

Appendix 1

Criteria and assumptions to be applied in the SA of site options

Assumptions regarding distances

Reference is made to 'easy walking distance' in the appraisal assumptions. There are a number of pieces of research that give a variety of recommended guidance distances for walking. For example, the Institute of Highways and Transportation found that the average length of a walk journey is one kilometre. The Institute of Highways and Transportation categorises distances depending upon location and purpose of the trip, and 'desirable', 'acceptable', and 'preferred maximum':

	Town centres (m)	Commuting/School/ Sight-seeing (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred maximum	800	2,000	1,200

For the purposes of the appraisal, distances in the appraisal will be measured as the straight line distance from the edge of the site option to existing services and facilities, and therefore actual walking distances are likely to be greater (e.g. depending on the house location within a larger site and the availability of a direct route).

It is recognised that many journeys to services and facilities will not be made in a straight line. When applying the Institute of Highways and Transportation distances for the appraisal of site options to each of the relevant distances a 10% buffer has therefore been applied to account for the potential difference between the straight line distance and the actual distance involved in a journey to services and facilities. For example, the relevant distance applied for walking distance for town and local centres has been decreased from 800m to 720m, and so on.

It is considered that this is a reasonable approach, and professional judgement will be used when applying these distances to each site option and the range of services and facilities considered by the appraisal (e.g. where there are significant barriers to straight-line movement, such as railway lines). The distances used in the appraisal will vary depending upon the type of destination being accessed and the mode of transport:

- 450m walking distance for primary schools on the basis that parents are unlikely to want to walk long distances with young children.
- 900m walking distance for secondary schools.
- 720m walking distance for city, district, local, neighbourhood, rural and minor rural centres.
- 450m to a bus stop, as many people are unlikely to want to walk much further and then catch a bus to their destination.
- 1,800m walking distance to a train station.
- In terms of access to cycle routes, a distance of 450m will be used in the appraisal on the assumption that links to cycle routes are likely to use road carriageways.

The SA assumptions include analysis of the proximity of residential areas to key employment areas. Although there is no guarantee that people will find jobs at the employment areas closest to them, it is considered that provision of homes close to major sources of employment would support people in making shorter journeys to work. The following walking assumption has been applied:

- 1,800m walking distance to employment areas.

Table A1.1: Criteria and assumptions to be applied during the SA of site options for the Greater Cambridge Local Plan

SA Objectives	Criteria and assumptions
<p>1. To ensure that everyone has the opportunity to live in a decent, well-designed, sustainably constructed and affordable home.</p>	<p>Residential site options</p> <p>All of the residential site options are expected to have positive effects on this objective, due to the nature of the proposed development. Planning Practice Guidance²⁹⁶ states that affordable housing should only be sought for residential development 10 or more homes. It is expected that sites of this size or larger could potentially provide affordable homes and so will have significant positive effects. Therefore:</p> <ul style="list-style-type: none"> • Sites with capacity for more than 10% net additional total housing need will have a significant positive (++) effect. • Sites with capacity for fewer than 10% net additional total housing need will have a minor positive (+) effect. <p>Employment site options</p> <p>The location of employment sites is not considered likely to affect this objective, therefore the score for all site options will be negligible (0).</p>
<p>2. To maintain and improve access to centres of services and facilities including health centres and education.</p>	<p>All site options</p> <p>Larger scale development could potentially incorporate the provision of new services. The location of all types of development sites could affect this objective by influencing people’s ability to access existing services and facilities (both for local residents and employees during breaks and after work).</p> <p>The defined city, town and rural centres are the areas in South Cambridgeshire and Cambridge City which provide access the high number of services and facilities. Local, neighbourhood and minor rural centres will provide access to a lower level of services and facilities. The location of proximity to these areas can therefore be used to establish the potential accessibility to a wider number of services and facilities in Greater Cambridge. Therefore:</p>

²⁹⁶ Ministry of Housing, Communities & Local Government (2019) Planning Practice Guidance Paragraph: 023 Reference ID: 23b-023-20190315

SA Objectives	Criteria and assumptions
	<ul style="list-style-type: none"> • Sites that are within 720m of a defined city, district or rural centre will have a significant positive (++) effect. • Sites that are within 720m of a defined local, neighbourhood, or minor rural centre will have an uncertain minor positive (+?) effect. • Sites that are not located within 720m of a defined city, district, local, neighbourhood, rural or minor rural centre will have an uncertain minor negative (-?) effect. <p>Residential site options</p> <p>For sites which support residential use it will be necessary to consider access to education facilities. It is recognised that educational facilities are often not located within the town and village centres and are instead provided to meet the needs of specific catchment areas. Sites which provide a good level of access to services and facilities at centre locations may not always be those which provide a good level of access to educational facilities. The effects of sites on the educational element of this objective will depend on the access that they provide to existing educational facilities, although there are uncertainties as the effects will depend on there being capacity at those schools to accommodate new pupils, and there are no further education facilities in Greater Cambridge. New residential development could stimulate the provision of new schools/school places, particularly larger sites, but this cannot be assumed at this stage. Therefore, for residential sites, in addition to the assumptions set out to consider access to service and facilities centres:</p> <ul style="list-style-type: none"> • Sites that are within 1km of a secondary school and within 450m of a primary school will have an uncertain significant positive (++) effect. • Sites that are within 1km of a secondary school or within 450m of a primary school (but not both) will have an uncertain minor positive (+?) effect. • Sites that more than 1km of a secondary school and 450m of a primary school will have an uncertain minor negative (-?) effect. <p>This will mean some residential sites may be recorded as having an overall mixed (++)/-? or +/-?) effect.</p>
3. To encourage social inclusion, strengthen	All types of site options

SA Objectives	Criteria and assumptions
<p>community cohesion and advance equality between those who share a protected characteristic (Equality Act 2010) and those who do not.</p>	<p>The proximity of development to services and facilities and public transport links may help to address issues of social inclusion and equality. These issues (including access to facilities such as education and healthcare and proximity to public transport links, such as railway stations and bus stops) are considered under SA objective 2, SA objective 4, and SA objective 12 in the SA framework. Many other contributors to equality, social inclusion and community cohesion cannot be determined using geographical factors and will therefore be more relevant to policy assessments.</p> <p>Achieving local regeneration may help to promote a sense of ownership and community cohesion among residents. It is recognised that this will depend in part on the detailed proposals for sites and their design, which are not known at this stage. However, development which occurs on brownfield land is likely to help promote the achievement of regeneration in Greater Cambridge. Therefore:</p> <ul style="list-style-type: none"> • Sites that are on brownfield land, or land that is partly brownfield, will have a minor positive (+) effect. • Sites that are on greenfield land will have a negligible (0) effect. <p>The location of new developments will also affect social deprivation and economic inclusion by influencing how easily people are able to access job opportunities and access to decent housing in a given area. Areas which are identified as most deprived in Greater Cambridge are often also those which could benefit most from the achievement of regeneration. The delivery of housing or employment sites within a 40% most deprived area²⁹⁷ will therefore have a minor positive (+) effect.</p> <p>The city centre and district and rural centre locations of South Cambridgeshire and Cambridge City help to support community networks in Greater Cambridge. Development which contains appropriate uses (such as retail and/or community uses) and is to occur within the defined city centres and district and rural centres could help to maintain the vitality and viability of these locations. As such where site options to be delivered within the defined city, district and rural centres would contain a use of this type, a significant positive (++) effect is expected. Site options that contain a use of this type to be delivered within a local, neighbourhood, or minor rural centre are expected to result in a minor positive (+) effect.</p>

²⁹⁷ According to the Index of Multiple Deprivation 2015

SA Objectives	Criteria and assumptions
<p>4. To improve public health, safety and wellbeing and reduce health inequalities.</p>	<p>All types of site options</p> <p>Sites that are within walking distance (720m) of existing healthcare facilities (i.e. GP surgeries or hospitals) and areas/features which promote physical activities (open spaces, or sports facilities) among residents will ensure that residents have good access to healthcare services and are provided with opportunities for healthy lifestyle choices. This includes employment sites, which will provide employees with access to these types of features outside of working hours and during break times. Therefore:</p> <ul style="list-style-type: none"> • Sites that are within 720m of a healthcare facility and an area of open space/sports facility²⁹⁸ will have a significant positive (++) effect. • Sites that are within 720m of either healthcare facility or an area of open space/ sports facility (but not both) will have a minor positive (+) effect. • Sites that are not within 720m of either a healthcare facility or an area of open space/ sports facility will have a minor negative (-) effect. <p>If sites come forward within an area of open space or a site which currently accommodates an outdoor sports facility it is recognised that that this use may be lost as a result of development. As such where site options contain such features a significant negative (--) effect is recorded. This will mean some sites may be recorded as having an overall mixed (++) or (+/-) effect.</p> <p>If a number of sites are allocated within close proximity of one another, this could lead to existing healthcare facilities becoming overloaded. If at any point information becomes available regarding the capacity of existing healthcare facilities, this will be taken into account in the SA as relevant.</p> <p>If development at a site is likely to incorporate new healthcare facilities, open space/sports facilities, it will be scored in accordance with the assumptions listed above.</p>
<p>5. To conserve, enhance, restore and connect</p>	<p>All types of site options</p> <p>Development sites that are within close proximity of an international, national or local designated nature conservation site have the potential to affect the biodiversity or geodiversity of those sites/features, e.g.</p>

²⁹⁸ Includes areas identified in Council's Open Space studies, country parks and CROW Access land

SA Objectives	Criteria and assumptions
wildlife, habitats, species and/or sites of biodiversity or geological interest.	<p>through habitat damage/loss, fragmentation, disturbance to species, air pollution, increased recreation pressure etc. Conversely, there may be opportunities to promote habitat connectivity if new developments include green infrastructure. Therefore, while proximity to designated sites provides an indication of the potential for an adverse effect, uncertainty exists, as appropriate mitigation may avoid adverse effects and may even result in beneficial effects. The potential impacts on undesignated habitats and species adjacent to the potential development sites cannot be determined at this strategic level of assessment. This would be determined once more specific proposals are developed and submitted as part of a planning application.</p> <ul style="list-style-type: none"> • Sites that are within Natural England’s Impact Risk Zones (IRZs) of one or more internationally or nationally designated biodiversity or geodiversity sites may have an uncertain significant negative (--?) effect. • Sites that are within 400m of a locally biodiversity or geodiversity designated site or area of ancient woodland or priority habitat, or sites that include grassland, wet grassland and woodland and/or associated opportunity areas may have an uncertain minor negative (-?) effect. • Sites that not within of an IRZ of one or more internationally or nationally designated biodiversity or geodiversity sites, and are over 400m from a locally designated site could have a negligible (0?) effect.
6. To conserve and enhance the character and distinctiveness of Greater Cambridge’s landscapes and townscapes, maintaining and strengthening local distinctiveness	<p>All types of site options</p> <p>The effects of new development on the character and quality of the landscape will depend in part on its design, which is not yet known; therefore all effects will be to some extent uncertain at this stage. As it stands there has been no landscape character study or landscape sensitivity study that covers the whole of Greater Cambridge, and only within Cambridge have character areas been defined. The Councils plan to commission a landscape character assessment, but in the absence of this evidence all assessments will have associated uncertainty (?).</p> <ul style="list-style-type: none"> • Sites that currently consist of derelict or degraded land may have a minor positive effect (+?). • Brownfield sites that are in existing or recent use (i.e. not derelict/degraded) and sites that would not lead to loss of landscape features (e.g. green space or water bodies) may have a negligible effect (0?).

SA Objectives	Criteria and assumptions
and sense of place.	<ul style="list-style-type: none"> Sites that would lead to a loss of landscape features (e.g. green space or water bodies) or would be out of keeping with the scale of existing development may have a minor negative effect (-?).
7. To conserve and/or enhance the qualities, fabric, setting and accessibility of Greater Cambridge's historic environment.	<p>All types of site options</p> <p>The NPPF states that when considering the impact of a proposed development on the significance of a designated heritage asset “great weight should be given to the asset’s conservation ... irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance”. However, development could also enhance the significance of the asset (provided that the development preserves those elements of the setting that make a positive contribution to or better reveals the significance of the asset).</p> <p>In all cases, effects will be uncertain at this stage as the potential for negative or positive effects on historic and heritage assets will depend on the exact scale, design and layout of the new development and opportunities which may exist to enhance the setting of heritage features (e.g. where sympathetic development replaces a derelict brownfield site which is currently having an adverse effect).</p> <ul style="list-style-type: none"> Sites which have potential for heritage assets to be enhanced and their significance to be better revealed could have a minor positive (+?) or significant positive effect (++?) on this objective. Sites which are unlikely to cause adverse impacts on the significance of heritage assets could have a negligible (0?) effect on this objective. Sites which have the potential to cause harm to the significance of heritage assets, but can be mitigated, could have a minor negative (-?) effect on this objective. Sites which have the potential to cause harm to the significance of heritage assets where it is unlikely that these can be adequately mitigated could have a significant negative (--?) effect on this objective.
8. To make efficient use of Greater Cambridge's land resources through the re-use of previously	<p>All types of site options</p> <p>The effects of new development on soils will depend on its location in relation to the areas of highest quality agricultural land in Greater Cambridge, and whether the land has previously been developed. Therefore:</p> <ul style="list-style-type: none"> Sites that are mainly or entirely on greenfield land which is classed as being of Grade 1 or Grade 2 agricultural quality would have a significant negative (--) effect.

SA Objectives	Criteria and assumptions
developed land and conserve its soils.	<ul style="list-style-type: none"> • Sites that are mainly or entirely on greenfield land which is classed as being of Grade 3 agricultural quality (but where it is not known if it is Grade 3a or 3b land) could have a significant negative effect although this is uncertain (--?). • Sites that are mainly or entirely on greenfield land that is classed as Grade 4, Grade 5, non-agricultural or urban land would have a minor negative (-) effect. • Sites that are mainly or entirely on brownfield land would have a minor positive (+) effect. • Sites that would result in the remediation of contaminated land would have a significant positive (++) effect.
9. To conserve mineral resources in Greater Cambridge.	<p>All types of site options</p> <p>The effects of new development on mineral resources will depend on its location in relation to areas which have been identified for their importance for mineral reserves in Greater Cambridge. The Cambridgeshire and Peterborough Minerals and Waste Development Plan Site Specific Proposals DPD (2012) identifies Mineral Safeguarding Areas (MSAs) and Mineral Consultation Areas (MCAs). Development within or in close proximity to these areas can result in sterilisation of mineral resources. Therefore:</p> <ul style="list-style-type: none"> • Sites that are located directly within a MSA or MCA would have a significant negative effect on mineral resources although this is uncertain (--?) dependent upon whether extraction could be achieved prior to any development. • Sites that are located within 250m of a MSA would have a minor negative effect on mineral resources although this is uncertain (-?) dependent upon whether extraction could be achieved prior to any development. • Sites located more than 250m from a MSAs or MCA are expected to have a negligible (0) effect. <p>It should be noted that the emerging updated joint Minerals and Waste Local Plan will replace the current plan. Any updates to these designations will be considered as and when they occur.</p>
10. To achieve sustainable water resource management	<p>All types of site options</p> <p>The effects of new development in terms of promoting more sustainable use of water resources will depend largely on people's behaviour as well as the design of new developments. However, where development</p>

SA Objectives	Criteria and assumptions
and promote the quality of Greater Cambridge's waters.	<p>takes place within Source Protection Zones (SPZs), there may be potential risks relating to contamination to result. Therefore:</p> <ul style="list-style-type: none"> • Sites that are within a SPZ could have a minor negative (-) effect. • Sites that are not within a SPZ could have a negligible (0) effect. <p>Any issues regarding supply of water resources, and waste water treatment capacity, are more appropriately appraised at the Local Plan scale, rather than through as assessment of each individual site.</p>
11. To adapt to climate change, including minimising flood risk.	<p>All types of site options</p> <p>The effects of new development on this SA objective will depend to some extent on its design, for example whether it incorporates SuDS, which cannot be assessed at this stage. Where site options are located in areas of high flood risk, it could increase the risk of flooding in those areas (particularly if the sites are not previously developed) and would increase the number of people and assets at risk from flooding. As such:</p> <ul style="list-style-type: none"> • Sites that are entirely or mainly within flood zone 3a or flood zone 3b are likely to have a significant negative (--) effect. • Sites that are entirely or mainly within flood zone 2 are likely to have a minor negative (-) effect. • Sites that are entirely or mainly within flood zone 1 are likely to have a negligible (0) effect. <p>Furthermore:</p> <ul style="list-style-type: none"> • Sites that are on greenfield land are expected to have a minor negative (-) effect. • Sites that are on brownfield land are expected to have a negligible (0) effect. <p>Adopting a precautionary approach the scores for this SA objective reflect the most adverse effect identified. For example a site which lies within flood zone 3a and brownfield land would score a significant negative (--) effect overall.</p>
12. To minimise Greater Cambridge's	<p>All types of site options</p> <p>The effects of new development in terms of climate change and how development will respond to this issue will depend to some extent on its design, for example whether it incorporates renewable energy generation on site or includes SuDS. However, the proximity of development sites to sustainable transport links will affect</p>

SA Objectives	Criteria and assumptions
contribution to climate change.	<p>the extent to which people are able to make use of non-car based modes of transport to access services, facilities and job opportunities, although the actual use of sustainable transport modes will depend on people's behaviour.</p> <p>It is possible that new transport links such as bus routes or cycle paths may be provided as part of larger-scale housing developments or employment development but this cannot be assumed.</p> <p>It is assumed that people would generally be willing to travel further to access a railway station than a bus stop. It is also recognised that many cyclists will travel on roads as well as dedicated cycle routes, and that the extent to which people choose to do so will depend on factors such as the availability of cycle storage facilities at their end destination, which are not determined by the location of sites. How safe or appealing particular roads are for cyclists cannot be determined at this strategic level of assessment. However, the proximity of site options to existing cycle routes can be taken as an indicator of how likely people are to cycle to or from a development site. Therefore:</p> <ul style="list-style-type: none"> • Sites that are within 1.8km of a railway station, or sites that are more than 1.8km from a railway station but within 450m of the Cambridge Busway stop (or similar dedicated rapid bus route), are likely to have a significant positive (++) effect. • Sites that are within 1.8km of a key employment area and within 720m of a defined city, district or rural centre will have a significant positive (++) effect. • Sites that are more than 1.8km from a railway station and more than 450m from a Cambridge Busway stop (or similar dedicated rapid bus route) but within 450m of a regular bus stop and/or cycle route are likely to have a minor positive (+) effect. • Sites that are either within 1.8km of a key employment area or within 720m of a defined city, district or rural centre will have a minor positive (+) effect. • Sites that are more than 1.8km from a railway station and 450m from a Cambridge Busway stop or regular bus stop and cycle route could have a minor negative (-) effect. • Sites that are not located within 720m of a defined city, district, local, neighbourhood, rural or minor rural centre and are further than 1.8km from a key employment area will have a minor negative (-) effect.
13. To limit air pollution in	All types of site options

SA Objectives	Criteria and assumptions
<p>Greater Cambridge and ensure lasting improvements in air quality.</p>	<p>Development sites that are within, or directly connected via road, to one of the Air Quality Management Areas (AQMA) in Greater Cambridge, or in AQMAs in surrounding Districts, could increase levels of air pollution in those areas as a result of increased vehicle traffic. Therefore:</p> <ul style="list-style-type: none"> Residential, employment and mixed use sites that are within or directly connected via road to an AQMA (i.e. on a road that passes through or adjacent to the site) are likely to have a significant negative (--) effect. All sites that are not within or directly connected via road to an AQMA are likely to have a negligible (0) effect on air quality.
<p>14. To facilitate a sustainable and growing economy.</p>	<p>Employment site options</p> <p>All of the employment site options are expected to have positive effects on this objective, due to the nature of the proposed development. Larger sites will provide opportunities for the creation of more new jobs and so would have significant positive effects. Therefore:</p> <ul style="list-style-type: none"> Sites that are more than 5ha in size will have a significant positive (++) effect. Sites that are smaller than 5ha in size will have a minor positive (+) effect. <p>Residential site options</p> <p>This objective focuses on economic growth in terms of the type and location of economic development to be delivered by the Local Plan. The potential for the specific location of residential sites within Greater Cambridge to influence economic factors is considered under SA objective 15. Therefore a negligible (0) effect is expected for these types of site options in relation to SA objective 14.</p>
<p>15. To deliver, maintain and enhance access to diverse employment opportunities, to meet both</p>	<p>Employment site options</p> <p>The provision of new employment sites within Greater Cambridge is likely to benefit the highest number of residents where are accessible by sustainable transport links. Therefore:</p> <ul style="list-style-type: none"> Sites that are within 1.8km of a train station or likely to have a significant positive (++) effect. Sites that are within 450m of a bus stop and/or cycle path are likely to have a minor positive (+) effect.

SA Objectives	Criteria and assumptions
<p>current and future needs in Greater Cambridge.</p>	<p>Sites that are not within 1.8km of a train station or within 450m of a bus stop and cycle path are likely to have a minor negative (-) effect.</p> <p>Residential site options</p> <p>The location of residential sites will influence the achievement of this objective by determining how easily residents would be able to access job opportunities at existing employment sites.</p> <p>The City of Cambridge provides access to a significant range of employment opportunities (including the city centre, business and science parks, and Addenbrooke's Hospital). Some of the larger villages in the South Cambridgeshire District provide services to smaller villages, providing some limited employment. The proximity of site options to key employment areas also serves as an indicator of the level of employment opportunities which are likely to be accessible. Therefore:</p> <ul style="list-style-type: none"> • Sites that are within 1.8km of a key employment area, e.g. 'Established Employment Areas', 'Protected Industrial Sites', business parks and science parks, and major employers, e.g. Addenbrookes Hospital Cambridge city centre or rural centre would have a significant positive (++) effect. • Sites that are within 720m of a district, local, neighbourhood or minor rural centre would have a minor positive (+) effect. • Sites that are more than 720m of a district, local, neighbourhood or minor rural centre would have a minor negative (-) effect. • Sites that are also more than 1.8km of a key employment area, Cambridge city centre or rural centre would have a significant negative (--) effect. <p>In addition, if a site option would result in the loss of an existing employment site, a negative effect would occur in relation to the protection of existing employment sites.</p> <p>Therefore (which could result in mixed effects overall):</p> <ul style="list-style-type: none"> • Sites that are currently in employment use would have a significant negative (--) effect.

