



Cambridge Northern Fringe East Area Action Plan

Appraisal of Policy Options

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South Cambridgeshire District Council and Cambridge City Council

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1 Appraisal of policy options

The policy options have been appraised against the appraisal framework set out in section xxx and a brief appraisal commentary provided. When carrying out the appraisal the team has considered how the approaches / options would work towards or against the various SA Objectives and whether any mitigation or enhancements need to be addressed whilst the policies are being developed. Because the elements of the plan being assessed are only approaches and not fully worked up policies at this stage, it is not possible in all cases to be definitive in identifying significant effects. Where it is possible to assign a level of significance this has been included within the appraisal commentary. However, in the majority of cases it is only possible to conclude the nature of impact (i.e. beneficial or adverse).

A number of the policies draw upon standards and policies set out in the Cambridge Local Plan: Proposed Submission 2014 to provide a consistent approach across the whole area, which includes land within both Cambridge City Council and South Cambridgeshire District Council local authority areas. The relevant policies are:

- Place and building design;
- Tall buildings and skyline;
- Open space;
- Car parking provision; and
- Cycle parking.

In the case of these policies, the councils considered that it was not a reasonable option to consider using South Cambridgeshire Local Plan policies or standards. This is because using the Cambridge City Council standards / policies better suits the urban context of the site as it is a part of the City.

Another option for the policies would be to develop specific policies and standards for the CNFE area. It has not been deemed to be a reasonable approach to prepare another, different set of policies/standards for this single area because of the level of technical assessment that has already gone into the development of the Cambridge Local Plan policies, and the advantages of a consistent approach with the rest of the city.

PROPOSED APPROACH: PLACE AND BUILDING DESIGN

Policy 55 seeks to protect and enhance the special character of Cambridge by encouraging development that responds to its context. Policy 56 supports development that is designed to be attractive, high quality, accessible, inclusive and safe, positively enhancing the townscape. Policy 57 sets out the measures needed to ensure new buildings are considered high quality in terms of sustainability, functionality and design (including with relation to biodiversity). Policy 59 concerns landscape and the public realm and states that external spaces, landscape, public realm, and boundary treatments must be designed as an integral part of new development proposals and co-ordinated with adjacent sites and phases. Collectively the policies provide a coherent design approach to place and building design.

The policies seek to ensure that the character of Cambridge is protected and enhanced. In doing so the policies should ensure that the character and distinctiveness of the built environment is both protected and enhanced and in doing so should positively contribute to several of the sustainability objectives.

The policies were appraised for their sustainability impacts as part of the SA of the Cambridge Local Plan. This appraisal showed that the policies should lead to significant positive effects in terms of encouraging proposals that lead to high quality design and an improved public realm. For this appraisal, it is important to analyse these policies in the context of the CNFE. With regard to landscape and design, the CNFE area is not particularly sensitive in terms of townscape so would not require any particular considerations in this regard. As the Local Plan recognises, different elements of place making may be more or less important than others, depending on the nature and complexity of the site and its surroundings. Therefore, it is not considered that the policies will have different effects in the CNFE than they would when applied to Cambridge generally. Therefore, the policies support the achievement of the following SA Objectives and should result in significant beneficial impacts:

- 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 6: Maintain and enhance the diversity and local distinctiveness of landscape and townscape character
- SA Objective 9: Maintain and enhance human health and wellbeing, and reduce inequalities
- SA Objective 10: Improve the quantity and quality of publically accessible open space

No potential negative impacts have been identified. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED APPROACH: DENSITIES

Much of the land in the area is under-utilised in terms of development density. The proposed approach should ensure that the density of the development reflects the specific needs of the area. As stated in the Issues and Options document, the high level of accessibility provided by the proposed new Railway Station and Guided Busway means that high densities, comparable with new developments near the existing Cambridge railway station, are possible. The supporting text of the policy approach mentions specific local

issues that need to be built into the consideration of density including landscape and townscape impacts, residential amenity, parking requirements, building heights and layout, open space standards and water related issues, and legal and property constraints. As long as these issues are considered by the council when developing the density proposals for the site, the proposed approach will have a beneficial impact on the following SA objectives, helping to use land efficiently, respect local character and make local services more viable, thus potentially reducing the need to travel:

- 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 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.

No potential negative impacts have been identified. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED APPROACH: TALL BUILDINGS AND SKYLINES

Cambridge Local Plan has a policy on tall buildings (Policy 60: Tall buildings and the skyline in Cambridge) and an Appendix F called Tall Buildings and the Skyline. Appendix F sets out a detailed explanation of the required approach, methodology and assessment to developing and considering tall buildings in Cambridge.

Policy 60 was appraised for its sustainability impact as part of the SA of the Cambridge Local Plan. The SA stated that the inclusion of this policy / guidance will help to contribute to the sustainability objective of ensuring that the scale of new development is sensitive to the existing key landmark buildings and low lying topography of the City. It is important to analyse this policy in the context of the CNFE. CNFE cannot be seen in isolation of Cambridge as a whole in terms of building heights. Cambridge has a varied skyline composed of towers, chimneys and spires, many of which are associated with the historic core. The flat landscape and the relative uniformity of the existing built form, which is mainly three to four storeys in height, means that the few tall buildings, such as King's College Chapel, are major landmarks. Trees form an important element of the Cambridge skyline, within both the historic core and surrounding suburbs and the CNFE area is no exception in this respect. It is not considered that the policy will have a different effect in the CNFE than it would when applied to Cambridge generally. Therefore, the policies support the achievement of the following SA Objective and should result in significant beneficial impact:

- SA Objective 6: Maintain and enhance the diversity and local distinctiveness of landscape and townscape character.

No potential negative impacts have been identified. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

Please note that the Council are undertaking further work over the coming months in relation to landscape, skyline and building heights in the CNFE area. This further work will be incorporated into the SA when available.

PROPOSED OPTIONS: BUILDING HEIGHTS

As noted above, the Councils are undertaking further work over the coming months in relation to landscape, skyline and building heights in the CNFE area. This further work will be incorporated into the SA when available. In the absence of this work, however, some general conclusions can be drawn.

Option A will reflect the form and character of development currently in the area so will therefore have a significant beneficial effect on SA Objective 6: Maintain and enhance the diversity and local distinctiveness of landscape and townscape character.

Option B is less likely to reflect the character of development currently in the area, 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. As highlighted in the policy approach this could also provide more flexibility in the overall masterplanning of the site, therefore, having indirect beneficial effects on several of the objectives.

Option C is also less likely to reflect the character of the area but poses more risk as no maximum building heights will be prescribed. This could detract from the current skyline of the city and has the most risk attached to it with regard to significant negative effects. If this option is taken forward it will be crucial for developers to enter into a positive and collaborative planning approach which includes statutory consultees and the public.

Please note that building heights would be included in the visual and landscape assessment which would be submitted with planning applications and that the Cambridge City Council's existing policy approach on Tall Buildings and Skylines outlined in the previous policy approach would also need to be adhered to.

PROPOSED APPROACH: BALANCED AND INTEGRATED COMMUNITIES – EFFECTIVE INTEGRATION WITH THE WIDER AREA

The proposed approach should improve the integration of neighbouring areas with the CNFE area and provide employment opportunities and community facilities. A key objective of Cambridge City Council is to address issues of social exclusion, poverty and disadvantage within Cambridge, ensuring that the prosperity benefits of growth are shared more fairly by all in the city. CNFE currently has very limited facilities (e.g., retail, leisure and community uses) both within its boundary and in the surrounding area. The approach supports the achievement of the following SA Objectives and should result in beneficial impacts:

- SA Objective 6 Maintain and enhance the diversity and local distinctiveness of landscape and townscape;
- SA Objective 9 Maintain and enhance human health and wellbeing, and reduce inequalities;
- SA Objective 10 Improve the quantity and quality of publically accessible open space;
- SA Objective 12 Redress inequalities related to age, disability, gender, race, faith, location and income; and
- SA Objective 13 Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities).

No potential negative impacts have been identified. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED APPROACH: NEW EMPLOYMENT USES

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.

No potential negative impacts have been identified in relation to any of the other SA Objectives. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED APPROACH: SHARED SOCIAL SPACE

The supporting text to the policy approach recognises that employment areas require complementary social and support facilities if they are to achieve the full potential of the area. This has been supported through a number of studies including the Cambridge Cluster at 50 report¹ and the Employment Options Study which showed that the Northern Fringe Employment Area including CNFE should plan in facilities and focal points for social interaction for all new developments. The proposed approach should ensure that a vibrant working environment is developed which provides for the needs of workers. The proposed approach will 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.

No potential negative impacts have been identified. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED OPTIONS: CHANGE OF USE FROM OFFICE TO RESIDENTIAL OR OTHER PURPOSES

Over the last ten years, and beyond, Cambridge has seen a loss of land and premises in industrial use as higher value uses, such as residential and retail, have put pressure on

¹ East of England Development Agency and Partners. Cambridge Cluster at 50: The Cambridge Economy; Retrospect and Prospect (2011)

sites. The offices and industrial uses make up an important part of the economy meeting the needs of people and businesses in the local area, in particular the business services that high technology firms rely on, as well as helping to provide a diverse range of jobs. Therefore, it is important to safeguard these uses.

Policy option B will provide protection against employment uses being turned into housing. Policy option A will not provide this kind of protection and arguably could undermine efforts to regenerate the area.

Option A could have negative impacts on the following SA objectives:

- 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.

Option B, if successful in protecting employment development could have beneficial impacts on the same SA objectives.

The proposed options would have a neutral impact on the remainder of the SA Objectives.

PROPOSED OPTIONS: CAMBRIDGE SCIENCE PARK

The development of the CNFE area will result in intensification of use which will help to turn the area into an employment hub. Option A will not lead to any negative impacts, however, it may result in missed opportunities with regard to updating the building stock and look of the Science Park, increasing densities and providing additional employment space. In contrast Option B could encourage greater intensification of use on the Cambridge Science Park, and/or intensification over a shorter time period, than may otherwise occur and may enable the park to be integrated functionally with the rest of the AAP area and ensure more integrated public transport strategies to be developed. This will have beneficial 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.

The proposed options would have a neutral impact on the remainder of the SA Objectives.

The council have also proposed extending the site boundary to include Chesterton Sidings Triangle. The option is to include a very small triangular area of land to the south of the sidings that (1) may be used for the proposed new railway station and (2) to provide a pedestrian/cycle access for CNFE as part of the Chisholm Trail. The option will be positive as it will enable positive planning of this small but important area of the CNFE area. The option will have a significant positive effect on the following SA Objective:

- SA Objective 16: Reduce the need to travel and promote more sustainable transport choices.

In enabling sustainable transport it will also have positive benefits on other SA Objectives including:

- 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).

There are also two discounted options for this policy approach:

- Land to the north of the A14; and
- Land to the east of the railway line, both within the control of South Cambridgeshire District Council.

These options have not been tested for their sustainability as they are not deemed to be reasonable options. The reasons for this as are stated in the Issues and Options report, namely:

- These areas do not include land which reflects the characteristics of the AAP area and would not be consistent with the submitted Local Plans;
- The areas are largely Green Belt and no changes to the Green Belt boundaries in these areas have been identified through the Local Plans' Green Belt review;
- Much of the land near the river is at high risk of flooding; and
- The area to the east contains Gypsy and Traveller site provision. Existing Gypsy and Traveller sites are proposed to be safeguarded in the South Cambridgeshire Submission Local Plan.

<p><i>PROPOSED OPTIONS: CHANGE OF USE FROM INDUSTRIAL TO OTHER PURPOSES AT NUFFIELD ROAD</i></p>
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Option A will have a Neutral performance against the SA Objectives. It supports the achievement of 'SA objective 14 Improve the efficiency, competitiveness, vitality and adaptability of the local economy' by maintaining the industrial uses on the site but could result in adverse impacts with regards to nearby residents with regards to traffic issues (SA Objective 9 Maintain and enhance human health and wellbeing, and reduce inequalities).

Option B, replacing industrial uses with office and relocating existing businesses elsewhere in the AAP, should result in beneficial impacts with regards to:

- SA Objective 9 Maintain and enhance human health and wellbeing, and reduce inequalities; and
- SA Objective 2 Improve air quality and minimise or mitigate against sources of environmental pollution.

However, it could result in adverse impacts with regards to 'SA Objective 14 Improve the efficiency, competitiveness, vitality and adaptability of the local economy' should spatial option 2 to taken forward because the option involves a net loss in industrial/storage uses (- 7.1 hectares compared to existing) and therefore there is a risk that businesses could not be relocated. However, spatial options 3 and 4 should be able to accommodate the existing

businesses at Nuffield Road industrial area as they will result in net increases in industrial/storage uses.

Option C, release of employment land in the Nuffield Road area for residential uses and seeking to accommodate those existing business uses elsewhere within the CNFE area, should also result in beneficial impacts with regards to:

- SA Objective 9 Maintain and enhance human health and wellbeing, and reduce inequalities;
- SA Objective 2 Improve air quality and minimise or mitigate against sources of environmental pollution; as well as
- SA Objective 11 Ensure everyone has access to decent, appropriate and affordable housing

Again, it could result in adverse impacts with regards to 'SA Objective 14 Improve the efficiency, competitiveness, vitality and adaptability of the local economy' as for Option B above.

The redevelopment of the land at Nuffield Road should involve the remediation of contaminated land present on the site. This requires further investigation but residential development may be limited to dwellings without private gardens.

PROPOSED APPROACH: BALANCED AND INTEGRATED COMMUNITIES - WIDER EMPLOYMENT BENEFITS

Neighbouring residential areas are home to some of the city's more disadvantaged communities with pockets of employment and income deprivation. Requiring developers to consider how they can provide training and employment opportunities will be positive in reducing these inequalities. The policy approach could have beneficial impacts on the following SA objectives:

- SA Objective 9: Maintain and enhance human health and wellbeing, and reduce inequalities.
- 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).
- 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.

No potential negative impacts have been identified. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED OPTIONS: HOTEL & CONFERENCING FACILITIES

A need for a hotel in this area has not been identified within the baseline data review and therefore Option A, which does not make provision for a hotel within the CNFE AAP, does not result in any adverse impacts.

Options B and C include provision for a hotel with or without conferencing facilities, which would provide a facility for use by local businesses and their visitors would reduce the need to travel further afield for overnight accommodation. A hotel could also support the vitality of the area by creating an evening economy in this area, assuming that public spaces are designed for safety and security. The provision of a hotel could also provide a wider range of employment opportunities within this area.

Options B and C perform similarly in that, by providing a hotel with or without conferencing facilities, the options would support the achievement of the following SA Objectives and would result in minor positive impacts:

- SA Objective 13 Improve the quality, range and accessibility of services and facilities (e.g. health, transport, education, training, leisure opportunities);
- 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; and
- SA Objective 16 Reduce the need to travel and promote more sustainable transport choices.

Option C could perform marginally better than Option B, through the provision of more facilities to support local businesses.

No potential negative impacts have been identified in relation to any of the other SA Objectives. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED APPROACH: BALANCED AND INTEGRATED COMMUNITIES - HOUSING MIX

PROPOSED APPROACH: AFFORDABLE HOUSING REQUIREMENT

The proposed approach to housing mix and affordability will have a significant beneficial impact on the following SA Objectives:

- SA Objective 11: Ensure everyone has access to decent, appropriate and affordable housing.

It 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:

- SA Objective 9: Maintain and enhance human health and wellbeing, and reduce inequalities.
- SA Objective 12: Redress inequalities related to age, disability, gender, race, faith, location and income.

No potential negative impacts have been identified in relation to any of the other SA Objectives. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED OPTIONS: PRIVATE RENTED ACCOMMODATION

There is a high level of housing need in the Cambridge area (see the Strategic Housing Market Assessment (SHMA) for the Cambridge sub-region). It is important to increase the supply of all types of housing, including affordable housing, and maintain a mix of different types of sizes, types and tenures of housing to meet a wide range of housing needs. The private rented sector is becoming more important in the city because of high house prices. Both of the options would help to achieve several of the SA Objectives including:

- SA Objective 9: Maintain and enhance human health and wellbeing, and reduce inequalities.
- SA Objective 11: Ensure everyone has access to decent, appropriate and affordable housing.

It is clear that if there is a demand for private rented accommodation in the area which will fill a housing need, then Option B will perform the best. However, the council needs to collect more evidence that this is indeed the case and ensure that any policy does not preclude the development of other forms of housing if they will help to fulfil the local housing need.

PROPOSED OPTIONS: STUDENT HOUSING

Student accommodation is a high percentage among the city accommodation and demand appears to be continuing. It is important to increase the supply of all types of housing, including student housing.

Four options are presented. Without detailed information about the need for student housing only general conclusions can be made.

Option A would appear to be unduly prescriptive in that it precludes the provision of student accommodation even though it is clear that there is demand. This would appear to be an unreasonable approach and we would recommend that it is not taken forward.

Options B, C and D could all have positive effects if developed using an up to date evidence base. A risk in developing student housing is that it could have the impact of reducing the overall supply of affordable housing as sites are developed for students and not the general population. Options B and D would seem to be the most effective in reducing this risk and therefore, have the potential to have the most positive effect. Option C would appear to pose the most risk to jeopardising the provision of affordable housing.

PROPOSED APPROACH: PROVISION OF SERVICES AND FACILITIES

PROPOSED APPROACH: NEW LOCAL CENTRE:

The area currently has very limited facilities (e.g. retail, leisure and community uses) both within its boundary and in the surrounding area. This concern has been supported through a number of studies including the Cambridge Cluster at 50 report² and the Employment Options Study showed that the Northern Fringe Employment Area including CNFE should plan in facilities and focal points for social interaction for all new developments. The AAP

² East of England Development Agency and Partners. Cambridge Cluster at 50: The Cambridge Economy; Retrospect and Prospect (2011)

and future development proposals offer an opportunity for provision of a new community core with shops, services, restaurants, cafés etc. with possible links to improved facilities on the Cambridge Science Park. The proposed approach should ensure that a vibrant working environment is developed which provides for the needs of the workers. The proposed approach will 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.

No potential negative impacts have been identified. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED OPTIONS: OPEN SPACE

The CNFE has very limited existing open space and the East Chesterton Ward currently has 2.89 hectares of mixed quality protected open space per 1,000 population (source: Cambridge City Council Open Space and Recreation Strategy October 2011), which compares poorly to the target of 4.1 hectares per 1,000 population in the updated Open Space Standards of the Cambridge Local Plan 2014 Proposed Submission.

The lack of open space emphasises the importance of the CNFE AAP providing sufficient multi-functional open space for the area's needs, although this should be balanced with other needs and the nature of the area. Open spaces are a key aspect of high quality urban environments and are fundamental to the character of the city. As recognised in the Cambridge Local Plan 2014 Proposed Submission, an essential part of Cambridge's character stems from the relationship between the city's buildings and open spaces. It is likely that due to the restriction of space on the site off site contributions will be required to meet the open space standards in the Local Plan.

The policy approach will have a beneficial impact on the following SA Objectives:

- SA Objective 5: Maintain and enhance the range and viability of characteristic habitats and species and
- SA Objective 6: Maintain and enhance the diversity and local distinctiveness of landscape and townscape character 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; and
- SA Objective 10: Improve the quantity and quality of publically accessible open space.

The significance of the impacts will be dependent on what is planned on site and the balance between on-site provisions and off site contributions. No potential negative impacts have been identified although care needs to be taken to ensure that development on the site remains viable. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED APPROACH: KEY TRANSPORT AND MOVEMENT PRINCIPLES

Further work needs to be completed on access to the site including traffic modelling. However, the policy approach sets out some positive principles that will help to guide the development of the site. The transport network in Cambridge is relatively constrained with finite capacity for vehicles and access to the main part of the CNFE area is limited with just one main route in and out onto Milton Road. Capacity at this junction and along the Milton Road Corridor is a significant constraint. Permeability across the site is currently severely restricted due to physical barriers including the A14, the railway line and Milton Road. Increasing permeability is therefore challenging and crucial. It is recognised that the AAP and subsequent development proposals provide an opportunity to maximise the sustainable transport opportunities offered by the proposed new railway station, the extension to the Guided Bus and connection to the existing high quality off-road cycle network alongside the existing Guided Busway, as well as enhancements to the network including the new Chisholm Trail. The policy approach will have a beneficial impact 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 16: Reduce the need to travel and promote more sustainable transport choices.

No potential negative impacts have been identified. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED OPTIONS: MODAL SHARE TARGET:

Because of the constrained nature of the Cambridge transport system it is vitally important that traffic levels are kept stable and that a modal share target is set. The traffic modelling that will be carried out will provide vital evidence for the appraisal. A Paramics micro stimulation model and CSR (Cambridge Sub Region Model) will be developed which will test the impacts on traffic levels and distribution of different options. In the absence of the modelling work only a broad assessment can be made.

The 2011 census showed that despite the increase in population in the ten years since the previous census, the proportion of employed residents of the city who drove to work dropped from 37.5% to 30%. In order for these traffic levels to continue to remain stable, despite the forecast growth for the city, work undertaken by the councils indicate that the proportion of employed city residents who drive to work needs to fall even further, to 24%. The sites highly sustainable location highlights the potential to achieve the 24% needed across the city to keep traffic levels stable. With the existing and future pressures on the city's road network, CNFE must seek to facilitate the greatest possible public transport and cycle mode share.

Option C is likely to cause negative impacts because it will not seek to constrain road traffic from the site. This is likely to cause increases in road traffic which will cause increases in noise, air pollution, CO₂ and nuisance. This is also likely to constrain economic growth in the medium and long term. Therefore, the option is likely to have negative 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.

Options A and B are likely to have beneficial impacts on most of the above SA Objectives through helping to restrict road traffic (in association with the transport strategy that is set for the site). However, without specific traffic modelling on the impacts of different modal shares (and without further details on what would be needed to make the area an exemplar scheme) the significance of the impacts cannot be judged.

There may be some concern that higher modal share targets might inhibit some commercial demand for new floorspace when linked with restricted car parking if some find it difficult to use their car. Therefore, Options A and B may have a slight negative effect on Objective 14 in the short term. Options A and B are likely to have a beneficial effect on Objective 14 in the medium and long term as the travel options in the area significantly improve and users of the site become more used to alternative modes of travel. High modal share targets are likely to become more the norm in Cambridge and this site will have a competitive advantage because of its accessibility.

PROPOSED OPTIONS: VEHICULAR ACCESS AND ROAD LAYOUT

The current access to the site is limited with just one main route (Cowley Road) in and out onto Milton Road. The junction acts as a bottleneck constraint to further development as it suffers from heavy peak time congestion. Investigations are currently ongoing with regard to access solutions for the site but the results are not yet available. In the absence of this work only a broad assessment can be made.

Option A would not appear to be a practical solution due to the congestion this will cause and the impacts this will have on the character of the site as Cowley Road is expected to serve as a green boulevard. Having all traffic access the site in this way would undermine the urban design aspirations of this element of the masterplan. Therefore, Option A would have negative impacts on the following SA Objectives:

- SA Objective 6: Maintain and enhance the diversity and local distinctiveness of landscape and townscape character
- SA Objective 10: Improve the quantity and quality of publically accessible open space
- SA Objective 16: Reduce the need to travel and promote more sustainable transport choices.

It would seem that Options B and C are likely to perform better both in terms of congestion and in terms of urban design principles. It is difficult to assess in detail without the results of the access investigations. However, Option B is likely to perform better against SA Objectives 6 and 10. However, Option C might perform better in transport terms as it is more likely to reduce congestion (as it provides more road space for vehicle access) and may perform well in terms of safety as it separates HGVs from other road traffic.

PROPOSED OPTIONS: PARKING AT TRANSPORT INTERCHANGE

The current (and consented) interchange proposals include parking for 450 cars and around 1000 bicycles at ground level. Option A will have beneficial 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.

It will do this through enabling access to more sustainable modes of transport and therefore helping to promote the competitiveness of the area and providing beneficial environmental impacts of modal switch.

Option B, provision of a multi storey car park is quite a significant change. This will need to be assessed as part of an additional planning permission especially in terms of visual impacts on houses to the east of the CNFE area and the impacts are also dependent on the planned heights of the buildings in the immediate area (which is currently unknown). Option

B would have the beneficial impacts identified above but would also potentially have negative impacts on the following SA Objective:

- SA Objective 6: Maintain and enhance the diversity and local distinctiveness of landscape and townscape character

In addition, Option B could possibly have a beneficial impact on the following SA Objective through making more effective use of land:

- SA Objective 1: Minimise the irreversible loss of undeveloped land, protect soils and economic mineral reserves.

PROPOSED OPTIONS: CAR PARKING PROVISION

Careful consideration needs to be given to appropriate levels of car parking provision for the site, with a potentially strong argument for strict parking standards given CNFE's highly sustainable location. Similarly to the policy approach on modal share, the traffic modelling that will be carried out will provide vital evidence for the appraisal. A Paramics micro stimulation model and CSR (Cambridge Sub Region Model) will be developed which will test the impacts on traffic levels and distribution of different options. In the absence of the modelling work only a broad assessment can be made. Without specific traffic modelling on the impacts of different modal shares (and without further details on what would be needed to make the area an exemplar scheme) the significance of the impacts cannot be judged.

All of the options are 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.

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.

Please note that an option based on less restrictive parking standards has not been developed (and assessed) as this was not considered a reasonable approach given the context of the site and its access issues.

PROPOSED OPTIONS: CYCLE PARKING PROVISION

Given the sustainable location of the site, there is the potential for many trips generated by the development to be made by bike. The site already has the potential to be connected in a number of directions to existing or planned high quality cycle infrastructure. The planned Chisholm Trail will connect the site to Cambridge Station and the Addenbrooke's campus and eastwards, the site will also connect to the guided busway through the new guided busway extension. There are also plans for upgrades to the cycling infrastructure along Cowley Road. All of the options are 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.

Options B and C are likely to have more beneficial effects than Option A. However, the success of the standards is dependent on the transport strategy developed for the site.

PROPOSED OPTIONS: SUSTAINABLE DESIGN AND CONSTRUCTION AND FLOOD RISK

The Cambridge Local Plan has the following policies in relation to sustainable design and construction:

- Policy 27: Carbon reduction, community energy networks, sustainable design and construction, and water use
- Policy 28: Allowable solutions for zero carbon development
- Policy 29: Renewable and low carbon energy generation
- Policy 31: Integrated water management and the water cycle
- Policy 32: Flood risk

The South Cambridgeshire Local Plan also has a number of policies (shown below):

- Policy CC/1: Mitigation and Adaptation to Climate Change
- Policy CC/2: Renewable and Low Carbon Energy Generation
- Policy CC/3: Renewable and Low Carbon Energy in New Developments
- Policy CC/4: Sustainable Design and Construction
- Policy CC/8: Sustainable Drainage Systems

The sustainability appraisals for the Cambridge Local Plan and the South Cambridgeshire Local Plan find that the policies will be generally positive in terms of promoting sustainability (although with some reservations about the use of the phrase “unless it can be demonstrated that such provision is not technically or economically viable” in Cambridge Local Plan Policy 27 and some concern about the effects of large numbers of solar panels on townscape in South Cambridgeshire).

The district policies are not exactly the same and have slightly different provisions. Table XX below sets out the requirements for each.

It is not possible to state exactly how the sustainability performance of the policies would differ because it is not clear what mix of development is likely to come forward. There are some conclusions that can be drawn however from the comparison of Options A and B.

- Option A might be a difficult approach to develop because there are differences in the policy approaches in the two plans. This may lead to uncertainty and it is less likely that the site will deliver development to the same standards with relation to sustainable

design and construction and climate change as that which would be specified under Option B.

- Option B would provide more clarity to developers and would be clearer in terms of the exact provisions required. However, if Option B is taken forward the councils should ensure that the most stringent provisions are applied to the site.

Table xx: Comparison of sustainable construction and design policies			
Issue	Option A		Option B
	Cambridge	South Cambridgeshire	New Policy
Provision of a sustainability statement	<p>Promoters of major development... should prepare a sustainability statement ... outlining their approach to the following issues:</p> <ul style="list-style-type: none"> • adaptation to climate change • carbon reduction • water management • site waste management • e. use of materials 	<p>Planning permission will only be granted for proposals that demonstrate and embed the principles of climate change mitigation and adaptation into the development. Applicants must submit a Sustainability Statement to demonstrate how these principles have been embedded into the development proposal.</p>	<p>All development proposals to demonstrate how the principles of sustainable design and construction have been integrated into the design of proposals, giving specific consideration to:</p> <ul style="list-style-type: none"> • adaptation to climate change • carbon reduction (both in relation to the design and layout of developments and buildings themselves and through the promotion of sustainable modes of transport) • water management • site waste management • use of materials.
New homes	<p>By 2016 Code for sustainable Homes Level 4 On-site reduction of regulated carbon emissions relative to Part L 2006: 44% - 60% on-site, with remainder dealt with through allowable solutions (as per national zero carbon policy) 80 litres/head/day</p>	<p>Proposals for new dwellings and new non-residential buildings of 1,000 m2 or more will be required to reduce carbon emissions (over the requirements set by Building Regulations) by a minimum of 10% through the use of on-site renewable energy technologies.</p> <p>All new residential developments must achieve as a minimum the equivalent of Code for Sustainable Homes Level 4 for water efficiency (105 litres per person per day).</p> <p>The Council is relying on the planned changes to Building Regulations anticipated</p>	<p>Given that the proposed adoption of the AAP will be late 2016, national zero carbon policy for new homes will have come into force, and as such additional carbon reduction standards for any new residential development at CNFE will not be required, in line with the outcomes of the Housing Standards Review.</p> <p>Any new residential development to meet the optional water efficiency standards resulting from the Housing Standards Review of 110 litres per person per day.</p>

Table xx: Comparison of sustainable construction and design policies

Issue	Option A		Option B
	Cambridge	South Cambridgeshire	New Policy
		to come into force in 2013 and 2016, which will progressively improve the energy efficiency requirements of new homes	
Other development	<p>By 2016 BREEAM Excellent Water efficiency: Full credits to be achieved for category Wat 01 On site carbon reduction: In line with 2013 Part L</p> <p>By 2019 BREEAM Excellent Water efficiency: Full credits to be achieved for category Wat 01 On site carbon reduction: In line with national zero carbon policy</p>	<p>Proposals for new dwellings and new non-residential buildings of 1,000 m2 or more will be required to reduce carbon emissions (over the requirements set by Building Regulations) by a minimum of 10% through the use of on-site renewable energy technologies.</p> <p>Proposals for non-residential development must be accompanied by a water conservation strategy, which demonstrates a minimum water efficiency standard equivalent to the BREEAM standard for 2 credits for water use levels unless demonstrated not practicable.</p>	<p>All new non-residential development will be required to meet a minimum of BREEAM excellent. Carbon reduction for new non-residential development would be linked to the mandatory requirements set out for BREEAM excellent.</p> <p>New non-residential development should achieve maximum BREEAM credits for water efficiency.</p>
Allowable solutions	<p>Where compliance with national zero carbon policy necessitates the use of the allowable solutions framework (ASF), developers will have the option to:</p> <ul style="list-style-type: none"> a. deliver their own allowable solutions locally; b. make a contribution to the Cambridgeshire Community Energy Fund; or 	<p>Where 'allowable solutions' are needed for a proposal to achieve zero carbon (as set out in Building Regulations), and if a Cambridgeshire Community Energy Fund exists, the Council's preference is that developers contribute to this fund to ensure that the benefits are retained locally.</p>	

Table xx: Comparison of sustainable construction and design policies			
Issue	Option A		Option B
	Cambridge	South Cambridgeshire	New Policy
	c. offset via third-party allowable solutions providers into a project selected from a local Energy Efficiency and Renewable and Low Carbon Energy Infrastructure Projects List.		
Approach to SUDS	<p>A detailed policy on the design of natural drainage features. A flood risk policy that states: the destination of the discharge obeys the following priority order:</p> <ul style="list-style-type: none"> • firstly, to ground via infiltration; • then, to a water body; • then, to a surface water sewer. 	<p>Development proposals must incorporate appropriate sustainable surface water drainage systems (SuDS) appropriate to the nature of the site.</p> <p>A flood risk policy that states: the destination of the discharge obeys the following priority order:</p> <ol style="list-style-type: none"> i. Firstly, to the ground via infiltration; ii. Then, to a water body; iii. Then, to a surface water sewer; iv. Discharge to a foul water or combined sewer is unacceptable. 	<p>Surface water to be managed close to the surface and on the surface with priority given to nature services through the use of sustainable drainage systems (SuDS). Water should be seen as a resource and be re-used where practicable, offsetting potable water demand. A water sensitive approach should be taken to the design of development proposals.</p>
Flood risk	<p>The peak rate of run-off over the lifetime of the development, allowing for climate change, is no greater for the developed site than it was for the undeveloped site.</p> <p>The post-development volume of run-off, allowing for climate change over the development lifetime, is no greater than it would have been for the undeveloped site.</p>	<p>In order to minimise flood risk, development will only be permitted where:</p> <ol style="list-style-type: none"> a. The sequential test and exception tests established by the National Planning Policy Framework demonstrate the development is acceptable (where required). 	<p>All development should ensure that all forms of flood risk are taken into consideration and that proposals are not at risk of flooding or increase the risk of flooding elsewhere.</p>

PROPOSED APPROACH: RENEWABLE AND LOW CARBON ENERGY GENERATION

A number of studies have assessed Cambridge's potential for renewable and low carbon energy generation. These studies suggest that the main focus for renewable and low carbon energy generation will be from the potential that Cambridge offers for the development of district heat networks and the use of microgeneration, such as solar panels. Cambridge City Council recognises that the opportunities for stand-alone renewable energy schemes within Cambridge are limited. However, it is keen to support opportunities where they arise, in particular small-scale and community schemes that are most likely to be viable within Cambridge. The policy approach would have beneficial effects on the following SA Objectives:

- SA Objective 7: Minimise impacts on climate change (including greenhouse gas emissions).

The site has so far not been recognised as having potential for district heating. However, the fact that the policy requires further consideration will be positive in reducing carbon emissions. Anaerobic digestion could also provide a valuable form of renewable heat and power in this context.

PROPOSED APPROACH: HEALTH IMPACT ASSESSMENT

Health Impact Assessment (HIA) is a method of considering the positive and negative impacts of development on the health of different groups in the population, in order to enhance the benefits and minimise any risks to health. The policy approach will have positive impacts on the following SA Objective:

- SA Objective 9: Maintain and enhance human health and wellbeing, and reduce inequalities

The policy will also ensure conformity with the South Cambridgeshire Local Plan (Submission Draft 2014) which includes a policy on this issue (Policy SC/2). This will be through ensuring major developments assess their impacts on health and therefore, maximise the health benefits of their proposals. No potential negative impacts have been identified. The proposed approach would have a neutral impact on the remainder of the SA Objectives.

PROPOSED OPTIONS: PHASING AND DELIVERY APPROACH

It is important that a detailed masterplan for the area is developed to ensure that the site maximises its potential and appropriate infrastructure is provided. The site is complex and will need to be co-ordinated with a number of parties. As long as an effective masterplan is developed the precise nature of the mechanism used is not important for the Sustainability Appraisal.