

Cambridge Local Plan 2014:

Reviewing the Development Strategy for the Cambridge Area: Joint Sustainability Appraisal

May 2013



Reviewing the Sustainable Development Strategy for the Cambridge Area

1. Cambridge City Council and South Cambridgeshire District Council are updating their Local Plans for the Cambridge area for the period up to 2031.
2. The existing development plans for the area are the Cambridge Local Plan (adopted 2006) and the South Cambridgeshire Local Development Framework (adopted between 2007 and 2010). They include a development strategy based on a sustainable development sequence focusing development on Cambridge, sites on the edge of Cambridge brought forward through a review of the Green Belt, a new town (Northstowe), and limited development in better served villages.
3. The updated local plans extend the plan period to 2031, and consider development needs for this period, and how they should be addressed. This paper considers the evolution of the development strategy for the Cambridge area, and how the preferred approach was identified.
4. It includes the following:
 - The Current Development Strategy for Cambridgeshire - How the existing strategy for development in the Cambridge area was developed.
 - Continuing a Sustainable Development Strategy – Considerations regarding how the strategy could be moved forward to 2031.
 - Considering Options for a new Development Strategy – How strategy options were considered through the Issues and Options process.
 - Existing Housing Supply – Details the existing supply of sites with planning permission or existing allocations, and how they relate to the development hierarchy.
 - Identifying New Site Options – How site options for testing were identified, how they were tested through the Sustainability Appraisal (SA) process, and how reasonable alternative allocations were distinguished from rejected options.
 - Identification of the proposed development strategy.

The Current Development Strategy for the Cambridge Area

5. Whilst regional and structure plans are no longer produced, throughout the plan making process South Cambridgeshire District Council has worked closely with Cambridge City Council. There is a strong interaction between the two administrative areas. South Cambridgeshire encircles Cambridge and many residents of the district look to the city for services and jobs.
6. The current development strategy for the Cambridge area stems from as far back as 1999, from the work undertaken by Cambridge Futures, which influenced the 2000 Regional Plan for East Anglia and the 2003 Cambridgeshire and Peterborough Structure Plan. Prior to that date, development in Cambridge had been constrained by the Green Belt. One of the effects of this constraint

was that housing development which would have taken place in Cambridge was dispersed to towns and villages beyond the outer boundary of the Green Belt, with people commuting back to jobs in Cambridge contributing to congestion, greenhouse gas emissions, air quality problems and other quality of life issues. The change in strategy introduced in the 2003 Cambridgeshire Structure Plan recognised that a significant change in the approach to the planning of the city was required in order to help redress the imbalance between homes and jobs in, and close to, Cambridge, whilst ensuring that the special qualities of Cambridge and the surrounding area which are protected by a Green Belt are maintained. It also needed to provide for the long-term growth of the University of Cambridge and Addenbrooke's Hospital, whilst minimising increases in congestion on radial routes into the city.

7. The existing Cambridge Local Plan (2006) and South Cambridgeshire Local Development Framework (adopted between 2007 and 2010) introduced a step change in levels of planned growth, unmatched since the interwar years. This was consistent with the agreed development strategy for the Cambridge area set out in the 2003 Cambridgeshire and Peterborough Structure Plan. The Plans released significant land from the Cambridge Green Belt and allocated a number of urban extensions to the city in the south, north west, north east and east of the city.
8. The strategy in the Cambridgeshire and Peterborough Structure Plan 2003 and carried into the two Councils' current plans aims to focus development according to a sustainable development sequence:
9. Current Development Sequence:
 1. Within the urban area of Cambridge
 2. On the edge of Cambridge
 3. In the new town of Northstowe
 4. At the market towns in neighbouring districts and in the better served villages.
10. The Cambridgeshire Structure Plan envisaged the following approach to Development following this sequence.

Structure Plan 2003 Development Sequence	Cambridge only	South Cambs Only	Cambridge and South Cambs	%
Cambridge	6,500	2,400	8,900	27
Edge of Cambridge	6,000	2,000	8,000	25
New settlement(s)		6,000	6,000	18
Villages		9,600	9,600	30
TOTAL 1999 to 2016	12,500	20,000	32,500	

11. The 2003 Structure Plan identified broad locations to be released from the Green Belt on the edge of Cambridge, which had been identified in Green Belt reviews as having less significance in terms of the purposes of the Cambridge Green Belt. The only exception to this was land in north west Cambridge to

meet the long term development needs of Cambridge University given its international significance. The strategy was put into effect through the Cambridge Local Plan, the South Cambridgeshire Local Development Framework, and the joint Area Action Plans for North West Cambridge and Cambridge East. All of these plans were subject to extensive periods of public consultation and examination by planning inspectors. The strategy was endorsed and included in the East of England Plan 2008. Significant progress is being made on the growth sites identified in the Councils' current plans, although progress was slowed just as sites were coming forward due to the effects of the recession when it took hold in 2008. However, almost all sites are now progressing well and are either under construction, with planning permission or at pre-application discussion stage.

12. At the heart of the strategy established in 2003 was the review of the Cambridge Green Belt which released land for a total of around 22,000 homes, of which some 10,000 to 12,000 were to be built at Cambridge East in both Cambridge and South Cambridgeshire. This included development that would take place beyond 2016 where it required the relocation of Cambridge Airport. In 2009, the landowner - Marshalls of Cambridge - advised that Cambridge Airport would not be made available in this plan period at least, as an appropriate relocation sites could not be found. This means that the major development opportunities at Cambridge East cannot be part of the development strategy in the new Local Plans, and so the full implementation of the current development strategy cannot take place in the plan period to 2031. Marshall has recently announced a renewed intention to develop the allocated site north of Newmarket Road for around 1,200 homes with a planning application expected in 2013 and development north of Cherry Hinton in both Councils' areas following later which the Councils consider could provide around 500 homes.

Continuing a Sustainable Development Strategy

13. Throughout the preparation of the existing plans, there was strong local acknowledgement of the growing need for future growth to follow a more sustainable spatial pattern of development in the Cambridge area to help mitigate commuting by car to jobs in and close to Cambridge and the resulting congestion and emissions, this included traffic restraint through the introduction of a congestion charge which was subsequently rejected.
14. As part of the review of the Regional Spatial Strategy (RSS) for the East of England, the Cambridgeshire authorities commissioned consultants to prepare the Cambridgeshire Development Study. The study was completed in 2009 and looked at how well the existing development strategy was working, forecasts for economic growth, taking account of the beginning of the downturn and how the strategy could be developed if further growth was needed.
15. The study identified a range of challenges for growth beyond the current development strategy. These included that significant additional expansion to Cambridge (where the economy is strongest) would impact on the integrity of

the Green Belt and the concept of Cambridge as a compact city. The study also concluded that without deliverable solutions for transport and land supply, Cambridge centred growth would be difficult to achieve, and would require a fundamental step change in traffic management and travel behaviour.

16. The study recommended a spatial strategy for Cambridgeshire that was based on delivering the current strategy with further balanced expansion through regeneration in selected market towns, and focussed on making best use of existing infrastructure. However, it did indicate that some additional growth could be located on the edge of Cambridge incorporating a limited review of the Green Belt boundary, in the long term. The key objective of the strategy was to locate homes close to Cambridge or other main employment centres, avoiding dispersed development, and ensuring that travel by sustainable modes is maximised through connections focussing on improved public transport and reducing the need to travel.
17. For the review of the development plans the Councils have considered whether the current strategy remains the most appropriate development strategy to 2031, or whether an alternative would be more suitable as a result of current circumstances. The interrelationship between Cambridge and South Cambridgeshire means that decisions cannot be taken in isolation and the future approach needs to remain joined up, as it has been in the past. This is also now a requirement on the authorities under the Duty to Cooperate introduced by the Localism Act 2011. On the whole, South Cambridgeshire looks towards Cambridge in functional terms whilst Cambridge is affected by a tight administrative boundary and surrounding Green Belt, and therefore any decision relating to the spatial strategy in South Cambridgeshire is likely to have an impact on Cambridge and vice versa.
18. The Councils have reviewed jointly how far the current sustainable development strategy has progressed, what evidence there is that it is achieving its original objectives and what a new sustainable development strategy looks like in view of changes in economic and other circumstances since the current strategy was adopted. It must balance the three strands of sustainability – economic, social, and environmental.
19. For plan making, Councils are required to positively seek opportunities to meet the objectively assessed development needs of their area in a flexible way, unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits.
20. Where Green Belts are defined, they should only be altered in exceptional circumstances when preparing a Local Plan. When reviewing Green Belt boundaries, Councils are required to take account of the need to promote sustainable development and consider the consequences for sustainable development of channelling development towards urban areas within Green Belts, to villages inset within the Green Belt and to locations beyond the Green Belt.

21. This sets a considerable challenge for the Cambridge area, in the context of:
- A strong and growing economy;
 - The need for new homes to support the jobs and the aim to provide as many of those new homes as close to the new jobs as possible to minimise commuting and the harmful effects for the environment, climate change and quality of life that it brings; and
 - A tightly drawn Green Belt to protect the unique character of Cambridge as a compact, dynamic city with a thriving historic centre, to maintain and enhance the quality of its setting, and to prevent it merging with the ring of necklace villages, that helps underpin the quality of life and place in Cambridge, fundamental to economic success
22. Achieving an appropriate balance between these competing arms of sustainable development is a key objective of the development strategy for the new Local Plans.

Note: The amount of development that should be planned for is addressed separately and not in this document.

Sustainable Development Strategy Review

23. The current sustainable development strategy was extensively scrutinised and challenged during its evolution through the regional plan and structure plan into the Cambridge Local Plan and South Cambridgeshire Local Development Framework (LDF). Independent planning inspectors confirmed it as the most sustainable development strategy for the two Districts to 2016 and beyond.
24. Moving forward into the new Local Plans and having regard to the new Duty to Co-operate, the recently established Cambridgeshire Joint Strategy Unit has worked with the Councils to carry out a further review of the sustainable development strategy for the two Councils' areas. Overall, the Cambridge and South Cambridgeshire Sustainable Development Strategy Review document concludes that the development strategy in the Cambridge Local Plan and the South Cambridgeshire LDF remains the most sustainable for the two areas, subject to striking the right balance between meeting the needs and demands for new homes and jobs, with environmental, infrastructure and quality of life factors. The most sustainable locations for development are within and on the edge of Cambridge and then in one or more new settlements close to Cambridge, which are connected to the city by high quality public transport and other non-car modes. Development in market towns (outside Cambridge and South Cambridgeshire) scores broadly similar to new settlements although travel distances are much further making non-car modes potentially less attractive than new settlements. Development in villages is the least sustainable option and only appropriate in the larger better served villages with good quality public transport.

25. The review concluded that in addition to the key sustainability considerations of proximity to employment, services and facilities and access to good public transport, the central themes that emerge from this broad assessment are:
- The need to have regard to the scale of development that is planned at different locations, not least to ensure that development allocations do not undermine the delivery of the existing sustainable development strategy and lead to a return to unsustainable patterns of development;
 - Its ability to deliver the necessary infrastructure to create sustainable communities; and
 - Overall delivery implications and timescales.
26. Whilst the new Local Plans need to add some supply to the significant existing supply of housing, planning permission already exists for more employment development than is forecasted by 2031. Whatever decisions are made on supplying additional houses, jobs growth will continue. The challenge will be to develop Local Plans that deliver a sustainable development strategy that balances employment growth with good quality and deliverable travel options with short journey times from the key locations for new and existing homes. Consideration also needs to be given to the special character of Cambridge and quality of life for existing and future residents.
27. In its National Planning Policy Framework (NPPF), the Government carries forward the advice from earlier Planning Policy Statements that, when drawing up or reviewing Green Belt boundaries, local planning authorities should take account of the need to promote sustainable patterns of development. They 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. As part of preparing new Local Plans and given the change in circumstances since the current development strategy was agreed, it was therefore considered appropriate to look again at the inner Cambridge Green Belt boundary in order to establish whether there were any more options for development that should be consulted on.

Considering Options for a new Development Strategy

28. The Issues and Options consultations sought comments on whether the current development strategy remains the soundest basis for development in Cambridge and South Cambridgeshire for the period to 2031.

Cambridge

29. The Cambridge Issues and Options Report 2012 focussed on the City Council's area by assessing options for continued development within the urban area as well as exploring whether there should be further development on the edge of Cambridge in the Green Belt. This included:

- Whether there should be more development than is already committed in the 2006 Local Plan on the edge of Cambridge?
 - Should more land be released from the Green Belt?
 - If so, where should this be? Ten broad locations around Cambridge were included in the consultation document.
 - Whether there were any other approaches that should be considered at this stage?
30. There was also strong acknowledgement of the good progress that is being made towards implementing the current strategy, with development progressing on fringe sites on the edge of Cambridge.

South Cambridgeshire

31. The South Cambridgeshire Issues and Options 2012 consultation included a question on how the sustainable development strategy should be taken forward.
32. It explained that any development strategy for South Cambridgeshire needs to recognise the links with Cambridge, particularly in terms of providing employment to support the successful economy of Cambridge and South Cambridgeshire, and housing to provide opportunities for the workforce, both existing and new, to live close to where they work. As with the current strategy, the updated Local Plan is likely to need to be a combination of sites at different stages in the sequence in order to meet housing targets and in particular some village housing developments to provide a 5-year supply, given the long lead in time for new major developments which would realistically only start to deliver later in the plan period.
33. The options for the development strategy consulted on that lie within South Cambridgeshire were to:
- Focus on providing more development on the edge of Cambridge, in part to replace Cambridge East, through a further review of the Green Belt.
 - Focus on providing more development through one or more new settlements, of sufficient size to provide sustainable development, including provision of a secondary school, and with good public transport links to Cambridge.
 - Focus on providing development at the more sustainable villages that have the best levels of services and facilities and accessibility by public transport and cycle to Cambridge or, to a lesser extent, a market town.
 - A combination of the above.

Cambridge and South Cambridgeshire

34. Through the joint consultation in 2013, the Councils sought views on the appropriate balance between protecting land on the edge of Cambridge that is of high significance to Green Belt purposes, and delivering development away from Cambridge in new settlements and at better served villages

35. The majority of representations were that the Green Belt should be protected from further development. Development should be concentrated in new settlements and better served villages, to reduce congestion and avoid pressure on village infrastructure. Further urban extensions received a more limited level of support.

The Sustainability Appraisal of Strategic Approaches

36. The Sustainability Appraisal process has also been a key element of considering the relative merits of different strategic approaches.
37. Building on the Sustainability Appraisals supporting each of the Issues and Options consultations, Appendix 1 of this report includes a high level assessment of the sustainability implications of focusing on different stages of the development sequence (Cambridge Urban Area, Edge of Cambridge, New Settlements, more Sustainable villages, and less sustainable villages).
38. In outline, the benefits of utilising land within the urban area of Cambridge are the re-use of previously developed land and reducing the need for greenfield development. It also delivers housing closest to the highest concentration of jobs, services and facilities.
39. Development on the edge of Cambridge is the next closest option to the City, but would require use of greenfield land in the Green Belt. The purposes of the Cambridge Green Belt recognise the qualities and importance of the area for the landscape and townscape setting of the City and surrounding villages. The Green Belt review has shown that significant additional development would be detrimental to these purposes.
40. New settlements offer the opportunity to focus development in a way that would support delivery of new services, facilities and employment to meet the needs of residents. Whilst there would still be travel to Cambridge they offer a higher degree of self-containment than more dispersed strategies. They would enable the delivery of focused transport improvements, to deliver a higher share of travel by sustainable modes than more distributed strategies, although they would also focus traffic into specific corridors.
41. Village based strategies would disperse growth. It may enable incremental improvements to existing services and transport, but would provide less focus for delivery of high quality services, and could put pressure on existing village services where expansion could be challenging. There would be less access to high quality public transport, and the modal share of travel by car would be higher.

Existing Housing Supply

42. Notwithstanding the loss of a significant number of homes at Cambridge East, a significant supply of housing has already been identified through existing plans. This includes land with planning permission, and land that was identified and allocated in previous plans which remain available, suitable and deliverable, with these attributes being tested through Annual Monitoring Reports.

Within Cambridge

43. Since 2011, 280 homes have been built within the urban area of Cambridge. At the end of March 2013 there was an existing supply of 2,698 homes in Cambridge City Council's urban area of Cambridge either with planning permission or outstanding allocations. This excludes the major developments on the edge of Cambridge in the current Local Plan 2006, that are considered under the edge of Cambridge stage below. Orchard Park also forms part of the urban area of Cambridge, having been released in an earlier plan, although it lies within South Cambridgeshire. It is largely built, but a further 309 dwellings are expected to be built between 2011 and 2031. There is therefore a total existing supply of 3,287 homes within the urban area of Cambridge.

On the edge of Cambridge

44. Since 2011, 51 homes have been built at Trumpington Meadows and NIAB1. A further 11,310 new homes are already identified through the combined land released from the Green Belt in the Cambridge Local Plan 2006 and South Cambridgeshire LDF adopted between 2007 and 2010. This is a major part of the current development strategy and will remain so in the new Local Plans. After stalling at the beginning of the economic downturn, good progress in relation to the development of the fringe sites has been, and continues to be made. There is therefore a total existing supply of 11,361 homes on the edge of Cambridge.

New settlements

45. The new town of Northstowe is a key part of the current strategy. The town will comprise 9,500 dwellings in total, of which 5,965 are anticipated to come forward by 2031. Northstowe is located on the Guided Busway and will have good public transport links to Cambridge but at present the guided buses often get caught along with all other traffic on congested roads once they reach Cambridge. South Cambridgeshire District Council consulted on whether the reserve site at Northstowe should be allocated in the Local Plan but recognised that this would not increase the number of homes that could be built by 2031, but could provide flexibility in the way the town is built. It is not expected that the reserve land will increase the overall number of homes at Northstowe.

Development at larger villages

46. A total of 640 homes have been built in villages since 2011. There are outstanding commitments for 3,028 homes in the rural area as a whole as at end March 2012 and three site options that were subject to public consultation in the Issues and Options consultation of summer 2012 now have planning permission for a further 185 homes .

Total Existing Supply

47. Cambridge has an existing supply of 10,437, divided between the urban area, and sites on the fringe of the City.

CAMBRIDGE	Completions and Committed Dwellings (March 2013)	Percentage of existing total supply
Cambridge Urban Area	2,978	29
Cambridge Fringe Sites	7,459	71
TOTAL	10,437	

48. The total existing supply for South Cambridgeshire accounts for 14,029 dwellings.

SOUTH CAMBS	Completions and Committed Dwellings (March 2013)	Percentage of existing total supply
Cambridge Urban Area	309	2
Cambridge Fringe Sites	3,902	28
New Settlements	5,965	43
Villages	3,853	27
TOTAL	14,029	

49. The combined total of existing supply of the two districts is shown in the table below.

CAMBRIDGE AND SOUTH CAMBS	Completions and Committed Dwellings (March 2013)	Percentage of existing total supply
Cambridge Urban Area	3,287	13
Cambridge Fringe Sites	11,361	46
New Settlements	5,965	24
Villages	3,853	16
TOTAL	24,466	

50. The current commitments retain the Cambridge focus of the strategy originated in the Structure Plan, with around 60% in or on the edge of the City.
51. The objectively assessed housing needs identified in the Strategic Housing Market Assessment (SHMA), which the two Councils have committed to meeting

in full within their own areas under a country-wide Memorandum of Cooperation, are 14,000 homes for Cambridge and 19,000 homes for South Cambridgeshire for the plan period 2011-2031.

52. A housing requirement of 14,000 dwellings for Cambridge, means the new Local Plan needs to accommodate an additional 3,563 dwellings on top of current supply. A housing requirement of 19,000 for South Cambridgeshire, means the new Local Plan needs to identify sites to accommodate a further 4,971 dwellings.
53. Both individually and in combination, the new local plans of both districts will be determining the location of around 25% of the total development planned in the sub region 2011 to 2031. Whatever the outcome of the strategy a significant focus on Cambridge will remain.

Identifying New Site Options

54. Both Councils have explored a range of site options that could meet the additional development requirements to 2031 through their Issues and Options consultations.

Cambridge

55. Cambridge City Council has undertaken an extensive search for additional housing sites within the built-up area. This involved a Strategic Housing Land Availability Assessment (SHLAA) whereby the Council issued a general 'call for sites' to identify all possible sites that could accommodate housing development in the city as well as undertaking an extensive search for sites. Sites that were put forward were subject to a rigorous assessment leading to a shortlist of sites which could deliver an additional 2,060 homes. These sites were subject to public consultation in January 2013, including initial sustainability appraisal by Cambridge City Council.

On the edge of Cambridge (Cambridge and South Cambridgeshire)

56. The Green Belt surrounding Cambridge has been in place since the 1950s. Green Belt policy has maintained the setting and special character of Cambridge, avoided coalescence with the ring of villages closest to the city, protected the countryside from development and prevented urban sprawl. The result is that Cambridge remains a compact city, surrounded by attractive countryside and a ring of attractive villages to which there is easy access by foot and bicycle. The city centre is unusually close to open countryside, particularly to the west and south-west.
57. These characteristics are valued assets and significantly contribute to the character and attractiveness of the historic city and the wider Cambridge area, and the quality of life enjoyed here. The Green Belt around Cambridge has an inextricable relationship with the preservation of the character of the city, which

is derived from the interplay between the historic centre, the suburbs around it and the rural setting that encircles it.

58. The National Planning Policy Framework (NPPF) states that the Government attaches great importance to Green Belts, with the fundamental aim of Green Belt policy being to prevent urban sprawl by keeping land permanently open. The essential characteristics of Green Belts are their openness and their permanence. The NPPF continues the five long established national purposes of including land within Green Belts as being to:
 - To check the unrestricted sprawl of large built-up areas;
 - To prevent neighbouring towns merging into one another;
 - To assist in safeguarding the countryside from encroachment;
 - To preserve the setting and special character of historic towns; and
 - To assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

59. At the local level, the fourth bullet is of particular significance and the following purposes of the Cambridge Green Belt have been established in previous Local Plans:
 - To preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre;
 - To maintain and enhance the quality of its setting; and
 - To prevent communities in the environs of Cambridge from merging into one another and with the city.

60. Green Belt boundaries can only be established in Local Plans and according to the NPPF, once established they can only be altered in exceptional circumstances. The current inner Green Belt boundary has been established through the Cambridge Local Plan (2006) and South Cambridgeshire Local Development Framework (adopted between 2007 and 2010), including the Cambridge East Area Action Plan (2008) and North West Cambridge Area Action Plan (2009). The exceptional circumstances for establishing the Green Belt boundaries set out in existing plans came through the Cambridgeshire and Peterborough Structure Plan (2003), which sought to focus more growth close to Cambridge to increase the sustainability of development. The Structure Plan agreed broad locations where land should be released from the Green Belt.

61. In order to inform the current detailed Green Belt boundary, two important studies were undertaken. The first was the Inner Green Belt Boundary Study undertaken by Cambridge City Council in 2002 and the second was the Cambridge Green Belt Study by Landscape Design Associates for South Cambridgeshire District Council in September 2002.

62. The study for South Cambridgeshire District Council took a detailed look at the Green Belt around the east of Cambridge and a wider, more strategic look at the Green Belt elsewhere around the city, whilst the Inner Green Belt Boundary Study prepared by Cambridge City Council was carried out to specifically assist with identifying sites that could be released from the Green Belt for development

close to Cambridge without significant harm to the purposes of the Green Belt including the setting of the city.

63. The City Council also commissioned a specific Green Belt study by Landscape Design Associates (2003) in relation to land West of Trumpington Road. This was a requirement of the Structure Plan (2003). This study concluded that there was no case for a Green Belt release concerning the land West of Trumpington Road, in that the land provides a rural setting of arable farmland and water meadows close to the historic core, which is not found elsewhere around Cambridge. A smaller area of land including school playing fields and the golf course was assessed for development within this broad location and it was concluded that these were attractive features in their own right which contribute positively to the quality of the landscape setting of Cambridge, and the quality of life for people within the city.
64. The current Green Belt boundary around the city was established with the expectation that its boundaries could endure to the end of the plan period of 2016 and beyond. However, circumstances have changed, and whilst good progress has been made towards achieving the current development strategy, with development of the fringes all underway with the exception of the Cambridge East airport site, the Councils do need to consider as part of preparing their new Local Plans whether there are exceptional circumstances for reviewing Green Belt boundaries again. In reviewing Green Belt boundaries, the NPPF requires local planning authorities to take account of the need to promote sustainable patterns of development, and with consideration given to the consequences for sustainable development of channelling development outwards 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.
65. The Councils took a joined up approach in the Issues and Options consultations in Summer 2012 and asked whether there should be more development on the edge of Cambridge, if there should be more land released from the Green Belt, and if so, where should this be. Ten Broad Locations around the edge of Cambridge were consulted on to explore whether any had potential to be released from the Green Belt for housing. A summary of the views received is contained in the Site Assessments for Edge of Cambridge Sites evidence document. The ten broad locations were also subject to sustainability appraisal in the Initial Sustainability Appraisal. Promoters of land on the edge of Cambridge through the Councils' respective SHLAA processes resubmitted their sites through the consultations.
66. To help inform the process in moving forward to identifying specific site options, the Councils carried out a joint review of the Inner Green Belt boundary. The purpose of the review was to provide an up to date evidence base for Councils' new Local Plans, and help the Councils reach a view on whether there are specific areas of land that could be considered for release from the Green Belt and allocated for development to meet their identified needs without significant harm to Green Belt purposes.

67. The Inner Green Belt Study Review 2012 builds on the studies that were undertaken in 2002 and 2003 as well as the broad updated appraisal of the Inner Green Belt boundary that the City Council undertook in March 2012 to sit alongside its Issues and Options consultation (Summer 2012). The appraisal of the inner Green Belt boundary areas was undertaken against the backdrop of the most recent land releases and how those releases have affected the revised inner Green Belt boundary. The appraisal specifically reconsidered zones of land immediately adjacent to the city in terms of the principles and function of the Green Belt.
68. In summary, both steps have found that releases of land on the edge of the city through the current Local Plans are sound. However, as a consequence of the releases, the adjacent rural land surrounding these sites now has increased value for Green Belt purposes and to the setting of the city. This increase in value for Green Belt purposes comes from three considerations:
- New developed edges are being created on land released from the Green Belt by previous plans and these edges are moving the city further into its rural surroundings and therefore lessening the extent of the Green Belt;
 - The new edges are different from those previously seen on the edge of the city being more densely developed and usually higher and not so easily softened by vegetation; and
 - Views of the city will be foreshortened as the edge advances into the rural surroundings sometimes making the foreground noticeably more important for the setting of the city.
69. The work concluded that areas where the city is viewed from higher ground or generally has open aspects, or where the urban edge is close to the city centre are more sensitive and cannot accommodate change¹ easily. Areas of the city that have level views and where the edge has mixed foreground can sometimes accommodate change more easily. On a comparative basis these areas have a lesser importance to the setting of the city and to the purposes of Green Belt.
70. Given that the inner Green Belt boundary was looked at very closely only a decade ago it should not be unexpected that the new review has found that most of the inner Green Belt continues to be important for Green Belt purposes and specifically important to protect the setting and special character of Cambridge as a historic city.
71. The work also confirmed that in areas where changes to the city edge are currently envisaged and they are adjacent to important view-points such as motorways or elevated vantage points, there needs to be an appropriately sized area of land retained as Green Belt between any future urban edge and the view/vantage point to still provide a green foreground setting to the city. This green foreground should be retained as Green Belt. This need is vital because development requires a minimum distance between it and the viewpoint to avoid

¹ 'Change' means the introduction of a different feature into the rural/agricultural landscape. This could be an electricity pylon, built development or even a bio-mass crop, but in this instance it is built development.

a harmful effect on the setting of the city. This can be demonstrated on the northern edge of the city where development in places now abuts the A14 with no foreground between the viewpoint and the development. As a result, the development cannot be viewed in any sort of landscape context or setting making it appear severe and discordant.

72. Having thoroughly tested the inner Green Belt boundary, the Inner Green Belt Study Review 2012 found that there are a limited number of small sites, which are of lesser importance to Green Belt purposes. The review also concluded that the significant majority of the remaining Green Belt close to Cambridge is fundamentally important to the purpose of the Cambridge Green Belt and should not be developed. This is considered to be the tipping point, at which if you extend beyond this point for development, the Green Belt purposes and setting of the city are compromised. Any further significant development on the inner edge of the Green Belt would have significant implications for Green Belt purposes and fundamentally change Cambridge as a place. The 2012 study confirmed the conclusions of the Green Belt Study 2002 by Landscape Design Associates, that despite extensive development to the south-east, east and north of the historic core, the scale of the core relative to the whole is such that Cambridge still retains the character of a city focussed on its historic core. The findings of the study were incorporated into the technical assessments of potential site options.

Identifying site options on the Edge of Cambridge

73. Following the identification and testing of broad locations in the 2012 Issues and Options consultation, a long list of sites at the fringe of Cambridge was developed within these broad locations drawing on two sources: Developers' site boundaries received from the 'call for sites' for the Strategic Housing Land Availability Assessments (SHLAAs) carried out by both authorities and also pursued through the 2012 Issues and Options consultations; and additional sites identified through the 2012 Inner Green Belt Review as fulfilling Green Belt purposes to a lesser degree. This resulted in an initial list of 41 sites.
74. These sites were assessed utilising a site assessment pro forma, which was developed jointly to take into account both authorities' Sustainability Appraisal objectives. The pro forma was specifically developed to fully integrate the sustainability appraisal process into site assessment. The criteria in the pro forma take into account the social, environmental and economic sustainability themes and objectives identified in the Sustainability Appraisal Scoping Reports of both Councils. Ensuring that the criteria take into account the SA is the most effective way of ensuring that the SA is central to the appraisal of sites. In this way, the potential effects of bringing forward alternative sites for development can be thoroughly tested and compared. Consultants URS, who are carrying out the Sustainability Appraisal (SA) of the Cambridge Local Plan review, advised on the development of the joint pro forma to ensure that it meets the requirements of SA and the Strategic Environmental Assessment (SEA) Directive. The pro forma also includes planning and deliverability criteria which

do not directly relate to the SA, but are important in order to ensure that the Local Plans are deliverable.

75. The Joint Green Belt Site Assessment Pro forma can be found at Appendix 1 of the Interim Sustainability Appraisal of Issues and Options 2 Part 1. For each criterion there is an explanation as to which of the Cambridge SA topics and South Cambridgeshire SA objectives it relates to. A traffic light system has been used to score the sites from 'red red' (a significant negative impact) to 'green green' (no impact or minor impact which can be mitigated). In most cases there were three potential scores (red, amber, green), but in some cases this was extended at either end to five categories to give a finer grained assessment. The grading range provides a means by which the relative sustainability of each site can be established in comparison with other sites.
76. The pro forma is split into two parts. The first part is a high level sieve (Level 1). It includes strategic considerations, including impact on the Green Belt, flood risk, national biodiversity and heritage designations. It also addresses key deliverability issues. This stage is effective for identifying issues that mean a site should be rejected.
77. Level 2 of the assessment considered a range of issues including accessibility to services and sustainable transport, pollution, historic environment and biodiversity. Although a number of sites were considered to merit rejection following the Level 1 assessment, they were also assessed by the Level 2 criteria in order to give the most comprehensive and robust assessment possible.
78. Map 2 and Appendix 1 in the Issues & Options 2, Part 1 – Joint Consultation of Development Strategy & Site Options on the Edge of Cambridge (November 2012) illustrate the site options tested. The completed pro formas for all of the sites assessed can be found in the 'Technical Background Document – Part 1' at the following link: www.cambridge.gov.uk/ccm/navigation/planning-and-buildingcontrol/planning-policy/background-documents/
79. The individual site pro formas show how each site performs against the criteria that relate to the sustainability objectives.
80. In order to draw information together in an accessible form, and reach an overall conclusion on the merits of the sites assessed, key elements from the pro formas were combined in a series of summaries by broad location which enable the most and least sustainable sites to be identified. These can be found in Appendix 2 of the Issues and Options 2 (2013) Part 1 document.
81. Following the assessment, 6 sites in the Green Belt on the edge of Cambridge were identified as being sites with development potential, albeit with some constraints or adverse impacts (with an overall score of amber). These include two housing sites, two employment sites, one site which could be developed for either housing or employment and one which could be potentially developed for housing, employment or a community stadium. Five of these sites are located

to the south of Cambridge and one is to the north of Cambridge. Four of the sites are within the Cambridge City Council boundary and two fall within South Cambridgeshire. These were subject to public consultation in the joint Issues and Options 2: Part 1 consultation in January 2013.

82. The other sites assessed have been rejected as options for development, due to either their significance to Green Belt purposes and/or for other reasons including planning constraints such as archaeological merit. Reasons for rejection are summarised in Appendix 3 of the Issues and Options 2: Part 1 document.

Identifying Site Options – The Rest of South Cambridgeshire

83. In order to identify reasonable site options, South Cambridgeshire District Council has drawn on its Strategic Housing Land Availability Assessment (SHLAA). The National Planning Policy Framework (NPPF) (March 2012) requires the preparation of Strategic Housing Land Availability Assessments (SHLAA), by local planning authorities, to establish realistic assumptions about the availability, suitability, and likely economic viability of land to meet the identified need for housing over the plan period. A 'Call for Sites' was issued in 2011, and nearly 300 site options with development potential were submitted and subject to testing.
84. Each of the sites was also subject to Sustainability Appraisal. This tested the impact of development on the 23 South Cambridgeshire Sustainability Objectives, identified through the sustainability appraisal scoping process. To assist in making this assessment quantifiable, measurable and transparent, and for direct comparison between sites to be made, the Site Assessment Matrix in appendix 2 of the Initial Sustainability Appraisal indicates how the impact of individual sites against each objective has been determined. For a number of objectives, quantifiable grading was identified to provide a means by which the relative sustainability of each site can be established in comparison with other sites.
85. In order to combine the results of the SHLAA and SA to assist plan making, a summary assessment that draws together the two assessments and reaches a view on the 'Sustainable Development Potential' of each site was prepared. Appendix 6 of the SHLAA document includes detailed assessments of all sites and can be viewed on South Cambridgeshire District Council's website: www.scamb.gov.uk/ldf/shlaa .
86. Annex 1 of the Initial Sustainability Appraisal Report 2012 includes detailed sustainability appraisals of all sites, and Annex 2 the summary assessment for each site.
87. The South Cambridgeshire SHLAA and Sustainability Assessments identify key constraints and considerations relating to potential development sites including suitability, availability and achievability. In order to draw information together in

an accessible form, and reach an overall conclusion on the merits of the sites assessed, key elements from both assessments were combined in a series of settlement summaries which enable the most and least sustainable sites in each settlement to be identified. This was collated in Annex 2 of the Initial Sustainability Appraisal Report 2012. These assessments explore issues in two groups, providing an assessment of the impact and its significance, using a similar mechanism to the SA of identifying a range from significant positive to significant negative impacts. The first group of issues comprises:

- Strategic considerations identified in the SHLAA – Identifies if a site is subject to any strategic considerations that have the potential to make the site unsuitable for development e.g. flood risk, impact on SSSI or Listed Buildings (reflects tier 1 of the SHLAA site assessment. Green Belt impact was drawn out separately).
- Green Belt – Sites in the Green Belt are identified by a negative score, sites outside as neutral. If it is in the Green Belt, impact on the function of the Green Belt was considered, and the scale of impact identified. The assessment included in the SHLAA utilised the LDA Green Belt Study 2002 to guide consideration. Green Belt as a matter of principle was NOT used as an exclusionary factor at this stage.
- SHLAA significant local considerations – Identifies if a site is subject to heritage, environmental and physical considerations, from tier 2 of the SHLAA Assessment (note landscape and townscape impact drawn out separately)
- Landscape and townscape impact – reflects the conclusions of the SHLAA and the Sustainability Appraisal.
- SHLAA site specific factors – Considers the availability and achievability of the site. If a site is scored as a significant negative, it is rejected, as it cannot be delivered.(Reflects tier 3 of the SHLAA assessment).
- Access to key local services, distance to key local services, accessibility by sustainable transport modes – draws on the Sustainability Appraisal to consider transport accessibility.

88. Each summary concludes with the 'Sustainable Development Potential'. This draws on the SHLAA Assessment and the Sustainability Appraisal. It categorises sites as follows:

- More Sustainable Sites with Development Potential (few constraints or adverse impacts) GREEN
- Less sustainable but with development potential (some constraints or adverse impacts) AMBER

- Least Sustainable, with no significant development potential (significant constraints or adverse impacts) RED
89. The entries in the summary assessment sometimes represent a judgement about a number of separate criteria from the SHLAA and Sustainability Appraisal assessments and represent a balanced view of the overall performance of that site across a range of criteria.
 90. The settlement summaries taken together with the full assessments allow for sites to be selected to meet a number of different options relating to the scale of growth and spatial development strategies. They have also helped to make the process and findings accessible for the public during the Issues and Options consultations.
 91. Sites identified as 'Least Sustainable, with no significant development potential' have been rejected at this stage, because they are not considered reasonable options for development.
 92. The approach to village sites has taken into account the village hierarchy, developed following a review of the sustainability of settlements (South Cambridgeshire Village Classification Report 2012), and included in the Spatial Strategy chapter of the Local Plan. This identifies Rural Centres as the most sustainable villages in the district, with the highest level of access to a combination of services, facilities, employment and public transport, providing services to a small rural hinterland. Minor Rural Centres are the next in the hierarchy, offering a lower level of services and facilities, but still more than smaller villages. Sites that were consulted on as potentially falling in a new category 'Better Served Group Villages' provide a lower level of services and facilities, but could be differentiated from Group villages, which only benefit from a low level of services but include a primary school. At the bottom of the hierarchy, infill villages do not have a primary school, and are generally the smallest villages in the District.
 93. After reviewing the potential development sites, it was clear that sufficient sites could be identified as higher levels of the hierarchy, without relying on allocations in the smallest villages, which would lead to a dispersed pattern of development where the fewest services and facilities are available. Therefore sites at Group and Infill villages were not considered reasonable alternatives and were not consulted on, even if they scored Amber in the assessments. Such sites may be capable of development as windfalls or as rural affordable housing exception sites depending on their location and scale, but they would not reflect a sustainable form of development in the context of a district wide strategy and so have not been considered as options for development site allocations in the Local Plan.

New settlements

94. A total of 14 sites which would either deliver new standalone settlements, or expand existing new settlements, were tested through the SHLAA and Sustainability Appraisal process.
95. Five options were subsequently identified for consultation in Issues and Options 2012. The Strategic Reserve at Northstowe, identified in the current Local Development Framework, was identified, but is unlikely to deliver additional dwellings at Northstowe during the plan period and may simply help provide the planned 9,500 homes in a high quality form of development. Potential new settlements were identified at Waterbeach Barracks, with three different scale options identified. A new village at Bourn Airfield was also identified as an option.
96. New settlement options could deliver significant numbers of new homes but they have major infrastructure requirements, particularly in terms of transport measures.. High quality, sustainable transport solutions would be essential to minimise commuting by private car.
97. New settlements also require long lead in times before they can deliver homes on the ground and therefore could only provide homes for the second half of the plan period, although they would continue to provide housing beyond the plan period. A new town at Waterbeach Barracks may only deliver 1,400 dwellings during the plan period. A new village at Bourn Airfield may have greater potential to deliver in the plan period if appropriate.

Larger, better served villages

98. South Cambridgeshire District Council consulted in Issues and Options 2012 on site options that could deliver a total of 5,850 new homes on village sites. This included a strategic scale development at Cambourne.
99. In response to Issues and Options 2012 consultation, 58 new sites were submitted to the Council for consideration. Those in Group and Infill villages were not assessed, because they are the villages with limited services and facilities and the least sustainable locations for development. The 30 sites in identified Better Served Group Villages and above were assessed and 10 additional site options were identified for consultation in the I&O2. These sites could deliver an additional 1,245 new homes. This gives options for a total of 7,095 additional new homes at this lowest stage in the development sequence.

Public Consultation

100. Site options were subject to public consultation through the Issues and Options Consultations, including the joint consultation in January 2013.

101. Over 38,000 representations have been submitted to the councils in response to the two issues and options consultations that have taken place so far. Summaries of the representations, as well as the individual representations, are available to view on the Councils' websites.
102. The Councils have reviewed and considered the comments received, including Member Workshops for South Cambridgeshire Members and the Development Plan Scrutiny Sub-Committee for Cambridge City Council Members. The Councils have also considered a range of possible options that flow from the development strategy options and the site options consulted on and tested those through the SA process. They have also been tested through transport modelling and as the long list of site options has been narrowed down, key stakeholders have been asked again for their views on the emerging shortlist of sites to help further refine the preferred strategy and package of sites, such as the education authority.
103. As referred to earlier, the SA of the broad strategy options at Appendix 1 demonstrates that focusing development on Cambridge remains the most sustainable location for additional development and the Cambridge SHLAA has identified 6,302 new homes through windfall sites or allocations within the urban area in the new Local Plan.
104. The edge of Cambridge is the next most sustainable location against a range of objectives for growth in the development sequence, but the SA identifies the importance of balancing the accessibility aspects of sustainable development and the environmental and social benefits it brings, with the significant harm to the landscape and setting environmental aspects of sustainability that development on land in the Green Belt would have, with the resulting irreversible adverse impacts on the special character and setting of Cambridge as a compact historic city and the risks that could have to the economic success of the Cambridge area, which is in part built on its attractiveness as a place to live and work. The detrimental impacts of further major development on the edge of Cambridge was demonstrated in the Inner Green Belt Study Review 2012 and major extensions to Cambridge were rejected as reasonable options and not consulted on in Issues and Options 2 in 2013. The assessment process identified six Green Belt sites as potential options for development and this limited refinement of the Green Belt would mean that Cambridge is able to meet its full objectively assessed needs within its administrative area. Results of consultation on the appropriate balance between edge of Cambridge or new settlements and better served villages was strongest to protect the Green Belt.
105. The effect of decisions on reasonable site options on the edge of Cambridge is to require development away from Cambridge to meet the remaining development needs of the wider Cambridge area. The SA of broad locations at Appendix 1 confirms earlier findings from the Regional Spatial Strategy review and Structure Plan that new settlements are the next most sustainable location for growth and that development at villages should be limited for sustainability reasons.

106. South Cambridgeshire's SHLAA and Initial Sustainability Report demonstrate that there are 2 new settlement options that can be considered for development in the new Local Plan: a new town at Waterbeach and a new village at Bourn Airfield. The other new settlement options put to the Council were rejected in the SHLAA and initial SA process. The 2 sites identified scored as Amber in the assessment largely because it is inevitable that such a major development will have some adverse impact on some aspects of sustainability, but it was considered that they would be capable of mitigation through carefully designed development proposals. The results of consultation supported concentration on new settlements rather than focus on edge of Cambridge due to Green Belt impacts
107. At the more sustainable village stage of the sequence, South Cambridgeshire consulted on a range of housing site options across the district. The largest of these was a major extension to Cambourne, through a fourth linked village to the west of the existing village. The results of consultation offered some support to better served villages, although to a lesser extent than new settlements.

Consideration of alternative packages of sites

108. The Councils have followed an iterative process of developing the preferred strategy.
109. For Cambridge, the level of objectively assessed need is such that all reasonable options have needed to be included in the Local Plan and Cambridge City Council does not consider that any reasonable alternatives exist for meeting need beyond this, in view of the outcome of work to consider potential for Green Belt review.
110. For South Cambridgeshire, having jointly reached the view on the edge of Cambridge, the options available are around the number of new settlements identified in the new Local Plan, the possible timing and level of delivery that could be secured in the plan period from those sites, whether to include a major expansion of the previously established new village of Cambourne, and the implications for level of village provision that would need to be made and identifying the best available sites in the better served villages.
111. Important issues for shortlisting the preferred village sites included:
- providing homes close to the jobs in and around Cambridge,
 - providing homes close to the jobs south of Cambridge in view of the predominance of new housing in villages to the north over many years and substantial jobs growth in the south,
 - focus on more sustainable villages with high quality public transport links to Cambridge
 - making best use of brownfield land
 - Avoid green spaces, and areas of flood risk
 - sites with parish council and local support

112. A range of options around the new settlement options, major expansion of Cambourne and the best available sites at villages have been identified and tested through SA, to consider the relative impact of different development packages. This included looking at different levels of growth at some of the site options to minimise adverse impacts and secure the most sustainable form of development. Details are included in appendix 2 of this report.

The Revised Strategy

113. The Councils are now at the stage of identifying the preferred package of housing sites to include in their Local Plans to meet their identified objectively assessed needs. Given the significant level of supply from each Council's current plans of 10,400 for Cambridge and 14,000 for South Cambridgeshire, the Councils need to allocate land for a further 3,600 and 5,000 homes respectively.
114. Cambridge City Council has identified sites for 3,324 new homes through new allocations and windfall development in the urban area of Cambridge. In addition, land north and south of Worts Causeway is proposed to be removed from the Green Belt and allocated for housing to deliver 430 dwellings. This would enable the City Council to meet its full identified housing needs within its administrative area.
115. It is also proposed to allocate the 3 sites on Fulbourn Road close to ARM for employment, 2 in Cambridge City Council's area and 1 in South Cambridgeshire.
116. A small expansion of the existing NIAB2 housing site in South Cambridgeshire between Huntingdon and Histon roads is also proposed, although this would not increase the overall number of homes currently planned but instead provide more room to ensure a high quality development. It is not proposed to include employment on the site so that there is sufficient room for the supporting infrastructure necessary for the housing development to retain a green foreground to Cambridge Road.
117. Strategic options for new development in South Cambridgeshire focus on new settlements and previously established new settlements, with new allocations for:
- New town at Waterbeach Barracks – 8,000 homes, 1,400 of which by 2031.
 - New village at Bourn Airfield – 3,500 homes, 1,470 of which by 2031.
 - Cambourne West – 1,500 homes, all by 2031.
118. The preference to allocate all three strategic sites has been influenced by the long lead in times for new settlements which will therefore come forward later in the plan period and continue developing beyond 2031. Without also including major expansion of Cambourne, a significant amount of development would be required at villages and would result in the sort of dispersed development strategy previously having been found to be unsustainable. Bourn Airfield new

village would be delayed by two years to come forward slightly later in the plan period than it otherwise might, so that the remainder of Cambourne is well progressed before any development starts at Bourn Airfield. This will also help provide additional flexibility. The strategic sites will provide 4,370 homes in the plan period. Starting Waterbeach towards the end of the plan period has the benefit of ensuring that Northstowe will be well established before another new town development begins.

119. The major sites will be supported by limited development at the more sustainable villages in the order of 900 homes to provide flexibility and help ensure a continuous supply of housing land over the plan period, including if there is any delay in progress on any of the major sites.

(Note: the preferred village sites will be considered at South Cambridgeshire's Planning Policy and Localism Portfolio Holder's meeting on 11 June)

120. The table below shows the level of development proposed at each stage of the development sequence:

CAMBRIDGE AND SOUTH CAMBRIDGESHIRE HOUSING 2011 TO 2031	Existing Completions and Commitments (both areas)	New Sites Cambridge	New Sites South Cambs	TOTAL	Percentage
Cambridge Urban Area	3,287	3,324	0	6,611	20
Edge of Cambridge	11,361	430	100	11,891	35
New Settlements	5,965	0	4,370	10,335	31
Villages	3,853	0	895	4,748	14
TOTAL	24,466	3,754	5,365	33,585	100

121. The development strategy identified includes development at a number of levels in the sequence taking account of the opportunities and constraints identified.

122. Cambridge remains the focus of the development strategy comprising 55% of the housing requirement 2011 to 2031. This is comparable with and slightly higher than the 52% in the Structure Plan strategy.

123. Only minor additional Green Belt development potential was identified on the edge of Cambridge in addition to the extensive existing commitments because of the significant harm this would cause to the purposes of the Green Belt. The additional dwellings, added to those already committed, mean that 35% of all new development is planned on the edge of Cambridge, compared with 25% in the Structure Plan.

124. In addition to the new settlement at Northstowe, the strategy proposes additional new settlements at Bourn Airfield, and in the longer term Waterbeach Barracks. This will enable infrastructure investment to be focused to maximise benefits, maximise travel by non-car modes, support the re-use of significant previously

developed sites, and reduce the need for further development at villages as the final and least sustainable stage in the development sequence, although some village development is proposed to provide flexibility.

125. At the village level, development will be focused on the more sustainable villages with the best range of services and facilities, including taking account of opportunities to utilise previously developed land.

126. A comparison with the Structure Plan 2003 strategy is provided below.

	Structure Plan 1999 to 2016	Percentage	New Strategy 2011 - 2031	Percentage
Edge of Cambridge	8,000	25	11,891	35
New Settlements	6,000	18	10,335	31
Villages	9,600	30	4,748	14

APPENDIX 1

The sustainability implications of focusing development at different spatial locations

The following builds on the assessment of South Cambridgeshire Issues and Options 2012 Issue 9: Development Strategy, which considered the broad implications of focusing development at different locations in the development sequence. It additionally includes a comparison with development within the Cambridge urban area to cover the whole of the development sequence. It has also been reviewed by Environ, who are completed the Final Sustainability Appraisal of the South Cambridgeshire Local Plan.

The appraisal is structured around the South Cambridgeshire sustainability objectives, established through the South Cambridgeshire Sustainability Appraisal Scoping Report. The linkages to the Cambridge City Sustainability Appraisal Framework and its Objectives have been considered, and the relationship between the sustainability objectives is detailed at the end of this note.

	1. Land	2. Waste	3. Air quality and environmental pollution	4. Designated sites and protected species	5. Habitats and species	6. Access to wildlife and green spaces	7. Landscape and townscape character	8. Historic Environment	9. Good Spaces	10. Climate Change Mitigation	11. Climate Change Adaptation	12. Human health	13. Crime	14. Public Openspace	15. Housing	16. Inequalities	17. Services and Facilities	18. Involvement	19. Economy	20. Access to Work	21. Infrastructure	22. Sustainable Travel	23. Transport infrastructure
Cambridge Urban Area	+++	~	?	~	?	~	+	~	~	~	~	?	~	~	~	~	+++	~	~	+++	+++	+++	+++
Edge of Cambridge	-	~	?	?	?	+++	--	-	~	~	~	?	~	~	~	~	+ / +++	~	~	+++	+++	+++	+++
New settlements	+	~	~	?	?	+++	--- / ?	~	~	+++ / ?	~	~	~	~	~	~	+ / +++	~	~	+++ / ?	+++	+ / +++	+++
More sustainable villages	-	~	~	?	?	+	- / ?	~	~	~	-	~	~	~	~	~	+	~	~	+	+	-	-
Smaller less sustainable villages	-	~	~	?	?	+	- / ?	~	~	~	~	~	~	~	~	~	--	~	~	--	-	--	--

ASSESSMENT KEY

Symbol	Likely effect against the SA Objective
+++	Potentially significant beneficial impact, option supports the objective
+	Option supports this objective although it may have only a minor beneficial impact
~	Option has no impact or effect is neutral insofar as the benefits and drawbacks appear equal and neither is considered significant
?	Uncertain or insufficient information on which to determine the assessment at this stage
-	Option appears to conflict with the objective and may result in adverse impacts
---	Potentially significant adverse impact, conflict with the objective

This assessment considers the range of broad strategies / options available for growth. This is a high level appraisal of strategic options and actual impacts on many objectives would depend on the specific site options identified for development, and therefore these are more appropriately explored elsewhere.

Cambridge

Development in Cambridge offers opportunities to re-use previously developed land, making use of the existing urban area, reducing the need to develop greenfield / agricultural land. Cambridge provides the highest concentration of jobs, and high order services and facilities in the Cambridge area, placing residential development in the urban area would enable the closest access to these. With regard to air quality, the central area of the city is identified as an AQMA, and therefore further development could include placing further population in this area. However, development in the urban area has best opportunity to support non-car modes of transport, and the compact nature of the city makes it particularly suitable for cycling in addition to walking.

Edge of Cambridge

An edge of Cambridge focus would involve Green Belt development, and loss of significant amounts of high grade agricultural land. The review of the Green Belt identified that it would not be possible to deliver significant additional development on the edge of Cambridge without significant detriment to the specific purposes of the Cambridge Green Belt. These purposes highlight the importance to the historic City of Cambridge of the quality of its setting as well as the usual role of Green Belts in preventing communities from merging with one another. The recent review of the Green Belt released large areas of less significance to Green Belt purposes, and the land that remains on the inner edge becomes increasingly important.

Development on the edge of Cambridge would be the next closest development option to the urban area of the city, supporting access opportunities by alternative modes, although access to public transport services is better close to radial routes with good services, and some areas around the City currently have more limited access to high quality public transport. Larger developments could include their own local centres, and be accessed by new public transport routes.

Development on the edge of Cambridge could bring dwellings closer to the M11 or A14, areas of relatively poor air quality (with an AQMA on the A14). Major development has the potential to worsen air quality, although it would support greater use of non-car modes than more distributed patterns of development. Development near to busy routes would still add to congestion at peak times.

Green Infrastructure opportunities would vary by site, but larger scale development could support delivery of significant green infrastructure. A number of larger site proposals specifically reference the potential to deliver significant open space or Green Infrastructure beyond the minimum required by policy.

New Settlements

A focus on new settlements could utilise previously developed land opportunities, such as former airfields or military barracks, although they would also be likely to still utilise significant areas of greenfield land. New settlements could incorporate significant public transport routes to Cambridge, and new town and local centres as appropriate, to ensure that residents have convenient access to local services and facilities by walking, cycling and public transport. They have the potential to enable focussed investment in public transport and cycling infrastructure, delivering high quality services to provide a significantly higher modal share of travel by non-car modes than village based growth options. The greater distance from Cambridge would mean higher levels of car use (although significantly better than dispersed villages based strategies), and it would result in focused pressure on specific routes. This could have local air quality implications.

New settlements could be developed with a mix of uses with employment delivering jobs locally and their own services and facilities of higher order than smaller scale growth at existing villages. This could provide a degree of self-containment, by providing opportunities to live and work in the same place, however, the greatest concentration of jobs will remain in and close to Cambridge.

The scale and mixed use nature of new settlements offer specific opportunities for renewable energy based upon potential for combined heat and power.

Impact on landscape would depend on the site, but the scale of a new settlement means that impacts could be significant. Some sites were tested with more limited wider landscape impacts. Located outside the green belt they would have a lesser impact on townscape, and the setting of Cambridge. Sites tested were all outside the Green Belt. New settlements could provide opportunity to deliver significant green infrastructure.

More Sustainable Villages

A focus on the more sustainable villages would focus development on villages where there is the best access to local services and facilities and best public transport to access higher order services and facilities in Cambridge, but comparatively villages offer a reduced range of opportunities, and the need to travel would be greater than in other options.

There are likely to be significantly less opportunities to deliver sustainable transport than a Cambridge focused or new settlement option, as spreading development around villages would be likely to deliver incremental improvements at best, rather than focused investment. Traffic impacts would be spread more around the district, but there would be a higher modal share for car use. Outside the Rural Centres public transport services are generally limited in terms of frequency and journey time. Cycling opportunities would also be lower than other strategy approaches, as distances to Cambridge or market towns would be greater, and would often rely on rural roads rather than dedicated routes.

A distribution to smaller sites would have a more incremental impact on the landscape and townscape, but village expansions could negatively impact on village character. The most sustainable villages are inset into the Green Belt close to Cambridge. A village based option would require incremental improvement to village infrastructure. This could put pressure on existing village services and facilities, such as schools, doctors and utilities. A more distributed pattern of village development would provide no direct opportunities to deliver significant scale green infrastructure. In order to identify the quantity of sites required to deliver required levels of development through a village focus, it could require the use of some sites in flood zone 2.

Other Villages

Focusing more development into less sustainable villages (group and infill villages) would have significant adverse impacts on access to services and facilities, employment, and sustainable transport. A village based strategy requiring development at lower levels of the village hierarchy would increase the proportion of growth at greater distances from major employment areas than other strategic approaches. In many cases public transport in smaller villages is extremely limited, and most lack any significant services and facilities, therefore increasing the journey length to access these.

Key to Sustainability Objectives

Further information on the objectives can be found in the individual districts sustainability appraisal scoping reports.

South Cambridgeshire Sustainability Objectives		Cambridge City Sustainability Objectives
LAND	1. Minimise the irreversible loss of undeveloped land, economic mineral reserves, productive agricultural holdings, and the degradation / loss of soils	1. Communities and Wellbeing
	2. Minimise waste production and support the reuse and recycling of waste products	
POLLUTION	3. Improve air quality and minimise or mitigate against sources of environmental pollution	4. Water 1. Communities and Wellbeing
BIODIVERSITY	4. Avoid damage to designated sites and protected species	8. Biodiversity and Green Infrastructure
	5. Maintain and enhance the range and viability of characteristic habitats and species	
	6. Improve opportunities for people to access and appreciate wildlife and green spaces	
LANDSCAPE, TOWNSCAPE AND CULTURAL HERITAGE	7. Maintain and enhance the diversity and local distinctiveness of landscape and townscape character	7. Landscape, Townscape and Cultural Heritage
	8. Avoid damage to areas and sites designated for their historic interest, and protect their settings.	
	9. Create places, spaces and buildings that work well, wear well and look good	
CLIMATE CHANGE	10. Minimise impacts on climate change (including greenhouse gas emissions)	6. Climate change mitigation and renewable energy
	11. Reduce vulnerability to future climate change effects	5. Flood risk including climate change adaptation

HEALTH	12. Maintain and enhance human health	1. Communities and Wellbeing	
	13. Reduce and prevent crime and reduce fear of crime		
	14. Improve the quantity and quality of publically accessible open space.		
HOUSING	15. Ensure everyone has access to decent, appropriate and affordable housing		
INCLUSIVE COMMUNITIES	16. Redress inequalities related to age, disability, gender, race, faith, location and income		
	17. Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities)		
	18. Encourage and enable the active involvement of local people in community activities		
ECONOMIC ACTIVITY	19. Improve the efficiency, competitiveness, vitality and adaptability of the local economy.		2. Economy
	20. Help people gain access to satisfying work appropriate to their skills, potential and place of residence		
	21. Support appropriate investment in people, places, communications and other infrastructure		
TRANSPORT	22. Reduce the need to travel and promote more sustainable transport choices.	3. Transport.	
	23. Secure appropriate investment and development in transport infrastructure, and ensure the safety of the transport network.		

Appendix 2 Site Package Options for Sustainability Appraisal

In order to compare the sustainability of delivering the remaining housing needs for South Cambridgeshire at different locations, packages of sites have been identified and tested, to compare the cumulative impacts.

Eight different packages were identified, each with a different focus for the remaining development. It would not be reasonable to test every potential combination of options, but the aim has been to providing a good coverage of strategic alternatives that could be delivered with the site options available taking account of the issue and options and initial sustainability appraisal process.

Where new settlements have been considered, the deliverability and potentially longer lead in times have been taken into account. The phasing relative to other options has also been considered, in order to achieve the development needed in the plan period. In some cases different amounts of a site being developed in the plan period have been considered, with the remainder being developed later.

Further details of this assessment will be included in the South Cambridgeshire Final Sustainability Report, which will accompany the draft Local Plan.

Option 1 - Waterbeach New Town, Cambourne West and Village Focus

This option includes provision from the partial completion by 2031 of a new town at Waterbeach, with the remainder after 2031, the completion of an extension to the existing new settlement at Cambourne and development at a range of villages down to the 'Better Served Group Village' level.

Option 2 - Bourn Airfield New Settlement and Village Focus

This option includes the completion of a new settlement at Bourn Airfield within the plan period, and limited development in Rural Centres and Minor Rural Centre villages to meet the remaining requirement.

Option 3 - Cambourne and Village Focus

This option is a village focused approach. It includes completion of an extension to the existing new settlement at Cambourne, with the remainder of new development focused on other villages. At Waterbeach, there would be no new settlement, but the redevelopment of the barracks themselves would accommodate around 900 dwellings.

Option 4 - Waterbeach New Town, Bourn Airfield New Settlement, and Cambourne West Focus

This option includes provision from the partial completion by 2031 of a new town at Waterbeach, the partial completion of a new settlement at Bourn Airfield, the completion of an extension to the existing new settlement at Cambourne. This would be supported by selected development at Rural Centres and Minor Rural Centres.

Option 5 - Waterbeach New Town, Bourn Airfield New Settlement and Village Focus

This option includes provision from the partial completion by 2031 of a new town at Waterbeach, the partial completion of a new settlement at Bourn Airfield (but more than Option 4 assumes), and development at Rural Centres and Minor Rural Centres.

Comparing with Green Belt strategies

As detailed earlier, the assessment of 41 individual potential site options highlighted the potential harm to the Green Belt and the setting of the City of significant further development. Only 6 site options were identified, and all have been included within the proposed development strategy.

The sustainability appraisal earlier identified potential benefits on some sustainability objectives of further development in the Green Belt. In order to provide a comparison with other strategies, packages have been tested which include further development in the Green Belt, building on the assessments of tested but rejected sites. Testing has considered the overall impact of identifying the quantum of development in the broad locations available, rather than identifying specific rejected site options.

Option 6 - Cambridge Green Belt and Village Focus

This option assumes 2 or 3 large urban extensions to Cambridge on land currently in the Green Belt. This would accommodate around 4000 dwellings. This would be supported by selected village sites at Rural Centres and Minor Rural Centres, with a focus on previously developed land.

Option 7 - Cambridge Green Belt, Waterbeach New Town, Cambourne West and Village Focus

This option assumes 1 or 2 large urban extensions to Cambridge on land currently in the Green Belt, accommodating around 2000 dwellings. The remaining development needs would be accommodated through the partial completion of a new town at Waterbeach, the completion of an extension to the existing new settlement at Cambourne and limited development at villages.

Option 8 - Cambridge Green Belt, Waterbeach New Town, Bourn Airfield New Settlement, Cambourne West and Village Focus

This option assumes delivery of smaller sites on land currently in the Green Belt on the edge of Cambridge, provision from the partial completion of a new town at Waterbeach, the completion of an extension to the existing new settlement at Cambourne and selected development at Rural Centres and Minor Rural Centres.

Table 1 Development Packages for Sustainability Appraisal

Options by Development Sequence (South Cambs only)	Existing Supply	Opt 1		Opt 2		Opt 3		Opt 4 (was 9)	
		Existing Supply & New Sites	New Sites Only	Existing Supply & New Sites	New Sites	Existing Supply & New Sites	New Sites	Existing Supply & New Sites	New Sites
Cambridge urban area	309	309	0	309	0	309	0	309	0
Cambridge fringe sites	3,902	4,002	100	4,002	100	4,002	100	4,002	100
New settlement(s)	5,965	7,365	1,400	9,465	3,500	5,965	0	8,835	2,870
Rural Centres	1,779	4,314	2,535	2,444	665	4,314	2,535	3,969	2,190
Minor Rural Centres	1,082	2,182	1,100	1,597	515	3,477	2,395	1,287	205
Group Villages	846	846	0	846	0	846	0	846	0
Infill Villages	147	147	0	147	0	147	0	147	0
TOTAL	14,029	19,164	5,135	18,809	4,780	19,059	5,030	19,394	5,365

Options by Development Sequence (South Cambs only)	Existing Supply	Opt 5		Opt 6		Opt 7		Opt 8	
		Existing Supply & New Sites	New Sites	Existing Supply & New Sites	New Sites	Existing Supply & New Sites	New Sites	Existing Supply & New Sites	New Sites
Cambridge urban area	309	309	0	309	0	309	0	309	0
Cambridge fringe sites	3,902	4,002	100	8,002	4,100	6,002	2,100	5,032	1,130
New settlement(s)	5,965	9,665	3,700	5,965	0	7,365	1,400	7,865	1,900
Rural Centres	1,779	2,444	665	1,999	220	3,479	1,700	3,499	1,720
Minor Rural Centres	1,082	1,422	340	1,422	340	1,082	0	1,597	515
Group Villages	846	846	0	846	0	846	0	846	0
Infill Villages	147	147	0	147	0	147	0	147	0
TOTAL	14,029	18,834	4,805	18,689	4,660	19,229	5,200	19,294	5,265

Each package of sites has been tested utilising the Sustainability Objectives developed through the South Cambridgeshire Sustainability Appraisal Scoping Report, by consultants Environ.



South Cambridgeshire Local Plan Sustainability Appraisal

Draft SA Results for Packages of Sites

Prepared for:
**South Cambridgeshire District Council
Cambourne**

Prepared by:
**ENVIRON
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Version Control Record				
Issue	Description of Status	Date	Reviewer Initials	Author Initials
A	First Draft	17/05/13	VTT	TM
1	Draft SA Report to client	20/05/13	VTT	VTT/TM
1A	Minor amendments	20/05/13	VTT	VTT/TM
2	Final Draft Report	20/05/13	VTT	VTT/TM

1 Introduction

This draft report outlines the results of a sustainability appraisal of site packages for the South Cambridgeshire Local Plan. These packages have been selected as the reasonable alternatives which could deliver the additional 4,971 dwellings need to meet the South Cambridgeshire identified housing needs. The preferred package, when chosen following the sustainability appraisal, will contribute to a much larger development strategy for the Cambridge area, involving almost 55 % of development (18,000) houses in and on the edge of Cambridge.

This assessment builds upon work undertaken by South Cambridgeshire District Council for its site assessments.

The purpose of this assessment is to identify, describe and evaluate the likely significant effects on the environment¹ and sustainability, of the reasonable alternative packages of sites. There are 8 reasonable alternative packages which have been subject to assessment.

2 Sustainability Appraisal Methodology

This assessment builds on comprehensive assessment work at the site level which has already been undertaken by the South Cambridge District Council. It uses the same SA Framework as these previous assessments.

Key to the appraisal scoring:

Symbol	Likely effect against the SA Objective
+++	Potentially significant beneficial impact
+	Policy supports this objective although it may have only a minor beneficial impact
0	Policy has no impact or effect is neutral insofar as the benefits and drawbacks appear equal and neither is considered significant
?	Uncertain or insufficient information on which to determine or base the assessment at this stage
-	Policy appears to conflict with the objective and may result in adverse impacts
---	Potentially significant adverse impact

¹ As required by the Article 5 SEA Directive.

Option 2 - Bourn Airfield New Settlement and Village Focus

PACKAGE 2															
	Site name/category	NIAB3	BA	Rural Centres				Minor Rural Centres				Overall			
1	Previously developed land	0	+	+++	0	0	0	+++	0	0	0	+++	0	0	+
	Agricultural land	-	---	0	-	-	-	0	-	-	-	0	-	-	---
	Mineral reserves, soils	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Air quality	-	-	0	0	0	0	0	0	0	0/-	0	0	0	-
	Noise, light pollution, odour & vibration	0	-	+++	0	0	0	-	-	-	-	+++	0	0	-
	Land contamination	+	+	+	0	0	+/0	+	0	+	+	+	0	+	+
	Water environment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Nature conservation interest & geodiversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Habitat fragmentation, native species, habitat restoration	+	0	0	+	+	+	0	0	0	0	0	0	0	+
6	Access to wildlife & green spaces	0	+	0	0	0	0	0	0	0	+	0	0	0	+
7	Landscape character	-	0	+	0/+	0/+	0/+	0	-	0	---/-	0	0	0	-
	Townscape character	-	0	0/+	0	0	0	+++	-	-	---/-	+	0	0	-
8	Historical, archaeological, cultural	0	0/-	0	0	0/-	0	0	0	0	0	+/0	0	0	0
10	Renewable energy resources	0	+ /+++	0	0	0	0	0	0	0	0	0	0	0	+
11	Flooding, SUDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Open space	+++	+	0	0	+	0	0	0	0	+	0	0	0	+
16	accessibility to local services/ facilities	+++	+	+	+	+	+	+++	0	0	0	0	0	0	+
	Distance to centre	+	0	---	---	-	---	---	---	---	-	+++	-	-	-

PACKAGE 2														
Site name/category	NIAB3	BA	Rural Centres				Minor Rural Centres					Overall		
safer transport network & promote use of non-motorised modes	+	+++	+	0	0	0	+++	+	+	+/+++	+	+	+	+++

Option 4 - Waterbeach New Town, Bourn Airfield New Settlement, and Cambourne West Focus

PACKAGE 4																	
	Site name/category	NIAB3	WNT	BA	Rural Centres						CW	Minor Rural Centres				Overall	
1	Previously developed land	0	+++	+	+++	0	0	0	+++	0	0	0	0	0	+++	0	+++
	Agricultural land	-	---	---	0	-	-	-	0	-	-	---	-	-	0	-	---
	Mineral reserves, soils	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	-
3	Air quality	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	-
	Noise, light pollution, odour & vibration	0	0	-	+++	0	0	0	-	0	0	0/-	0	0	+++	-	-
	Land contamination	+	+	+	+	0	0	+/0	+	+	+	0	0	+	+	+	+
	Water environment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Nature conservation interest & geodiversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Habitat fragmentation, native species, habitat restoration	+	+++	0	0	+	+	+	0	0	0	+/0	0	0	0	0	+
6	Access to wildlife & green spaces	0	+++	+	0	0	0	0	0	0	0	+/+++	0	0	0	0	+
7	Landscape character	-	-	0	+	0/+	0/+	0/+	0	-	-	0/-	0	0	0	-	-
	Townscape character	-	0	0	0/+	0	0	0	+++	-	-	0	0	0	+	-	-
8	Historical, archaeological, cultural	0	-	0/-	0	0	0/-	0	0	-	-	0	0	0	+/0	0	-
10	Renewable energy resources	0	+++	+/+++	0	0	0	0	0	0	0	0/+	0	0	0	0	+
11	Flooding, SUDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Open space	+++	+++	+	0	0	+	0	0	+	+	+/+++	0	0	0	0	+++
16	accessibility to local services/ facilities	+++	+	+	+	+	+	+	+++	+	+	+	0	0	0	0	+
	Distance to centre	+	0	0	---	---	-	---	---	+	0	---	-	-	+++	-	---
	Quality & range of local services & facilities	0	+++	+++/+	0	+	+	0	0/-	+	+	+/+++	0	0	0	0	+++

Option 5 - Waterbeach New Town, Bourn Airfield New Settlement and Village Focus

PACKAGE 5														
	Site name/category	NIAB3	WNT	BA	Rural Centres				Minor Rural Centres				Overall	
1	Previously developed land	0	+++	+	+++	0	0	0	+++	0	+++	0	0	+
	Agricultural land	-	---	---	0	-	-	-	0	-	0	-	-	---
	Mineral reserves, soils	0	-	0	0	0	0	0	0	0	0	0	0	-
3	Air quality	-	-	-	0	0	0	0	0	0/-	0	0	0	-
	Noise, light pollution, odour & vibration	0	0	-	+++	0	0	0	-	-	+++	0	0	-
	Land contamination	+	+	+	+	0	0	+/0	+	+	+	0	+	+
	Water environment	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Nature conservation interest & geodiversity	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Habitat fragmentation, native species, habitat restoration	+	+++	0	0	+	+	+	0	0	0	0	0	+
6	Access to wildlife & green spaces	0	+++	+	0	0	0	0	0	+	0	0	0	+
7	Landscape character	-	-	0	+	0/+	0/+	0/+	0	---/-	0	0	0	-
	Townscape character	-	0	0	0/+	0	0	0	+++	---/-	+	0	0	-
8	Historical, archaeological, cultural	0	-	0/-	0	0	0/-	0	0	0	+/0	0	0	-
10	Renewable energy resources	0	+++	+/+++	0	0	0	0	0	0	0	0	0	+
11	Flooding, SUDS	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Open space	+++	+++	+	0	0	+	0	0	+	0	0	0	+
16	accessibility to local services/ facilities	+++	+	+	+	+	+	+	+++	0	0	0	0	+
	Distance to centre	+	0	0	---	---	-	---	---	-	+++	-	-	-
	Quality & range of local services & facilities	0	+++	+++/+	0	+	+	0	0/-	+	0	0	0	+++

PACKAGE 5														
	Site name/category	NIAB3	WNT	BA	Rural Centres				Minor Rural Centres				Overall	
1 7	Ability of people to influence decisions	0	0	0	0	0	0	0	0	0	0	0	0	0
1 8	Engagement with community activities	0	+++	+++	0	+/0	+/0	0	0	+	0	0	0	+++
1 9	Business development & competitiveness	+	+++	+++	-/0	0	0	0	0/-	0	0	0	0	+++
	Shopping hierarchy	0	0	0	0	0	0	0	0/-	0	0	0	0	0
2 0	employment opportunities in accessible locations	+++	0/+++	+/+++	+	+	+	+	+++	+	0	+++	+++	+
2 1	investment in key community services & infrastructure	-	-	-	-	-	-	-	+	+	+	+++/+	+++/+	-
	access to education & training, & provision of skilled employees	+	-	-	-	-	-	-	+	-	+	+++	+++	-
	shorter journeys, improve modal choice & integration modes	+++	+	0	0	0	0	0	+++	+	0	+	+	+
	distance to bus stop / rail station	+++	0	0	0	-	0	-	+++	+	+++	+	+	+
2 2	frequency of Public Transport	+	+/?	+	+	+	+	+	+++	+	---	-	-	+
	typical Public Transport Journey Time to City Centre or Market Town	+++	+/?	0	-	0	0	-	+++	0	+	+++	+++	+
	distance for cycling to City Centre or Market Town	+++	+	0	+	+	0	+	+++	+	+	+++	+++	+
2 3	safe access to the highway network	-	---	0/-	0	0	0/-	0	0	0	0	0	0	-
	safer transport network & promote use of non-motorised modes	+	+++	+++	+	0	0	0	+++	+/+++	+	+	+	+++

Option 6 - Cambridge Green Belt and Village Focus

PACKAGE 6										
	Site name/category	NIAB3		GB		Rural Centres		Minor Rural Centres		Overall
1	Previously developed land	0	0	+++	+++	0	+++	0	0	+
	Agricultural land	-	---	0	0	-	0	-	-	---
	Mineral reserves, soils	0	0	0	0	0	0	0	0	0
3	Air quality	-	---	0	0	0/-	0	0	0	---
	Noise, light pollution, odour & vibration	0	0	+++	-	-	+++	0	0	+
	Land contamination	+	+	+	+	+	+	0	+	+
	Water environment	0	0	0	0	0	0	0	0	0
4	Nature conservation interest & geodiversity	0	0	0	0	0	0	0	0	0
5	Habitat fragmentation, native species, habitat restoration	+	0 / +	0	0	0	0	0	0	+
6	Access to wildlife & green spaces	0	+++	0	0	+	0	0	0	+++
7	Landscape character	-	---	+	0	---/-	0	0	0	---
	Townscape character	-	---	0 / +	+++	---/-	+	0	0	---
8	Historical, archaeological, cultural	0	0/-	0	0	0	+/0	0	0	0
10	Renewable energy resources	0	0	0	0	0	0	0	0	0
11	Flooding, SUDS	0	0	0	0	0	0	0	0	0
14	Open space	+++	+++/?	0	0	+	0	0	0	+++/?
16	accessibility to local services/ facilities	+++	+++	+	+++	0	0	0	0	+++
	Distance to centre	+	0/+	---	---	-	+++	-	-	?
	Quality & range of local services & facilities	0	+++	0	0/-	+	0	0	0	+++
17	Ability of people to influence decisions	0	0	0	0	0	0	0	0	0
18	Engagement with community activities	0	+	0	0	+	0	0	0	+
19	Business development & competitiveness	+	+/?	-/0	0/-	0	0	0	0	+/?
	Shopping hierarchy	0	0	0	0/-	0	0	0	0	0
20	employment opportunities in accessible locations	+++	+++	+	+++	+	0	+++	+++	+++
21	investment in key community services & infrastructure	-	-	-	+	+	+	+++/+	+++/+	-
	access to education & training, & provision of skilled employees	+	-	-	+	-	+	+++	+++	-
22	shorter journeys, improve modal choice & integration modes	+++	+++	0	+++	+	0	+	+	+++
	distance to bus stop / rail station	+++	+/+++	0	+++	+	+++	+	+	+

PACKAGE 6										
	Site name/category	NIAB3		GB		Rural Centres		Minor Rural Centres		Overall
	frequency of Public Transport	+	+ / +++	+	+++	+	---	-	-	+
	typical Public Transport Journey Time to City Centre or Market Town	+++	+ / +++	-	+++	0	+	+++	+++	+
	distance for cycling to City Centre or Market Town	+++	+++	+	+++	+	+	+++	+++	+++
2	safe access to the highway network	-	-	0	0	0	0	0	0	-
3	safer transport network & promote use of non-motorised modes	+	+++ / ?	+	+++	+ / +++	+	+	+	+++ / ?

Option 7 - Cambridge Green Belt, Waterbeach New Town, Cambourne West and Village Focus

PACKAGE 7							
	Site name/category	NIAB3	GB	WNT	CW	Rural Centres	Overall
1	Previously developed land	0	0	+++	0	+++	+
	Agricultural land	-	---	---	---	0	---
	Mineral reserves, soils	0	0	-	0	0	-
3	Air quality	-	---/-	-	0	0	-
	Noise, light pollution, odour & vibration	0	0	0	0/-	+++	+
	Land contamination	+	+	+	0	+	+
	Water environment	0	0	0	0	0	0
4	Nature conservation interest & geodiversity	0	0	0	0	0	0
5	Habitat fragmentation, native species, habitat restoration	+	0 / +	+++	+/0	0	+
6	Access to wildlife & green spaces	0	+++	+++	+/+++	0	+++
7	Landscape character	-	---	-	0/-	+	---
	Townscape character	-	---	0	0	0 / +	---
8	Historical, archaeological, cultural	0	0/-	-	0	0	-
10	Renewable energy resources	0	0	+++	0/+	0	+
11	Flooding, SUDS	0	0	0	0	0	0
14	Open space	+++	+++/?	+++	+/+++	0	+
16	accessibility to local services/ facilities	+++	+++	+	+	+	+++
	Distance to centre	+	0 / +	0	---	---	-
	Quality & range of local services & facilities	0	+++	+++	+/+++	0	+++
17	Ability of people to influence decisions	0	0	0	0	0	0
18	Engagement with community activities	0	+	+++	+/+++	0	+
19	Business development & competitiveness	+	+/?	+++	+/+++	-/0	+/?
	Shopping hierarchy	0	0	0	0/+	0	0
20	employment opportunities in accessible locations	+++	+++	0/+++	0	+	+
21	investment in key community services & infrastructure	-	-	-	-	-	-
	access to education & training, & provision of skilled employees	+	-	-	-	-	-
22	shorter journeys, improve modal choice & integration modes	+++	+++	+	0	0	+
	distance to bus stop / rail station	+++	+/+++	0	0	0	+
	frequency of Public Transport	+	+/+++	+/?	+	+	+

PACKAGE 7							
	Site name/category	NIAB3	GB	WNT	CW	Rural Centres	Overall
	typical Public Transport Journey Time to City Centre or Market Town	+++	+ /+++	+/?	0	-	+
	distance for cycling to City Centre or Market Town	+++	+++	+	0	+	+
23	safe access to the highway network	-	-	---	0/-	0	-
	safer transport network & promote use of non-motorised modes	+	+++/?	+++	+	+	+++

PACKAGE 8														
	Site name/category	NIAB3	GB	BA	CW	Rural Centres		Minor Rural Centres						Overall
18	Engagement with community activities	0	+	+++	+/>+++	0	0	+	0	0	0	0	0	+
19	Business development & competitiveness	+	+/?	+++	+/>+++	-/0	0/-	0	0	0	0	0	0	+/?
	Shopping hierarchy	0	0	0	0/+	0	0/-	0	0	0	0	0	0	0
20	employment opportunities in accessible locations	+++	+++	+/>+++	0	+	+++	+	+	+	0	+++	+++	+
21	investment in key community services & infrastructure	-	-	-	-	-	+	+	+++/>+	+++/>+	+	+++/>+	+++/>+	-
	access to education & training, & provision of skilled employees	+	-	-	-	-	+	-	+	+	+	+++	+++	-
22	shorter journeys, improve modal choice & integration modes	+++	+++	0	0	0	+++	+	+	+	0	+	+	+
	distance to bus stop / rail station	+++	+/>+++	0	0	0	+++	+	+++	+	+++	+	+	+
	frequency of Public Transport	+	+/>+++	+	+	+	+++	+	+	+	---	-	-	+
	typical Public Transport Journey Time to City Centre or Market Town	+++	+/>+++	0	0	-	+++	0	0	0	+	+++	+++	+
23	distance for cycling to City Centre or Market Town	+++	+++	0	0	+	+++	+	+	+	+	+++	+++	+
	safe access to the highway network	-	-	0/-	0/-	0	0	0	0	0	0	0	0	-
	safer transport network & promote use of non-motorised modes	+	+/?	+++	+	+	+++	+/>+++	+	+	+	+	+	+++

	Package No.	1	2	3	4	5	6	7	8
18	Will it encourage engagement with community activities?	+++	+++	+	+++	+++	+	+	+
19	Will it support business development and enhance competitiveness, enabling provision of high-quality employment land in appropriate locations to meet the needs of businesses, and the workforce?	+++	+++	+	+++	+++	+/?	+/?	+/?
	Will it protect the shopping hierarchy, supporting the vitality and viability of Cambridge, town, district and local centres?	0	0	0	0	0	0	0	0
20	Will it contribute to providing a range of employment opportunities, in accessible locations?	+	+	+	+	+	+++	+	+
21	Will it improve the level of investment in key community services and infrastructure, including broadband?	-	-	?	-	-	-	-	-
	Will it improve access to education and training, and support provision of skilled employees to the economy?	-	-	-	-	-	-	-	-
22	Will it enable shorter journeys, improve modal choice and integration of transport modes to encourage or facilitate the use of modes such as walking, cycling and public transport?	+	+	+	+	+	+++	+	+
	Sub-indicator: Distance to bus stop / rail station	+	+	+	+	+	+	+	+
	Sub-indicator: Frequency of Public Transport	+	+	+	+	+	+	+	+
	Sub-indicator: Typical Public Transport Journey Time to Cambridge City Centre or Market Town	+	+	+	+	+	+	+	+
23	Sub-indicator: Distance for cycling to City Centre or Market Town	+	+	+	+	+	+++	+	+
	Will it provide safe access to the highway network, where there is available capacity?	---	-	-	---	-	-	-	-
	Will it make the transport network safer for and promote use of non-motorised modes?	+++	+++	+	+++	+++	+++/?	+++	+++

3.3 Comparative Performance of Packages against each SA Objectives

SA Objective 1

Will it use land that is previously developed?

There is a limited supply of previously developed land available for development in the district, and this was reflected in the options identified through the plan making process. Therefore, all packages perform positively against this sub-objective because areas within each of the packages perform either neutrally, or have minor positive impacts, leading to a positive cumulative performance. The only packages which could utilise significant areas of previously developed land include either or both of two new settlement options, at Waterbeach and Bourn Airfield. In particular the Waterbeach new town option would involve the redevelopment of the large barracks site. There are options at the village level that would utilise previously developed land, particularly at Sawston and Gamlingay. As a result, packages 1 and 4 offer potentially significant beneficial impacts. This largely stems from the relative reliance in these packages on Waterbeach New Town which scores highly on

this sub-objective to deliver a large proportion of their housing allocations. The other packages which include this site are less reliant on it in terms of overall housing provision and include other sites with less positive performance.

Will it protect and enhance the best and most versatile agricultural land?

The scale of development needed in the district means that impact on this objective will be significant, with unavoidable loss of high grade agricultural land. All packages therefore perform poorly in relation to this sub-objective.

The major development site options are all identified as having significant negative impact on the objective, as they would involve large areas of high grade agricultural land. Some smaller villages were identified avoiding the high grade agricultural land, but they would not be sufficient to deliver the total.

Whilst the impact of a number of village sites was indicated as only minor due to their smaller scale, cumulatively packages involving a number of these sites would impacts would still be significant. Package 3 performs slightly better overall because a significant proportion of housing provision, around 34%, in this package comes from rural centres and several minor rural centre sites which have a neutral impact on the best and most versatile agricultural and from the redevelopment of the barracks at Waterbeach, However, the cumulative impact of this package of sites on agricultural land should still be noted, even if it is marginally less significantly adverse than the other packages.

Will it avoid the sterilisation of economic mineral reserves? Will it minimise the degradation / loss of soils due to new development'?

Mineral reserves are identified on the proposals map of the Cambridgeshire and Peterborough Minerals and Waste Local Development Framework. Of particular prevalence in the area are reserves of sand and gravel. The most significant site within areas identified is the Waterbeach New Town, therefore packages 1, 4, 5 and 7 conflict with this sub-objective. The other packages have no impact on this sub-objective or the effects are considered to be neutral.

SA Objective 2

This objective was scoped out of the assessment as it is not a location specific issue.

SA Objective 3

Will it maintain or improve air quality?

Growth on the scale envisaged will inherently generate traffic movements, thereby having a negative impact on air pollution regardless of location of new development.

New settlements options identified are located in areas of good air quality, but an increase in traffic and static emissions could potentially affect local air quality.

The individual assessments of large scale development sites needed to deliver this volume of development were identified as having significant negative impacts on air quality. Package 6 could have potentially significant adverse impacts because it incorporates large scale development on the edge of Cambridge (4,000 homes). In addition, sites in locations near to the A14 or the M11 would be near to areas of poor air quality, including the identified Air Quality Management Area.

This objective is intrinsically linked with the transport objectives particularly objective 22 on sustainable travel. Therefore, when considering the impacts on air quality from development of a given package, consideration also needs to be given to the performance of the package against objective 22, positive performance against which can mitigate for potential air quality impacts identified under this objective.

Minimise, and where possible improve on, unacceptable levels of noise, light pollution, odour and vibration?

It is generally possible to avoid light pollution through sensitive lighting design, in all but the darkest of landscapes.

The initial assessment of the Bourn Airfield new settlement site highlighted a potential conflict with the adjoining industrial area. This had historically resulted in noise complaints from nearby residential areas. This site was proposed in representations for redevelopment for employment uses which are more compatible with residential development, and subject to consultation through Issues and Options 2. The issue is therefore now capable of appropriate mitigation and the site's performance against this objective has therefore improved. This is case for packages 2, 4, 5 and 8.

The development packages avoid significant cumulative negative performance overall, but nonetheless there are potential minor adverse impacts. A small number of village sites offered specific opportunities to address issues, such as redevelopment of industrial areas in residential areas.

On the edge of Cambridge, package 6 has the potential to bring development closer to the M11 and A14 and therefore people closer to potential noise pollution. The individual site assessments within the package highlight these issues, but also indicate that impacts are likely to be capable of mitigation and consequently this package performs positively overall.

Package 7 has the potential for a minor positive performance for this objective, because the majority of its sites are considered to have neutral impact on achieving this objective and one has the potential for a major positive performance.

Will it protect and where possible enhance the quality of the water environment?

All packages have a neutral performance for this objective. Parts of the south east of South Cambridgeshire are identified as groundwater protection zones, associated with the underlying chalk. The majority of development within the packages would avoid these areas. Some site options around villages in these areas, like Sawston would fall within groundwater protection zones, but appropriate mitigation measures could be included to protect water quality.

SA Objective 4

Will it conserve protected species and protect sites designated for nature conservation interest and geodiversity?

All sites are outside protected areas and it has been assumed that mitigation measures could be implemented appropriately for all options, as would be required by law and planning policy.

SA Objective 5

Will it reduce habitat fragmentation, enhance native species, and help deliver habitat restoration (helping to achieve Biodiversity Action Plan Targets)?

None of the sites included in any of the packages is considered to be in conflict with this sub-objective. All packages are considered to have a cumulative positive performance since they all include sites where there are opportunities for positive enhancements to be secured through development.

Major development options identified include opportunities for habitat linkage/enhancement/restoration, and the creation of new Green Infrastructure which would provide net benefits. Waterbeach New Town (included in packages 1, 4, 5 and 7), offers potentially significant beneficial impacts through habitat creation in the north of the site, as part of mitigation measures required to preserve the setting of Denny Abbey. Packages including this site therefore perform well for this sub-objective. Although village sites may offer fewer opportunities for enhancement in terms of overall net gains, the significance of their contribution to ecological coherence of strategic habitat networks is highly dependent upon their location and the type of habitat they could provide.

SA Objective 6

Will it improve access to wildlife and green spaces, through delivery and access to green infrastructure?

The greatest potential to directly deliver new green infrastructure is with major development sites. Larger sites on the edge of Cambridge have potential to include green infrastructure, as do new settlements. Smaller village sites generally offer less potential, although they may still contribute financially to improving green space provision and access through Section 106 agreements or the Community Infrastructure Levy (CIL), they are less likely to be able to secure increases in provision levels directly.

SA Objective 7

Will it maintain and enhance the diversity and distinctiveness of landscape character?

All packages include some sites which conflict with the protection of landscape character, and therefore negative performances have been recorded.

Packages involving development on the edge of Cambridge are likely to have a significant negative impact on the landscape Character objective. The review of the Green Belt identified that it would not be possible to deliver significant additional development on the edge of

Cambridge without significant detriment to the specific purposes of the Cambridge Green Belt. These purposes highlight the importance to the historic City of Cambridge of the quality of its setting as well as the usual role of Green Belts in preventing communities from merging with one another.

The scale of the new settlement options mean that they will also impact on this objective, but they are likely to offer greater potential for mitigation, and are located in areas of lower landscape sensitivity. The setting of Denny Abbey is a particular issue for the Waterbeach new town option, and mitigation will be required to maintain its setting.

Will it maintain and enhance the diversity and distinctiveness of townscape character?

All packages include some sites which conflict with the protection of townscape character, and therefore negative performances have been recorded. Packages which include significant green belt release on the edge of Cambridge (6, 7 and 8) would have significant negative impacts on this objective. The rationale for this being that the Green Belt setting of Cambridge is identified as being particularly important to the historic character and setting of the City. The townscape impact of the new settlement options is identified as being less significant as they lie outside the Green Belt, away from Cambridge.

SA Objective 8

Will it protect or enhance sites, features or areas of historical, archaeological, or cultural interest including conservation areas, listed buildings, registered parks and gardens and scheduled monuments)?

Only packages 2, 6 and 8 have a neutral performance for this objective. A number of sites included in the packages have been assessed as being in conflict with this objective. This includes Waterbeach New Town (included in packages 1, 4, 5 and 7), where the key issue is the impact on Denny Abbey. Mitigation measures could be implemented, but there would be likely minor negative residual impacts.

The Green Belt Study 2012 highlights the importance of the Green Belt as part of the setting for the historic City of Cambridge. Packages involving development on the edge of Cambridge could negatively impact on this setting.

SA Objective 9

This objective has been scoped out of this assessment as it is not location specific. All developments will be required to be built to a high standard of design and create good spaces through the plan's policy requirements.

SA Objective 10

Will it support the use of renewable energy resources?

Large developments present potential opportunities for district heating/combined heat and power. New settlements, with a large scale, mixed uses and potentially higher density centres may offer the greatest opportunities. This accounts for the positive performance for most packages

in relation to this sub-objective. Large scale development sites on the edge of Cambridge could offer opportunities, but they are not as large as the eventual scale of the potential new settlements, hence package 6 has a neutral performance for this sub-objective. However, the potential for such low carbon energy developments is dependent on factors which are highly site-specific, which means that some caution should be applied in interpreting these performances. The focus of package 3 on smaller scale village development means that this package is the least likely to offer opportunities for district heating or combined heat and power, meaning that this package is unlikely to positively support this sub-objective and is more likely to have a neutral effect.

Two SA sub-objectives have been scoped out, because all new development will be required to promote energy efficiency, and minimise contributions to climate change through sustainable construction practices. This will be ensured by adherence with building regulations and through policies within the plan.

SA Objective 11

Will it minimise risk to people and property from flooding, and incorporate sustainable drainage measures?

All of the packages are seen to be neutral in relation to this sub-objective apart from package 3, which includes a site which is partially in flood zones 2 and 3.

The SA sub-objective regarding sustainable water use has been scoped out as this development design rather than development location specific and all development will have to be implemented to enable and encourage high levels of water efficiency.

SA Objectives 12 and 13

These two objectives have been scoped out because they relate predominantly to design specific issues rather than locational issues.

SA Objective 14

Will it increase the quantity and quality of publically accessible open space?

No sites within any of the packages have a negative performance for this objective and all packages perform positively for the provision of public open space. General planning policies require provision of open space to meet the needs generated through new development.

Package 3 because of its dispersed approach to development around villages, may give rise to fewer opportunities to deliver more than the minimum open space requirements, and such infrastructure investment will inherently be more dispersed, but in doing so it could achieve a wider spatial distribution of new provision. Specific opportunities will depend on how the developments evolve.

Waterbeach New Town (included in packages 1, 4, 5 and 7), offers potentially significant beneficial impacts because of the new open space which would be provided as part of this development.

SA Objective 15

All the housing sub-objectives have been scoped out of this assessment because they relate primarily to the type and mix of provision which will be controlled through the plan policies are therefore not specific to location of development.

All of the sites were generally assumed to be neutral in relation to the sub-objective for provision of accommodation for gypsies, travellers and travelling show people, because the plan is proposing no specific site allocations.

SA Objective 16

This objective has been scoped out because all developments will be expected to improve social relations.

SA Objective 17

Will it improve accessibility to key local services and facilities, including health, education and leisure (shops, post offices, pubs, sports facilities etc?)

Packages 6 and 7, which include the most significant levels of development on the edge of Cambridge, offer potentially the most significant positive performance in relation to this sub-objective because of the proximity of development to the higher order services and facilities available within Cambridge. Development of a new town would include its own town centre and facilities, although in the case of Waterbeach much of this would be delivered beyond the plan period, and so the short and medium term performance for this sub-objective would be less positive than in the longer term.

Other packages include development at the Rural Centre / Minor Rural Centre level, ensuring that new housing would be accessible to local services and facilities. Package 3, which has the most village focus, incorporates the most sites with a negative score against this sub-objective but, on balance, even this package scores positively overall. Because none of the packages include housing provision on new sites beyond the better served group villages, none of the packages is in conflict with this sub-objective overall.

Distance to local centres is one measure of accessibility, and this varies by individual site. Significant major developments would be likely to incorporate new local centres, thereby ensuring services and facilities are accessible to the new population. Smaller developments are more likely to be reliant on existing centres.

Most village level options are located on the edges of villages, meaning that in some cases site score relatively poorly against the objective. In the case of package 7 and 8, which would include some development on the edge of Cambridge, smaller urban extensions may not include new local centres, and site specific appraisals indicated that some sites were a significant distance from existing local centres.

Packages 1, 3 and 4 incorporate a relatively high level of housing provision in villages so are in conflict with this sub-objective and may result in potentially significant adverse impacts as many village sites are at some distance from existing village centres. They also rely on development

in Cambourne west, which generally performs poorly against distance to centre, although it does adjoin a new secondary school so its performance for education access is good. There is also a small supermarket nearby in Lower Cambourne. In particular, package 4 relies on it to deliver over a quarter of its housing provision. The overall performance of Cambourne west depends upon whether it is likely to deliver a local centre, and therefore provision of a local centre should be an integral part of the development delivery.

In contrast, the other packages have a greater reliance on new settlements and/or major development sites and generally these perform better because it is assumed that they would be able to deliver new local centres through masterplanning of these sites. Overall, however, these packages are still in conflict with this sub-objective.

Will it improve quality and range of key local services and facilities including health, education and leisure (shops, post offices, pubs etc?)

The assessment of individual sites assumed that larger focused developments have more potential to deliver a range of new services, whilst more scattered village development would reduce the likely impact of investment, and could put additional pressure on existing village services.

Consequently, package 3 performs less positively as it does not include a new settlement and is additionally the most reliant on village development. By comparison, the other packages perform well for this objective.

SA Objective 18

Will it encourage engagement with community activities?

New development is required by plan policies to provide community facilities to meet the needs generated, and will therefore contribute to supporting engagement with community activities. The assessment of individual sites assumed that larger more focused developments are more likely to be able to deliver a wider range of new services. On this basis packages 1, 2, 4 and 5, which include new settlements, are more likely to perform well and provide positive support for this sub-objective. Conversely, that scattered village development would be less likely to be able to, and could in some cases put additional pressures on existing village services. On this basis Package 3 does not include a new settlement, performs less positively.

SA Objective 19

Will it support business development and enhance competitiveness, enabling provision of high-quality employment land in appropriate locations to meet the needs of businesses, and the workforce?

New settlements would be mixed use developments incorporating provision of employment land, hence the strongly positive performance for the packages providing new settlements (1, 2, 4, 5, 7 and 8) and the less positive performance for package 3, which would not deliver a new settlement. Some development proposals on the edge of Cambridge would also be mixed use. It should be noted, however, that much of the employment at Waterbeach (included in options 1, 4, 5 and 7) may be delivered beyond plan period.

Will it protect the shopping hierarchy, supporting the vitality and viability of Cambridge, town, district and local centres?

The individual site assessments assumed that the plan's policy requirements would mean that new centres may be delivered to meet local needs, but that they would be required not to be of such a scale to harm the shopping hierarchy. Therefore, all packages are deemed to have a neutral performance for this sub-objective.

SA Objective 20

Will it contribute to providing a range of employment opportunities, in accessible locations?

The site assessments focused on accessibility to major employment opportunities, using accession modelling for journey lengths. All of the packages support this objective, with package 6 offering potentially significant beneficial impacts because of the concentration of development on the edge of the most significant existing employment area, that being Cambridge. New settlement sites are currently not as close to major employment areas, but as mixed use used new employment opportunities are likely to lead to increased access to employment in the longer term, and therefore these are likely to perform slightly better than the village focused packages.

SA Objective 21

Will it improve the level of investment in key community services and infrastructure, including broadband?

During the earlier assessment of individual sites it was assumed that larger sites will need investment in infrastructure and that they cannot rely on existing provision. Since all packages include large sites they all record a negative performance against this sub-objective except for package 3. Package 3 incorporates a diversity of sites including sites with significantly positive and minor negative performance for this sub-objective, such that an overall performance is difficult to judge with any level of certainty.

Will it improve access to education and training, and support provision of skilled employees to the economy?

Even after allowing for surplus school places, development on the scale incorporated in each of the packages would require an increase in school planned admission numbers, which would require the expansion of existing schools and/or provision of new schools. All of the packages therefore conflict with this objective and may result in adverse impacts unless new schools were provided.

SA Objective 22

Will it enable shorter journeys, improve modal choice and integration of transport modes to encourage or facilitate the use of modes such as walking, cycling and public transport?

Sub-indicator: Distance to bus stop / rail station

Sub-indicator: Frequency of Public Transport

Sub-indicator: Typical Public Transport Journey Time to Cambridge City Centre or Market Town

Sub-indicator: Distance for cycling to City Centre or Market Town

All of the packages support this sub-objective and score positively against the sub-indicators.

Development close to the edge of Cambridge would support access opportunities by alternative modes, although access to public transport services is better close to radial routes with good services, and some areas around the City currently have more limited access to high quality public transport. Larger developments could be accessed by new public transport routes. This means that package 6 would perform particularly well against this objective because of the concentration of development on the edge of Cambridge.

New settlements (included in packages 1, 2, 4, 5, 7 and 8) could incorporate significant public transport routes to Cambridge, and new town and local centres as appropriate, to ensure that residents have convenient access to local services and facilities by walking, cycling and public transport. They have the potential to enable focussed investment in public transport and cycling infrastructure, delivering high quality services to provide a significantly higher modal share of travel by non-car modes than village based growth options. Dispersing development around villages would be more likely to deliver incremental improvements, rather than focused investment. But this could benefit existing communities. Traffic impacts would be spread more around the district, but there would be a higher modal share for car use. Outside the Rural Centres public transport services are generally limited in terms of frequency and journey time. Cycling opportunities would also be lower than other strategy approaches, as distances to Cambridge or market towns would be greater, and would often rely on rural roads rather than dedicated routes. This would particularly impact on package 3 as the most village based option.

The sub-objective on the movement of freight has been scoped out of this assessment because this assessment is dealing specifically with housing allocations.

SA Objective 23

Will it provide safe access to the highway network, where there is available capacity?

A wide range of sites are in conflict with this sub-objective, which results in a negative performance for all packages. A major negative performance is recorded for packages 1 and 4 because of their reliance on Waterbeach New Town. The site assessment suggests that this development may result in potentially significant adverse impacts because of insufficient capacity on existing roads although mitigation measures are being explored to address this, including improved access to rail, road improvements and bus improvements. It should also be noted that by the end of the plan period, only a small proportion of the new town will be built, reducing the scale of the impacts at that time.

Will it make the transport network safer for and promote use of non-motorised modes?

The site assessments for the new settlements at Waterbeach New Town and Bourn Airfield suggest that they could potentially lead to significant improvement to public transport, walking or cycling facilities. Transport evidence suggests this would increase modal share by sustainable modes compared to more dispersed development strategies.

Similarly, the greenbelt developments are seen to be of a sufficient scale to enable associated improvements to the transport network. This accounts for the strongly positive performances for all packages except package 3, although there is some uncertainty as it would depend on the opportunities provided by specific sites. Nonetheless, package 3 includes a larger number of smaller developments, which would offer less potential to generate significant investment in transport infrastructure.

3.4 Commentary on Sustainability Performance of Packages

This section describes how each package performs across the range of SA objectives and sub-objectives. This section does not seek to describe all the effects, but to highlight the significant sustainability effects of the packages, or those effects which differentiate the packages' performances.

Option 1 - Waterbeach New Town, Cambourne West and Village Focus

This package includes provision from a new town at Waterbeach, the completion of an extension to the existing new settlement at Cambourne and development at a range of villages down to the Better Served Group Village level.

Waterbeach New Town scores strongly against a relatively large number of sub-objectives and, because of its relative reliance on this site, this is reflected in the overall scores for this package. It performs strongly in relation to:

- Use of previously developed land;
- Provision of open space;
- Quality and range of local services and facilities;
- Engagement with community activities;
- Business development and competitiveness; and
- Safety of the transport network and promotion of non-motorised modes

As with all of the packages, it performs poorly in relation to the use of agricultural land. Both Waterbeach New Town and Cambourne West would involve the loss of significant amounts of agricultural land and this would be compounded by cumulatively significant further loss from a large number of village sites.

The inclusion of a large number of village sites which are considered to be sensitive in landscape terms means that the cumulative impact on landscape character is likely to be significant in this package. Significant mitigation measures will be required, particularly when the town would reach its eventual size.

Its inclusion of a large number of village sites, many of which are some distance from existing centres, also means it scores poorly in relation to the 'distance to centre' sub-indicator. The issues with highway capacity for the Waterbeach New Town site also result in this package performing poorly in terms of providing safe access to the highway network.

In relation to the infrastructure objectives, there is a contrast between the more positive scores for the sites in minor village centre and the more negative scores for the new settlements and larger village sites, where investment in infrastructure would be required. In spite of the inclusion of a significant number of smaller village sites, we have assessed the balance overall as being negative.

Option 2 - Bourn Airfield New Settlement and Village Focus

This package includes the completion of a new settlement at Bourn Airfield within the plan period, and limited development in Rural Centres and Minor Rural Centre villages to meet the remaining requirement.

Unlike Waterbeach New Town, only approximately one third of the Bourn Airfield site is previously developed land and it also scores less strongly in relation to the provision of open space. Because of its heavy reliance on the Bourn Airfield site, this is reflected in the overall scores for this package, with fewer strongly positive scores than package 1.

However, it performs slightly better than package 1 in relation to the distance to centre sub-indicator because so much of the provision in this package would be served by a new centre on the Bourn Airfield site, with less provision on village sites. The absence of significant capacity constraints on the highway network for the Bourn Airfield site also means it performs better than package 1 in relation to the sub-indicator for safe access to the highway network.

Option 3 - Cambourne and Village Focus

This package adopts a village-focused approach. It includes completion of an extension to the existing new settlement at Cambourne, with the remainder of new development focused on other villages. At Waterbeach, there would be no new settlement, but the redevelopment of the barracks themselves would accommodate around 900 dwellings.

Overall, this package does not strongly support any of the sub-objectives.

Although the Waterbeach barracks development would not result in the loss of agricultural land, the cumulative loss of agricultural land across a large number of village sites means that there is still conflict with this sub-objective, albeit to a lesser degree than the other packages as it could deliver the largest number of houses without using agricultural land.

Although individual site impacts may be relatively minor, the cumulative impacts on landscape and townscape character from this package are likely to be significant, although some impacts may be capable of partial mitigation through design and siting.

As with the other packages with a strong reliance on village development, it scores poorly in relation to access to services and facilities, placing larger amounts of development in lower order centres than any other package.

Larger scale developments are more likely to incorporate new provision of services, facilities, employment space and transport facilities. The reliance on smaller sites in this package therefore results in this package performing less positively in relation to:

- Quality and range of local services and facilities;
- Engagement with community activities;
- Business development and competitiveness;
- Safety of the transport network and promotion of non-motorised modes.

Option 4 - Waterbeach New Town, Bourn Airfield New Settlement, and Cambourne West Focus

This package includes provision from the partial completion by 2031 of a new town at Waterbeach, the partial completion of a new settlement at Bourn Airfield, the completion of an extension to the existing new settlement at Cambourne. This would be supported by selected development at Rural Centres and Minor Rural Centres.

The overall scores for this package largely mirror the scores for package 1, with strongly positive scores for:

- Use of previously developed land;
- Provision of open space;
- Quality and range of local services and facilities;
- Engagement with community activities;
- Business development and competitiveness;
- Safety of the transport network and promotion of non-motorised modes.

It has strongly negative scores for use of agricultural land, distance to centre and (because of the highways issues relating to Waterbeach New Town) provision of safe access to the highway network.

It does, however, represent a lower level of landscape impact than package 1 in terms of landscape character because the large number of sensitive village sites in option 1 are largely replaced in this package with the Bourn Airfield site, which is not considered to be sensitive. It is probably also marginally less sensitive in terms of townscape character, although the differences are too subtle to be picked up in terms of the overall performance of the packages at this level of assessment.

Option 5 - Waterbeach New Town, Bourn Airfield New Settlement and Village Focus

This package includes provision from the partial completion by 2031 of a new town at Waterbeach, the partial completion of a new settlement at Bourn Airfield (but more than Option 4 assumes, which is offset by less reliance on development at Rural Centres and Minor Rural Centres).

Its relative reliance on the Bourn Airfield site means that its scores largely mirror the scores for package 2. The focus on new settlements means that it is likely to result in provision of new services, facilities, employment space and transport facilities, meaning it performs strongly in relation to:

- Quality and range of local services and facilities;
- Engagement with community activities;
- Business development and competitiveness;
- Safety of the transport network and promotion of non-motorised modes.

The relatively low provision in villages also means that this package is likely to have less cumulative impact on landscape and townscape character than those with a strong reliance on village development or on other sensitive sites.

Option 6 - Cambridge Green Belt and Village Focus

This package assumes 2 or 3 large urban extensions to Cambridge on land currently in the Green Belt. This would accommodate around 4000 dwellings. This would be supported by selected village sites at Rural Centres and Minor Rural Centres, with a focus on previously developed land.

Delivering this scale of development on the edge of Cambridge would require sites which would have a significant negative impact on the landscape and townscape character objectives and on air quality. The review of the Green Belt identified that it would not be possible to deliver significant additional development on the edge of Cambridge without significant detriment to the specific purposes of the Cambridge Green Belt. These purposes highlight the importance to the historic City of Cambridge of the quality of its setting as well as the usual role of Green Belts in preventing communities from merging with one another.

The major Green Belt sites could offer significant potential for the provision of green infrastructure, which results in this package and package 7 performing strongly in relation to this sub-objective. Because of the proximity of much of the development to Cambridge, these packages also strongly support the sub-objective of improving accessibility to key local services and facilities. In addition, the provision of new services and facilities which would be required as part of the urban extensions included in this package mean that this package would improve the quality and range of key local services and facilities.

The edge of Cambridge focus of this package also results in strongly positive scores for a number of the sustainable travel and transport infrastructure sub-objectives, including: contributing to provision of employment opportunities in accessible locations; and enabling shorter

journeys, improving modal choice and integration of transport modes. It also performs well against the sub-indicator for 'distance for cycling to city centre'.

Option 7 - Cambridge Green Belt, Waterbeach New Town, Cambourne West and Village Focus

This option assumes 1 or 2 large urban extensions to Cambridge on land currently in the Green Belt, accommodating around 2000 dwellings. The remaining development needs would be accommodated through the partial completion of a new town at Waterbeach, the completion of an extension to the existing new settlement at Cambourne and development at 1 village.

Delivering this scale of development on the edge of Cambridge would require sites which would have a significant negative impact on the landscape and townscape character objectives. The review of the Green Belt identified that it would not be possible to deliver significant additional development on the edge of Cambridge without significant detriment to the specific purposes of the Cambridge Green Belt. These purposes highlight the importance to the historic City of Cambridge of the quality of its setting as well as the usual role of Green Belts in preventing communities from merging with one another.

The major Green Belt sites could offer significant potential for the provision of green infrastructure, which results in this package and package 6 performing strongly in relation to this sub-objective. Because of the proximity of much of the development to Cambridge, these packages also strongly support the sub-objective of improving accessibility to key local services and facilities. It performs less well than package 6 for access to employment opportunities, although still positively. In addition, the provision of new services and facilities which would be required as part of the urban extensions included in this package mean that this package would improve the quality and range of key local services and facilities.

As with all the packages this one would lead to loss of high grade agricultural land. As above the scale of development on the edge of Cambridge would result in significant negative impact on the landscape and townscape objective.

There are fewer strongly positive scores, for example regarding sustainable travel and transport infrastructure sub-objectives.

Option 8 - Cambridge Green Belt, Bourn Airfield New Settlement, Cambourne West and Village Focus

This option assumes delivery of smaller sites on land currently in the Green Belt on the edge of Cambridge, the partial completion of a new settlement at Bourn Airfield, the completion of an extension to the existing new settlement at Cambourne and selected development at Rural Centres and Minor Rural Centres.

Delivering this scale of development on the edge of Cambridge would require sites which would have a significant negative impact on the landscape and townscape character objectives. The review of the Green Belt identified that it would not be possible to deliver significant additional development on the edge of Cambridge without significant detriment to the specific purposes of the Cambridge Green Belt. These purposes highlight the importance to the historic City of Cambridge of the quality of its setting as well as the usual role of Green Belts in preventing communities from merging with one another.

As with all the packages this one would lead to significant loss of high grade agricultural land. This package would result in significant harm to landscape and townscape character on the edge of Cambridge. There are some larger sites in the package which have negative or uncertain performances for safe highway access.

The package performs less well than package 6 for access to employment opportunities, although still positively.

The only strongly positive performance is for this package is for objective 23, relating to the sub-objective of transport network safety and promoting the use of non-motorise transport modes.