>• Yes - additional options could focus growth in areas relating to the most significant transport projects (ie East West Rail).</li> </ul>
B06	Enable active travel and public transport opportunities	NPPF	One or more strategic options should... support walking, cycling and public transport use.	No	<ul style="list-style-type: none"> <li>• All options except Dispersal – villages, imply concentrations of significant growth which will support the creation of new infrastructure, enabling walkable and cyclable places.</li> <li>• Public transport corridors explicitly relies on existing and proposed transport infrastructure.</li> <li>• Dispersal - new settlements acknowledges need to connect new settlements to main centres via transport infrastructure.</li> </ul>
B07	Be focused on previously-developed land	NPPF	One or more strategic options should... make as much use as possible of previously-developed or 'brownfield' land.	No	Densification of existing urban areas focuses growth on previously developed land.

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
B08	Optimise the density of development, promoting a significant uplift in minimum density standards in town and city centres and other locations well served by public transport		One or more strategic options should...optimise the density of development, promoting a significant uplift in minimum density standards in town and city centres and other locations well served by public transport.	No	No – Densification of existing urban areas explicitly considers densification in Cambridge and the new settlements.
B09	take account of existing Cambridge Green Belt	NPPF	One or more strategic options should...take account of Cambridge Green Belt, including its inner and outer boundaries.	No	No: <ul style="list-style-type: none"> <li>• All of the options together provide choices about locating or not locating growth within existing Cambridge Green Belt.</li> <li>• In particular, Edge of Cambridge: outside Green Belt and Edge of Cambridge: Green Belt explicitly test the most critical of these choices.</li> </ul>
B10	Maximise the potential for decentralised energy systems	NPPF	One or more strategic options should...maximise the potential for decentralised energy systems (i.e. include significant scales of development at higher densities that could generate sufficient demand for an effective decentralised energy system).	No	Edge of Cambridge: outside Green Belt, Edge of Cambridge: Green Belt, and Dispersal: New Settlements imply concentrations of significant growth which could support the potential for decentralised energy systems.
B11	focus growth on existing urban areas, thereby reducing impact on countryside and natural capital.	NPPF	One or more strategic options should...focus growth on existing urban areas, thereby reducing impact on the countryside, agricultural land, and natural capital more broadly.	No	No: <ul style="list-style-type: none"> <li>• Densification of existing urban areas focuses growth on previously developed land.</li> <li>• All options except Dispersal: villages seek to concentrate growth and could include higher densities, thereby limiting the widespread impact of development on the countryside and agricultural land.</li> </ul>

Ref.	Option/Principle/Concept name	Source	Description	Sifting: take forward for full testing?	Sifting comments
B12	Proportionate growth approach: Focus growth in locations that make a positive contribution to local character and distinctiveness	NPPF	Include strategic options that...make a positive contribution to local character and distinctiveness (ie. maintain the current relative roles of settlements within the settlement hierarchy, distributing growth proportionate to locations relative to current size). Note that this is a very specific way of reading the implication of NPPF para. 185. To extract principle for the purposes of identifying potential impacts on strategy options. Many other readings of the implications of this are possible. In reality, any spatial option could affect local character and distinctiveness, particularly under higher growth scenarios.	Yes - needs further consideration	Partly: • No - Densification of existing urban areas, and Edge of Cambridge - outside the Green Belt in principle seek to retain the current settlement hierarchy and also retain policy designations that support the character of Cambridge and its hinterland. • Yes – consideration has not been given previously to what a proportionate growth pattern would look like.
C01	Option 1: Concentration Close to Norwich	Greater Norwich Joint Local Plan	Not described further in Growth Options consultation	No	Close to Edge of Cambridge / no clear option for strategic testing.
C02	Option 2: Transport Corridors	Greater Norwich Joint Local Plan	Not described further in Growth Options consultation	No	Same as Public Transport Corridors
C03	Supporting an existing high-tech corridor.	Greater Norwich Joint Local Plan	Option 3 would concentrate the great majority of the additional 3,300 dwellings in the A11 corridor, with significant growth in the south west fringe, Wymondham and a new settlement in or near the corridor.	Yes	

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
C04	Option 4: Dispersal	Greater Norwich Joint Local Plan	Not described in Growth Options consultation	No	Same as Dispersal
C05	Option 5: Dispersal plus New Settlement	Greater Norwich Joint Local Plan	Not described in Growth Options consultation	No	Hybrid - not clearly distinct from First Conversation options, which are all described as a 'Focus on...'. Hybrid option most likely resulting pattern but to be identified following strategic options testing.
C06	Option 6: Dispersal plus Urban Growth	Greater Norwich Joint Local Plan	Not described in Growth Options consultation	No	Hybrid - not clearly distinct from First Conversation options, which are all described as a 'Focus on...'. Hybrid option most likely resulting pattern but to be identified following strategic options testing.
C07	Option 1 – Continue the current approach	Bedford Borough Local Plan 2032	Growth area remains as currently defined and continues to accommodate majority of growth. · Limited development in the remaining rural area, mostly village infilling. · Development in open countryside restricted in line with government policy.	No	Same as Current Strategy, tested in Annex A.
C08	Expanded growth area	Bedford Borough Local Plan 2032	The current 'growth area' (Bedford, Kempston and the villages in the Marston Vale) could be expanded. Development would still be concentrated in the expanded 'growth area' and there would be little development in the remainder of the borough.	Yes	Yes – focuses growth in a geographically specific (rather than typology-specific) location which is not considered through First Conversation options.

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
C09	Option 3 – Expanded growth area plus some rural growth	Bedford Borough Local Plan 2032	Growth area as option 2. More growth allowed in the larger villages than in smaller settlements. Development in open countryside restricted in line with government policy.	No	Hybrid - no clear option for strategic testing; hybrid option most likely resulting pattern but to be identified following strategic options testing.
C10	Option 4 – Existing growth area plus new rural growth points	Bedford Borough Local Plan 2032	Growth area similar to option 1 but with less growth than option 1. · Some growth also to be focussed on a limited number of new rural growth points. · Development in the rest of the borough limited to infilling in existing villages. · Development in open countryside restricted in line with government policy.	No	Hybrid - not clearly distinct from First Conversation options, which are all described as a 'Focus on...'. Hybrid option most likely resulting pattern but to be identified following strategic options testing.
C11	Option 5 – Spread development around existing settlements	Bedford Borough Local Plan 2032	Abandon concentration of development in the growth area. · Allocate development to settlements according to their size (about two thirds to the urban area and one third to rural villages). · Development in open countryside restricted in line with government policy.	No	Same as Dispersal
C12	Science Vale focus plus 'sustainable settlements'	South Oxfordshire Plan	Focus on Science Vale area (60%) with the remainder across 'sustainable settlements' (40%) (likely to be Thame, Wallingford, Henley and some less constrained larger villages e.g. Benson, Berinsfield, Chalgrove, Chinnor, Cholsey, Crowmarsh Gifford, Sonning Common and Watlington).	No	Hybrid - not clearly distinct from First Conversation options, which are all described as a 'Focus on...'. Hybrid option most likely resulting pattern but to be identified following strategic options testing.
C13	All development located in the high-tech growth area (all in Science Vale)	South Oxfordshire Plan	All additional housing in Science Vale	Yes	

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
C14	All growth in a single new settlement	South Oxfordshire Plan	All additional housing in a single new settlement in the shaded area of the district which is not in the Green Belt or Area of Outstanding Natural Beauty.	No	Locates all growth in a geographically specific (rather than typology-specific) location, but new settlements are already included as an option in First Conversation.
C15	Dispersal	South Oxfordshire Plan	Make land allocations for new homes at all towns, larger and smaller villages, and introduce a more permissive approach to infill development in the smallest villages (but still not hamlets or open countryside).	No	Same as Dispersal
C16	Next to neighbouring major urban areas	South Oxfordshire Plan	Our rural district lies immediately adjacent to the major town of Reading and the city of Oxford. Here there are many employment opportunities as well as universities, regional hospitals and bigger shopping centres. One option would be to put our housing growth on the edge of these neighbouring urban areas.	No	Exact context not relevant to Greater Cambridge, but principle of locating growth adjacent to major urban areas would result in Edge of Cambridge options included in First Conversation.
C17	Raising densities	South Oxfordshire Plan	We could fit in more growth on a smaller area of land by encouraging higher densities in new development. Our current policy, Core Strategy policy CSH2, sets a minimum of 25 dwellings per hectare, which is quite a low density. We set this to make sure that developments are planned sensitively to fit with their settings. However, there are many examples of higher density development which still work well. Higher density doesn't automatically mean small flats, cramped living, no gardens, not enough parking and poor design. The examples in the boxes below show	No	Same as Densification.

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
C18	Locating development in particular settlements where it could help fund projects	South Oxfordshire Plan	Public money to fund infrastructure is in short supply. Sometimes the only way that big scale improvements or expansions can be paid for is through development. By the community taking housing development, the council and county council can require housebuilders to contribute towards infrastructure projects. These could be, for example, a new road, a new river bridge, or a new or expanded school. The scale of growth to fund such 'big ticket' items is likely to be quite large, but we would like to know if there are any communities which would welcome investigation of this option. Another route for communities to look at enhanced growth to fund a 'big ticket' project is through preparing a neighbourhood plan.	Yes	No First Conversation option has as its explicit purpose the funding of desired infrastructure, albeit resulting distribution of development could be same as for existing options. To be explored further.
C19	Intensification of city, town and district centres	Introducing the Oxfordshire Plan 2050	No further explanation provided	No	Same as Densification.
C20	Intensification of development within existing suburbs	Introducing the Oxfordshire Plan 2050	No further explanation provided	No	Same as Densification.
C21	Intensification around the edges of larger settlements and strategic extensions	Introducing the Oxfordshire Plan 2050	No further explanation provided	No	Same as Densification/Edge of Cambridge options

Ref.	Option/Principle/Concept name	Source	Description	Sifting: take forward for full testing?	Sifting comments
C22	Spokes and hubs	Introducing the Oxfordshire Plan 2050	(Continue to focus on Oxford and key corridors in to Oxford)	Yes	-
C23	New settlement/s	Introducing the Oxfordshire Plan 2050	No further explanation provided	No	Same as Dispersal: New Settlements
C24	Dispersal	Introducing the Oxfordshire Plan 2050	(This would involve spreading new development evenly across the county, including in smaller settlements)	No	Hybrid of Dispersal: villages and Dispersal: new settlements.
C25	'String' settlement/ settlement cluster	Introducing the Oxfordshire Plan 2050	(Development focused on a number of linked settlements. It could involve new and/or existing/expanded settlements)	Yes	-
C26	'Wheel' settlement cluster	Introducing the Oxfordshire Plan 2050	(Focus on Oxford and the existing larger towns and the key corridors in to Oxford and between the towns)	Yes	-



<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
C27	Option 1: Neighbourhood plan-led delivery of growth	Hinckley & Bosworth Local Plan	The distribution pattern for new development is determined by Parish Councils and the Borough Council. Under this option, for the Local Plan period, Local Parishes will be expected to put forward an annual figure for the number of new homes, employment and other land uses that they will bring forward through their Neighbourhood Development Plans. The cumulative figure will then be offset against our Borough's Objectively Assessed Housing Need to establish a residual figure. The Local Plan will	No	Does not provide a clear implication for any spatial distribution that could be tested. Not considered to be a realistic option.
C28	Option 2: Core Strategy approach	Hinckley & Bosworth Local Plan	Development would continue to be directed in accordance with the strategic approach of the current Core Strategy	No	Repeat of current strategy
C29	Option 3: Key Transport and Accessibility Corridors	Hinckley & Bosworth Local Plan	This approach would see development directed towards the key transport corridors in the borough.	No	Same as Public Transport Corridors
C30	Option 4: Garden Village / New Town	Hinckley & Bosworth Local Plan	A new settlement would be developed in the borough through this option. No specific location or broad area was identified in the SIO to accommodate this new settlement.	No	Same as New Settlements

Ref.	Option/Principle/Concept name	Source	Description	Sifting: take forward for full testing?	Sifting comments
C31	Option 5: Proportionate growth of key rural centres	Hinckley & Bosworth Local Plan	Development would be broadly distributed amongst the key rural centres under this option.	No	Would be addressed through Dispersal: Villages.
C32	Option 6: A mix of the above options	Hinckley & Bosworth Local Plan	Rather than rely on one strategic option alone, under this approach a combination of options 1-5 would deliver development in the borough.	No	Hybrid - not clearly distinct from First Conversation options, which are all described as a 'Focus on...'. Hybrid option most likely resulting pattern but to be identified following strategic options testing.
D01	Garden City, growing an existing city	Urbed, 2014. Uxcester Garden City Wolfson Economics Prize submission	3 major urban extensions in a 'snowflake' pattern. Doubles population of existing city of 200,000 to 400,000, through extensions of 50,000 people each.	Yes - needs further consideration	Follows same distribution as Edge of Cambridge options, but at a significantly greater scale such that the footprint of developed land would include elements of other options including current villages.
D02	New living campus clusters	Mae: Urcadia	Clusters of development in 1km2 of varying densities and resulting scales: 10,000 people - 25,000 people	Yes - needs further consideration	Unclear what spatial distribution this option would have. Requires further consideration.
D03	Town cluster; village cluster; village	VeloCity	Villages w/in 7 mile radius of local centres/PT hubs grouped into 3-4 clusters of 4-6 villages each w/in 1-2 miles of each other. Each village takes on a specific role for the cluster, and takes 600-1,000 homes on high density plots. Cars removed from villages.	Yes - needs further consideration	Unclear what spatial distribution this option would have. Requires further consideration.

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
D04	Town Centre Intensification	5th Studio CamMKOx typologies	This typology involves the intensification of existing town or city centres. Such an approach has the potential to make the most efficient use of existing infrastructure by concentrating development in the most accessible and sustainable locations. As well as providing space for new homes, these areas have the potential to provide new or expanded higher-order facilities and amenities in anticipation of the general increase in population within the areas that these centre serve (through the deployment of other typologies say, in particular the “linked places” typologies).	No	Same as Densification
D05	Suburban Intensification	5th Studio CamMKOx typologies	Suburban intensification in areas of opportunity: certain forms of 20th century suburban development such as open plan council housing estates, and the large areas of often underused and marginal green space around road infrastructure in the later New Towns (e.g. Northampton, Peterborough and Milton Keynes), may offer more potential. Much of this “Space Left Over after Planning” would benefit from sensitive intervention to better frame highways and open space, and remains in single, most often public, ownership, making larger-scale, coordinated development possible	No	Same as Densification
D06	Edge Intensification	5th Studio CamMKOx typologies	Retrofit of peripheral, low density, and currently monocultural employment, retail and leisure areas, to diversify their use and make more efficient use of the land	Yes - needs further consideration	Possibly addressed via Densification / Edge of Cambridge options, albeit retrofitting existing areas of development would result in growth in different locations than if growth were to take place on new edge of Cambridge sites.

<i>Ref.</i>	<i>Option/Principle/Concept name</i>	<i>Source</i>	<i>Description</i>	<i>Sifting: take forward for full testing?</i>	<i>Sifting comments</i>
D07	Strong Edge and Satellite	5th Studio CamMKOx typologies	<p>This type of development is a satellite settlement distinct from, but closely linked to, a neighbouring existing place. The distance out may vary, but the quality of the connection to the city is vital. The separation of the settlement, as opposed to it being directly connected to the host city, may be due to constraints on growth at the edge of the city itself. Some examples are flood plains or green belt designation, or because of the suitability of particular locations of radial public transport routes.</p> <p>As with the Edge Intensification / Edge City typology, it is important that locations developed according to this typology have their own identity, sense of place, and local facilities (appropriate for the scale of the settlement) within walking/cycling distance, as well as having a primary connection to key locations within the host settlement..</p>	No	Same as Dispersal: new settlements.
D08	Compact City - Urban Extension	5th Studio CamMKOx typologies	A development linked to the existing town centre, principally by convenient and quick walking and cycling routes, that actively discourages motor transport.	No	Same as Edge of Cambridge: Outside Green Belt and Edge of Cambridge: Green Belt
D09	New Small Settlement	5th Studio CamMKOx typologies	<p>small-scale, deliverable settlements with a strong sense of identity and community and easy access to the countryside. A settlement that could also benefit from the economies of scale necessary to make good transport infrastructure and access to higher-order functions affordable and sustainable.</p> <p>Suggested locations include on transport corridors linked to larger population centres.</p>	No	Same as Dispersal: new settlements

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
D10	New Town	5th Studio CamMKOx typologies	the population is large enough to justify a station on the national rail network, with the station being a defining feature of the place, but small (and compact) enough that walking and cycling are able to provide for most internal journeys. Specifically in terms of the chosen case study location, it is assumed that the settlement would justify a new station on East West Rail, even if the line is delivered as a fast regional line with relatively few stops – in a way that multiple smaller settlements could not.	No	Same as Dispersal: new settlements
D11	String City	5th Studio CamMKOx typologies	a number of smaller linked settlements. However, in this case these smaller settlements are assumed to aggregate together to create a place of sufficient scale to be thought of as a city, rather than connecting to, and remaining subservient to, an existing larger-scale “central place”. This typology is therefore based on the new agglomeration having, over time, a large degree of self-containment, its own higher order services and a greater degree of national connectivity than the preceding “new town” typology. The component parts of this typology might vary in scale and in character, and might include existing places as well as new ones. Their totality would be defined by the high degree of connectivity between them. This would most likely be achieved through a new, and in the case of existing towns or villages retro-fitted, high quality public transport network.	Yes - needs further consideration	Possibly addressed via Dispersal: New Settlements and Dispersal: Villages. Requires further exploration
D12	New City	5th Studio CamMKOx typologies	population of at least 250,000 - similar to Milton Keynes today - and would be largely self-contained in terms of jobs and services, serving as a new regional centre for its hinterland.	No	Same as Dispersal: new settlements

<i>Ref.</i>	<i>Option/Principle/Concept name</i>	<i>Source</i>	<i>Description</i>	<i>Sifting: take forward for full testing?</i>	<i>Sifting comments</i>
D13	Minimum growth	Cambridge Futures, 2000	Minimum Growth would preserve the City of Cambridge and surrounding South Cambridgeshire with the minimum change. All new dwellings and business floorspace would be allocated to East Cambridgeshire and Huntingdonshire.	Yes - needs further consideration	Absolute minimum growth was not explored as a First Conversation option.
D14	Densification	Cambridge Futures, 2000	Densification would put the maximum development in the City of Cambridge where demand is highest. Dwellings and business floorspace would be allocated predominantly to the city, so higher buildings in a more compact form would be allowed to replace existing low-density development.	No	Same as Densification
D15	Necklace	Cambridge Futures, 2000	Necklace would be the continuation of the policy which has existed for the last fifty years; it would produce only minimum growth in the city and green belt, with more growth in existing and new villages and in the main market towns.	No	Same as Dispersal: New Settlements and Dispersal: Villages
D16	Green Swap	Cambridge Futures, 2000	Green Swap would allow development in selected areas of the green belt which are of less scenic value and/or are not available for public use. In return for such permission, developers would provide equivalent or enhanced amenities for the public farther out of town	No	Same as Edge of Cambridge: Green Belt
D17	Transport Links	Cambridge Futures, 2000	Transport Links envisages all further development as happening within easy access of a public transport corridor. It would include more intensive use of the existing lines and reinstatement of the St Ives–Huntingdon line.	No	Same as Public Transport Corridors
D18	Virtual Highway	Cambridge Futures, 2000	Virtual Highway proposes a high- capacity electronic communications system that would provide instant business and personal communication for work, education, retail and other services. It is based on a concept of a multimedia super-corridor where audio, computer and visual communications are interconnected.	Yes	

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
D19	New Town	Cambridge Futures, 2000	New Town would concentrate most of the development in a single location, large enough to make the new town an alternative to the City of Cambridge. It would necessitate investment in new transport links to the city.	No	Same as Dispersal: New Settlements
D20	Copenhagen Green Finger Plan	Centre for Public Impact Case Study	Directed urban housing and business developments alongside five train lines and roads, separated by green areas for recreation. These urbanised areas formed the fingers, while the city centre could be seen as the palm of the hand. The station proximity principle (stationsnærhedsprincippe) allowed for new housing, businesses, and public services to be erected only close to train stations; The green wedge principle worked to preserve the green spaces between these urban settlements.	Yes - needs further consideration	Close to Public Transport Corridors option, but takes the idea to the ultimate extent.
D21	Net zero growth	Officer idea	Drawing on the idea that climate change legislation has greater weight than national planning policy, restrict all village growth and only locate growth in environmentally sustainable locations including Cambridge, Cambourne and new settlements. Ignore policy designations such as Green Belt.	Yes - needs further consideration	Further consideration of spatial implications required.

Ref.	Option/Principle/Concept name	Source	Description	Sifting: take forward for full testing?	Sifting comments
D22	Spatial urbanism approach	Officer idea	<ul style="list-style-type: none"> <li>• Centres and nodes first - focussing new development at existing centres/interchanges and prioritising land and optimising density within 400m and 800m walking distances. Areas and settlements with railway stations land within 1000m/5minute cycle ride should be prioritised for development. Guided bus stops are a form of interchange and could also form part of this.</li> <li>• Compact growth/intensification in rural locations that fall within a theoretical 5 mile/30-minute cycle ride of Cambridge, especially settlements with railway stations and Rapid Transit stops such as Cambridgeshire Guided Busway. Apply the above compact criteria of optimising land within 400m/800m of centres (this could provide the theoretical settlement boundary, refined through other constraints such as ecology). Interestingly applying a 30 minute 'golden' cycling distance this includes the settlements of:</li> <li>• Intensification/edge expansion of settlements served by East-West Rail, releasing and prioritising land within 1000m/5minute cycle ride of new railway station.</li> <li>• Any potential new compact settlement located on East-West Rail/existing trainline – compact form, with shape more-or-less concentric, new settlement extent and radius from centre dictated by 5-10minute cycle ride</li> </ul>	Yes - needs further consideration	Further consideration of spatial implications required.
D23	Nature first	Officer idea	Shape a spatial strategy based upon first considering the best opportunities for habitats and wildlife.	Yes	



<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
E01	Preserving the Green Lung	First Conversation response, Q42	Protecting the green belt around Cambridge thus preventing urban sprawl and retaining the character of Cambridge	No	Edge of Cambridge: non-Green Belt explicitly explores the potential to avoid development around Cambridge.
E02	Housing in close proximity to employment/innovation centres	First Conversation response, Q42	Provide residential development in locations to support the growth of the employment sector. The location of employment areas such as the Innovation Corridor are generally in rural areas. As such there is a limited number of dwellings which could serve employees of such institutes. By providing residential development in close proximity, skilled workers will continue to be attracted to such institutions. It will assist in the reduction of journeys to and from employment sites by motor vehicle given the opportunities to cycle or walk. This will assist the Greater Cambridge Authority in meeting their key themes within the Plan.	Yes	
E03	Tied cottages /key worker housing	First Conversation response, Q42	Employers provide housing in close proximity to place of employment to reduce the need to travel	Yes	
E04	The Manchester Model	First Conversation response, Q42	Creating sustainable transport links, reducing the number of trips needed by car and increasing journeys by bike, foot and public transport.	No	A range of First Conversation options seek to enable sustainable transport opportunities.

Ref.	Option/Principle/Concept name	Source	Description	Sifting: take forward for full testing?	Sifting comments
E05	The 'Gruene Finger'	First Conversation response, Q42	The towns grow out into the country-side from existing settlements but always with green space secured alongside and decent cycle paths, so you can cycle across town over grass and through trees; a good example is Osnabrück	Yes	
E06	Focus development to the east side of the city	First Conversation response, Q42	"the east side of the city offers significant scope for housing and commercial development. Such development would have the advantage of being close to the principal centres of employment and the existing rail infrastructure whilst also opening up opportunities for new transport links to connect the main centres of employment more effectively. Most significantly, it includes land which has previously been safeguarded for development, and is within the boundaries of the existing urban area so would provide opportunities in line with the existing spatial strategy" CPIER p42.	No	Addressed through Edge of Cambridge options
E07	Blended spatial strategy	First Conversation response, Q42	a 'blended spatial strategy' of four possible scenarios. The scenarios considered included: - densification - dispersal - fringe growth - transport corridors	No	Hybrid - not clearly distinct from First Conversation options, which are all described as a 'Focus on...'. Hybrid option most likely resulting pattern but to be identified following strategic options testing.
E08	The A428 Corridor	First Conversation response, Q42	The A428 corridor running due west of Cambridge to Cambourne and St Neots presents a broad transport corridor that is due to receive substantial investment in relation to East West rail (including new station at Cambourne) and the Cambridge Automated Metro. Both of these transport interventions will provide a good choice of sustainable transport modes within this growth corridor and are due to be constructed before 2030.	Yes	

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
E09	Key principles	First Conversation response, Q42	In areas with access to existing/planned public transport links; <ul style="list-style-type: none"> <li>• In areas with good provision of cycleways/pedestrian linkages;</li> <li>• In areas well connected to local employment ; and</li> <li>• In key villages with services or local existing/planned employment</li> </ul>	No	These principles are addressed through a range of the First Conversation options.
E10	Sustainable self-contained communities	First Conversation response, Q42	The fundamental requirement is that every significant development must create, or be part of, a sustainable self-contained community with all of accommodation, amenity, education, and employment.	No	Addressed through Dispersal: New Settlements option
E11	Sustainable Transport Focus	First Conversation response, Q42	Sites should be chosen on their ability to satisfy sustainable transport goals and shift the overwhelming majority of journeys from cars to walking, cycling and public transport. If a realistic Transport Assessment cannot achieve this then the site should not be considered suitable for development. Furthermore, the location and compactness of development is only part of the story: to reduce car usage you cannot give away money, land and resources in ways that enable unnecessary usage of cars	No	No clear option proposed.
E12	Development on the edge of Cambridge with reprovision of green belt to compensate	First Conversation response, Q42	Develop areas on the edge of the city but with an equivalent area of land added to the Greenbelt further out from Cambridge	No	Addressed through Edge of Cambridge options

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
E13	Sustainable villages	First Conversation response, Q42	The scale of development that occurs at individual villages will depend on the level of services and facilities.	No	Addressed through Dispersal: Villages option
E14	Edge of Cambridge at public transport nodes	First Conversation response, Q42	Development at the edge of Cambridge at public transport nodes and on land outside of green belt and in Cambridge Green belt. The East West rail corridor could provide major locations for larger development and/or new settlements.	No	Hybrid - not clearly distinct from First Conversation options, which are all described as a 'Focus on...'. Hybrid option most likely resulting pattern but to be identified following strategic options testing.
E15	Flexible approach	First Conversation response, Q42	Allow developments in sustainable locations to ensure there is a balance of homes and jobs in the right place. It is important to ensure that a range of small sites are allocated in the Local Plan to ensure that these can be delivered in the short to medium term. The Local Plan should not overly-rely on large strategic allocations which are complex to deliver and rely on costly infrastructure to proceed.	No	Hybrid - not clearly distinct from First Conversation options, which are all described as a 'Focus on...'. Hybrid option most likely resulting pattern but to be identified following strategic options testing.
E16	Brownfield Sites First	First Conversation response, Q42	Development should, where possible, be directed to existing brownfield sites; in particular, within urban areas.	Yes	
E17	Airport site	First Conversation response, Q42	Should Cambridge Airport relocate and its land be released, this would offer up a significant development opportunity.	No	Addressed through Edge of Cambridge options.

<b>Ref.</b>	<b>Option/Principle/Concept name</b>	<b>Source</b>	<b>Description</b>	<b>Sifting: take forward for full testing?</b>	<b>Sifting comments</b>
E18	Major new developments	First Conversation response, Q42	Major new developments appear to be the main component of meeting the growth targets for housing and employment. It follows that sites with good transport connections are preferable.	No	Addressed through Edge of Cambridge options
E19	A combination of all suggested	First Conversation response, Q42		No	Hybrid - not clearly distinct from First Conversation options, which are all described as a 'Focus on...'. Hybrid option most likely resulting pattern but to be identified following strategic options testing.
E20	Hybrid of new communities and small scale extensions to existing villages	First Conversation response, Q42	Large scale in new well located , highly green communities . Small scale as rural exception sites on edge of well located sustainable established communities.	No	Hybrid - not clearly distinct from First Conversation options, which are all described as a 'Focus on...'. Hybrid option most likely resulting pattern but to be identified following strategic options testing.
E21	'Nature recovery network'	First Conversation response, Q42	The plan should map a 'nature recovery network' as a framework to guide essential development. Water and water sources are a vital part of this connectivity, as are drains, streams, rivers, lakes and ponds. A 'nature recovery network' must include these aquatic elements at the same time as identifying new large-scale areas for habitat creation, including new woodlands and areas of natural regeneration, and opportunities for linking them all together. The plan should recognise that 'flooding', which will be increasingly likely with climate change, can be mitigated upstream by slowing river drainage. This 'natural' approach would require a reversion to an earlier pattern of agricultural land-use management with wet meadows and less arable land in the flood plain itself.	Yes	

<i>Ref.</i>	<i>Option/Principle/Concept name</i>	<i>Source</i>	<i>Description</i>	<i>Sifting: take forward for full testing?</i>	<i>Sifting comments</i>
E22	Densification around sustainable transport links	First Conversation response, Q45	Build taller buildings around sustainable transport links such as Cambridge North	No	Addressed through Densification option.

## **Annex C. Full testing of short-listed additional ideas**

## Revisit of sources that informed First Conversation options

### Option A0: Current strategy

#### Source

- Plan/Project: Cambridge Local Plan 2018 / South Cambridgeshire Local Plan 2018
- Specific document: Adopted [Cambridge Local Plan 2018](#) / Adopted [South Cambridgeshire Local Plan 2018](#)

#### Description (from source)

(Cambridge Local Plan 2.27) The preferred sequential approach for new development can be described as:

- (first) being within the existing urban area of Cambridge;
- (second) being within the defined fringe sites on the edge of Cambridge;
- (third) within the six small-scale Green Belt sites proposed to be released from the inner Green Belt boundary, four of which are within the city;
- (fourth) within existing and newly identified new settlement locations at Cambourne, Northstowe, Bourn Airfield and Waterbeach; and
- lastly in identified villages.

#### South Cambridgeshire Local Plan 2.22

The distribution of housing across the development sequence in the adopted Local Plans is shown below:

	Existing Completions and Commitments (both areas)	New Sites Cambridge	New Sites South Cambs	TOTAL	%
Cambridge Urban Area	5,358	1,470	0	6,282	19
Edge of Cambridge	11,370	890	410	12,670	35
New Settlements and Cambourne West	3,445	0	4,610	8,055	23
Rural Area (including windfalls)	7,284	0	936	8,220	23
<b>TOTAL</b>	<b>27,457</b>	<b>2,360</b>	<b>5,956</b>	<b>35,773</b>	<b>100</b>

Source: Housing Trajectory November 2015

#### Purpose/effects (from source)

Sequential approach to development is in principle the most sustainable

- provide as many new homes as close to new jobs as possible to minimise commuting and to minimise and mitigate harmful effects for the environment, climate change and quality of life.



- Balance above aim with protecting the purposes of Cambridge Green Belt, which aims to protect the unique character of Cambridge as a compact, dynamic city with a thriving historic centre, maintain and enhance the quality of the city's setting, and prevent the city merging with the ring of necklace villages. The Green Belt and its purposes help underpin the quality of life and place in Cambridge, which are fundamental to economic success.
- Provide new homes in locations that are or can be supported by transport and other infrastructure

### Relevant in a Greater Cambridge context?

Partly

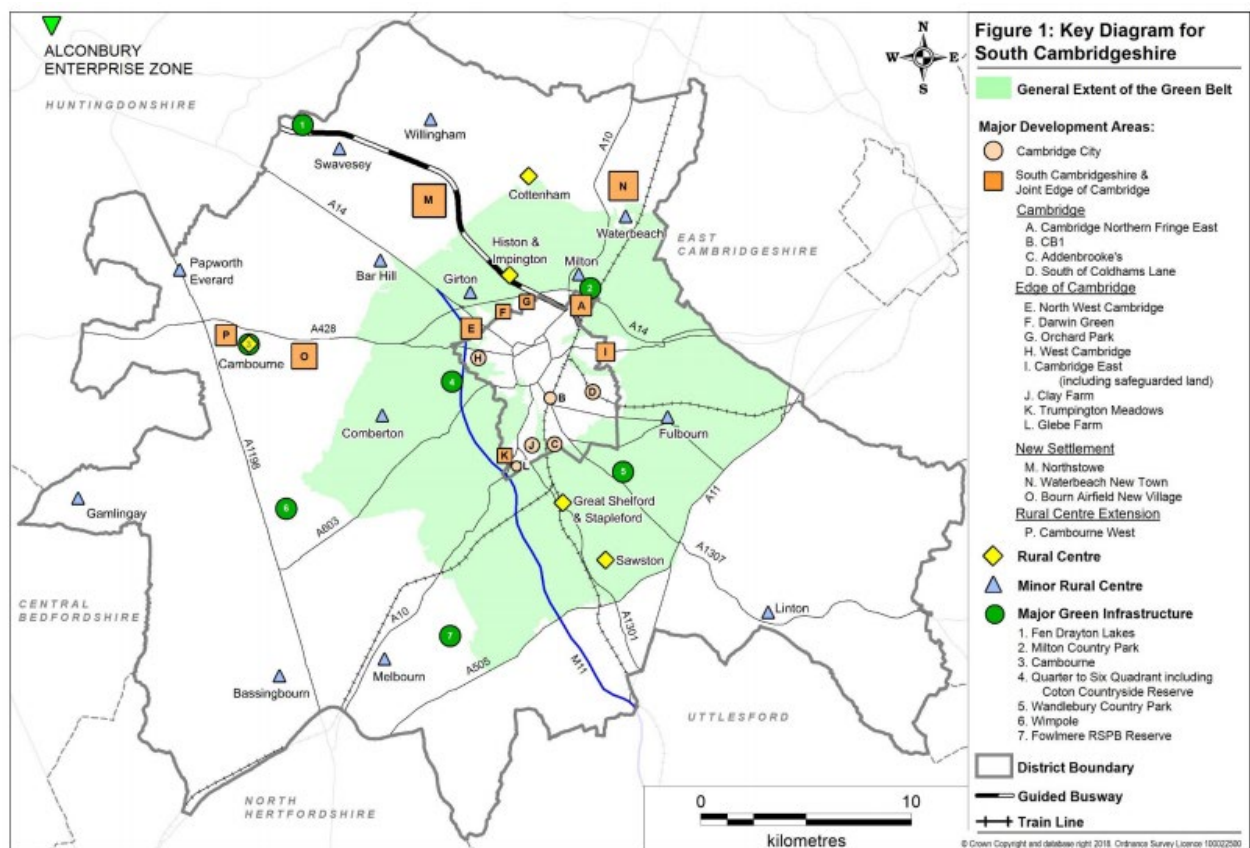
- Yes – by definition this Cambridge and South Cambridgeshire development strategy is relevant to this area.
- No – the choices available to the councils now are somewhat different, in that the strategy choices made in the adopted plans impact on residual capacity in the sources of supply. The balance of the distribution of homes and jobs might therefore be different.

### Potential distribution of growth in a Greater Cambridge context

#### Diagrams

Figure 1: A0 - Example growth option diagram

[South Cambridgeshire District Council, 2018. South Cambridgeshire Local Plan 2018, Figure 1: Key Diagram for South Cambridgeshire, p29](#)



### *Description*

Sequential approach taken to distributing growth as follows, relying on capacity of each source of supply and only using the next source of supply within the settlement hierarchy if required by the growth level scenario:

- First, as much growth as possible focused on the urban area of Cambridge, as determined by capacity.
- Second, growth focused on remaining edge of Cambridge fringe sites outside of Green Belt, as determined by capacity.
- Third, limited growth focused on edge of Cambridge within Green Belt
- Fourth, growth focused in one or more new settlements, assumed to be within south west or south east quadrants linked to existing or proposed high quality public transport infrastructure
- Fifth, remaining growth focused on rural centres and minor rural centres

### **Substantively different to existing options?**

- No – This option focuses growth as far as reasonably possible in the Cambridge Urban Area, so would likely be close to a high growth scenario under the Densification option, for which additional growth locations need to be identified.

### **Reasonable?**

N/A

### **Option A03: Dispersal (sub-regional)**

#### **Source**

- Plan/Project: Cambridgeshire & Peterborough Independent Economic Review – Final Report
- Specific document: [Cambridgeshire & Peterborough Independent Economic Review – Final Report](#)

#### **Description (from source)**

A dispersal strategy is where new houses and jobs are created outside of the primary urban areas of Cambridge and Peterborough, mainly in the market towns. It could also involve the creation of new towns and villages where previously there was only farmland/countryside.

#### **Purpose/effects (from source)**

##### **Advantages:**

- Bringing new homes and jobs to towns and villages where populations are ageing could bring new life into them.
- If market towns can develop their own unique selling points (as some in the area have successfully done) then they may attract small business 'clusters'.
- Market towns have some quality of life advantages and may enjoy close communities.

##### **Disadvantages:**

- Uncertainty over how likely it is that sufficient jobs would move into the market towns to make dispersal work on a large scale. In some cases it may, but it would be high risk to attempt to build many houses in the hope that jobs would follow.
- If jobs did not arise on a dispersed strategy, commuting problems into cities will intensify, and a growing sense that the towns are merely 'dormitories' will develop.

A 'jobs-first' approach to market towns, which focuses first on bringing employment, and then second on housing, is preferable.

#### **Relevant in a Greater Cambridge context?**

##### **Partly:**

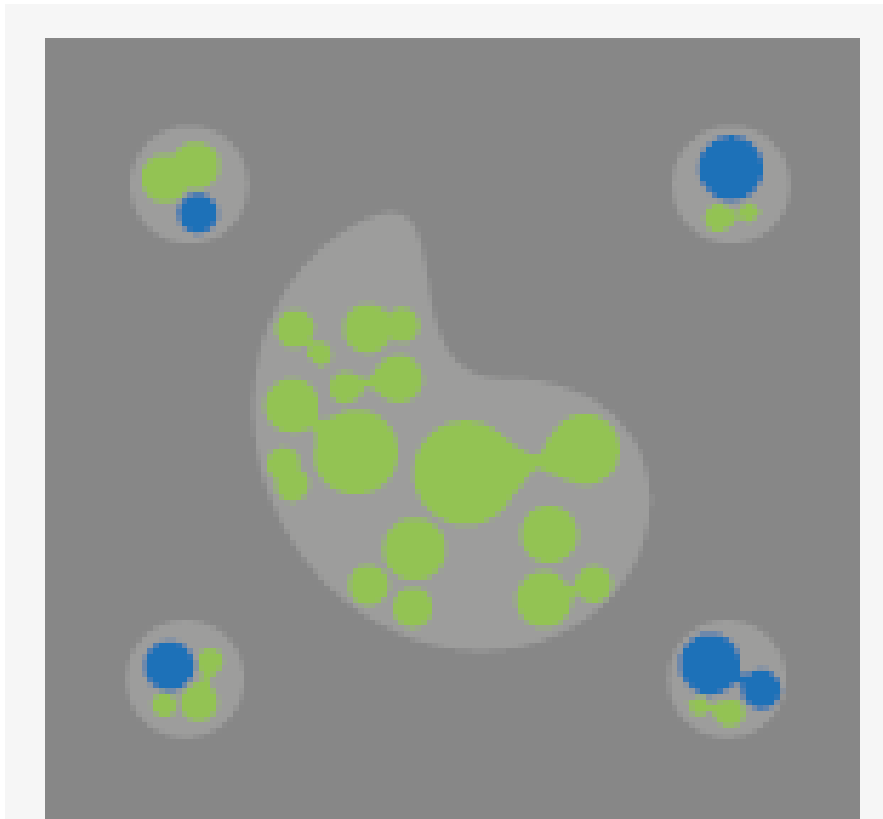
- Yes – Greater Cambridge is surrounded by market towns such as St Neots, Huntingdon, St Ives, Ely, Newmarket, Haverhill, Saffron Walden and Royston.
- Yes – Notwithstanding the above, growth could be located in settlements outside of Cambridge urban area such as at the committed new settlements, as well as at market towns beyond the boundary of South Cambridgeshire.
- Yes - Royston is a market town that adjoins the boundary of South Cambridgeshire. In theory this settlement could be expanded within the boundary of South Cambridgeshire.
- No – the geographical scope of the Greater Cambridge Local Plan (stated explicitly to be relevant to consideration of reasonable options in the Strategic

Environmental Assessment Directive) is limited to Cambridge and South Cambridgeshire.

## **Potential distribution of growth in a Greater Cambridge context**

### *Diagrams*

*Figure 2: B1 - Example growth option diagram*



Source: Cambridgeshire & Peterborough Independent Economic Commission, 2018. Cambridgeshire & Peterborough Independent Economic Review - Final Report, p19

### *Description*

Employment and housing growth focused in committed and/or new settlements within Greater Cambridge, and in market towns beyond Greater Cambridge, such as at St Neots, Huntingdon, St Ives, Ely, Newmarket, Haverhill, Saffron Walden and Royston.

### **Substantively different to existing options?**

- Yes – The First Conversation consultation did not include any options considering growth extending beyond Greater Cambridge boundaries.

### *Reasonable?*

### *Reasonable: National policy?*

Partly:

- No – a strategy that focused growth beyond the boundaries of Greater Cambridge would be incompatible with NPPF para. 35 requiring plans to be

Positively prepared – providing a strategy which, as a minimum, seeks to meet the area’s objectively assessed needs.

- Yes – a strategy that focused growth within Greater Cambridge but was based on agreement with neighbouring authorities about their taking unmet needs beyond the boundaries of Greater Cambridge could be compatible with national policy.

*Reasonable: absolute constraints?*

- Capacity: Unknown – assume Yes.
  - It is assumed that there is some capacity for growth in market towns beyond Greater Cambridge, although this is not known for certain.
- Environmental constraints: Unknown – assume Yes.
  - The locations of and typologies for growth passed to neighbouring districts cannot be assumed, as this would be a matter for each relevant Local Planning Authority. As such, it is not possible to assess whether this option would be limited by environmental constraints. However, given the land area included in neighbouring districts, it seems reasonable to assume that there is land available for some growth which is not limited by absolute environmental constraints.

*Reasonable: viable and deliverable?*

- Viability: Unknown
  - The locations of and typologies for growth passed to neighbouring districts cannot be assumed, as this would be a matter for each relevant Local Planning Authority. As such, it is not possible to assess even at a high level whether this option would be viable.
- Deliverability: Unknown, assume challenging
  - As noted above, it is uncertain how likely it is that sufficient jobs would move into the market towns beyond Greater Cambridge to make dispersal work on a large scale:
    - It would be high risk to attempt to build many houses in the hope that jobs would follow.
    - If jobs did not arise on a dispersed strategy, commuting problems into cities will intensify, and a growing sense that the towns are merely ‘dormitories’ will develop.
  - Agreeing to pass on growth to neighbouring districts could be a challenging political and legal process, including but not limited to the following issues:
    - Any dispersal of growth beyond Cambridge and South Cambridgeshire would need agreement under the Duty to Cooperate with neighbouring bodies.
    - Without a sub-regional strategic statutory plan, the appropriateness of the Greater Cambridge Local Plan might be reliant on other plan processes that are not aligned in timetable.

- Without a sub-regional strategic statutory plan, it is challenging to see how Sustainability Appraisal for the Greater Cambridge Local Plan could appropriately test options extending beyond the Greater Cambridge geography

Drawing on the above, it is not considered reasonable to test this option further, as it is not compliant with national policy, and goes beyond the scope of what reasonable options are as set out in SEA Regulations.

## Spatial principles set out in the National Planning Policy Framework

### Principle B04: Integrate uses including housing and employment

#### Source

- Plan/Project: National Planning Policy Framework, 2019. Paragraph 92

#### Description (from source)

Planning policies and decisions should...ensure an integrated approach to considering the location of housing, economic uses and community facilities and services.

#### Purpose/effects (from source)

To provide the social, recreational, and cultural facilities and services the community needs.

#### Relevant in a Greater Cambridge context?

- Yes – relevant in any spatial context.

#### Potential distribution of growth in a Greater Cambridge context

Growth distributions that would integrate housing, economic uses, facilities and services could include:

- Growth focused in areas close to existing infrastructure and services, such as within Cambridge
- New housing growth focused in sufficient concentrations so as to generate demand for economic uses and community facilities and services, such as at new settlements.
- While many locations close to Cambridge could be considered as key employment areas, one possible interpretation of an integrated approach to locating housing, jobs would be to focus growth to the south of Cambridge close to research parks within the biotech cluster. This area to date has seen employment but not significant housing or infrastructure growth. The Greater Norwich approach built on an area of growth of all uses.

#### Substantively different to existing options?

Partly:

- Yes – southern cluster approach would focus growth in a geographically specific (rather than typology-specific) location which is not considered through First Conversation options.
- No – focus of growth within Cambridge or at new settlements is already addressed by First Conversation options.

*Reasonable?*

*Reasonable: national policy?*

Yes – this option is derived from the NPPF.

*Reasonable: absolute constraints?*

- Capacity: Yes.
  - It is assumed that there is some capacity for growth.
  - The area, south of Cambridge is relatively undeveloped with several small settlements located parallel with the M11. Extensions to these

include considerable risk of settlement coalescence. Whilst there is more capacity for growth in areas either side of the A1307, the need for substantial infrastructure to support large scale residential development would need to be balanced against its environmental impact.

- Environmental constraints: Yes.
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints.
  - The area is predominantly rural/agricultural and therefore significant development would have an impact on the area's character and environmental qualities. It can however be assumed that some areas will not be limited by absolute environmental constraints.
  - However, the River Granta flows through this area and feeds into the River Cam. Any significant development in the area affecting its flow e.g., with increased run-off or flow rates would potentially have an impact on the River Cam and Cambridge.

*Reasonable: viable and deliverable?*

- Viability: Unknown – assume yes but challenging.
  - A single growth location can be assumed to be viable but very much dependent on size of growth. Considerations include:
    - A balance between sustainable residential growth and environmental impact will need to be identified. Sufficient housing growth will be necessary for the development to be viable to deliver the necessary infrastructure including transport improvements.
  - Expanding existing settlements would be more viable but limited in capacity to avoid settlement coalescence and therefore limited in terms of necessary infrastructure improvements
- Deliverability: Unknown – assume yes but challenging.
  - Deliverability is very much dependent on scale of permissible development.
  - As noted above, it is uncertain as to how much residential growth could be provided that provides sufficient infrastructure to be sustainable without adversely affecting either the immediate area or areas beyond.
  - Expanding existing villages would be more feasible



## **Principle B05: Explicitly rely on existing or proposed transport infrastructure**

### **Source**

- Plan/Project: National Planning Policy Framework, 2019. para 102,103

### **Description (from source)**

Transport issues should be considered from the earliest stages of plan-making and development proposals, so that opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated.

### **Purpose/effects (from source)**

Reduce congestion and emissions and improve air quality and public health.

### **Relevant in a Greater Cambridge context?**

- Yes – there are current and proposed transport infrastructure projects in Greater Cambridge that could support future growth.

### **Potential distribution of growth in a Greater Cambridge context**

Growth focused along key transport corridors into Cambridge, including those provided for by the Cambridgeshire Autonomous Metro and East West Rail proposals.

One potential interpretation of this principle would be to focus growth on the corridor to the west of Cambridge, which will be provided for by the Cambridgeshire Autonomous Metro and East West Rail proposals.

### **Substantively different to existing options?**

Partly:

- No – Densification option would enable consideration of appropriate locations for higher densities related to public transport infrastructure.
- No – Dispersal: New Settlements option description notes that such opportunities would rely on being connected to the strategic transport network.
- No – Public Transport Corridors option addresses growth opportunities relying on existing and proposed public transport infrastructure.
- Yes – Notwithstanding the above, First Conversation options do not focus all growth in a geographically specific (rather than typology-specific) location.

### **Reasonable?**

Considering only an option focusing growth on the corridor to the west of Cambridge.

### **Reasonable: national policy?**

Yes – compatible with NPPF para. 102 on realising opportunities from existing or proposed transport infrastructure.

### **Reasonable: absolute constraints?**

- Capacity: Yes.
  - It is assumed that there is capacity for development close to Cambourne.

- It is assumed that there may be capacity for development at the villages along the A428 corridor.
- Environmental constraints: Unknown – assume Yes.
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints.

*Reasonable: viable and deliverable?*

- Viability: Unknown – assume yes.
  - Following allocation in the South Cambridgeshire Local Plan, proposed new settlements at Waterbeach and Bourn are progressing through the application process, implying that developing or expanding new settlements in South Cambridgeshire is currently viable.
  - As evidenced by Annual Monitoring Reports, over many years, smaller developments in South Cambridgeshire villages have continued to progress through the planning system, proving their ongoing viability.
- Deliverability: Unknown – assume mixed
  - Deliverability will depend on locations and typologies of development:
    - Delivery assumed to be supported by being close to strategic public transport infrastructure
    - Delivery rates are assumed to be affected by locating a number of developments close to one another.
    - New settlements usually have a long lead in time from planning permission to the start of construction. As such, confirmation of how much of a new settlement could be developed within the next 20 years will be important as part of considering whether to allocate it in the new Local Plan.
    - Developer contributions on individual smaller sites do not generate substantive contributions to support major transport and other infrastructure provision. As such, an option that focused growth towards smaller sites might result in cumulative impacts on the transport network, for which it might be hard to collect sufficient funds to mitigate. Over time this could lead to an infrastructure deficit that might make such a strategy undeliverable in the long term.

**Principle B12: Proportionate growth approach (focus growth in locations that make a positive contribution to local character and distinctiveness)**

**Source**

- Plan/Project: National Planning Policy Framework, 2019. para 102,103

**Description (from source)**

Include strategic options that...make a positive contribution to local character and distinctiveness (ie. maintain the current relative roles of settlements within the settlement hierarchy, distributing growth proportionate to locations relative to current size).

Note that this is a very specific way of reading the implication of NPPF para. 185. To extract principle for the purposes of identifying potential impacts on strategy options. Many other readings of the implications of this are possible. In reality, any spatial option could affect local character and distinctiveness, particularly under higher growth scenarios.

**Purpose/effects (from source)**

**Make a positive contribution to local character and distinctiveness.**

**Relevant in a Greater Cambridge context?**

- Yes – there is capacity for growth at locations across the settlement hierarchy within Greater Cambridge.

**Potential distribution of growth in a Greater Cambridge context**

Proportionate growth relative to current or committed size of settlement, such that the most growth would be distributed to the location at the start of this list and the least growth to the locations at the end of this list: Cambridge, Waterbeach, Northstowe, Cambourne, largest villages, smaller villages.

**Substantively different to existing options?**

- No - Likely be close to a high growth scenario under the Densification option, for which additional growth locations need to be identified.

Note this is similar to A0: Current strategy.

*Reasonable?*

N/A

**Plan-making practice in the UK**

**Option C03: Supporting an existing high-tech corridor**

**Source**

- Plan/Project: Greater Norwich Joint Local Plan
- Specific document: [Towards A Strategy – Greater Norwich Development Partnership 29th January 2019](#)

**Description (from source)**

Concentrate the great majority of the additional 3,300 dwellings in the A11 corridor, with significant growth in the south west fringe, Wymondham and a new settlement in or near the corridor.

“Strategic growth area” broadly defined to include:

- The City of Norwich;
- The suburbs/fringe parishes which make up the rest of the urban area;
- All the strategic employment areas, Norwich City Centre, Norwich Research Park, Longwater/the Food Hub, Wymondham, Hethel, the Norwich Airport area, Broadland Business Park, Broadland Gate and Rackheath. These areas provide for growth of the key employment sectors identified in the Norfolk and Suffolk Economic Plan. Local evidence shows that all of the strategic employment locations have the potential for jobs and business growth;
- Around 80% of total housing growth (existing commitment and emerging distribution);
- All but one of the strategic scale housing growth locations (locations with 1,000 dwellings +);
- High quality public transport, road and cycling infrastructure (existing and planned);
- The great majority of brownfield sites in the area.

**Purpose/effects (from source)**

Maximise economic growth potential by

- Support existing growth in an existing corridor, building on existing infrastructure
- Link with wider growth corridors
- Provides a focused area to promote to partners for further investment
- Link to the city of Norwich as a driver of the regional economy, supporting its vitality and regeneration.

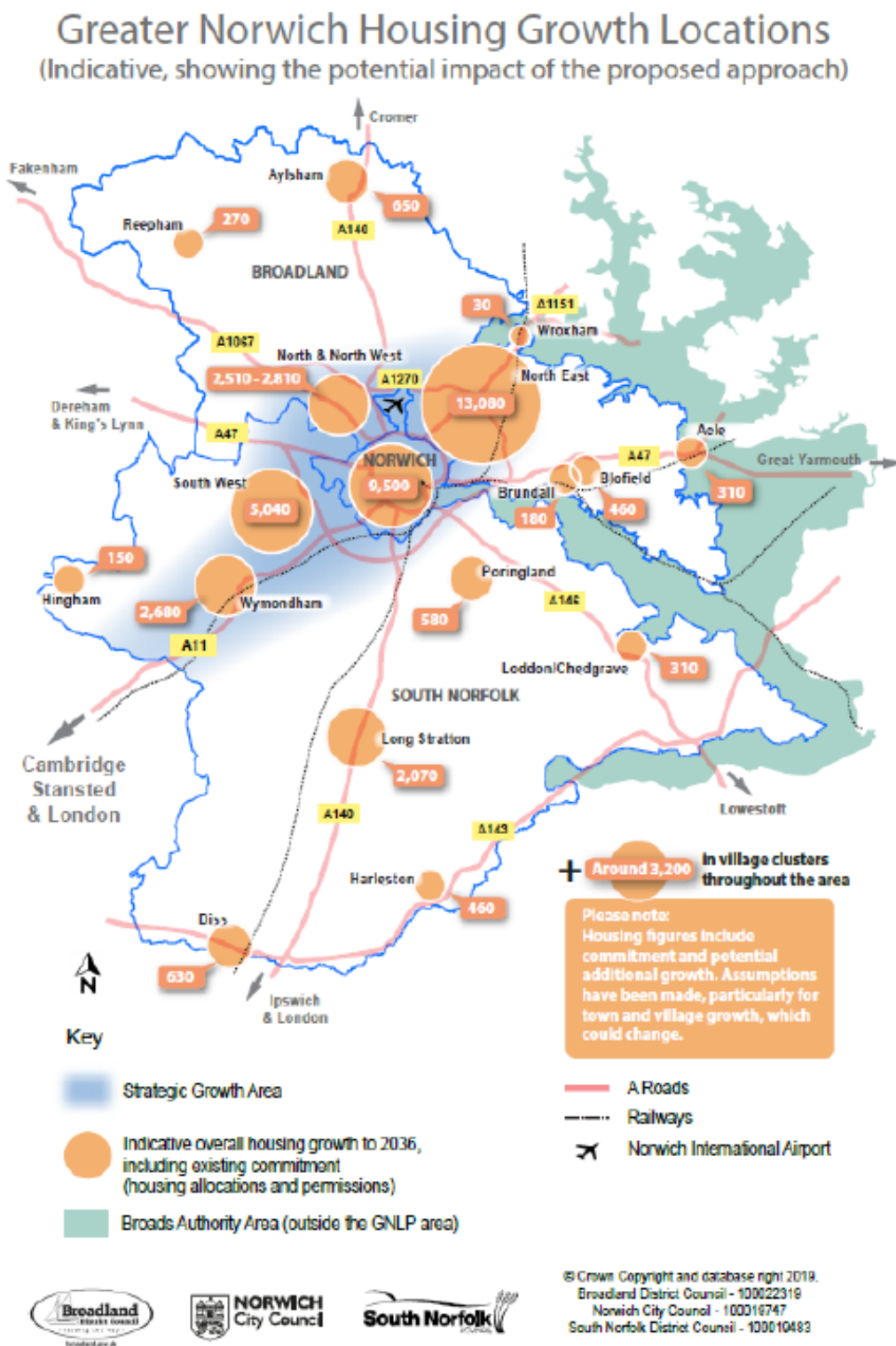
**Relevant in a Greater Cambridge context?**

Partly

- Yes – the most focused high-tech corridor in Greater Cambridge is the cluster of biotech organisations south of Cambridge, as a part of the UK's Innovation Corridor (London-Stansted-Cambridge Corridor).
- No - South of Cambridge area to date has seen employment but not significant housing or infrastructure growth. The Greater Norwich approach built on an area of growth of all uses.
- No – In some ways the whole of Greater Cambridge could be considered a high-tech area.

## Potential distribution of growth in a Greater Cambridge context Diagrams

Figure 3: B1 - Example growth option diagram



### Description

Focus growth within the life sciences cluster area to the south of Cambridge.

### **Substantively different to existing options?**

- Yes – focuses growth in a geographically specific (rather than typology-specific) location which is not considered through First Conversation options.

### **Reasonable?**

*Reasonable: National policy?*

Yes:

- Integration of housing and jobs is supported by NPPF para. 92.

*Reasonable: absolute constraints?*

- Capacity: Yes.
  - The area, south of Cambridge is relatively undeveloped with several small settlements located parallel with the M11 - it is assumed that there is some capacity for growth.
- Environmental constraints: Yes.
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints.
  - The area is predominantly rural/agricultural and therefore significant development would have an impact on the area's character and environmental qualities. It can however be assumed that some areas will not be limited by absolute environmental constraints.
  - However, the River Granta flows through this area and feeds into the River Cam. Any significant development in the area affecting its flow e.g., with increased run-off or flow rates would potentially have an impact on the River Cam and Cambridge.

*Reasonable: viable and deliverable?*

- Viability: Unknown – assume yes.
  - Following allocation in the South Cambridgeshire Local Plan, proposed new settlements at Waterbeach and Bourn are progressing through the application process, implying that developing or expanding new settlements in South Cambridgeshire is currently viable.
  - As evidenced by Annual Monitoring Reports, over many years, smaller developments in South Cambridgeshire villages have continued to progress through the planning system, proving their ongoing viability.
- Deliverability: Unknown – assume mixed
  - Deliverability will depend on locations and typologies of development:
    - Delivery assumed to be supported by being close to strategic public transport infrastructure
    - Delivery rates are assumed to be affected by locating a number of developments close to one another.
    - New settlements usually have a long lead in time from planning permission to the start of construction. As such, confirmation of how much of a new settlement could be developed within the next 20 years will be important as part of considering whether to allocate it in the new Local Plan.

- Developer contributions on individual smaller sites do not generate substantive contributions to support major transport and other infrastructure provision. As such, an option that focused growth towards smaller sites might result in cumulative impacts on the transport network, for which it might be hard to collect sufficient funds to mitigate. Over time this could lead to an infrastructure deficit that might make such a strategy undeliverable in the long term.

### **Option C08: Expanded growth area**

#### **Source**

- Plan/Project: Bedford Borough Local Plan 2032
- Specific document: [Development Strategy and Site Selection Methodology Background Paper, September 2015](#)

#### **Description (from source)**

- Existing growth area would expand through urban extensions and development adjoining the existing growth area.
- Limited development in the remaining rural area, mostly village infilling.
- Development in open countryside restricted in line with government policy.

#### **Purpose/effects (from source)**

##### *Sustainability appraisal criteria*

This option is likely to have the following positive effects –

- maximise land use efficiency and encourage sustainable travel within the expanded growth area

- preserve open countryside, including its habitats and species, although to a lesser extent than under option 1
- contribute to the achievement of economic growth through concentrating economic development
- make a positive contribution to town centre development
- reduce deprivation in the most deprived wards, which are located in the existing growth area
- reduce the need to travel and commute outward.

This option is likely to have the following negative effects –

- increase emissions from transport and construction (temporary effect) in the existing growth area
- increase resource consumption (energy, water, land) and waste production
- increase pressure for development of open land adjoining the existing growth area, potentially affecting habitats and species
- may mean further decline of rural economies, services and employment
- do little to help meet the need for housing, services, and facilities outside of growth area
- may increase exclusion and inequalities, and further increase deprivation in terms of access to essential services in the rural area
- cause rural public transport to decline further.

#### *Deliverability criteria*

- Concentrating growth would risk the delivery of existing large committed sites in the growth area.
- Growth area villages would have to absorb further significant growth before recently created communities had matured.
- Locations in the A421 corridor are attractive to potential employers and close to labour markets.
- Concentrating development is likely to maximise infrastructure opportunities.

#### **Relevant in a Greater Cambridge context?**

Partly:

- No – the sequential development strategy of the adopted Local Plans locates significant growth in a range of different locations within Greater Cambridge, as opposed to being within a limited area or corridor.
- Yes – in terms of concentrations of growth outside of Cambridge within the adopted Local Plans and previous rounds of plan-making, the most significant growth has been allocated to the north and west of Cambridge, at Cambourne, Bourn Airfield, Northstowe and Waterbeach. A possible interpretation of expanding a growth area in a Greater Cambridge context would be to focus growth in this broad area of South Cambridgeshire.



## Potential distribution of growth in a Greater Cambridge context

### Diagrams

Figure 4: B1 - Example growth option diagram

## Option 2 – Expanded 'growth area'



[Local Plan 2032 - Planning for the future Issues and Options Paper, 2014](#)

### Description

Focus growth to the west and north of Cambridge, expanding development at and in the area of existing and committed new settlements.

One potential interpretation of this principle would be to focus further growth on the A428 corridor to the west of Cambridge, which includes Cambourne and its expansion at Cambourne West, as well as allocated development at Bourn Airfield.

### Substantively different to existing options?

Partly:

- No – growth areas outside of Cambridge at new settlements are all on public transport corridors. Focusing growth to the west and north of Cambridge, expanding development at and in the area of existing and committed new settlements, is addressed through Public Transport Corridor option.

- Yes – in relation to the A428 corridor focus, First Conversation options do not focus all growth in a geographically specific (rather than typology-specific) location.

### **Reasonable?**

Considering only an option focusing growth on the corridor to the west of Cambridge.

*Reasonable: national policy?*

Yes – compatible with NPPF para. 102 on realising opportunities from existing or proposed transport infrastructure.

*Reasonable: absolute constraints?*

- Capacity: Yes.
  - It is assumed that there is capacity for development close to Cambourne.
  - It is assumed that there may be capacity for development at the villages along the A428 corridor.
- Environmental constraints: Unknown – assume Yes.
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints.

*Reasonable: viable and deliverable?*

- Viability: Unknown – assume yes.
  - Following allocation in the South Cambridgeshire Local Plan, proposed new settlements at Waterbeach and Bourn are progressing through the application process, implying that developing or expanding new settlements in South Cambridgeshire is currently viable.
  - As evidenced by Annual Monitoring Reports, over many years, smaller developments in South Cambridgeshire villages have continued to progress through the planning system, proving their ongoing viability.
- Deliverability: Unknown – assume mixed
  - Deliverability will depend on locations and typologies of development:
    - Delivery assumed to be supported by being close to strategic public transport infrastructure
    - Delivery rates are assumed to be affected by locating a number of developments close to one another.
    - New settlements usually have a long lead in time from planning permission to the start of construction. As such, confirmation of how much of a new settlement could be developed within the next 20 years will be important as part of considering whether to allocate it in the new Local Plan.
    - Developer contributions on individual smaller sites do not generate substantive contributions to support major transport and other infrastructure provision. As such, an option that focused growth towards smaller sites might result in cumulative impacts on the transport network, for which it might be hard to collect sufficient funds to mitigate. Over time this could lead to

an infrastructure deficit that might make such a strategy undeliverable in the long term.

## **Option C13: All development located in the high-tech growth area (All in Science Vale)**

### **Source**

- Plan/Project: South Oxfordshire Local Plan
- Specific document: [South Oxfordshire Local Plan - draft topic paper](#)

### **Description (from source)**

All additional housing in Science Vale (note this option considers distribution of housing only; not employment land).

### **Purpose/effects (from source)**

#### *Pros*

- Based on locating housing where it can support growth
- Provides a focus for the delivery of infrastructure and services potentially at a more competitive return
- Supports the aspirations of the Science Vale Area Action Plan

#### *Cons*

- Some of the smaller settlements might miss out on some desired growth for local affordable housing for example
- Timescales and funding needed for the infrastructure required to support this level of growth is untested
- Could create housing market saturation in Science Vale by concentrating development in one area
- There is a risk that relying on a few larger sites with high infrastructure requirements would not deliver homes fast enough to maintain our five year land supply

### **Relevant in a Greater Cambridge context?**

- Yes – focuses growth in a geographically specific (rather than typology-specific) location which is not considered through First Conversation options.

## **Potential distribution of growth in a Greater Cambridge context**

### *Diagrams*

*Figure 5: B1 - Example growth option diagram*

None available

### *Description*

All growth located within the life sciences cluster area to the south of Cambridge.

### **Substantively different to existing options?**

- Yes – locates all growth in a geographically specific (rather than typology-specific) location which is not considered through First Conversation options.

### **Reasonable?**

*Reasonable: National policy?*

Yes:

- Integration of housing and jobs is supported by NPPF para. 92.

*Reasonable: absolute constraints?*

- Capacity: Yes.
  - The area, south of Cambridge is relatively undeveloped with several small settlements located parallel with the M11 - it is assumed that there is some capacity for growth.
- Environmental constraints: Yes.
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints.
  - The area is predominantly rural/agricultural and therefore significant development would have an impact on the area's character and environmental qualities. It can however be assumed that some areas will not be limited by absolute environmental constraints.
  - However, the River Granta flows through this area and feeds into the River Cam. Any significant development in the area affecting its flow e.g., with increased run-off or flow rates would potentially have an impact on the River Cam and Cambridge.

*Reasonable: viable and deliverable?*

- Viability: Unknown – assume yes.
  - Following allocation in the South Cambridgeshire Local Plan, proposed new settlements at Waterbeach and Bourn are progressing through the application process, implying that developing or expanding new settlements in South Cambridgeshire is currently viable.
  - As evidenced by Annual Monitoring Reports, over many years, smaller developments in South Cambridgeshire villages have continued to progress through the planning system, proving their ongoing viability.
- Deliverability: Unknown – assume mixed
  - Deliverability will depend on locations and typologies of development:
    - Delivery assumed to be supported by being close to strategic public transport infrastructure
    - Delivery rates are assumed to be affected by locating a number of developments close to one another.
    - New settlements usually have a long lead in time from planning permission to the start of construction. As such, confirmation of how much of a new settlement could be developed within the next 20 years will be important as part of considering whether to allocate it in the new Local Plan.
    - Developer contributions on individual smaller sites do not generate substantive contributions to support major transport and other infrastructure provision. As such, an option that focused growth towards smaller sites might result in cumulative impacts on the transport network, for which it might be hard to collect sufficient funds to mitigate. Over time this could lead to

an infrastructure deficit that might make such a strategy undeliverable in the long term.

## **Option C18: Locating development in particular settlements where it could help fund projects**

### **Source**

- Plan/Project: South Oxfordshire Plan
- Specific document: [Draft Topic Paper – Local Plan Spatial Strategy](#)

### **Description (from source)**

Public money to fund infrastructure is in short supply. Sometimes the only way that big scale improvements or expansions can be paid for is through development. By the community taking housing development, the council and county council can require housebuilders to contribute towards infrastructure projects. These could be, for example, a new road, a new river bridge, or a new or expanded school. The scale of growth to fund such 'big ticket' items is likely to be quite large, but we would like to know if there are any communities which would welcome investigation of this option. Another route for communities to look at enhanced growth to fund a 'big ticket' project is through preparing a neighbourhood plan.

### **Purpose/effects (from source)**

#### *Pros*

- Would achieve much needed benefits for some communities
- Fits well with neighbourhood planning where communities weigh up for themselves whether to opt for this

#### *Cons*

- May require significant amounts of housing to achieve the benefit sought.

### **Relevant in a Greater Cambridge context?**

- Yes – New settlements are an option under consideration in Greater Cambridge. These could help finance improvements along existing public transport corridors. Specific projects for which this approach is a live issue include East West Rail Central Section, and the Cambridgeshire Autonomous Metro.

### **Potential distribution of growth in a Greater Cambridge context**

Growth focused along key corridors into Cambridge, including:

- At Cambourne where an East West Rail station is proposed; and
- On proposed Cambridgeshire Autonomous Metro routes into Cambridge.

### **Substantively different to existing options?**

- No – Dispersal - new settlements and Public transport corridors were both considered through First Conversation options

### **Reasonable?**

N/A

## Option C22: Spokes and hubs

### Source

- Plan/Project: Oxfordshire Plan 2050
- Specific document: [Introducing the Oxfordshire Plan 2050](#)

### Description (from source)

Continue to focus on Oxford and key corridors into Oxford.

### Purpose/effects (from source)

- Concentrates transport along routes that are already at high capacity
- May offer opportunities for funding to enhance strategic corridors
- This would not help 'spread the load' of new development, but would mean improving existing infrastructure, which might be efficient, but much will depend on the potential of existing infrastructure to be improved to take new development

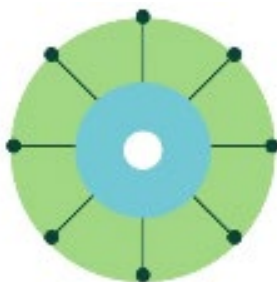
### Relevant in a Greater Cambridge context?

- Yes – there are key corridors into Cambridge, which are supported by existing and proposed transport schemes.

### Potential distribution of growth in a Greater Cambridge context

#### Diagrams

Figure 6: B1 - Example growth option diagram



#### Description

Growth focused at Cambridge, and along key public transport corridors into Cambridge.

### Substantively different to existing options?

- No – this is a hybrid of Densification and Public Transport corridor options.

### Reasonable?

N/A



## **Concept C25: 'String' settlement/ settlement cluster**

### **Source**

- Plan/Project: Oxfordshire Plan 2050
- Specific document: [Introducing the Oxfordshire Plan 2050](#)

### **Description (from source)**

**Development focused on a number of linked settlements. It could involve new and/or existing/expanded settlements**

### **Purpose/effects (from source)**

**May or may not be close to existing high-quality transport corridors**

**Relies on there being suitable broad locations available for this type of development**

**This may involve promoting development at some existing, currently small, settlements, which may significantly change their character**

**A number of smaller settlements could collectively, be of sufficient scale to be served by shared infrastructure**

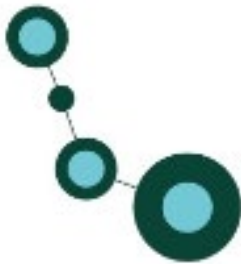
### **Relevant in a Greater Cambridge context?**

- Yes – development would be focused on several linked settlements and could involve new and/or existing/ expanded settlements. There are many settlements varying in size from small villages to larger settlements across Greater Cambridge, where development could be spread.

## Potential distribution of growth in a Greater Cambridge context

### Diagrams

Figure 7: B1 - Example growth option diagram



### Description

Growth spread across a number of existing and new developments in South Cambridgeshire. Further work required to explore opportunities.

### Substantively different to existing options?

Partly:

- No – This option was not a specific option in the First Conversation options but a combination of Dispersal: new settlements, Dispersal: villages, and Public Transport Corridors.
- Yes – Development is spread across a number of existing and new developments, the aggregate of which is sufficient to provide substantial infrastructure including improved transport links between these settlements, reducing their reliance on existing established centres such as Cambridge.

### Reasonable?

*Reasonable: National policy?*

Yes:

- Yes – compatible with NPPF para. 78 in promoting sustainable development in rural areas.

*Reasonable: absolute constraints?*

- Capacity: Unknown – assume Yes.
  - There is undeveloped land within Greater Cambridge which in theory has capacity for additional new or expanded settlements.
- Environmental constraints: Unknown – assume Yes.
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints.

*Reasonable: viable and deliverable?*

- Viability: Unknown – assume yes
  - Following allocation in the South Cambridgeshire Local Plan, proposed new settlements at Waterbeach and Bourn are progressing through the application process, implying that developing or expanding new settlements in South Cambridgeshire is currently viable.

- As evidenced by Annual Monitoring Reports, over many years, smaller developments in South Cambridgeshire villages have continued to progress through the planning system, proving their ongoing viability.
- Deliverability: Unknown, assume challenging
  - Deliverability is very much dependent on transport costs/ improvements, especially if these need to be implemented in advance of new development. Locating development along or close to existing or proposed transport corridors should support deliverability.
  - New settlements usually have a long lead in time from planning permission to the start of construction. As such, confirmation whether a new settlement could be developed within the next 20 years will be important as part of considering whether to allocate it in the new Local Plan.
  - Delivering shared services and infrastructure across a number of settlements would require coordination between landowners, developers and authorities that is not current practice within the current approach to village development.

## Option C26: 'Wheel' settlement cluster

### Source

- Plan/Project: Oxfordshire Plan 2050
- Specific document: [Introducing the Oxfordshire Plan 2050](#)

### Description (from source)

**Focus on Oxford and the existing larger towns and the key corridors into Oxford and between the towns**

### Purpose/effects (from source)

- This could be a variation on the spoke and hub approach but with the added benefits of stronger links between the towns
- Could take some of the pressure off the corridors into Oxford

### Relevant in a Greater Cambridge context?

- Yes – there are a number of substantial existing or planned settlements within Greater Cambridge, beyond the city itself. In theory, the corridors between these settlements and Cambridge, and between the settlements themselves, could become a focus for further growth and infrastructure investment.

### Potential distribution of growth in a Greater Cambridge context

#### Diagrams

Figure 8: B1 - Example growth option diagram

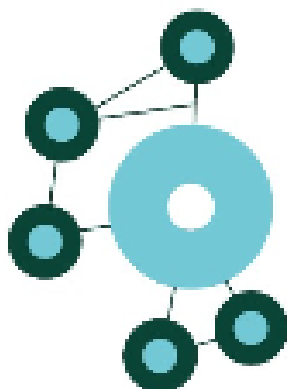


Figure 9: B1 - Likely distribution of growth in Greater Cambridge context

### Description

Growth focused at Cambridge, the existing and planned largest settlements outside of Cambridge, and the key corridors into Cambridge and between the largest settlements. New growth locations potentially to the south and/or east of Cambridge where there is currently less committed housing growth in comparison with corridors to the west and north.

### Substantively different to existing options?

Partly:

- No – Focus on Cambridge and corridors into Cambridge is addressed through all Densification, Edge of Cambridge options, and Public Transport Corridors.
- Yes – Focus on corridors between existing and planned largest settlements outside Cambridge is not included in First Conversation options.

**Reasonable?**

*Reasonable: National policy?*

Yes - compatible with NPPF para. 102 on realising opportunities from existing or proposed transport infrastructure.

*Reasonable: absolute constraints?*

- Capacity: Unknown – assume Yes.
  - Capacity will depend on the existing transport capacity between new and existing settlements; the potential for each settlement to expand sustainably.
- Environmental constraints: Unknown – assume Yes.
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints.

*Reasonable: viable and deliverable?*

- Viability: Unknown.
  - Capacity to expand new and existing settlements may limit capacity and hence ability to cover cost of improved transport links
- Deliverability: Unknown, assume challenging
  - Deliverability is very much dependent on transport costs/improvements, especially if these need to be implemented in advance of new development.

## Ideas from other sources

### Concept D01: Garden City, growing an existing city

#### Source

- Plan/Project: Urbed – 2014 Wolfson Economics Prize submission
- Specific document: [Wolfson Economics Prize 2014 – Finalists' Submissions: Compendium of Non-Technical Summaries](#)

#### Description (from source)

- major urban extensions in a 'snowflake' pattern. Extensions lie within a zone 10km from the city centre, which is a 20 minute tram ride, within the green belt.
- Doubles population of existing city of 200,000 to 400,000, through extensions of 50,000 people each.
- tram stops within 20 minutes of the city centre, neighbourhoods that are within 10 minutes walk of these tram stops, each of which supports a secondary school and its feeder primary schools, and urban extensions that have sufficient scale to support a district centre and employment uses.
- for every hectare of land developed another will be given back to the city as accessible public space

#### *Larger-scale/longer term idea*

#### Purpose/effects (from source)

- High quality, larger housing, with higher environmental standards, in greater quantities and with far greater spending on infrastructure
- Walkable/prioritises public transport
- accessible to public space, forests, lakes and country parks
- allows for incremental development
- investment in new transport infrastructure and city centre facilities to benefit the existing and new residents

#### Relevant in a Greater Cambridge context?

Cambridge district includes a population of around 137,000. While this is lower than the 200,000 referenced in the Urbed proposal, their use of an Oxford case study (population ~150,000 suggests) that there may be at least some potential to explore the Uxcester concept in a Greater Cambridge context.

## Potential distribution of growth in a Greater Cambridge context

### Diagrams

Figure 10: B1 - Example growth option diagram

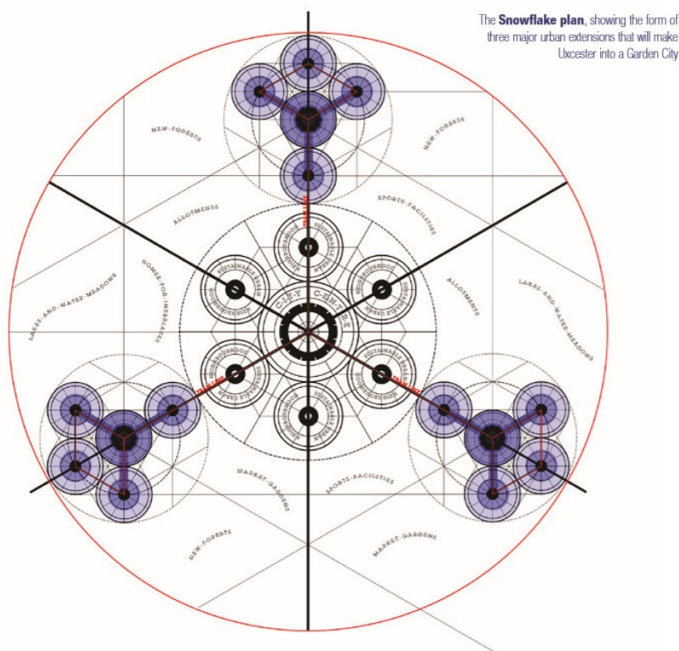


Figure 11: B1 - Likely distribution of growth in Greater Cambridge context

### Description

- Plan period: Growth focused at edge of Cambridge and along public transport corridors.
- Built out: Growth focused at Cambridge's urban extensions on a very large scale, focused on key corridors into Cambridge.

### Substantively different to existing options?

Plan period: No -

- Focus on Cambridge and public corridors into Cambridge is addressed through all First Conversation options other than Dispersal.
- Edge of Cambridge option addresses the idea of urban extensions.

Built out: Partly –

- No – the pattern of growth envisaged by this Garden City concept is the same as that addressed through the Public Transport Corridor First Conversation option.
- Yes – urban extensions of a scale to double the population of Cambridge were not addressed through First Conversation options.

### Reasonable?

Reasonable: National policy?

Yes:

- Yes – NPPF para. 72 supports the idea of meeting the need for new homes via larger scale development.

*Reasonable: absolute constraints?*

- Capacity: Unknown
  - There is undeveloped land in South Cambridgeshire which could theoretically accommodate significant additional growth. It is unknown whether there would be sufficient land available to support a doubling of the population of Cambridge.
- Environmental constraints: Unknown – assume challenging
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints. It is likely that seeking to double the population of Cambridge would be impacted by constraints such as water resource capacity.

*Reasonable: viable and deliverable?*

- Viability: Unknown – assume no
  - It is considered that development on this scale would not be viable without a change to the current development delivery model in the Greater Cambridge area.
- Deliverability: No
  - It is considered that development on this scale would not be viable without a change to the current development delivery model in the Greater Cambridge area.
  - Were such an approach to development to be deliverable in principle, of how much development could take place within the next 20 years would be important as part of considering whether to allocate it in the new Local Plan.



## **Concept D02: New living campus clusters**

### **Source**

- Plan/Project: The Cambridge to Oxford Connection: Ideas Competition
- Specific document: [Mae: Urcadia](#)

### **Description (from source)**

- Clusters of communities within the New Living Campus, each with a range of homes, public spaces and other facilities, of a walkable scale, giving an average area of around 1km<sup>2</sup> or 100 hectares, allowing a cluster to contain between 5,000 and 25,000 homes depending on the location, density and local demand.
- City Campus model that can house 250,000 people in 12 clusters with a range of densities to accommodate a variety of typologies from self-build terrace to multi-level apartment block.
- Each cluster of the New Living Campus could develop a specialist faculty to encourage a particular field of innovation, such as 'Construction Material Innovation' or 'Biotechnology in Food Production'.

### *Larger-scale/longer term idea*

### **Purpose/effects (from source)**

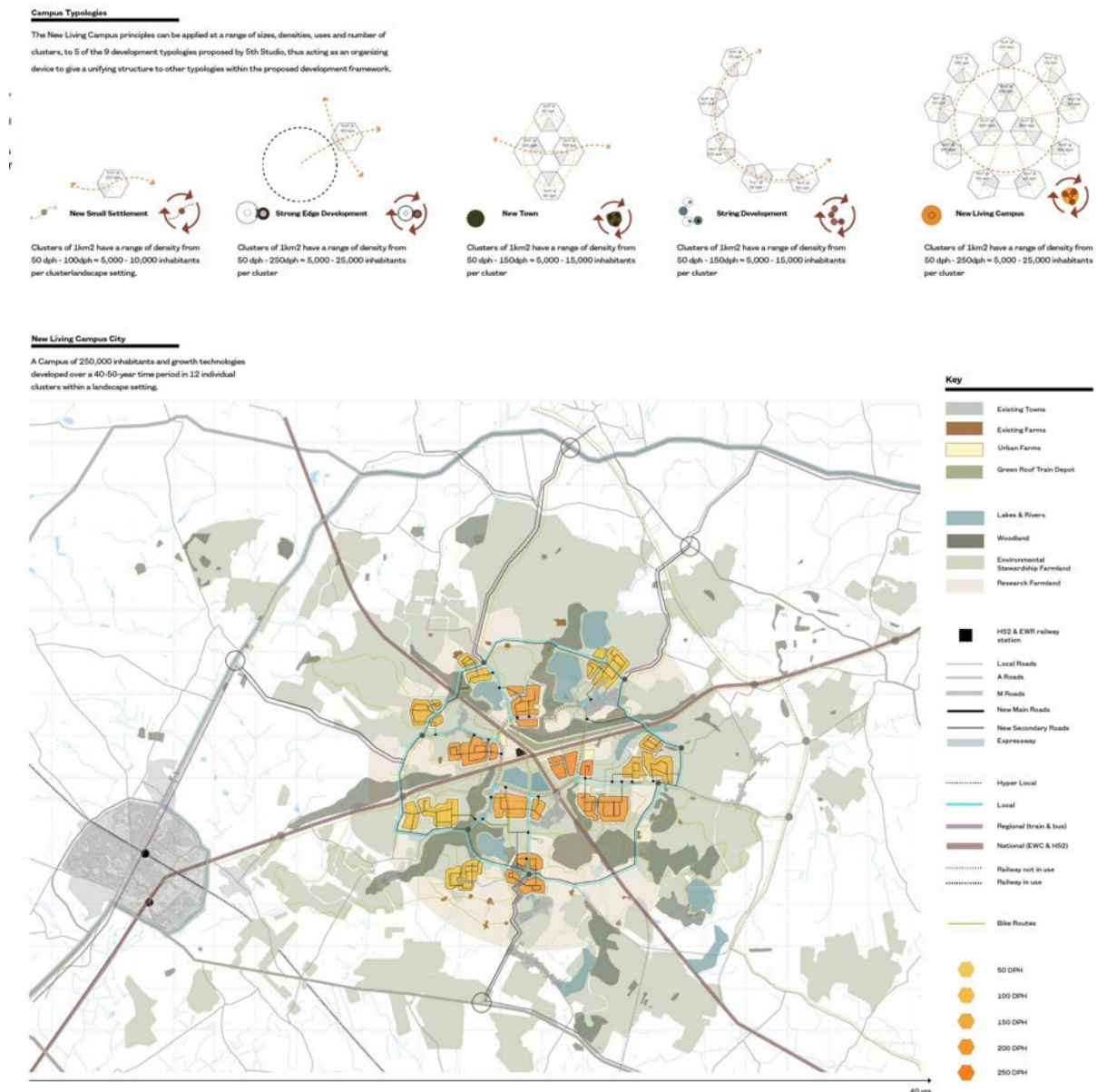
- Decentralised, polycentric settlement would allow each centre to distinguish itself from others in both urban typology and technological specialism.
- Each centre could accommodate a variety of densities and types of housing
- Different centres could support innovation by clustering different specialisms
- Creates places with enduring social and community value.
- Connected to transport infrastructure
- Walkable scale
- Encourages the landscape to flow through and around the whole.
- Flexible model (scalable): over time, individual clusters are complete, allowing green and agricultural landscape to flow between, and additional clusters to be completed to suit demand and location.

### **Relevant in a Greater Cambridge context?**

- Yes – There is undeveloped land close to existing or proposed

## Potential distribution of growth in a Greater Cambridge context Diagrams

Figure 12: B1 - Example growth option diagram



### Description

Unclear. To an extent a typology to be applied in a range of contexts, rather than a spatial option.

Plan period: First phases of one or more new high-density new settlements supported by strategic transport infrastructure connecting to Cambridge.

Built out: cluster of high-density new settlements supported by strategic transport infrastructure connecting to Cambridge; opportunity for additional high density new settlements within the same area.

### Substantively different to existing options?

Partly:

- Yes – Clusters of connected new settlements within a relatively small area were not explicitly considered within the First Conversation options.
- No – New settlements were considered under the First Conversation Dispersal: New settlements option
- No – More a typology to be applied in a range of contexts, rather than a spatial option.

**Reasonable?**

N/A

Further consideration may be given to this concept in parallel to the strategic options testing, to inform later stages of the plan process.

**Concept D03: Town cluster; village cluster; village (VeloCity)**

**Source**

- Plan/Project: The Cambridge to Oxford Connection: Ideas Competition
- Specific document: [Tibbalds Planning and Urban Design: Velocity](#)

**Description (from source)**

Town cluster:

- Existing villages within a 7 mile catchment of local centres and transport nodes such as the new stations on the East West Rail link can be grouped into 3-4 clusters of 4-6 villages . 7 miles is a comfortable distance for an adult on a daily commute to the transport interchange.

- This model can be repeated across the corridor wherever local centres/ transport infrastructure are located.

#### Village clusters

- Within 1-2miles of each other
- Roads to the main routes are retained. Linking roads between villages are replaced with 'Slow Lane' cycle routes through the shared green heart of fields between the villages. The car is also removed from within the villages to create a cycle/pedestrianised centre.
- Each village provides a specific service that links the cluster together such as a local produce market, schools, workplace, cultural facilities or waste recycling centres.
- 'Big Back Garden' in the centre of each village cluster, combining active recreation with productive landscape and areas of 'untouched' landscape

#### Villages

- New development is focused around existing villages rather than creating new ones
- Existing field patterns create a framework of 0.5ha plots where a mix of new high density housing, community facilities and infrastructure are located around the edges of a village, retaining its heart: the green, the church, the manor, the farm etc.
- 20 'housing fields' have the potential to provide 600-1000 new homes per village, which across the clusters could create 15,500 new homes around each interchange town.

#### **Purpose/effects (from source)**

- Removes dependence on car - cycling as the mainstream form of movement
- Village clusters can be 'self-sufficient' on a daily/weekly basis along with links to the Fast Track connecting to Cambridge and Oxford
- Builds on and reinvigorates villages' unique identities and characters
- 'Big back garden' provides an alternative healthy and socially connecting lifestyle that reinforces the attraction of living in the country

#### **Relevant in a Greater Cambridge context?**

Partly:

- Yes – there are a number of villages within South Cambridgeshire within 7 miles of transport nodes varying in size, which in theory could be clustered and expanded as village clusters.
- No – the arrangement of villages within the area of transport nodes does not in all instances lend itself to groupings within 1-2 miles of each other in an arrangement enabling shared use of a central green space.

Figure 13: B1 - Example growth option diagram



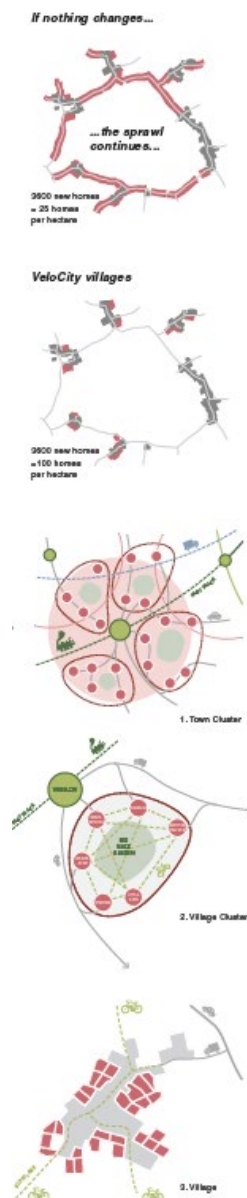


Figure 14: B1 - Likely distribution of growth in Greater Cambridge context

Growth spread across a number of villages with good access to Cambourne as the proposed location for a new East West Rail station within South Cambridgeshire.

### **Substantively different to existing options?**

Partly:

- No – Dispersal: Villages considers distributing growth to villages, and Public Transport Corridors located growth along transport corridors, including at villages.
- Yes – Notwithstanding the above, no single First Conversation option considered distributing growth to only those villages within an area around transport nodes.
- Yes – no First Conversation option envisaged closing highways to vehicular traffic.

**Reasonable?**

N/A

Further consideration may be given to this concept in parallel to the strategic options testing, to inform later stages of the plan process.

**Concept D06: Edge Intensification****Source**

- Plan/Project: Plan/Project: 5th Studio CamMKOx typologies
- Specific document: [5th Studio CamMKOx typologies: Edge Intensification](#)

**Description (from source)**

- Intensification of existing suburbs
- Urban extensions to new settlements

**Purpose/effects (from source)**

- Intensification of existing suburbs may require land assembly and therefore affect timely deliverability to housing sites.
- Urban extensions in new settlements may lack the capacity to expand essential social infrastructure such as schools and GP surgeries.
- Develop dispersed across a number of settlements may not provide satisfactory improvements to infrastructure
- Intensification of existing small sites is unlikely to generate infrastructure needs alone, so are unlikely to significantly contribute to improvements to infrastructure
- The character of a smaller settlements might be adversely affected by new development
- Expanding some smaller settlements can support local shops, pubs and bus services
- Smaller sites may improve deliverability rates due to competing developers
- Dispersal is unlikely to meet the employment land needs of the county - larger businesses often need large sites and there are advantages to clustering

**Relevant in a Greater Cambridge context?**

- Yes – there are lower density suburbs of Cambridge which could in theory be intensified.

**Potential distribution of growth in a Greater Cambridge context**

Intensification of Cambridge suburbs where social housing can no longer achieve environmental ratings A, B or C.

**Substantively different to existing options?**

- No – focus on Intensification of existing urban areas and development on the Edge of Cambridge is addressed through First Conversation options.

**Reasonable?**

N/A

Further consideration may be given to this concept in parallel to the strategic options testing, to inform later stages of the plan process.



## Concept D11: String City

### Source

- Plan/Project: 5th Studio CamMKOx typologies
- Specific document: [5th Studio CamMKOx typologies: String City](#)

### Description (from source)

- This typology assumes aggregated smaller settlements can create a place of sufficient scale to be thought of as a city, rather than connecting to, and remaining subservient to, an existing larger-scale “central place”.
- The component parts of this typology might vary in scale and in character and might include existing places as well as new ones. Their totality would be defined by the high degree of connectivity between them. This would most likely be achieved through a new, and in the case of existing towns or villages retro-fitted, high quality public transport network.
- Existing and new places would be linked together by a public transport loop, and via a network of high quality walking and cycling routes.
- Existing new places located around a protected and accessible green heart, aggregating each place’s open space requirement
- one of the settlements should develop higher order functions to serve the new city’s population as well as a wider catchment

### *Larger-scale/longer term idea*

### Purpose/effects (from source)

#### Benefits

- The new agglomeration of smaller settlements would have a large degree of self-containment, its own higher order services and a greater degree of national connectivity.
- the entire population would be within a short walk of the “Green Heart”.
- opportunities for new sport, leisure and productive landscapes adjoining the new neighbourhoods
- could help preserves sensitive landscapes

#### Challenges

- different settlements within the area would each need a distinctive and complementary economic role
- need to be very well interconnected by public transport if they are to function as a ring city rather than as an unrelated cluster of expanded towns and villages

### Relevant in a Greater Cambridge context?

#### Partly:

- Yes – development would be focused on several linked settlements and could involve new and/or existing/ expanded settlements. There are many settlements varying in size from small villages to larger settlements across Greater Cambridge, where development could be spread. The development would have less dependence on Cambridge.

- No – the String City concept - that aggregated smaller settlements can create a place of sufficient scale to be thought of as a city, rather than connecting to, and remaining subservient to, an existing larger-scale “central place” – would seem unrealistic in the context of development within the Greater Cambridge sub-region, in that any new agglomeration of development would be likely to be subservient to Cambridge for the foreseeable future.

### Potential distribution of growth in a Greater Cambridge context Diagrams

Figure 15: B1 - Example growth option diagram

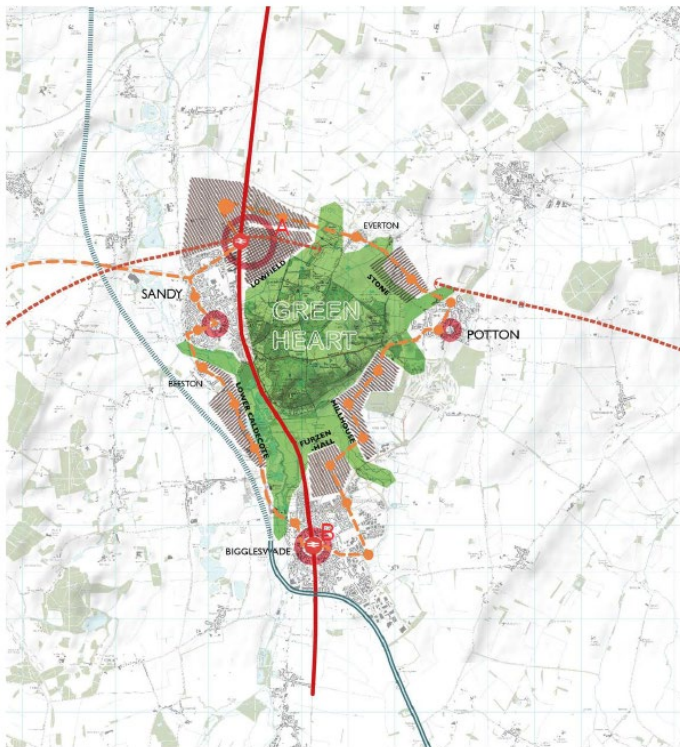


Figure 16: B1 - Likely distribution of growth in Greater Cambridge context

### **Description**

- Plan period: Growth clustered across a small number of existing and first phases of new developments in South Cambridgeshire.
- Built out: Growth clustered across a small number of existing and new towns in South Cambridgeshire

### **Substantively different to existing options?**

Plan period - Partly:

- No – This option was not a specific option in the First Conversation options but a combination of Dispersal: new settlements, Dispersal: villages, and Public Transport Corridors.
- Yes – Development is spread across a number of existing and new developments, the aggregate of which is sufficient to provide substantial infrastructure including improved transport links between these settlements, reducing their reliance on existing established centres such as Cambridge.

Built out – yes

- Growing a number of settlements to the cumulative scale of a city was not was not addressed through First Conversation options.

### **Reasonable?**

N/A

Further consideration may be given to this concept in parallel to the strategic options testing, to inform later stages of the plan process.

### **Option D13: Minimum growth**

#### **Source**

- Plan/Project: Cambridge Futures 2000
- Specific document: [Cambridge Futures 2000 summary](#)

#### **Description (from source)**

Minimum Growth would preserve the City of Cambridge and surrounding South Cambridgeshire with the minimum change. All new dwellings and business floorspace would be allocated to East Cambridgeshire and Huntingdonshire.

#### **Purpose/effects (from source)**

- Substantial increase in the cost of living and production in the City means Cambridge would cease to develop as a world-class centre of high-tech development.
- Considerable increase in congestion on the access roads would continue to erode the quality of life in the city.

#### **Relevant in a Greater Cambridge context?**

- Yes – Given the already planned and implemented growth in Greater Cambridge, this option highlights the consequences of only providing a minimum quantum of growth.

#### **Potential distribution of growth in a Greater Cambridge context**

##### *Description*

Very limited growth within Greater Cambridge; growth focused beyond Greater Cambridge.

#### **Substantively different to existing options?**

- Yes – Absolute minimum growth was not explored as a First Conversation option.

### **(E) Reasonable?**

*Reasonable: National policy?*

Partly:

- No – a strategy that focused growth beyond the boundaries of Greater Cambridge would be incompatible with NPPF para. 35 requiring plans to be Positively prepared – providing a strategy which, as a minimum, seeks to meet the area's objectively assessed needs.
- Yes – a strategy that focused growth within Greater Cambridge but was based on agreement with neighbouring authorities about their taking unmet needs beyond the boundaries of Greater Cambridge could be compatible with national policy.

*Reasonable: absolute constraints?*

- Capacity: Unknown – assume Yes.
  - It is assumed that there is some capacity for growth beyond Greater Cambridge, although this is not known for certain.
- Environmental constraints: Unknown – assume Yes.
  - The locations of and typologies for growth passed to neighbouring districts cannot be assumed, as this would be a matter for each relevant Local Planning Authority. As such, it is not possible to assess whether this option would be limited by environmental constraints. However, given the land area included in neighbouring districts, it seems reasonable to assume that there is land available for some growth which is not limited by absolute environmental constraints.

*Reasonable: viable and deliverable?*

- Viability: Unknown
  - The locations of and typologies for growth passed to neighbouring districts cannot be assumed, as this would be a matter for each relevant Local Planning Authority. As such, it is not possible to assess even at a high level whether this option would be viable.
- Deliverability: Unknown, assume challenging
  - As noted above, it is uncertain how likely it is that sufficient jobs would move into the market towns beyond Greater Cambridge to make dispersal work on a large scale:
    - It would be high risk to attempt to build many houses in the hope that jobs would follow.
    - If jobs did not arise on a dispersed strategy, commuting problems into cities will intensify, and a growing sense that the towns are merely 'dormitories' will develop.
  - Agreeing passing on growth to neighbouring districts could be a challenging political and legal process, including but not limited to the following issues:

- Any dispersal of growth beyond Cambridge and South Cambridgeshire would need agreement under the Duty to Cooperate with neighbouring bodies.
- Without a sub-regional strategic statutory plan, the appropriateness of the Greater Cambridge Local Plan might be reliant on other plan processes that are not aligned in timetable.
- Without a sub-regional strategic statutory plan, it is challenging to see how Sustainability Appraisal for the Greater Cambridge Local Plan could appropriately test options extending beyond the Greater Cambridge geography

Drawing on the above, it is not considered reasonable to test this option further, as it is not compliant with national policy, and goes beyond the scope of what reasonable options are as set out in SEA Regulations.

## **Concept D18: High Capacity Telecommunications**

### **Source**

- Plan/Project: Staff idea, drawing on Cambridge Futures
- Specific document: N/A

### **Description (officer judgement)**

- Typology based upon implementation of high capacity telecommunication infrastructure in Greater Cambridge, connected via a multimedia super corridor with other high-growth areas including:
  - Cambridge/Milton Keynes/Oxford Arc,
  - Cambridge-Norwich Tech Corridor; and
  - London-Stansted-Cambridge Corridor
- Full-fibre optics (to door) and 5G telecommunication network, providing instant business and personal communication for work, education, retail and other services.
- Connectivity (ultra/hyper speed as in 100 Mb - 1Gb) will be a key driver in housing market and almost all business sectors - notably also in advanced manufacturing which may accelerate in the late 2020s and early 2030s.

### **Purpose/effects (officer judgement)**

#### *Pros*

- Reduced need for people who work in the Greater Cambridge area to physically live in the Greater Cambridge area
- Reduction in demand for commuting, with associated reduction in carbon emissions.
- Reduced need for employment floorspace and residential dwellings.
- Supports knowledge-based industries already located in Greater Cambridge and beyond.

#### *Cons*

- Many industries still require people to be physically located in the Greater Cambridge area. University education, tourism, retail and leisure
- Delivery of high-capacity electronic/digital telecommunications infrastructure including 5G and ultra/hyper speed fibre-optics will be rolled out over a period of time and will not cover all dwellings unless specifically provided in both new and existing dwellings.
- Benefits of this infrastructure can only be achieved if available within and beyond Greater Cambridge.
- For long-term working from home, many employees will need to live in larger dwellings to provide a dedicated office area away to separate work from home life.
- Long-term working from home will alter the way people socialise and interact outside their work life and this will require changes to our town centres. Socialising at work, for many is an important part of their social interaction.

- Long-term working from home can impede the development of ideas that would otherwise be generated from the co-location of different scientific knowledge-based industries.
- Need to consider the social impact this new way of working will affect people and how this cannot exacerbate feelings of isolation or loss of community well-being.

**Relevant in a Greater Cambridge context?**

- Yes – relevant to any area.

**Potential distribution of growth in a Greater Cambridge context**

*Description*

Housing and employment growth requirements reduced related to greater home working. Physical distribution of growth unclear.

**Substantively different to existing options?**

Partly:

- Yes - Focus on supporting significantly increased working from home across Greater Cambridge was not included in First Conversation options.
- No - Physical distribution of growth unclear.

**Reasonable?**

N/A



## **Concept D20: Copenhagen Finger Plan**

### **Source**

- Plan/Project: Centre for Public Impact
- Specific document: [Land use and transport in Denmark](#)

### **Description (from source)**

- Direct urban housing and business developments alongside train lines and roads, separated by green areas for recreation. These urbanised areas form the fingers, while the city centre could be the palm of the hand.

### **Purpose/effects (from source)**

- Prevent urban sprawl, while also avoiding overcrowded cityscapes
- The station proximity principle allows for new housing, businesses, and public services to be erected only close to train stations
- The green wedge principle works to preserve the green spaces between these urban settlements.

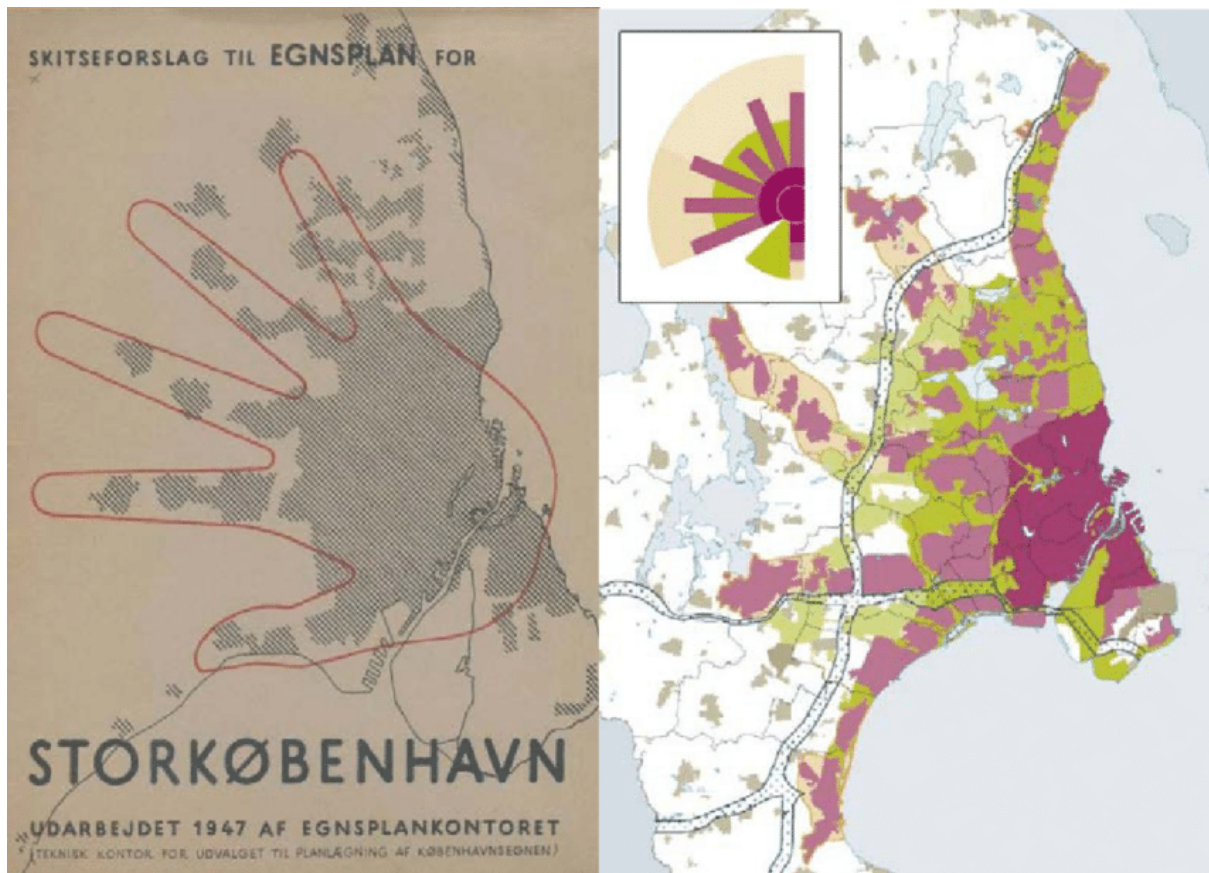
### **Relevant in a Greater Cambridge context?**

- Yes – There are a number of recently improved railway stations that may allow for some housing growth, located in small villages. A new railway station proposed for Cambourne as part of the East/West rail link could provide a significant opportunity.
- No – The existing railway stations within Cambridge do not allow for further expansion in the way described above.

## Potential distribution of growth in a Greater Cambridge context

### Diagrams

Figure 17: B1 - Example growth option diagram



[https://www.researchgate.net/figure/Copenhagen-Five-Finger-Plan-left-and2007-version-Fingers-Plan-right-Consummated\\_fig2\\_294139457](https://www.researchgate.net/figure/Copenhagen-Five-Finger-Plan-left-and2007-version-Fingers-Plan-right-Consummated_fig2_294139457)

### Description

Growth focused along public transport corridors extending from Cambridge, providing continuous broad corridors of development separated by green wedges.

### Substantively different to existing options?

- No – This is a logical ultimate extension of the Public transport corridors option.

### Reasonable?

N/A

## **Concept D21: Net Zero Growth**

### **Source**

- Plan/Project: Staff idea, drawing on materials and discussion at Town & Country Planning Association Spring Conference 2020 – Climate Change – game over?
- Specific document: [Town & Country Planning Association Spring Conference 2020 – Climate Change – game over - materials](#)

### **Description (officer judgement)**

- Locate growth only in environmentally sustainable locations. Ignore any conflicting policy designations such as Green Belt or heritage.
- Draws on the climate emergency declared at national and local levels, and the related point that the Climate Change Act 2008 as amended in 2019 has greater weight than national planning policy.

### **Purpose/effects (officer judgement)**

- Mitigates climate change, supporting zero carbon ambitions, including by limiting the need to travel, and promoting walking, cycling and public transport use.
- New development is located in areas at least risk of flooding, and if in areas of flood risk, it is safe for its lifetime.

### **Relevant in a Greater Cambridge context?**

- Yes – there is undeveloped land within Greater Cambridge in highly sustainable locations avoiding areas of flooding.

### **Potential distribution of growth in a Greater Cambridge context**

#### *Description*

Growth located in Cambridge urban area, new settlements, and along transport corridors. No small sites.

### **Substantively different to existing options?**

- No – This option is a combination of several specific options in the First Conversation including Densification of existing urban areas; Edge of Cambridge – on and outside the Green Belt and Public transport corridors.

### **Reasonable?**

N/A

## **Concept D22: Spatial Urbanism approach**

### **Source**

- Plan/Project: Internal staff idea
- Specific document: N/A

### **Description (from source)**

- Centres and nodes first - focussing new development at existing centres/interchanges and prioritising land and optimising density within 400m and 800m walking distances. Areas and settlements with railway stations land within 1000m/5minute cycle ride should be prioritised for development. Guided bus stops are a form of interchange and could also form part of this.
- Compact growth/intensification in rural locations that fall within a theoretical 5 mile/30-minute cycle ride of Cambridge, especially settlements with railway stations and Rapid Transit stops such as Cambridgeshire Guided Busway. Apply the above compact criteria of optimising land within 400m/800m of centres (this could provide the theoretical settlement boundary, refined through other constraints such as ecology). Interestingly applying a 30 minute 'golden' cycling distance this includes the settlements of:

- Intensification/edge expansion of settlements served by East-West Rail, releasing and prioritising land within 1000m/5minute cycle ride of new railway station.
- Any potential new compact settlement located on East-West Rail/existing trainline – compact form, with shape more-or-less concentric, new settlement extent and radius from centre dictated by 5-10minute cycle ride

#### **Purpose/effects (from source)**

- reinforce walkable neighbourhoods/active travel modes
- building at sufficient densities to create/sustain demand for services and amenities

#### **Relevant in a Greater Cambridge context?**

- Yes – There are a number of recently improved railway stations that may allow for some housing growth, located in small villages. A new railway station proposed for Cambourne as part of the East/West rail link could provide a significant opportunity.

#### **Potential distribution of growth in a Greater Cambridge context**

##### *Diagrams*

Figure 18: B1 - Example growth option diagram

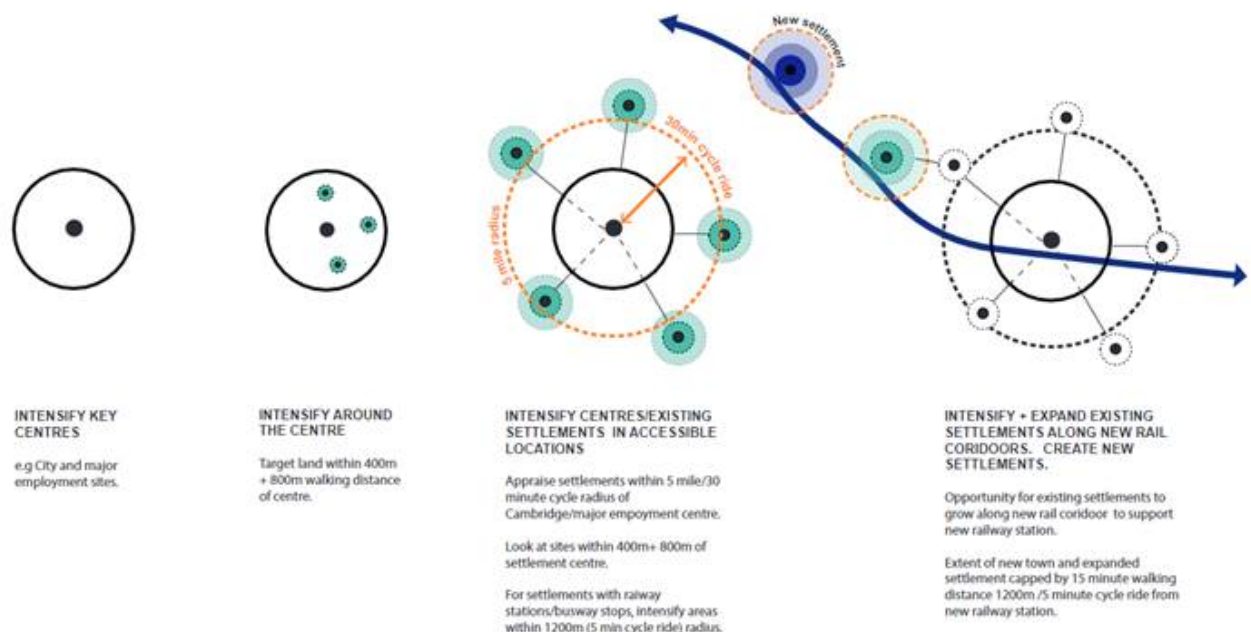


Figure 19: B1 - Likely distribution of growth in Greater Cambridge context

##### *Description*

- Growth focused at locations at/close to existing centres and transport interchanges, including at the larger settlements and villages with train stations.
- Compact growth/intensification in rural locations that fall within a theoretical 5 mile/30-minute cycle ride of Cambridge

**Substantively different to existing options?**

- No – This option is a combination of several options in the First Conversation including Densification of existing urban areas; Dispersal - new settlements and villages, and Public transport corridors.

**Reasonable?**

N/A

**Principle D24: Nature first****Source**

- Plan/Project: Nature first
- Specific document: Officer idea

**Description (from source)**

Shape a spatial strategy based upon first considering the best opportunities for habitats and wildlife.

**Purpose/effects (from source)**

- Enhance existing and support provision of new habitats
- Mitigate and adapt to climate change
- Mitigate flood risk

**Relevant in a Greater Cambridge context?**

- Yes – Both councils have declared a biodiversity emergency and this nature-first approach would be a method for embedding biodiversity principles into the Local Plan.

**Potential distribution of growth in a Greater Cambridge context**

Unclear. This idea requires further exploration to understand its impact on the potential distribution of development.

**Substantively different to existing options?**

- Yes – as it reframes development as something that should focus on nature first.

**Reasonable?**

*Reasonable: National policy?*

Partly

- Yes – supports NPPF para. 8 an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

*Reasonable: absolute constraints?*

- Capacity: Unknown
  - Further consideration required to understand implications for growth locations and capacity.
- Environmental constraints: Yes
  - This option enhances nature and embeds environmental improvement as the central principle of the Local Plan.

*Reasonable: viable and deliverable?*

- Viability: Unknown
  - Once a nature first strategy had been defined, consideration would need to be given to the availability and viability for development that aligned with such a strategy.
- Deliverability: Unknown
  - Once a nature first strategy had been defined, consideration would need to be given to the availability of land for development that aligned with such a strategy, and beyond that its deliverability.
  - Beyond setting a development strategy informed by a nature first approach, funding would be needed to deliver the habitat improvements assumed to be incorporated into this strategy.

See Annex E. Further consideration of reasonable additional options for further consideration of this option.

## Ideas proposed in responses to First Conversation consultation

### Principle E02: Housing in close proximity to employment/innovation centres

#### Source

- First Conversation consultation response Q42

#### Description (from source)

Provide residential development in locations to support the growth of the employment sector. The location of employment areas such as the Innovation Corridor are generally in rural areas. As such there is a limited number of dwellings which could serve employees of such institutes.

#### Purpose/effects (from source)

**Skilled workers will continue to be attracted to key employment locations institutions.**

**Support the reduction of journeys to and from employment sites by motor vehicle, given the opportunities to cycle or walk.**

#### Relevant in a Greater Cambridge context?

Partly:

- Yes – relevant in any spatial context.
- No – traditional notion of employment centres may be changing complexion. Especially true of knowledge economy work that Greater Cambridge seeks to attract, where flexible working practices are becoming more widespread and this has been accelerated by the Covid-19 pandemic.

#### Potential distribution of growth in a Greater Cambridge context

Development distribution that integrates housing and employment uses could include:

- North East Cambridge, where major employment sites such as the Cambridge Science Park and Cambridge business park are isolated from housing and thereby generate significant external trips.
- Focus growth to the south of Cambridge close to research parks within the biotech cluster.
- Growth focused in areas close to existing infrastructure and services, such as within Cambridge
- New housing growth focused in sufficient concentrations so as to generate demand for economic uses and community facilities and services, such as at new settlements.

#### Substantively different to existing options?

Partly:

- Yes – Focusing growth to the south of Cambridge close to research parks within the biotech cluster is not addressed in First Conversation options
- No – Locating growth at North East Cambridge, close to existing infrastructure and services, and in sufficient concentrations so as to generate demand for economic uses and community facilities and services, is addressed through First Conversation options.

#### Reasonable?

Considering only an option focusing growth to the south of Cambridge.



*Reasonable: National policy?*

Yes:

- Integration of housing and jobs is supported by NPPF para. 92.

*Reasonable: absolute constraints?*

- Capacity: Yes.
  - The area, south of Cambridge is relatively undeveloped with several small settlements located parallel with the M11 - it is assumed that there is some capacity for growth.
- Environmental constraints: Yes.
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints.
  - The area is predominantly rural/agricultural and therefore significant development would have an impact on the area's character and environmental qualities. It can however be assumed that some areas will not be limited by absolute environmental constraints.
  - However, the River Granta flows through this area and feeds into the River Cam. Any significant development in the area affecting its flow e.g., with increased run-off or flow rates would potentially have an impact on the River Cam and Cambridge.

*Reasonable: viable and deliverable?*

- Viability: Unknown – assume yes.
  - Following allocation in the South Cambridgeshire Local Plan, proposed new settlements at Waterbeach and Bourn are progressing through the application process, implying that developing or expanding new settlements in South Cambridgeshire is currently viable.
  - As evidenced by Annual Monitoring Reports, over many years, smaller developments in South Cambridgeshire villages have continued to progress through the planning system, proving their ongoing viability.
- Deliverability: Unknown – assume mixed
  - Deliverability will depend on locations and typologies of development:
    - Delivery assumed to be supported by being close to strategic public transport infrastructure
    - Delivery rates are assumed to be affected by locating a number of developments close to one another.
    - New settlements usually have a long lead in time from planning permission to the start of construction. As such, confirmation of how much of a new settlement could be developed within the next 20 years will be important as part of considering whether to allocate it in the new Local Plan.
    - Developer contributions on individual smaller sites do not generate substantive contributions to support major transport and other infrastructure provision. As such, an option that

focused growth towards smaller sites might result in cumulative impacts on the transport network, for which it might be hard to collect sufficient funds to mitigate. Over time this could lead to an infrastructure deficit that might make such a strategy undeliverable in the long term.

### **Principle E03: Tied cottages /key worker housing**

#### **Source**

- First Conversation consultation response Q42

#### **Description (from source)**

Employers provide housing in close proximity to place of employment to reduce the need to travel.

#### **Purpose/effects (from source)**

- Tied cottages /key worker housing

#### **Relevant in a Greater Cambridge context?**

Partly:

- Yes – relevant in any spatial context
- No – the Local Authority can only control social/affordable housing tethering

#### **Potential distribution of growth in a Greater Cambridge context**

Housing for local workers is something desirable, but the spatial distribution of this is difficult to discern. Key worker employment sites would need to be defined and identified. If housing development is occurring in places that is not close to the identified key worker employment sites, then the affordable key worker housing would need to be provided off site and this could undermine other ambitions for balanced communities to be delivered with a range of tenures at new sites.

### **Substantively different to existing options?**

- Yes – this is an approach that seeks to locate housing near key worker employment sites.

### **Reasonable?**

*Partly*

*No*

- No – a strategy based only on key worker housing may fail to meet Greater Cambridge's minimum growth requirement and therefore would be incompatible with NPPF para. 35 requiring plans to be Positively prepared – providing a strategy which, as a minimum, seeks to meet the area's objectively assessed needs.

*Yes*

- Housing developments should consider the needs for local workers to help fulfil the Greater Cambridge Housing Strategy 2019-2023.

### ***Reasonable: absolute constraints?***

- Capacity: Yes.
  - Capacity to absorb only tethered housing cottages at existing key worker employment sites may need to be delivered at higher densities.
  - Lack of comprehensive planning may affect the area's ability to grow over the long-term in a sustainable form.
- Environmental constraints: Yes.
  - It is assumed that tethered housing cottages would have some absolute environmental constraints and would need to be delivered at higher densities to reduce environmental impact.

### ***Reasonable: viable and deliverable?***

- Viability: unsure.
  - Capacity to support tethered housing in social/affordable housing schemes is possible, but a strategy based solely on this is unlikely to be viable.
- Deliverability: unsure
  - This is not a spatial option per se, but should be considered in draft housing policy.

## **Option E05: The Gruene Finger**

### **Source**

- [gruenefinger](#)
- First Conversation consultation response Q42

### **Description (from source)**

The towns grow out into the countryside from existing settlements but always with green space secured alongside and decent cycle paths, so you can cycle across town over grass and through trees; a good example is Osnabrück.

### **Purpose/effects (from source)**

The green fingers:

- Help manage the urban climate
- serve as water retention areas
- provide carbon sinks
- provide
- local recreation areas
- support biodiversity

### **Relevant in a Greater Cambridge context?**

Cambridge includes a population spread between Cambridge and a series of towns surrounded by countryside in Greater Cambridge context. This could be a way to explore growth while increasing access to green space introducing active travel corridors and pushing gentle density that can respond to the councils' climate emergency ambitions.

### **Potential distribution of growth in a Greater Cambridge context**

Growth focused on 'gruene fingers' at Cambridge's urban extensions will be on along axes or corridors that extend into green belt and countryside

### **Substantively different to existing options?**

- No – Edge of Cambridge option addresses the idea of urban extensions.
- No – Focus on corridors into Cambridge is addressed through all the Public Transport Corridors First Conversation option.

### **Reasonable?**

N/A

### **Option E08: A428 Corridor**

#### **Source**

- First Conversation consultation response Q42

#### **Description (from source)**

The A428 corridor running due west of Cambridge to Cambourne and St Neots presents a broad transport corridor that is due to receive substantial investment in relation to East West Rail (including new station at Cambourne) and the Cambridge Automated Metro. Both of these transport interventions will provide a good choice of sustainable transport modes within this growth corridor and are due to be constructed before 2030.

#### **Purpose/effects (from source)**

Provides a good choice of sustainable transport modes.

**Relevant in a Greater Cambridge context?**

- Yes - development would be centred on several linked settlements and could take advantage of new public transport provision.

**Potential distribution of growth in a Greater Cambridge context**

Growth focused along the A428 corridor in Greater Cambridge.

**Substantively different to existing options?**

- No – the A428 is a corridor on which public transport improvements are planned. This option will be addressed through Public Transport Corridor option.
- Yes – Notwithstanding the above, First Conversation options do not focus all growth in a geographically specific (rather than typology-specific) location.

**Reasonable?***National policy*

Yes – compatible with NPPF para. 102 on realising opportunities from existing or proposed transport infrastructure.

*Reasonable: absolute constraints?*

- Capacity: Yes
  - There is undeveloped land along existing or proposed transport corridors within Greater Cambridge which in theory has capacity for additional new settlements. There is also undeveloped land around villages along the proposed CAM transport corridor to the west of Cambridge which in theory has capacity for development.
- Environmental constraints: Unknown – assume yes.
  - It is assumed that some growth is permissible but still limited by absolute environmental constraints.

*Reasonable: viable and deliverable?*

- Viability: Unknown – assume yes
  - Following allocation in the South Cambridgeshire Local Plan, proposed new settlements at Waterbeach and Bourn are progressing through the application process, implying that developing new settlements in South Cambridgeshire is currently viable.
  - As evidenced by Annual Monitoring Reports, over many years, smaller developments in South Cambridgeshire villages have continued to progress through the planning system, proving their ongoing viability.
  - Locating growth close to public transport nodes should reduce additional transport infrastructure investment required to support development, and thereby increase viability.
- Deliverability: Unknown – assume mixed
  - Locating growth close to public transport nodes should reduce additional transport infrastructure investment required to support development, and thereby increase deliverability.
  - East West Rail and CAM proposed transport infrastructure projects are yet to have funding or development consent confirmed. As such,

confirmation whether such projects could be completed in time to support associated development within the next 20 years will be important as part of considering whether to allocate growth on these routes in the new Local Plan.

- New settlements usually have a long lead in time from planning permission to the start of construction. As such, confirmation whether a new settlement could be developed within the next 20 years will be important as part of considering whether to allocate it in the new Local Plan.

## **Principle E16: Brownfield sites first**

### **Source**

- First Conversation consultation response Q42

### **Description (from source)**

Development should, where possible, be directed to existing brownfield sites; in particular, within urban areas.

### **Purpose/effects (officer judgement)**

Protection of the countryside, reduction in landscape impact.

### **Relevant in a Greater Cambridge context?**

- Yes – There are several brownfield sites that are potential sites for densification, including land within Cambridge urban area and in particular North East Cambridge and Cambridge Airport safeguarded land.
- No – Retaining industrial uses close to strategic transport links is also important for Cambridge, so needs to be balanced with improving spatial efficiencies of current industrial workspaces, providing strategies for innovative colocation of industrial and other uses, and relocation of industrial to suitable places.

### **Potential distribution of growth in a Greater Cambridge context**

Development centred within Cambridge urban area.

### **Substantively different to existing options?**

- No – this option is already covered by Densification and Edge of Cambridge, First Conversation options

### **Reasonable?**

N/A

## **Principle E21: Nature recovery network**

### **Source**

- First Conversation consultation response Q42

### **Description (from source)**

The plan should map a 'nature recovery network' as a framework to guide essential development. Water and water sources are a vital part of this connectivity, as are drains, streams, rivers, lakes and ponds. A 'nature recovery network' must include these aquatic elements at the same time as identifying new large-scale areas for habitat creation, including new woodlands and areas of natural regeneration, and opportunities for linking them all together. The plan should recognise that 'flooding', which will be increasingly likely with climate change, can be mitigated upstream by slowing river drainage. This 'natural' approach would require a reversion to an earlier pattern of agricultural land-use management with wet meadows and less arable land in the flood plain itself.

### **Purpose/effects (from source)**

- Enhance existing and support provision of new habitats
- Mitigate and adapt to climate change
- Mitigate flood risk

### **Relevant in a Greater Cambridge context?**

- Yes – Both councils have declared a biodiversity emergency and this nature-first approach would be a method for embedding sustainability and rewilding principles into the local plan.
- No – This does not set out how Cambridge can deliver new homes and jobs within this approach.

### **Potential distribution of growth in a Greater Cambridge context**

Unclear. This idea requires further exploration to understand its impact on the potential distribution of development.

### **Substantively different to existing options?**

Partly:

- Yes – as it reframes development as something that should focus on nature first.
- No – unclear what distribution of growth this principle would generate.

### **Reasonable?**

*Reasonable: National policy?*

Partly

- Yes – supports NPPF para. 8 an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.
- No – this approach on its own would not address NPPF para. 35 requiring plans to be Positively prepared – providing a strategy which, as a minimum, seeks to meet the area's objectively assessed needs.



*Reasonable: absolute constraints?*

- Capacity: Unknown
  - Further consideration required to understand implications for growth locations and capacity.
- Environmental constraints: Yes
  - This option enhances nature and embeds environmental improvement as the central principle of the Local Plan.

*Reasonable: viable and deliverable?*

- Viability: Unknown
  - Once a nature first strategy had been defined, consideration would need to be given to the availability and viability for development that aligned with such a strategy.
- Deliverability: Unknown
  - Once a nature first strategy had been defined, consideration would need to be given to the availability of land for development that aligned with such a strategy, and beyond that its deliverability.
  - Beyond setting a development strategy informed by a nature first approach, funding would be needed to deliver the habitat improvements assumed to be incorporated into this strategy.

See Annex E. Further consideration of reasonable additional options for further consideration of this option.

## Annex D. Cross-check: review of the uniqueness of the reasonable additional options

<i>Option</i>	<i>Likely distribution of growth</i>	<i>Unique?</i>
Principle B04: Integrate uses including housing and employment	Focus growth to the south of Cambridge close to research parks within the biotech cluster.	No – overlap with options C03, C13, E03
Option C03: Supporting an existing high-tech corridor	Focus growth to the south of Cambridge close to research parks within the biotech cluster.	No – overlap with options B04, C13, E03
C13: All development located in the high-tech growth area (All in Science Vale)	Focus growth to the south of Cambridge close to research parks within the biotech cluster.	No – merge with options B04, C03, E03
Principle E03: Housing in close proximity to employment/innovation centres	Focus growth to the south of Cambridge close to research parks within the biotech cluster.	No - overlap with options B04, C03, C13
Principle B05: Explicitly rely on existing or proposed transport infrastructure	Focus growth on the corridor to the west of Cambridge, which will be provided for by the Cambridgeshire Autonomous Metro and East West Rail proposals	No – overlap with C08 and E08
Option C08: Expanded growth area	Focus further growth on the A428 corridor to the west of Cambridge, which includes Cambourne and its expansion at Cambourne West, as well as allocated development at Bourn Airfield.	No – overlap with B05 and E08.
Option E08: A428 Corridor	Growth focused along the A428 corridor in Greater Cambridge.	Unclear – overlap with B05 and C08.
Principle D24: Nature First	Unclear. This idea requires further exploration to understand its impact on the potential distribution of development.	Overlap with E21; requires further consideration to understand development strategy implications.
Principle E21: Nature Recovery Network	Unclear. This idea requires further exploration to understand its	Overlap with D24; requires further consideration to

	impact on the potential distribution of development.	understand development strategy implications.
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## **Annex E. Further consideration of reasonable additional options**

This section considers further the reasonable additional options set out above at Annex D. Cross-check: review of the uniqueness of the reasonable additional options, in order to confirm which should be taken forward for testing as strategic spatial options.

### **Integrating homes and jobs/supporting a high-tech area**

#### **Relevant ideas**

Ideas considered include:

- Principle B04: Integrate uses including housing and employment
- Option C03: Supporting an existing high-tech corridor
- C13: All development located in the high-tech growth area (All in Science Vale)

#### **Considerations**

Rough analysis<sup>12</sup> of existing and future homes and jobs data provides the following insights relevant to considering options that seek to integrate the distribution of homes and jobs:

##### **Existing distribution of homes and jobs:**

- Urban/rural split: 45% of Greater Cambridge's homes are within the urban area of Cambridge, with 55% being within the rural area of South Cambridgeshire. In comparison, 56% of Greater Cambridge's jobs are within the urban area of Cambridge, with 44% being within the rural area of South Cambridgeshire.
- Within the urban area, the greatest proportion of jobs and homes (34% of each) are located within a roughly defined central area. In edge of Cambridge areas, there is a roughly even spread of homes around the compass, but with a low proportion to the south and west. In comparison, in edge of Cambridge areas jobs are distributed roughly evenly apart from in the south, which includes 19% of jobs in the urban area.
- Within the rural area, the most significant proportion of homes (28%) is in the north west, including for example the large villages of Histon and Impington and Cottenham. Beyond that there is a roughly even spread of homes around the compass apart from in the east, where there are significantly fewer homes (9%). In comparison, the greatest proportion of jobs (24%) is in the south, with the next highest proportion being in the north west (21%).
- Combining the urban and rural areas, the highest proportion of homes is to the north west (21%); the south west has the second highest proportion (17%); there is a roughly even spread of homes around other points of the

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<sup>12</sup> Defining urban wards as either central or if on the edge of the urban area as one of north, east, south, south west, west and north west, and dividing rural wards in the same way.

compass. In comparison, the south has the highest proportion of jobs (21%), with the next highest proportion being within the central urban area of Cambridge.

#### **Future distribution of homes and jobs:**

- Urban/rural split: In 2036, 42% of Greater Cambridge's homes are within the urban area of Cambridge, with 58% being within the rural area of South Cambridgeshire. In comparison, 49% of Greater Cambridge's committed floorspace is within the urban area of Cambridge, with 51% being within the rural area of South Cambridgeshire.
- Within the urban area, the greatest proportion of jobs and homes (34% of each) are located within a roughly defined central area. In edge of Cambridge areas, there is a roughly even spread of homes around the compass, but with a low proportion to the south and west. In comparison, in edge of Cambridge areas jobs are distributed roughly evenly apart from in the south, which includes 19% of jobs in the urban area.
- Within the rural area, the most significant proportion of homes (28%) is in the north west, including for example the large villages of Histon and Impington and Cottenham. Beyond that there is a roughly even spread of homes around the compass apart from in the east, where there are significantly fewer homes. In comparison, the greatest proportion of committed floorspace (24%) is in the south, with the next highest proportion being in the north west.
- Combining the urban and rural areas, in 2036, the highest proportion of homes is in the north western parts of Cambridge and South Cambridgeshire (24%), with more or less equal spread of homes around the other points of the compass. In comparison, the greatest proportion of committed floorspace is in the south (37%), with the next highest proportion in the north west (31%).

#### **Conclusions**

The southern part of Cambridge and South Cambridgeshire has the highest proportion of existing jobs and committed employment floorspace but does not have a comparable proportion of existing and committed homes. This provides justification for an option which seeks to integrate homes and jobs within this area.

#### **Growth around transport interchanges**

##### **Relevant ideas**

Ideas considered include:

- Principle B05: Explicitly rely on existing or proposed transport infrastructure
- Option C08: Expanded growth area
- Option E08: A428 Corridor

## Considerations

These ideas converge around focusing development within a specific broad area of a district focused around transport infrastructure provision, providing the following benefits:

- Connected to existing and proposed strategic transport infrastructure to encourage sustainable travel within the expanded growth area
- Contributing to the social sustainability of the broad area by further adding to the critical mass of population to support existing and planned services and facilities
- contributing to the achievement of economic growth through concentrating economic development

## Conclusions

It is considered that there is merit in testing a strategic option specifically focusing as much growth as possible in the area of Cambourne and the A428 proposed public transport corridor, given proposed strategic transport infrastructure, and to add to the economic and social sustainability of that area.

### Nature First / Nature Recovery Network

## Relevant ideas

Ideas considered include:

- Principle D24: Nature First
- Principle E21: Nature Recovery Network

## Considerations

Available evidence to inform a nature first/nature recovery network option includes environmental constraints and opportunities, drawing on environmental data and recent or proposed green infrastructure projects. These are explored below.

## Environmental constraints

### *Information considered*

- Local Authority environmental constraints data
- Initial mapping developed for Greater Cambridge Local Plan Green Infrastructure Opportunity Mapping (similar to above but more wide ranging).

## Findings

Environmental constraints data is in general fine grained, such that it would not be possible to derive a broad strategic spatial option from it. One possible approach would be to protect all areas of peatland, albeit again this would not present sufficient guidance to generate a reasonable spatial option for the whole of Greater Cambridge.

## **Environmental opportunities**

### *Information considered*

#### **Data**

- [Cambridgeshire & Peterborough Habitat Opportunity Mapping 2018](#)
- [OxCam Local Natural Capital Plan](#):

#### **Projects**

- [Cambridgeshire Green Infrastructure Strategy 2011](#)
- Natural Cambridgeshire Opportunity Areas identified as part of the OxCam Arc work
- [Fens Biosphere project](#)
- [Cambridge Great Park proposal](#)
- [Cambridge Past Present & Future/Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire Nature Recovery Network proposal](#)

#### *Findings*

#### **Data**

Data identifying environmental opportunities is fine grained with no clear pattern from which to derive a broad strategic spatial option.

#### **Projects**

There are a number of environmental projects/areas which are common to a number of the sources considered, including, for example, Wicken Fen Vision, West Cambridgeshire Hundreds, and the Gog Magogs. In theory one approach to defining a nature first option would be to develop only outside of all such commonly supported environmental project areas. However, taking this approach leaves significant areas of Greater Cambridge remaining within which to potentially distribute development, with no clear principles for how to do so.

#### **Conclusions**

In principle, it is challenging to determine a spatial option for where to locate development (that will serve people), based solely on the principle of considering the requirements of wildlife and habitats (and not people).

In practice, drawing on available information, it is difficult to identify a clear method to determine a specific Nature First/Nature Recovery Network strategic spatial option that goes beyond a constraints approach (i.e. avoiding locating development in

priority environmental areas), even when considering environmental opportunity projects. Without separately identifying principles for where to actively locate development (such as proximity to public transport which is already addressed through First Conversation options) it is therefore challenging to derive a reasonable spatial option.

Drawing on the above, it is considered that it is most appropriate to integrate consideration of environmental data and projects - including the later stages of the Green Infrastructure Opportunity Mapping referred to above, which will identify broad priority areas for green infrastructure – into the consideration of the benefits and disadvantages of all the strategic spatial options, rather than to attempt to create a standalone Nature First/Nature Recovery Network strategic spatial option.



## **Annex F. List of reasonable options for testing**

### **First Conversation options**

First Conversation options as set out at Annex A. Assessment of First Conversation options:

- Densification of existing urban areas
- Edge of Cambridge – non-Green Belt
- Edge of Cambridge – Green Belt
- Dispersal - new settlements
- Dispersal – villages
- Public transport corridors

### **Description and benefits of additional options**

#### **Supporting a high-tech corridor by integrating homes and jobs**

##### **Sources**

- Principle B4: Integrate uses including housing and employment
- Option C3: Supporting an existing high-tech corridor

##### **Description**

This approach would focus new homes close to existing and committed jobs within the life sciences cluster area around the south of Cambridge, including homes at existing villages and at new settlements.

##### **Purpose/benefits**

- Supports the continued success of the life sciences cluster area around the south of Cambridge
- Sites growth near to existing centres of employment, potentially reducing the need to travel by car and so making a positive contribution to addressing climate change.
- Could support housing availability within the area south of Cambridge, an issue highlighted by employers within the area.

#### **Expanding a growth area around transport nodes**

##### **Sources**

- Principle B05: Explicitly rely on existing or proposed transport infrastructure
- Option C08: Expanded growth area
- Option E08: A428 Corridor

##### **Description**

This approach would focus new homes and jobs close to existing recent and committed development at Cambourne, close to the proposed East West Rail station, and at transport nodes along the proposed Cambridgeshire Autonomous Metro route between Cambourne and Cambridge.

**Purpose/benefits**

- Locates growth near to planned rail and metro public transport provision, potentially reducing the need to travel by car and so making a positive contribution to addressing climate change.
- Locates growth close to existing large-scale growth commitments, adding to the critical mass of population that could generate demand for further services and employment provision.

## Annex G. List of sources considered

Sources of spatial ideas are listed below in the order they are considered within the report:

Cambridge Local Plan 2018 / South Cambridgeshire Local Plan 2018

<https://www.cambridge.gov.uk/local-plan-2018>

<https://www.scambs.gov.uk/planning/local-plan-and-neighbourhood-planning/the-adopted-development-plan/south-cambridgeshire-local-plan-2018/>

Cambridgeshire & Peterborough Independent Economic Review - Final Report

<https://www.cpier.org.uk/media/1672/cpier-report-151118-lowres.pdf>

National Planning Policy Framework, 2019

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/810197/NPPF\\_Feb\\_2019\\_revised.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf)

Greater Norwich Joint Local Plan: Growth Options Document

<https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwjOpt7IraboAhXRQ0EAHXFjBjMQFjAAegQIBBAB&url=https%3A%2F%2Fwww.greaternorwichgrowth.org.uk%2Fdmsdocument%2F2531&usq=AOvVaw0lucH9hfA064Jnhlr89qJN>

Bedford Borough Local Plan 2032: Development Strategy & Site Selection  
Methodology Paper

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## **Appendix 3: Strategic growth proposals included in neighbouring Local Plans**

Completed June 2020

<b>Council</b>	<b>LP status</b>	<b>Local Plan period</b>	<b>LP housing figures</b>	<b>LP jobs figures</b>	<b>Growth Strategy (key growth sites)</b>	<b>Other key points</b>
Huntingdonshire District Council	Adopted	2011-2036	20,100	14,400	<p>Concentrate development in locations which provide, or have the potential to provide, the greatest access to services and facilities. Encourage limited development for rural communities to support social and economic sustainability. Four spatial planning areas take 75% of development:</p> <ul style="list-style-type: none"> <li>- Huntingdon including Brampton and Godmanchester and the strategic expansion location of Alconbury Weald</li> <li>- St Neots including Little Paxton and the strategic expansion location of St Neots East</li> <li>- St Ives</li> <li>- Ramsey including Bury</li> </ul>	

<b>Council</b>	<b>LP status</b>	<b>Local Plan period</b>	<b>LP housing figures</b>	<b>LP jobs figures</b>	<b>Growth Strategy (key growth sites)</b>	<b>Other key points</b>
East Cambridgeshire District Council	Adopted	2015-2031	11, 500 (found to be out of date in April 2020 review)	9,200	<ul style="list-style-type: none"> <li>- Focus growth in market towns of market towns of Ely, Soham and Littleport</li> <li>- limited development will take place in villages which have a defined development envelope</li> </ul>	Plan found sound subject to modifications in 2018 but withdrawn by the Council in 2019 rather than adopted as the Council did not agree with the modifications put forward by the Inspector to make the plan sound. A second review of the local plan took place in April 2020 which found the 2015 plan needs to be partially revised in respect of its strategic housing policies
Central Bedfordshire Council	Examination	<b>Core Strategy:</b> 2001-2026 <b>Emerging plan:</b> 2015-2035	<b>Core Strategy:</b> 17,950 <b>Emerging plan:</b> 39,500	<b>Core Strategy:</b> 17,000 <b>Emerging plan:</b> 24,000	<p>The <b>core strategy</b> directs growth to:</p> <ul style="list-style-type: none"> <li>60% in Major Service Centres</li> <li>30% in Minor Service Centres</li> <li>10% in Large and Small Villages</li> </ul> <p>The <b>emerging plan</b> proposes:</p> <ul style="list-style-type: none"> <li>- a new village east of Biggleswade,</li> <li>- up to 4 new villages in Marston Moretaine,</li> <li>-extension north of Luton and</li> <li>-extension east of Arlesey,</li> </ul> <p>*some growth in existing settlements where supported by services.</p>	Plan at examination - most recent additional info submitted by officer in May 2020

Braintree District Council	Examination	<b>Core Strategy:</b> 2011-2026 <b>Emerging plan:</b> 2013-2033	<b>Core Strategy:</b> 3,372 <b>Emerging plan:</b> 14,320	<b>Core Strategy:</b> 14,000 <b>Emerging plan:</b> 490 per annum	<b>Core Strategy:</b> Land to the north-west of Braintree - off Panfield Lane - 600 dwellings and associated community uses, 15ha of employment land and site for football club Land to the south-west of Witham - off Hatfield Road -600 dwellings and associated community uses Land to the north-east of Witham (in Rivenhall Parish) - off Forest Road -300 dwellings and associated community uses. There is also a proposal for a business and innovation park at land to the west of A131 at Great Notley which will contain 18.5ha of B1, B2, B8 and C1 uses.  <b>Emerging plan:</b> - extensions to Braintree town (4,000+) - A12 corridor (Hatfield Peverel, Kelvedon and Feering - 2,000) - 3 Garden communities on boundaries with Uttlesford and Colchester (each delivering 2,500 within plan period and between 7,000 and 24,000 each in total)	Draft plan published in 2017 Hearing took place at beginning of 2020 Inspectors report on section 1 received, finding proposal for Garden Communities unsound.
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<b>Council</b>	<b>LP status</b>	<b>Local Plan period</b>	<b>LP housing figures</b>	<b>LP jobs figures</b>	<b>Growth Strategy (key growth sites)</b>	<b>Other key points</b>
North Hertfordshire District Council	Examination	Emerging Plan: 2011-2031	14,000 (13,800 in district and 200 in Luton HMA also 1,950 further houses in Luton HMA to contribute to unmet need)		<ul style="list-style-type: none"> <li>- North of Baldock for 2,800 homes 92,500 to be delivered by 2031)</li> <li>- North of Letchworth (900)</li> <li>- North of Stevenage (900)</li> <li>- East of Hichin (700)</li> <li>- NE of Great Ashby (600)</li> <li>- East of Luton (2,100)</li> </ul> Employment allocations at: <ul style="list-style-type: none"> <li>- former power station Letchworth (1.5ha)</li> <li>- East Baldock (19.6ha)</li> <li>- West Royston (10.9ha)</li> </ul>	Hearings on the emerging plan were scheduled in March had to be postponed due to Covid.
West Suffolk Council	Preparing for Reg 18 consultation in Oct-Dec 2020	<b>Forest Heath Core Strategy:</b> 2001-2026 (housing to 2031) <b>St Edmundsbury core strategy:</b> 2001-2021	<b>Forrest Heath:</b> 6,400 <b>St Edmundsbury:</b> min 9,000 (15,631 between 2001-2026)	18,000 shared across Mid Suffolk / St Edmundsbury / Forest Heath (The East of England Plan 2008)	Newmarket - 15,000sqm of retail/240 dwellings Brandon: 2ha of employment/600sqm retail/260 dwellings - Mildenhall - 4.5ha employment/1,500sqm retail/260 dwellings - Lakenheath - 70 dwellings - Red Lodge - extant consent for new village centre with school and 1,659 dwellings St Edmundsbury - Development to focus of Bury St Edmunds (52%) and Haverhill (34%) (using sequential approach and favouring brownfield sites)	The current West Suffolk Local Plan (consists of the former Forest Heath area (FHDC) and former St Edmundsbury area (SEBC) Local Plan documents A policy review was published in July 2020 which found a high level of compliance with national policy.

<b>Council</b>	<b>LP status</b>	<b>Local Plan period</b>	<b>LP housing figures</b>	<b>LP jobs figures</b>	<b>Growth Strategy (key growth sites)</b>	<b>Other key points</b>
Uttlesford District Council	Preparing new local plan - timetable to be available in coming weeks	Local Plan from 2005 - 2015. Draft 2019 Local Plan was withdrawn - about to begin preparing docs for reg 18	N/A	N/A	N/A	Draft 2019 Local Plan was withdrawn.

## **Appendix 4: Sustainable Settlement Sizes Review**

South Cambridgeshire District Council  
and Cambridge City Council  
**Greater Cambridge Local Plan**

## Sustainable Settlement Sizes Review

Final Report

Prepared by LUC

November 2020

South Cambridgeshire District Council  
and Cambridge City Council  
**Greater Cambridge Local Plan**

## Sustainable Settlement Sizes Review

Version	Status	Prepared	Checked	Approved	Date
1.	Draft for client comment	S. Smith	S. Smith J. Owen	J. Owen	15/06/20
2.	Final	S. Smith	J. Owen	J. Owen	23/10/20
3.	Minor updates	S. Smith	J. Owen	J. Owen	10/11/20

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Landscape  
Management  
Ecology  
Historic Environment  
GIS & Visualisation



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## Chapter 1 – Introduction

- 1.1 Cambridge City Council and South Cambridgeshire District Council have commissioned LUC to carry out a literature review to identify what size(s) of settlement is/are likely to be sustainable and could reasonably be planned for within a Greater Cambridge context. This information will inform consideration of options for the emerging Joint Local Plan, particularly with regards to new settlements and possibly other strategic spatial options, such as urban extensions.

### Sustainability Appraisal

- 1.2 An integrated Sustainability Appraisal and Strategic Environmental Assessment is being undertaken for the emerging Greater Cambridge Local Plan (hereafter referred to as 'Sustainability Appraisal'). Sustainability Appraisal is required by law for the Local Plan, and its purpose is to identify and manage potential significant environmental, social and economic effects that may arise as a result of the Local Plan.
- 1.3 A key requirement of Sustainability Appraisal is to consider all reasonable alternatives as the plan evolves<sup>1,2</sup>. This document will help to inform identification of reasonable alternatives, particularly in assisting the Councils to determine what size of new settlement should be considered reasonable in a Greater Cambridge context.

### The brief

- 1.4 The brief set out the key tasks for the research as follows:
- Review of national planning policy relating to this topic.
  - Draw on experience of plan-making processes nationally and internationally.
  - Consider terms, including but not necessarily limited to:
    - Developing a working definition of what 'sustainable' means for a new settlement, and in a Greater Cambridge context.
  - Identify the key features of a settlement that make it sustainable. This could include but may not be limited to identifying thresholds in relation to making certain key infrastructure or service provision viable (recognising that some specific thresholds may be set at a local level).
  - Consider whether the location of a settlement may affect what size might be considered sustainable.
- 1.5 The brief noted that there may be a range of sizes of settlement that are considered sustainable, in various contexts and for various reasons.

---

<sup>1</sup> The Environmental Assessment of Plans and Programmes Regulations, 2004 No. 1633 <sup>2</sup> MHCLG (2019) Planning Practice Guidance: Strategic environmental assessment and sustainability appraisal

## Method of approach

- 1.6 The first task was to review relevant national policy. The starting point for this was the National Planning Policy Framework (NPPF) as this sets the overarching framework for planning policy in England. Other relevant policies and programmes relating to sustainable development of housing and new communities were also reviewed. The purpose of the policy review was to identify key policy documents and related literature and the main points they make with regards to new settlements, including policy support. Where such documents make reference to settlement sizes, this is noted as a starting point, but then compared to and refined using other evidence and guidance on thresholds and case studies of what has been delivered elsewhere. This also applies to the documents considered in Appendix A, which set out various thresholds.
- 1.7 The second task involved gathering intelligence from current and recent plan-making by looking at recent Inspectors' reports and letters for Local Plans that include new settlement proposals.
- 1.8 The third task was to define what makes a settlement 'sustainable'. This task involved reviewing standards set in national policy and programmes as explored in the previous task, as well as looking at a range of guidance on new communities, for example the Government's Garden Communities Toolkit and TCPA guidance on new garden communities. This task included consideration of whether the definition of 'sustainable' may differ depending on the location of a new settlement. This involved drawing on guidance and research documents, such as URBED's 2014 Wolfson Prize submission<sup>3</sup>.
- 1.9 The fourth task was to identify size thresholds beyond which key features of a sustainable settlement, such as schools and GP services, would likely be provided. This task drew on guidance on new communities, as referred to in the third task, as well as a review of standards/thresholds set out in guidance such as Shaping Neighbourhoods for Local Health and Global Sustainability<sup>4</sup>. In addition, this was informed by a review of existing new settlement proposals, including the case studies set out in Appendix A. The Greater Cambridge context was considered through review of the adopted Local Plans, including recent new settlement / new community proposals in Greater Cambridge and conversations with Cambridgeshire County Council regarding locally-specific requirements for infrastructure provision. More weight was given to existing Cambridgeshire-specific requirements than other thresholds.
- 1.10 The case studies referred to in this document are primarily from the UK. A desktop search for international case studies produced very little in terms of relevant, up-to-date case studies from elsewhere.
- 1.11 The final task was to draw conclusions from the above research to provide recommendations on the appropriate size of a new settlement in the Greater Cambridge context.

<sup>3</sup> URBED (2014), Uxcester Garden City: Submission for the 2014 Wolfson Economics Prize. Available at: [URBED Wolfson submission](#).

<sup>4</sup> Barton, Grant and Guise (2010) Shaping Neighbourhoods for Local Health and Global Sustainability



## Structure of this document

1.12 The remainder of this document is structured as follows:

- Chapter 2 – Policy Review considers relevant national policy, programmes and Inspector's comments relating to sustainable development and new settlements.
- Chapter 3 – Defining a Sustainable Settlement seeks to develop a working definition of what 'sustainable' means for a new settlement, particularly in a Greater Cambridge context.
- Chapter 4 – Estimating Sustainable Settlement Sizes in Greater Cambridge draws on the policy review and examples from other local plan processes to identify what level of growth would be considered a sustainable settlement in Greater Cambridge.
- Chapter 5 – Conclusions summarises key findings from the previous chapters and provides recommendations on an appropriate approach for the consideration of new settlement sizes in Greater Cambridge

## Chapter 2 – Policy Review

- 2.1 The purpose of this policy review is to identify key policy documents and related literature and the main points they make with regards to new settlements, including policy support. This review provides a background and policy context for development of new settlements, rather than a robust evidence base to determine what a sustainable settlement size would be in Greater Cambridge. Whilst it has not directly influenced our analysis of sustainable settlement sizes, it provides a starting point for considering what makes a settlement sustainable. This is considered further and refined using various evidence sources in Chapter 3.

### National Planning Policy Framework (NPPF)

- 2.2 The NPPF recognises achieving sustainable development as the purpose of the planning system, and is built on the 'presumption in favour of sustainable development'. Sustainable development should achieve economic, social and environmental net gains.
- 2.3 Paragraph 72 of the NPPF recognises that provision of large numbers of new homes can often best be achieved through large-scale development, such as new settlements or significant extensions to existing settlements. It states that such large-scale development should (among other things):
- Be well located and designed.
  - Be supported by the necessary infrastructure and facilities.
  - Ensure that their size and location will support a sustainable community, with sufficient access to services and employment opportunities within the development itself (without expecting an unrealistic level of self-containment), or in larger towns to which there is good access.
- 2.4 Paragraph 103 of the NPPF suggests that planning should manage patterns of growth to help achieve an efficient and sustainable transport system. It states that “Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes”.
- 2.5 Paragraph 124 of the NPPF states that good design is a key aspect of sustainable development. Whilst this review is strategic and does not consider design details, a sustainable development would need to be able to incorporate sustainable design, including providing for a mix of development (including green and other public space, local facilities and sustainable transport).
- 2.6 In summary, the NPPF shows support for new settlements, if located and planned in a sustainable way. Whilst it does not suggest what size settlements should be to be sustainable, the NPPF provides policy guidance on what The Government considers is required to make a settlement sustainable, which feeds into our analysis on settlement size.

## Garden Communities Prospectus and Toolkit

- 2.7 In August 2018, the Ministry of Housing, Communities and Local Government (MHCLG) published 'Garden communities: prospectus' to support the Garden Communities Programme. The prospectus was intended to encourage bids from local authorities and private sector partners for proposals for new garden communities and offers Government assistance to help deliver their development. This forms part of the Government's aim to increase housebuilding to an average of 300,000 net new homes by the mid-2020s.
- 2.8 Garden communities are a particular style of new settlement, following 'garden city principles'. The Prospectus sets out requirements and expectations for schemes applying for support under the UK Government's Garden Communities Programme. Whilst this review is not specific to garden communities, the prospectus includes useful principles on what a sustainable settlement looks like.
- 2.9 The Prospectus defines Garden Towns as settlements of more than 10,000 homes and Garden Villages as settlements of 1,500 to 10,000 homes. It implies a preference for development of Garden Towns, presumably due to the greater infrastructure provision and self-sufficiency expected at larger developments. However, it is not clear from the Prospectus or Toolkit how these numbers have been determined and therefore further evidence is required to understand if they are likely to represent sustainable settlement sizes.
- 2.10 The document defines a sustainable scale of development as 'built at a scale which supports the necessary infrastructure to allow the community to function self-sufficiently on a day to day basis, with the capacity for future growth to meet the evolving housing and economic needs of the local area'. It also refers to the need for integrated and accessible transport options, particularly sustainable transport, and design aspects, including generous greenspace provision.
- 2.11 The Government's Garden Communities Toolkit includes information on how to decide if and where a new garden community is appropriate, as well as information on considerations such as engagement, Masterplanning, infrastructure viability, delivery and governance.

- 2.12 Figure 2.1 below<sup>5</sup> shows garden towns and villages that are currently part of the Government's Garden Towns and Villages Programme. However, there is uncertainty in whether all of these will come forward. Research undertaken by Lichfields<sup>6</sup> found that "Garden Communities status is not a 'golden ticket' to securing an allocation or planning permission, and only a third have a permission and or an allocation in an adopted plan. Another third are in emerging plans, and a full 30% are yet to achieve formal planning status. This means two thirds still need to establish the principle of development and are therefore subject to ongoing levels of planning risk. A number of proposals have experienced delay because of insufficient evidence that the schemes are well conceived or deliverable over the plan period."
- 2.13 Some garden community proposals have already faced hurdles and barriers in the planning system, such as the garden communities planned in Uttlesford and North Essex, as explained further below.

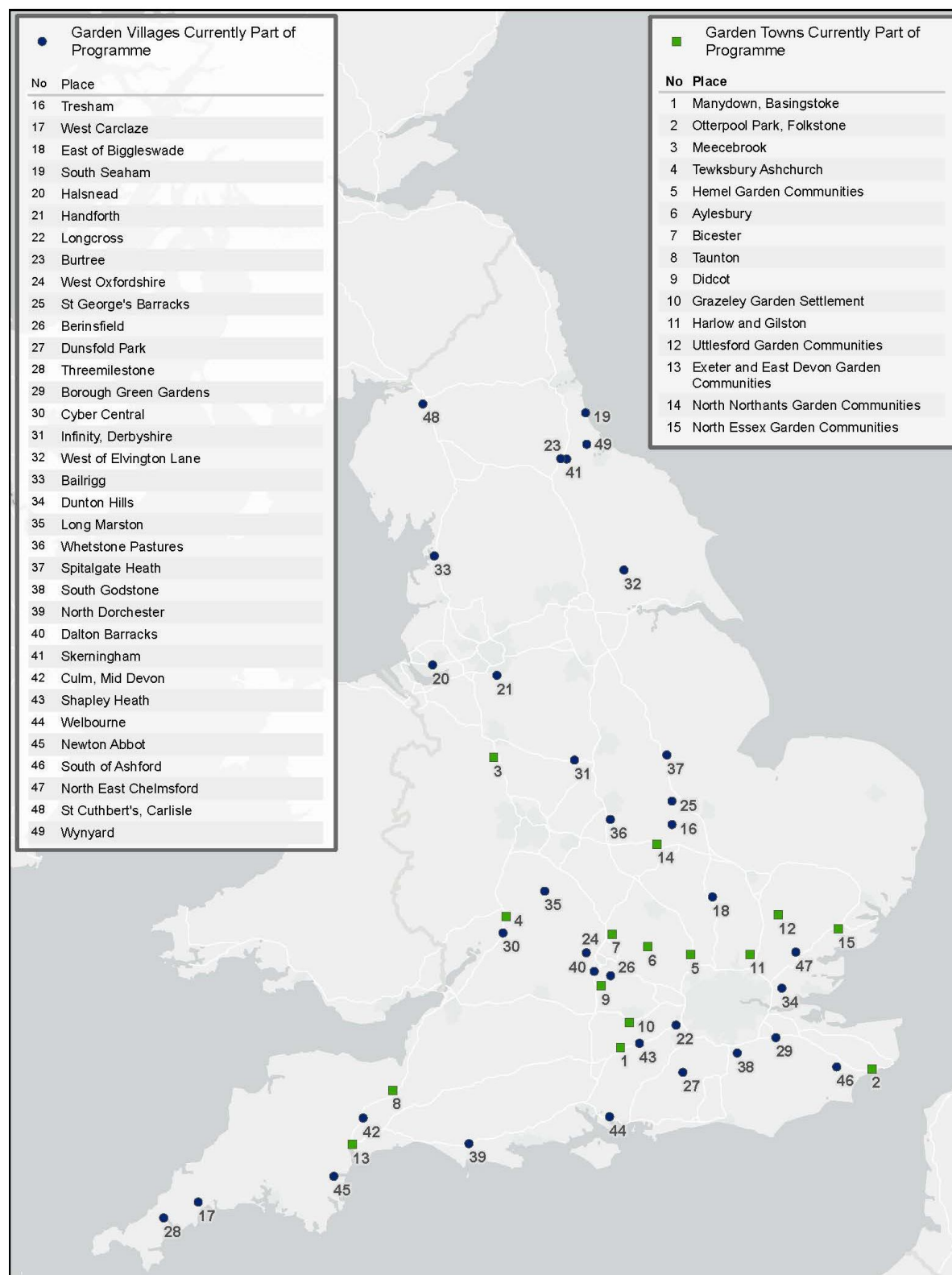
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<sup>5</sup> UK Government (2020) Garden Towns and Villages Programme – January 2020

<sup>6</sup> Lichfields (December 2019) How does your garden grow? A stock take on planning for the Government's Garden Communities programme

Figure 2.1: UK Government Garden Towns and Villages Programme

## Garden Towns and Villages Programme - January 2020



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## Review of Inspectors' Reports

- 2.14 This section considers comments in recent Inspectors' reports and letters regarding new settlements. These show that the challenges in providing the evidence and justification for new settlement proposals to demonstrate that they meet the tests of soundness can be considerable, but that with proper appraisal and objective assessment, they can successfully be incorporated into Local Plans.

### North Essex

- 2.15 The submitted North Essex Section 1 Local Plan proposed three garden communities: West of Braintree Garden Community; Colchester Braintree Borders Garden Community; and Tendring Colchester Borders Garden Community. These ranged in scale from a minimum of 7,000 homes to a maximum of 24,000 homes when fully built out, with each delivering 2,500 homes by 2033. The proposals included a rapid transit system, ultimately linking the three garden communities to Stansted Airport.
- 2.16 The Inspector's letter to the North Essex Authorities (15<sup>th</sup> May 2020) raised concerns about the deliverability of the garden communities. He highlighted the need for a high level of certainty regarding infrastructure provision, including the timing of this provision, if new settlements are dependent on such infrastructure (particularly with regards to transport, in this case). The letter also emphasised the need to ensure new settlements are viable, taking into account the cost of infrastructure and land values. The Inspector came to the view that it was appropriate to factor in a 40% contingency for transport and utilities infrastructure.
- 2.17 He concluded that only one of the garden communities was deliverable – the Tendring Colchester Borders Garden Community – and that the other two should be deleted from the Local Plan.

### Uttlesford

- 2.18 The Inspectors' letter to Uttlesford District Council (10<sup>th</sup> January 2020) raised concerns regarding the proposal of three new garden communities included in the submitted Local Plan (one of which formed part of the West of Braintree Garden Community included in the submitted North Essex Section1 Local Plan).
- 2.19 The Inspectors concerns were partly due to a lack of consideration of all reasonable alternatives in terms of the spatial strategy. They also raised concerns that the new settlements would not meet all of TCPA's Garden City Principles, including due to uncertainty regarding land value capture for the community, mechanisms for long-term community stewardship and implementation of timely and efficient public transport. The timetable for delivery of the garden communities was also felt to be too optimistic. The letter highlighted that self-containment of new settlements is more likely to be successful if employment uses are provided in the early phases of development in order to prevent the settlements becoming commuter towns.

- 2.20 The Inspectors' letters for both Uttlesford and North Essex express concerns about relying on proposed transport infrastructure around which there remains some uncertainty. Both also suggest that the plans should not rely on meeting such a high proportion of development through new settlements (both plans propose to allocate three new settlements but Inspectors have suggested each only allocates one).

### **Hart District**

- 2.21 The submitted Hart Local Plan included Policy SS3, which sets out the Council's commitment to preparing a New Settlement Development Plan Document (DPD) after the adoption of the Plan. Policy SS3 and its supporting text identified an Area of Search (AoS) at Murrell Green / Winchfield for the delivery of up to 5,000 dwellings through the production of a New Settlement DPD. The Plan stated that it was not required in the Plan period to meet identified housing needs, but that the Council anticipated that some 1,500 homes from the proposed new settlement would be expected to be delivered within the Plan period.
- 2.22 The Inspector's Report for the Hart Local Plan (10<sup>th</sup> February 2020), raised concern about the proposed new settlement had been considered and ranked against reasonable alternatives, and that the Local Plan established the principle of a new settlement for long-term growth but infrastructure considerations and viability had not been explored. He concluded that, in order to make the Local Plan sound, Policy SS3 should be deleted.

### **Harrogate**

- 2.23 The Inspector's Report for the Harrogate Local Plan (30<sup>th</sup> January 2020) is supportive of the allocation of a new settlement at Green Hammerton/Cattal. Whilst recognising that focusing development at existing settlements is generally more sustainable, as this allows new residents to access the established services and facilities there, the Inspector states that settlements cannot expand indefinitely and there will come a point when this existing infrastructure is at or over capacity, therefore alternative solutions to providing sufficient housing, such as new settlements, are necessary.

## Chapter 3 – Defining a Sustainable Settlement

### Environmental, social and economic considerations for settlement size and the issue of self- containment

- 3.1 It is recognised that, when designed and developed carefully as ‘holistic’ neighbourhoods, new settlements can encourage highly sustainable living patterns. However, new settlements can lead to an increase in car commuting when they increase the need to travel, for example in cases where they function as dormitory settlements<sup>7</sup> or fail to provide easy access to amenities<sup>8</sup>. Trip generation is likely to reduce as settlement size increases, provided the settlement in question is reasonably self-contained and can lead to journey internalisation<sup>9</sup>. In addition, a range of sustainable energy systems (including renewable energy and CHP) can most economically be provided at the neighbourhood scale, thus favouring larger-scale new neighbourhoods<sup>10</sup>.
- 3.2 New settlements should provide high quality living environments with infrastructure provided on site. A sustainable settlement should also provide a range of housing types and tenures to meet a range of housing needs. The available evidence does not point to any clear consensus on the link between scale of delivery and the provision of affordable housing, with a recognition that “the relationship between housing supply and affordability is neither simple or direct”<sup>11</sup>. New settlements are generally seen as being capable of providing affordable housing. This is based on the assumption that larger-scale development can bring economies of scale, making them potentially cheaper to deliver and “enabling the delivery of significant additions to social housing stock, so long as S106 obligations can be applied to a significant level”<sup>12</sup>. However there is evidence that the delivery of affordable housing may be more significantly influenced by scheme-

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<sup>7</sup> Williams, Katie (2014), Urban form and infrastructure: a morphological review. Future of cities: working paper. Foresight, Government Office for Science.

<sup>8</sup> GL Hearn (2016), New Settlement Scoping Study: Aylesbury Vale District Council, Aylesbury Vale District

<sup>9</sup> TCPA (2007), Best Practice in Urban Extensions and New Settlements, London: TCPA.

<sup>10</sup> URBED (2014), Uxcester Garden City: Submission for the 2014 Wolfson Economics Prize. Available at: [URBED Wolfson submission](#)

<sup>11</sup> RTPI (2017), Better Planning for Housing Affordability: Position Paper. London: RTPI.

<sup>12</sup> Bramley, Glen; Ballantyne Way, Sarah; Cousins, Lin; and Houston, Dominic (2017), The Deliverability and Affordability of Housing in the South West of England. RTPI Research Report no. 16.



specific factors and changing grant funding priorities, especially given the need for supporting infrastructure<sup>13</sup>.

- 3.3 The seminal report on 'Best Practice in Urban Extensions and New Settlements' produced by the TCPA and published in 2007<sup>14</sup> by the Department of Communities and Local Government stated that "the concept of self-containment does not mean that any size of place can be regarded as a sustainable community. A place needs to be large enough to support a secondary school. This means the number of homes will be in the range 4,000-5,000 at least. The reasoning is that a community that cannot provide for its children through to adulthood is not sustainable, and that the quality of community life is impoverished if older children do not participate because they are sent elsewhere each day. Growing up in a sustainable community also provides a sound foundation for citizenship. Secondary school catchments can be used as the basic building block when designing the size of a new town."
- 3.4 If large and mixed enough to enable residents to be economically active within the settlement, new settlements can support local economics and economic diversity. They can also attract inward investment, provided that development is of high quality and provides adequate buildings, services and connections for investors<sup>15</sup>. Post-war New Towns such as Milton Keynes are viewed as examples of where, as a result of investment in retail infrastructure and employment alongside housing, places were produced that "play an important role in the wider economy"<sup>16</sup>.
- 3.5 However, self-containment can also be a function of geography. It has long been considered that the further the distance from a central major city, the greater the probability of self-containment in terms of jobs, homes and services<sup>17</sup>. However, it has also been demonstrated that as mobility has increased over time, and people are able and willing to travel longer distances, self-containment is becoming more difficult to achieve. Nonetheless, the general rule that the further away from a central major city, the more likely self-containment can be achieved still holds.
- 3.6 In summary, larger new settlements are generally more likely to be considered sustainable because they can be more self-contained, although this in turn is also influenced by the proximity of the new settlement to a larger conurbation. These issues are explored in more detail below.

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<sup>13</sup> Bramley, Glen; Ballantyne Way, Sarah; Cousins, Lin; and Houston, Dominic (2017), The Deliverability and Affordability of Housing in the South West of England. RTPI Research Report no. 16.

<sup>14</sup> TCPA (2007), *Best Practice in Urban Extensions and New Settlements*, London: TCPA.

<sup>15</sup> Williams, Katie (2014), *Urban form and infrastructure: a morphological review*. Future of cities: working paper. Foresight, Government Office for Science.

<sup>16</sup> TCPA (2015), *New Towns and Garden Cities – Lessons for Tomorrow*. Stage 2: Lessons for Delivering a New Generation of Garden Cities. London: TCPA.

<sup>17</sup> TCPA (2007), *Best Practice in Urban Extensions and New Settlements*, London: TCPA.

## Components of a sustainable settlement

- 3.7 'Sustainability' is a broad term incorporating environmental, social and economic factors. The Government's Garden Communities Toolkit<sup>18</sup> sets out the following sustainability considerations for Masterplanning new communities:
- Plan active and accessible travel options
    - Meet residents' day-to-day needs by planning a range of uses that are easily accessible by walking, cycling and public transport.
  - Incorporation of sustainable design and construction
    - Include energy use and supply, water use and supply, ecology and biodiversity, lifespan and durability of materials, and the use of technology
  - Interdependence of urban systems and communities and the effects of global issues.
    - Plan in resilience for future change. This includes climate change, technological advances and economic uncertainty, and the ability of a place to adapt to changing circumstances
  - Design inclusive and intergenerational green spaces and public realm.
    - These need to be flexible enough to adapt to the community's changing needs over time.
  - Encourage healthy and active lifestyles.
    - Design space to enable good access to local facilities, green space, safe places for active play, food growing and social interaction.
- 3.8 The Toolkit also encourages new garden communities to be future-ready by incorporating digital technology and other areas of innovation, including new methods of construction and energy production, allowance for autonomous vehicles and new trends in future technologies.
- 3.9 The TCPA promotes its Garden City Principles<sup>19</sup> as the basis for a sustainable new settlement:
- Land value capture for the benefit of the community.
  - Strong vision, leadership and community engagement.
  - Community ownership of land and long-term stewardship of assets.
  - Mixed-tenure homes and housing types that are genuinely affordable.

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<sup>18</sup> Homes England (2019) Garden Communities Toolkit [online], Available at: <https://www.gov.uk/guidance/garden-communities/infrastructure>, Accessed: 9/6/2020

<sup>19</sup> TCPA (date not available) Garden City Principles [online] Available at: <https://www.tcpa.org.uk/garden-city-principles>, Accessed: 9/6/2020

- A wide range of local jobs in the Garden City within easy commuting distance of homes.
  - Beautifully and imaginatively designed homes with gardens, combining the best of town and country to create healthy communities, and including opportunities to grow food.
  - Development that enhances the natural environment, providing a comprehensive green infrastructure network and net biodiversity gains, and that uses zero-carbon and energy-positive technology to ensure climate resilience.
  - Strong cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.
  - Integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport.
- 3.10 As such, the infrastructure provided and design of development play a substantial role in whether a settlement can be considered sustainable, although the TCPA's Garden City Principles also focus on governance. Location and design can influence the environmental impact of the settlement in terms of harm to or enhancement of the ecological, landscape and historical baseline. Design can also influence social equity, inward investment, and climate change mitigation and resilience. The nature of development, i.e. what is to be built, influences social equity, economic productivity and viability of the settlement. Given that this review focuses on the size of settlement that would be sustainable, without reference to specific locations or design details, sustainability is considered primarily in relation to the nature of a new settlement, i.e. what elements would be included in settlements of different sizes.
- 3.11 The policy review suggests that in order to be sustainable, a settlement needs to include the following:
- Necessary infrastructure and facilities (including greenspace).
  - Access to services and employment on-site or in larger towns to which there is good access.
  - A range of transport modes, particularly sustainable transport.
- 3.12 In order to meet the points above, we need to define what constitutes 'necessary infrastructure and facilities'. Similarly, the policy review suggests that a new settlement should have a substantial degree of self-sufficiency and that day-to-day needs of residents should be met onsite.
- 3.13 The Garden Communities Toolkit states that "the infrastructure needed to support a sustainable garden community can include:
- Physical components, like streets, cycle paths, utilities and public realm.
  - Green and blue infrastructure, like open space and green corridors, water bodies and natural habitat creation.

- Social/ community infrastructure like education, healthcare, community, retail, play for all ages, and sports/ leisure facilities.
- Strategic infrastructure needed to support delivery of the whole community, like major transport infrastructure, a secondary school or a country park.
- Local infrastructure is needed to serve a neighbourhood, for example, a primary school.”

3.14 It has been assumed that the physical components of infrastructure (first bullet) would be a necessary part of any strategic development and that development would not be permitted without consulting utilities providers and ensuring these could accommodate the new development. However, if one or more new settlements or strategic urban extensions are to be included in the Local Plan, these will need to be subject to viability testing to ensure this essential infrastructure can be provided. The case studies in Table 3.1: give examples of what local authorities have taken to constitute necessary or day-to- day services and facilities when preparing their local plans.

**Table 3.1:** How case studies define key facilities and services

Case Study	Key services and facilities as defined by the case study
Cambridge Local Plan (2018)	
Table 8.3 of the adopted Cambridge Local Plan <sup>20</sup> sets out example community uses that would be expected to serve different catchments (local, neighbourhood, district and city-wide). The uses specified at neighbourhood and district levels are likely to best represent day-to-day needs.	<p>Local:</p> <ul style="list-style-type: none"> <li>• Community or civic room.</li> </ul> <p>Neighbourhood:</p> <ul style="list-style-type: none"> <li>• Community house or hall.</li> <li>• Primary school.</li> <li>• Day nursery.</li> <li>• District:</li> <li>• Public library.</li> <li>• Primary care facility.</li> </ul> <p>Community centre and other shared use services/buildings.</p> <ul style="list-style-type: none"> <li>• Function room.</li> <li>• Secondary school.</li> <li>• Place of worship.</li> </ul>

<sup>20</sup> Cambridge City Council (2018) Cambridge Local Plan

Harrogate District Local Plan	
The New Settlement Background Paper for the Harrogate Local Plan <sup>21</sup>	Local convenience store. GP.

Stafford Local Plan	
The Settlement Assessment for the Stafford Local Plan <sup>22</sup> identifies key aspects of sustainability and community facilities.	Shops. Meeting places. General Medical Facility. Sports venue. Cultural buildings. Public houses. Places of worship.  Library. Post Office. Schools.

3.15 For the purposes of this document, services and facilities considered to meet people's day-to-day needs are set out in Table 3.2:. These have been compiled using a combination of the data sources discussed above, personal communication with Cambridge City Council and professional judgement. It is important to note that Table 3.2: presents the minimum range of services considered to meet day to day needs and provision of further services and facilities should be included where possible. In particular, the larger a new settlement, the more additional facilities should be provided, including arts and cultural venues (e.g. museums, music venues), restaurants, hotels and larger retailers.

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<sup>22</sup> Stafford Borough Council (2018) New Local Plan, Settlement Assessment

Table 3.2: Services and facilities required to meet day-to-day needs

Services and facilities required to meet daily needs
Local shops (including a supermarket)
Early years provision
Schools (primary and secondary)
Employment opportunities
Publicly accessible green space
Community meeting space
Public transport stop(s) (train or bus) <sup>23</sup>
GP surgery or health centre
Recreation and leisure facilities
Library

- 3.16 With regards to employment opportunities, new development will generate employment during the construction stage, and any new strategic site is likely to generate some employment opportunities, for example through managing or working at a new local shop, pub or school. However, 'employment provision' as referred to in Table 3.2: relates to a substantial area of land set aside specifically for employment use, rather than community, such as a business park or industrial area.

#### Access to existing settlements

- 3.17 Although garden communities and new settlements are often characterised as being 'stand-alone', in practice this is often not the case. For example, under the Government's Garden Communities programme, some rely on existing services of a neighbouring settlement either as 'linked' new settlements, or can be considered as 'urban extensions' rather than self-contained communities or 'standalone settlements'. Lichfields found that 22 of 49 garden communities are standalone settlements not functionally linked or directly adjacent to existing settlements, eight were major new settlements clearly linked to nearby towns, and the remaining 19 were urban extensions, on the edge of existing towns and cities such as Basingstoke, Bicester, Taunton and Wellingborough.

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<sup>23</sup> Footpaths and cycleways have not been included in this list as it has been assumed these can be designed into all scales of development

The standalone projects accounted for approximately one third of homes in the programme (35%), the linked new settlements another third (32%), and the urban extensions the final third (33%). On average, the largest of these were the linked new settlements, around 16,000 homes each, while standalone settlements and urban extensions were on average around 6,300 and 7,000 homes respectively<sup>24</sup>.

- 3.18 Experience from Europe highlights that there is substantial benefit in being near an existing urban conurbation that can share access to jobs and services, particularly in the early stages of developing a new settlement<sup>25</sup>. As such, some settlements could be considered sustainable with a lower level of provision, if they are located with good access to one or more larger towns or cities. Providing there are accessible, frequent and rapid connections to the larger town or city, it may be reasonable for residents to visit the larger town for some day to day needs.

- 3.19 Alternatively, smaller new settlements could come forward in a way that echoes Ebenezer Howard's proposal of a larger, central garden city, surrounded by smaller cities with good connections into the larger city, or the very similar 'hub and spoke' approach to expanding market towns set out in the Taylor Review<sup>26</sup>. URBED's proposal to grow central Oxfordshire through 'snowflakes'<sup>27</sup> is a similar idea. This involves a central city, in this case Oxford, surrounded by towns/urban extensions (sub-neighbourhoods), each in turn surrounded by smaller neighbourhoods. For each settlement, the highest density development and best transport connections are in the centre, maximising access to these. On the other hand, larger new settlements may benefit from being more remote from existing towns and cities, in order to encourage self-containment. If residents have to travel further, and perhaps by less convenient modes/routes to work, shop and spend leisure time in other towns, they are more likely to carry out these activities in the settlement where they live.

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<sup>24</sup> Lichfields (December 2019) How does your garden grow? A stock take on planning for the Government's Garden Communities programme

<sup>25</sup> PRP, URBED and Design for Homes (2008), Beyond Eco-towns: Applying the Lessons from Europe, PRP Architects Ltd.

<sup>26</sup> Matthew Taylor (2008) Living Working Countryside, The Taylor Review of Rural Economy and Affordable Housing

<sup>27</sup> The URBED Trust (2019) Oxfordshire Futures 2050, Achieving smarter growth in Central Oxfordshire

- 3.20 The Inspector's report for the Harrogate Local Plan, discussed in Chapter 2, asserts that settlements cannot expand indefinitely, due to the capacity of existing infrastructure or due to environmental limitations, such as unacceptable harm to landscape or the historic environment. Similarly, the TCPA suggested that, whilst it may seem efficient to continue to add housing estates, business parks or urban extensions etc. to existing towns, towns will reach a limit. This could be a physical limit, such as a motorway or river, or a sense that 'the expansion is so removed from the heart of the place that it might as well not be part of the place'<sup>28</sup>. No existing evidence on the extent to which a settlement can expand has been identified; this is likely to depend on a case by case basis and is a matter of planning judgement. The extract from Urban form and infrastructure: a morphological review<sup>29</sup> in Appendix B states that both peripheral development and new settlements can provide access to services and facilities if adequate new services are provided or there is capacity at existing services and facilities nearby.

#### Defining 'good access'

- 3.21 Central to planning for new communities, whether new settlements or not, is to have a good understanding of what 'good access' means, as this is a fundamental ingredient of sustainability.
- 3.22 URBED's 'snowflake' model is based each sub-neighbourhood having a central public transport stop that is never more than 15 minutes from the town centre<sup>30</sup> (although these are urban extensions, rather than new settlements, which would likely be further away).
- 3.23 Various guidance documents, such as Providing for Journeys on Foot<sup>31</sup> and Shaping Neighbourhoods<sup>32</sup> set standards and thresholds for acceptable walking distance to services and facilities. These are presented in Table 3.3: Providing for Journeys on Foot gives 'desirable', 'acceptable' and 'preferred maximum' distances, whereas Shaping Neighbourhoods suggests different thresholds

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<sup>28</sup> TCPA (2007), Best Practice in Urban Extensions and New Settlements, London: TCPA.

<sup>29</sup> Williams, Katie (2014), Urban form and infrastructure: a morphological review. Future of cities: working paper. Foresight, Government Office for Science.

<sup>29</sup>

<sup>30</sup> URBED (2014), Uxchester Garden City: Submission for the 2014 Wolfson Economics Prize. Available at: [URBED Wolfson submission](#)

<sup>31</sup> Institution of Highways and Transport (2000) Guidelines for Providing for Journeys on Foot <sup>32</sup> Barton, Grant and Guise (2010) Shaping



3.24 based on population density. The shortest ('desirable') and longest ('preferred maximum') recommended distances are included in Table 3.3:. Whilst walking distances are most relevant to provision of services and facilities within a settlement, the time such journeys would take can be used to estimate likely acceptable travel times by other modes of transport. For example, it takes about 5 minutes to walk 400m, therefore if 400m is the acceptable walking distance it can be assumed that 5 minutes would be an acceptable travel time by other modes. As such, Table 3.3: converts each distance threshold into a travel time as well. However, this can only be used as a rough guide as there are likely to be other considerations when travelling by other modes of transport.

Table 3.3: Example accessibility standards

Service / facility	Desirable walking distance / time	Preferred maximum walking distance / time
Providing for Journeys on Foot standards <sup>33</sup>		
Town centres	200m / 2.5 minutes	800m / 10 minutes
Commuting/school Sight-seeing	500m / 6.25 minutes	2km / 25 minutes
Elsewhere	400m / 5 minutes	1,200m / 15 minutes
Shaping Neighbourhoods standards <sup>34</sup>		
Nursery/first school	400m / 5 minutes	600m / 7.5 minutes
Primary/middle school	500m / 6.25 minutes	800m / 10 minutes
Secondary school	700m / 8.75 minutes	1,200m / 15 minutes

1.

<sup>33</sup> Institution of Highways and Transport (2000) Guidelines for Providing for Journeys on Foot

<sup>34</sup> Barton, Grant and Guise (2010) Shaping Neighbourhoods for Local Health and Global Sustainability

- 3.25 When travelling by public transport, there will likely be a short journey to a bus or tram stop, or train station and a period of time waiting at a bus or tram stop, or train station. In addition, people are likely to travel by car or public transport for longer distances and therefore may be prepared to spend more time travelling to reach their destination. WYG used the National Travel Survey to analyse how far people travel to a bus, tram/tube stop or railway station<sup>35</sup>. They found that the mean distance walked to a bus stop was 580m (7.25 minutes) and the 85<sup>th</sup> percentile (i.e. the distance within which 85% of journeys are made) was 800m (10 minutes). The average distance walked to a railway station was 1,010m (12.63 minutes) and the 85<sup>th</sup> percentile was 1,610m (just over 20 minutes).
- 3.26 Table 3.3: suggests that, ideally, all local services and facilities should be within 15 minutes' walk. The preferred maximum walking times for those things residents are likely to be prepared to travel further for, such as employment, a larger centre or leisure centre is generally between 20 and 25 minutes. It is therefore assumed that residents would be willing to travel a similar amount of time via other modes of transport to access such services and facilities. Ideally this would be by sustainable modes of transport and would require minimum travel. For example, if residents are travelling elsewhere for work, they could stop at a supermarket near their workplace on the way home. Taking into account WYG's findings discussed above, that people will walk around 10 minutes to a bus stop and more to a train station, for the purposes of this study, 'good access' to a larger settlement is considered to mean 10-15 minutes travel time on public transport. The door-to-door journey time will be longer than this as it will include travelling to/from the public transport stop/station.
- 3.27 There are a number of other guidance documents setting out standards for the provision, quality and accessibility of local services and facilities, which should be taken into account when considering and planning for new settlements. For example, Natural England's ANGSt<sup>36</sup> and Fields in Trust's standards<sup>37</sup> should all be referred to when considering provision of open space and recreation facilities.

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<sup>35</sup> Wakenshaw and Bunn on behalf of WYG (2015) How far do people walk?

<sup>36</sup> Natural England (2010) 'Nature Nearby': Accessible Natural Greenspace Guidance

<sup>37</sup> Fields in Trust (2015) Guidance for Outdoor Sport and Play, Beyond the Six Acre Standard

- 3.28 ANGSt recommends that everyone, wherever they live, should have an accessible natural greenspace:
- of at least 2 hectares in size, no more than 300 metres (5 minutes walk) from home;
  - at least one accessible 20 hectare site within two kilometres of home;
  - one accessible 100 hectare site within five kilometres of home; and
  - one accessible 500 hectare site within ten kilometres of home; plus
  - a minimum of one hectare of statutory Local Nature Reserves per thousand population.

3.29 Fields in Trust sets out recommended benchmark guidelines for formal outdoorspace, play space and informal outdoor space as set out in Table 3.4:.

Table 3.4: Fields in Trust recommended benchmark guidelines

	Quantity guidelines (hectares per 1,000 population)	Walking guidelines (metres)	Quality guidelines
Playing pitches	1.2	1,200	<ul style="list-style-type: none"> <li>■ Quality appropriate to the intended level of performance, designed to appropriate technical standards.</li> <li>■ Located where they are of most value to the community to be served.</li> <li>■ Sufficiently diverse recreational use for the whole community.</li> <li>■ Appropriately</li> </ul>
All outdoor sports	1.6	1,200	
Equipped / designated play areas	0.25	Local Area for Play – 100m  Locally Equipped Area for Play – 400m  Neighbourhood Equipped Area for Play – 1,000m	

Other formal outdoor provision	0.8	700	<p>landscaped.</p> <ul style="list-style-type: none"> <li>■ Maintained safely and to the highest possible condition with available finance.</li> <li>■ Positively managed taking account of the need for repair and replacement over time as necessary.</li> <li>■ Provision of appropriate ancillary facilities and equipment.</li> <li>■ Provision of footpaths.</li> <li>■ Designed so as to be free of the fear of harm or crime.</li> </ul>
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	Quantity guidelines (hectares per 1,000 population)	Walking guidelines (metres)	Quality guidelines
			<ul style="list-style-type: none"> <li>Local authorities can set their own quality benchmark standards for playing pitches, taking into account the level of play, topography, necessary safety margins and optimal orientation.</li> </ul>
Parks and gardens	0.8	710	<ul style="list-style-type: none"> <li>Parks to be of Green Flag status.</li> <li>Appropriately landscaped.</li> <li>Positive management.</li> <li>Provision of footpaths.</li> <li>Designed so as to be free of the fear of harm or crime.</li> </ul>
Amenity green space	0.6	480	
Natural and semi-Natural	1.8	720	

### Identifying thresholds

3.30 There is little guidance available regarding assumptions on the level of growth required to make provision of community services and facilities, such as those listed in Table 3.2:; viable. This may be because this varies depending on local context. For example, Lichfields found that, based on the 40 schemes it identified in the Garden Communities programme, the levels of provision of schools between sites vary enormously, likely due to both existing provision and the use of need assessments by planners to determine education capacity requirements. They found within Garden Communities individual sites as small as 1,500 homes that will provide a secondary school, and a site of 3,300 homes that will provide two secondary schools, but there were also a number of examples of a site of over 2,500 homes providing no secondary school, and three sites providing two secondary schools were all over 2,500 homes.

- 3.31 Lichfields also noted that, in some cases, provision for secondary schools entailed only the land required, rather than full build-cost funding by the scheme<sup>38</sup>.
- 3.32 We reviewed various documents to draw some general conclusions and compare opinions on the scale of development likely to be required to enable delivery of key services and facilities, as set out below. It is noted that the Garden Communities Prospectus is a political document to encourage bids for new garden communities as part of the Government's aim to increase housebuilding to an average of 300,000 net new homes by the mid-2020s. Furthermore the document does not explain the reasoning behind the figures of 1,500 and 10,000 homes. Whilst Policy Exchange is a right wing think tank (and therefore somewhat politically motivated), it is considered that the points set out below regarding settlement size are based on reasonable assumptions. These documents are not relied on to determine settlement size in this report, but provide a useful starting point for thinking.
- 3.33 The Garden Communities Prospectus suggests a 'new settlement' should be at least 1,500 new homes, as it defines Garden Villages as settlements of 1,500 to 10,000 homes and Garden Towns as settlements of more than 10,000 homes.
- 3.34 Policy Exchange suggests that garden villages would be around 1,500 to 5,000 homes<sup>39</sup>, although as with the Garden Communities Prospectus, it is not clear what evidence this is drawn from. They include some assumptions about the level of infrastructure that would be viable for such villages, as set out below:
- Around 1,500 homes allows a village built around a hub of primary school, sports hub, and local centre with household recycling facilities. It would hope to attract a café/small shops/a post office; with some live/work opportunities too, but it will clearly function in relation to nearby larger settlements for facilities like hospital healthcare, and main retail shopping.
  - Around 5,000 homes allows a secondary school as well as two primary schools and a small but vibrant village centre (as above), but including an employment area, recreational space and landscaped areas. Whilst it probably won't attract a full range of national retailers, this would operate more as a self-sustaining community than its smaller counterpart.

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<sup>38</sup> Lichfields (December 2019) How does your garden grow? A stock take on planning for the Government's Garden Communities programme.

<sup>39</sup> Policy Exchange (2015) Garden Villages: Empowering localism to solve the housing crisis

- 3.35 The TCPA's guidance on garden cities<sup>40</sup> suggests that new garden settlements generally consist of around 5,000 homes or more, with garden cities starting at around 15,000. The TCPA's guidance suggests that development should aim to provide at least one job per household. Whilst it is recognised that this guidance is for garden cities and that smaller new settlements may rely more on commuting to other nearby towns, it sets a standard to aim for. The guidance also recognises that no settlement is wholly self-contained and therefore good public transport links should be available to access employment in nearby centres as well.
- 3.36 Viability Testing Local Plans: Advice for planning practitioners<sup>41</sup> draws on the (now withdrawn) 2010 Code for Sustainable Homes Cost Review to suggest that 'strategic' sites (including new settlements and strategic extensions) would be around 5,000 homes and larger.
- 3.37 Both the Garden Communities Prospectus and Policy Exchange document suggest that the starting point for a new dwelling is 1,500 homes, and this would be a village with a more limited range of services and facilities. However, the TCPA's guidance on garden cities and the Viability Testing Local Plans document suggest that around 5,000 homes is a starting point for new settlements (TCPA suggests this is based on provision of a secondary school<sup>42</sup>). This may suggest that whilst a smaller settlement could meet local needs to an extent through provision of a more limited range of services and facilities, larger settlements are likely to be more viable.
- 3.38 The North Hertfordshire New Settlement Study<sup>43</sup> noted that the first garden cities (Letchworth and Welwyn Garden City) consisted for around 15,000 to 20,000 homes. First and second generation new towns, such as Skelmersdale, Peterlee and Hatfield generally consist of around 15,000 to 20,000 dwellings (although some are notably larger, around 40,000 dwellings or up to 59,000 at Telford), whereas third generation new towns, such as Milton Keynes and Peterborough are much larger, at around 70,000 to 90,000 dwellings. These numbers are substantially higher than those discussed in the documents above. This does not mean that smaller new settlements are necessarily unsustainable if they provide the critical mass of population to ensure viable provision of services and facilities. However, the North Hertfordshire New Settlement Study showed that this can vary greatly.

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<sup>40</sup> TCPA (2014) The art of building a garden city: garden city standards for the 21<sup>st</sup> century

<sup>41</sup> Local Housing Delivery Group (2012) Viability Testing for Local Plans: Advice for planning practitioners

<sup>42</sup> TCPA (2007), Best Practice in Urban Extensions and New Settlements, London: TCPA.

<sup>43</sup> Mott MacDonald, on behalf of ATLAS (2016) North Hertfordshire New Settlement Study.

For example, the study found that in new towns on average, there are around 1,500 dwellings to a primary school, although Skelmersdale has 700 dwellings per primary school and Telford and Peterborough have more than 2,500 dwellings per primary school. Similarly, it found that provision of GP surgeries in new towns varied from one per 4,000 people up to one per 16,000 people. It is noted that the study also highlights that the new towns considered were founded and advanced through an historic context and a different planning environment to today.

- 3.39 Appendix A sets out thresholds for the services and facilities set out in Table 3.2: from various sources. It also sets out the services and facilities that have been provided, or are planned to be provided at new settlements/communities recently constructed and proposed. This demonstrates that the level provision of services and facilities that can expected to be provided at new settlements varies from place to place, but there does appear to be a general trend of a lower level of services being provided at settlements or urban extensions of around 1,000 to 2,000 homes and then a higher level of services being provided at larger strategic sites of around 3,000 to 5,000 homes and larger. The examples included in Appendix A do not generally reflect a lower level of services being provided at strategic extensions, when compared to new settlements.



## Chapter 4 – Estimating Sustainable Settlement Sizes in Greater Cambridge

### The Greater Cambridge context

- 4.1 Comprising Cambridge City and South Cambridgeshire District, Greater Cambridge covers approximately 360 square miles, with a total population of 290,000 people. Cambridge City and South Cambridgeshire have a unique relationship, in that South Cambridgeshire entirely surrounds Cambridge City. Greater Cambridge borders Huntingdonshire and East Cambridgeshire to the north; Central Bedfordshire to the west; North Hertfordshire, Uttlesford and Braintree to the south, and to the east, it borders West Suffolk.
- 4.2 Whilst Cambridge City is distinctly urban, South Cambridgeshire is a mainly rural district. With Cambourne in the west, Histon to the north and Sawston in the south being the most populated settlements in Greater Cambridge, after Cambridge. Greater Cambridge contains a wealth of historic assets, with over 4,000 listed buildings, 32 conservation areas and 24 registered parks and gardens across Cambridge and South Cambridgeshire. There were settlements in the locality of Cambridge in the Bronze Age and Iron Age, but the Romans built the first town at Cambridge. The bridge across the River Cam or Granta, from which the town takes its name, had existed since at least 875. The town is recorded in the Domesday book and by the 1200's it was a thriving commercial town and the University of Cambridge had been founded<sup>44,45,46</sup>.
- 4.3 Cambridge's internationally renowned university, its world-class reputation for research, science and technology excellence, and its high quality of life, has led to considerable growth pressure over recent decades. Being a historic city surrounded by Green Belt, a number of new settlements have been planned and established in Greater Cambridge in recent years. These are set out in Table 4.1:.

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<sup>44</sup> <https://www.cam.ac.uk/about-the-university/history/early-records>

<sup>45</sup> <http://www.localhistories.org/cambridge.html>

Table 4.1: New settlements in Greater Cambridge

Settlement	Description
Bar Hill	Bar Hill village was planned in the late 1950s to address a housing shortage in South Cambridgeshire. The first residents moved in in 1967 but the village was not completed until 1989.
Cambourne	Cambourne consists of around 4,250 homes and comprises the villages of Lower, Greater and Upper Cambourne. The first planning permission for Cambourne was given in 1996 and construction started in 1998. Building work began on Upper Cambourne in 2008. Cambourne West, which will be a fourth, linked village is allocated in the adopted South Cambridgeshire Local Plan (Policy SS/8).
Northstowe	Northstowe is a new town based on and around the site of the former RAF Oakington base. Northstowe was allocated in the 2003 Cambridgeshire and Peterborough Structure Plan and the first phase of development was given planning permission in 2012. The first homes were occupied in 2017. The South Cambridgeshire Local Plan 2018 allocates an extension to Northstowe (Policy SS/5), which will contribute to meeting the 10,000 homes already planned for.
Waterbeach New Town	The South Cambridgeshire Local Plan 2018 allocates a new town of 8,000 to 9,000 dwellings on and around the former Waterbeach Barracks (Policy SS/6).
Bourn Airfield	The South Cambridgeshire Local Plan 2018 allocates a new village of around 3,500 dwellings at Bourn Airfield (Policy SS/7).

- 4.4 In addition to the new settlements set out above, the adopted Cambridge and South Cambridgeshire Local Plans allocated a number of other strategic sites, namely Orchard Park, Land Between Huntingdon Road and Histon Road, Cambridge East and North East Cambridge (previously referred to as 'Cambridge Northern Fringe East'). North East Cambridge in particular, will be of a scale equivalent to a new settlement, providing over 8,000 new homes and 28,000 jobs, and will provide a range of infrastructure to meet the needs arising from development and existing local needs.

#### Defining a sustainable settlement size in the Greater Cambridge context

- 4.5 Drawing on the information presented in Chapter 3 and Appendix A, we have identified reasonable assumptions regarding the amount of housing required to enable viable provision of local services and facilities in new communities in Greater Cambridge. These assumptions are set out in Table 4.2:. In order to ensure these are relevant to a Greater Cambridge context, locally specified standards have been used as the threshold, where available, as there is greater certainty and precedent in this being required (and it is assumed, delivered) locally (i.e. the standards for early years provision, a primary school, a secondary school and a library in Table 4.2: reflect Cambridgeshire County Council Standards). The basis for all standards are set out in Table 4.2:. It has been assumed that a smaller settlement of 1,500 homes would provide a number of services and facilities and this has been taken as a starting point for the rows in Table 4.2: with more limited local evidence. This has been applied for those services and facilities that the Policy Exchange document<sup>47</sup> assumed would be provided at this size, if this is in line with what is proposed to be provided at East of Biggleswade, which is the smallest case study included, at 1,500 homes.

Table 4.2: Amount of housing required to enable viable provision of local services and facilities in new communities

Services and facilities required to meet daily needs	Approximate minimum number of new dwellings required to enable provision	How threshold has been determined
Local shops / local/town centre (preferably including a post office)	1,500	Even a small new settlement would be expected to provide some local shops. This is somewhat corroborated by the examples given in Table A.2: Houlton in Rugby and Former Alconbury Airfield and Grange Farm in Huntingdonshire are both expected to provide a main/district centre or local centre per 1,550 people and 1,666 people respectively. The new village East of Biggleswade, the smallest example in Appendix A (1,500 homes) is expected to provide 'a mix of retail' <sup>48</sup> .
Early years provision	1,000	Cambridgeshire County Council requirement (to be integrated into/provided alongside primary school).
Primary school	1,000	Cambridgeshire County Council requirement.
Secondary school	3,000	Cambridgeshire County Council requirement.

<sup>48</sup> [https://www.centralbedfordshire.gov.uk/info/45/planning\\_policy/468/local\\_plan\\_-\\_overview/4](https://www.centralbedfordshire.gov.uk/info/45/planning_policy/468/local_plan_-_overview/4)

Services and facilities required to meet daily needs	Approximate minimum number of new dwellings required to enable provision	How threshold has been determined
Employment opportunities	3,500	<p>All examples in Table A.2 are expected to provide employment opportunities, except the new village East of Biggleswade (1,500 homes). There is little guidance or policy on this matter, but it is noted that the second smallest case study, Bourn Airfield at 3,500 homes, is expected to provide employment land, hence the 3,500 homes figure. It is noted that the Policy</p> <p>Exchange document<sup>49</sup> suggests a settlement of around 5,000 homes would provide an employment area, but as this is not well evidenced in the document it has not been relied on.</p>
Publicly accessible green/open space	450	<p>All examples in Table A.2 are expected to provide publicly accessible green/open space. Standards in the existing Local Plans are set out per population, rather than giving threshold of the number of homes that would trigger the need for new open space.</p> <p>Nevertheless, the 450 homes figure here is based on the approximate number of homes that the existing local plan standard thresholds relate to (see Appendix A). It is anticipated that any new settlement will be larger than 450 dwellings and will provide publicly accessible green/open space.</p>

Services and facilities required to meet daily needs	Approximate minimum number of new dwellings required to enable provision	How threshold has been determined
Community meeting space	1,500	<p>Shaping Neighbourhoods suggests development of around 1,670 homes would warrant a new community hall or similar. Standards in the adopted South Cambridgeshire Local Plan give a floorspace figure per population, which is difficult to translate to facilities per number of homes.</p> <p>All examples in Table A.2 are expected to provide new community meeting space, often with an emphasis on multifunctional space. Given that this includes the smallest case study, East of Biggleswade (1,500 homes), which is similar to the Shaping Neighbourhoods threshold, 1,500 homes is considered an appropriate threshold.</p>

Services and facilities required to meet daily needs	Approximate minimum number of new dwellings required to enable provision	How threshold has been determined
Public transport stop(s) (train or bus) <sup>50</sup>	1,500	<p>It is essential that any new settlement is served by public transport, in order for it to be sustainable. All examples in Table A.2 are expected to include public transport links (although this wasn't discussed in the information regarding Houlton).</p> <p>Documents considered in Table A.1 gave little information on this, although it is noted that the North Essex SA assumed a new community of a minimum 2,000 homes would include transport links. Given this and that even the smallest of the new community case studies considered (East of Biggleswade) included public transport links, 1,500 homes is considered a suitable threshold.</p>
GP surgery or health centre	4,500	<p>With regards to the case studies in Table A.2, Bourn Airfield at 3,500 homes is not expected to include a GP surgery, whereas the next largest example in Huntingdonshire, at 5,000 homes, is expected to provide one.</p>

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<sup>50</sup> Footpaths and cycleways have not been included in this list as it has been assumed these can be designed into all scales of development

Services and facilities required to meet daily needs	Approximate minimum number of new dwellings required to enable provision	How threshold has been determined
		<p>The North Essex SA used a threshold of 4,500 homes, informed by discussions with the North Essex and Mid Essex Clinical Commissioning Groups (CCGs), which is between the examples above and is also close to the Shaping Neighbourhoods figure of 4,167 homes. As such, 4,500 is considered a suitable threshold.</p> <p>We were advised by NHS England and the Cambridgeshire and Peterborough Clinical Commissioning Group that a local threshold has not been identified at this time. However, the Councils will continue to work with healthcare infrastructure providers as the Local Plan progresses, in order to ensure suitable provision of healthcare facilities for all scales of new residential development.</p>
Recreation and leisure facilities	1,500	<p>All examples in Table A.2 are expected to provide new recreation and leisure facilities, including East of Biggleswade (1,500 homes) (Bourn Airfield may rely on larger facilities elsewhere ie. Cambourne).</p> <p>Standards identified in Table A.1 are generally for specific types of facility. It is expected that smaller new settlements (taken to be 1,500 homes) would provide some level of recreation and leisure facilities, as reflected in proposals for East of Biggleswade.</p>



Services and facilities required to meet daily needs	Approximate minimum number of new dwellings required to enable provision	How threshold has been determined
Library (could be mobile library stop, access point or full library)	All	Cambridgeshire County Council advised that any new settlement would be required to provide some kind of library provision. This could be a full library (larger settlements), satellite library, access point or a mobile library stop (smaller settlements). Information regarding library provision was not available for many of the new community case studies in Table A.2.

- 4.6 What constitutes a sustainable settlement size will depend on a number of factors, including the location and pattern of development. In order for a new settlement to provide all of the services and facilities set out in Table 4.2:, it would have to consist of at least 4,500 homes. This 4,500 homes threshold relates to the threshold for GP surgeries. This is because this is the largest minimum threshold for all services considered, i.e. 4,500 homes would be expected to provide all of the services and facilities listed in Table 4.2:), but a smaller number of homes may not provide for a GP surgery (but may provide other services listed in Table 4.2:).
- 4.7 A smaller settlement size may be acceptable for a new settlement, where other services and facilities in a larger centre can be easily accessed nearby (as discussed in Chapter 3, such services and facilities should be within around 15 minutes travel time on public transport time, excluding travel to/from public transport stops). It should be noted that the need to provide the services and facilities set out in Table 4.2: will depend on local circumstances. For example, if the new settlement has good access to an existing employment area, but none of the other amenities listed, then just the amount of employment land provided within the new settlement itself could perhaps be reduced. This is explored further below.

## Location and pattern of new development

- 4.8 In terms of existing access to significant services and facilities the only relevant larger settlement with a substantially higher level of services and facilities within Greater Cambridge is the city of Cambridge. When considering access to Cambridge, the focus is likely to be on the city centre, where retail and leisure uses are focused and is likely to be most accessible by public transport. The Cambridge City Centre Capacity Study<sup>51</sup> also recognised that the city centre is an increasingly important location for office development. As Cambourne, Northstowe and Waterbeach continue to expand, they could play a future role in serving surrounding settlements as well. It is noted that the planned new settlement at Bourn Airfield is expected to deliver a slightly lower level of infrastructure provision compared to other new settlements considered in Table A.2, due to its proximity to Cambourne. For example, it is likely that the Bourn Airfield site will include a satellite library, with residents having access to a larger library in Cambourne if needed and the larger recreation facilities at Cambourne are expected to be used by Bourn Airfield residents.
- 4.9 It is recognised that reliance on existing services and facilities in Cambridge depends on the capacity of these. New development can make contributions to expanding the capacity of existing services and facilities, but there will also be a physical limit to their expansion. For example, the 2013 Retail and Leisure Study<sup>52</sup> noted limited scope for expansion of retail and leisure opportunities in the City Centre. As such, it is recommended that all facilities set out in Table 4.2: are provided at any new settlement, regardless of its proximity to Cambridge.
- 4.10 New settlements located at the edge of Greater Cambridge may be able to rely on existing services and facilities in larger towns and cities beyond the South Cambridgeshire boundary, such as Letchworth Garden City and Huntingdon, and possibly also smaller settlements, such as Haverhill and Royston. This would require close cross-boundary working with neighbouring authorities to establish where existing services and facilities have capacity and the extent of contributions required from development to improve or expand these.
- 4.11 Closely linked to the issue of access to existing centres, services and facilities is the issue of the pattern of new development, which will have implications for the level of service provision. For example, it could be sustainable to create a new community on the edge of Cambridge itself, much like the regeneration of North East Cambridge, which can both make use of existing services and facilities within the city as well as providing new and improved facilities to serve the development and the wider area

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<sup>51</sup> ARUP (2013) Cambridge City Centre Capacity Study

<sup>52</sup> GVA (2013) Cambridge Retail and Leisure Study Update 2013

Similarly, new settlements could grow around Cambridgeshire using the 'hub and spoke' approach to expanding market towns set out in the Taylor Review<sup>53</sup>, and URBED's proposal of growing towns in a 'snowflake' pattern<sup>54</sup>, as set out in Chapter 3. Such expansions to Cambridge would likely need to provide a lower level of new infrastructure, and could focus on provision of services and facilities that are currently at or over-capacity, or that the location is deficient in.

- 4.12 Similarly, new strategic developments could adjoin existing settlements in order to both utilise and bolster their service provision. For example, this could include further growth at an existing settlement, such as one of the villages, further growth at Northstowe or Waterbeach, or an additional village at Cambourne. This could be particularly valuable where a smaller settlement could be brought to a critical mass for provision of new infrastructure, such as a railway station or other form of rapid transit. In 2014, URBED claimed that it was not possible to build a new city from scratch in the economic context of the report, and promoted the idea that new cities should grow from an existing, mature town<sup>55</sup>. This would be somewhere with good rail connections, educational facilities, cultural facilities and a thriving town centre, which are considered unachievable in the early years of a new settlement. Whilst a smaller, existing village may not include all these amenities, the principle can be carried across. Expanding an existing village will enable development to capitalise on existing infrastructure, particularly in the early years when there would otherwise not be enough residents to render some infrastructure viable. New development may also help support and expand existing services and facilities. In addition, expanding a village may help ensure a sense of place and a central hub for the community from the beginning. However, as URBED noted, one of the key challenges in expansion of existing settlements is gaining local support<sup>56</sup>. This is often related to a somewhat inevitable change in character of the settlement and actual or perceived impacts on the environment. There may also be fears that new development will not invest sufficiently in the infrastructure needed to support the expansion.
- 4.13 Rather than physical proximity to a larger settlement, a new settlement could share services with another if it is linked by frequent and rapid public transport links. As discussed above, around 10-15 minutes travel time on public transport (excluding travel to/from public transport stops) is considered 'good' access, although this transport must also be frequent, reliable and have sufficient capacity. This approach to development could result in a single new settlement with links to Cambridge. Alternatively, a string of smaller settlements could be created along a public transport corridor, such as the planned Cambridgeshire Autonomous Metro or the Cambridgeshire Guided Busway.

<sup>53</sup> Matthew Taylor (2008) Living Working Countryside, The Taylor Review of Rural Economy and Affordable Housing

<sup>54</sup> The URBED Trust (2019) Oxfordshire Futures 2050, Achieving smarter growth in Central Oxfordshire

<sup>55</sup>, <sup>56</sup> URBED (2014), Uxcester Garden City: Submission for the 2014 Wolfson Economics Prize. Available at: [URBED Woldson submission](#)

## Additional considerations

- 4.14 The sustainability and success of new settlements depends on factors beyond the infrastructure they provide. Appendix B reproduces a table from Williams (2014) that summarises the 'conditions for achieving successful new places to 2065', and includes consideration of new peripheral developments and dispersed development in addition to new settlements. Ultimately the table concludes that, while the 'dispersed development' model raises challenges for creating successful places, both urban extensions and standalone new settlements can become 'successful places' socially, economically and environmentally, provided they are thoughtfully designed, appropriately located, and well served (at an early stage) with adequate infrastructure.
- 4.15 URBED<sup>57</sup> suggests that new garden cities are most successful when based on an existing settlement with good rail connections, infrastructure, services and facilities, or at least within proximity to growing urban conurbations so that they can share access to infrastructure, jobs and services in the early stages<sup>58</sup>. In particular, high quality sustainable transport is required to create behaviour change from the start. In other European countries, amenities such as shops and restaurants have been encouraged to move into new communities early through low or rent-free periods and use of temporary space<sup>59</sup>. URBED's 2014 Wolfson Prize submission<sup>60</sup> advocated substantial growth of an existing town through a 'hub and spoke' model, with urban extensions spaced out around the existing urban area but only joining to it at a small point. Whilst Greater Cambridge is not necessarily looking for new cities, it is worth bearing in mind these considerations when establishing any new settlement 'from scratch'.
- 4.16 As mentioned in Chapter 3, there are many more aspects to sustainability than what services and facilities are provided on-site. New settlements should seek to be as self-contained as possible. For example, there should be a variety of employment provision and this should be of a type to meet local need. New settlements should maximise the green infrastructure network, seek opportunities for community food growing and implement sustainable technologies that would be more challenging to retrofit into existing settlements, such as district heating networks, in order to be truly sustainable.
- 4.17 Other design factors that will need to be considered include density. Higher densities require less land-take and may therefore help to preserve the natural environment and countryside. However, this may mean lower levels of greenspace within the settlement itself, including fewer and/or smaller parks and gardens. Higher densities are likely to enhance accessibility to services and facilities, as larger numbers of people will be within walking distance of, for example, a school or railway station. However, this needs to be planned alongside the capacity of such infrastructure. Higher density development is

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<sup>57</sup> URBED (2014), Uxcester Garden City: Submission for the 2014 Wolfson Economics Prize. Available at: [URBED Wolfson submission](#)

<sup>58, 59</sup> PRP, URBED and Design for Homes (2008), Beyond Eco-towns: Applying the Lessons from Europe, PRP Architects Ltd.

<sup>60</sup> URBED (2014), Uxcester Garden City: Submission for the 2014

Wolfson Economics Prize. Available at: [URBED Wolfson submission](#)

likely to be focused on shared central resources, which offers the potential to generate a more extensive town centre to serve all neighbourhoods, whereas lower density development is likely to depend more heavily on local centres, which may not have as wide a range of services and facilities, or retail choice. Transport infrastructure is also likely to be more centralised and may therefore be more cost efficient as more people can be served by fewer links. However, if behaviour of residents does not take advantage of this, it could lead to congestion in the centre of the settlement<sup>61</sup>. Transport for New Homes<sup>62</sup> suggests that many of the garden villages and towns built through the government's garden communities programme are not delivering modal shift set out in visions for these developments, for example in masterplans, local plans, or funding bids. Transport for New Homes found that the garden communities being built are still car- oriented, often at the expense of front gardens, sufficient and attractive pavements and street trees. It also found that new garden communities were associated with significant transport infrastructure to mitigate the expected increase in cars from the development, seemingly rather than seeking to reduce the increase in car use via modal shift. It was also suggested that some garden communities were located so as to 'unlock' strategic road infrastructure. Funding and accessibility (particularly walking distance and barriers such as busy roads) were recorded as key factors limiting modal shift. The report also linked the lack of high quality walking and cycling infrastructure to wider issues, such as poor performance of local shops (as footfall is low), inactive lifestyles, isolation and discrimination against those who can't drive or struggle to afford to buy and run a car. Whilst it is noted that Transport for New Homes is devoted to advocating for development that does not require reliance on private vehicles, it is helpful to bear in mind that development needs to include robust, practical principles for ensuring modal shift and to ensure this is delivered.

### The test of deliverability

- 4.18 Of critical importance in the successful planning and delivery of new settlements are governance arrangements and viability. This is very much evidence in the Inspectors' considerations of new settlement proposals in Local Plans for North Essex, Uttlesford, and Hart District. Realistic and robust assumptions and calculations regarding the costs of land assembly, infrastructure, provision of affordable housing, including contingencies and inflation with regard to both construction costs and sale values are necessary. As Lichfields concluded, a number of garden communities proposals have experienced delay because of insufficient evidence that the schemes are well conceived or deliverable over the plan period. Promoters and local authorities need to be confident they can answer key questions, such as:

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<sup>61</sup> Mott MacDonald, on behalf of ATLAS (2016) North Hertfordshire New Settlement Study.

<sup>62</sup> Transport for New Homes (2020) Garden Villages and Garden Towns: Visions and Reality.

Why is the site's inclusion in the spatial strategy for the area justified when assessed against reasonable alternatives?

- How will the project be implemented in light of relevant information about land ownership, delivery model, and infrastructure requirements?
- Is the scheme viable when taking into account the necessary infrastructure, affordable housing provision, a realistic delivery trajectory and robust cost and value assumptions?
- If external funding is required – e.g. from Government – but not yet secured, how should that uncertainty be factored into its role within the Local Plan housing trajectory?
- How does the planning policy identifying the site actually operate? What further planning tools are required to help unlock the scheme and ensure it delivers in a way that meets core policy requirements governing the quality of design and place?

4.19 If the promoters and local authorities can answer these questions positively, with confidence, and with a sound commercial as well as planning case, then new settlement proposals stand a much better chance of navigating the examination process, and being delivered on the ground.

## Chapter 5 – Conclusions

- 5.1 Table 4.2: sets out minimum thresholds for a variety of essential services and facilities. However, the purpose of this document is to identify an overall sustainable settlement size. General consensus from the literature is that new settlements should constitute at least around 1,500 homes, although some sources seem to suggest 5,000 homes is more appropriate.
- 5.2 Overall, we recommend that a settlement of around 4,500 homes would be the minimum to be sustainable in Greater Cambridge and that the most sustainable option is to provide settlements of at least this size even in proximity to Cambridge. This is because a settlement of this size would be able to accommodate everyday services and facilities such as local shops, early years provision, a primary and secondary school, employment, green space, community meeting space, public transport infrastructure, a GP surgery or health centre and recreation facilities, which are required to provide the opportunity to meet needs locally without having to travel elsewhere (i.e. a measure of self-containment). This in turn can help to foster community cohesion and identity. However, it is acknowledged that the location and pattern of development of new communities will influence the appropriate size and smaller developments may be appropriate in certain circumstances. Larger settlements are likely to be more sustainable to an extent, as they are likely to be more self-contained, although the goal of self-containment needs to be approached with a degree of realism.
- 5.3 In practice, sustainable settlement size will vary between locations within Greater Cambridge, due to environmental constraints. In addition, new settlements should maximise sustainability through design, and a key consideration will be the promotion of walking and cycling within new settlements, and excellent public transport connections, particularly with Cambridge, but also with the wider strategic public transport network.
- 5.4 Finally, Cambridge City Council and South Cambridgeshire Council are in the strong position of having the experience of planning for new settlement proposals through the Local Plan process, and implementation in practice. The Councils will be aware of the considerable challenges of delivering new settlements, in terms of funding, securing services, facilities, infrastructure, and job creation, long lead-in times and phasing, as well as creating a genuine sense of community. The Councils will also be aware of the opportunities that new settlements provide, whether stand-alone, or linked to existing settlements, to design-in sustainability considerations, drawing on the lessons learned to date.

LUC

November 2020



## Appendix A – Thresholds for Provision of New Services and Facilities

Table A.1 below sets out thresholds for provision of various services and facilities as required by the County Council, existing policy or set out in guidance documents. County Council requirements are expected to have a strong chance of being delivered, as the County Council is the local education authority. Whilst new requirements should be based on up to date evidence and not be solely based on existing local plan requirements, standards set out in current local plans are included, as these are locally specific and have been tested and found sound through the Examination process.

The North Essex SA assumptions are included because they were drawn from an exercise in which a number of parties were consulted to identify reasonable threshold assumptions. For the SA, assumptions regarding thresholds for delivery of healthcare services were drawn from discussions with the North Essex and Mid Essex Clinical Commissioning Group (CCG). Other assumptions were drawn from extensive liaison with site promoters and a local interest group.

Table A.2 sets out case studies of relatively recently constructed or proposed new communities and what infrastructure has been or is proposed to be delivered at these sites.

**Table A.1: Approximate thresholds for provision of new services and facilities**

Service/facility	Local shops / town/local centre	Early years provision	Primary school	Secondary school	Employment provision	Publicly accessible green/ open space	Community meeting space	Public transport services	GP surgery or health centre	Recreation and leisure facilities	Library
Source											
Cambridgeshire County Council <sup>63</sup>		1,000 homes (to be provided alongside primary school)	1,000 homes	3,000 homes							Required (more detail on case-by-case basis)
Cambridge Local Plan <sup>64</sup>						2.2 ha informal open space per 435 homes				1.2 ha outdoor sport per 435 homes people. 1 sports hall per 5,652 homes.	

<sup>63</sup> Communicated in a phone call between LUC and Cambridgeshire County Council

<sup>64</sup> The figures in this row were presented in the source as standards per population. They have been converted to standards per household (using an average household size of 2.3 people (Cambridgeshire Insight, Census 2011 Profile: Cambridge, available at:

Service/facility	Local shops / town/local centre	Early years provision	Primary school	Secondary school	Employment provision	Publicly accessible green/ open space	Community meeting space	Public transport services	GP surgery or health centre	Recreation and leisure facilities	Library
Source											
										1 swimming pool per 21,739 homes.	
South Cambridgeshire Local Plan (2018) <sup>65</sup>						1.2 ha informal open space per 417 homes	111m <sup>2</sup> per 417 homes			1.6 ha outdoor sport per 417 homes	
Shaping Neighbourhoods for Local Health	Local centre per 2,500 homes District centre/ superstor	2,000 homes	1,667 homes	3,333 homes			1,667 homes		4,167 homes	Leisure centre per 10,000 homes	

<sup>65</sup> The figures in this row were presented in the source as standards per population. They have been converted to standards per household (using

Service/facility	Local shops / town/local centre	Early years provision	Primary school	Secondary school	Employment provision	Publicly accessible green/ open space	Community meeting space	Public transport services	GP surgery or health centre	Recreation and leisure facilities	Library
Source											
and Global Sustainability <sup>66,67</sup>	e per 10,000 homes										
North Essex SA Assumptions	≥2,000 homes	≥2,000 homes	≥2,000 homes	≥4,500 homes	Assumed	≥2,000 homes	≥2,000 homes	≥2,000 homes	≥4,500 homes		
(note 2,000 homes was considered starting point for new community)				(≥2,000 homes would contribute to expanding existing schools					(>2000 homes) Would contribute to expanding existing facilities off-site		

<sup>66</sup> Barton, Grant and Guise (2010) Shaping Neighbourhoods for Local Health and Global Sustainability

<sup>67</sup> The figures in this row were presented in the source as standards per population. They have been converted to standards per household (using an average household size of 2.4 people) Cambridgeshire Insight, Census 2011 Profile: South Cambridgeshire, available at: <https://cambridgeshireinsight.org.uk/population/census-2011/>) to ensure they are comparable with other standards presented

Table A.2: Examples of service and facility provision at new settlements/ new communities ('Y' indicates that this type of facility is provided at the new community)

Service/ facility											
Case Study	Shops / town/local centre	Early Years Provision	Primary school	Secondary school	Employment provision	Publicly accessible green space	Community meeting space	Public transport services	GP surgery or health centre	Recreation and leisure facilities	Library
Current South Cambridgeshire Local Plan											
Waterbeach New Town (8,000-9,000 homes) <sup>68</sup>	Y	Y	Y (x5)	Y (x2)	Y	Y	Y (111 sqm per 417 homes)	Y	Y	Y	Y
New Village at Bourn Airfield (3,500 homes) <sup>69</sup>	Y	Y	Y (x2)	Y	Y	Y	Y (x2 multifunctional buildings)	Y		Y (possibly off-site)	Y (satellite)

<sup>68</sup> South Cambridgeshire District Council (2019) Waterbeach New Town SPD, Available at: <https://www.scambs.gov.uk/media/13057/waterbeach-new-town-spd-low-res-feb-2019.pdf>, Accessed: 05/06/2020

<sup>69</sup> South Cambridgeshire District Council (2019) Bourn Airfield New Village SPD, Available at: <https://www.scambs.gov.uk/media/14163/bourn-airfield-spd-adopted-2-10-2019.pdf>, Accessed: 05/06/2020

Service/ facility Case Study	Shops / town/local centre	Early Years Provision	Primary school	Secondary school	Employment provision	Publicly accessible green space	Community meeting space	Public transport services	GP surgery or health centre	Recreation and leisure facilities	Library
Northstowe (10,000 homes) <sup>70</sup>	Y (town and local centres)	Y	Y (x7)	Y (x1)	Y	Y	Y	Y	Y	Y	Possibly
Cambourne (4,250 homes in Lower Great and Upper Cambourne)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
New settlements/ communities across the county											
Houlton, Rugby (6,200 homes) <sup>71</sup>	Y (district centre and 3 local centres)		Y (x3)	Y	Y	Y	Y	?	Y	Y	

<sup>70</sup> Gallagher and Homes & Communities Agency (2012) Northstowe Development Framework Document

<sup>71</sup> Planning application R11/0699 to Rugby Borough Council.

Service/ facility Case Study	Shops / town/local centre	Early Years Provision	Primary school	Secondary school	Employment provision	Publicly accessible green space	Community meeting space	Public transport services	GP surgery or health centre	Recreation and leisure facilities	Library
Former Alconbury Airfield and Grange Farm, Huntingdonshire (5,000 homes) <sup>72</sup>	Y (main centres and up to two secondary centres)	Y	Y (x3)	Y	Y	Y	Y	Y	Y	Y	
Cranbrook, East Devon (7,770 homes) <sup>73</sup>	Y	Y	Y (x3)	Y (all-through)	Y	Y	Y	Y	Y	Y	Possibly
East of Biggleswade, Central Bedfordshire (1,500 homes) <sup>74</sup>	Y	Y	Y	(contributions towards off-site facilities)		Y	Y	Y	(contributions towards off-site facilities)	Y	

<sup>72</sup> Huntingdonshire District Council (2019) Huntingdonshire's Local Plan to 2036, Available at: <https://www.huntingdonshire.gov.uk/media/3872/190516-final-adopted-local-plan-to-2036.pdf>, Accessed: 8/6/2020

<sup>73</sup> East Devon District Council (2017) The Cranbrook Plan: Preferred Approach, Available at: <https://eastdevon.gov.uk/media/2271420/d-170928-masterplan-document-title-update.pdf>, Accessed: 8/6/2020

<sup>74</sup> Central Bedfordshire (date not available) Local Plan – overview, One new village east of Biggleswade, Available at: [https://www.centralbedfordshire.gov.uk/info/45/planning\\_policy/468/local\\_plan\\_-\\_overview/4](https://www.centralbedfordshire.gov.uk/info/45/planning_policy/468/local_plan_-_overview/4), Accessed: 8/6/2020

## Appendix B – Conditions for Achieving Successful New Places



Table B.1: Conditions for achieving successful new places to 2065 (reproduced from Williams, 2014<sup>75</sup>)

Characteristics of successful urban forms in the UK	New peripheral developments	New settlements	Dispersed development
Successful urban forms are ones that:	Can this be achieved?	Can this be achieved?	Can this be achieved?
Environmental characteristics			
Make sustainable use of the UK's land resource (accommodating demographic change without loss of valued land)	Yes, if sited in appropriate locations: e.g. not on land of high ecologically/landscape value.	Yes, if sited in appropriate locations i.e. well connected enough, not on land of high ecological/landscape value	Not usually, although individual developments might not be problematic, in aggregate, continued <i>ad hoc</i> dispersal would develop valued open land.
Make sustainable use of the UK's environmental resources (including protecting and enhancing biodiversity)	Yes, if planned sensitively. But there may be some inevitable loss if developing on greenfield sites.	Yes, if delivered using sustainable planning and design principles, including best practices (e.g. in Sustainability Impact Assessment, responsible sourcing, and integrated infrastructure – such as waste to energy). But there may be some inevitable loss if	Partly, small scale changes may not be problematic, but in aggregate are inefficient and may damage biodiversity.

<sup>75</sup> Williams, Katie (2014), Urban form and infrastructure: a morphological review. Future of cities: working paper. Foresight, Government Office for Science. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/324161/14-808-urban-form-and-infrastructure-1.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/324161/14-808-urban-form-and-infrastructure-1.pdf)

Characteristics of successful urban forms in the UK	New peripheral developments	New settlements	Dispersed development
		developing on greenfield sites.	
Are physically adapted for the UK's future climate	Yes, if future climate is considered from the outset in design, planning and construction.	Yes, if adaptation is considered during design and construction.	Partly, if individual developments consider future climate from the outset in design, planning and construction. But harder to plan/manage collective/community scale solutions.
Do not contribute to future climate change (i.e. reduce carbon emissions, exceeding or matching international targets)	Yes, if they are zero/low carbon developments, and do not generate transport emissions. Travel emissions can be minimised by providing a mix of uses in the development and good connections to existing settlement.	Yes, if low/zero carbon design is applied from the outset, and if new physical and virtual connections to existing settlements/destinations are low carbon, and/or reduce travel demand.	Partly, if autonomous (micro) energy generation solutions are used. But likely to result in significant transport emissions (car travel).
Improve (or do not worsen) air quality	Yes, if development is designed as zero emission from the outset, and good connections are made to adjacent settlement. But are likely to inevitably generate some emissions from increased car use.	Yes, if development is designed as zero emission from the outset and good connections are made to existing destinations. But are likely to inevitably generate some emissions from increased car use.	Unlikely, due to few alternatives to car travel for dispersed development, so continued emissions likely (unless major change to electric vehicles).

Characteristics of successful urban forms in the UK	New peripheral developments	New settlements	Dispersed development
Facilitate efficient water management (systems and behaviours)	Yes, if new, efficient water infrastructure is provided (e.g. sustainable urban drainage systems) and connections are made to supply infrastructure in adjacent settlement (to maximise use of any 'spare' capacity). And if new development promotes water efficient behaviours (e.g. By using water meters, providing water butts etc.). But there may not be enough water for populations in some areas (given regional disparities and climate change).	Yes, if new, efficient water infrastructure is provided (e.g. sustainable urban drainage systems) and connections are made to supply infrastructure in adjacent settlement maximising use of any 'spare' capacity. And if new development promotes water efficient behaviours (e.g. by using water meters, providing water butts etc.). But there may not be enough water for populations in some areas (given regional disparities and climate change).	Partly, can facilitate localised water harvesting and recycling (at the level of a dwelling or group of dwellings). But is not efficient for mains water provision, and waste water processing

Facilitate efficient energy management (systems and behaviours)	Yes, if new efficient energy supply systems are provided (e.g. renewable) and/or the new development links to and makes use of spare capacity from adjacent supply sources. But new population may breach existing supply.	Yes, if new efficient energy supply systems are provided (e.g. renewable) at the outset.	Partly, can facilitate localised energy generation (at the level of a dwelling or group of dwellings). But is not efficient for provision from the grid/pipelines.
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Characteristics of successful urban forms in the UK	New peripheral developments	New settlements	Dispersed development
Facilitate efficient transport management (systems and behaviours)	Yes, if new efficient transport infrastructure is provided to adjacent settlement and wider destinations. And if peripheral development is large enough to provide mix of uses and facilitate walking/cycling.	Yes, if new efficient transport infrastructure is provided. And if the new settlement is large enough to provide mix of uses and facilitate walking/cycling.	No, dispersed development is difficult to service with public transport, and low carbon travel (walking and cycling) levels tend to be lower.
Facilitate efficient waste (solid and water) management (systems and behaviours)	Yes, if new efficient waste infrastructure is provided, and/or linked to any spare capacity in adjacent settlement	Yes, if waste management systems are well planned and infrastructure provided.	Partly, can facilitate localised waste management, e.g. there may be space for compositing. But, inefficient for general waste collection, recycling services etc.
Facilitate the efficient integration of different infrastructure systems	Partly. Where new infrastructure is required there may be the opportunity to introduce new integrated systems (e.g. energy to waste). But where infrastructure is connecting to existing systems, there may be lock-in.	Yes, if best practice in integrated systems (e.g. energy to waste, smart transport) are planned and provided.	Partly, if it facilitates small scale integrated infrastructure systems (e.g. within autonomous housing). But is inefficient and costly for mainstream systems (e.g. transport, energy, waste).
Social characteristics			
Adapt to future changes (social, economic and environmental) in a socially equitable way	Partly, if designed/developed to be flexible to future changes.	Partly, if designed/developed to be flexible to future changes.	Partly, provides some small scale flexibility. But not responsive to major social changes, e.g. does not provide enough affordable housing.

Characteristics of successful urban forms in the UK	New peripheral developments	New settlements	Dispersed development
Are desirable to the population	Yes, if high quality extensions, with a mix of house sizes and types, are provided at affordable costs. And if the adjacent settlement is desirable.	Yes, if the development is high quality, and provides a mix of house sizes and types at affordable costs.	Partly, very desirable, particularly to more affluent householders seeking larger homes/more space, for second home owners, and to rural residents, seeking to remain in their home towns/villages. Not desirable for those unable to afford it.
Provide a range of housing types and tenures to meet needs and be affordable	Yes, if designed to accommodate a variety of household types.	Yes, if designed to accommodate a variety of household types.	No, dispersed development has tended to provide housing at the higher end of the market, with affordability a problem.
Are accessible for all	Yes, if good connections to the adjacent settlement and to wider destinations are provided.	Yes, if good connections within the development and to wider destinations are provided.	No, accessibility is a key problem for dispersed developments (in terms of distance, range of nearby destinations, and car dependency).
Provide access to health/ education/ culture/ leisure services for all	Partly, if residents can access existing provision in adjacent settlement (and there is capacity). Or, if adequate new services are provided within the extension.	Partly, if the new settlement provides adequate services, or if they are provided in other settlements nearby.	No, accessibility to services is a key problem for dispersed developments (in terms of distance, provision of nearby services, and car dependency).

Are healthy	Yes, if planned and designed according to healthy urban planning principles. Can provide significant opportunities for good peripheral design where people can thrive. But, if they are not	Yes, if planned and designed according to healthy urban planning principles. Can provide significant opportunities for good design. But, if	Partly, if they support an active, rural life. But can become car-dominated, with inhabitants relying on inactive travel.
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Characteristics of successful urban forms in the UK	New peripheral developments	New settlements	Dispersed development
	well connected, can become car dominated dormitories characterised by inactive travel.	they are not well connected, can become car-dominated dormitories characterised by inactive travel.	
Economic Characteristics			
Do not cause land/property price shocks/instability	Partly, this depends on how much land is released and how this affects local/regional supply and demand.	Partly, this depends on how much land is released and how this affects local/regional supply and demand.	Partly, incremental process so does not usually have dramatic impact. But demand for this type of development by more affluent, and by those buying second homes has changed the rural housing market.
Enable efficiencies in infrastructure costs	Yes, if extensions are relatively high density then new infrastructure can connect to existing infrastructure in the adjacent city (where there is capacity), and be provided cost effectively. And, new infrastructure (such as combined heat and power systems) can be provided to serve the new population.	Yes, if well planned, and if new infrastructure systems are integrated. If densities and mix of use are well planned then low per capita costs.	No, it is costly to service dispersed developments. Per capita costs are high because of spatial distribution.



Enable efficiencies in public service (e.g. schools) costs	Yes, if extensions are relatively high density then the development can use services already provided in the adjacent	Yes, if populations are large enough then services can be provided at efficient per capita	No, public services are costly per capita in dispersed developments,
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Characteristics of successful urban forms in the UK	New peripheral developments	New settlements	Dispersed development
	development (i.e. where there is capacity), or new services can be provided (e.g. schools) cost effectively to the new community.	costs. However, there are different population thresholds for different services (e.g. primary schools, hospitals), so some costs may be borne by adjacent towns/cities.	because of spatial distribution (e.g. waste collection, social care).
Enable efficiencies in transport costs (for suppliers and residents)	Yes, if connections to adjacent settlement (transport interchanges and hubs) are optimised.	Partly, if developments are large enough, and well planned, then per capita costs can be low for supplying transport services, and residents will have options to walk/cycle. However, there will be infrastructure costs connecting to other hubs.	No, transport infrastructure is costly to provide to dispersed developments.
Support local economies and economic diversity	Yes, if the development is large/mixed enough and its population is economically active within the adjacent settlement, or in the new extension.	Yes, if the development is large/mixed enough to enable residents to be economically active within the settlement.	Partly, may support rural economies through diversification/modernisation.

Attract inward investment	Yes, if a high quality development, and if it provides	Yes, if a high quality development, and if provides buildings/	No, investment in dispersed locations tends to be small scale and piecemeal.
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Characteristics of successful urban forms in the UK	New peripheral developments	New settlements	Dispersed development
	buildings/ services/ connections desirable to investors	services/ connections desirable to investors.	
Facilitate innovation and creativity	Yes, if attracts creative/skilled population, and supports capacity in adjacent or nearby creative clusters.	Yes, if attracts creative/skilled population, and supports capacity in adjacent or nearby creative clusters.	Partly, there can be small scale innovation, but most innovation/ creativity is associated with clusters/ hubs of skilled people/businesses.
Facilitate efficient ICT provision	Yes, if links to provision in adjacent development, and is part of a connected city region.	Yes, if it is part of a connected city region.	No. dispersed developments are difficult and costly to service with ICT.

## Appendix 5: Establishing the Baseline

### Introduction

Before identifying new locations for jobs and homes in Greater Cambridge, it is important to establish the baseline amount and location of existing population, jobs and homes in the area.

### Amount and Location of Existing Population, Dwelling Stock and Jobs

Cambridgeshire County Council prepare population and dwelling stock estimates, that are published on Cambridgeshire Insight. Employment (jobs) figures are published on NOMIS and are taken from the Business Register and Employment Survey.

### Cambridge

Ward	2018 Population	2018 Dwelling Stock	Employment / Jobs	% of Population	% of Dwelling Stock	% Employment / Jobs
Abbey	10,300	4,420	4,000	7.5	8.1	3.7
Arbury	9,420	4,140	1,750	6.9	7.6	1.6
Castle	10,550	2,730	9,000	7.7	5.0	8.3
Cherry Hinton	9,140	3,850	4,500	6.7	7.1	4.1
Coleridge	10,010	4,220	4,000	7.3	7.7	3.7
East Chesterton	9,510	4,220	8,000	6.9	7.7	7.3
King's Hedges	9,470	4,060	1,500	6.9	7.5	1.4
Market	8,170	2,230	22,000	6.0	4.1	20.2
Newnham	8,030	1,870	8,000	5.9	3.4	7.3
Petersfield	8,720	3,710	6,000	6.4	6.8	5.5
Queen Edith's	9,570	3,900	21,000	7.0	7.2	19.3
Romsey	10,050	4,200	2,250	7.3	7.7	2.1
Trumpington	14,930	6,840	14,000	10.9	12.6	12.8

<b>Ward</b>	<b>2018 Population</b>	<b>2018 Dwelling Stock</b>	<b>Employment / Jobs</b>	<b>% of Population</b>	<b>% of Dwelling Stock</b>	<b>% Employment / Jobs</b>
West Chesterton	8,990	4,090	3,000	6.6	7.5	2.8
Total	136,850	54,460	109,000	100	100	100

## South Cambridgeshire

<b>Parish</b>	<b>2018 Population</b>	<b>2018 Dwelling Stock</b>	<b>% of Population</b>	<b>% of Dwelling Stock</b>	<b>Settlement Hierarchy</b>
Abington Pigotts	150	70	0.1	0.1	Infill
Arrington	410	170	0.3	0.3	Infill
Babraham	320	140	0.2	0.2	Infill
Balsham	1,580	680	1.0	1.0	Group
Bar Hill	3,870	1,750	2.5	2.6	Minor Rural Centre
Barrington	1,100	480	0.7	0.7	Group
Bartlow	110	50	0.1	0.1	Infill
Barton	830	380	0.5	0.6	Group
Bassingbourn-cum- Kneesworth	2,920	1,350	1.9	2.0	Minor Rural Centre
Bourn	1,050	440	0.7	0.7	Group
Boxworth	220	100	0.1	0.2	Infill
Caldecote	1,780	680	1.1	1.0	Group
Cambourne	11,290	4,230	7.2	6.4	Rural Centre
Carlton	190	90	0.1	0.1	Infill
Castle Camps	650	290	0.4	0.4	Group
Caxton	590	250	0.4	0.4	Infill
Childerley	30	10	0.0	0.0	Infill
Comberton	2,360	990	1.5	1.5	Minor Rural Centre
Conington	160	60	0.1	0.1	Infill
Coton	910	390	0.6	0.6	Group
Cottenham	6,160	2,630	3.9	4.0	Rural Centre
Croxton	160	70	0.1	0.1	Infill
Croydon	220	100	0.1	0.2	Infill
Dry Drayton	660	270	0.4	0.4	Group
Duxford	1,890	790	1.2	1.2	Group

<b>Parish</b>	<b>2018 Population</b>	<b>2018 Dwelling Stock</b>	<b>% of Population</b>	<b>% of Dwelling Stock</b>	<b>Settlement Hierarchy</b>
Elsworth	650	280	0.4	0.4	Group
Eltisley	410	170	0.3	0.3	Group
Fen Ditton	750	370	0.5	0.6	Group
Fen Drayton	910	370	0.6	0.6	Group
Fowlmere	1,280	520	0.8	0.8	Group
Foxton	1,280	530	0.8	0.8	Group
Fulbourn	4,910	2,010	3.1	3.0	Minor Rural Centre
Gamlingay	3,810	1,630	2.4	2.4	Minor Rural Centre
Girton	4,710	1,870	3.0	2.8	Minor Rural Centre
Grantchester	510	270	0.3	0.4	Infill
Graveley	230	90	0.1	0.1	Infill
Great Abington	880	370	0.6	0.6	Group
Great and Little Chishill	630	280	0.4	0.4	Infill
Great Eversden	250	100	0.2	0.2	Infill
Great Shelford	4,460	2,070	2.8	3.1	Rural Centre
Great Wilbraham	680	290	0.4	0.4	Group
Guilden Morden	960	410	0.6	0.6	Group
Hardwick	2,550	1,040	1.6	1.6	Group
Harlton	310	130	0.2	0.2	Infill
Harston	1,820	780	1.2	1.2	Group
Haslingfield	1,620	710	1.0	1.1	Group
Hatley	190	80	0.1	0.1	Infill
Hauxton	970	440	0.6	0.7	Group
Heydon	240	100	0.2	0.2	Infill
Hildersham	200	100	0.1	0.2	Infill
Hinxton	330	150	0.2	0.2	Infill
Histon	4,760	1,990	3.0	3.0	Rural Centre
Horningsea	330	160	0.2	0.2	Infill
Horseheath	470	210	0.3	0.3	Infill
Ickleton	720	320	0.5	0.5	Infill

<b>Parish</b>	<b>2018 Population</b>	<b>2018 Dwelling Stock</b>	<b>% of Population</b>	<b>% of Dwelling Stock</b>	<b>Settlement Hierarchy</b>
Impington	4,360	1,810	2.8	2.7	Rural Centre
Kingston	240	110	0.2	0.2	Infill
Knapwell	90	50	0.1	0.1	Infill
Landbeach	850	390	0.5	0.6	Infill
Linton	4,650	1,920	3.0	2.9	Minor Rural Centre
Litlington	840	360	0.5	0.5	Infill
Little Abington	520	250	0.3	0.4	Group
Little Eversden	580	240	0.4	0.4	Infill
Little Gransden	310	140	0.2	0.2	Infill
Little Shelford	850	340	0.5	0.5	Infill
Little Wilbraham	440	200	0.3	0.3	Infill
Lolworth	150	60	0.1	0.1	Infill
Longstanton	3,810	1,580	2.4	2.4	Group
Longstowe	210	90	0.1	0.1	Infill
Madingley	200	100	0.1	0.2	Infill
Melbourn	4,750	2,080	3.0	3.1	Minor Rural Centre
Meldreth	2,020	820	1.3	1.2	Group
Milton	4,880	2,120	3.1	3.2	Minor Rural Centre
Newton	370	170	0.2	0.3	Infill
Oakington & Westwick	1,570	650	1.0	1.0	Group
Orchard Park	2,650	1,000	1.7	1.5	n/a
Orwell	1,070	470	0.7	0.7	Group
Over	2,880	1,160	1.8	1.7	Group
Pampisford	360	160	0.2	0.2	Infill
Papworth Everard	3,840	1,560	2.4	2.3	Minor Rural Centre
Papworth St Agnes	60	30	0.0	0.0	Infill
Rampton	470	200	0.3	0.3	Infill
Sawston	7,300	3,090	4.6	4.6	Rural Centre
Shepreth	780	330	0.5	0.5	Infill



<b>Parish</b>	<b>2018 Population</b>	<b>2018 Dwelling Stock</b>	<b>% of Population</b>	<b>% of Dwelling Stock</b>	<b>Settlement Hierarchy</b>
Shingay-cum-Wendy	120	50	0.1	0.1	Infill
Shudy Camps	330	130	0.2	0.2	Infill
South Trumington	450	220	0.3	0.3	n/a
Stapleford	1,970	840	1.3	1.3	Rural Centre
Steeple Morden	1,170	500	0.7	0.8	Group
Stow-Cum-Quy	550	250	0.3	0.4	Infill
Swavesey	2,570	1,060	1.6	1.6	Minor Rural Centre
Tadlow	190	70	0.1	0.1	Infill
Teversham	2,810	1,290	1.8	1.9	Group
Thriplow	1,180	510	0.7	0.8	Group
Toft	550	240	0.3	0.4	Infill
Waterbeach	4,840	2,260	3.1	3.4	Minor Rural Centre
West Wickham	430	180	0.3	0.3	Infill
West Wratting	480	200	0.3	0.3	Infill
Weston Colville	460	190	0.3	0.3	Infill
Whaddon	530	230	0.3	0.3	Infill
Whittlesford	1,890	690	1.2	1.0	Group
Willingham	4,170	1,810	2.6	2.7	Minor Rural Centre
Wimpole	320	120	0.2	0.2	Infill
Total	157,470	66,540	100	100	

<b>Ward</b>	<b>Employment / Jobs</b>	<b>% Employment / Jobs</b>
Balsham	800	0.9
Bar Hill	3,500	4.1
Barton	1,000	1.2
Bassingbourn	1,500	1.8
Bourn	4,500	5.3
Caldecote	1,000	1.2
Comberton	400	0.5
Cottenham	3,000	3.5
Duxford	1,750	2.1
Fowlmere and Foxton	900	1.1

Fulbourn	3,500	4.1
Gamlingay	1,250	1.5
Girton	1,000	1.2
Hardwick	400	0.5
Harston and Hauxton	1,250	1.5
Haslingfield and The Eversdens	450	0.5
Histon and Impington	5,000	5.9
Linton	1,500	1.8
Longstanton	1,500	1.8
Melbourn	3,500	4.1
Meldreth	1,250	1.5
Milton	11,000	12.9
Orwell and Barrington	700	0.8
Papworth and Elsworth	4,000	4.7
Sawston	2,500	2.9
Swavesey	2,000	2.3
Teversham	2,500	2.9
The Abingtons	10,000	11.7
The Mordens	500	0.6
The Shelfords and Stapleford	3,000	3.5
The Wilbrahams	1,750	2.1
Waterbeach	5,000	5.9
Whittlesford	1,750	2.1
Willingham and Over	1,500	1.8
Total	85,150	100

## Amount and Location of Committed Housing

### Amount

The amount of housing committed in Greater Cambridge is set out in the Greater Cambridge housing trajectory (April 2020). The housing trajectory records annual housing completions anticipated from adopted allocations, sites with planning permission and the windfall allowance from 1 April 2019 to 31 March 2033. The housing trajectory also highlights the number of remaining dwellings that will be

delivered post 2033 from the adopted allocations and sites with planning permission, where the site is not wholly completed at 31 March 2033.

Anticipated housing completions are only included in the housing trajectory for those sites that have been assessed as either deliverable and / or developable based on the definitions in the glossary of the National Planning Policy Framework (NPPF, February 2019). The housing trajectory also applies lapse rates for non-delivery to some types of site, and maximum annual delivery rates to other types of site.

Using anticipated housing completions from the housing trajectory to estimate the amount of housing committed in Greater Cambridge therefore provides a more conservative estimate of housing commitments than simply adding up the number of dwellings committed on extant allocations and planning permissions.

The Greater Cambridge housing trajectory (April 2020) records that 25,325 dwellings (net) are anticipated to be completed in Greater Cambridge between 1 April 2019 and 31 March 2033 on adopted allocations and sites with planning permission, with 1,528 dwellings anticipated to be completed in 2019-2020.

Anticipated completions for 1 April 2033 to 31 March 2041 from adopted allocations and sites with planning permission can be predicted from existing information. It can be assumed that the delivery rates of each site not wholly completed by 31 March 2033 will continue as anticipated for pre-2033, until the site is wholly delivered. This results in the following anticipated annual completions:

	<b>2033- 2034</b>	<b>2034- 2035</b>	<b>2035- 2036</b>	<b>2036- 2037</b>	<b>2037- 2038</b>	<b>2038- 2039</b>	<b>2039- 2040</b>	<b>2040- 2041</b>	<b>TOTAL: 2033- 2041</b>
Cambridge allocations, post 2033	216	0	0	0	0	0	0	0	<b>216</b>
Northstowe	250	250	250	250	250	250	250	250	<b>2,000</b>
Waterbeach New Town	250	250	250	250	250	250	250	250	<b>2,000</b>

Bourn Airfield New Village	150	150	150	150	150	150	150	150	<b>1,200</b>
Cambourne West	150	150	150	150	150	80	0	0	<b>830</b>
<b>Total</b>	<b>1,016</b>	<b>800</b>	<b>800</b>	<b>800</b>	<b>800</b>	<b>730</b>	<b>650</b>	<b>650</b>	<b>6,246</b>

Using these assumptions, 6,246 dwellings (net) are therefore anticipated to be completed in Greater Cambridge between 1 April 2033 and 31 March 2041 on adopted allocations and sites with planning permission.

The new plan period will start on 1 April 2020, and therefore the housing completions for 2019-2020 need to be deducted from the commitments. The Councils have assumed that housing completions for 2019-2020 will be 1,528 dwellings as anticipated in the Greater Cambridge housing trajectory (April 2020).

Therefore for the plan period of 2020-2041, it is anticipated that 30,043 dwellings (net) will be delivered in Greater Cambridge from housing commitments consisting of adopted allocations and sites with planning permission.

However, within this, there are twelve adopted allocations in Cambridge<sup>13</sup> that are anticipated to deliver 736 dwellings as they have been assessed as being developable, but which have not yet shown any real progress towards delivery. A review of all the adopted allocations that have not made progress towards delivery will be undertaken as part of the preparation of the Greater Cambridge Local Plan.

Also, this does not take account of any dwellings from the outline planning application (with a planning committee resolution to grant planning permission) for up to 1,500

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<sup>13</sup> The Paddocks Trading Estate (site R7, 123 dwellings), 379-381 Milton Road (site M1, 95 dwellings), BT telephone exchange and car park, Long Road (site R14, 76 dwellings), Willowcroft (site R2, 78 dwellings), Travis Perkins (site R9, 43 dwellings), Henry Giles House (site R4, 48 dwellings), Camfields Resource Centre and Oil Depot (site R5, 35 dwellings), 149 Cherry Hinton Road and Telephone Exchange (site R8, 33 dwellings), Horizon Resource Centre (site R11, 40 dwellings), Cambridge Professional Development Centre (site R16, 67 dwellings), 82-88 Hills Road and 57-63 Bateman Street (site M5, 20 dwellings), and 315-349 Mill Road and Brookfields (site R21, 78 dwellings)

dwellings at the Wellcome Genome Campus, as the Councils did not have sufficient evidence to assess this as deliverable or developable for the housing trajectory.

For the purposes of testing options through the plan-making process it is considered appropriate to rely upon (and therefore include in the baseline for all options) commitments that have reasonable certainty of delivery. In this context, there would seem to be uncertainty of delivery within the plan period for the 736 allocated dwellings that have made little progress and there would seem to be reasonable certainty of delivery within the plan period for the 1,500 dwellings at the Wellcome Campus with a resolution to grant planning permission.

As a result, and for the purposes of considering the strategic spatial options for testing, the Councils have excluded the anticipated delivery from the adopted Cambridge allocations where no progress has been made and included the anticipated delivery from the Wellcome Genome Campus development in the commitments. This results in the following anticipated housing delivery:

<b>Anticipated Completions 2020-2033</b>	<b>Anticipated Completions 2033-2041</b>	<b>Cambridge allocations, with no progress towards delivery</b>	<b>Wellcome Genome Campus</b>	<b>TOTAL</b>
23,797	6,246	-736	1,500	30,807

## **Distribution**

The distribution of housing committed in Greater Cambridge is as set out in the table below, based on the Greater Cambridge Housing Trajectory (April 2020) and assumed delivery from sites not wholly completed by 31 March 2033 but committed and anticipated to continue delivering until 2041 (as outlined above).

The housing trajectory includes a discount for non-delivery on certain types of sites of 9 dwellings or less. Therefore where this discount has been applied to the total of these sites in the housing trajectory, for the purposes of this paper, the discount has

been applied to the total of each type of site for each village / parish, and the numbers rounded up or down where necessary to ensure that the overall total matches the housing trajectory.

From the housing trajectory, it is anticipated that 1,528 dwellings will be completed in 2019-2020. The anticipated completions for each of the specified sites in the housing trajectory are based on a survey in February 2020, and therefore have been taken to be the total completions anticipated for 2019-2020. For the small sites anticipated to be completed in 2019-2020, for the purposes of this paper, the same proportion of anticipated completions compared to overall completions for that source of supply has been applied to the total from each source for each parish / village, and the numbers rounded up or down where necessary to ensure that the overall total matches the housing trajectory.

	<b>Commitments – 10 or more dwellings</b>	<b>Commitments – 9 or less dwellings</b>	<b>Of which, assumed completions 2019-2020</b>	<b>Additions and Subtractions of Sites compared to Housing Trajectory (April 2020)</b>	<b>Therefore, total for 2020-2041</b>
Cambridge Urban Area	2,413	485	204	-736 <sup>14</sup>	<b>1,958</b>
North West Cambridge (University Site)	2,163		22		<b>2,141</b>
NIAB (Darwin Green)	2,578		100		<b>2,478</b>
Cambridge East - North of Newmarket Road	1,300		0		<b>1,300</b>

<sup>14</sup> This relates to the twelve adopted Cambridge allocations which have not yet shown any real progress towards delivery, as outlined above.

	<b>Commitments – 10 or more dwellings</b>	<b>Commitments – 9 or less dwellings</b>	<b>Of which, assumed completions 2019-2020</b>	<b>Additions and Subtractions of Sites compared to Housing Trajectory (April 2020)</b>	<b>Therefore, total for 2020-2041</b>
Cambridge East - North of Cherry Hinton	1,200		0		<b>1,200</b>
Cambridge East - Land at Coldhams Lane	22		22		<b>0</b>
North of Worts Causeway	200		0		<b>200</b>
South of Worts Causeway	230		0		<b>230</b>
Bell School	32		32		<b>0</b>
Clay Farm	244		93		<b>151</b>
Trumpington Meadows	374		72		<b>302</b>
Northstowe	5,750		246		<b>5,504</b>
Waterbeach New Town	4,900		0		<b>4,900</b>
Bourn Airfield New Village	2,630		0		<b>2,630</b>
Cambourne West	2,590		0		<b>2,590</b>
Arrington		6	2		<b>4</b>
Babraham		3	0		<b>3</b>
Balsham	63	4	30		<b>37</b>
Bar Hill	40		0		<b>40</b>
Barrington	220	14	3		<b>231</b>
Bartlow		2	0		<b>2</b>
Barton		5	2		<b>3</b>

	<b>Commitments – 10 or more dwellings</b>	<b>Commitments – 9 or less dwellings</b>	<b>Of which, assumed completions 2019-2020</b>	<b>Additions and Subtractions of Sites compared to Housing Trajectory (April 2020)</b>	<b>Therefore, total for 2020-2041</b>
Bassingbourn- cum- Kneesworth	69	25	26		<b>68</b>
Bourn		5	0		<b>5</b>
Caldecote	176	33	60		<b>149</b>
Cambourne	93	3	34		<b>62</b>
Carlton		3	0		<b>3</b>
Castle Camps	10	7	2		<b>15</b>
Caxton		14	2		<b>12</b>
Comberton <sup>15</sup>	90	3	0		<b>93</b>
Conington		5	2		<b>3</b>
Coton		3	0		<b>3</b>
Cottenham	508	29	56		<b>481</b>
Croydon		6	3		<b>3</b>
Dry Drayton	10	8	1		<b>17</b>
Duxford		4	2		<b>2</b>
Elsworth		4	0		<b>4</b>
Eltisley		2	0		<b>2</b>
Fen Ditton		1	0		<b>1</b>
Fen Drayton		29	6		<b>23</b>
Fowlmere		11	3		<b>8</b>
Foxton	22	8	2		<b>28</b>
Fulbourn	337	9	16		<b>330</b>
Gamlingay	88	35	8		<b>115</b>
Girton	8	13	1		<b>20</b>
Graveley		1	0		<b>1</b>
Great Abington	52	23	42		<b>33</b>

<sup>15</sup> This includes the allocation at Bennell Farm that is in the parish of Toft



	<b>Commitments – 10 or more dwellings</b>	<b>Commitments – 9 or less dwellings</b>	<b>Of which, assumed completions 2019-2020</b>	<b>Additions and Subtractions of Sites compared to Housing Trajectory (April 2020)</b>	<b>Therefore, total for 2020-2041</b>
Great and Little Chishill		5	0		<b>5</b>
Great Eversden		3	1		<b>2</b>
Great Shelford & Stapleford		36	10		<b>26</b>
Great Wilbraham		2	0		<b>2</b>
Guilden Morden	0	9	2		<b>7</b>
Hardwick	242	5	53		<b>194</b>
Harlton		9	3		<b>6</b>
Harston		13	8		<b>5</b>
Haslingfield		5	0		<b>5</b>
Hatley		1	0		<b>1</b>
Hauxton	50	3	52		<b>1</b>
Hinxton	0		0	+1,500 <sup>16</sup>	<b>1,500</b>
Histon & Impington	73	18	5		<b>86</b>
Horningsea		2	0		<b>2</b>
Horseheath		3	0		<b>3</b>
Ickleton		1	-1		<b>2</b>
Kingston		5	1		<b>4</b>
Knapwell		1	0		<b>1</b>
Landbeach		4	1		<b>3</b>
Linton	97	19	4		<b>112</b>
Litlington	21	6	1		<b>26</b>
Little Abington		0	0		<b>0</b>

<sup>16</sup> This relates to the Wellcome Genome Campus development.

	<b>Commitments – 10 or more dwellings</b>	<b>Commitments – 9 or less dwellings</b>	<b>Of which, assumed completions 2019-2020</b>	<b>Additions and Subtractions of Sites compared to Housing Trajectory (April 2020)</b>	<b>Therefore, total for 2020-2041</b>
Little Eversden		3	0		<b>3</b>
Little Gransden		7	2		<b>5</b>
Little Shelford		1	0		<b>1</b>
Little Wilbraham		4	2		<b>2</b>
Lolworth		2	0		<b>2</b>
Longstanton	0	15	4		<b>11</b>
Longstowe		4	0		<b>4</b>
Melbourn	256	9	79		<b>186</b>
Meldreth	40	34	4		<b>70</b>
Milton		11	1		<b>10</b>
Newton		2	2		<b>0</b>
Oakington and Westwick		9	2		<b>7</b>
Orwell	49	10	18		<b>41</b>
Over	99	18	7		<b>110</b>
Papworth Everard	61	1	0		<b>62</b>
Rampton		4	0		<b>4</b>
Sawston <sup>17</sup>	471	17	50		<b>438</b>
Shepreth	25	9	2		<b>32</b>
Shingay-cum- Wendy	10	0	0		<b>10</b>
Shudy Camps		5	2		<b>3</b>
Steeple Morden		6	0		<b>6</b>
Stow-cum-Quy		3	0		<b>3</b>

<sup>17</sup> This includes the two allocations north and south of Babraham Road that are in the parish of Babraham

	<b>Commitments – 10 or more dwellings</b>	<b>Commitments – 9 or less dwellings</b>	<b>Of which, assumed completions 2019-2020</b>	<b>Additions and Subtractions of Sites compared to Housing Trajectory (April 2020)</b>	<b>Therefore, total for 2020-2041</b>
Swavesey	201	19	18		<b>202</b>
Tadlow		2	0		<b>2</b>
Teversham		4	-1		<b>5</b>
Thriplow		3	0		<b>3</b>
Toft		3	0		<b>3</b>
Waterbeach	38	26	27		<b>37</b>
West Wickham		7	2		<b>5</b>
West Wratting		3	0		<b>3</b>
Weston Colville		4	1		<b>3</b>
Whaddon		1	0		<b>1</b>
Whittlesford	0	10	6		<b>4</b>
Willingham	180	33	65		<b>148</b>
Wimpole		4	1		<b>3</b>
<b>TOTAL</b>	<b>30,325</b>	<b>1,246</b>	<b>1,528</b>	<b>764</b>	<b>30,807</b>

	<b>Percentage of Commitments</b>	<b>Percentage of Commitments (with additions and subtractions)</b>
Cambridge Urban Area	9.0%	6.4%
Edge of Cambridge	26.6%	26.0%
New Settlements and Cambourne West	52.0%	55.6% (including Wellcome Genome Campus development)
Rural Area	12.4%	12.1%

## Appendix 6: Delivery assumptions for housing

### Introduction

In preparing the [Greater Cambridge Housing Trajectory and Five Year Housing Land Supply – Main Document and Annex \(November 2019\)](#), the Councils developed typical assumptions for lead-in times and build-out rates of different sites based on their location and size.

A Housing Delivery Study is being commissioned to independently review and where necessary provide updates / revisions to the Councils' typical assumptions for lead-in times and build out rates.

The following sections provide detailed information on the lead-in times, build out rates and delivery assumptions used for this paper.

### Lead-In Times

The typical assumptions for lead-in times as set out in the Greater Cambridge Housing Trajectory and Five Year Housing Land Supply – Main Document and Annex (November 2019) were developed based on the planning application process (outline and reserved matters, full or prior approval) chosen for the site and the type of site (strategic site or non-strategic site). These typical assumptions do not work for this paper, as at this stage the planning application process that will be chosen is not known.

### Strategic Sites – New Settlements

For the purposes of this paper, the Councils have considered the actual and proposed lead-in times of the existing committed five new settlements.

	<b>Northstowe</b>	<b>Waterbeach New Town</b>	<b>Bourn Airfield New Village</b>	<b>Cambourne</b>	<b>Cambourne West</b>
Dwellings	up to 10,000	8,000-9,000	approximately 3,500	3,000 plus 10%	up to 2,350
Allocated	Jul-07	Sep-18	Sep-18	Feb-04	Sep-18

Outline planning application submitted	Feb-12	Feb-17	Sep-18	Jan-92	Dec-14
Outline planning application resolved to grant	Oct-12	May-19			Aug-17
Outline planning application granted (decision notice issued)	Apr-14	Sep-19		Apr-94	Dec-17
First RM planning application for housing submitted	Jun-16	Dec-20		Mar-98	Dec-19
First RM planning application for housing granted	Sep-16			Jul-98	Jun-20
First dwelling(s) under construction	Mar-17	Apr-21	Jun-21		Sep-20
First dwelling(s) completed	Mar-17	Jun-21	Jan-22	Jun-99	Mar-21
Allocated to first completion (in years)	9.7	2.8	3.3	n/a	2.5
Outline planning application submitted to first completion (in years)	5.1	4.3	3.3	7.4	6.3

When considering all five new settlements collectively, and also the average of from allocation to first completion and outline planning application to first completion (as for some the planning application was submitted ahead of adoption of the allocation), this analysis concludes that the typical lead-in time for a new settlement from allocation to first completions on site is 5 years (rounded to the nearest half year).

## Strategic Sites – Edge of Cambridge sites

For the purposes of this paper, the Councils have considered the actual and proposed lead-in times of the existing committed eight strategic sites on the edge of Cambridge.

	<b>North West Cambridge</b>	<b>NIAB / Darwin Green</b>	<b>Cambridge East - North of Newmarket Road</b>	<b>Cambridge East - North of Cherry Hinton</b>	<b>Bell School</b>	<b>Clay Farm</b>	<b>Glebe Farm</b>	<b>Trumpington Meadows</b>
Dwellings	up to 3,000	1,593	up to 1,300	max of 1,200	max 347	up to 2,300	286	approximately 1,200
Allocated	Oct-09	Jul-06	Feb-08	Sep-18	Jul-06	Jul-06	Jul-06	Jul-06
Outline planning application submitted	Sep-11	Dec-06	Dec-13	Mar-18	Aug-06	Jun- 07		Dec-07
Outline planning application resolved to grant	Aug-12	Jul-10	Apr-16	May-20	Jun-08	May- 08		Feb-08
Outline planning application granted (decision notice issued)	Feb-13	Feb-15	Nov-16		Dec-10	Aug- 10		Oct-09
First RM planning application for housing submitted	Dec-13	Sep-15	Mar-19	Oct-21	Dec-13	Feb- 11	Dec- 09	Jan-11
First RM planning application for housing granted	Feb-14	May-16	Sep-19	Mar-22	Apr-14	Jul-11	Aug- 10	Jul-11
First dwelling(s) under construction	Mar-16	Mar-19	Mar-20		Mar-15	Mar- 12		Mar-12
First dwelling(s) completed	Mar-18	Mar-19	Sep-20	Mar-23	Mar-16	Mar- 13	Mar- 13	Mar-13
Allocated to first completion (in years)	8.4	12.7	12.6	4.5	9.7	6.7	6.7	6.7

Outline planning application submitted to first completion (in years)	6.5	12.3	6.8	5.0	9.6	5.8	3.3	5.3
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When considering all eight edge of Cambridge sites collectively, and also the average of from allocation to first completion and outline planning application to first completion (as for some the planning application was submitted ahead of adoption of the allocation), this analysis concludes that the typical lead-in time for a strategic edge of Cambridge site from allocation to first completions on site is 7.5 years (rounded to the nearest half year).

### Non-Strategic Sites

For the purposes of this paper, the Councils have used the data on lead-in times from the 43 non-strategic sites across Greater Cambridge (as listed in the Greater Cambridge Housing Trajectory – Main Document (November 2019)), to develop an overall lead-in time for any non-strategic site from validation of planning application to first completions on site. The data was not sufficiently different between Cambridge and South Cambridgeshire to need two separate typical assumptions.

This analysis concludes that the typical lead-in time for a non-strategic site from validation of its planning application to first completions on site is 3 years.

Analysis of the lead-in time from allocation of a site to a planning application being submitted does not allow a typical assumption for this lead-in time to be developed. Some Cambridge allocations have been adopted in more than one plan before coming forwards, and on a number of South Cambridgeshire allocations the planning application was submitted ahead of the Local Plan being adopted.

Within a 21 year plan period, with hopefully at least 15 years remaining from adoption of the Local Plan, it is reasonable to assume that any non-strategic sites will be wholly delivered within the plan period.

## Build-out Rates

### Strategic Sites

For the strategic sites, the Councils published evidence relating to average annual housing completions for new settlements during the preparation and examination of the recently adopted Local Plans. This evidence was used to inform the Greater Cambridge housing trajectory included in the adopted Local Plans. The Inspectors concluded in their reports that the “Council’s assessment of supply is reasonable and evidence-based” and in relation to Waterbeach New Village and Bourn Airfield New Village, the Inspectors concluded in their reports that “the Council is correct to assume a modest delivery rate for the purposes of the housing trajectory”.

For the housing trajectory in the adopted Local Plan, the Councils used an annual completion rate for new settlements of up to 250 dwellings for Waterbeach New Town and Northstowe, and a slightly higher combined annual completion rate of up to 300 dwellings for Bourn Airfield New Village and Cambourne West, given their scale and separation but also proximity to each other.

The Councils have since applied these typical assumptions on build out rates to the strategic sites on the edge of Cambridge, with each of the strategic sites being anticipated to deliver up to 250 dwellings a year, unless the developer / housebuilder has indicated a lower build out rate.

However, higher annual completions have been recorded on the edge of Cambridge, in particular at Cambridge Southern Fringe across the developments of Trumpington Meadows, Glebe Farm, Clay Farm and Bell School. These developments include a mixture of flats and houses.

	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- 2016	2016- 2017	2017- 2018	2018- 2019
Trumpington Meadows	2	141	141	67	103	89	123	148
Clay Farm	0	16	271	393	149	467	539	109



Bell School	0	0	0	0	21	122	45	50
Glebe Farm	0	55	112	86	34	30	0	0
TOTAL	2	212	524	546	307	708	707	307

During the last eight years, Cambridge Southern Fringe has delivered over 250 dwellings in six of those years, and over 500 dwellings in four of those years. To deliver a high housing requirement for Greater Cambridge and a sustainable development strategy by 2041, higher build out rates than previously used as typical assumptions will be needed. The Councils have therefore assumed for the purposes of this paper that build out rates on strategic sites and new settlements can be doubled from the historic assumptions of up to 250 dwellings a year to up to 500 dwellings a year. The Housing Delivery Study will confirm whether this is a reasonable assumption and whether these levels of completions can be achieved on all strategic sites.

### Non-strategic Sites

Typical assumptions for build out rates for non-strategic sites were developed as set out in the Greater Cambridge Housing Trajectory and Five Year Housing Land Supply – Main Document and Annex (November 2019) and are as follows:

	Size	Peak dwellings per year	Average dwellings per year	Number of years of completions
Cambridge	10-49	40	12	1
	50-99	99	90	1
	100-199	150	82	2
South Cambridgeshire	10-49	39	15	1
	50-99	80	38	2
	100-199	90	60	3

## Delivery Assumptions

### New Sites / Broad Locations

The Greater Cambridge Local Development Scheme (July 2020) sets out two alternative timetables for the submission of the Greater Cambridge Local Plan, depending on whether it is submitted alongside / including the North East Cambridge Area Action Plan, or ahead of the Area Action Plan. The latest anticipated submission date is spring 2024. The timetable for the examination of the Greater Cambridge Local Plan and the receipt of the Inspector's Report is subject to the Inspector's own timetable, and therefore a date of adoption for the Local Plan is not provided. For the purposes of working out anticipated delivery within the plan period for this paper, it has been assumed that the Greater Cambridge Local Plan will be adopted in autumn 2025.

Using the lead-in times and build out rates set out above, and assuming the Greater Cambridge Local Plan is adopted in autumn 2025, results in the following delivery assumptions for any new settlements and edge of Cambridge sites:

	<b>Lead-In Time</b>	<b>First Completions</b>	<b>Annual Completion Rate</b>	<b>Total Completed by 2041</b>
Cambridge Airport	7.5 years	Spring 2033 (2033-2034)	Up to 250 dwellings, historic delivery rates	1,935 dwellings (rounded down to 1,900 dwellings)
Cambridge Airport	7.5 years	Spring 2033 (2033-2034)	Up to 500 dwellings, higher delivery rates	3,870 dwellings (rounded down to 3,800 dwellings)
Edge of Cambridge site / broad location of up to 3,900 dwellings	7.5 years	Spring 2033 (2033-2034)	Up to 250 dwellings, historic delivery rates	1,935 dwellings (rounded down to 1,900 dwellings)
Edge of Cambridge site / broad location of	7.5 years	Spring 2033 (2033-2034)	Up to 500 dwellings, higher delivery rates	3,870 dwellings (round down to 3,800 dwellings)

up to 3,900 dwellings				
New Settlement	5 years	Autumn 2030 (2030-2031)	Up to 250 dwellings, historic delivery rates	2,560 dwellings (rounded down to 2,500 dwellings)
New Settlement	5 years	Autumn 2030 (2030-2031)	Up to 500 dwellings, higher delivery rates	5,120 dwellings (rounded down to 5,100 dwellings)

North East Cambridge as an area does not fit within the categories for which the Councils have developed lead-in times and build-out rates. There are no other similar sites completed or committed within Cambridge Urban Area from which to develop assumptions, and therefore as a strategic site within the urban area but at its edge, the Councils consider it reasonable to apply the lead-in times and build out rates for strategic sites on the edge of Cambridge. This results in the first delivery assumption set out in the table below.

An Area Action Plan is being prepared for the North East Cambridge area, and the draft plan (July 2020) includes a housing trajectory for the area. This housing trajectory in the draft Area Action Plan assumes much higher annual build out rates than historically assumed for strategic sites and assumes delivery soon after adoption of the Area Action Plan. The draft Area Action Plan explains that it takes account of ongoing engagement with landowners / developers, current expectations of the housing and employment market, efficient building processes such as modular housing, the housing types to be delivered, and housing tenures which support quick delivery such as build to rent. The draft Area Action Plan also highlights that the Councils are not advocating the housing trajectory as set out, but are instead seeking comments on it. Using this housing trajectory and making some assumptions for 2040-2041 results in the second delivery assumption set out in the table below.

	<b>Lead-In Time</b>	<b>First Completions</b>	<b>Annual Completion Rate</b>	<b>Total Completed by 2041</b>
North East Cambridge	7.5 years	Spring 2033 (2033-2034)	Up to 250 dwellings, historic delivery rates	1,935 dwellings (rounded down to 1,900 dwellings)

North East Cambridge	as per housing trajectory in Draft Area Action Plan (July 2020)	assumed to be 2025-2026	as per housing trajectory	8,070 dwellings <sup>18</sup> (rounded down to 8,000 dwellings)
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## Existing New Settlements

As the Councils consider that it is reasonable to assume for the purposes of this paper that any new strategic sites and new settlements will be able to deliver up to 500 dwellings a year, the Councils also consider that these build out rates will be able to be achieved on existing committed new settlements. Assuming higher annual build out rates of double existing anticipated completions<sup>19</sup> on each of the new settlements, after the end of the current (2020-2025) five year period, results in the following additional capacity:

	<b>Already included in Commitments</b>	<b>ADDITIONAL capacity from Existing Commitments, if higher build out rates</b>
Northstowe	5,750 [phase 1 = 1,069 dwellings, phases 2 & 3 = 4,681 dwellings]	3,819 [phases 2 & 3 only]
Waterbeach New Town	4,900	4,000
Bourn Airfield New Village	2,630	870
Cambourne / Cambourne West	2,590	0
<b>Total</b>	<b>15,870</b>	<b>8,689 (rounded down to 8,600)</b>

<sup>18</sup> The housing trajectory in the draft Area Action Plan only considers a plan period to 2040 and indicates that 8,000 dwellings could be delivered by then. For the purposes of this paper, it has been assumed that the 2040+ anticipated dwellings are delivered evenly over the five years from 2040 to 2045 and therefore that a further 70 dwellings could be delivered in 2040-2041, resulting in 8,070 dwellings anticipated by 2041.

<sup>19</sup> Existing anticipated completions of up to 250 dwellings a year each for Northstowe (phases 2 & 3) and Waterbeach New Town, therefore double to up to 500 dwellings a year each. Existing anticipated completions of up to 150 dwellings a year each for Bourn Airfield New Village and Cambourne West, therefore double to up to 300 dwellings a year each.

## Existing Strategic Sites on Edge of Cambridge

The Councils do not consider that it is reasonable to assume that build out rates for existing strategic sites on the edge of Cambridge can be increased. This is because there is already more than one strategic site being delivered with anticipated completions of up to 250 dwellings a year in each edge of Cambridge broad location<sup>20</sup>, and therefore each broad location is already anticipated to deliver high annual completions.

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<sup>20</sup> For example, in north west Cambridge, there are two sites - the university site and the NIAB / Darwin Green development, and in east Cambridge, there are two sites - land north of Newmarket Road and land north of Cherry Hinton.

## Appendix 7: Identifying the number and location of jobs for modelling purposes

### Introduction

The Greater Cambridge Employment Land Review & Economic Evidence Base Study (GL Hearn, with SQW, Cambridge Econometrics, and Icen Projects, November 2020) (the ELR) explores in detailed the committed employment land supply, and quantitative and qualitative issues regarding land for different types of employment.

For the plan period of 2020-2041, it is anticipated that 459,319 sqm (net) of business floorspace will be delivered in Greater Cambridge from business floorspace commitments consisting of adopted allocations and sites with planning permission. Adding the anticipated increase in business floorspace of 150,000 sqm from the outline planning application (with a planning committee resolution to grant planning permission) at the Wellcome Genome Campus results a baseline of 609,319 sqm (net) business floorspace for 2020-2041.

For the purposes of transport modelling, it is important that each modelled scenario includes the same total number of jobs and homes, in order that they can be directly comparable. It is also necessary to consider the distributions of jobs.

Allocations for employment land in Local Plans only account for a relatively small proportion of overall jobs – employment allocations are for jobs in the ‘B’ use classes (covering office, research and development and industrial uses). These don’t currently account for the very significant proportion of jobs arising in other population-driven sectors such as shops, leisure and education, although as of September 2020 there has been a reorganisation of use classes including the introduction of Use Class E replacing Use Class B.

## Establishing a baseline

As a first step, guided by the ELR, the split between 'B' use jobs and non 'B' use jobs was identified.

Requirement	Minimum	Medium	Maximum
Total jobs requirement	45,800	58,500	79,500
Jobs requirement in 'B' Uses	10,765	20,625	26,735

The non-B Jobs are largely guided by population growth, these were therefore left to the transport modelling team to consider as the model runs were developed.

The Councils have provided distributions of 'B' use jobs for each spatial option to the transport modelling team, for them to apply alongside standard assumptions for population driven non 'B' use job sectors. Due to the significant level of existing commitments, the Councils have largely distributed jobs to those locations, however for all growth level options and all spatial options a small number of jobs have been distributed to the new locations specific to the spatial option that is being tested.

The Councils do not have a trajectory for completions of business land or floorspace in the same way as they do for housing. Many strategic sites take a number of years to come forward, including crossing into subsequent plan periods. This can particularly be the case for new settlements. The housing trajectory anticipates that a number of the existing new settlements will continue to develop beyond 2041. For the purposes of transport modelling we have also assumed that not all the business land and floorspace will be delivered by that time either.

For the purposes of distributing 'B use' jobs, officers were guided by site by site information in the ELR, and as a starting point a list of 22 strategic sites were identified, with potential job numbers guided by planning application information or using floorspace to jobs densities. Initial assumptions on delivery were then applied to each site in terms of the amount of jobs anticipated in 2020-2041:

- the number of jobs anticipated at Waterbeach New Town, Northstowe (phases 2 & 3) and Bourn Airfield New Village is based on the proportion of homes anticipated,
- the change in the number of jobs anticipated at Clifton Road Industrial Estate is considered to be neutral as although the site is allocated for redevelopment, there are 'B' use jobs anticipated within the resulting mixed use development,
- the number of jobs anticipated at Cambridge Research Park, Landbeach, assumes delivery of the vacant plots that are subject to a pending outline planning application, and
- the number of jobs anticipated at Northstowe is based on the Economic Development Strategy submitted with the phase 3 outline planning applications, which includes updated 'B' use assumptions for the whole development.

This created a 'B' use jobs baseline for 2020-2041. As this number of 'B use' jobs was higher than that forecast for either the minimum or medium growth levels, and was only a few thousand jobs less than the maximum growth levels, and it is expected that new housing allocations or new settlements necessary to deliver the housing growth levels being considered would be accompanied by 'B' use jobs in new locations, officers have amended the anticipated delivery from these 22 sites for each growth level. However, these 22 sites are anticipated to deliver the same number of jobs for each of the 8 spatial options within a growth level.

For the maximum growth level, in addition to the assumptions already considered, a further reduction in anticipated new jobs delivery of 20% (from the baseline for 2020-2041) has been assumed on all sites except for on developments: within the North East Cambridge area; with the most recent permissions; and where an overall loss of jobs is anticipated. For the medium growth level, the same approach has been taken, however, a reduction in anticipated new jobs delivery of 40% (from the baseline for 2020-2041) rather than 20% has been assumed.

For the minimum growth level, more significant reductions to jobs delivery for each of the 22 sites have been assumed to enable jobs to be distributed alongside the new



locations for housing growth in each of the 8 spatial options. For those developments that have outline planning permission, an outline planning application pending or are allocated in the adopted Local Plans but do not yet have planning permission, a reduction in anticipated new jobs delivery of 60% (from the baseline for 2020-2041) has been assumed. For those developments with full planning permission or a prior approval permission, a reduction of 30% (from the baseline for 2020-2041) has been assumed. No reduction has been applied to any anticipated loss of existing jobs.

These assumptions result in the jobs distribution across existing commitments as set out in the table below:

<b>Site / location</b>	<b>'B' use Jobs – baseline (all time)</b>	<b>'B' use Jobs – baseline (2020- 2041)</b>	<b>'B' use Jobs – maximum (2020- 2041)</b>	<b>'B' use Jobs – medium (2020- 2041)</b>	<b>'B' use Jobs – minimum (2020- 2041)</b>
West Cambridge	6,000	2,000	2,000	2,000	800
Wellcome Trust Genome Campus, Hinxton	4,000	4,000	3,200	2,400	1,600
Cambourne Business Park	800	800	640	480	320
North West Cambridge (Eddington)	1,500	1,500	1,200	900	600
Former Spicers Site, Sawston (Huawei)	350	350	350	350	245
East of Peterhouse Technology Park, Cambridge (South Cambridgeshire Local Plan, Policy E/3)	1,600	1,600	1,280	960	640
Cambourne West	1,145	1,145	1,145	1,145	460
Waterbeach New Town	2,100	1,100	1,100	1,100	440
Cambridge East – North of Newmarket Road (Wing / Marleigh)	-465 (+85, -550)	-465 (+85, -550)	-465 (+85, -550)	-465 (+85, -550)	-515 (+35, -550)
Grant Park, Great Abington	1,200	1,200	960	720	480
Addenbrooke's Hospital and Biomedical Campus (including South	1,500	1,500	1,500	1,500	600

<b>Site / location</b>	<b>'B' use Jobs – baseline (all time)</b>	<b>'B' use Jobs – baseline (2020- 2041)</b>	<b>'B' use Jobs – maximum (2020- 2041)</b>	<b>'B' use Jobs – medium (2020- 2041)</b>	<b>'B' use Jobs – minimum (2020- 2041)</b>
Cambridgeshire Local Plan, Policy E/2)					
Cambridge Research Park, Landbeach	1,100	1,100	880	660	440
Northstowe	Phase 1 = 670, Phases 2 & 3 = 1,200	Phase 1 = 670, Phases 2 & 3 = 660	Phase 1 = 670, Phases 2 & 3 = 660	Phase 1 = 670, Phases 2 & 3 = 660	Phase 1 = 270, Phases 2 & 3 = 265
Bourn Airfield New Village	1,200	900	900	900	360
Clifton Road Industrial Estate area, Cambridge	0	0	0	0	-330
West of London Road, Pampisford	1,070 (+1,195, - 125)	1,070 (+1,195, - 125)	830 (+955, -125)	590 (+715, -125)	355 (+480, -125)
Station Road area, Cambridge	-370	-370	-370	-370	-370
Fulbourn Road West, Cambridge (Cambridge Local Plan, sites GB3 and GB4)	790	790	630	470	315
Cambridge Science Park	2,690	2,690	2,690	2,690	1,880
Nuffield Road Industrial Estate, Cambridge	-5	-5	-5	-5	-5
St Johns Innovation Centre, Cambridge	235	235	235	235	165
Cowley Road Industrial Estate, Cambridge	880	880	880	880	615
<b>TOTAL</b>	<b>29,190</b>	<b>23,350</b>	<b>20,910</b>	<b>18,470</b>	<b>9,630</b>

## Delivery assumptions

The Councils do not have typical assumptions for anticipated delivery of 'B use' jobs from different types of developments (e.g. new settlements, edge of Cambridge sites). The following sections therefore provide information on the delivery

assumptions used for 'B use' jobs in the new locations for growth identified in each of the 8 spatial options in this paper.

### **Additional jobs from existing new settlements**

For the maximum growth level, each of the 8 spatial options assumes that additional dwellings will be delivered by 2041 from the existing new settlements based on a higher (doubled) annual delivery rate. In the jobs baseline (as set out in the table above), the proportion of jobs anticipated on these existing new settlements by 2041 has been assumed based on the proportion of dwellings anticipated. Therefore, for the maximum growth level, in each of the 8 spatial options additional jobs need to be assumed to be consistent with the dwelling assumptions.

For the purposes of this paper and for the maximum growth level only, 1,840 additional jobs (in addition to those jobs already included in the table above) are anticipated by 2041 from the existing new settlements based on the assumption that each of these new settlements will be wholly completed by 2041:

- Northstowe (phases 2 & 3): 540 additional jobs
- Waterbeach New Town: 1,000 additional jobs
- Bourn Airfield New Village: 300 additional jobs

For the medium and minimum growth levels, the number of jobs assumed in the table above is the same proportion as the number of dwellings assumed at the existing annual delivery rates.

### **Jobs at new settlements**

For any additional new settlements included in a spatial option, officers have assumed that a similar jobs provision will be provided at these new developments as is expected to be provided at the existing new settlements, with differing amounts based on the size of the new settlement.

Northstowe is anticipated to deliver 10,000 new homes and up to approx. 2,100 jobs in 'B uses'. Waterbeach New Town is anticipated to deliver 9,000 new homes and approx. 2,100 jobs in 'B uses', with Cambridge Research Park at Landbeach across the A10. Bourn Airfield New Village is anticipated to deliver 3,500 new homes and

approx. 1,200 jobs. Cambourne West is anticipated to deliver 2,350 new homes and approx. 1,145 jobs in 'B uses', with Cambourne Business Park and the existing settlement of Cambourne to the east.

For the purposes of this paper, a new settlement of 9,000 new homes is anticipated to deliver 2,500 new jobs in 'B uses' and a new settlement of 4,500 new homes is anticipated to deliver 1,500 new jobs in 'B uses'. The proportion of new jobs assumed at each new settlement by 2041 has been anticipated for each spatial option and each growth level (where they are included as a location for development) based on the proportion of new homes anticipated by 2041. However, a delay in the provision of jobs compared to homes is included as on new developments new business floorspace and therefore 'B use' jobs tend to be delivered after the first new homes have been completed and occupied.

Officers have assumed that 'B use' jobs provided at new settlements will largely be B1 uses, with a small proportion of B2 and B8 uses. For the purposes of this paper, the following split across the 'B uses' has been applied to new 'B use' jobs in new settlements:

- B1 use: 85% of the overall 'B use' jobs.
- B2 and B8 uses: 15% of the overall 'B use' jobs, with 75% of these jobs being B2 use and 25% being B8 use.

### **Jobs at Cambridge Airport**

Officers had assumed that the 2,000 existing 'B use' jobs would be lost, and that 5,000 new 'B use' jobs will be re-provided within the new development (based on the adopted Cambridge East Area Action Plan). However, only 675 'B use' jobs are recorded on this site in the transport model, and therefore for the purposes of this paper this site is assumed to lose up to 675 'B use' jobs and re-provide up to 5,000 'B use' jobs.

For all spatial options and for all growth levels, where Cambridge Airport is included as a location for development, it is assumed that all existing jobs will be lost, even where only some new jobs are assumed. This is because it is assumed that the

existing airport uses on the site will all need to be removed before any new development can take place.

The proportion of new jobs assumed at Cambridge Airport by 2041 has been anticipated for each spatial option and each growth level (where it is included as a location for development) based on the proportion of new homes anticipated by 2041. However, a delay in the provision of jobs compared to homes is included as on new developments new business floorspace and therefore 'B use' jobs tend to be delivered after the first new homes have been completed and occupied.

Officers have assumed that 'B use' jobs provided at Cambridge Airport will largely be B1 uses, with a small proportion of B2 and B8 uses. For the purposes of this paper, the following split across the 'B uses' has been applied to new 'B use' jobs at Cambridge Airport:

- B1 use: 85% of the overall 'B use' jobs.
- B2 and B8 uses: 15% of the overall 'B use' jobs, with 75% of these jobs being B2 use and 25% being B8 use.

### **Jobs at North East Cambridge**

For North East Cambridge, officers have assumed that this site can deliver the jobs anticipated by the draft North East Cambridge Area Action Plan (July 2020). The draft Area Action Plan anticipates that 20,000 jobs will be provided within the development from the 234,500 sqm of B1 floorspace anticipated. This is in addition to the existing commitments on the Cambridge Science Park and other industrial estates that fall within the Area Action Plan boundary, which are included in the jobs baseline as set out in the table above.

In order for the jobs numbers to balance in each of the spatial options, the anticipated level of jobs from this site has been reduced more than for other locations given the significant number of jobs anticipated at North East Cambridge, and the long term nature of this site. A delay in the provision of jobs compared to homes is included as on new developments new business floorspace and therefore 'B use' jobs tend to be delivered after the first new homes have been completed and occupied.

Officers have assumed that 'B use' jobs provided at North East Cambridge will be all B1 uses, based on the draft North East Cambridge Area Action Plan (July 2020). The area will include B2 and B8 uses, but no additional jobs will be provided, although existing businesses may be re-located within the area.

### **Jobs at Green Belt broad locations**

For spatial option 3 (Edge of Cambridge: Green Belt), where all new development is proposed in broad locations on the edge of Cambridge and in the Green Belt, officers have assumed that new 'B use' jobs will be provided in these broad locations alongside the new homes. For other spatial options that include these broad locations on the edge of Cambridge and in the Green Belt, officers have assumed that no new 'B use' jobs will be provided alongside the new homes as there are existing 'B use' jobs within Cambridge and on nearby employment sites. However, given the significant level of new homes proposed in these broad locations in spatial option 3, it is anticipated that 'B use' jobs will be provided in the same way as 'B use' jobs are provided in new settlements and will be provided as part of Eddington (North West Cambridge), North East Cambridge, and Cambridge East.

Officers have assumed that 'B use' jobs provided in the broad locations on the edge of Cambridge and in the Green Belt will be all B1 uses, due to the need for any 'B use' developments to be compatible with both the existing and proposed residential uses in these locations. There is not the same scope as within new settlements to locate incompatible 'B uses' (such as B2 and B8 uses) away from residential uses.

### **Jobs in villages**

For spatial option 5 (Villages), where all the development is proposed in new developments within or on the edge of villages, officers have assumed that new 'B use' jobs will be provided in the villages alongside the new homes. For other spatial options that include development in villages, officers have assumed that no new 'B use' jobs will be provided alongside the new homes as there are existing 'B use' jobs within villages and on nearby employment sites. However, given the significant level of new homes proposed in the villages in spatial option 5, it is anticipated that additional 'B use' jobs will be provided either within a development or through new or expanded employment sites.

Officers have assumed that 'B use' jobs provided in the villages will largely be B1 uses, with a small proportion of B2 and B8 uses. For the purposes of this paper, the following split across the 'B uses' has been applied:

- B1 use: 85% of the overall 'B use' jobs.
- B2 and B8 uses: 15% of the overall 'B use' jobs, with 75% of these jobs being B2 use and 25% being B8 use.

### Distribution of 'B' use jobs in the spatial options

The following tables set out the distribution of the 'B' use jobs to find in the new growth locations for each of the spatial options, once the existing committed jobs have been deducted as follows:

<i>Calculation / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Medium: 2020-2041</i>	<i>Maximum: 2020-2041</i>
Total 'B' use jobs to find	10,765	20,625	26,735
Jobs from already committed locations (see table above)	9,630	18,470	20,910
Committed new settlements - additional delivery (as described above)	N/A	N/A	1,840
Balance to be made in new allocations	1,135	2,155	3,985

Notes:

- Total 'B' use jobs to find: this is the 'B' use jobs requirement 2020-2041, derived from Greater Cambridge Employment Land Review.
- Jobs from already committed locations: this is the 'B use' jobs baseline for each of the growth level options as set out above.
- Committed new settlements - additional delivery: as set out above, when the higher delivery rates assumption is incorporated into the maximum growth

scenario for all options, a further 1,840 jobs could be delivered from the existing committed new settlements by 2041.

- Balance to be made in new allocations: this is the balance of 'B' use jobs that has been distributed to the new growth locations.



### Spatial Scenario 1: Focus on Densification of existing urban areas

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	0	0	0	0	0	0
North East Cambridge	1,135	20,000	2,580	20,000	3,910	20,000
Cambridge Airport (safeguarded land)	0	0	-425	4,325	75	4,325
Green Belt Fringe	0	0	0	0	0	0
New settlements	0	0	0	0	0	0
Villages Total	0	0	0	0	0	0
<b>Total</b>	<b>1,135</b>	<b>20,000</b>	<b>2,155</b>	<b>24,325</b>	<b>3,985</b>	<b>24,325</b>

### Spatial Scenario 2: Focus on Edge of Cambridge: outside Green Belt

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	0	0	0	0	0	0
North East Cambridge	1,560	20,000	1,680	20,000	2,310	20,000
Cambridge Airport (safeguarded land)	-425	4,325	-425	4,325	575	4,325
Green Belt Fringe	0	0	0	0	0	0
New settlements	0	0	900	3,000	1,100	4,000
Villages Total	0	0	0	0	0	0
<b>Total</b>	<b>1,135</b>	<b>24,325</b>	<b>2,155</b>	<b>27,325</b>	<b>3,985</b>	<b>28,325</b>

### Spatial Scenario 3: Focus on Edge of Cambridge: Green Belt

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	0	0	0	0	0	0
North East Cambridge	0	0	0	0	0	0
Cambridge Airport (safeguarded land)	0	0	0	0	0	0
<b>Green Belt Fringe</b>	<b>1,135</b>	<b>1,135</b>	<b>2,155</b>	<b>2,155</b>	<b>3,985</b>	<b>3,985</b>
New settlements	0	0	0	0	0	0
Villages Total	0	0	0	0	0	0
<b>Total</b>	<b>1,135</b>	<b>1,135</b>	<b>2,155</b>	<b>2,155</b>	<b>3,985</b>	<b>3,985</b>

### Spatial Scenario 4: Focus on New Settlements

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	0	0	0	0	0	0
North East Cambridge	0	0	0	0	0	0
Cambridge Airport (safeguarded land)	0	0	0	0	0	0
Green Belt Fringe	0	0	0	0	0	0
<b>New settlements</b>	<b>1,135</b>	<b>3,000</b>	<b>2,155</b>	<b>8,000</b>	<b>3,985</b>	<b>9,000</b>
Villages Total	0	0	0	0	0	0
<b>Total</b>	<b>1,135</b>	<b>3,000</b>	<b>2,155</b>	<b>8,000</b>	<b>3,985</b>	<b>9,000</b>

### Spatial Scenario 5: Focus on Dispersal: Villages

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	0	0	0	0	0	0
North East Cambridge	0	0	0	0	0	0
Cambridge Airport (safeguarded land)	0	0	0	0	0	0
Green Belt Fringe	0	0	0	0	0	0
New settlements	0	0	0	0	0	0
<b>Villages Total</b>	<b>1,135</b>	<b>1,135</b>	<b>2,155</b>	<b>2,155</b>	<b>3,985</b>	<b>3,985</b>
<b>Total</b>	<b>1,135</b>	<b>1,135</b>	<b>2,155</b>	<b>2,155</b>	<b>3,985</b>	<b>3,985</b>

### Spatial Scenario 6: Focus on Public transport corridors

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	0	0	0	0	0	0
North East Cambridge	655	20,000	1,705	20,000	3,110	20,000
Cambridge Airport (safeguarded land)	0	0	0	0	0	0
Green Belt Fringe	0	0	0	0	0	0
New settlements	480	1,500	450	2,500	875	2,500
<b>Villages Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>1,135</b>	<b>21,500</b>	<b>2,155</b>	<b>22,500</b>	<b>3,985</b>	<b>22,500</b>

**Spatial Scenario 7: Supporting a high-tech corridor by integrating homes and jobs (southern cluster)**

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	0	0	0	0	0	0
North East Cambridge	0	0	0	0	2,410	20,000
Cambridge Airport (safeguarded land)	0	0	0	0	575	4,325
Green Belt Fringe	0	0	0	0	0	0
New settlements	1,135	1,500	540	1,500	1,000	2,500
Villages Total	0	0	1,615	1,615	0	0
Total	1,135	1,500	2,155	3,115	3,985	26,325

**Spatial Scenario 8: Expanding a growth area around transport nodes**

<i>Source of supply / Growth Level</i>	<i>Minimum: 2020-2041</i>	<i>Minimum: All time</i>	<i>Medium: 2020-2041</i>	<i>Medium: All time</i>	<i>Maximum: 2020-2041</i>	<i>Maximum: All time</i>
Cambridge urban area	0	0	0	0	0	0
North East Cambridge	0	0	1,615	20,000	2,410	20,000
Cambridge Airport (safeguarded land)	0	0	0	0	575	4,325
Green Belt Fringe	0	0	0	0	0	0
New settlements	1,135	1,500	540	1,500	1,000	2,500
Villages Total	0	0	0	0	0	0
Total	1,135	1,500	2,155	21,500	3,985	26,325

## **Appendix 8: Baseline, opportunities and constraints mapping**

## Strategy options methodology mapping

### Contents

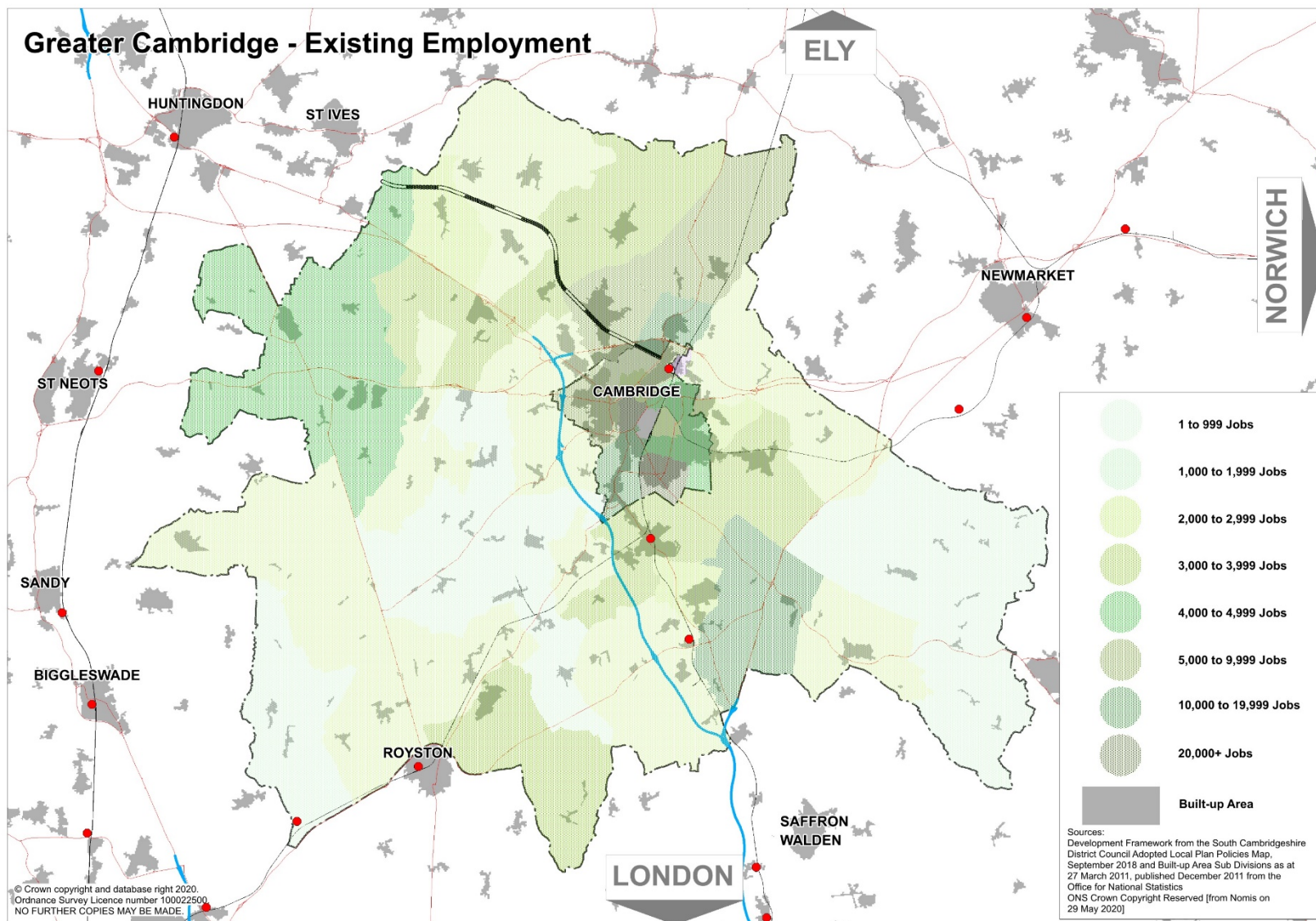
1. Baseline:
  - a) Existing homes
  - b) Existing employment
  - c) Current transport connections, urban areas and employment sites
2. Commitments
  - a) Housing commitments
  - b) Jobs commitments
3. Opportunities and constraints
  - a) Future transport infrastructure
  - b) Rural services proxy – South Cambridgeshire Local Plan 2018 settlement designations

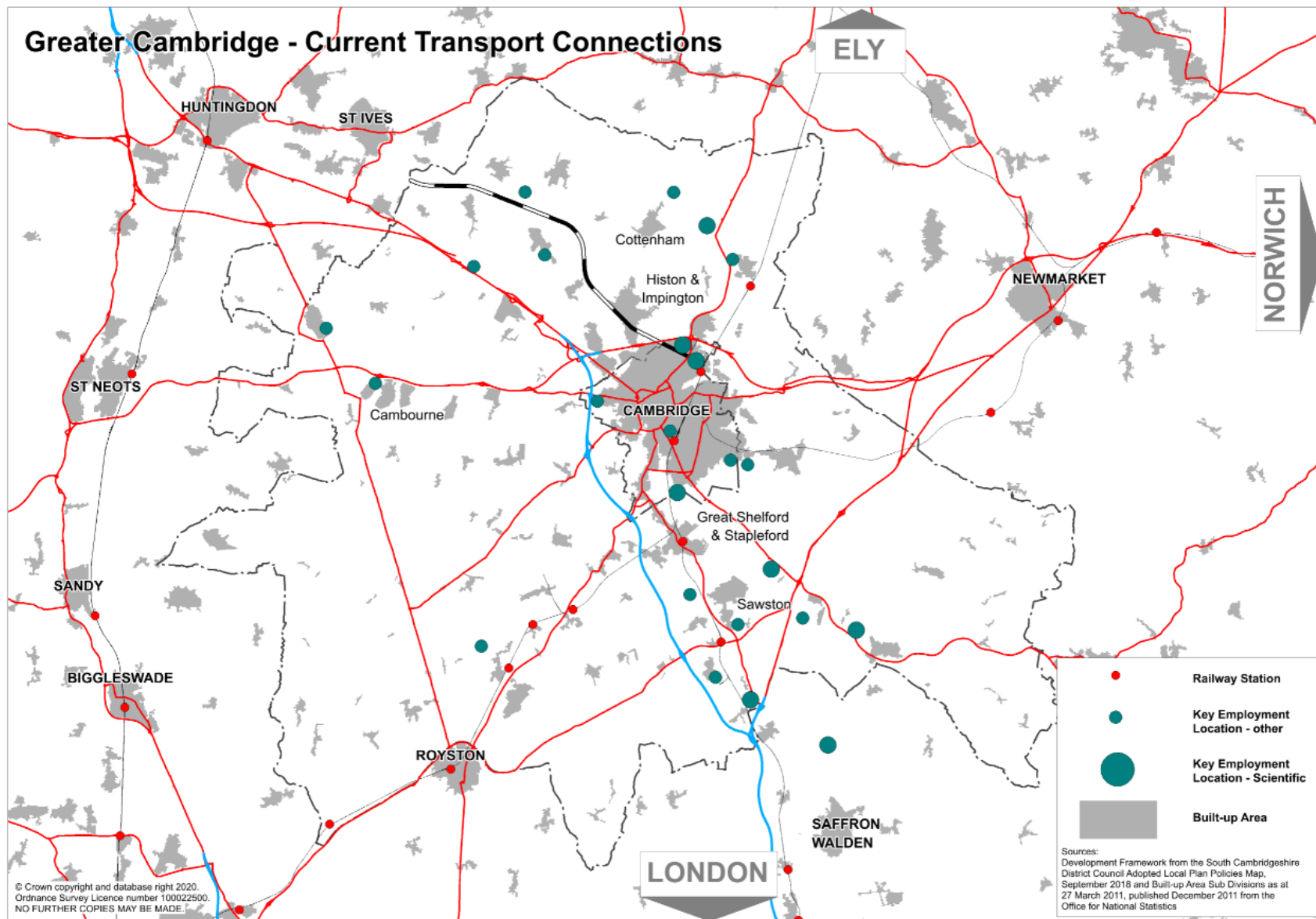
For environmental constraints - See Figures in Greater Cambridge Local Plan Sustainability Appraisal Scoping Report:

## 1. Baseline



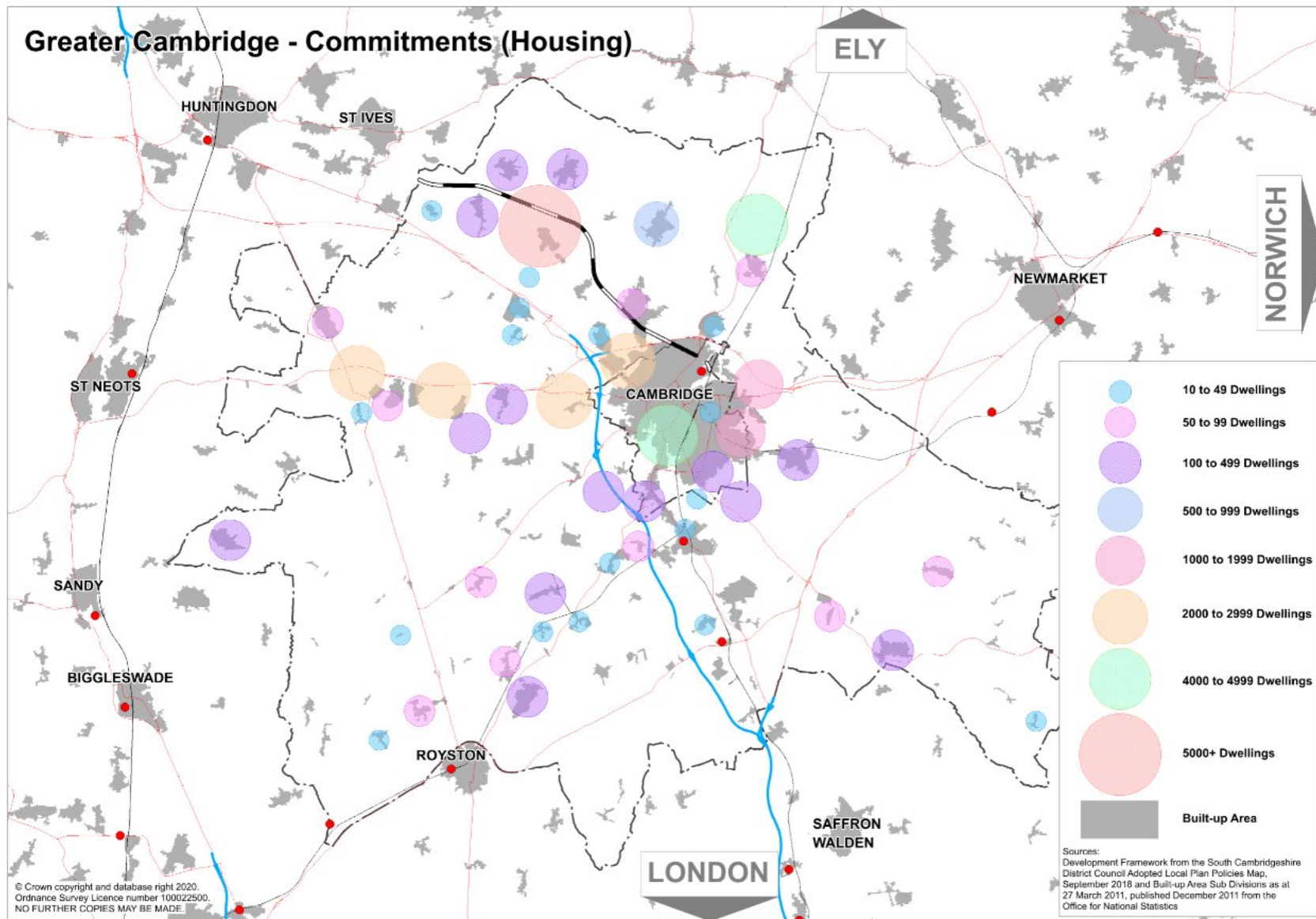




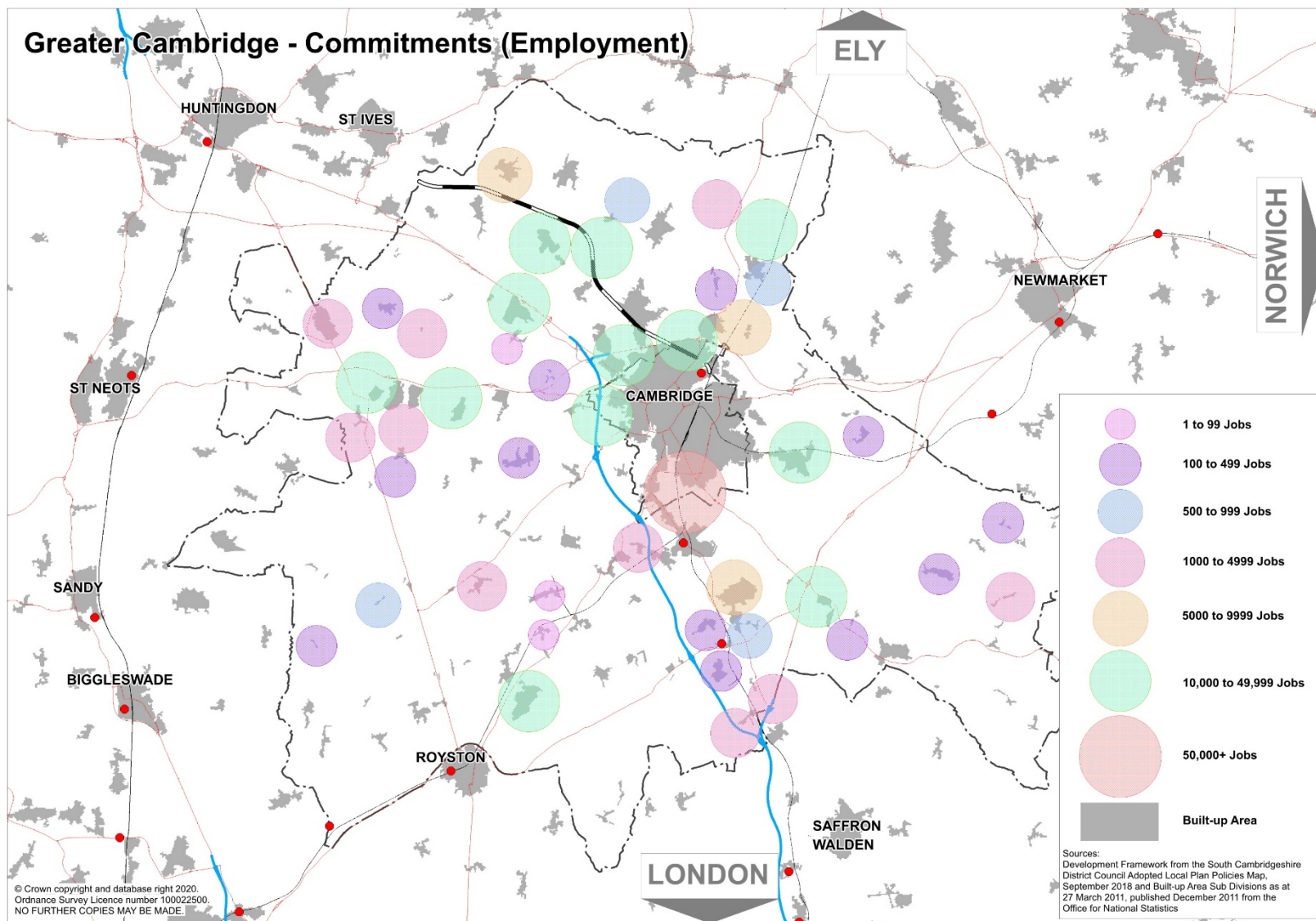


2.

## 2. Commitments

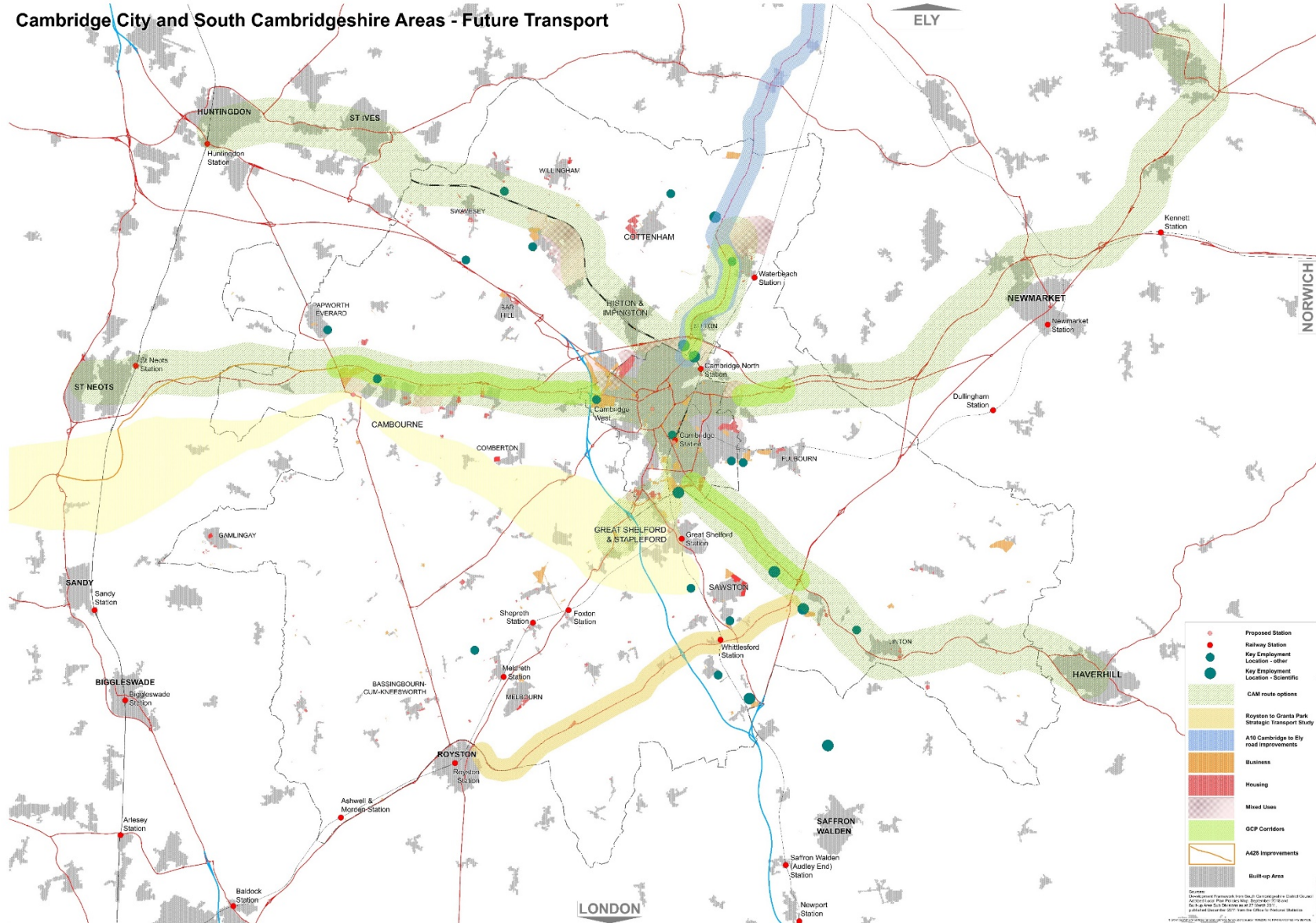






### 3. Opportunities and constraints

# Cambridge City and South Cambridgeshire Areas - Future Transport



Rural services proxy – South Cambridgeshire Local Plan 2018 village designations

