5. SUSTAINABILITY APPRAISAL FINDINGS

5.1 Introduction

This section presents the findings of the SA. It also presents the findings of a consistency check comparing the AAP Vision, and Objectives with the SA Framework Objectives.

5.2 Findings: Consistency check with the SA Framework

A consistency check was undertaken at the previous stage of the SA (Interim Sustainability Appraisal Report (November,2014)) between the vision and objectives (see Table 4 and 5) and the SA framework. The consistency check compared the draft vision and objectives developed for the plan in Issues and Options 1 with the SA Framework objectives and identified where consistency and potential tensions between the two sets of objectives and the vision may exist. The check also identified whether there were any omissions from the vision and objectives when compared with the SA Framework Objectives (which were developed for the NEC AAP area and reflect key sustainability issues) and put forward suggestions for improvement. The check demonstrated that the vision and objectives generally reflected the sustainability issues in the area in a positive way. At this previous stage, two opportunities to improve the vision were identified:

- Better reference could be made to ensuring that the North East Cambridge is resilient to climate change; and
- Better reference could be made to addressing inequalities within the area.

The previous stage of the SA also reflected some tensions between the vision and objectives and the SA framework. This is shown by Objective 3: Maximise the Employment Opportunities which could potentially conflict with SA objectives relating to air and noise pollution, water pollution, biodiversity, landscape and townscape and provision of open space as these factors could potentially be compromised at higher levels of development.

The consistency check has been re-run to ensure that the new vision and objectives in Issues and Options 2019 are also consistent with the SA framework. The results are shown within Table 6 and show that:

- The vision of the document has been shortened to the following: North East Cambridge A socially and economically inclusive, thriving, and low- carbon place for innovative living and working; inherently walkable where everything is on your Doorstep. This is a more effective vision as it is much more accessible, builds upon the recommendation to make better reference to addressing inequalities and has left the detail to the objectives. Because the vision has now been reduced and the detail left to the objectives, only the objectives have been assessed;
- The objectives now state that North East Cambridge will successfully combine low-tech green solutions with high-tech smart city technology to respond positively to the challenges of climate change. This is positive, but the objective would be stronger if it directly addressed resilience to climate change;
- With regard to equality, the objectives directly identify the importance of a social and
 economic inclusivity. They state that the NEC will integrate with surrounding communities,
 spreading the benefits it delivers to surrounding areas and will deliver economic growth and
 prosperity that achieves social justice and equality. This is a positive change to the objectives;
 and

• The tensions between the objectives that are geared towards economic development and some of the SA framework objectives (particularly those around environmental quality) have been reduced. It is felt that references to the layered economy suggests more responsive and sensitive development which reduces the risk of environmental conflict.

Table 6: Consistency Matrix

Key to symbols: ✓ = consistent, ~ = neutral, ? = opportunity to improve consistency, X = potential conflict								
SA Objective	A place with a strong identity that successfully integrates into Cambridge, bringing economic growth and prosperity that is delivered with social justice and equality.	A high quality, healthy biodiverse place which will be a major contributor to	A City Innovation District which will deliver affordable homes, a diverse range of quality jobs and excellent neighbourhood facilities					
1	✓	✓	~					
2	✓	✓	✓					
3	~	✓	~					
4	~	✓	~					
5	~	✓	~					
6	✓	✓	~					
7	✓	✓	~					
8	✓	✓	~					
9	✓	✓	✓					
10	✓	✓	✓					
11	~	~	✓					
12	✓	~	✓					
13	✓	~	✓					
14	~	~	✓					
15	✓	~	✓					
16	✓	~	✓					

5.3 Findings: Options and Spatial Approach

Detailed assessments have been provided for the spatial approach (in this case the indicative concept plan) and also where options have been provided. These detailed assessments are provided below in assessment matrices (tables).

Issue: Indicative Concept Plan

Question 7: Do you support the overall approach shown in the Indicative Concept Plan?

		Impact of the approaches
SA Objective	Option A	Commentary
Minimise the irreversible loss of undeveloped land, protect soils and economic minerals	+/?	The Indicative Concept plan utilises land that has previously been developed and will not affect mineral resources. The indicative concept plan is therefore scored as partially minor positive. The contamination present across the site has not yet been fully quantified so this element remains uncertain. However, if development delivers the opportunity for remediation this will be positive. Mitigation: Each parcel of land will require a full and detailed site investigation in order to determine ground conditions and the presence, or not, of contamination. A much higher standard of remediation would be required for sensitive developments such as residential dwellings with gardens. Residential gardens may not be suitable in some parts of the AAP area. Residential uses are proposed in areas where chlorinated solvents, Hydrocarbons, gases and vapours, PAHs, and diesel range organics have previously been identified (Nuffield Road area and near the proposed station). The draft AAP will need to respond appropriately to this issue. Detailed investigation will also need to take place at the planning application stage. Any existing resources available on the site, such as materials from redundant buildings, should be reused as far as practicable. A Construction Environmental Management Plan (CEMP) including a Site Waste Management Plan will be required to support planning applications.
2. Improve air quality and minimise or mitigate against sources of environmental pollution	+/?	Information is not available on potential air quality and noise impacts relating to the redevelopment as detailed transport modelling is not complete. The indicative concept plan proposes the concept of creating a walkable neighbourhood with sustainable transport links and connections through and from the AAP, encouraging the use of bikes and public transport. Mixed use centres proposed to the centre, south east and south western corner of the site are connected by green infrastructure routes. The indicative concept plan is scored as minor positive until further information is available which can be used to judge significance. Mitigation:

		The Councils should undertake a detailed transport study focussing on the NEC AAP to fully understand the potential impacts of proposals on air quality, noise and environmental pollution. Traffic impacts on Milton Road and existing junctions need to be addressed as part of future development proposals. Residential development close to major transport infrastructure such as the A14 and the railway will need to mitigate the transport noise already present on the site.
3. Protect and where possible enhance the quality of the water environment	+	Current water quality issues have been identified within the baseline data e.g. within the First Public Drain. However, the indicative concept plan proposes a water management network, contained within a green infrastructure corridor that will aim to better the current conditions within the First Public drain. The wider draft AAP contains policies that specifically propose sustainable drainage systems and blue green infrastructure linkages across the site and the indicative concept plan is therefore scored as minor positive. Construction practices would need to be carefully managed through a CEMP in order to avoid
		pollution entering watercourses during construction.
4. Avoid adverse effects on designated sites and protected species	~/?	The Indicative Concept Plan indicates that the Bramblefields City Wildlife Site will remain where it is however it is currently isolated from other green infrastructure and this is not proposed to be improved. The Plan proposes to capitalise on the network of existing trees and landscape and extends this to create an overall framework to improve biodiversity and linkages to the wider countryside. However, there is limited additional green space proposed within the site and there is currently not enough detail at this stage to understand connections to local nature reserves. Therefore, the indicative concept plan is scored as partially neutral and partially uncertain. The City Wildlife Site is located close to the railway and proposed residential areas, and it is therefore assumed that potential negative impacts on the LNR will be mitigated through the
		planning application process. Mitigation: The councils should consider linkages to the nearby open space and wildlife reserves and how
		development can potentially enhance designated sites.

5. Maintain and enhance the range and viability of characteristic habitats and species and improve opportunities for people to access and appreciate wildlife and green spaces	+	The indicative concept plan provides opportunities for green infrastructure connections across the site which capitalises on the network of existing trees and landscape but also extends this to create an overall framework to improve biodiversity and linkages to the wider countryside. This will improve access to green space. The plan also proposes significant improvements to the first public drain to create a wildlife corridor. Given its current state this would be a significant improvement.
6. Maintain and enhance the diversity and local distinctiveness of landscape and townscape character	++	The indicative concept plan takes advantage of an opportunity to improve this gateway to Cambridge and proposes to deliver a mix of uses where people working in the area have more opportunities to live nearby, and those living and working in the area have access to the right mix of services and facilities. The Plan also proposes green infrastructure routes within the site and proposes to improve the First Public drain contributing to improved townscape character for future users of the site. Proposed policy approaches with regards to place and building design and tall buildings support this SA Objective. The Plan is therefore scored as major positive. Enhancement: The councils need to ensure that any development of connectivity measures considers the local landscape and townscape character of the planned development. Findings of landscape and visual assessment are required to complete the assessment. It is likely that an archaeological
7. Minimise impacts on climate change (including greenhouse gas emissions)	+	investigation will be required before any significant development takes place. Movement and the ability to do so easily on foot, by bike or on public transport is central to making the area a well-connected place that reduces the need to travel by car. The indicative concept plan is proposing sustainable transport links and connections through and from the AAP, encouraging the use of bikes and public transport. This therefore supports a 'modal shift' from private cars to more sustainable forms of transport, helping to reduce local climate impacts and is scored as minor positive. The Issues and Options 2019 Report includes a range of options related to climate change mitigation for residential and non-residential uses, including approaches to sustainable building design, renewable and low carbon energy and it is therefore assumed that the Concept Plan will have the potential to improve energy efficiency of operations and renewable energy generation will be considered as part of detailed proposals.

8. Reduce vulnerability to future climate change effects.	+	The indicative concept plan is proposing sustainable transport links and connections through and from the NEC, encouraging the use of bikes and public transport therefore supports a 'modal shift' from private cars to more sustainable forms of transport, helping to reduce local climate impacts. The plan proposes a green infrastructure crossing between the current Water Recycling Centre site and the Cambridge Science Park area and the use of SuDs and green infrastructure has the potential to reduce vulnerability to future climate change and is therefore scored as minor positive. Transport modelling for Ely to Cambridge has been undertaken, however specific modelling for the NEC APP will need to occur to fully understand potential impacts relating to the proposed options. Enhancement: The councils should also consider linkages to the nearby open space and green infrastructure for any planned development. Policies should require specific consideration to adaption to climate
9. Maintain and enhance human health and wellbeing, and reduce inequalities	++	change including giving consideration to the layout and massing of new developments. The indicative concept plan proposes to provide new employment opportunities which should help to address some issues related to deprivation in the area. Movement and the ability to do so easily on foot, by bike or on public transport is central to making the area a well-connected place that reduces the need to travel by car and the indicative concept plan provides opportunities for green infrastructure connections across the site which capitalises on the network of existing trees and landscape but also extends this to create an overall framework to improve biodiversity and linkages to the wider countryside. This will enhance human health and wellbeing benefits and are therefore scored as major positive. Enhancement: Developers should be encouraged to register with The Considerate Constructors Scheme which includes guidelines for respecting the community by considering the impact on their
10. Improve the quantity and quality of publicly accessible open space.	+	neighbours, and for protecting and enhancing the environment. The indicative concept plan does not specify additional open space within the AAP, apart for the concept of a central green space. It does provide opportunities for green infrastructure connections across the site which capitalises on the network of existing trees and landscape but also extends this to create an overall framework to improve biodiversity and linkages to the wider countryside. Green space is proposed to the north of the plan which should help to reduce adverse impacts on the Green Belt. Overall the plan will improve access to green space and is therefore scored as minor positive.

11. Ensure everyone has access to decent, appropriate and affordable housing	+	The indicative concept plan includes provision for residential housing near the new station and the city wildlife site. It is unclear at this stage how much of the housing is affordable housing however any housing will contribute to meeting the additional housing provision within Cambridge and is therefore scored as minor positive. Types of housing may be determined to some degree by contamination present and remediation available. Enhancement: When drafting the AAP, more detailed consideration will need to be had to ensure policy
		requirements strike the right balance between attracting development investment, maximising the amount of affordable housing and achieving sufficient levels of developer contributions to fund the infrastructure needed to create sustainable communities.
12. Redress inequalities related to age, disability, gender, race, faith, location and income	+	This option includes new housing development, a new mixed use District centre and two mixed use local centres providing employment opportunities. In addition, the proximity of the station and the provision of a high quality sustainable movement corridor will significantly improve the accessibility of the site and surrounding area, making the Science Park a highly attractive business generation. The Issues and Options 2019 Report proposes to aim to deliver the right mix of uses where people working in the area have more opportunities to live nearby, and those living and working in the area have access to the right mix of services and facilities and is therefore scored as minor positive. Enhancement:
		The AAP could include policies to ensure that employment opportunities are available for local people, in order to support this SA Objective.
13. Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities)	+	This option includes new housing development, a new mixed use District centre and two mixed use local centres providing employment opportunities. In addition, the proximity of the station and the provision of a high quality sustainable movement corridor will significantly improve the accessibility of the site and surrounding area, making the North East Cambridge a highly attractive business generator and is therefore scored as minor positive. It is unclear what the new District and local centre could provide (that is addressed by options elsewhere in the Issues and Options 2019 Report). However, employment areas require complementary social and support facilities if they are to achieve the full potential of the area and this has been shown in several local studies.

14. Improve the efficiency, competitiveness, vitality and adaptability of the local economy	+	The provision of mixed use development will help to maintain and enhance the economy of Cambridge and improve competitiveness. The indicative concept plan will provide high quality employment in an accessible location. This option will, however, result in a loss of industrial/storage uses compared with the baseline. There is no other local centre within the immediate vicinity. The nearest local or district centre is on the A1309 towards the city centre on the boundary between the Kings Hedges and East Chesterton wards therefore the provision of two local centres and one District centre is positive and provides employment opportunities. The indicative concept plan is therefore scored as minor positive.
15. Support appropriate investment in people, places, communications and other infrastructure	+/?	The provision of mixed use development will help to maintain and enhance the economy of Cambridge and improve competitiveness. The indicative concept plan will provide high quality employment in an accessible location. Whether development achieves the delivery of necessary infrastructures is dependent on how development is implemented through AAP polices and this is therefore scored as uncertain at this stage. The indicative concept plan will promote the provision of sustainable transport links therefore are scored partially minor positive. Mitigation: Milton Road has the potential to form a key interface with the wider NEC area therefore the councils need to ensure that appropriate investment in facilities considered when developing the AAP. Traffic impacts on Milton Road and existing junctions need to be addressed as part of future development proposals
16. Reduce the need to travel and promote more sustainable transport choices.	+	Movement and the ability to do so easily on foot, by bike or on public transport is central to making the area a well-connected place that reduces the need to travel by car. The indicative concept plan proposes the concept of creating a walkable neighbourhood with sustainable transport links and connections through and from the AAP, encouraging the use of bikes and public transport. Mixed use centres proposed to the centre, south east and south western corner of the site are connected by green infrastructure routes. The indicative concept plan is scored as minor positive until further information is available which can be used to judge significance. Mitigation: Milton Road has the potential to form a key interface with the wider NEC area therefore the councils need to ensure that appropriate investment in facilities considered when developing the AAP. Traffic impacts on Milton Road and existing junctions need to be addressed as part of future development proposals.

Issue: Local Movement and Connectivity

Question 16: Should the AAP include any or a combination of the options below to improve pedestrian and cycling connectivity through the site and to the surrounding area?

- A Create a strong east-west axis to unite Cambridge North Station with Cambridge Science Park across Milton Road. This pedestrian and cycle corridor would be integrated into the wider green infrastructure network to create a pleasant and enjoyable route for people to travel through and around the site. The route could also allow other sustainable forms of transport to connect across Milton Road.
- B Improve north-south movement between the Cowley Road part of the site and Nuffield Road. Through the redevelopment of the Nuffield Road area of the NEC, it will be important that new and existing residents have convenient and safe pedestrian and cycle access to the services and facilities that will be provided as part of the wider North East Cambridge area proposals.
- C Upgrade connections to Milton Country Park by both foot and cycle. This would include improving access to the Jane Coston Bridge over the A14, the Waterbeach Greenway project including a new access under the A14 (see Transport Chapter), as well as the existing underpass along the river towpath.
- D Provide another Cambridge Guided Bus stop to serve a new District Centre located to the east side of Milton Road.
- E Increasing ease of movement across the sites by opening up opportunities to walk and cycle through areas where this is currently difficult, for example Cambridge business park and the Cambridge Science Park improving access to the Kings Hedges and East Chesterton areas as well as the City beyond.

		Impact of the approaches						
SA Objective	Option A	Option B	Option C	Option D	Option E	Commentary and comparison of options		
1. Minimise the irreversible loss of undeveloped land, protect soils and economic minerals	+	+	+	+	+	All options utilise land that has previously been developed and will not affect mineral resources therefore all approaches have been scored as minor positive.		

2. Improve air quality and minimise or mitigate against sources of environmental pollution	+/?	+/?	+/?	+/?	+/?	Information is not available on potential air quality and noise impacts relating to the redevelopment as detailed transport modelling is not complete. All options are proposing sustainable transport links and connections through and from the AAP, encouraging the use of bikes and public transport therefore all approaches have been scored as minor positive until further information is available which can be used to judge significance.
						Mitigation: The Councils should undertake a detailed transport study focussing on the NEC AAP to fully understand the potential impacts of options on air quality, noise and environmental pollution. Traffic impacts on Milton Road and existing junctions need to be addressed as part of future development proposals. Residential development close to major transport infrastructure such as the A14 and the railway will need to mitigate the transport noise already present on the site.

3. Protect and where possible enhance the quality of the water environment	~	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
4. Avoid adverse effects on designated sites and protected species	~	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
5. Maintain and enhance the range and viability of characteristic habitats and species and improve opportunities for people to access and appreciate wildlife and green spaces	+	~	+	~	~	All options are proposing sustainable transport links and connections through and from the AAP. However, Options A and C provide direct links to green infrastructure and green spaces and are therefore scored as minor positive. Option B does not affect the SA objective and is therefore scored neutral. Further detailed transport modelling on the implications of Option D need to be undertaken to recognise benefits and to understand potential linkages to open space therefore this option is scored as neutral.
6. Maintain and enhance the diversity and local distinctiveness of landscape and townscape character	+/?	+/?	+/?	+/?	+/?	Options represent an opportunity to improve the setting and approach to the AAP and are therefore scored as partially minor positive. However how these options fit in with the wider development landscape and character of the AAP is unclear at this stage. Mitigation:

7. Minimise impacts on climate change	~	~	~	~	~	The Councils need to ensure that any development of connectivity measures considers the local landscape and townscape character of the planned development. This question does not affect the
(including greenhouse gas emissions)						SA objective therefore all options are scored neutral.
8. Reduce vulnerability to future climate change effects.	+	+	+	+	+	All options are proposing sustainable transport links and connections through and from the AAP, encouraging the use of bikes and public transport therefore all approaches have been scored as minor positive by supporting a 'modal shift' from private cars to more sustainable forms of transport, helping to reduce local climate impacts. Transport modelling for Ely to Cambridge has been undertaken, however specific modelling for the NEC APP will need to occur to fully understand potential impacts relating to the proposed options.
9. Maintain and enhance human health and wellbeing, and reduce inequalities	+	+	+	~	+	Options A – C and E are proposing cycle and pedestrian access through the AAP, facilitating healthy and active lifestyles for future users of the site and are therefore scored as minor positive. Option D does not affect the SA

						objective therefore it is scored as neutral.
10. Improve the quantity and quality of publicly accessible open space.	~	~	~	~	~	This question does not affect the SA objective therefore all options are scored as neutral.
11. Ensure everyone has access to decent, appropriate and affordable housing	~	~	~	~	~	This question does not affect the SA objective therefore all options are scored as neutral.
12. Redress inequalities related to age, disability, gender, race, faith, location and income	~	~	~	~	~	This question does not affect the SA objective therefore all options are scored as neutral.
13. Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities)	+/?	+/?	+/?	+/?	+/?	Whether development achieves the delivery of necessary infrastructure and access to services is dependent on how development is implemented so this is unclear at this stage. However, all options are proposing sustainable transport links and connections through and from the AAP therefore are scored as partially minor positive. Mitigation: The councils need to ensure that any development of facilities, services and associated infrastructure takes into account current retail and leisure provision and ensure that future customer demand is taken into account. A new retail Needs Assessment will need to be commissioned to inform the Local plan review and the findings of this should be considered to fully understand the

						potential impacts relating to the proposed options.
14. Improve the efficiency, competitiveness, vitality and adaptability of the local economy	~	~	~	~	~	This question does not affect the SA objective therefore all options are scored as neutral.
15. Support appropriate investment in people, places, communications and other infrastructure	~/+	~/+	~/+	~/+	~/+	Whether development achieves the delivery of necessary infrastructures is dependent on how development is implemented so this is unclear at this stage therefore all options have been scored as partially neutral however all options will promote the provision of sustainable transport links therefore is cored partially minor positive.
16. Reduce the need to travel and promote more sustainable transport choices.	++	++	++	++	++	All options are proposing sustainable transport links and connections through and from the AAP, encouraging the use of bikes and public transport all approaches have been scored as major positive.

Issue: Milton Road connectivity

Question 18: Which of the following options would best improve connectivity across Milton Road between Cambridge North Station and Cambridge Science Park?

- A One or more new 'green bridges' for pedestrians and cycles could be provided over Milton Road. The bridges could form part of the proposed green infrastructure strategy for the NEC, creating a substantial green/ecological link(s) over the road.
- B Subject to viability and feasibility testing, Milton Road could be 'cut-in' or tunnelled below ground in order to create a pedestrian and cycle friendly environment at street level. This option would allow for significant improvements to the street which would be more pleasurable for people to walk and cycle through.
- C Milton Road could be significantly altered to rebalance the road in a way that reduces the dominance of the road, including rationalising (reducing) the number of junctions between the Guided Busway and the A14 as well as prioritising walking, cycling and public transport users.
- D Connectivity across Milton Road could be improved through other measures. We would welcome any other suggestions that would improve the east-west connectivity through the site.
- E Other ways of improving connections (please specify)

	Impact of the approaches						
SA Objective	Option A	Option B	Option C	Option D	Commentary and comparison of options		
1. Minimise the irreversible loss of undeveloped land, protect soils and economic minerals	+	+	+	~	Options A-C utilise land that has previously been developed and will not affect mineral resources therefore all approaches have been scored as minor positive. Option D is a question posed for consultees rather than an issue that can be tested therefore is scored neutral.		
2. Improve air quality and minimise or mitigate against sources of environmental pollution	+/?	+/?	+/?	~	Information is not available on potential air quality and noise impacts relating to the redevelopment as detailed transport modelling for the NEC is not complete. However, the connections between the station and the science park is considered key to making this area sustainable so the effects on the criteria are likely to be positive. Options A-C are proposing sustainable transport		

					links and connections through and from the AAP in addition to encouraging the use of bikes and pedestrians therefore all approaches have been scored as partially minor positive. Option D is a question posed for consultees rather than an issue that can be tested therefore is scored neutral. Mitigation: The councils should undertake a detailed transport study focussing on the NEC AAP to fully understand the potential impacts of options on air quality, noise and environmental pollution.
3. Protect and where possible enhance the quality of the water environment	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
4. Avoid adverse effects on designated sites and protected species	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
5. Maintain and enhance the range and viability of characteristic habitats and species and improve opportunities for people to access and appreciate wildlife and green spaces	+	?	?	~	Option A proposes a green bridge which will increase habitat connectivity and enhance existing green infrastructure and has therefore been scored as a minor positive. Options B and C are not currently detailed enough to understand how green infrastructure connections will be provided and are therefore scored as uncertain. Option D is a question posed for consultees rather than an issue that can be tested therefore is scored neutral. Mitigation: Milton Road has the potential to form a key interface with the wider NEC area therefore the councils need to ensure
					that green infrastructure provision and access to open space is fully considered when developing the AAP.

6. Maintain and enhance the diversity and local distinctiveness of landscape and townscape character	+/?	+/?	+/?	~	All options present an opportunity to improve the setting and approach to the AAP and are therefore scored as partially minor positive. However how these options fit in with the wider development landscape and character of the AAP is unclear at this stage. Option D is a question posed for consultees rather than an issue that can be tested therefore is scored neutral. Mitigation: The Councils need to ensure that any development of connectivity measures considers the local landscape and townscape character of the planned development.
7. Minimise impacts on climate change (including greenhouse gas emissions)	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
8. Reduce vulnerability to future climate change effects.	++	+	+	~	All options are proposing sustainable transport links and connections through and from the AAP, encouraging the use of bikes and public transport therefore all approaches support a 'modal shift' from private cars to more sustainable forms of transport, helping to reduce local climate impacts. In addition, Option A proposes a green bridge which will provide green infrastructure and has the potential to reduce local climate change impacts. Option A is therefore scored major positive and Options B & C minor positive. Option D is a question posed for consultees rather than an issue that can be tested therefore is scored neutral. Transport modelling for Ely to Cambridge has been undertaken, however specific modelling for the NEC APP will need to occur to fully understand potential impacts relating to the proposed options.
9. Maintain and enhance human health and wellbeing, and reduce inequalities	+	+	+	~	Options A – C are proposing cycle and pedestrian access at Milton Road facilitating healthy and active lifestyles for future users of the site and are therefore scored as minor

					positive. Option D is a question posed for consultees rather than an issue that can be tested therefore is scored neutral.
10. Improve the quantity and quality of publicly accessible open space.	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
11. Ensure everyone has access to decent, appropriate and affordable housing	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
12. Redress inequalities related to age, disability, gender, race, faith, location and income	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
13. Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities)	+	+	+	~	Whether development achieves the delivery of necessary infrastructure and access to services is dependent on how development is implemented so this is unclear at this stage. However, Options A-C are proposing sustainable transport links and connections through and from the AAP therefore are scored as minor positive. Option D is a question posed for consultees rather than an issue that can be tested therefore is scored neutral.
14. Improve the efficiency, competitiveness, vitality and adaptability of the local economy	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
15. Support appropriate investment in people, places, communications and other infrastructure	?/+	?/+	?/+	~	Whether development achieves the delivery of necessary infrastructures is dependent on how development is implemented so this is unclear at this stage therefore all options have been scored as partially uncertain however all options will promote the provision of sustainable transport links therefore are scored partially minor positive. Option D is a question posed for consultees rather than an issue that can be tested therefore is scored neutral. Mitigation:

					Milton Road has the potential to form a key interface with the wider NEC area therefore the councils need to ensure that appropriate investment in facilities considered when developing the AAP.
16. Reduce the need to travel and promote more sustainable transport choices.	++	++	++	~	Options A-C are proposing sustainable transport links and connections through and from the AAP, encouraging the use of bikes and public transport and have been scored as major positive. Option D is a question posed for consultees rather than an issue that can be tested therefore is scored neutral.

Issue: Green Space Provision

Question 24: Within the North East Cambridge area green space can be provided in a number of forms including the following options. Which of the following would you support?

- A Green space within the site could be predominately provided through the introduction of a large multi-functional district scale green space. Taking inspiration from Parker's Piece in Cambridge, a new large space will provide flexible space that can be used throughout the year for a wide range of sport, recreation and leisure activities and include a sustainable drainage function. The sustainable drainage element would link into a system developed around the existing First Public Drain and the drainage system in the Science Park. The green space could be further supported by a number of smaller neighbourhood block scale open spaces dispersed across the site.
- B Green spaces within the site could be provided through a series of green spaces of a neighbourhood scale that will be distributed across the residential areas. These green spaces will also be connected to the green infrastructure network to further encourage walking and cycling. Again, these spaces will include a sustainable drainage function and link into the existing First Public Drain and the Science Park drainage system.
- C Enhance connections and corridors within and beyond the site to improve the biodiversity and ecological value as well as capturing the essential Cambridge character of green fingers extending into urban areas. These corridors could also be focussed around the green space network and sustainable drainage and would reflect the NPPF net environmental gain requirement.
- D- Green fingers to unite both sides of Milton Road and capitalise on the existing green networks.
- E Consideration of the site edges enhancement of the existing structural edge landscape and creating new structural landscape at strategic points within and on the edge of the CNF. This would also enhance the setting to the City on this important approach into the City.

F – Creation of enhanced pedestrian and cycle connectivity to Milton Country Park and the River Cam corridor

		Impact of the approaches								
SA Objective	Option A	Option B	Option C	Option D	Option E	Option F	Commentary and comparison of options			
1. Minimise the irreversible loss of undeveloped land, protect soils and economic minerals	+	+	+	+	+	+	All options utilise land that has previously been developed and will not affect mineral resources therefore all approaches have been scored as minor positive.			
2. Improve air quality and minimise or	+/?	+/?	+/?	?	?	?	Information is not available on potential air quality and noise impacts relating to the redevelopment as detailed			

mitigate against sources of environmental pollution							transport modelling is not complete therefore all approaches have been scored as partially uncertain. Options A – C specifically propose sustainable drainage and blue green infrastructure linkages across the site. They also propose sustainable transport links and connections through and from the AAP in addition to encouraging the use of bikes and pedestrians and are therefore scored as minor positive. Mitigation: The councils should undertake a detailed transport study focussing on the NEC AAP to fully understand the potential impacts of options on air quality, noise and environmental pollution.
3. Protect and where possible enhance the quality of the water environment	+	+	+	~	~	~	Options A – C specifically propose sustainable drainage systems and blue green infrastructure linkages across the site. These options have the potential to improve water quality in the area and therefore are scored minor positive. Options D – F do not provide specific reference to First Public drain or sustainable drainage however consideration of these would need to occur as part of planning applications therefore they are scored as neutral.
4. Avoid adverse effects on designated sites and protected species	?	?	?	?	?	?	There is not enough detail at this stage to understand connections to local nature reserves therefore options are scored as uncertain. Mitigation: The councils should consider linkages to the nearby open space and wildlife reserves and how development can potentially enhance designated sites.

5. Maintain and enhance the range and viability of characteristic habitats and species and improve opportunities for people to access and appreciate wildlife and green spaces	++	++	++	?	?	++	Options A-C and F fully meet the objective of improving access to, and provision of open space. Options will improve connectivity between wildlife corridors and will demonstrate a comprehensive green infrastructure network and are therefore scored as major positive. Options D and E refer to existing green networks and potential connections however do not specify additional open space provision. It is unclear as to whether these options provide biodiversity net gain and are therefore scored as uncertain. Mitigation: The councils should consider linkages to the nearby open space and nature reserves and how development can potential enhance designated sites.
6. Maintain and enhance the diversity and local distinctiveness of landscape and townscape character	+/?	+/?	+/?	+/?	+/?	+/?	All options take advance of an opportunity to improve this gateway to Cambridge therefore are partially scored as minor positive. However how these options fit in with the wider development landscape and character of the AAP is unclear at this stage. Mitigation: The councils need to ensure that any development of connectivity measures considers the local landscape and townscape character of the planned development.
7. Minimise impacts on climate change (including greenhouse gas emissions)	~	~	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
8. Reduce vulnerability to future climate change effects.	+	+	+	?	?	?	Options A-C provide biodiversity and green blue infrastructure across the AAP site which has the potential to reduce local climate change impacts such as urban

							heat island effects and are therefore scored as minor positive. Options D -F do not provide enough information to score against this objective therefore have uncertain effects. Mitigation: The councils should consider linkages to the nearby open space and green infrastructure for any planned development.
9. Maintain and enhance human health and wellbeing, and reduce inequalities	++	++	++	+	++	++	Options A – C are proposing green infrastructure and open space within the site which will facilitating healthy and active lifestyles for future users of the site. Option E is focussing on the creating landscape and open space within and on the edges of the NEC. Options A – C and E and F will enhance human health and wellbeing benefits and are therefore scored as major positive. Option D makes benefit of surrounding green corridors and providing linkages outside of the site but it is unclear at this stage if the policy is proposing open space within the site therefore this option is scored as minor positive.
10. Improve the quantity and quality of publicly accessible open space.	++	++	++	+	++	+	Options A – C and E provide additional open space within the AAP and will help improve the quality and quantity of open space within the north of Cambridge and are therefore scored as partially major positive. Option D and F propose to improve linkages to existing open space but it is unclear stage if the policy is proposing open space within the site therefore this option is scored as minor positive.
11. Ensure everyone has access to decent, appropriate and affordable housing	~	~	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.

12. Redress inequalities	~	~	~	~	~	~	This question does not affect the SA objective therefore
related to age,							all options are scored neutral.
disability, gender, race,							
faith, location and							
income							

Issue: Approach industrial uses

Question 36: Which of the following approaches should the AAP take to existing industrial uses in the North East Cambridge area?

A - seek to relocate industrial uses away from the North East Cambridge area?

B - seek innovative approaches to supporting uses on site as part of a mixed use City District?

			Impact of the approaches
SA Objective	Option A	Option B	Commentary and comparison of options
1. Minimise the irreversible loss of undeveloped land, protect soils and economic minerals	+	+	Both options utilise land that has previously been developed and will not affect mineral resources therefore all approaches have been scored as minor positive. Question 37 is a question posed to consultees so has not been assessed.
2. Improve air quality and minimise or mitigate against sources of environmental pollution	0	+	Option B could potentially reduce the need to travel (and therefore, air and noise pollution) as the mixed-use quarter could include housing and employment opportunities, thereby making the area self-sustaining.
3. Protect and where possible enhance the quality of the water environment	~	~	This question does not affect the SA objective therefore all options are scored neutral.
4. Avoid adverse effects on designated sites and protected species	~	~	This question does not affect the SA objective therefore all options are scored neutral.
5. Maintain and enhance the range and viability of characteristic habitats and species and improve opportunities for people to access and appreciate wildlife and green spaces	~	?	If planned well option B could increase people's access to wildlife and green spaces if the mixed use city district. However, this is currently uncertain. Mitigation: Ensure that the mixed use city district has good access to green spaces and wildlife.

6. Maintain and enhance the diversity and local distinctiveness of landscape and townscape character	~	~	This question does not affect the SA objective therefore all options are scored neutral.
7. Minimise impacts on climate change (including greenhouse gas emissions)	~	~	This question does not affect the SA objective therefore all options are scored neutral.
8. Reduce vulnerability to future climate change effects.	~	~	This question does not affect the SA objective therefore all options are scored neutral.
9. Maintain and enhance human health and wellbeing, and reduce inequalities	~	~	This question does not affect the SA objective therefore all options are scored neutral.
10. Improve the quantity and quality of publicly accessible open space.	~	~	This question does not affect the SA objective therefore all options are scored neutral.
11. Ensure everyone has access to decent, appropriate and affordable housing	~	~	This question does not affect the SA objective therefore all options are scored neutral.
12. Redress inequalities related to age, disability, gender, race, faith, location and income	~	~	This question does not affect the SA objective therefore all options are scored neutral.
13. Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities)	~	~	This question does not affect the SA objective therefore all options are scored neutral.
14. Improve the efficiency, competitiveness, vitality and adaptability of the local economy	+	+	Cambridge has been identified as one of the five most competitive cities in the UK, and one of the most recession proof cities that is likely to lead Britain back to growth. It is important that employment uses proposed for the site are able to support the cutting edge nature of the economic sectors represented in Cambridge. Both approaches could help to contribute to the economy as long as the correct type of uses are planned for.
15. Support appropriate investment in people, places, communications and other infrastructure	~	~	This question does not affect the SA objective therefore all options are scored neutral.

16. Reduce the need to travel and promote	0	+	Option B could potentially reduce the need to travel as the mixed-
more sustainable transport choices.			use quarter could include housing and employment opportunities,
			thereby making the area self-sustaining.

Issue: Carbon Reduction Standards for Residential Development

Question 62: Within this overall approach, in particular, which option do you prefer in relation to carbon reduction standards for residential development?

A - a 19% improvement on 2013 Building Regulations (the current Cambridge Local Plan standard); or

- B a requirement for carbon emissions to be reduced by a further 10% through the use of on-site renewable energy (the current South Cambridgeshire Local Plan standard); or
- C a 19% improvement on 2013 Building Regulations plus an additional 10% reduction through the use of on-site renewable energy (combining the current standards in the Local Plans); or
- D consider a higher standard and develop further evidence alongside the new joint Local Plan.

	Impact	of the app	roaches		
SA Objective	Option A	Option B	Option C	Option D	Commentary and comparison of options
1. Minimise the irreversible loss of undeveloped land, protect soils and economic mineral	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
2. Improve air quality and minimise or mitigate against sources of environmental pollution	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
3. Protect and where possible enhance the quality of the water environment	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
4. Avoid adverse effects on designated sites and protected species	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
5. Maintain and enhance the range	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.

and viability of characteristic habitats and species and improve opportunities for people to access and appreciate wildlife and green spaces					
6. Maintain and enhance the diversity and local distinctiveness of landscape and townscape character	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
7. Minimise impacts on climate change (including greenhouse gas emissions)	+	+	++	++/?	Option A will have a positive impact as the standard in the Cambridge local plan is a fabric first standard which seeks to improve efficiency. Option B will require new development to include renewable energy provision and therefore a minor positive effect is recorded. Option C provides a commitment that will ensure carbon reduction as part of the construction of new residential buildings and commits to renewable energy provision therefore this particularly supports this objective and is therefore scored as major positive. Option D has the potential to score major positive as it will include a new stricter target. However, it is currently unclear what this target is and this will need to be tested later on in the planning process.
8. Reduce vulnerability to future climate change effects.	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
9. Maintain and enhance human health and wellbeing, and reduce inequalities	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.

10. Improve the quantity and quality of publicly accessible open space.	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
11. Ensure everyone has access to decent, appropriate and affordable housing	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
12. Redress inequalities related to age, disability, gender, race, faith, location and income	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
13. Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities)	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
14. Improve the efficiency, competitiveness, vitality and adaptability of the local economy	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.
15. Support appropriate investment in people, places, communications and other infrastructure	~	~	~	~	This question does not affect the SA objective therefore all options are scored neutral.

16. Reduce the need	~	~	~	~	This question does not affect the SA objective therefore all options are	
to travel and promote					scored neutral.	l
more sustainable						l
transport choices.						

5.4 Findings: Policy Approaches

Where policy approaches have been put forward in the Issues and Options 2019 consultation document these have been assessed through provision of a sustainability commentary. These commentaries are shown in Table 7.

Table 7: Assessment of the policy approaches

Approach	Sustainability commentary
Issue: AAP boundary	Inclusion of the Science Park in the AAP boundary should enable the park to be integrated functionally with the rest of the AAP area. It will also enable development to be brought forward that significantly reduces the modal share of trips made to the site by car, and enable access by other means. This will have positive impacts on the following SA objectives: SA Objective 1: Minimise the irreversible loss of undeveloped land, protect soils and economic mineral reserves. SA Objective 6: Maintain and enhance the diversity and local distinctiveness of landscape and townscape character. SA Objective 14: Improve the efficiency, competitiveness, vitality and adaptability of the local economy. SA Objective 15: Support appropriate investment in people, places, communications and other infrastructure. SA Objective 16: Reduce the need to travel and promote more sustainable transport choices.
Issue: Creating a healthy community	Healthy Towns address a range of issues that could have positive impacts on sustainability objectives and provides an opportunity to explore innovation and best practice. Principles it explores include promoting inclusive communities, good access to health services, walkable neighbourhoods, high quality public transport and cycling links, and opportunities for physical activity. This will have a direct beneficial impact on the following SA objective: SA Objective 9: Maintain and enhance human health and wellbeing and reduce inequalities. If the principles are successful in increasing walking and cycling (and reducing car use) they could also have indirect positive effects on: SA Objective 2: Improve air quality and minimise or mitigate against sources of environmental pollution. The proposed approach would have a neutral effect on the remainder of the SA Objectives.
Issue: Building Heights and Skyline	Development which incorporates tall buildings is less likely to reflect the character of development currently in the area and have an impact on:

Approach	Sustainability commentary
	SA Objective 6: Maintain and enhance the diversity and local distinctiveness of landscape and townscape character.
	However, this is not necessarily detrimental and could provide new positive focal points and landmarks in the area, depending on how developments are designed and placed. As long as policies on design are followed by developers and adequate consultation is undertaken with the public and statutory consultees the impact of this option could be significantly beneficial. This could also provide more flexibility in the overall masterplanning of the site, therefore, having indirect beneficial impacts on several of the objectives.
	Please note that further consideration of building heights will be included in the Landscape Character and Visual Impact Appraisal, so the issue can be further considered at the draft AAP stage.
	Therefore, there is a potential for a beneficial impact but this is uncertain at this stage as further work is being undertaken by the Councils on landscape and townscape impacts.
	The proposed approach would have a neutral effect on the remainder of the SA Objectives.
Issue: Crossing the railway line	 As the AAP Issues and Options 2019 document highlights, this approach provides potential benefits of access to green infrastructure and it would also help neighbouring communities access the new services, facilities and employment that will be delivered in this area. Therefore, it could have beneficial effects on: SA Objective 5: Maintain and enhance the range and viability of characteristic habitats and species and improve opportunities for people to access and appreciate wildlife and green spaces SA Objective 9: Maintain and enhance human health and wellbeing, and reduce inequalities SA Objective 10: Improve the quantity and quality of publicly accessible open space. SA Objective 12: Redress inequalities related to age, disability, gender, race, faith, location and income SA Objective 13: Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities). The proposed approach would have a neutral effect on the remainder of the SA Objectives.
Issue: Managing car parking	The North East CambridgeTransport study has yet to be completed, therefore, there are uncertainties attached to the
and servicing	assessment. As recognised in the AAP Issues and Options 2019 consultation document, Cambridge North Station and
Issue: Car Mode Share	the Guided Busway (including the adjacent maintenance track/cycleway) have radically altered the accessibility of the area and make sustainable modes a realistic and attractive option. There is also limited scope to increase the number of
Issue: Car Parking	area and make sustainable modes a realistic and attractive option. There is also inniced scope to increase the number of

Approach	Sustainability commentary
	motorised vehicles using Milton Road. In order to make the development sustainable it is necessary to manage car parking and servicing. Therefore, the policy approach could have beneficial effects on: SA Objective 2: Improve air quality and minimise or mitigate against sources of environmental pollution SA Objective 7: Minimise impacts on climate change (including greenhouse gas emissions) SA Objective 14: Improve the efficiency, competitiveness, vitality and adaptability of the local economy SA Objective 16: Reduce the need to travel and promote more sustainable transport choices. However, it will be important that a practical sustainable transport strategy is developed to enable people to access the site using modes other than the car. The proposed approach would have a neutral effect on the remainder of the SA Objectives.
Issue: Cycle Parking	Given the sustainable location of the site, there is the potential for many trips generated by the development to be made by bike. The approach is likely to have positive impacts on the following SA Objectives: • SA Objective 2: Improve air quality and minimise or mitigate against sources of environmental pollution. • SA Objective 7: Minimise impacts on climate change (including greenhouse gas emissions). • SA Objective 14: Improve the efficiency, competitiveness, vitality and adaptability of the local economy. • SA Objective 16: Reduce the need to travel and promote more sustainable transport choices. The proposed approach would have a neutral effect on the remainder of the SA Objectives.
Issue: Types of Employment Space	Cambridge has been identified as one of the five most competitive cities in the UK, and one of the most recession proof cities that is likely to lead Britain back to growth. It is important that employment uses proposed for the site are able to support the cutting-edge nature of the economic sectors represented in Cambridge. The proposed approach for new employment uses is likely to deliver a range of employment opportunities and meet the needs of different businesses, including local business clusters. The approach specifically supports the achievement of SA Objective 14 Improve the efficiency, competitiveness, vitality and adaptability of the local economy and should result in significant beneficial impacts. The proposed approach would have a neutral impact on the remainder of the SA Objectives. Inclusion of shared social spaces would have a beneficial impact on the following SA Objectives: SA Objective 9: Maintain and enhance human health and wellbeing, and reduce inequalities SA Objective 13: Improve the quality, range and accessibility of services and facilities. SA Objective 16: Reduce the need to travel and promote more sustainable transport choices.

Approach	Sustainability commentary
	The proposed approach would have a neutral effect on the remainder of the SA Objectives.
Issue: Housing Mix	Cambridge and South Cambridgeshire are currently preparing a Housing Strategy for the two districts. This will help to
Issue: Affordable Housing	inform the drafting of the AAP. The housing approaches taken together are likely to have a significant beneficial impact on the following SA Objective through ensuring a mix of housing types to meet needs (and comply with space
Issue: Custom Build Housing	standards); provision of affordable housing at all tenures; provision of custom build opportunities; housing in the private rented sector and housing for particular needs:
Issue: Houses in Multiple Occupation (HMO)	SA Objective 11: Ensure everyone has access to decent, appropriate and affordable housing.
Issue: Private Rented Sector Housing	They will also have beneficial impacts on the following SA Objectives, but the significance of the impacts will be dependent on the exact mix of housing developed:
Issue: Other forms of	SA Objective 9: Maintain and enhance human health and wellbeing, and reduce inequalities.
specialist housing, including for older people, students & travellers	SA Objective 12: Redress inequalities related to age, disability, gender, race, faith, location and income.
Issue: Quality and Accessibility of Housing	The proposed approach would have a neutral impact on the remainder of the SA Objectives.
Issue: Sustainable design and construction standards	A range of standards proposed address different aspects of climate change, taken together are likely to have a significant beneficial impact on the following SA Objective:
	SA Objective 7: Minimise impacts on climate change (including greenhouse gas emissions).
	The proposed approach would have a neutral impact on the remainder of the SA Objectives.
Issue: Reviewing Sustainability Standards in	There is potential for positive impacts if standards are increased in the future, particularly on the following objective:
the future	SA Objective 7: Minimise impacts on climate change (including greenhouse gas emissions)
	The proposed approach would have a neutral impact on the remainder of the SA Objectives.
Issue: Site wide approaches to sustainable design and construction	The approaches are likely to have a wide-ranging positive effect on all the sustainability objectives as schemes such as BREEAM communities cover the whole range of sustainability issues.

Approach	Sustainability commentary
Issue: Biodiversity	The approach is likely to have a potential positive impact on the following SA Objectives, although until the exact approaches are known it is difficult to judge the significance of the positive effect.
	 SA Objective 4: Avoid adverse effects on designated sites and protected species SA Objective 5: Maintain and enhance the range and viability of characteristic habitats and species and improve opportunities for people to access and appreciate wildlife and green spaces
	The proposed approach would have a neutral impact on the remainder of the SA Objectives.
Issue: SMART technology	The approach is likely to have a potential positive impact on the following SA Objectives through implementing technologies like smart metering and making better use of emerging transport technology (although until the exact approaches are known it is difficult to judge the significance of the positive effect): SA Objective 7: Minimise impacts on climate change (including greenhouse gas emissions) SA Objective 16: Reduce the need to travel and promote more sustainable transport choices. The proposed approach would have a neutral impact on the remainder of the SA Objectives.
Issue: Waste Collection	The approach is likely to have a potential positive impact on the following SA Objectives through using 'smart bins' that are only collected when sensors indicate they are almost full, reducing collection vehicles miles:
	 SA Objective 2: Improve air quality and minimise or mitigate against sources of environmental pollution SA Objective 7: Minimise impacts on climate change (including greenhouse gas emissions) SA Objective 16: Reduce the need to travel and promote more sustainable transport choices
	The proposed approach would have a neutral impact on the remainder of the SA Objectives.