

Prepared by Stantec in August 2021 on behalf of Great Cambridge Shared Planning as a supplementary analysis to Strategic Spatial Options Review, November 2020

Greater Cambridge Local Plan Strategic Spatial Options Assessment: Integrated Water Management Supplement

Introduction

This Greater Cambridge Local Plan Strategic Spatial Options Assessment: Integrated Water Management Supplement Report assesses with regard to water cycle matters, the working assumption Greater Cambridge Local Plan preferred option development strategy, and a new blended Edge of Cambridge: Green Belt alternative, in the same way as was completed for the strategic spatial options in November 2020.

Alongside other evidence assessments and Sustainability Appraisal, consideration of the preferred option and Edge of Cambridge: Green Belt alternative alongside the strategic spatial options assessments ensures consideration of a range of reasonable alternative strategies.

Context

For the strategic spatial options stage we completed assessments of the three growth levels and eight strategic spatial options.

Further to this, ahead of the Preferred Options Plan consultation taking place in autumn 2021, officers from Greater Cambridge Shared Planning on behalf of the two councils shared with us a working assumption preferred option development strategy, including preferred growth level and distribution assumptions for dwellings, jobs and associated population growth.

Please note that use of the working assumption preferred option development strategy to inform this evidence base does not confer formal support by either

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council for that strategy. No decisions will be taken on development strategy assumptions until relevant member committees meet and approve documents for the Local Plan preferred options consultation. Such decisions will be informed by appraisal of reasonable alternatives. Setting out working assumptions in this and other notes does not prejudice those decisions.

Growth level

Following consideration of the November 2020 strategic spatial options evidence bases and Sustainability Appraisal, Greater Cambridge Shared Planning have determined that the medium level of homes associated with the central employment scenario represents the objectively assessed need for homes in Greater Cambridge. Having determined this, the previously assessed alternative growth options of minimum and maximum are no longer considered to represent reasonable alternatives.

Further to the above, the Greater Cambridge Local Plan Preferred Option growth level is the medium homes level, including a 1:1 commuting ratio for housing growth generated by additional jobs above those supported by the Standard Method, in line with the councils' aims of limiting longer distance commuting and thereby limiting carbon emissions (described as medium+). We, and other evidence base consultants, did not assess the medium+ level of growth for the Strategic Spatial options, but we do not consider that rerunning the evidence testing of the strategic spatial options against a new medium+ housing figure would result in materially different outcomes to our November 2020 conclusions.

A high level assessment of the overall level of growth associated with medium+ (5.9% more people than medium) concluded that the overall consequences for wastewater, water quality and water resources were unchanged although the requirement to provide additional water resources over the short term (next 10 years)

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was further emphasised, warning that the environmental harm resulting from not achieving this would be heightened.

Drawing on the above, we are testing the new spatial options of preferred option and Blended Strategy including Edge of Cambridge: Green Belt based on the medium+ growth level, and have not assessed the impacts of the previous alternative growth levels in relation to these new spatial options.

Spatial distribution

The Councils' working assumption preferred option is a blended strategy including a number of broad supply locations. To ensure that the preferred option is tested against reasonable alternatives, an assessment of the preferred option blended strategy has been completed, so that it can be compared against:

- the strategic spatial options tested last year
- other reasonable alternative blended strategies.

Some of the spatial options tested last year were blended strategies and others not. The Councils reviewed the strategic spatial options tested in November to see whether these included a range of reasonable alternative blended strategies, noting that they don't need to test every possible reasonable alternative. The conclusion to this assessment was that the only alternative blended strategy not yet tested was one including development at Edge of Cambridge: Green Belt. The Councils therefore identified a blended strategy development distribution for this spatial option, which is directly comparable to the preferred option and broadly comparable to the strategic spatial options from November 2020.

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Spatial options tested

1. Preferred option growth level: preferred options spatial strategy
2. Preferred option growth level: Blended Strategy including Edge of Cambridge: Green Belt

Methodology

This Supplementary Report assesses the above spatial options using the same methodology as completed for the Greater Cambridge Local Plan Strategic Spatial Options Assessment: Integrated Water Management (2020). See that report for further detail.

Findings

Table 12 of the Strategic Spatial Options Assessment for integrated water management is repeated below for reference:

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| Spatial Scenario | Score and (rank) for housing distribution 2020-2041 | | | Average score and (rank), all growth scenarios |
|---------------------------------------------------------------------------------------|-----------------------------------------------------|------------------------|-------------------------|------------------------------------------------|
| | Minimum spatial pattern | Medium spatial pattern | Maximum spatial pattern | |
| 2. Edge of Cambridge - outside the Green Belt | 0.8 (1) | -0.1 (2) | 0.9 (1) | 0.5 (1) |
| 4. Dispersal – new settlements | 0.0 (3) | 0.0 (1) | 0.0 (2) | 0.0 (2) |
| 6. Public transport corridors | 0.8 (1) | -2.4 (5) | -0.4 (3) | -0.6 (3) |
| 8. Expanding a growth area around transport nodes (Cambourne) | -2.1 (6) | -2.1 (3) | -0.6 (5) | -1.6 (4) |
| 7. Supporting a high-tech corridor by integrating homes and jobs (south of Cambridge) | -1.8 (4) | -3.7(7) | -0.5 (4) | -2.0 (5) |
| 3. Edge of Cambridge – Green Belt | -2.0 (5) | -2.1(4) | -2.0 (7) | -2.0 (6) |
| 1. Densification of existing urban areas | -2.1 (7) | -3.1 (6) | -1.4 (6) | -2.2 (7) |
| 5. Dispersal -villages | -5.6 (8) | -5.6 (8) | -5.6 (8) | -5.6 (8) |

It shows the ranking of eight different spatial scenarios from a water management perspective. These rankings were based upon the detailed constraints and opportunities categorisations for each location discussed in Section 4.3 of the report and listed in Appendix B. The top two ranked options for the medium option, which is the most directly comparable, were 4 and 2. These options (4. Dispersal to New

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Settlements and 2. Edge of Cambridge Outside the Green Belt) have known or expected low flood risk, and large sites with good opportunities for blue-green infrastructure, flood risk reduction and high-quality resilient water recycling systems.

An exercise has been undertaken to assess two further scenarios with a growth level slighter greater than medium (medium+) and two different distributions.

- 09 : Preferred option growth level: preferred options spatial strategy
- 10: Preferred option growth level: Blended Strategy including Edge of Cambridge: Green Belt

Applying the same methodology, (see Appendix 4 of the Strategic Spatial Options Assessment for integrated water management (2020) which shows scoring and a worked example) the scores for the new scenarios are respectively -1.6 and -1.7 ranking them 3rd and 4th overall when compared to the previous medium scenario. The revised scores and ranked order are now as follows:

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| Strategic Spatial Option | Description | Score | Ranks |
|--------------------------|---------------------------------------------------------------|-------|-------|
| 4 | Dispersal -new settlements | 0.0 | 1 |
| 2 | Edge of Cambridge – outside Green Belt | -0.1 | 2 |
| 9 | Preferred options spatial strategy (medium +) | -1.6 | 3 |
| 10 | Blended Strategy including Edge of Cambridge: Green Belt | -1.7 | 4 |
| 3 | Expanding a growth area around transport nodes | -2.1 | 5 |
| 8 | Edge of Cambridge – Green Belt | -2.1 | 6 |
| 6 | Public transport corridors | -2.4 | 7 |
| 1 | Densification of existing urban areas | -3.1 | 8 |
| 7 | Supporting a high-tech corridor by integrating homes and jobs | -3.7 | 9 |
| 5 | Dispersal villages | -5.6 | 10 |

The most favourable spatial options remain 4 and 2. Newly assessed spatial options 9 and 10 are ranked next with the preferred options approach ranking 3rd overall.

Options 9 and 10 score relatively highly in the appraisal because they include the larger developments of North East Cambridge, Cambridge Airport and Cambourne which would have good opportunities for blue-green infrastructure, flood risk reduction and high-quality resilient water recycling systems. There may be some constraints for development in the Greenbelt for blended Option 10 because existing fluvial and surface water flood risk may make individual sites difficult to deliver, but this depends upon location.

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Development in villages included in these options could have some constraints due to flood risk, wastewater capacity and potentially fewer opportunities for betterment due to the smaller size of sites, but this would be dependent upon the specific site allocations and requirements of policy in the Local Plan.

Specific constraints which require management and/or further investment associated with the preferred spatial option (Option 9) are connected to growth at Cambourne where local wastewater treatment capacity constraints are not easily overcome, although this is possible via transfers to Papworth Everard WRW. There are however opportunities to supply Cambourne with fresh water from outside the area easing likely short term local supply shortages.