NW Cambridge Area Action Plan

Site Footprint Assessment

1. Background

1.1 North West Cambridge between Huntingdon Road and Madingley Road comprises the Girton ridge, which is visible as the rising land that is seen on the approaches to Cambridge from the west. From the west and southwest, the view of Girton College's tower rising above the screen of pines atop the ridge can be seen. The rising land of the ridge is also prominent in these views. A major issue for the North West Cambridge Area Action Plan (AAP) is how to define the extent of the area for development to meet the University's development needs/aspirations (the site footprint) and the definition of the revised boundaries for the Green Belt having regard to these qualities of the setting of Cambridge.

1.2 Five site footprints were included in the Issues and Options consultation:

- Option 10.1 - The preferred option of Cambridge University covering the largest footprint, which extends closest to the M11 and furthest down the slope which runs down to Washpit Brook, which runs roughly parallel to the M11 in this area. This option has a large circular central open space on the strategic gap through the development. It would fully meet the University's development aspirations, as set out in the Issues and Options Report.
- Option 10.2 – An alternative configuration of site which is contained at the top of the slope broadly on the 20m contour and includes additional land further south. It has a slightly smaller, but broadly comparable, footprint to 10.1. The footprint has a broad strategic gap but no circular central open space.
- Option 10.3 – An option drawn from the recommendations of a Green Belt Landscape Study for this area prepared by David Brown Associates and Richard Morrish Associates (May 2006), which contains development at the top of the slope broadly on the 20m contour and excludes land further south which is identified as being of historic importance. It includes a strategic gap running broadly north-south towards Madingley Road
- Option 10.4 – Similar to Option 10.3 but with the strategic gap running northeast-southwest to link out towards open countryside out to and beyond the M11.
- Option 10.5 – The smallest site footprint with development contained close to the existing built up area of Cambridge.

1.3 Maps of all the site footprint options are included in Appendix 1.1.

1.4 In order to move towards a preferred site footprint, a structured approach was considered to be needed to compare the relative merits of the site options. Site assessment criteria have therefore been devised to provide a consistent basis for considering each site option. Following discussions with the Planning Lead Members from Cambridge City and South Cambridgeshire District Councils as the two local planning authorities jointly preparing the AAP, these criteria were shared with key local stakeholders and the comments received were taken into account before being finalised with the Lead Members and used to assess the different site options.

1.5 The site assessment criteria were compiled from:

1. The vision for the area set out in Option 7.1 of the Issues and Options Report. Appendix 1.2 sets out the various components of the vision and considers the relevance of each to determining the site footprint.
2. The objectives set out in Option 8.1 of the Issues and Options report. Appendix 1.3 sets out these objectives and considers the relevance of each to determining the site footprint.
3. Other relevant criteria drawn from national planning policy guidance, sound planning practice and site specific considerations. Appendix 1.4 sets out these other criteria and how they are relevant to site footprint.

1.6 The assessment criteria drawn from the above were refined to avoid duplication and structured to provide:

1. an overview of the site option and how it relates to the University's aspirations,
2. consideration of the impact of the site option on the Green Belt and setting of Cambridge and other wider considerations particularly affecting the outer boundary of the site,
3. consideration of issues more relevant to the shape and form of the site itself.

1.7 The draft assessment criteria were sent to local key stakeholders including the County Council, the University and local Parish Councils, local interest groups and residents associations. The consultation ran from 23rd April to 4th May 2007.

1.8 The consultation representations and responses are set out in Appendix 1.5 and as a result a number of refinements were made, although the consultation showed a general support for the approach being taken. The changes made are set out in Appendix 1.6 to this paper.

2. Assessment of Site Footprint Options 10.1 to 10.5

2.1 Detailed site assessments of each of the options subjected to public consultation are set out in Appendix 1.7. Also included are the results of the sustainability appraisal and a summary of the representations received during the Issues & Options consultation.

2.2 This section summarises and draws together the findings of those assessments against each assessment criteria in turn. It then reaches a conclusion on the relative merits of the site footprint options that were subject to consultation.

2.3 The table below identifies the developable land in each Option. This is compared with the size of the University's preferred site, Option 10.1, because the development is intended specifically to meet the University's needs/aspirations. Each site is also compared with Option 10.2 because the University confirmed in its representations on this option that it "*has a sufficient developable area to meet the University's needs in terms of housing, academic and commercial research floorspace*". It also commented that, "*Option 10.2 has a similar developable area to Option 10.1, which enables a form of development of appropriate density*".

2.4 The table also includes an indicative notional capacity of each site footprint for both housing and employment provision. It must be noted that the actual yield of each option will be dependent on masterplanning and this is necessarily an estimate based on size of the site in relation to the University's preferred option and calculating housing and employment on a pro rata basis. It should also be noted that the housing provision includes market and affordable housing, including key worker housing, but does not include the student housing proposed by the University.

Table 1: Analysis of the Assessments of site options 10.1 – 10.5

Topic	10.1	10.2	10.3	10.4	10.5
Development Option	Development begins in the west where the land starts to rise from Washpit Brook; the green gap widens out into circular open space in the vicinity of the SSSI.	Development extends over fields to the south-west, and is limited on the west facing slope further north.	The rise of land from Washpit Brook is excluded from the development, the strategic gap runs north to south and widens slightly towards Madingley Road.	The rise of land from Washpit Brook is excluded from the development, the strategic gap turns more east to west and widens more than 10.3.	Almost all development is retained within the city boundary.
Developable Land	77ha	68ha	51ha	48ha	26ha
University Aspirations	100% land of 10.1	88% land of 10.1	66% land of 10.1	62% land of 10.1	34% land of 10.1
	113% land of 10.2	100% land of 10.2	75% land of 10.2	71% land of 10.2	38% land of 10.2

Notional Housing provision	2500	2208	1656	1558	844
Notional Employment provision	100,000m^2 or 35.5ha	88,312m^2 or 31.4ha	66,234m^2 or 23.5ha	62,338m^2 or 22.1ha	33,766m^2 or 12.0ha

Green Belt

2.5 The strategic context for development in this location is provided by the Structure Plan which identifies land between Huntingdon Road and Madingley Road as a location for a strategic scale of development for predominantly University-related uses (Policy P9/2c). The Panel Report recognised that "*this location was not considered by the Buchanan study to have potential for development. The land is prominent, being highly visible from the west and it provides an open setting to the village of Girton, which straddles the A14*" (paragraph 8.92).

2.6 The Cambridge Sub Region Study by Colin Buchanan and Partners informed the Structure Plan and considered where land could be released from the Green Belt for development without fundamental harm to its purposes. Its conclusions regarding North West Cambridge at paragraph 7.3.1 were that: *"Previous studies have suggested that development could be placed to the west of Cambridge, between the city and the villages of Coton and Madingley. The relatively enclosed, rolling landscape could potentially accommodate development. However, site surveys undertaken for this Study found that there were no opportunities to develop close to the city boundary without affecting the existing interface between the city and the countryside, one of the important aspects of setting. Furthermore, the ecological and historical importance of the area was likely to generate further constraints to sustainable development."* However, the Panel concluded in the light of evidence of need by the University and lack of suitable alternative locations, that they were "*satisfied that there would be justification for the release of Green Belt land in North West Cambridge to meet that need*" (paragraph 8.101).

2.7 The Cambridge Green Belt Study by LDA published in 2002 provides and provided further context. At page 64 paragraph 3, it states *"A large area of supportive landscape lies to the west of the city, between the colleges and the visually distracting M11",* and at page 81 Areas 4 and 5 *"These areas posses the greatest concentration of qualities essential to the fourth purpose of Green Belts as defined by PPG2, i.e. to preserve the setting and special character of historic towns….*and continues *There is little scope for change in this area if these qualities are to be safeguarded. The strategy should be to preserve the countryside, the edge of Cambridge, and the visual and physical relationship between the city and its setting".*

2.8 The LDA study however goes on to state in the last paragraph of page 83 that it has not identified opportunities for large scale development between Madingley Road and Huntingdon Road but that more detailed assessment might identify some sites in this area that could be developed without causing adverse affects to Green Belt purposes.

2.9 The Structure Plan sets the framework for the releases of land from the Green Belt for development that it identifies (Policy P9/2a and P9/2b – see the list of factors in the site assessment criteria at Appendix 1.6). Of particular importance is the objective to "*retain any areas required to maintain the purposes of the Green Belt", the most relevant of which in the context of an urban extension to Cambridge is the need to "maintain and enhance the quality of its setting*".

2.10 The Cambridge Local Plan 2006 includes a policy for the development of that part of this sector that lies within its area. The recent City Local Plan Inspector's Report concluded that all land within Cambridge City's area should be removed from the Green Belt in the Local Plan and that it would be for the AAP to determine which land should be put back into the Green Belt in the context of considering the whole of the area in both districts and the appropriate footprint for development. In the context of Green Belt setting, it comments that, "*the M11 should have an open space buffer because at present the M11 runs largely through countryside west of Cambridge*" (paragraph 9.22.36).

2.11 It is therefore relevant in the context of the NW Cambridge AAP, to determine what land should be retained in order to maintain the purposes of the Green Belt and what land can be excluded from the Green Belt to meet the development needs/aspirations of the University without unacceptable harm to Green Belt purposes, and as a consequence what areas should be put back into the Green Belt in Cambridge City and retained in the Green Belt in South Cambridgeshire.

a. Outer edge of the site:

2.12 As part of the preparation of its Local Plan 2006, Cambridge City Council undertook a comprehensive Green Belt assessment for the Inner Green Belt Boundary. For this sector, it looked at four areas defined by field boundaries. It concluded that the area west of Washpit Book and including the fields west of the Park & Ride, is of very high importance to Green Belt, of very high importance to setting and of low importance to character. For the land east of Washpit Brook including the slope and extending to the district boundary on the plateau, it concluded that it is of high importance to Green Belt, is of high/medium importance to setting and of low importance to character. For the fields to the east of the triangular woodland adjacent to the M11, it concluded that it is of medium importance to Green Belt, of medium importance to setting and of low importance to character. These parcels are not directly comparable with any of the site options, as they do not always

follow the contours of the land, but are helpful in confirming the importance of this area generally to the Green Belt setting of Cambridge and particularly the area including the slope rising up to the east from Washpit Brook. .

2.13 To assist the Councils further in developing site footprint options for the joint NW Cambridge AAP, David Brown Associates and Richard Morrish Associates were commissioned in 2006 to undertake a Green Belt Landscape Study for the NW quadrant of Cambridge (hereafter termed the David Brown study). The study identifies the slope rising up from Washpit Brook close to the M11, as a key part of the landscape setting of Cambridge (see map extract at Appendix 1.8 which identifies the "*opportunities and constraints*" in this location as identified by the authors of that study). Of particular relevance to Green Belt, it identified at paragraph 8.3 a number of features and elements that it considered "*form constraints of very substantial weight on the extent of development possible*" and included "*the visually important rising landform of the Girton ridge between Washpit Brook and the brow of the slope at the 20 metres AOD contour*". It also referred to "*views of defining local landmarks that give Cambridge its 'sense of place', such as Girton College, Girton Church and St John's College Chapel*".

2.14 In terms of maintaining Green Belt purposes, the main issue which distinguishes the outer boundary of the site footprint options is the potential loss of green foreground to Cambridge that is provided by the slope of land down to the Washpit Brook and M11, which provides a key part of the setting of the City. Development of any scale in this location would have the greatest impact when seen in views towards Cambridge from the M11 and the Madingley area. A key judgement to be made is at what point the extent of the built footprint starts to have an unacceptable impact on the setting of Cambridge and that Green Belt purposes are compromised such that development is unacceptable in Green Belt terms.

2.15 The rising landform makes this area very prominent in views from the west of Cambridge. The open and pastoral character of this land presents the quintessential rural setting that is associated with the setting of Cambridge. This openness also allows the visual, historical and cultural connections between the two prominent existing focal points in the landscape; the Chapel of the American Cemetery and the tower of Girton College.

2.16 Of the Options consulted upon, the University's preferred site (option 10.1), has the greatest impact on this aspect of the Green Belt setting of the City because it extends development closest to the M11 and down much of the slope to Washpit Brook. The David Brown study considered this footprint and concluded that "*The proximity to the M11 and the falling landform will lead to this area not being perceived as a significant foreground. Views of Girton College would be lost from a number of viewpoints. Areas of historic interest would be permanently*

lost. …… Mitigation cannot replace these features and elements. There would be a severe level of harm to the function of the Green Belt as protection for the setting of the historic City of Cambridge and the character of the city on the north west would be fundamentally changed" (paragraph 8.5).

2.17 Options 10.2, 10.3 and 10.4 seek to reduce this impact by generally moving the edge of the development, away from the brook and the M11. They also take the development higher up the slope to its break-line marked by the 20m contour, so that the slope remains an open foreground to Cambridge as recommended by the David Brown study. Even with a footprint boundary contained at the top of the slope, the study advises that there would be "*moderate harm*", but concludes that, "*a workable Green Belt setting function is retained*".

2.18 Option 10.2 would, however, damage the Green Corridor along Madingley Road, one of the most characteristic entries into the City. It would also have an adverse impact on the areas of historic and ecological importance identified by the David Brown study closer to Madingley Road (see separate criteria).

2.19 Option 10.5 has the least impact as it confines development to a small area at the eastern end of the site.

2.20 All land within the AAP area and not included in the site footprint would remain in, or be put back into, the Green Belt.

b. Strategic Gap:

2.21 Also relevant to Green Belt considerations relating to site footprint is the width and orientation of the strategic gap through the development. The strategic gap will perform two slightly different functions in different locations.

2.22 The area fronting Huntingdon Road and between existing development currently has and will continue to have a role in separating Cambridge from the village of Girton. It relates to a similar width of Green Belt separation on the north side of Huntingdon Road performing the same function. The gap in this location should remain at its current full width and no site footprint options propose otherwise.

2.23 The part of the strategic gap to the south of Huntingdon Road will form a green corridor running through the development. The development will function as a new urban extension of Cambridge. Whilst the new development will abut the rear boundaries of existing properties fronting Huntingdon Road, there will be no connections between these built areas and the new development will look towards Cambridge and the remainder of the development. The width of the strategic gap as it runs through the new development is therefore not constrained by the width fronting Huntingdon Road. The Cambridge Local Plan policy 9/7

requires the retention of “a green corridor between Huntington Road and Madingley Road”.

2.24 In Option 10.1 the strategic gap opens into a wide circle in the heart of the development and then continues south and runs through to Madingley Road to the east of the Park & Ride. In Options 10.3 and 10.4 the gap is also wide but turns south west towards the open countryside west of the Park and Ride and beyond the M11. These 3 options have the greatest width of corridor linking through to Madingley Road and would be the least sustainable options for planning a compact urban extension in this locality. Option 10.2 continues the width of the Huntingdon Road frontage through the development and turns towards the open countryside beyond the M11 with development blocking any link through to Madingley Road. Option 10.5 contains development close to Cambridge and east of the strategic gap onto Huntingdon Road and there is therefore no need for a green corridor through the development.

2.25 All land within the strategic gap and not included in the site footprint would remain in, or be put back into, the Green Belt.

Historic Landscape

2.26 The Green Belt Landscape Study (Brown and Morrish) identifies a number of features of historic interest in the area to the north and east of the Park & Ride site. These include pasture, pre-enclosure hedgerows, a significant pollarded oak, ridge and furrow field patterns and S-shaped field boundaries surviving forms the former open field system that dating back to at least medieval times (see Map extract at Appendix 1.9).

2.27 Option 10.1 incurs a high level of impact on historic landscape elements. Historic field patterns, pre-enclosure boundaries, pre-enclosure hedgerows would be lost. Option 10.2 protects features on the slope down to the M11 and Washpit Brook but would have a high impact to the south-west where the majority of the historic field patterns, pre-enclosure boundaries, pre-enclosure hedgerows and ridge and furrow patterns are located.

2.28 These heritage landscape elements provide the historic core of Cambridge with a setting and context. The Study advises that ‘*piecemeal’* retention of features from the historic landscape e.g. veteran oak and historic hedgerows, would have their value eroded in terms of context and historical relevance and these features are unlikely to be sustained in the long term. It advises that their loss would be significant and diminish the value of the historic core itself.

2.29 Options 10.3 and 10.4 incur less impact of historic landscape by avoiding part of the slope to the M11 and Washpit Brook, and the fields

to the north of the Park & Ride site are excluded. Option 10.5 incurs the least loss of historic landscape.

Biodiversity

2.30 Option 10.1 has the greatest impact on the Washpit Brook to the northwest edge of the site, which is a known area of ecological interest. The other Options limit this impact by confining development to the higher ground. A main badger sett in the vicinity of the Travellers Rest SSSI is affected by all Options to some extent. Other than 10.5, 10.1 scores well on this point with the sett located within a large open area. All options with the exception of 10.5 would probably require the relocation and careful re-establishment of a secondary badger sett, which lies behind the houses fronting Huntingdon Road. The remaining Options 10.3 and 10.4 have very slightly greater impact as the green corridor is less wide. In all Options a 30m wide zone of nil development work would be required by Government guidelines in PPS9. The presence of Great Crested Newts have been recorded in ponds at the Park & Ride site but mitigation measures as part of development could suitably offset any impact and possibly bring habitat gain and an overall increase in the population's distribution across the site. Option 10.2 has the greatest impact. The Travellers Pit SSSI close to Huntingdon Road is entirely geological in its interest and is not designated for any biodiversity/wildlife value. The sides of the Pit with their exposed strata would need to be protected whichever option is chosen.

Surface Water Attenuation

2.31 All Options will have implications for surface water attenuation although Option 10.1 has the most extensive built footprint and therefore could be expected to generate the largest volume of surface water arising from hard surfaces in need of attenuation. However, provided that Suds are incorporated into the built footprint, there is no reason to expect that this Option could not satisfactorily accommodate measures to attenuate surface water so that off site flooding and drainage problems are not made worse.

Health and Amenity

2.32 Studies have been prepared by consultants for Cambridge University on air quality and noise impacts of development in this location to assess whether there are any fundamental constraints on any particular site footprint and with a view to identifying whether acceptable mitigation measures could be provided that would mitigate any adverse impacts and also not cause unacceptable harm to the setting of Cambridge.

2.33 Air quality is an issue at the north west tip of the site. However, this is a matter that could probably be addressed through the masterplanning

process and is unlikely to preclude uses such as employment development in this location.

2.34 Noise mitigation will be a key requirement of any development even though much of it will be located further away from the motorway. An unknown factor is the impact of potential increases in traffic along the M11/A14 and at the Girton Interchange. The design of the latter is still unknown.

2.35 The form of development on its outer edge could possibly be used to mitigate noise or pollution from the M11 if a terraced type of edge development or other alternatives were used and were considered to be acceptable in visual terms. Caution would need to be exercised regarding the scale and height of buildings required to attempt to achieve this.

2.36 The study indicates that there may also need to be other measures such as a 3m acoustic barrier along the M11, a 5m bund closer to the development and careful design and orientation of buildings to prevent sound entering residential areas. The principle of a permanent acoustic barrier is unlikely to be acceptable in this location and would significantly harm the setting of Cambridge. A 5m bund would also need careful consideration in this respect. However, at this stage it is not possible to identify any particular site footprint that would require such measures. As such it would be prudent for the AAP to include a policy requiring that the development is undertaken in a way that does not require unacceptable noise and air quality mitigation measures, whichever footprint is chosen. The masterplanning of any site option chosen would therefore be crucial in achieving a satisfactory environment.

2.37 There is some suggestion that 10.1 may allow a greater potential to more effectively shield residential areas and internal open spaces from noise than 10.2, 10.3 and 10.4. However this needs to be treated with caution as experience from the Cambridge Northern Fringe suggests that the uses which might provide such a screen may not come forward quickly enough.

2.38 Option 10.5 is the least affected by noise and air quality issues.

Sustainable Development

2.39 Option 10.1 provides the greatest scale of development and is therefore likely to bring forward the largest range of local facilities and would help ensure that a local centre is viable. For Options 10.2, 10.3 and 10.4, the scale of development would be sufficient to support a local centre. However, for Option 10.5, it is doubtful as to whether it is capable of supporting more than a 1FE primary school.

Site Configuration

2.40 The University maintains that Option 10.1 provides ample scope for masterplanning its development needs/aspirations. Option 10.2 would dictate a more constrained site configuration, particularly in view of the shape of development that extends to the west of the Park & Ride and could hamper the creation of a cohesive new community and the provision of accessible services and facilities. For Options 10.3 and 10.4 the width of the strategic gap would make it difficult to deliver a development that works as a whole, and in particular which is cohesive and where all parts of the development have good access to services and facilities. Option 10.5 only provides for a small part of the needs/aspirations of the University and could lead to pressure for higher density development.

Mix of University Related Uses

2.41 As Option 10.1 is based on the University's draft masterplan framework, this Option would deliver the University's needs/aspirations in full and therefore provide a satisfactory mix of predominately university related uses.

2.42 The University's response to 10.2 through the Issues and Option consultation indicated that the required scale of development could be accommodated on this footprint and, on the same basis, is therefore is capable in supplying a satisfactory mix of uses.

2.43 In contrast, the University have indicated that Options 10.3, 10.4 and 10.5 would not bring forward the scale of development required to provide for a satisfactory mix of university related uses.

Transport Infrastructure

2.44 In all Options it should be possible to provide for different modes of transport, giving priority to walking, cycling and public transport provision. The detail of such provision will be determined through masterplanning and subsequent detailed design and transport assessment. It will thus be essentially an iterative design process rather than one that is fixed at the options stage.

2.45 Options with large areas of development are more likely to generate a large number of trips and hence require correspondingly large transport infrastructure. All Options could accommodate future strategic transport provision, particularly by linking to a proposed orbital link road. In all cases, however, the ease of doing this will be dependent upon whether the link road is to the east or the west of the strategic gap. The proposed radial link road will need to cross the strategic gap in most Options, raising issues of severance. In terms of providing a high level of public transport accessibility, it may be more difficult to meet a 400m walk distance to public transport stops in the more

extensive options. However, Options with larger areas of development will generate higher transport demands, making specific bus services more viable.

Relationship with Adjoining Communities

2.46 All options generally connect well with the existing built up area of the City and the proposed NIAB development, north of Huntingdon Road.

2.47 However, for Options 10.1, 10.3 and 10.4, development of the western part of the site would be somewhat removed from the adjoining areas, due to the very wide strategic gap through the development. Whilst the retention of a strategic gap is an important policy requirement of the development, for the part of the gap running through the heart of the new development, a balance should be struck between retaining a meaningful gap and ensuring a connected development where residents and those working in the area can move about the development easily and access community services and facilities and the local centre from all parts of the development. A wider strategic gap may therefore have disadvantages in achieving connectivity.

2.48 None of the options present any real opportunities to connect with either Girton Village or with the large properties which front the south side of Huntingdon Road.

2.49 Option 10.2 is the only option which could connect directly to the University's west Cambridge site, south of Madingley Road although this does not preclude transport links being created for all the other options.

Accessibility to community uses by walking and cycling

2.50 In all options it should be possible to provide for accessibility to community uses by walking and cycling. Options with larger north-south dimensions and greater site areas may result in longer walking and cycling distances to community uses outside the development than options with more compact forms of development. Accessibility to community uses within the site from residents outside the development will also be generally better for options with more compact forms of development, but this will depend on the disposition of the community uses within the development, which is an issue for masterplanning. Similarly, the Options with more compact forms of development will have shorter walking and cycling distances to external community uses particularly to the north east of Huntingdon Road. Options with more extensive areas of development will have poorer external accessibility e.g. in Option 10.2 the extension down to Madingley Road will be more remote from facilities to the north.

Development viability and delivery

2.51 Whilst this is an important matter, there is no evidence to assess the various options. However, Options 10.1 and 10.2 are considered viable and deliverable by the University.

Comparison of the Sustainability Appraisals

2.52 It is a requirement of the Planning and Compulsory Purchase Act (2004) for any Local Development Framework document to undergo a Sustainability Appraisal in order to determine its impacts on social, economic and environmental objectives. As part of this process, each site footprint has been appraised and reported in the Interim Sustainability Appraisal Report prepared by Scott Wilson (2006) as part of the preparation of the Issues and Options Report.

2.53 The Sustainability Appraisal of Options 10.1 to 10.5 found that the relative sustainability of the options was dependent on the balance between the impacts of development on resource use in the round and the extent that it satisfies the needs of the University.

2.54 Although options 10.1 and 10.2 meet the development aspirations of the University, the SA found their impact on the character, setting and landscape of Cambridge and Girton to be substantial. While Option 10.5 performed well in terms of impacts on landscape, ecological and historical interests it underperforms in terms of provision of employment opportunities, services and facilities due to the significantly reduced spatial footprint.

2.55 The SA suggests that the greater the resource use the more one could expect adverse environmental impacts, and positive social and economic impacts.

2.56 It also indicates that mitigation measures could reduce the impact of options on natural resources, for example through the use of recycled aggregates, water efficiency measures and energy efficiency.

Responses to Issues and Options

Summary of Objections to Option 10.1

2.57 Cambridge University supported this Option, as it would meet its development needs/aspirations in full. Many of the objections to this option centred around the development paying no attention to the purpose of the Green Belt, the sensitive landscape setting of Cambridge as a compact City and the historical value of the site. Concern was raised about the loss of important views and the loss of biodiversity and substantial areas of habitat. An increase in traffic as a result of the development was also highlighted as a concern, along with questions about the functionality of parts of the site due to their proximity to the M11.

Summary of Objections to Option 10.2

2.58 Cambridge University commented that this Option would meet most of its development needs/aspirations. A major concern in relation to this option was that the fragmentation of the development would dissipate the potential for a thriving local centre as well as making public transport provision through the site less sustainable. The strategic gap was criticised for being contrived and of limited value, failing to maintain sufficient separation between Cambridge and Girton. Concerns were again raised about the loss of Green Belt land as well as the effect on areas of both ecological and historical value, with a loss of biodiversity and habitat. Objections were also raised in relation to the prominence of development on the plateau, poor landscape setting and the nature of transport links.

Summary of Objections to Option 10.3

2.59 Concerns have been raised that this option would far too severely restrict the use of an urgently needed site in Cambridge and provide less growth capacity for the University. Development under this option would either lead to a substantial reduction in the development capacity of the site or lead to an increase in development densities and heights in order to deliver the University's aspirations. Concerns have been raised that this would lead to unsustainably dense development and an intensification of development that would lead to the coalescence between Cambridge and Girton. Other concerns are that the density of development would lead to a dominance of apartment blocks rather than houses and would also rule out the possibility of plots being made available to self-builders. Concerns remain over the loss of the Green Belt, the affect of the development on important views of key features of the landscape, loss of land deemed important to the setting of Cambridge and the detrimental impact on the SSSI, while others feel that the benefits in terms of setting of the city are not significant. An added concern is that the development would provide no noise buffer for Girton.

Summary of Objections to Option 10.4

2.60 Concerns have been raised that this option would far too severely restrict the use of an urgently needed site in Cambridge and provide less growth capacity for the University. Development under this option would either lead to a substantial reduction in the development capacity of the site or lead to an increase in development densities and heights in order to deliver the University's aspirations. Concerns have been raised that this would lead to unsustainably dense development and an intensification of development that would lead to the coalescence between Cambridge and Girton. Other concerns are that the density of development would lead to a dominance of apartment blocks rather than houses and would also rule out the possibility of

plots being made available to self-builders. In terms of public transport, concerns are raised that under this option it would be difficult to create a legible public transport route from the main part of the development towards the Madingley Road Park & Ride site. Concerns remain over the loss of the Green Belt, the affect of the development on important views of key features of the landscape, loss of land deemed important to the setting of Cambridge, the detrimental impact on the SSSI and the awkward layout of the strategic gap, while others feel that the benefits in terms of setting of the city are not significant.

Summary of Objections to Option 10.5

2.61 Concerns have been raised that this option would lead to an overly dense and unsustainable development on a small portion of the site and lose an opportunity to open the site to the public and create an attractive built fringe and that this would not make good use of land released from the Green Belt. Concerns raised in relation to Options 10.3 and 10.4 are mirrored for this option, i.e. that the density of development would lead to a dominance of apartment blocks rather than houses and would also rule out the possibility of plots being made available to self-builders. Concerns are also raised that this option would be contrary to the requirements of the Structure Plan in that it does not maximise the use of land close to the urban edge, that it would cause difficulties in delivering elements of the draft East of England Plan as it restricts development from taking place in South Cambridgeshire and, that by preventing development in South Cambridgeshire, it would not be able to help deliver some of the 1,000 dwelling shortfall identified by the Inspector examining the South Cambridgeshire Core Strategy DPD. In not meeting the University's needs it is also felt by some objectors that this Option would fall entirely short of serving the urgent need for key worker housing for University staff and that as adequate provision of services and facilities would not be met in the vicinity it could further increase the need to travel. There is a continuing concern from some objectors that this option still represents loss of Green Belt, while others feel that the benefits in terms of setting of the city are not significant.

3. Conclusions on sites subject to consultation

3.1 The assessments demonstrate that all Options are capable of being developed but none are able to completely satisfy all the criteria each having a different mix of advantages and disadvantages.

3.2 Various studies, including those informing the Structure Plan, confirm that the area between Madingley Road and Huntingdon Road is important to the Green Belt setting of Cambridge. Notwithstanding, the Structure Plan proposes the release of land from the Green Belt in this location specifically to meet the long-term needs of the University.

3.3 Given this, the two key criteria (in no particular order) can be considered to be:

1. Satisfying the needs of the University
2. Maintaining the purposes of the Cambridge Green Belt.

3.4 The site footprint assessments have tested those 2 criteria alongside a variety of other criteria, drawn from the vision and objectives for this development. Those assessments have indicated that there are no absolute constraints on any particular site footprint for matters such as air quality, noise, drainage, ecology. There are other factors that are relevant to take into account alongside meeting the University's needs and impact on the Green Belt, such as historic landscape and connectivity within the development; however, they do not have the same weight in terms of strategic policy.

3.5 None of the site Options consulted upon perform sufficiently well against the 2 key tests of meeting the University's needs and protecting the Green Belt setting of Cambridge that they could be recommended as the preferred site.

4. Development of further Variant Options

4.1 In order to try and identify a site footprint that could better meet the 2 key tests of meeting the University's needs and protecting the Green Belt setting of Cambridge, the Joint Officer Team has developed two additional Options derived from those consulted upon, Sites A and B. The aim of these new options was to try to protect the Green Belt setting by keeping development generally to the 20m contour on the Washpit Brook valley slope (as recommended in the David Brown Landscape Study) but to compensate elsewhere to increase the site footprint to more closely match the University's needs/aspirations. This was achieved by including more land in the south west part of the site and narrowing the green gap through the development between the two sections of the development. Two alternative approaches to the width of the strategic gap are identified, but otherwise the sites are very similar. The implications of these changes are considered in site assessments using the same assessment criteria as site options 10.1 to 10.5.

4.2 The University put forward an additional option submitted as part of the University's response to the Issues and Options consultation; Option C. It pulls development to a limited extent up the slopes of the Washpit Brook valley but still well below the 20m contour. This Option has been endorsed by the University's North West Cambridge Committee.

4.3 Through partnership working with the University on the issue of the site, the University raised concerns about the Councils' emerging site options A and B in terms of the scale of the development footprint, the

importance of the slope in protecting the setting of Cambridge and whether these options provided an appropriate site configuration to ensure a sustainable form of development, particularly at the north western part of the site.

4.4 Through this process, the University has also informally submitted a further variant, Option D, which is similar to Option C but, like Option A maintains the green gap to a constant and narrow width instead of opening out as in the previous University preferred Options 10.1 and C. In comparison to C, option D also presents a more indented outer boundary towards the west.

4.5 It was also agreed that further work on some key issues would be helpful in informing the decision on the preferred site, and to assess whether a site could be identified that met the University's development needs/aspirations and also protected the Green Belt setting of Cambridge. To this end, the University helpfully commissioned work on 3-D modelling of the site to assist an understanding of the visual impact of the outer limits of development on the Green Belt setting and the views into the strategic gap from Huntingdon Road, a study of potential air quality and noise impacts (used for the assessment of all site options), ecological issues (also used for the assessment of all site options), and transport implications. All parties entered into this work in the interests of partnership working and with the hope of reaching agreement on the site footprint, but in the understanding that there was could be no commitment on the part of the local planning authorities that a consensus agreement could necessarily be reached.

4.6 At the meeting of the Joint Member Reference Group on 29 June 2007, a further Option, subsequently referred to as Option E, emerged and was recommended by the Group to the two Councils. The outer boundary of Option E is similar to Options A and B. However, it varies from those options in its treatment of the strategic gap; this is retained at 200m immediately south of Huntingdon Road but then extends into a larger central open space in a similar fashion to 10.1. Just south of this central green space it then narrows to 100m as it runs towards Madingley Road.

5. Assessment of Site Footprint Options A to E

5.1 Detailed site assessments of each of the further options A to E are set out in Appendix 1.10. Also included are the results of the sustainability appraisal. Maps of these options are set out in Appendix 1.11

5.2 This section summarises and draws together the findings of those assessments against each assessment criteria in turn. It then reaches a conclusion on the relative merits of the further site footprint options

that were developed to address the shortcomings of sites Options 10.1 to 10.5.

Table 2: Analysis of the Assessments of site options A - E

Topic	A	B	C	D	E
Development Option	Development is contained broadly by the 20m contour line before following the established hedge towards the M11, the strategic gap narrows to 100m south of the SSSI towards Madingley Road.	Development is contained broadly by the 20m contour line before following the established hedge towards the M11, the strategic gap continues at 200m south of the SSSI towards Madingley Road.	Based on 10.1, development is drawn slightly further up the slope, the strategic gap widens out into a circular open space in the vicinity of the SSSI. .	Based on option C, with additional green indentations into the outer edge of the development, the 200m strategic gap runs south towards Madingley Road.	Based on Option A, development is contained broadly by the 20m contour line before following the established hedge towards the M11. The strategic gap is 200m at Huntingdon Road, widening to a large central open space before narrowing to 100m towards Madingley Road.
Developable Land	71ha	67ha	72ha	75ha	69ha
University Aspirations	92% land of 10.1	87% land of 10.1	94% land of 10.1	97% land of 10.1	90% land of 10.1
	104% land of 10.2	99% land of 10.2	106% land of 10.2	110% land of 10.2	102% land of 10.2
Housing	2305	2175	2338	2435	2240
Employment provision	92,208m^2 or 32.7ha	87,013m^2 or 30.9ha	93,506m^2 or 33.2ha	97,403m^2 or 34.6ha	89,610m2 or 31.81ha

Green Belt

5.3 The context for the Green Belt assessment of options A to E remains as given above for options 10.1 to 10.5.

a. Outer edge of the site:

5.4 Options A to E all provide a more extensive green setting and foreground to views of Cambridge than Option 10.1 by moving the outer edge of the site further up the slope away from the M11. For the central section of the site, the width of the setting separating built development from the M11 is broadly 200 metres in options C and D rising to between 300 and 400 metres in Options A,B and E. The intention of the drawing back of the footprint further up the slope being to maintain the quality of the setting of the City, particularly as appreciated by people moving through the Green Belt either to and from Cambridge along Madingley Road and Cambridge Road or past it along the M11 and the A428 – the setting of Cambridge can only be appreciated by people moving through or living in the Green Belt. Setting quality is not dependent upon any difference in the quality of the built form between Options on this outer edge, as a high quality

edge would be an expectation for every Option, but rather upon the extent of its green setting and foreground. As an extreme, if development were to be brought forward to the foot of the slope, which is close to the M11 there would be no meaningful green setting or foreground for the City in this location. Such a proposal would be contrary to Green Belt purposes and the Green Belt policies of the Structure Plan.

5.5 Views of the site reveal that it is visible as a relatively narrow horizontal sliver of land when viewed from a distance but as an expansive open foreground to Cambridge when viewed from the middle distance or nearby. Options A, B and E therefore set out to provide an acceptable Green Belt setting when viewed from the middle distance (Madingley Road), and when travelling either north or south on the M11 for nearby views and also from the existing footpath under the M11 which leads to Madingley village and which will be more heavily used once the development has taken place. The 20-metre contour is followed along the middle part of the site, but in these options the proposed development edge would encroach down the slope to follow an existing hedge line in the southern part of the site. The rationale being that this portion of the development would not be visible from the south due to the motorway cutting and the wood, and from the middle distance and the north the built edge of Cambridge would still be framed by an attractive and expansive green setting and foreground, particularly with enhancement of the existing hedge line.

5.6 The success of these assumptions remained to be tested through views modelling of each Option, which the University's consultants were capable of providing. The outcome of this modelling work is examined below, can be seen in Appendix 1.12, and can be used as an aid to understanding potential impacts upon Green Belt purposes when on site. Option E has not been subject to this modelling exercise but the results for the impact on the setting of Cambridge from the west and the M11 would be the same as options A and B.

b. Strategic Gap:

5.7 The context for the strategic gap in respect of options A to E remains as given above for options 10.1 to 10.5. All of these options maintain a 200 metre wide gap towards Huntingdon Road to maintain an effective gap between Cambridge and Girton to conform to Structure Plan policy. Options B, C, and D broadly retain this width further to the south whilst option A narrows it to 100 metres width in the middle of the site about 500 metres south of Huntingdon Road. The rationale being to improve community cohesiveness between the western and eastern parts of the University development, that a wider gap is not needed in this location to provide effective separation between Girton and Cambridge and to enable the development needs of the University to be more closely met. In Option E the 200 metre wide gap is also retained towards Huntingdon Road but it then widens into a large

central open space in a similar way to Options C and D before narrowing to 100m towards Madingley Road, similar to Option A.

Historic Landscape

5.8 The inclusion of land north and west of the Park & Ride in all Options has disadvantages in terms of impact on features of historic interest as identified by the David Brown study. However, it allows for development further north to be contained at the top of the slope in Options A, B and E and the Green Belt setting of Cambridge is better protected. Under normal considerations, these areas of historic importance would be protected from development. The David Brown study advises that "*piecemeal retention of landscape features within new development is unlikely to sustain these features in the long term*".

5.9 However, in the context of the 2 key criteria, it is considered on balance that the overall harm would be less than that created to the setting of Cambridge by development on the slope down to Washpit Brook. There will also be opportunities through careful masterplanning to retain some of the key factors of historic interest within the development, e.g. the significant pollarded oak and the S-shaped field boundary.

5.10 The loss of historic landscape features would not be acceptable in the context of Options C and D where there remains a significant degree of harm to the Green Belt setting of Cambridge.

Biodiversity

5.11 These Options limit the impact on the Washpit Brook to the northwest edge of the site, which is a known area of ecological interest by confining development to the higher ground. As with all the consultation options, other than 10.5, they would probably require the relocation and careful re-establishment of a secondary badger sett which lies behind the houses fronting Huntingdon Road. A main badger sett in the vicinity of the Travellers Rest SSSI is protected by a green corridor of just 200m width narrowing to only 100m in Option A which could have a significant impact on foraging and social routes to a greater extent than any of the consultation Options or Options C, D or E. Ponds known to have or that have potential to have Great Crested Newt populations are largely unaffected as in the consultation Options with the exception of 10.2. The Travellers Pit SSSI is entirely geological in its interest and is not designated for any biodiversity/wildlife value. The sides of the Pit with their exposed strata would need to be protected whichever option is chosen.

Surface Water Attenuation

5.12 All options will have implications for surface water attenuation of surface water arising from hard surfaces in need of attenuation.

However, provided that Suds are incorporated into the built footprint, there is no reason to expect that these Options could not satisfactorily accommodate measures to attenuate surface water so that off site flooding and drainage problems are not made worse.

Health and Amenity

5.13 All of these Options are likely to have similar health and amenity implications. The context in terms of noise and pollution remains as given in respect of the consultation Options 10.1 to 10.5.

Sustainable Development

5.14 All of these Options are likely to have similar sustainable development implications being large enough to bring forward a local centre and local facilities.

Site Configuration

5.15 All of these options provide ample scope for masterplanning. Appendix 1.13 illustrates one example of how Option A could be configured. During consideration of the emerging alternative options, the University raised concerns over the deliverability of a successful and sustainable form of development in Options A and B, particularly in respect of the north west part of the site where development is contained at the top of the slope at the 20m contour. This concern is also likely to apply to option E which is the same as Options A and B in this respect. The Councils' masterplanning officers have given consideration to this concern and have prepared an indicative layout to demonstrate that these options can be successfully developed at Appendix 1.13. One of the advantages of these options is that they provide publicly accessible views out across the Green Belt towards Madingley.

Mix of University Related Uses

5.16 Table 2 shows that none of these options are able to deliver enough land to meet the full extent of the University's aspirations as set by Option 10.1, although all but Option B provide for 90% or more of its aspirations, with A, C and E being broadly comparable and Option D being the closest to Option 10.1. The University's response to Option 10.2 through the issues and Options consultation indicated that the required scale of development could be accommodated on that footprint and, on the same basis, is therefore capable of supplying a satisfactory mix of uses. Measured against this test, all of Options A to E would be capable of meeting the aspirations of the University.

Transport Infrastructure

5.17 The context in terms of transport infrastructure remains as given in respect of the consultation Options 10.1 to 10.5.

Relationship with Adjoining Communities

5.18 The gap between Girton and Cambridge at Huntingdon Road is about 200m in width. The gap is crucial north of Huntingdon Road in order to maintain the separate identity of Girton village. However, south of Huntingdon Road the only existing development consists of the ribbon of detached houses in large gardens. Any University development which takes place behind these properties presents no real opportunity to connect with them. Therefore the issue of separation is less acute in this sector, and becomes increasingly less important with distance from Huntingdon Road. One factor to consider is the significance of views out from the Huntingdon Road area towards the open countryside, but this has to be set against the severance which open space could result in for the community of the new University development. The assessment suggests that if this is very wide it could prevent cohesion within the development and discourage walking and cycling to the local centre.

5.19 Therefore Option B maintains the green gap at 200m instead of widening out as in Options 10.1, 10.2, 10.3 and 10.4. Option A goes further and narrows the gap to 100m to maximise the built footprint and community cohesion and minimise walking/cycling distances. Options C, D and E are more similar to options 10., 10.2, 10.3 and 10.4 in having a wider central open space at the heart of the development. However, in Option E this then narrows in the south to 100m to maximise the footprint and to provide for community cohesion.

Accessibility to community uses by walking and cycling

5.20 The context in terms of accessibility to community uses by walking and cycling remains as given in respect of the consultation Options 10.1 to 10.5. The narrow strategic gap in Option A would minimise any separation issues between the western and eastern parts of the development and so facilitate access to community uses throughout the development. Option E provides for the strategic gap to be narrowed south of the large central open space which will assist accessibility to the local centre from the eastern part of the development.

Development viability and delivery

5.21 Whilst this is an important matter, there is no evidence to assess the various options. However, Options C & D must be considered viable and deliverable by the University, having been put forward by them.

Comparison of Sustainability Appraisals

5.22 The Sustainability Appraisal of Options A – E found that, in common with options 10.1 and 10.2, they have the potential to meet the

aspirations of the University and are likely to increase housing provision, including key worker housing, and employment opportunities as well as stimulating the local economy. However the options were also found to have negative impacts on the character, setting and landscape of Cambridge and Girton, as well as potential negative impacts on the ecology of the area. Options A – E all represent relatively large land-take resulting in the loss of open space and Green Belt, comparable to Options 10.1 and 10.2. The larger development footprints are likely to have greater impacts on resource use, although mitigation measures could reduce this impact, for example the use of recycled aggregates, water efficiency measures and energy efficiency.

5.23 The SA concluded that development proposed in Options A , B and E would lead to a significant loss of historic landscape features in this area as well as causing harm to some views. While Options C and D, will impact on some views, development in the south west of the site does not extend as far as that proposed in Options A, B and E thus reducing the risk to the sensitive historic features of the area.

5.24 In both Options A and D and to some extent in option E, the risk of merger between the new development and Girton is elevated due to the reduction of the strategic gap. The risk of harm to the SSSI is also increased in these options due to the narrowness of the buffer zones proposed. While the buffer in Option B was found to provide good protection for the SSSI against development, the SA highlights Options C and E as the best performing options in terms of the protection offered by the buffer zone around the SSSI and the width of the strategic gap, preventing merger between the development and Girton. All options were found to have a negative impact on public access to open space due to an absence of enhanced public access, which had previously been included for Options 10.1 – 10.5.

5.25 The Sustainability Appraisal recommends that mitigation measures similar to those suggested for 10.1 and 10.2 could be used for all options. Provision of open space could help mitigate the overall loss of open space across the site.

6. Modelling

6.1 In order to assist the assessment of the site footprint options, the University agreed to undertake views modelling of a shortlist of sites through their consultants EDAW. This included the University's preferred option 10.1 and the variant site options A, B and D. This modelling is set out in Appendix 1.12 along with an accompanying letter. Note that Option D is called the "2007 Discussion Plan" in the modelling, i.e. the plan put forward by the University for discussion during this process. Whilst Option E was derived after the modelling work was undertaken, for the views of the outer boundary, they would be the same as for Options A and B.

6.2 The modelling compares the 4 site options in turn from 7 agreed viewpoints. The building form is shown as a solid “wall” of development along the outer boundary of each option. The purpose of this simple "ribbon" modelling is to represent the variations between the options principally to show how the views change from option to option in terms the setting for development and in particular the foreground infront. The modelling assumes a building height of 4 storeys.

6.3 The University has also modelled Options A/B with 5 storeys on the basis that they say this would be required to fully meet their development needs/aspirations on a smaller footprint. It is however noted that in its representations on Option 10.2 the University has stated that this “*has a sufficient developable area to meet the University's needs in terms of housing, academic and commercial research floorspace*”. Compared with the footprint of Option 10.2, Options A, B and E would provide 104%, 99% and 102% of Option 10.2 respectively. It is therefore not accepted that the increased building height would be required in order to meet the University’s needs/aspirations. Notwithstanding, even if this were the case, the aim is to meet the University’s needs/aspirations as far as possible and consistent with other planning objectives. If the University’s full development aspirations were not able to be fully met on this site in an acceptable form, that is an acceptable outcome. However, it must be stressed that one of the key objectives of this process has been to identify a site that does meet the University’s aspirations, and Options A, B and E themselves represent a compromise on what would be proposed if it were not the strategic requirement to address the University’s needs/aspirations.

6.4 The actual impact of development would vary depending on the actual form of development following masterplanning. The modelling is not intended to suggest that the development edge would actually look like a solid, continuous wall of buildings as it does in all these images. Some mitigation of impact will be able to achieved through masterplanning and treatments could include, for example, breaks in the building frontage, variation in the building line, planting and other factors. If the built form is used as a tool to mitigate against noise impact, there may be less scope for mitigating its visual impact by breaking the building line, although some measures may be possibly whilst still effectively acting as a noise barrier.

6.5 The modelling demonstrates that any site option that meets or is close to meeting the University’s aspirations will change the character of this area and development will be highly visible. However, it is of strategic importance to maintain the setting of Cambridge and the modelling helps to understand which site footprint options enable a “workable Green Belt setting function” as it was described by David Brown to be achieved, and some options better provide for this than others.

6.6 A summary of the impact of development in each view is as follows:

View 1 – Long distant view from Cambridge Road

Option 10.1 presents a slightly greater impact in terms the amount of development visible and the green foreground provided to the development. The variation between Option 10.1 and Options A/B elsewhere is minimal.

View 2 – Mid distant view from Madingley Road

There is minimal difference in impact between Option 10.1 and Option D and there is little green foreground in this view. A minor rise in topography appears to be preserved in the foreground with Options A/B and the development is more distant, particularly in the central part of the view. The benefit of the foreground is reduced when the building height is increased to 5 storeys, however, it nonetheless retains a green setting to Cambridge.

View 3 – Closer view from the M11 heading south

More significant differences are revealed with this and views 4 and 5 due to their closer proximity to the development site. Views from the M11 are important to the impression gained by large numbers of people as they pass Cambridge and the gentle curve in the M11 accentuates the views into the site as they travel south. The M11 runs largely through countryside west of Cambridge and development should not have such an impact that it effectively brings Cambridge out to the M11. The key difference here is the preservation of the foreground and slope beyond Washpit Brook in Options A/B, particularly in the central and right hand parts of this view. This is not an insignificant difference in the Green Belt setting of Cambridge. 5 storeys would again have a greater impact than Options A/B but the green foreground to development is retained.

View 4 – Closer view from the M11 heading north

There is again a significant difference between Options 10.1 and A/B in this view. In terms of the built form edge, option 10.1 will very much dominate this view. In particular, the foreground is significantly reduced in 10.1 and so buildings, if built at 4 stories as shown, will very much dominate the view. The landscape in the foreground will become little more than a buffer to the motorway rather than a landscape setting for this development and the city. There is also no impression of the topography and the rising land that is currently an important part of the setting in this area. Views from the M11 are important to the impression

gained by large numbers of people as they pass Cambridge and the gentle curve in the M11 again accentuates the views into the site as they travel north. Slightly more foreground is provided in Option D. However, Options A/B show a greater foreground with buildings retreating in the view.

View 5 – Closer view from public footpath to north west

While the slope in this view appears very gentle, the actual slope is very much apparent when viewed on site, and views are gained along the slope which emphasises its impact. Option 10.1 removes any notion of the gentle slope below the 20m contour and pushes any buildings into the foreground towards the M11. It also provides a more "forced" or "contrived" edge which does not "work with" the natural contour of the land. Option D has a similar impact. Options A/B respect the 20m contour and the slope remains a feature in the landscape and provides a green foreground to Cambridge.

View 6 – Closer view from Huntingdon Road into strategic gap

In this view Option A and to a slightly lesser extent Option B become more dominant whereas Option 10.1 and to a lesser extent Option D, provide for a much greater "gap" between the two parts of development. Option A/B is far more prominent in terms of the impact of the built form. However, the development visible on the left side of this view is actually some way in the distance as shown on the map, which will mitigate its impact. The frontage of the strategic gap onto Huntingdon Road is not apparent in this view which is focused on the difference in impact of different widths of corridor through the heart of the new development. As recognised earlier, the gap on the road frontage is the crucial issue in Green Belt terms and a reduced gap through the new development can help ensure connectivity between the two parts of the new development.

View 7 – Closer view from SSSI into strategic gap

This view looks from the SSSI into the strategic gap and it addresses the impact of the options on the SSSI, which is the field at a lower level between the hedges in the left side of the view. There are major differences between the options in this view. First and foremost option 10.1 is completely screened by buildings in the foreground and development west of the strategic gap is so far away across the wide circular gap that it cannot be seen. Option A/B shows development closer to and on the far side of the SSSI. However the SSSI feature is properly preserved. Option D shows a more significant impact of built form on the SSSI.

6.7 While all the views in the modelling exercise are important, the immediate views shown in views 3,4 and 5 are particularly important. These views provide the most obvious impression of the change in topography on this side of the City and will be viewed on an extremely frequent basis by motorists on the M11. Given the high level of traffic on the M11 and the fact that it represents a major north-south motorway in the Country, any impact on these views must be given priority consideration. The modelling reveals that Options A and B, and therefore Option E, preserve the important Green Belt characteristics offered in views 3,4 and 5 namely the gentle slop in topography and the benefit this provides to the development and this edge of the City.

7. Overall Conclusion

7.1 This site footprint analysis has looked in detail at ten alternative options. Each has a different balance of advantages and disadvantages. The analysis has identified two key criteria in assessing the site footprint notwithstanding the importance of the assessment undertaken of all of the criteria. The two key criteria being the degree to which each option can satisfy the needs of the University and maintain the purposes of the Cambridge Green Belt in this location.

7.3 The choice of preferred option necessarily depends upon how the decision makers balance the importance of how each option performs in respect of the two key criteria, and taking into account the other criteria where these assist in reaching a decision.

7.4 From the detailed assessments of the site options, and taking account of the University's needs/aspirations, the supporting Green Belt landscape studies, an examination of viewpoints of the site and from the modelling work undertaken by EDAW, and the desirability of providing a large central open space in the strategic gap where it is shielded from the M11 by development, the Councils concluded that the draft Area Action Plan should include site Option E.

Appendix 1.1 – Maps of Site Options 10.1 to 10.5

Option 10.1

N

SSSI

Indicative Built Environment

Principal Open Space

0 100 200 400 600 800 1,000 Metres

Option 10.2

N

SSSI

Indicative Built Environment

Principal Open Space

0 100 200 400 600 800 1,000 Metres

Option 10.3

N

SSSI

Indicative Built Environment

Principal Open Space

0 100 200 400 600 800 1,000 Metres

Option 10.4

N

SSSI

Indicative Built Environment

Principal Open Space

0 100 200 400 600 800 1,000 Metres

Option 10.5

N

SSSI

Indicative Built Environment

Principal Open Space

0 100 200 400 600 800 1,000 Metres

Appendix 1.2: Issues and Options Report – Vision (Option 7.1)

Issues and Options Report Vision	Relevance to site footprint
North West Cambridge will create a new University quarter for Cambridge which will also contribute to meeting the needs of the wider city community.	Yes, in terms of market housing provided as part of the development and associated employment and community facilities.
Development will be of the highest quality in keeping with the reputation of the University as a centre of excellence and a world leader within the fields of higher education and research, and will address a wide range of the University's long-term development needs.	Yes, in terms of being of a physical size to accommodate a range of uses, including those identified by the University.
There will be a new neighbourhood centre which will act as a focus for the development but which will also provide facilities and services for nearby communities.	Yes. Site footprint is relevant in terms of ensuring community cohesion within the new development in terms of accessibility to community uses and through links between the new development and community uses outside the site relied on to serve the development. The accessibility to community uses within the site from residents outside the development is also relevant.
A new landscaped urban edge will be created which will enhance the setting of the City and maintain the separate identity of Girton village.	Yes. The Landscape setting is about the setting of Cambridge in both near and long distance views and in terms of edge treatment, the choices are either: • a high quality built edge • a high quality landscape boundary edge • a combination where high quality built development is enhanced through landscaping but the objective is not for development to be hidden. In terms of maintaining the separate identity of Girton, Structure Plan Policy P9/2a is relevant:

Issues and Options Report Vision	Relevance to site footprint
	• Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre • Maintain and enhance the quality of its setting • Prevent communities in the environs of Cambridge from merging into one another with the city In addition, the Structure Plan sets out criteria for the review of the Green Belt in Policy P9/2b on the edge of Cambridge which are to: 1. retain any areas required to maintain the purposes of the Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form; 2. have regard to the compact form of the city; 3. provide green separation between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. ensure the protection of green corridors running from open countryside into the urban area as generally indicated on the Key Diagram; 5. maintain views of the historic core; 6. provide, where appropriate, for limited development in identified Rural Centres in accordance with Policy P1/1. Note: that 3 is of relevance to maintaining the separate identity of Girton and only 6 is not relevant to site footprint.

Appendix 1.3: Issues and Options Report – Objectives (Option 8.1)

Issues and Options Report Objective	Relevance to site footprint
a) To ensure sustainable development;	Yes. Concentration of a scale of development: • sufficient to provide for local services and facilities accessible to the new community. • in a location which has, or has potential to have, good access to higher order services and facilities in Cambridge by public transport, cycling and walking.
b) To identify a new Green Belt boundary which allows for the development of the site without fundamentally undermining the purposes of the Green Belt;	Yes. The purposes of the Cambridge Green Belt are set out in Structure Plan Policy P9/2a and are to: • Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre • Maintain and enhance the quality of its setting • Prevent communities in the environs of Cambridge from merging into one another with the city The Structure Plan also sets out criteria for the review of the Green Belt in Policy P9/2b on the edge of Cambridge which are to: 1. retain any areas required to maintain the purposes of the Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form; 2. have regard to the compact form of the city; 3. provide green separation between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. ensure the protection of green corridors running from open countryside into the urban area as

Issues and Options Report Objective	Relevance to site footprint
	generally indicated on the Key Diagram; 5. maintain views of the historic core; 6. provide, where appropriate, for limited development in identified Rural Centres in accordance with Policy P1/1. Note: only 6 is not relevant to site footprint.
c) To provide an appropriate landscape setting and high quality edge treatment for Cambridge;	Yes. These are separate considerations but both are relevant to site footprint. Landscape setting is about the setting of Cambridge in both near and long distance views. In terms of edge treatment, the choices are either: • a high quality built edge • a high quality landscape boundary edge • a combination where high quality built development is enhanced through landscaping but the objective is not for development to be hidden.
d) To ensure appropriate separation between Cambridge and the village of Girton to maintain village character and identity;	Yes. This is a key Green Belt purpose (see b above).
e) To create a new community which respects and links with adjoining communities;	Yes, in part. Site footprint is relevant in terms of links between the new development and existing parts of Cambridge, including the rest of the University and Girton especially if links on foot or by cycle are to be encouraged.
f) To create a satisfactory mix of uses, taking into account: i. Identified University-	Yes, in terms of being of a physical size to accommodate a range of uses, including those identified by the University.

Issues and Options Report Objective	Relevance to site footprint
related uses ii. The need for Key Worker housing with the emphasis on University and College staff;	
g) To maximise walking and cycling and public transport use;	Yes. Site footprint is relevant in terms of the ability to provide high quality public transport and other non-car modes, both within the new development and through links between the new development and existing parts of Cambridge. Especially in relation to a 400m walk distance to public transport stops, and provision of public transport routes within the site to accommodate this requirement.
h) To determine what transport infrastructure is needed to link the development to key destinations in Cambridge and to the wider network and how it is to be delivered;	It is important that any site identified is capable of being properly and appropriately served by economically viable, sustainable public transport and services and infrastructure and has regard to wider transport issues beyond the site.
i) To provide standards for infrastructure provision including renewable energy, open space and car and cycle parking;	In terms of renewable energy provision, site location and size are unlikely to be a determining factor in site footprint. Scale and location of development would be relevant to the need for and location of surface water attenuation features. The Cambridge Local Plan standards for parking and open space will be used. This is consistent with the other urban extensions.
j) To determine the level, type and general location of community uses needed to satisfactorily serve the development;	Yes, in part. Site footprint is relevant in terms of ensuring an appropriate level of community provision for the scale of development and ensuring community cohesion within the new development in terms of accessibility to community uses and through links between the new development and community uses outside

Issues and Options Report Objective	Relevance to site footprint
	the site relied on to serve the development. The accessibility to community uses within the site from residents outside the development may also be relevant.
k) To determine appropriate phasing of development taking into account that development should only proceed when the University can prove the need for it;	Not relevant in this case where site development and phasing will be determined by demonstration of need by the University over time.
l) To ascertain what funding and investment is available to secure the infrastructure needs of the development;	Looking at this in terms of wider development viability, and therefore delivery, there may be implications for site footprint in terms of the overall scale of development and its ability to fund its infrastructure needs. It is likely that a larger scale of development will be better able to provide its infrastructure needs than a smaller scale of development. Although there will be thresholds as the scale of development increases which introduce new requirements for services, facilities or infrastructure which will place a greater proportionate burden on the development. Notwithstanding the above, without information on the development economics, development viability of any particular option cannot be assessed.
m) To protect existing wildlife and secure a net increase in biodiversity.	Yes, having particular regard to impact on protected species and loss of land of particular biodiversity value.

Appendix 1.4: Other Relevant Criteria

Other Assessment Criteria	Relevance to site footprint
University aspirations	This is not specifically listed as an objective because underpins the purpose of the AAP which is to release land from the Green Belt for predominantly University needs, which cannot be met elsewhere.
Site configuration	Ensuring the site is of a shape capable of being developed.
Historic landscape	PPG15 requires an assessment of the components and character of the historic landscape at an early stage in development plan preparation. Plans should protect the most important components and encourage development that is consistent with maintaining overall historic character.
Health and amenity	Implications of M11 for noise and air pollution.
Other national designations	Travellers Rest Pit Site of Special Scientific Interest (SSSI), designated for its geological importance.

Appendix 1.5: Consultation Representations and Responses on the Site Assessment Criteria – May 2007

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
1.	University of Cambridge	General	The consultation paper does not set out an assessment methodology that will enable the Councils either to assess and evaluate options, or to compare objectively one option with another. The proposed criteria are in fact a list of factors relevant to the planning of the site: they do not in themselves contain standards for judging options.	The consultation paper clearly sets out the assessment methodology. This provides an overview of each site option and how it relates to the University's aspirations as well as considering the impact on the Green Belt, setting of Cambridge and consideration of issues relevant to the shape and form of the site itself. It also sets out where the assessment criteria were derived and how they have been refined in order to avoid duplication. They accordingly provide a method for officers to assess and evaluate options. The assessment is only part of the process of reaching a preferred site. The outcomes of the assessments for the different options need to be analysed and compared and it is a matter of professional judgement in reaching a recommended preferred site having regard to all relevant factors. However, the assessment will provide a consistent basis for Members to make informed decisions.	
2.	University of	General	There is insufficient information available for each option, with the exception of	The University implies that a draft masterplan framework is required for all	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
	Cambridge		Option 10.1 which is supported by the University's draft masterplan framework, to enable objective assessments to take place. Options 10.2 to 10.5, and other options that have emerged since the Issues and Options consultation, comprise no more than a two dimensional plan showing a development boundary. For many of the factors identified as assessment criteria there is no specific development option information to assess. It is not clear therefore how Option 10.1 can be assessed and compared on a like-for-like basis with the other development options.	site options in order to evaluate them and this is not possible at this stage. It is considered that there is sufficient information available to enable objective assessment and decision making in respect of the site footprint options. Whist option 10.1 is based on the University's draft masterplan framework, neither Council has taken a formal view on this work and the full evidence base on which it rests has never been made public. It would therefore be wrong to give it undue weight in the site assessment process. Furthermore, options10.2 to 10.5 were informed by the 2006 Green Belt Landscape Study prepared by David Brown, which forms a supporting document to the North West Cambridge Issues & Options Report.	
3.	University of Cambridge	General	None of the factors listed as criteria are weighted, and so how will each option be scored? We are concerned having raised this as a potential problem from the outset that in the absence of a robust methodology, any assessment and evaluation of options will be entirely subjective.	This is not a purely a mathematical exercise but rather one requiring a degree of interpretation and judgement in order to balance the various criteria. The site assessment criteria are intended to expose differences between the options on a consistent basis and set them out for scrutiny by Members. The decision by	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
				Members will therefore be informed by the outcome of the site assessment criteria having regard to sound planning principles and in the context of a clear understanding of the University's stated needs.	
4.	University of Cambridge	General	The Issues & Options Report for the NW Cambridge Joint Area Action Plan puts forward five development footprint options, which are based on a two-dimensional plans differentiated by site boundaries. There are no further details provided in the Report for any of these options, although the University has prepared and undertaken testing of a masterplan framework that informed the preparation of Option 10.1.	The University implies that a draft masterplan framework is required for all site options in order to evaluate them and this is not possible at this stage. It is considered that there is sufficient information available to enable objective assessment and decision making in respect of the site footprint options. Whist option 10.1 is based on the University's draft masterplan framework, neither Council has taken a formal view on this work and the full evidence base on which it rests has never been made public. It would therefore be wrong to give it undue weight in the site assessment process. Furthermore, options10.2 to 10.5 were informed by the 2006 Green Belt Landscape Study prepared by David Brown, which forms a supporting document to the North West Cambridge Issues & Options Report.	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
5.	University of Cambridge	General	The Councils have stated that these proposed criteria will be used to evaluate the five footprint options set out in the Issues & Options Report. These options include a single boundary line in two dimensions for each of the options, which does not provide a sufficient amount of information to evaluate any of the schemes. In particular, it would be impossible to differentiate between any of the schemes for the above criteria based solely on a two-dimensional footprint.	The University implies that a draft masterplan framework is required for all site options in order to evaluate them and this is not possible at this stage. It is considered that there is sufficient information available to enable objective assessment and decision making in respect of the site footprint options. Whist option 10.1 is based on the University's draft masterplan framework, neither Council has taken a formal view on this work and the full evidence base on which it rests has never been made public. It would therefore be wrong to give it undue weight in the site assessment process. Furthermore, options10.2 to 10.5 were informed by the 2006 Green Belt Landscape Study prepared by David Brown, which forms a supporting document to the North West Cambridge Issues & Options Report.	
6.	University of Cambridge	General	The proposed assessment criteria comprise a list of factors to be taken into account in planning the site, many of which have already been considered through the University's masterplanning process. The criteria may be appropriate as policy statements within a final Area	The University implies that a draft masterplan framework is required for all site options in order to evaluate them and this is not possible at this stage. It is considered that there is sufficient information available to enable objective assessment and decision making in	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
			Action Plan, but are inappropriate for use in an assessment of different options.	respect of the site footprint options. Whist option 10.1 is based on the University's draft masterplan framework, neither Council has taken a formal view on this work and the full evidence base on which it rests has never been made public. It would therefore be wrong to give it undue weight in the site assessment process. Furthermore, options10.2 to 10.5 were informed by the 2006 Green Belt Landscape Study prepared by David Brown, which forms a supporting document to the North West Cambridge Issues & Options Report.	
7.	University of Cambridge	General	A further issue is the need for a like-for-like assessment of the five site footprint options. Option 10.1 is based on the University's masterplan. The University has been evolving proposals for its site at Northwest Cambridge for the past five years, and as the masterplan has evolved, many detailed elements of the scheme have been developed. As a result, there are some factors listed that could be developed into criteria to assess Option 10.1, but not options 10.2-10.5 (or other Options that have emerged following Issues and Options	The University implies that a draft masterplan framework is required for all site options in order to evaluate them and this is not possible at this stage. It is considered that there is sufficient information available to enable objective assessment and decision making in respect of the site footprint options. Whist option 10.1 is based on the University's draft masterplan framework, neither Council has taken a formal view on this work and the full evidence base on which it rests has never been made public. It would therefore be wrong to	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
			Consultation). As a result, we feel that the assessment will be unequally weighted in its results, and the assessment of Options 10.2-10.5 will be influenced by subjective viewpoints rather than demonstrable facts based on information about the footprints. For example, the 'Site Configuration' criterion requires that proposals ensure (1) a sustainable form of development; (2) a sense of place; and (3) an appropriate level, location and quality of open space.	give it undue weight in the site assessment process. Furthermore, options10.2 to 10.5 were informed by the 2006 Green Belt Landscape Study prepared by David Brown, which forms a supporting document to the North West Cambridge Issues & Options Report. This is not a purely a mathematical exercise but rather one requiring a degree of interpretation and judgement in order to balance the various criteria. The site assessment criteria are intended to expose differences between the options on a consistent basis and set them out for scrutiny by Members. The decision by Members will therefore be informed by the outcome of the site assessment criteria having regard to sound planning principles and in the context of a clear understanding of the University's stated needs.	
8.	University of Cambridge	General	The University has put forward a masterplan that will enable an informed discussion of these points, but is unclear how the Councils will asses and evaluate the other four footprint options, as they have not been masterplanned and it will be impossible to understand from a	The University implies that a draft masterplan framework is required for all site options in order to evaluate them and this is not possible at this stage. It is considered that there is sufficient information available to enable objective assessment and decision making in	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
			single 'red line' how the developments may or may not be sustainable, create a sense of place and provide a suitable amount of open space. This disparity in the amount of information required to provide an adequate assessment of Options 10.2-10.5 applies to all of the proposed criteria, but particularly in relation to those listed above.	respect of the site footprint options. Whist option 10.1 is based on the University's draft masterplan framework, neither Council has taken a formal view on this work and the full evidence base on which it rests has never been made public. It would therefore be wrong to give it undue weight in the site assessment process. Furthermore, options10.2 to 10.5 were informed by the 2006 Green Belt Landscape Study prepared by David Brown, which forms a supporting document to the North West Cambridge Issues & Options Report.	
9.	University of Cambridge	General	The problem associated with assessing and comparing options on a like-for-like basis is noted in the 'Development Viability & Delivery' criterion, which states 'without information on the development economics, development viability of any particular option cannot be assessed.' This issue is true of every other criterion, as there is a lack of any specific information for most of the other criteria as well.	The criterion on viability and delivery recognises the limitation on making an informed assessment at this stage. However, for the other criteria, there is sufficient information available to reach a view on the planning merits of the different site options, sufficient for the Councils to reach an informed view on the preferred site.	
10.	University of	General	The proposed criteria have not been weighted and no methodology for	This is not a purely a mathematical exercise but rather one requiring a	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
	Cambridge		evaluating options has been proposed. Without an appropriate methodology any assessment of options will inevitably be conditioned by subjective analysis. The Councils are already aware about our concerns that too much weight has been placed to date on protecting views for vehicle occupants on the M11, compared with other important factors. We recognise that the setting of Cambridge is a relevant and important factor to be taken into account in planning this development, but views from the M11 need to be placed in a proper context and weighted accordingly.	degree of interpretation and judgement in order to balance the various criteria. The site assessment criteria are intended to expose differences between the options on a consistent basis and set them out for scrutiny by Members. The decision by Members will therefore be informed by the outcome of the site assessment criteria having regard to sound planning principles and in the context of a clear understanding of the University's stated needs.	
11.	Girton Parish Council	Green Belt	"A major issue arising from the consultation is how to define the extent of the area for development (that is, the site footprint) and the definition of the revised boundaries for the Green Belt". Girton Parish Council endorses the crucial nature of this decision, and wishes to note that the Green Belt cannot simply be equated to the edge of the development; its own separate identity must be kept in mind.	Noted.	
12.	Girton Parish	Green Belt	The document rightly emphasises the need to "Assess each site option against	Agree. The intension was to reflect the wording of Structure Plan Policy P9/2b	Amend to include the precise

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
	Council		the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2" (both (a) and (b)). It is unfortunate that in the criterion the form of P9/2b point 3 has been subtly modified and it is important that the original form be maintained: "provide green separation between existing settlements * and any urban expansion of Cambridge* to maintain the identity of the individual settlement".	and no modification was intended.	wording from Structure Plan Policy P9/2b.
13.	University of Cambridge	Green Belt	We do not understand how the Councils will be able to assess development options in relation to the Green Belt criterion.	Disagree. It is considered that it is possible to distinguish between the site options. This requires an informed judgement being made on the impact of the options on the purposes of the Green Belt. The Structure Plan gives a clear policy context for the review of the Green Belt and the 2006 Green Belt Landscape Study prepared by David Brown, which forms a supporting document to the North West Cambridge Issues & Options Report, provides a more detailed analysis of the landscape character of this area.	
14.		Surface water attenuation	We do not understand how the Councils will be able to assess development	Disagree. The development will generate significant volumes of surface water,	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
			options in relation to the surface water attenuation criterion.	which will drain into the washpit brook. Therefore it is important that the ability of the development to provide surface water attenuation within the area of control of the University is assessed. The greater the extent of the development, the greater the need for surface water attenuation and the land take of such measures can be expected to increase accordingly. The actual extent and nature of the surface water attenuation measures needed for each option is not known at this stage, but it is reasonable to assume that these will be harder to achieve as the extent of development increases. This criterion does not assume that it will be impossible to achieve satisfactory surface water attenuation in respect of all the options.	
15.		High quality edge treatment	We do not understand how the Councils will be able to assess development options in relation to the high quality edge treatment criterion.	Agree that it would be difficult to assess each site option in relation to a high quality edge treatment without more detailed work undertaken to create a variety of edge for each option.	Delete the High Quality Edge Treatment criterion.
16	Girton Parish Council.	High quality edge treatment	We maintain that the "High quality edge treatment" can only be achieved through point 2 (a high quality landscape	Agree that a high quality edge treatment is important and a variety of different treatments will be considered through the	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
			boundary edge which is consistent with local landscape character) anything else would contradict the Local Plan and would seriously damage the "separate identity of Girton village".	masterplanning process. However, at this stage it would be difficult to assess each site option without more detailed work undertaken.	
17.	University of Cambridge	Health and amenity	We do not understand how the Councils will be able to assess development options in relation to the health and amenity criterion.	Disagree. It is important that the implications of noise and air pollution as well as the visual impact from the M11are considered. This would include an understanding of whether the noise and air quality implications of the M11 are such that either the extent or form of development is constrained and what visual impact there might be of any necessary mitigation measure including built form, landscaping and sound attenuation barriers. These are material considerations in selecting the preferred site. The University has undertaken noise and air quality assessments for land between Madingley Road and Huntingdon Road and these along with input from Environmental Health Officers will feed into the assessment of each site option.	
18.	University of Cambridge	Health and amenity	We have submitted reports for noise and air quality assessments that could be used to develop appropriate criteria	It is important that the implications of noise and air pollution as well as the visual impact from the M11is considered.	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
			for those matters. It is not clear how the Councils intend to assess each option in relation to mitigation of the noise and visual impact of the M11. A variety of measures are available but none have yet been specified for any option. Mitigation, especially for noise, is most effective when applied close to the source of intrusion, but that would have the same effect on all options. We would be grateful for clarification on how the Councils intend to assess this matter.	This would include the environmental & visual impact of any necessary mitigation measure including built form, landscaping and sound attenuation barriers. The University has undertaken noise and air quality assessments for land between Madingley Road and Huntingdon Road and these along with input from Environmental Health Officers will feed into the assessment of each site option. Whilst there may be a variety of options available to deal with this issue, an understanding of potential impacts in terms of mitigating adverse effects from different development footprints and the visual impacts of any necessary measures is relevant in assessing the site options.	
19.	Cambridgeshire County Council	Sustainable Development	Propose that footnote be inserted related to a single form entry primary school to read: <u>but it should be noted that whilst a 1FE primary school may be appropriate for development of up to 800 dwellings, for development with greater capacity or if there is potential for expansion in the</u>	Agree that reference to the size of the primary school in relation to the scale of development be included.	Amend the Sustainable development description to read: Development of sufficient scale to provide for a

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
			longer term the Education Authority would be looking for a larger site suitable for 2FE.		range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle. This will include a neighbourhood centre, some local shopping and provision for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800 dwellings, and a 2 form entry is required for larger developments).
20.	University of	Sustainable development	We do not understand how the Councils will be able to assess development	Disagree. It is important to assess whether the development is of a	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
	Cambridge		options in relation to the sustainable development criterion.	sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle. For example, the larger the site footprint, the greater the scale of development and therefore, the stronger the need for a local centre, leading to a greater degree of self containment.	
21.	Cambridgeshire County Council	Site configuration	In relation to point 1) a sustainable form of development, proposed amendment to read: <u>Including necessary waste recycling provision</u>.	It is not considered appropriate to make specific reference to the provision of waste recycling. The AAP cannot include policies relating to waste. There are also outstanding representations by both Councils to the emerging draft Minerals and Waste DPD on the appropriateness of this location for waste provision. If it is confirmed as an suitable location in due course it would be a matter for masterplanning. It is not a relevant factor in assessing the site footprint.	
22.	University of Cambridge	Site configuration	We do not understand how the Councils will be able to assess development options in relation to the site configuration criterion.	Disagree. It is important to consider whether the site is of a shape which can be developed satisfactorily and it is considered that it would be possible to distinguish between the site options.	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
23.	Cambridgeshire County Council	Transport infrastructure	Transport Infrastructure In relation to point 2) amend reference to the Cambridge Area Transport Study to the Cambridge Area Transport Strategy.	Agree.	Amend to read the Cambridge Area Transport Strategy.
24.	Cambridgeshire County Council	Transport infrastructure	In relation to point 3) proposed amendment to read: … good connections to segregated strategic public transport corridors….	The evidence base for this change is not clear. The principle of dedicated public transport routes is consistent with the approach in all the urban extensions. However, the principle of "segregated strategic" public transport corridors is a new term.	Amend point 3 of the transport infrastructure description to read: 3. Assess the ability of each option to provide a high level of public transport accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
					with West Cambridge.
25.	University of Cambridge	Transport infrastructure	We do not understand how the Councils will be able to assess development options in relation to the transport infrastructure criterion.	Disagree. It is considered that it would be possible to distinguish between the site options.	
26.	University of Cambridge	Relationship to adjoining communities	We do not understand how the Councils will be able to assess development options in relation to the relationship to adjoining communities criterion.	Disagree. It is important to consider the degree to which each option links with and respects existing parts of Cambridge including the rest of the University, the other part of the north west quadrant and Girton.	
27.	University of Cambridge	Accessibility to community uses by walking and cycling	We do not understand how the Councils will be able to assess development options in relation to the accessibility to community uses by walking and cycling criterion.	Disagree. It is important to consider the accessibility to community uses by walking and cycling within the development and through links between the new development and community uses outside the development as well as accessibility for residents outside the development so that the development contributes to meeting the needs of the wider City community.	
28.	University of Cambridge	Development viability and delivery	We do not understand how the Councils will be able to assess development options in relation to the development viability and delivery criterion.	The criteria as worded recognises that without information on the development economics, development viability of any particular option cannot be addressed. However, it is potentially an important	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
				consideration and it is considered it should remain in the criteria to highlight this point, notwithstanding the limited ability to assess the site options at this stage.	
29.	University of Cambridge	Sustainability appraisal	Sustainability appraisal is not in itself an assessment criterion.	Agree that this is not an assessment criterion but it is a relevant factor to be taken into account in reaching a preferred site.	Delete and insert a new paragraph in the introduction to read: The site assessments of each option together with the results of the sustainability appraisal and the representations from the Issues & Options consultation will be taken into account when determining the preferred site option.
30.	University of	Summary of representations	Summaries of representations to Issues and Options consultation are not	Agree that this is not an assessment criterion but it is a relevant factor to be	Delete and insert a new paragraph

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
	Cambridge		assessment criteria.	taken into account in reaching a preferred site.	in the introduction to read: The site assessments of each option together with the results of the sustainability appraisal and the representations from the Issues & Options consultation will be taken into account when determining the preferred site option.
31.	University of Cambridge	Assessment summary	Assessment summary is an outcome, not a criterion	Agree that this is not an assessment criterion but an assessment summary of each option will be provided to assist in the comparison of site options.	
32.	Cambridgeshire County Council	Objective g) – relevance to site footprint	Insert a new sentence to read: <u>Especially in relation to a 400m walk distance to public transport stops, and provision of public transport routes within the site to accommodate this</u>	Agree.	Amend to insert new sentence.

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
			requirement.		
33.	Cambridgeshire County Council	Objective h) – relevance to site footprint	Delete the following: Transport infrastructure is not necessarily a key factor in determining site footprint. And insert the following to read: Appropriately served by economically viable, sustainable public transport services and	Agree.	Delete the first sentence and amend to read: It is important that any site identified is capable of being appropriately and appropriately served by economically viable, sustainable public transport services and infrastructure and has regard to the wider transport issues beyond the site.
34.	Cambridgeshire County Council	Objective j) – relevance to site footprint	Insert new sentence to read: It is also relevant in terms of ensuring adequate site area for community uses such as school sites, playing fields and waste recycling provision.	The principle arising from this point is that the site must be capable for meeting the needs of the development in terms of community facilities. However, the amount of community facilities depends upon the size of the development rather than the provision of community facilities dictating the size of development.	Amend the relevance to site footprint description to read: Yes, in part. Site footprint is relevant in terms

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
					of ensuring an appropriate level of community provision for the scale of development and ensuring community cohesion within the new development in terms of accessibility to community uses outside the site relied on to serve the development.
35.	University of Cambridge	Proposed new criterion	Contribution to the further development of Cambridge and its sub-region as a world leader in the fields of higher education and research.	Agree that the assessment criteria should be amended to reflect the contribution to the further development of Cambridge and its sub-region as a world leader in the fields of higher education and research.	Include reference under the description of University's Aspiration criterion to read: Aspirations reflect the University's potential to contribute to the further development of

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
					Cambridge and its sub region as a world leader in the fields of higher education and research.
36.	University of Cambridge	Proposed new criterion	Contribution towards Strategic Employment Provision (the site is identified as a Strategic Employment Location in saved Structure Plan policy).	Agree that the assessment criteria should be amended to reflect the contribution towards Strategic Employment Provision as outlined in the saved Structure Plan Policy P2/3.	Add new criterion " Contribution to Strategic Employment Provision" which will assess the potential of each site option to contribute towards strategic employment provision as set out Structure Plan Policy P2/3.
37.	University of Cambridge	Proposed new criterion	The capacity within each option to provide for the University's development needs. That involves more than a comparison of footprint options. It relates for example to development scale, form, design and transport infrastructure capacity.	A major issue arising from the Issues & Options consultation is the definition of the site footprint which is required in order to release land from the Green Belt and define the revised Green Belt boundary. The assessment criteria have been compiled in order to provide an overview of each site option which includes an assessment of how it relates	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
				to the University's aspirations as well as considering the impact on the Green Belt, setting of Cambridge and consideration of issues relevant to the shape and form of the site itself and its capacity to deliver a sustainable form of development.	
38.	University of Cambridge	Proposed new criterion	Regard for the compact form of the City. This is an important element of saved Structure Plan policy, and referred to in the consultation paper's description of the assessment criteria. The description then expands upon matters relating to the setting of Cambridge, but not the need to have regard to its compact form. The site provides an opportunity to meet development needs in a location much more proximate to the historic core than areas to the east and south of Cambridge. This factor therefore needs to be considered on a city-wide basis, not simply by comparing different options for the site.	The planning merits of the various site options for NW Cambridge will be properly considered within the strategic planning framework and having regard to the site specific issues for this location.	
39.	University of Cambridge	Proposed new criterion	Development viability in relation to the provision of high value generating development, not just the overall scale of development as indicated in	The Councils will have regard to the comments made by the University in reaching a decision on the preferred site. It is recognised that the specific reason	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
			the assessment criteria description. Development will not necessarily remain viable if all development quantums are scaled back proportionately from the University's proposal. A level of high value generating development would still be required to pay for on and off-site infrastructure and to cross subsidise low/no-value generating uses. A reduction in development quantums is likely therefore to be disproportionately at the expense of low/no-value generating development, including affordable key worker housing. This is a major risk and a matter of concern for both the University and the local authorities.	for the release of land from the Green Belt in this location is to meet the needs of the University, including its need for affordable key worker housing. However, it should not be assumed that a development proposal which emphasises high value generating development at the expense of meeting the needs of the University would be acceptable.	
40.	University of Cambridge	Proposed new criterion	Public transport viability. We are concerned especially that options with the development boundary pulled back to the 20m contour level would not allow a sufficient weight of development in that part of the site to help make public transport viable along the radial route.	Noted. The criterion on site configuration and transport infrastructure provides an opportunity to consider this issue.	

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
41.	University of Cambridge	Proposed new criterion	Walking and cycling accessibility to employment and services (not just to community uses)	The wider issue of walking and cycling within the site is covered by point 1 in the transport infrastructure criterion. This is specifically about the functioning of the development in terms of community cohesion and accessibility.	
42.	University of Cambridge	Proposed new criterion	The even distribution of trips to, from and within the site. Our testing of the Councils' new Options A and B suggests that redistributing development from the west to the east of the site, compared with the University's draft masterplan framework, could create capacity problems with the proposed new junction next to the Travellers' Rest Public House.	Disagree. This point is adequately covered under the transport infrastructure assessment criterion	
43.	University of Cambridge		if the Travellers Rest junction is pushed to/or beyond capacity then this would impact on the attractiveness to deliver an orbital, as well as radial, public transport link, which is a major issue for the CNW Transport Strategy.	Noted.	
44.	University of		No option can provide for all modes of transport. We suggest criteria should	Disagree with the proposed change. However, the first point under the	Amend the first point under the

Rep No.	Respondent	Site Assessment Criterion	Representation	Council's Response	Changes to the Site Assessment Criteria
	Cambridge		relate to 'modes of transport that reduce reliance on single-occupancy car trips'.	transport infrastructure criterion could be amended to provide clarity.	transport infrastructure description to read: Assess the ability of each option to provide for <u>different modes of transport</u>, with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic.

Appendix 1.6: NW Cambridge Area Action Plan – Issues & Options:

Site Assessment Criteria

Following the Issues and Options Consultation for the North West Cambridge Area Action Plan (AAP) which took place between September and November 2006, the representations received are being assessed and will be taken into account in formulating the next stage, which is Preferred Options.

A major issue arising from the consultation is how to define the extent of the area for development (that is, the site footprint) and the definition of the revised boundaries for the Green Belt.

In order to do this, a structured approach is needed to compare the relative merits of the site options. Site assessment criteria have therefore been drawn up to provide a consistent basis for considering each site option.

The Councils are sharing the site assessment criteria with key local stakeholders and any comments received will be considered before the criteria are finalised and used to assess the different site options, which will then help inform the choice of preferred site. The site assessments will be considered by both Councils before public consultation takes place on Preferred Options for the North West Cambridge Area Action Plan in the autumn.

Site Assessment Methodology

The site assessment criteria have been compiled from:

1. The vision for the area set out in Option 7.1 of the Issues and Options Report. Appendix 1 sets out the various components of the vision and considers the relevance of each to determining the site footprint.
2. The objectives set out in Option 8.1 of the Issues and Options report. Appendix 1 sets out these objectives and considers the relevance of each to determining the site footprint.
3. Other relevant criteria drawn from national planning policy guidance, sound planning practice and site specific considerations. Appendix 2 sets out these other criteria and how they are relevant to site footprint.

The assessment criteria drawn from the above have been refined to avoid duplication and structured to provide:

1. an overview of the site option and how it relates to the University's aspirations,
2. consideration of the impact of the site option on the Green Belt and setting of Cambridge and other wider considerations particularly affecting the outer boundary of the site,

3. consideration of issues more relevant to the shape and form of the site itself.

The site assessments of each option together with the results of the sustainability appraisal and the representations from the Issues & Options consultation will be taken into account when determining the preferred site option.

The Assessment Criteria, in no particular order of priority, are:

Assessment Criteria	Description
OVERVIEW	
Development Option	Brief description of the site option.
Developable land	Size of site option in hectares.
University Aspirations	Comparison of the site option against: 1. the built footprint as proposed by the University in its masterplan (Option 10.1). 2. the built footprint of Option 10.2, which the representations by the University indicate could meet its needs. Also includes a proportional indication of the overall scale of development against the full aspirations of the University. Aspirations reflect the University's potential to contribute to the further development of Cambridge and its sub region as a world leader in the fields of higher education and research.
CONSIDERATIONS	
Sub regional housing requirement	Assess how the potential housing yield contributes to meeting the housing requirements of Cambridge City and South Cambs as set out in the RSS. Includes a pro rata assessment of housing and student accommodation yields, eg. if the site option were 80% of the University's built footprint, the assumption is that it would yield 80% of the number of dwellings. This does not take account of any change in the proportions of individual land uses that the University may advise is appropriate in view of the relative priorities for specific uses. It also does not consider potential to achieve a

Assessment Criteria	Description
	greater proportion of development through measures such as increased densities. Note: housing requirements are by district but it is not possible to make any realistic assumptions of dwelling yield by district for a mixed use site in the absence of masterplanning.
Contribution to Strategic Employment Provision.	Assess the potential of each site option to contribute towards strategic employment provision as set out Structure Plan Policy P2/3.
Green Belt	Assess each site option against the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2b: 1. Retain any area required to maintain the purposes of Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form; ~~in the context of delivering sustainable development and planned settlement form;~~. 2. ~~-~~Have regard for the compact form of the City; 3. Provide green separation between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. Ensure protection of green corridors running from open countryside into the urban area as generally indicated on the Key Diagram; 5. Maintain views of the historic core.; 6. provide, where appropriate, for limited development in identified Rural centres in accordance with Policy P1/1. NB. The purposes of the Green Belt as stated in Policy P9/2a are to: • Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre;

Assessment Criteria	Description
	• Maintain and enhance the quality of its setting; • Prevent communities in the Cambridge environs of Cambridge from merging into one another and with the city. The assessment of the impact of each option on the quality of the setting of Cambridge, will include consideration of topography, landscape character, short and long distance views from main vantage points, and providing an attractive green foreground to the City.
Historic landscape	Assess the historic landscape character of the area and the impact of each option on the quality and integrity of the landscape. This includes consideration of ridge and furrow, pre-enclosure hedgerows, pre-enclosure field boundaries and recorded crop marks.
Biodiversity	Assess the biodiversity value of the area and the impact of each option on that value. This includes protected species such as Great Crested Newts and badgers. The Washpit Brook area is of particular biodiversity value. Also assess the impact on the Travellers Rest Pit SSSI, designated for its geological importance.
Surface water attenuation	The development will generate significant volumes of surface water, which will drain into Washpit Brook. The floodplain starts at the edge of the area and extends to the River Great Ouse, along the route of the brook and its continuations. Assess the ability of the development to provide surface water attenuation within the area of control of the University
~~High quality edge treatment~~	~~Assess the potential in each site option for the outer boundary of the development in terms of its visual impact to create:~~ ~~1.a high quality built edge which reflects the character of Cambridge~~ ~~2.a high quality landscape boundary edge which is consistent with local landscape character~~

Assessment Criteria	Description
	~~3.a combination where high quality built development is enhanced through landscaping but the objective is not for development to be hidden.~~
Health and amenity	Assess the implications of noise and air pollution as well as the visual impact arising from the M11 on each site option as a whole and for all uses (including built and open uses within the site). This would include the environmental & visual impact of any necessary mitigation measures including built form, landscaping and sound attenuation barriers.
Sustainable Development	Development of sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle. This ~~is taken~~ will include a ~~to be a~~ neighbourhood centre ~~comprising of at least a single form entry primary school and~~, ~~-~~some local shopping and provision for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800 dwellings and a 2 form entry is required for larger developments).~~;~~
Site configuration	Ensuring the site is of a shape capable of being developed satisfactorily to ensure: 1) a sustainable form of development; 2) a sense of place; 3) an appropriate level, location and quality of open space. Also consider whether the site provides an opportunity to create an enhanced gateway on an entrance to Cambridge, ie on Huntingdon Road or Madingley Road.
Satisfactory mix of predominantly University related uses	Assess the scope for each site option to include a mix of uses having regard to: 1. the focus of the development on predominantly University related uses;

Assessment Criteria	Description
	2. identified University-related uses; 3. the need for Key Worker housing with the emphasis on University and College staff.
Transport infrastructure	1. Assess the ability of each option to provide for ~~all~~ different modes of transport ~~modes,~~ with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic. 2. Assess the ability of each option to accommodate future strategic transport provision, including proposals emerging from the Cambridge Area Transport ~~Study~~ Strategy and the North West Cambridge Transport Study. 3. Assess the ability of each option to provide a high level of public transport accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park with West Cambridge.
Relationship with adjoining communities	Assess the degree to which each option links with and respects existing parts of Cambridge, including the rest of the University, the other part of the north west quadrant and Girton.
Accessibility to community uses by walking and cycling	1. Within the development 2. Links between the new development and community uses outside the site relied on to serve the development. 3. Accessibility to community uses within the site from residents outside the development so that the development contributes to meeting the needs of the wider City community consistent with the vision set out in the AAP.
Development viability and delivery	Development viability, and therefore delivery, may be affected by the site footprint in terms of the overall scale of development and its ability to fund its infrastructure needs. However, without information on the development economics, development viability

Assessment Criteria	Description
	of any particular option cannot be assessed.
~~Sustainability Appraisal~~	~~Summary of the findings of the Initial Sustainability Appraisal of the options.~~
~~Summary of Representations~~	~~Summary of the representation made to the Issues and Options consultation.~~
~~Assessment Summary~~	~~Summary for each site option of the findings of the assessment~~.

Appendix 1.7 – Site Assessment of Options 10.1 to 10.5

North West Cambridge – Issues & Options

1. Site Assessment

Option 10.1

Topic	Criteria	Description and assessment
OVERVIEW		
Development Option	Brief description of the site option.	Based on the University's original draft masterplan, development extends down the slope to close to the Washpit Brook and the M11 leaving only a 100-200 metres wide strip of landscape buffer between the motorway and the edge of development. The development would therefore essentially begin where the land starts to rise. The narrow green corridor close to Huntingdon Road widens out into a roughly circular open space in the vicinity of the Travellers' Pit SSSI.
Developable land	Size of site option in hectares.	77 ha Indicative built environment
University Aspirations	Comparison of the site option against: 1. the built footprint as proposed by the University in its masterplan (Option 10.1). 2. the built footprint of Option 10.2, which the representations by the University indicate could meet its needs.	Meets 100% of University's aspirations as it accords with the Masterplan prepared on behalf of the University in 2005 It follows that it also meets and exceeds the scale of development in Option 10.2

Topic	Criteria	Description and assessment
	The proportional indication of the overall scale of development against the full aspirations of the University. These reflect the University's potential to contribute to the further development of Cambridge and its sub region as a world leader in the fields of higher education and research.	
CONSIDERATIONS		
Sub regional housing requirement	Assess how the potential housing yield contributes to meeting the housing requirements of Cambridge City and South Cambs as set out in the RSS. Provide a pro rata assessment of housing and student accommodation yields, eg. if the site option were 80% of the University's built footprint, the assumption is that it would yield 80% of the number of dwellings. This does not take account of any change in the proportions of individual land uses that the University may advise is appropriate in view of the relative priorities for specific uses. It also does not consider potential to achieve a greater proportion of development through measures such as increased densities. Note: housing requirements are by district but it is not possible to make any realistic assumptions of dwelling yield by	It is assumed that this would meet the upper level of housing of 2,500 dwellings as set out in the University's masterplan.

Topic	Criteria	Description and assessment
	district for a mixed use site in the absence of masterplanning.	
Contribution to Strategic Employment Provision	Assess the potential to contribute towards strategic employment provision as set out Structure Plan Policy P2/3.	It is assumed that this option would meet the scale of development put forward in the University's masterplan of 100,000 m2 floorspace or 35.5 ha of land
Green Belt	Assess against the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2b: 1. Retain any area required to maintain the purposes of Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form;; 2. Have regard for the compact form of the City; 3. Provide green separation between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. Ensure protection of green corridors running from open countryside into the urban area as generally indicated on the Key Diagram; 5. Maintain views of the historic core.;	1. In terms of the setting of Cambridge, this option has the greatest loss of green foreground on the slope of land down to the Washpit Brook and M11 which provides a key part of the setting of the City with views from the M11 and the Madingley area most affected. The rising landform makes this area prominent in views from the west of Cambridge. The open and pastoral character of this land presents the quintessential rural setting that is associated with the setting of Cambridge. This openness also allows the visual, historical and cultural connections between the two prominent existing focal points in the landscape; the Chapel of the American Cemetery and the tower of Girton College. In short, it is a visually sensitive landscape that currently enhances the setting of Cambridge and which would very largely lost under this option. This sweep of open rising ground that is so important to the setting of Cambridge is effectively lost and the proximity to the M11 and the rising landform will lead to this area not being perceived as a significant foreground. The rising land also means that development will be viewed over some distance as it extends up the slope and whilst landscaping can have some mitigating effect the slope means that it would not be able to be effectively screened as it is seen rolling

Topic	Criteria	Description and assessment
	6. provide, where appropriate, for limited development in identified Rural centres in accordance with Policy P1/1.. The purposes of the Green Belt as stated in Policy P9/2a are to: • Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre; • Maintain and enhance the quality of its setting; • Prevent communities in the Cambridge environs of Cambridge from merging into one another and with the city. The assessment of the impact on the quality of the setting of Cambridge, will include consideration of topography, landscape character, short and long distance views from main vantage points, and providing an attractive green foreground to the City.	down the slope, increasing its visual impact. It also has an impact on the views of Girton College. 2. As this option extends further into the open countryside it is the least compact option and therefore most reduces the compact nature of the City. 3. It provides the greatest degree of separation between Girton and Cambridge. The gap at Huntingdon Road is around 200m wide, but in this option it opens up into a wider area of around 300m which extends right through to Madingley Road. 4. The green corridor along Madingley Road is maintained. 5. There is no direct impact on the views of the Historic Core 6. This is not considered relevant in this assessment. The primary impact would arise from the extent to which this option would visually impact on views and the green foreground to the City. Views of Girton College would also be lost from a number of viewpoints.
Historic landscape	Assess the historic landscape character of the area and the impact of each option on the quality and integrity of the landscape. This includes consideration of ridge and furrow, pre-enclosure	The loss of historic landscape elements with this option would be of high significance. Historic field patterns, pre-enclosure boundaries, pre-enclosure hedgerows and ridge and burrow patterns, which are rare survivals from the former open field system which dates back to at least

Topic	Criteria	Description and assessment
	hedgerows, pre-enclosure field boundaries and recorded crop marks.	medieval times, will be lost. These heritage landscape elements provide the historic core of Cambridge with a setting and context. The loss of so much of the rural setting will be of a high significance and a diminution of the value of the historic core itself. The Option would include a 'piecemeal' retention of features from the historic landscape e.g. Veteran oak and historic hedgerows, which would erode their value in terms of context and historical relevance and it is also unlikely to sustain these features in the long term. The impact of the level of development on the historic landscape would also be significant in terms of the adverse effects of the development itself combined with infrastructure issues because of the extent of the development across the historic fields to the south west.
Biodiversity	Assess the biodiversity value of the area and the impact of each option on that value. This includes protected species such as Great Crested Newts and badgers. The Washpit Brook area is of particular biodiversity value. Also assess the impact on the Travellers Rest Pit SSSI, designated for its geological importance.	The primary impact of the development arises from its shear extent over an area of currently largely undeveloped countryside. A watercourse, the Wash Pit Brook runs along the site and is likely to provide a corridor for animals moving through the area. Initial ecological studies have identified a number of badger setts within the area of the Plan . A main sett is known to be in the vicinity of the Travellers Rest SSSI and would need to be relatively well protected through integration within the open space of the green gap. However, a secondary sett lying near to the Huntingdon Road may require translocation. Further survey work will be needed to inform and guide a suitable scheme of mitigation

Topic	Criteria	Description and assessment
		and habitat creation for the badgers. A population of great crested newts is known to exist in ponds in the southern part of the Plan area. However, the ponds known to be used as breeding sites, and those ponds with potential for great crested newts, would be retained within the development area and thus largely to be unaffected. Nevertheless, a full programme of survey work would required to re-assess previous surveys in order to inform and guide a scheme of mitigation and habitat creation for the great crested newts. With the integration of careful design measures such as SUDS, dropped kerbs and hibernation sites within new hedgerows the great crested newt population could even benefit from the changes brought about by development.
Surface water attenuation	The development will generate significant volumes of surface water, which will drain into Washpit Brook. The floodplain starts at the edge of the area and extends to the River Great Ouse, along the route of the brook and its continuations. Assess the ability of the development to provide surface water attenuation within the area of control of the University	As the option with the most extensive built footprint this option could be expected to generate the largest volume of surface water arising from hard surfaces in need of attenuation. Most of the development drains towards Washpit Brook with the possible exception of part of the site to the east of the north-south strategic gap. Provided that sustainable drainage systems (SUDS) are incorporated within the built footprint, there is no reason to expect that this option could not satisfactorily accommodate measures to attenuate surface water so that off-site flooding and drainage problems are not made worse. Any necessary water storage areas would be likely to be located in the low lying parts of the site to the south and adjoining the M11 and the Washpit Brook.
Health and amenity	Assess the implications of noise and air	The main issues are noise and air quality as a result of the

Topic	Criteria	Description and assessment
	pollution as well as the visual impact arising from the M11 on each site option as a whole and for all uses (including built and open uses within the site). This would include the environmental & visual impact of any necessary mitigation measures including built form, landscaping and sound attenuation barriers.	proximity of the M11. Residential development is unlikely to be appropriate at the northern tip of the site where it is close to the Girton Interchange on air quality issues. However employment may be suitable here and on the western limits of the development close to the M11 itself. It is possible that employment here could shield residential development to the east of it, improving the noise environment of the site, although this may be limited by the rise in land levels. Development on the eastern side of the site furthest from the M11 is less likely to be affected. As in most of consultation options, mitigation measures will be needed. This may include a mix of solutions including a 3m acoustic barrier along the M11 and a 5m bund closer to the development, and careful design and orientation of buildings. It will be necessary for buildings to be situated so as to prevent the creation of noise corridors into the site. The green corridor and internal open spaces are likely to benefit from the noise shielding provided by the built form. This mitigation could also apply to the following options.
Sustainable Development	Development of sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle. This will include a neighbourhood centre , some local shopping and provision for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800	As the option with the greatest scale of development, it is likely to bring forward the largest range of local facilities and ensure that the centre is viable. However, the configuration of the site with a wide green corridor fragmenting the new community and would increase distances to the centre which could thus discourage journeys on foot and cycle.

Topic	Criteria	Description and assessment
	dwellings and a 2 form entry is required for larger developments).	
Site configuration	Ensuring the site is of a shape capable of being developed satisfactorily to ensure: 1) a sustainable form of development; 2) a sense of place; 3) an appropriate level, location and quality of open space. Also consider whether the site provides an opportunity to create an enhanced gateway on an entrance to Cambridge, ie on Huntingdon Road or Madingley Road.	This option provides for the fullest possible range of development opportunity in that it is the largest of the site footprints of the various options at 77ha. The option will no doubt allow for various sustainable approaches to be implemented, whether in terms of block layout, use of sustainable drainage, or predominant south facing building orientation, amongst others. A sense of place, while being a relatively difficult goal to achieve simply from a plan given that it is so much also influenced by social and economic factors, would be possible in this option given the large area available to create a new development. In terms of open space, there is a generous amount of open space provided in the form of a strategic gap from Girton and the relatively large amount of development land would allow for a greater amount of on site open space. However, the gap between the site and the M11 is very narrow and low lying hence not of great use for formal open space use. Finally, the provision of an enhanced gateway is achievable, in terms of providing a strong built frontage on to Huntington Road.
Satisfactory mix of predominantly University related uses	Assess the scope for each site option to include a mix of uses having regard to: 1. the focus of the development on predominantly University related	As this option delivers the University's aspirations in full, it is assumed that this is not an issue in this option.

Topic	Criteria	Description and assessment
	uses; 2. identified University-related uses; 3. the need for Key Worker housing with the emphasis on University and College staff.	
Transport infrastructure	1. Assess the ability of each option to provide for different modes of transport with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic. 2. Assess the ability of each option to accommodate future strategic transport provision, including proposals emerging from the Cambridge Area Transport Strategy and the North West Cambridge Transport Study. 3. Assess the ability of each option to provide a high level of public transport accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park with West Cambridge.	1. Large area of development (particularly to the NW) is likely to generate a large number of trips and requiring corresponding transport infrastructure. 2. Majority of development links well to the proposed orbital link road, if this is to the west of the strategic gap, but not so well if it is to the east of the strategic gap. Proposed radial link road will need to cross strategic gap. 3. Greater width in NW part of site will make it more difficult to meet 400m walk distance. Size of development should be sufficient to justify site specific bus services.
Relationship with adjoining communities	Assess the degree to which it can link with and respect existing parts of	The University's development does not present any real opportunities to connect with Girton village, which lies

Topic	Criteria	Description and assessment
	Cambridge, including the rest of the University, the other part of the north west quadrant and Girton.	essentially to the north of Huntingdon Road. South of Huntingdon Road the only development in Girton is the small number of large houses in extensive plots, which front Huntingdon Road. There is no real opportunity for the University development, to the rear of these properties, to connect to them or the main community of Girton village. As such, the development will function as a separate neighbourhood of "Girton South", rather than as an extension to Girton Village, albeit that they physically abut. It connects well with the existing built-up area of the city and with the proposed development at NIAB. It does not connect directly to the University's West Cambridge site although this does not preclude transport links being created.
Accessibility to community uses by walking and cycling	1. Within the development 2. Links between the new development and community uses outside the site relied on to serve the development. 3. Accessibility to community uses within the site from residents outside the development so that the development contributes to meeting the needs of the wider City community consistent with the vision set out in the AAP.	1. Larger north-south dimension and greater site area may make walking and cycling distances to community uses longer than other options. 2. Larger north-south dimension and greater site area may make walking and cycling distances to external community uses longer than other options. 3. Larger north-south dimension and greater site area may make walking and cycling distances from existing residential areas longer than other options, particularly from north east of Huntingdon Road.
Development viability and delivery	Development viability, and therefore delivery, may be affected by the site footprint in terms of the overall scale of development and its ability to fund its	Whilst this is an important matter there is no evidence to assess the various options. However, this option is considered viable and deliverable by the University

Topic	Criteria	Description and assessment
	infrastructure needs. However, without information on the development economics, development viability of any particular option cannot be assessed	

2. Sustainability Appraisal

It is a requirement of the Planning and Compulsory Purchase Act (2004) for all planning policy documents to undergo a Sustainability Appraisal in order to determine its impacts on social, economic and environmental objectives (the **Sustainability Objectives**), for example: to ensure everyone has access to decent, appropriate and affordable housing. As part of this process, each site footprint has been appraised and reported in the Interim Sustainability Appraisal Report prepared by Scott Wilson (2006). A summary of the appraisal for this option is outlined below and for ease of interpretation the appraisal scoring system has been included.

Table 1: Appraisal Scoring System

SHADING	LIKELY IMPACT ON THE SUSTAINABILITY OBJECTIVE
Dark green text	Significant positive impact
Light green text	Some positive impact
Orange text	Moderate adverse impact
Red text	Negative impact
Yellow text	Uncertain or insufficient information to enable determination of impact
X	No significant effect / no clear link to the objective

Environmental

Predominantly red: This option shows a high level of development and consequently will involve an increased resource footprint relative to lower levels of development. The extent of the spatial footprint impacts significantly on habitats and species, including badgers and habitat near brook and wetlands area. The spatial footprint results in a significant reduction in open space and access to wildlife areas. Areas of historic interest will be lost. Due to a high level of land take in the green belt area, there is risk of merger of new development with village of Girton and the sweep of open rising land and setting of the city will be lost. Some views of Girton

College and the historic centre lost due to development on the ridge. Greater development results in more light, noise pollution, greater energy use, greater area of hard surface, which in turn may have drainage and flooding implications.
Dark green: The designated SSSI is well protected with a buffer zone.
Uncertainty: The assessment of objective 3.3 depends on the plan layout, building design and landscaping and of objective 4.2 on waste management and recycling initiatives.

Social

Red/orange: Significantly reduced open space available for recreation
Reduced public access to open space.
Dark Green:
Will provide affordable housing for low income group. Local centre will be provided
Light Green:
Local centre provided, however, quality of services and facilities will depend on final development plan.

Economic

Dark green: This option accords with the University Masterplan and as such will allow for the full development requirements of the University, including a local centre and a school. These developments, together with research facilities will provide employment opportunities and will improve business development.

3. Summary of Representations to the Issues & Options Report

Objections = 13, Support = 4, Comments = 3

Comments raised in support of this option:

- More dense development along the M11 fringe would act as a sound barrier (advantage for Girton College and Girton village);
- Makes best use of this urgently needed housing site;
- Best option as it is based on the outcomes of the masterplan collaborative design workshops (can be amended if necessary to increase the width of open space between the M11 and the new urban edge to soften the urban edge and retain views of Girton College);
- Meets the University's needs and provides an opportunity to create an excellent and coherent development;
- May bring about benefits in terms of encouraging local trips between residential, employment, retail and education centres
- Practical and compact site layout provides easy access to local facilities.

Supports came from: The University, individual members of the public.

Comments raised in objection to this option:

- Object to the option unless it incorporates transport links as proposed by Transport 2000;
- Functionality of some areas of the development may be inhibited by noise from the M11;
- Development pays no regard to the purpose of the Green Belt or to the sensitive landscape setting of Cambridge as a compact city;
- Loss of important views;
- No effort has been made to preserve the ecological or historical value of the site;
- Damaging in terms of biodiversity and loss of substantial areas of habitat;
- Will cause too much damage to the Green Belt;
- The 'green' entrance to Cambridge will be spoiled;
- More traffic from the new development would cause chaos.

Objections came from :Transport 2000, other developers (RLW Estates and Ashwell (Barton Road) Ltd), individual members of the public, County Council, Cambridge Preservation Society, Parish Council's (Coton and Swavesey), Girton Planning Action Group, Anglia Ruskin University and the Universities Superannuation Scheme Ltd.

North West Cambridge – Issues & Options

1. Site Assessment

Option 10.2

Topic	Criteria	Description and assessment
OVERVIEW		
Development Option	Brief description of the site option	This option is a variant of option 10.1 in that it would more or less meet the development aspirations of the University but on a slightly different footprint. This option seeks to test the scope for the development around the Madingley Road Park & Ride site with development extending over the ecologically and historically valued fields to the southwest but limits development on the west facing slopes further north.
Developable land	Size of site option in hectares.	68 ha Indicative built environment
University Aspirations	Comparison of the site option against: 1. the built footprint as proposed by the University in its masterplan (Option 10.1). 2. the built footprint of Option 10.2, which the representations by the University indicate could meet its needs.	Other factors being equal one could expect that the development could provide for 88% of the development aspirations of the University. The initial assessment of this option by consultants acting for the University indicate that the required volume of development could be accommodated whilst maintaining a character and scale of development compatible with its context.

Topic	Criteria	Description and assessment
	The proportional indication of the overall scale of development against the full aspirations of the University. These reflect the University's potential to contribute to the further development of Cambridge and its sub region as a world leader in the fields of higher education and research.	
CONSIDERATIONS		
Sub regional housing requirement	Assess how the potential housing yield contributes to meeting the housing requirements of Cambridge City and South Cambs as set out in the RSS. Provide a pro rata assessment of housing and student accommodation yields, eg. if the site option were 80% of the University's built footprint, the assumption is that it would yield 80% of the number of dwellings. This does not take account of any change in the proportions of individual land uses that the University may advise is appropriate in view of the relative priorities for specific uses. It also does not consider potential to achieve a greater proportion of development through measures such as increased densities.	On a pro-rata reduction of the 2,500 dwellings in 10.1, the indicative built environment this option would be 2,208 dwellings.

Topic	Criteria	Description and assessment
	Note: housing requirements are by district but it is not possible to make any realistic assumptions of dwelling yield by district for a mixed use site in the absence of masterplanning.	
Contribution to Strategic Employment Provision	Assess the potential to contribute towards strategic employment provision as set out Structure Plan Policy P2/3.	On a pro-rata reduction of option 10.1, this option would provide floorspace of 88,312 m2 or 31.4 ha of employment land.
Green Belt	Assess against the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2b: 1. Retain any area required to maintain the purposes of Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form;; 2. Have regard for the compact form of the City; 3. Provide green separation between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. Ensure protection of green corridors running from open	1. This option would have a somewhat reduced impact (compared with 10.1) on setting and the views to the site and upon the green foreground to the City as most of its western edge respects the 20 metre contour identified as important by the Green Belt Landscape Study of 2006. 2. This option extends development to the south and does not create a very compact form of development and it also reduces the compact nature of the City. 3. Provides adequate separation between Girton and Cambridge. The gap at Huntingdon Road is around 200m wide and this is continued through the proposed site development. 4. The green corridor along Madingley Road is not maintained. It would build on part of the green corridor running into Cambridge along Madingley Road, which forms part of a characteristically green and short approach into distinctive Cambridge identified in the Cambridge Green Belt Study 2002 by Landscape Design Associates which includes the Observatory fields and Churchill College grounds. 5. There is no direct impact on the views of the Historic

Topic	Criteria	Description and assessment
	countryside into the urban area as generally indicated on the Key Diagram; 5. Maintain views of the historic core.; 6. provide, where appropriate, for limited development in identified Rural centres in accordance with Policy P1/1. The purposes of the Green Belt as stated in Policy P9/2a are to: • Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre; • Maintain and enhance the quality of its setting; • Prevent communities in the Cambridge environs of Cambridge from merging into one another and with the city. The assessment of the impact on the quality of the setting of Cambridge, will include consideration of topography, landscape character,	Core 6. This is not considered relevant in this assessment. .

Topic	Criteria	Description and assessment
	short and long distance views from main vantage points, and providing an attractive green foreground to the City.	
Historic landscape	Assess the historic landscape character of the area and the impact on the quality and integrity of the landscape. This includes consideration of ridge and furrow, pre-enclosure hedgerows, pre-enclosure field boundaries and recorded crop marks.	This Option would 'set' the north west edge of the new development within an agricultural foreground protecting to some extent an element of the historic setting of the city because the extent of the development is defined by the break of the slope at the 20m contour. It would have a high impact to the south-west where the majority of the historic field patterns, pre-enclosure boundaries, pre-enclosure hedgerows and ridge and burrow patterns are situated. These heritage landscape elements provide the historic core of Cambridge with a setting and context. The loss of these elements on the rural setting will be of significance and contribute to a diminution of the value of the historic core itself. The Option would include a 'piecemeal' retention of features from the historic landscape whilst the Veteran oak is illustrated as being retained within an open space, the historic hedgerows are mainly included within the development area, which would erode their value in terms of context and historical relevance and it is also unlikely to sustain these features in the long term. The impact of the level of development on the historic landscape would also be significant in terms of the adverse effects of the development itself combined with infrastructure issues because of the extent of the development across the historic fields to the south west.

Topic	Criteria	Description and assessment
Biodiversity	Assess the biodiversity value of the area and the impact on that value. This includes protected species such as Great Crested Newts and badgers. The Washpit Brook area is of particular biodiversity value. Also assess the impact on the Travellers Rest Pit SSSI, designated for its geological importance.	This option has less impact than 10.1 on the Washpit Brook to the northwest edge of the site, which is a known area of ecological interest. It would also probably require the relocation and careful re-establishment of a secondary badger sett which lies behind the houses fronting Huntingdon Road. A main badger sett in the vicinity of the Travellers Rest SSSI is relatively well (although slightly less well than 10.1) protected by an area of wide open space, although there would be some disturbance. Ponds known to have or have potential to have Great Crested Newt populations are affected but impact could be largely dealt with by mitigation measures. The geological SSSI of the Travellers' Pit forms part of a wider open space within the green gap but development areas are closer to its southern and eastern boundaries than in 10.1.
Surface water attenuation	The development will generate significant volumes of surface water, which will drain into Washpit Brook. The floodplain starts at the edge of the area and extends to the River Great Ouse, along the route of the brook and its continuations. Assess the ability to provide surface water attenuation within the area of control of the University	Most of the development drains towards Washpit Brook with the possible exception of part of the site to the east of the north-south strategic gap. Provided that sustainable drainage systems (SUDS) are incorporated within the built footprint, there is no reason to expect that this option could not satisfactorily accommodate measures to attenuate surface water so that off-site flooding and drainage problems are not made worse. Any necessary water storage areas would be likely to be located in the low lying parts of the site to the south and adjoining the M11 and the Washpit Brook.
Health and amenity	Assess the implications of noise and	The greater distance of development from the M11 by being

Topic	Criteria	Description and assessment
	air pollution as well as the visual impact arising from the M11 as a whole and for all uses (including built and open uses within the site). This would include the environmental & visual impact of any necessary mitigation measures including built form, landscaping and sound attenuation barriers.	limited to the higher ground in the northern sector may reduce the impact of sound, but it allows less opportunity for employment buildings to shield residential development. There may be some air quality and noise issues if residential development were to be located close to Madingley Road P&R. Development on the eastern side of the site furthest from the M11 is less likely to be affected. As in most of consultation options, mitigation measures will be needed. This may include a mix of solutions including a 3m acoustic barrier along the M11 and a 5m bund closer to the development, and careful design and orientation of buildings. It will be necessary for buildings to prevent a straight line of noise penetration into the site Therefore they need to be situated so as to prevent the creation of noise corridors into the site.
Sustainable Development	Development of sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle. This will include a neighbourhood centre , some local shopping and provision for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800 dwellings and a 2 form entry is required for larger developments).	The scale of development would be sufficient to support a local centre, although the configuration of the site with a wide green corridor fragmenting the new community and would increase distances to the centre which could thus discourage journeys on foot and cycle.
Site configuration	Ensuring the site is of a shape capable of being developed	This option will dictate a more contained, and in some parts constrained, site configuration. The two separate blocks are

Topic	Criteria	Description and assessment
	satisfactorily to ensure: 1) a sustainable form of development; 2) a sense of place; 3) an appropriate level, location and quality of open space. Also consider whether the site provides an opportunity to create an enhanced gateway on an entrance to Cambridge, ie on Huntingdon Road or Madingley Road.	both very lengthy and will thereby give rise to a more "linear" form of development. The portion of the lands fronting Madingley Road will be very distant from the main parts of the site, which have a stronger relationship to Huntington Road, and so if fully developed the various parts of the site may not be well connected and may develop as somewhat different communities with different (and separate) facilities and services. A sustainable form of development is nevertheless possible, though a predominant south facing orientation for the purposes of passive solar gain will not be possible for much of the easterly portion of this site footprint. A sense of place may be difficult to achieve given the very distant parts of the site and the fact that they may require separate facilities and services for that reason. A generous amount of informal, strategic open space is provided which is well connected to the Girton Gap and M11 landscape corridor and on site open space (formal or informal) is possible in a variety of locations across the two parts of the development. A gateway entrance is possible from either Madingley Road or Huntington Road.
Satisfactory mix of predominantly University related uses	Assess the scope to include a mix of uses having regard to: 1. the focus of the development on predominantly University related uses; 2. identified University-related uses; 3. the need for Key Worker	The University's response to this option that required volume of development could be accommodated whilst maintaining a character and scale of development compatible with its context, would indicate that this option at 88% of 10.1 is capable of supplying a satisfactory mix of predominantly University related uses.

Topic	Criteria	Description and assessment
	housing with the emphasis on University and College staff.	
Transport infrastructure	1. Assess the ability to provide for different modes of transport with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic. 2. Assess the ability to accommodate future strategic transport provision, including proposals emerging from the Cambridge Area Transport Strategy and the North West Cambridge Transport Study. 3. Assess the ability to provide a high level of public transport accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park with West Cambridge.	1. Large area of development (particularly to theSE) is likely to generate a large number of trips and requiring corresponding transport infrastructure. 2. Majority of development links well to the proposed orbital link road, if this is to the east or west of the strategic gap. Proposed radial link road will need to cross strategic gap 3. Greater width in SE part of site will make it more difficult to meet 400m walk distance. Size of development should be sufficient to justify site specific bus services.
Relationship with adjoining communities	Assess the degree to which it can link with and respect existing parts of Cambridge, including the rest of the	The University's development does not present any real opportunities to connect with Girton village, which lies essentially to the north of Huntingdon Road. South of

Topic	Criteria	Description and assessment
	University, the other part of the north west quadrant and Girton.	Huntingdon Road the only development in Girton is the small number of large houses in extensive plots, which front Huntingdon Road. There is no real opportunity for the University development, to the rear of these properties, to connect to them or the main community of Girton village. As such, the development will function as a separate neighbourhood of "Girton South", rather than as an extension to Girton Village, albeit that they physically abut. This option would connect well with other parts of the City although the southern parts would be somewhat remote from the urban fabric of the City being separated by some open fields and the Madingley Park & Ride site. It would connect direct to the University's West Cambridge site.
Accessibility to community uses by walking and cycling	1. Within the development 2. Links between the new development and community uses outside the site relied on to serve the development. 3. Accessibility to community uses within the site from residents outside the development so that the development contributes to meeting the needs of the wider City community consistent with the vision set out in the AAP.	1. Larger north-south dimension, particularly area down to Madingley Road and greater site area may make walking and cycling distances to internal community uses the longest of all the options. 2. Larger north-south dimension, particularly area down to Madingley Road and greater site area may make walking and cycling distances to external community uses the longest of all the options. 3. Larger north-south dimension, particularly area down to Madingley Road and greater site area may make walking and cycling distances from existing residential areas the longest of all the options, particularly from north east of Huntingdon Road.
Development viability and delivery	Development viability, and therefore delivery, may be affected by the site footprint in terms of the overall scale	There is no evidence to suggest that this option is not viable and deliverable. The University's response to this option that required volume of development could be accommodated whilst

Topic	Criteria	Description and assessment
	of development and its ability to fund its infrastructure needs. However, without information on the development economics, development viability of any particular option cannot be assessed.	maintaining a character and scale of development compatible with its context, would indicate it considers this option viable and deliverable.

2. Sustainability Appraisal

It is a requirement of the Planning and Compulsory Purchase Act (2004) for all planning policy documents to undergo a Sustainability Appraisal in order to determine its impacts on social, economic and environmental objectives (the **Sustainability Objectives**), for example: to ensure everyone has access to decent, appropriate and affordable housing. As part of this process, each site footprint has been appraised and reported in the Interim Sustainability Appraisal Report prepared by Scott Wilson (2006). A summary of the appraisal for this option is outlined below and for ease of interpretation the appraisal scoring system has been included.

Table 1: Appraisal Scoring System

SHADING	LIKELY IMPACT ON THE SUSTAINABILITY OBJECTIVE
Dark green text	Significant positive impact
Light green text	Some positive impact
Orange text	Moderate adverse impact
Red text	Negative impact
Yellow text	Uncertain or insufficient information to enable determination of impact
X	No significant effect / no clear link to the objective

Environmental

Predominantly red and orange: This option shows a high level of development and consequently will involve an increased resource footprint relative to lower levels of development. Some ecological impacts of development, including impact on badgers, habitat area

in north of site and hedgerows in south. Less impact on wetland area around brook than 10.1. Significant area of open space lost and areas of historic interest lost. Greater access to open space than option 10.1. Significant land take in green belt area, risk of merger of new development with village of Girton. Harm to function of greenbelt to setting of city. Limited development on slope, however views may be blocked to Girton and city.
Light green: Designated SSSI is conserved with a smaller buffer zone than option 10.1
Uncertainty: As 10.1

Social

Red/orange: Significantly reduced open space available for recreation, however, greater public access to this than in 10.1.
Dark Green:
Will provide affordable housing for low income group. Local centre will be provided.
Light Green:
Local centre provided, however, quality of services and facilities will depend on final development plan.

Economic

Dark green: This option meets development aspirations of University. This will allow for the full development requirements of the University, including a local centre and a school. These developments, together with research facilities will provide employment opportunities and will improve business development.

3. Summary of Representations to the Issues & Options Report

Objections = 14, Support = 0, Comments = 4

Comments raised in relation to this option:

- May bring about benefits in terms of encouraging local trips between residential, employment, retail and education centres;
- A reasonable alternative to Option 10.1

Comments raised in objection to this option:

- Object to option unless it incorporated transport links proposed by Transport 2000;
- Development on the plateau would still be prominent;
- Will affect areas of ecological and historical interest;
- Strategic gap is contrived and very limited in value;
- Fails to maintain sufficient separation between Cambridge and Girton;
- Damaging in terms of biodiversity and will result in substantial loss of habitat;
- Significant detrimental effect on the Green Belt;

- This option would male public transport provision through the site less sustainable (3 development areas);
- This option would dissipate the potential for a thriving local centre as development is pulled in three directions;
- Would cause fragmentation of settlements;
- Narrow green corridors;
- Poor landscape setting.

Objections came from: Transport 2000, other developers (RLW Estates and Ashwell (Barton Road) Ltd), individual members of the public, County Council, the University, Cambridge Preservation Society, Swavesey Parish Council, Girton Planning Action Group, Anglia Ruskin University and the University's Superannuation Scheme.

North West Cambridge – Issues & Options

1. Site Assessment

Option 10.3

Topic	Criteria	Description and assessment
OVERVIEW		
Development Option	Brief description of the site option.	In this option the rise of the land from Washpit Brook is retained as open agricultural land but the proposed development would sit at the top of the slope. Thegreen gap between Girton and Cambridge which is 200m at Huntingdon Road is maintained and widens slightly towards Madingley Road, running broadly north to south through the development and would provide opportunities for a large central area for both amenity and recreation whilst protecting the SSSI
Developable land	Size of site option in hectares.	51 ha Indicative built environment
University Aspirations	Comparison of the site option against: 1. the built footprint as proposed by the University in its masterplan (Option 10.1). 2. the built footprint of Option 10.2, which the representations by the University indicate could meet its needs. The proportional indication of the overall	The University has indicated that its needs would be accommodated on the built footprint of 77ha (option 10.1). By comparison, with other factors being equal, this option could provide for only 66% or two thirds of the development aspirations of the University. The University has also indicated that most of its needs could be accommodated on the built footprint of 68 ha (Option 10.2) therefore, this option could provide for only 75% of these reduced development aspirations of the University.

Topic	Criteria	Description and assessment
	scale of development against the full aspirations of the University. These reflect the University's potential to contribute to the further development of Cambridge and its sub region as a world leader in the fields of higher education and research.	
CONSIDERATIONS		
Sub regional housing requirement	Assess how the potential housing yield contributes to meeting the housing requirements of Cambridge City and South Cambs as set out in the RSS. Provide a pro rata assessment of housing and student accommodation yields, eg. if the site option were 80% of the University's built footprint, the assumption is that it would yield 80% of the number of dwellings. This does not take account of any change in the proportions of individual land uses that the University may advise is appropriate in view of the relative priorities for specific uses. It also does not consider potential to achieve a greater proportion of development through measures such as increased densities. Note: housing requirements are by district but it is not possible to make any realistic assumptions of dwelling yield by district for a mixed use site in the absence of masterplanning.	On a pro-rata reduction of the 2,500 dwellings in 10.1, the indicative built environment this option would be 1656 dwellings
Contribution to Strategic Employment Provision	Assess the potential to contribute towards strategic employment provision as set out	On a pro-rata reduction of option 10.1, this option would provide floorspace of 66,234 m2 or 23.5 ha of

Topic	Criteria	Description and assessment
	Structure Plan Policy P2/3.	employment land.
Green Belt	Assess against the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2b: 1. Retain any area required to maintain the purposes of Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form;; 2. Have regard for the compact form of the City; 3. Provide green separation between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. Ensure protection of green corridors running from open countryside into the urban area as generally indicated on the Key Diagram; 5. Maintain views of the historic core.; 6. provide, where appropriate, for limited development in identified Rural centres in accordance with Policy P1/1.. The purposes of the Green Belt as stated in Policy P9/2a are to: • Preserve the unique character of Cambridge as a compact,	1. This option would have a reduced impact on views and upon the green foreground to the City compared to options 10.1 and 10.2, as all of its western edge respects the 20 metre contour identified as important by the Green Belt Landscape Study of 2006. 2. This option has a reduced footprint and therefore maintains the compact nature of the City better than 10.1 or 10.2. However, the width of the green gap which widens slightly towards the south provides a separation within the development which is contrary to delivering a compact development site. 3. Provides adequate separation between Girton and Cambridge with unimpaired links to the countryside. The gap at Huntingdon Road is around 200m wide and this is continued through the proposed site development and widens towards Madingley Road. 4. The green corridor along Madingley Road is maintained. 5. There is no direct impact on the views of the Historic Core. 6. This is not considered relevant in this assessment.

Topic	Criteria	Description and assessment
	dynamic city with a thriving historic centre; • Maintain and enhance the quality of its setting; • Prevent communities in the Cambridge environs of Cambridge from merging into one another and with the city. The assessment of the impact on the quality of the setting of Cambridge, will include consideration of topography, landscape character, short and long distance views from main vantage points, and providing an attractive green foreground to the City.	
Historic landscape	Assess the historic landscape character of the area and the impact of each option on the quality and integrity of the landscape. This includes consideration of ridge and furrow, pre-enclosure hedgerows, pre-enclosure field boundaries and recorded crop marks.	This Option would protect most of the elements within the historic landscape including the majority of the historic field patterns, pre-enclosure boundaries, pre-enclosure hedgerows and ridge and burrow patterns and therefore it will protect the historic setting of Cambridge due to the reduced area and location of the development. This Option would 'set' the north west edge of the new development within an agricultural foreground which would protect, to a certain extent the historic setting of the city, because the development is defined by the break of the slope at the 20m contour.
Biodiversity	Assess the biodiversity value of the area and the impact of each option on that value. This	This option has less impact than 10.1 on the Washpit Brook to the northwest edge of the site, which is a

Topic	Criteria	Description and assessment
	includes protected species such as Great Crested Newts and badgers. The Washpit Brook area is of particular biodiversity value. Also assess the impact on the Travellers Rest Pit SSSI, designated for its geological importance.	known area of ecological interest. It would also probably require the relocation and careful re-establishment of a secondary badger sett which lies behind the houses fronting Huntingdon Road. A main badger sett in the vicinity of the Travellers Rest SSSI is relatively well (although slightly less well than 10.1) protected by an area of wide open space, although there would be some disturbance. Ponds known to have or have potential to have Great Crested Newt populations are largely unaffected. The geological SSSI of the Travellers' Pit forms part of a wider open space within the green gap but development areas are closer to its southern and eastern boundaries than in 10.1.
Surface water attenuation	The development will generate significant volumes of surface water, which will drain into Washpit Brook. The floodplain starts at the edge of the area and extends to the River Great Ouse, along the route of the brook and its continuations. Assess the ability of the development to provide surface water attenuation within the area of control of the University	Most of the development drains towards Washpit Brook with the possible exception of part of the site to the east of the north-south strategic gap. Provided that sustainable drainage systems (SUDS) are incorporated within the built footprint, there is no reason to expect that this option could not satisfactorily accommodate measures to attenuate surface water so that off-site flooding and drainage problems are not made worse. Any necessary water storage areas would be likely to be located in the low lying parts of the site to the south and adjoining the M11 and the Washpit Brook.
Health and amenity	Assess the implications of noise and air	The greater distance of development from the M11 by

Topic	Criteria	Description and assessment
	pollution as well as the visual impact arising from the M11 on each site option as a whole and for all uses (including built and open uses within the site). This would include the environmental & visual impact of any necessary mitigation measures including built form, landscaping and sound attenuation barriers.	being limited to the higher ground in the northern sector may reduce the impact of sound, but it allows less opportunity for employment buildings to shield residential development. Development on the eastern side of the site furthest from the M11 is less likely to be affected.
Sustainable Development	Development of sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle. This will include a neighbourhood centre , some local shopping and provision for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800 dwellings and a 2 form entry is required for larger developments).	The scale of development would be sufficient to support a local centre, although the configuration of the site with a relatively wide green corridor fragmenting the new community and would increase distances to the centre which could thus discourage journeys on foot and cycle.
Site configuration	Ensuring the site is of a shape capable of being developed satisfactorily to ensure: 1) a sustainable form of development; 2) a sense of place; 3) an appropriate level, location and quality of open space. Also consider whether the site provides an opportunity to create an enhanced gateway on an entrance to Cambridge, ie on Huntingdon Road or Madingley Road.	This option provides for the most generous strategic gap between the east and west portions of the site footprint, and is the most tightly drawn against existing development fronting Huntingdon Road to the north. The size of the strategic gap, in terms the separation of the two portions of development, will likely cause the development of two distinct places with individual “centres” and/or play spaces/services. It will be difficult in terms of design and movement to deliver a development that works as a whole rather than two

Topic	Criteria	Description and assessment
		parts. Selection of this option would mean a prioritisation of the retention of a strategic green gap over the delivery of a compact and cohesive single development. A sustainable form of development is nevertheless possible in terms of providing south facing oriented blocks, however due to the very severed nature of the two large development parcels a less sustainable development will result due to the need for greater walking/cycling distances within the overall site. It will also be harder to have single facilities/services serving both sides of the development. Providing a sense of place and appropriate level of open space is possible in this option; however as already noted, the development will tend to function as two separate entities and so may develop two separate identities and be experienced as two places rather than one. Providing a gateway is possible with this option, however it will be limited to the westerly end of Huntingdon Road.
Satisfactory mix of predominantly University related uses	Assess the scope for each site option to include a mix of uses having regard to: 1. the focus of the development on predominantly University related uses; 2. identified University-related uses; 3. the need for Key Worker housing with the emphasis on University and	The University opposes this option which indicates that it does not consider that this option would deliver a satisfactory mix of predominantly University related uses. However, there is no direct evidence to support this view.

Topic	Criteria	Description and assessment
	College staff.	
Transport infrastructure	1. Assess the ability of each option to provide for different modes of transport with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic. 2. Assess the ability of each option to accommodate future strategic transport provision, including proposals emerging from the Cambridge Area Transport Strategy and the North West Cambridge Transport Study. 3. Assess the ability of each option to provide a high level of public transport accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park with West Cambridge.	1. Smaller area than options 10.1,10.2, A and B, and so will require less transport infrastructure and is likely to generate less trips. 2. Development is split either side of the strategic gap and will require radial link road crossing strategic gap to connect to orbital route. 3. Relatively narrow development corridor makes it easier to meet 400m walk distance. Size of development should be sufficient to justify site specific bus services.
Relationship with adjoining communities	Assess the degree to which it can link with and respect existing parts of Cambridge, including the rest of the University, the other part of the north west quadrant and Girton.	The University's development does not present any real opportunities to connect with Girton village which lies essentially to the north of Huntingdon Road. South of Huntingdon Road the only development in Girton is the small number of large houses in extensive plots which front Huntingdon Road. There is no real

Topic	Criteria	Description and assessment
		opportunity for the University development, to the rear of these properties, to connect to them or the main community of Girton village. As such, the development will function as a separate neighbourhood of "Girton South", rather than as an extension to Girton village, albeit that they physically abut. Development on the eastern part of the site would be well related and connected to adjoining parts of the City. It connects well with the existing built-up area of the city and with the proposed development at NIAB. However, development of the western part would be somewhat remote from adjoining areas. It does not connect directly to the University's West Cambridge site although this does not preclude transport links being created.
Accessibility to community uses by walking and cycling	1. Within the development 2. Links between the new development and community uses outside the site relied on to serve the development. 3. Accessibility to community uses within the site from residents outside the development so that the development contributes to meeting the needs of the wider City community consistent with the vision set out in the AAP.	1. Smaller north-south dimension of NW part of site and smaller site area may make walking and cycling distances shorter to internal community uses. 2. Smaller north-south dimension of NW part of site and smaller site area may make walking and cycling distances shorter to external community uses. 3. Smaller north-south dimension of NW part of site and smaller site area may make walking and cycling distances shorter from existing residential areas, particularly from north east of Huntingdon Road

Topic	Criteria	Description and assessment
Development viability and delivery	Development viability, and therefore delivery, may be affected by the site footprint in terms of the overall scale of development and its ability to fund its infrastructure needs. However, without information on the development economics, development viability of any particular option cannot be assessed	There is no evidence to suggest that this option is not viable and deliverable. However, the University does not support this option which may indicate that the scale of development is too limited to be viable and deliverable.

2. Sustainability Appraisal

It is a requirement of the Planning and Compulsory Purchase Act (2004) for all planning policy documents to undergo a Sustainability Appraisal in order to determine its impacts on social, economic and environmental objectives (the **Sustainability Objectives**), for example: to ensure everyone has access to decent, appropriate and affordable housing. As part of this process, each site footprint has been appraised and reported in the Interim Sustainability Appraisal Report prepared by Scott Wilson (2006). A summary of the appraisal for this option is outlined below and for ease of interpretation the appraisal scoring system has been included.

Table 1: Appraisal Scoring System

SHADING	LIKELY IMPACT ON THE SUSTAINABILITY OBJECTIVE
Dark green text	Significant positive impact
Light green text	Some positive impact
Orange text	Moderate adverse impact
Red text	Negative impact
Yellow text	Uncertain or insufficient information to enable determination of impact
X	No significant effect / no clear link to the objective

Environmental

Predominantly orange: This options shows mid level of development and therefore a moderate impact on resource use. The spatial footprint will impact to a lesser degree on habitats and species than options 10.1 and 10.2 but this impact remains fairly significant. Rise of land maintained as agricultural land but development would sit prominently at top of slope and views may be blocked to Girton and city. Risk of merger of new development with village of Girton and narrowing of greenbelt gap around city.
Light green: Designated SSSI is conserved with a smaller buffer zone than option 10.1
Dark green: Historic features in south of site maintained.
Uncertainty: As 10.1

Social

Orange: Reduced open space, however more retained than in 10.1 and 10.2.
Predominantly light/dark green:
Greater access to open space.
Will provide affordable housing for low income group.
Uncertainty: Reduced spatial footprint may reduce extent of local services provided at local centre.

Economic

Light green: Accommodates significant amount of University Masterplan. Will provide for some development other than housing but less provision than options 10.1 and 10.2.

3. Summary of Representations to the Issues & Options Report

Objections = 14, Supports = 4, Comments = 2

Comments raised in support of this option:

- This option seems to be the best compromise between development and the environment;
- This option seems to be the best compromise to preserve the historical and ecological value of the site;
- This option offers the most acceptable balance between meeting development needs and protection of the landscape and Green Belt setting of this sector of the edge of Cambridge;
- Supports proposal due to the retention of a wide strategic gap, typical arable setting to the City, some views and enabling recreational access within the retained rural fringe.

Supports came from : Individual members of the public, County Council and Cambridge Preservation Society.

Comments raised in objection to this option:

- Will lead to unsustainably dense development of the entire site;
- Does not meet the land requirement of the University;
- The intensification of the extent of the development would cause coalescence between Cambridge and Girton;
- Provides no noise buffer for Girton;
- Development would affect important views of key features of the landscape;
- Still represents harm to the Green Belt and as such is unacceptable;
- The option far too severely restricts the use of an urgently needed site in the City;
- Could have a detrimental impact on the Travellers Rest SSSI;
- Under this option there would either be a substantial reduction in development capacity on the site, or to deliver the University's development needs, development densities and heights would have to increase to 3-13 storeys, with an average height of 4-5 storeys;
- Benefits of this option in terms of the setting of Cambridge are not significant;
- Provides less growth capacity for the University;
- Would result in the loss of land deemed important to the setting of Cambridge;
- Would rule out the possibility of plots being made available to self-builders;
- Would impose much higher housing densities – mostly apartment blocks rather than houses.

Objections came from: Individual members of the public, other developers (RLW Estates and Ashwell (Barton Road) Ltd), County Council, the University, Swavesey Parish Council, Cambridge Preservation Society, Girton Planning Action Group, Anglia Ruskin University, University's Superannuation Scheme and the University of Cambridge Self-build Society

North West Cambridge – Issues & Options

1. Site Assessment

Option 10.4

Topic	Criteria	Description and assessment
OVERVIEW		
Development Option	Brief description of the site option.	In this option the rise of the land from Washpit Brook is retained as open agricultural land with the proposed development would sit at the top of the slope. The strategic gap widens even more than in 10.3 and turns more east to west through the development and links more directly with the open countryside beyond the M11.
Developable land	Size of site option in hectares.	48 ha Indicative built environment
University Aspirations	Comparison of the site option against: 1. the built footprint as proposed by the University in its masterplan (Option 10.1). 2. the built footprint of Option 10.2, which the representations by the University indicate could meet its needs. The proportional indication of the overall scale of development against the full aspirations of the University.	The University has indicated that its needs would be accommodated on the built footprint of 77ha (option 10.1). By comparison, with other factors being equal, this option could provide for 62% of the development aspirations of the University. The University has also indicated that most of its needs could be accommodated on the built footprint of 68 ha (Option 10.2) therefore, this option could provide for 71% of the development aspirations of the University.

Topic	Criteria	Description and assessment
	These reflect the University's potential to contribute to the further development of Cambridge and its sub region as a world leader in the fields of higher education and research.	
CONSIDERATIONS		
Sub regional housing requirement	Assess how the potential housing yield contributes to meeting the housing requirements of Cambridge City and South Cambs as set out in the RSS. Provide a pro rata assessment of housing and student accommodation yields, eg. if the site option were 80% of the University's built footprint, the assumption is that it would yield 80% of the number of dwellings. This does not take account of any change in the proportions of individual land uses that the University may advise is appropriate in view of the relative priorities for specific uses. It also does not consider potential to achieve a greater proportion of development through measures such as increased densities. Note: housing requirements are by district but it is not possible to make any realistic assumptions of dwelling	On a pro-rata reduction of the 2,500 dwellings in 10.1, the indicative built environment this option would be 1558 dwellings

Topic	Criteria	Description and assessment
	yield by district for a mixed use site in the absence of masterplanning.	
Contribution to Strategic Employment Provision	Assess the potential to contribute towards strategic employment provision as set out Structure Plan Policy P2/3.	On a pro-rata reduction of option 10.1, this option would provide floorspace of 62,338 m2 or 22.1 ha of employment land.
Green Belt	Assess against the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2b: 1. Retain any area required to maintain the purposes of Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form;; 2. Have regard for the compact form of the City; 3. Provide green separation between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. Ensure protection of green corridors running from open countryside into the urban area as generally indicated on the Key Diagram;	1. Like 10.3, this option would have a reduced impact on views and upon the green foreground to the City compared to options 10.1 and 10.2, as all of its western edge respects the 20 metre contour identified as important by the Green Belt Landscape Study of 2006. The greater width of the green corridor and the fact that it turns east-west probably reduces the impact of development slightly more than 10.3. 2. This option has a reduced footprint and therefore maintains the compact nature of the City better than 10.1 or 10.2. However, the width of the green gap which widens slightly towards the west provides a separation within the development greater than 10.3 which is contrary to delivering a compact development site. 3. Provides adequate separation between Girton and Cambridge with unimpaired links to the countryside. The gap at Huntingdon Road is around 200m wide and this is continued through the proposed site development and widens as it turns west to face the open countryside. 4. The green corridor along Madingley Road is maintained. 5. There is no direct impact on the views of the Historic Core.

Topic	Criteria	Description and assessment
	5. Maintain views of the historic core.; 6. provide, where appropriate, for limited development in identified Rural centres in accordance with Policy P1/1. The purposes of the Green Belt as stated in Policy P9/2a are to: • Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre; • Maintain and enhance the quality of its setting; • Prevent communities in the Cambridge environs of Cambridge from merging into one another and with the city. The assessment of the impact on the quality of the setting of Cambridge, will include consideration of topography, landscape character, short and long distance views from main vantage points, and providing an attractive green foreground to the	

Topic	Criteria	Description and assessment
	City.	
Historic landscape	Assess the historic landscape character of the area and the impact on the quality and integrity of the landscape. This includes consideration of ridge and furrow, pre-enclosure hedgerows, pre-enclosure field boundaries and recorded crop marks.	This Option would protect most of the elements within the historic landscape including the historic field patterns, pre-enclosure boundaries, pre-enclosure hedgerows and ridge and burrow patterns and therefore it will protect the historic setting of Cambridge due to the reduced area and location of the development. This Option would 'set' the north west edge of the new development within an agricultural foreground which would protect, to a certain extent the historic setting of the city, because the development is defined by the break of the slope at the 20m contour.
Biodiversity	Assess the biodiversity value of the area and the impact on that value. This includes protected species such as Great Crested Newts and badgers. The Washpit Brook area is of particular biodiversity value. Also assess the impact on the Travellers Rest Pit SSSI, designated for its geological importance.	This option has less impact than 10.1 on the Washpit Brook to the northwest edge of the site, which is a known area of ecological interest. It would also probably require the relocation and careful re-establishment of a secondary badger sett which lies behind the houses fronting Huntingdon Road. A main badger sett in the vicinity of the Travellers Rest SSSI is relatively well (although slightly less well than 10.1) protected by an area of wide open space (on this point it is slightly better tha 10.3 to which it is very similar except that the green corridor is wider), although there would be some disturbance. Ponds known to have or have potential to have Great Crested Newt populations are largely unaffected. The geological SSSI of the Travellers' Pit forms part of a wider open space within the green gap but development areas are closer to its southern and eastern boundaries than in 10.1.

Topic	Criteria	Description and assessment
Surface water attenuation	The development will generate significant volumes of surface water, which will drain into Washpit Brook. The floodplain starts at the edge of the area and extends to the River Great Ouse, along the route of the brook and its continuations. Assess the ability to provide surface water attenuation within the area of control of the University	Most of the development drains towards Washpit Brook with the possible exception of part of the site to the east of the north-south strategic gap. Provided that sustainable drainage systems (SUDS) are incorporated within the built footprint, there is no reason to expect that this option could not satisfactorily accommodate measures to attenuate surface water so that off-site flooding and drainage problems are not made worse. Any necessary water storage areas would be likely to be located in the low lying parts of the site to the south and adjoining the M11 and the Washpit Brook.
Health and amenity	Assess the implications of noise and air pollution as well as the visual impact arising from the M11 as a whole and for all uses (including built and open uses within the site). This would include the environmental & visual impact of any necessary mitigation measures including built form, landscaping and sound attenuation barriers.	The greater distance of development from the M11 by being limited to the higher ground in the northern sector may reduce the impact of sound, but it allows less opportunity for employment buildings to shield residential development. Development on the eastern side of the site furthest from the M11 is less likely to be affected by noise.
Sustainable Development	Development of sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle. This will include	The scale of development would be sufficient to support a local centre, although the configuration of the site with a wide green corridor fragmenting the new community and would increase distances to the centre which could thus discourage journeys on foot and cycle.

Topic	Criteria	Description and assessment
	a neighbourhood centre , some local shopping and provision for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800 dwellings and a 2 form entry is required for larger developments).	
Site configuration	Ensuring the site is of a shape capable of being developed satisfactorily to ensure: 1) a sustainable form of development; 2) a sense of place; 3) an appropriate level, location and quality of open space. Also consider whether the site provides an opportunity to create an enhanced gateway on an entrance to Cambridge, ie on Huntingdon Road or Madingley Road.	In terms of site configuration, there is little difference between this option and option 10.3 as the basic formation of a block layout and development pattern would be almost identical, save and except the width and shape of the strategic gap may give rise to minor variations of block layout. Therefore, all comments made above pertaining to option 10.3 also pertain to option 10.4.
Satisfactory mix of predominantly University related uses	Assess the scope to include a mix of uses having regard to: 1. the focus of the development on predominantly University related uses; 2. identified University-related uses;	The University opposes this option which indicates that it does not consider that this option would deliver a satisfactory mix of predominantly University related uses. However, there is no direct evidence to support this view

Topic	Criteria	Description and assessment
	3. the need for Key Worker housing with the emphasis on University and College staff.	
Transport infrastructure	1. Assess the ability to provide for different modes of transport with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic. 2. Assess the ability to accommodate future strategic transport provision, including proposals emerging from the Cambridge Area Transport Strategy and the North West Cambridge Transport Study. 3. Assess the ability to provide a high level of public transport accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park with West Cambridge.	1. Smaller area than options 10.1,10.2, A and B, and so will require less transport infrastructure and is likely to generate less trips. 2. Development is split either side of the strategic gap and will require radial link road crossing strategic gap to connect to orbital route. 3. Relatively narrow development corridor makes it easier to meet 400m walk distance. Size of development should be sufficient to justify site specific bus services.
Relationship with adjoining communities	Assess the degree to which it can link with and respect existing parts of	The University's development does not present any real opportunities to connect with Girton village which lies

Topic	Criteria	Description and assessment
	Cambridge, including the rest of the University, the other part of the north west quadrant and Girton.	essentially to the north of Huntingdon Road. South of Huntingdon Road the only development in Girton is the small number of large houses in extensive plots which front Huntingdon Road. There is no real opportunity for the University development, to the rear of these properties, to connect to them or the main community of Girton village. As such, the development will function as a separate neighbourhood of "Girton South", rather than as an extension to Girton village, albeit that they physically abut. Development on the eastern part of the site would be well related and connected to adjoining parts of the City. It connects well with the existing built-up area of the city and with the proposed development at NIAB. However, development of the western part would be somewhat remote from adjoining areas. It does not connect directly to the University's West Cambridge site although this does not preclude transport links being created.
Accessibility to community uses by walking and cycling	1. Within the development 2. Links between the new development and community uses outside the site relied on to serve the development. 3. Accessibility to community uses within the site from residents outside the development so that the development contributes to meeting the needs of the wider City community	1. Smaller north-south dimension of NW part of site and smaller site area may make walking and cycling distances shorter to internal community uses. 2. Smaller north-south dimension of NW part of site and smaller site area may make walking and cycling distances shorter to external community uses. 3. Smaller north-south dimension of NW part of site and smaller site area may make walking and cycling distances shorter from existing residential areas, particularly from north east of Huntingdon Road

Topic	Criteria	Description and assessment
	consistent with the vision set out in the AAP.	
Development viability and delivery	Development viability, and therefore delivery, may be affected by the site footprint in terms of the overall scale of development and its ability to fund its infrastructure needs. However, without information on the development economics, development viability of any particular option cannot be assessed.	There is no evidence to suggest that this option is not viable and deliverable. However, the University does not support this option which may indicate that the scale of development is too limited to be viable and deliverable

2. Sustainability Appraisal

It is a requirement of the Planning and Compulsory Purchase Act (2004) for all planning policy documents to undergo a Sustainability Appraisal in order to determine its impacts on social, economic and environmental objectives (the **Sustainability Objectives**), for example: to ensure everyone has access to decent, appropriate and affordable housing. As part of this process, each site footprint has been appraised and reported in the Interim Sustainability Appraisal Report prepared by Scott Wilson (2006). A summary of the appraisal for this option is outlined below and for ease of interpretation the appraisal scoring system has been included.

Table 1: Appraisal Scoring System

SHADING	LIKELY IMPACT ON THE SUSTAINABILITY OBJECTIVE
Dark green text	Significant positive impact
Light green text	Some positive impact
Orange text	Moderate adverse impact
Red text	Negative impact

Yellow text	Uncertain or insufficient information to enable determination of impact
X	No significant effect / no clear link to the objective

Environmental
Predominantly orange:
As 10.3 with exception of objective 3.2 where narrowing of greenbelt gap is less significant than option 10.3.
Light green:
Option will maintain and enhance distinctiveness of landscape.
Designated SSSI is conserved with a smaller buffer zone than option 10.1
Dark green: Historic features in south of site maintained.
Uncertainty: As 10.1
Social
Orange: Reduced open space, however more retained than in 10.1 and 10.2.
Predominantly light/dark green:
Greater access to open space.
Will provide affordable housing for low income group.
Uncertainty: Reduced spatial footprint may reduce extent of local services provided at local centre.
Economic
Light green: Accommodates significant amount of University Masterplan. Will provide for some development other than housing but less provision than options 10.1 and 10.2

3. Summary of Representations to the Issues & Options Report

Objections = 15, Supports = 1, Comments = 3

Comments raised in support of this option:

- Would be prepared to accept the compromise of the loss of some Green Belt to preserve the historical and ecological value of this landscape.

Support came from: Individual member of the public.

Comments raised in objection to this option:

- Does not provide adequate land for the University's development needs;
- Will lead to overly dense and unsustainable development of the entire site;
- The intensification of the extent of development in this area would cause coalescence between Cambridge and Girton.
- Development would affect important views of key features of the landscape;
- Still represents harm to the Green Belt and as such is unacceptable;
- This option too severely restricts the use of an urgently needed site in the city;
- It would be difficult to create a legible public transport route from the main part of the development towards the Madingley Road Park and Ride site under this option;
- Could have a detrimental impact on the Travellers Rest SSSI;
- Under this option there would either be a substantial reduction in development capacity on the site, or to deliver the University's development needs, development densities and heights would have to increase to 3-8 storeys, with an average height of 5 storeys;
- Awkward layout of strategic gap;
- The benefits of the option in terms of the setting of Cambridge are not significant;
- Would result in the loss of land deemed important to the setting of Cambridge;
- Would rule out the possibility of plots being made available to self-builders;
- Would impose a much higher housing density – mostly apartment blocks rather than houses.

Objections came from : Individual members of the public, other developers (RLW Estates and Ashwell (Barton Road) Ltd), County Council, the University, Cambridge Preservation Society, Swavesey Parish Council, Girton Planning Action Group, Anglia Ruskin University, University's Superannuation Scheme and the University of Cambridge Self-build Society

North West Cambridge – Issues & Options

1. Site Assessment

Option 10.5

Topic	Criteria	Description and assessment
OVERVIEW		
Development Option	Brief description of the site option.	This option retains almost all the new development within the city boundary.
Developable land	Size of site option in hectares.	26 ha Indicative built environment
University Aspirations	Comparison of the site option against: 1. the built footprint as proposed by the University in its masterplan (Option 10.1). 2. the built footprint of Option 10.2, which the representations by the University indicate could meet its needs. The proportional indication of the overall scale of development against the full aspirations of the University. These reflect the University's potential to contribute to the further	The University has indicated that its needs would be accommodated on the built footprint of 77ha (option 10.1). By comparison, with other factors being equal, this option could provide for 34% of the development aspirations of the University. The University has also indicated that most of its needs could be accommodated on the built footprint of 68 ha (Option 10.2) therefore, this option could provide for 38% of the development aspirations of the University.

Topic	Criteria	Description and assessment
	development of Cambridge and its sub region as a world leader in the fields of higher education and research.	
CONSIDERATIONS		
Sub regional housing requirement	Assess how the potential housing yield contributes to meeting the housing requirements of Cambridge City and South Cambs as set out in the RSS. Provide a pro rata assessment of housing and student accommodation yields, eg. if the site option were 80% of the University's built footprint, the assumption is that it would yield 80% of the number of dwellings. This does not take account of any change in the proportions of individual land uses that the University may advise is appropriate in view of the relative priorities for specific uses. It also does not consider potential to achieve a greater proportion of development through measures such as increased densities. Note: housing requirements are by district but it is not possible to make any realistic assumptions of dwelling yield by district for a mixed use site	On a pro-rata reduction of the 2,500 dwellings in 10.1, the indicative built environment this option would be only 844 dwellings

Topic	Criteria	Description and assessment
	in the absence of masterplanning.	
Contribution to Strategic Employment Provision	Assess the potential to contribute towards strategic employment provision as set out Structure Plan Policy P2/3.	On a pro-rata reduction of option 10.1, this option would only provide floorspace of 33,766 m2 or 12.0 ha of employment land.
Green Belt	Assess against the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2b: 1. Retain any area required to maintain the purposes of Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form;; 2. Have regard for the compact form of the City; 3. Provide green separation between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. Ensure protection of green corridors running from open countryside into the urban area as generally indicated on the Key Diagram;	This option would have a minimal impact upon the landscape setting of Cambridge and easily maintain the compact form of the City There is no loss of existing green separation in this option, Girton and Cambridge would remain totally separate communities.

Topic	Criteria	Description and assessment
	5. Maintain views of the historic core.; 6. provide, where appropriate, for limited development in identified Rural centres in accordance with Policy P1/1. The purposes of the Green Belt as stated in Policy P9/2a are to: • Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre; • Maintain and enhance the quality of its setting; • Prevent communities in the Cambridge environs of Cambridge from merging into one another and with the city. The assessment of the impact on the quality of the setting of Cambridge, will include consideration of topography, landscape character, short and long distance views from main vantage	

Topic	Criteria	Description and assessment
	points, and providing an attractive green foreground to the City.	
Historic landscape	Assess the historic landscape character of the area and the impact on the quality and integrity of the landscape. This includes consideration of ridge and furrow, pre-enclosure hedgerows, pre-enclosure field boundaries and recorded crop marks.	This Option would have minimal impact on the elements of the historic landscape because of the reduced area and location of the development. This Option would protect the historic setting of the city.
Biodiversity	Assess the biodiversity value of the area and the impact on that value. This includes protected species such as Great Crested Newts and badgers. The Washpit Brook area is of particular biodiversity value. Also assess the impact on the Travellers Rest Pit SSSI, designated for its geological importance.	This option has the least impact on biodiversity. The Washpit Brook to the northwest edge of the site, which is a known area of ecological interest is unaffected as is the secondary badger sett which lies behind the houses fronting Huntingdon Road. A main badger sett in the vicinity of the Travellers Rest SSSI is relatively well protected as there is direct access to undisturbed open countryside on the slopes of the Washpit Brook valley, although there would be some disturbance by development to the east and south. Ponds known to have or have potential to have Great Crested Newt populations are largely unaffected. The geological SSSI of the Travellers' Pit is slightly more affected by this option than any other as development would be close to its eastern and southern boundaries and to a part of its western boundary.
Surface water attenuation	The development will generate significant volumes of surface water, which will drain into Washpit Brook. The floodplain starts at the edge of the area and extends to the River	As the option with the minimal built footprint this option could be expected to generate the smallest volume of surface water arising from hard surfaces in need of attenuation. Only part of this development drains towards Washpit Brook. The landform

Topic	Criteria	Description and assessment
	Great Ouse, along the route of the brook and its continuations. Assess the ability to provide surface water attenuation within the area of control of the University	of that part of the site to the east of the north-south strategic gap would indicate a strong likelihood that some of the water from this location would travel north towards Huntingdon Road or east towards Storey's Way. Provided that sustainable drainage systems (SUDS) are incorporated within the built footprint, there is no reason to expect that this option could not satisfactorily accommodate measures to attenuate surface water so that off-site flooding and drainage problems are not made worse. Any necessary water storage areas would be likely to be located either in the strategic gap or further away in the low lying parts of the site to the south and adjoining the M11 and the Washpit Brook.
Health and amenity	Assess the implications of noise and air pollution as well as the visual impact arising from the M11 as a whole and for all uses (including built and open uses within the site). This would include the environmental & visual impact of any necessary mitigation measures including built form, landscaping and sound attenuation barriers.	As development is limited to the eastern side of the site furthest from the M11 this Option is least likely to be affected by noise.
Sustainable Development	Development of sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a	The development would be just sufficient to bring forward a 1FE primary school, but there must be doubts as to whether it is capable of supporting other facilities of a neighbourhood centre such as local shopping which would enable a degree of self containment.

Topic	Criteria	Description and assessment
	sustainable lifestyle. This will include a neighbourhood centre , some local shopping and provision for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800 dwellings and a 2 form entry is required for larger developments).	
Site configuration	Ensuring the site is of a shape capable of being developed satisfactorily to ensure: 1) a sustainable form of development; 2) a sense of place; 3) an appropriate level, location and quality of open space. Also consider whether the site provides an opportunity to create an enhanced gateway on an entrance to Cambridge, ie on Huntingdon Road or Madingley Road.	This option is the smallest and hence the most compact of options in terms of site area. Any site configuration would therefore have to "work hardest" to achieve anything near the University's aspirations for the quantum of development. This would result in the need for much taller buildings to provide the required development/floor space necessary. It is not considered that taller building heights as a result of such a constraint would be acceptable in this context given the low rise, suburban nature of surrounding development. A sustainable form of development is possible, however it would likely involve the use of more sustainable or renewable building materials given that there would be a greater bulk and height of buildings to work with in order to achieve the development aspirations of the University. In terms of providing a sense of place and appropriate level/location/quality of open space, this option can provide a sense of place, albeit in a much denser and taller built environment; and open space will act more as a buffer (strategic open space) or as small pocket parks/greens (formal open space within the site). An enhanced gateway

Topic	Criteria	Description and assessment
		entrance is not possible on Huntington Road although given the likely requirement for tall buildings on this small footprint it will be likely that taller buildings will help shape such a gateway entrance feature(s). Although it must be said again that this would not likely provide an appropriate juxtaposition against surrounding low rise development.
Satisfactory mix of predominantly University related uses	Assess the scope to include a mix of uses having regard to: 1. the focus of the development on predominantly University related uses; 2. identified University-related uses; 3. the need for Key Worker housing with the emphasis on University and College staff.	This option is unlikely to bring forward sufficient development to enable a satisfactory mix of University related uses.
Transport infrastructure	1. Assess the ability to provide for different modes of transport with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic. 2. Assess the ability to accommodate future	1. Smallest area and so will require least transport infrastructure and is likely to generate least trips. 2. Site connects directly with proposed orbital link road, if this is to the east of the strategic gap, but not if it is to the west. Proposed radial link road will not need to cross strategic gap if orbital road is to the east of the strategic gap 3. Small sit e size will make it easier to meet 400m walk distance, but size of development may be insufficient to justify site specific bus services.

Topic	Criteria	Description and assessment
	strategic transport provision, including proposals emerging from the Cambridge Area Transport Strategy and the North West Cambridge Transport Study. 3. Assess the ability to provide a high level of public transport accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park with West Cambridge.	
Relationship with adjoining communities	Assess the degree to which it can link with and respect existing parts of Cambridge, including the rest of the University, the other part of the north west quadrant and Girton.	The development would be totally separate from all existing parts of Girton. It would connect well to the existing adjacent development in the City and to the proposed development on the NIAB land. It would not connect directly to the University's West Cambridge site nor is it likely to bring forward transport links to it.
Accessibility to community uses by walking and cycling	1. Within the development 2. Links between the new development and community uses outside the site relied on to serve the development. Accessibility to community uses within the site from residents outside	1. Smallest east west dimension and smallest site area may make walking and cycling distances shortest to internal community uses 2. Smallest east west dimension and smaller site area may make walking and cycling distances shorter to external community uses particularly to the north east of Huntingdon Road

Topic	Criteria	Description and assessment
	the development so that the development contributes to meeting the needs of the wider City community consistent with the vision set out in the AAP	3. Smaller east west dimension and smaller site area may make walking and cycling distances shorter from existing residential areas, particularly from north east of Huntingdon Road
Development viability and delivery	Development viability, and therefore delivery, may be affected by the site footprint in terms of the overall scale of development and its ability to fund its infrastructure needs. However, without information on the development economics, development viability of any particular option cannot be assessed.	It is very doubtful as to whether this option could bring forward any development other than a limited amount of housing and some employment.

2. Sustainability Appraisal

It is a requirement of the Planning and Compulsory Purchase Act (2004) for all planning policy documents to undergo a Sustainability Appraisal in order to determine its impacts on social, economic and environmental objectives (the **Sustainability Objectives**), for example: to ensure everyone has access to decent, appropriate and affordable housing. As part of this process, each site footprint has been appraised and reported in the Interim Sustainability Appraisal Report prepared by Scott Wilson (2006). A summary of the appraisal for this option is outlined below and for ease of interpretation the appraisal scoring system has been included.

Table 1: Appraisal Scoring System

SHADING	LIKELY IMPACT ON THE SUSTAINABILITY OBJECTIVE
Dark green text	Significant positive impact

Light green text	Some positive impact
Orange text	Moderate adverse impact
Red text	Negative impact
Yellow text	Uncertain or insufficient information to enable determination of impact
X	No significant effect / no clear link to the objective

Environmental
Predominantly dark green: This option shows a low level of development and reduced resource footprint relative to other options. A substantial area of greenbelt maintained and there is minimal ecological impact and impact on undeveloped agricultural land. Views to Girton and the city are maintained.
Greater provision of open space and access to wildlife sites. Minimal impact on habitats and species and historic sites. This option will be most likely to conserve badger population on site. Reduced level of development results in less noise, light pollution, minimal energy use.
Light green:
Less hard surface relative to initial open land than other options.
Designated SSSI is conserved with a smaller buffer zone than option 10.1
Uncertainty: As 10.1
Social
Orange: Significantly reduced spatial footprint, will impact on level of services, facilities and employment opportunities.
Predominantly light/dark green: Large area of open space maintained
Greater access to open space. Will provide affordable housing for low income group.
Economic
Red: University needs not met.
Less provision of employment opportunities.
Less provision of facilities and services at local centre. If not provided, further to travel to nearest local facilities

3. Summary of Representations to the Issues & Options Report

Objections = 14, Supports = 7, Comments = 1

Comments raised in support of this option:

- This is the only option which allows the site to be developed as a single community;
- Preserves the integrity of Girton village and reduces the danger of coalescence between Cambridge and Girton;
- Would be prepared to accept some loss of Green Belt to preserve the historical and ecological value of this landscape;
- Most preferable landscape options as it maintains the existing landscape character and areas important for biodiversity;
- Results in the least amount of land take and would retain the largest area of ecological value

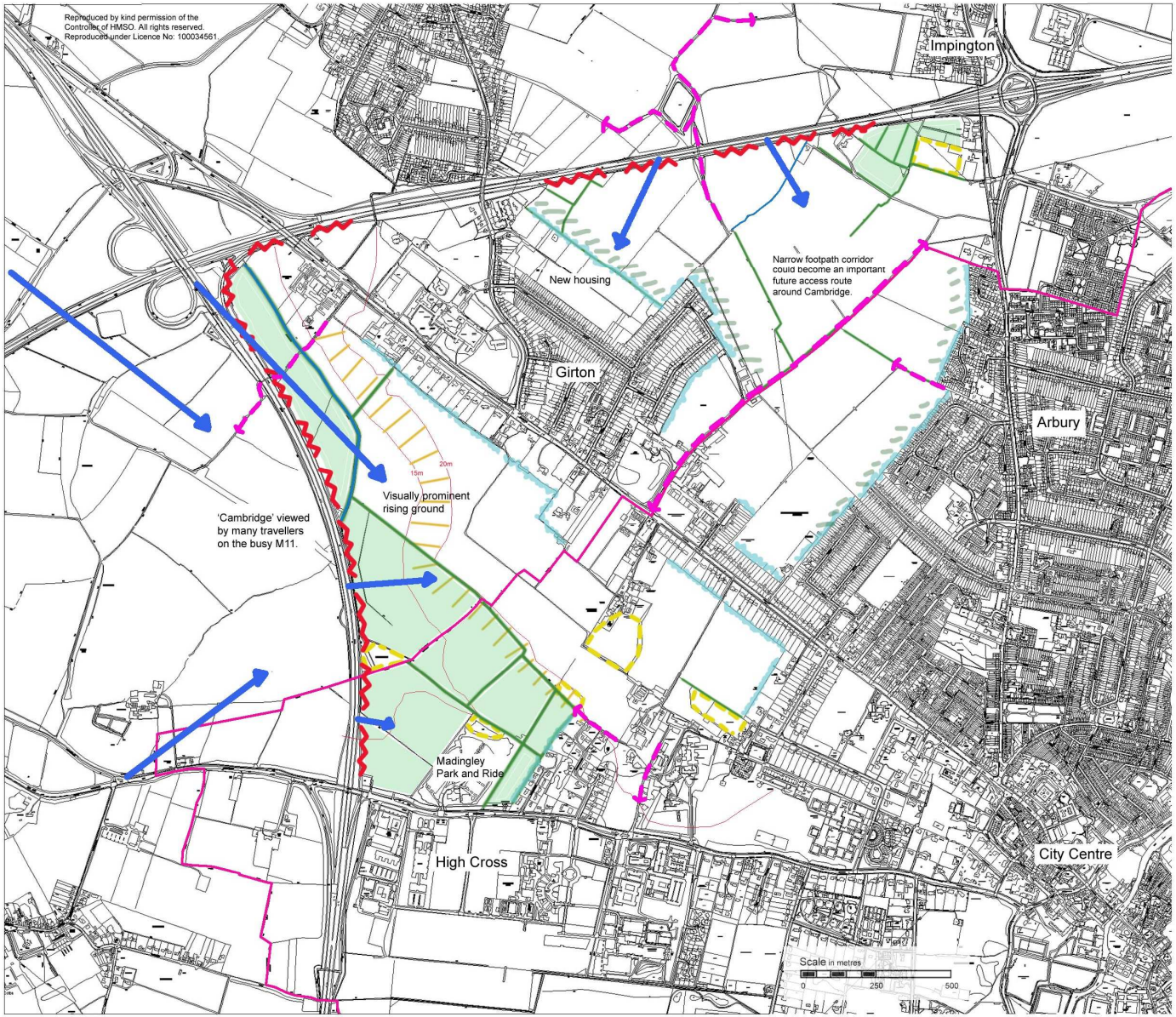
Supports came from: Transport 2000, Girton Parish Council, individual members of the public, Impington Parish Council, Cambridgeshire County Council and Natural England

Comments raised in objection to this option:

- This option will lead to an overly dense and unsustainable development on a small portion of the site and lose the opportunity to open the site to the public and create an attractive built fringe;
- This option would fall entirely short of serving the urgent need for key worker housing for University staff;
- Does not maximise the use of land close to the urban edge and therefore does not meet the requirements of the Structure Plan;
- This option may cause difficulties in delivering Policy H1 in the draft East of England Plan as it restricts development from taking place in South Cambridgeshire;
- Provides inadequate land to meet the University's needs;
- Would prevent the development of housing in South Cambridgeshire to help deliver some of the 1,000 dwelling shortfall identified by the Inspector into the South Cambridgeshire Core Strategy DPD;
- Still represents a loss of land from the Green Belt;
- This option would not make good use of land released from the Green Belt;
- As the necessary provisions are not met in the vicinity, it could further increase travel to the nearest facilities and services outside the development;
- Its benefits in terms of the setting of the city are not significant;
- Would rule out the possibility of plots being made available to self-builders;
- Would impose higher housing densities – mostly apartment blocks rather than houses.

Objections came from: Individual members of the public, County Council, Ashwell (Barton Road) Ltd, East of England Regional Assembly, the University, Cambridge Preservation Society, Swavesey Parish Council, Girton Planning Action Group, Anglia Ruskin University and the University of Cambridge Self-build Society.

Appendix 1.8 – Opportunities and constraints map extracted from the 2006 Green Belt Landscape Study prepared by David Brown associates



NORTH

Legend:

- District boundary
- Watercourses
- Break slope
- Some historic boundaries
- Major road frontage
- Principal residential frontage
- Fields with heritage and landscape values
- Principal site visibility
- Footpath link opportunities
- Urban boundary enhancement opportunities?
- Areas with ecological interest

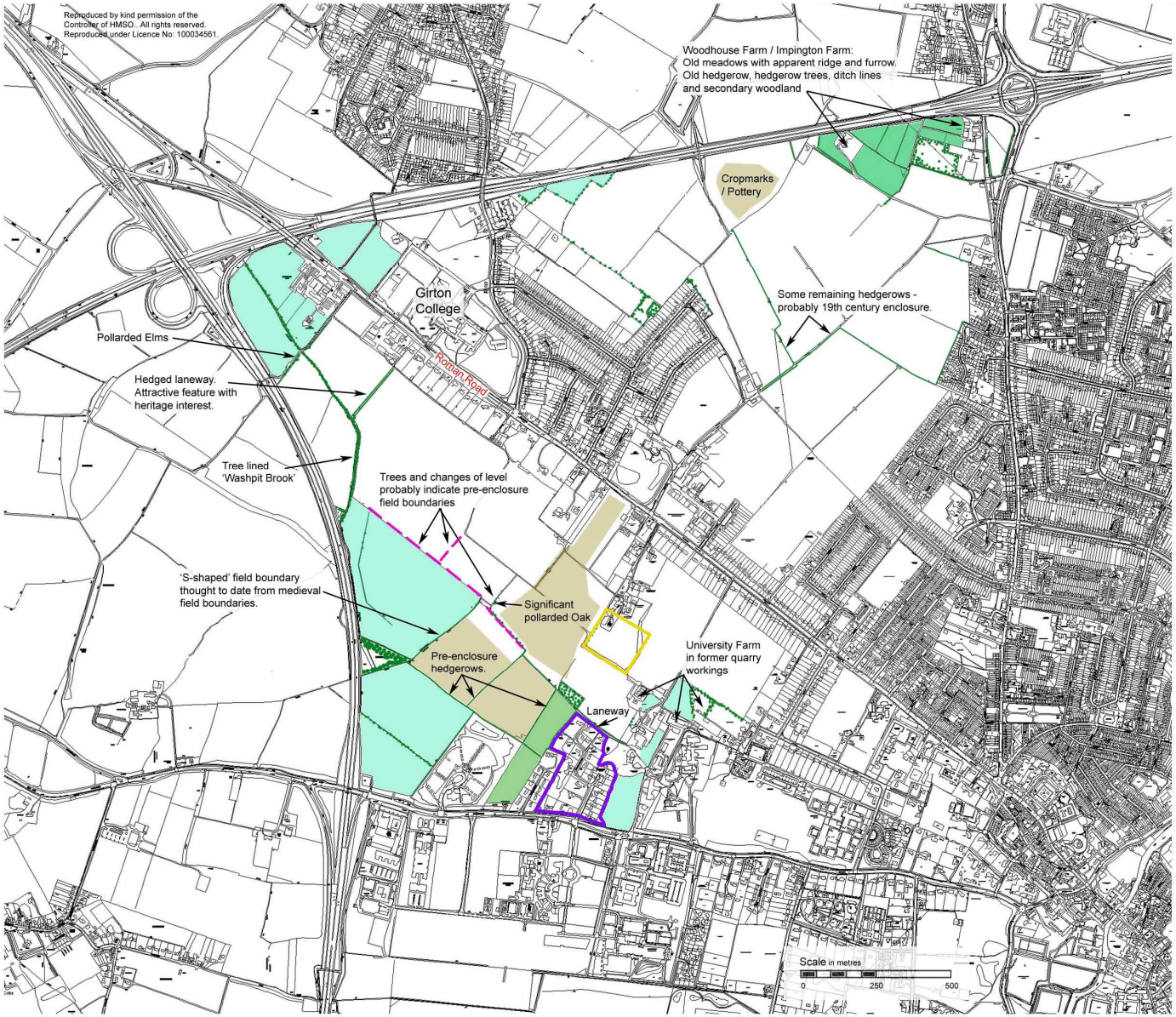
NORTH WEST CAMBRIDGE
Green Belt Landscape Study

Figure 6.0
Opportunities and Constraints

May 2006

DAVID BROWN LANDSCAPE DESIGN
richardmorrishassociates
landscape design • environmental planning

Appendix 1.9 – Heritage Interests map extracted from the 2006 Green Belt Landscape Study prepared by David Brown associates



NORTH

Legend:

- Pasture with ridge and furrow
- Presently pasture (some with apparent signs of ridge and furrow)
- Recorded cropmarks — Principal archaeological records in arable fields
- Geological SSSI
- Conduit Rd Conservation Area
- Bank — Pre-enclosure (Medieval?) boundary
- Hedges, hedge trees, woodland

A variety of archaeological finds in the study area indicate the antiquity of local human habitation and the importance of this area to the development of Cambridge.
(For other information about local heritage refer to the plans reproduced in the appendices of this report).

NORTH WEST CAMBRIDGE
Green Belt Landscape Study

Figure 3.0 (a)
Heritage Interest (Plan)

May 2006

DAVID BROWN LANDSCAPE DESIGN
richardmorrishassociates
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Appendix 1.10 – Site Assessment of Options A to E

North West Cambridge – Issues & Options

1. Site Assessment

Option A

Topic	Criteria	Description and assessment
OVERVIEW		
Development Option	Brief description of the site option.	In this option, development is withdrawn to the 20m contour line in the SCDC part of the site such that it does not extend down the slope towards the Washpit Brook and M11. To the south of the site in the City, development departs from the 20m contour behind the established hedge line towards the point where the M11 runs in a cutting to the south. A 200m strategic gap is retained immediately south of Huntingdon Road. It narrows just south of the SSSI to 100m and then extends westwards in order to provide a green buffer for the Great Crested Newts.
Developable land	Size of site option in hectares.	71ha Indicative built environment
University Aspirations	Comparison of the site option against: 1. the built footprint as proposed by the University in its masterplan (Option 10.1). 2. the built footprint of Option	The University has indicated that its needs would be accommodated on the built footprint of 77ha (option 10.1). By comparison, with other factors being equal, this option could provide for 92% of the development aspirations of the University. The University has also indicated that most of its needs could

Topic	Criteria	Description and assessment
	10.2, which the representations by the University indicate could meet its needs. The proportional indication of the overall scale of development against the full aspirations of the University. These reflect the University's potential to contribute to the further development of Cambridge and its sub region as a world leader in the fields of higher education and research.	be accommodated on the built footprint of 68 ha (Option 10.2) therefore, this option could provide for 104% of the development aspirations of the University.
CONSIDERATIONS		
Sub regional housing requirement	Assess how the potential housing yield contributes to meeting the housing requirements of Cambridge City and South Cambs as set out in the RSS. Provide a pro rata assessment of housing and student accommodation yields, eg. if the site option were 80% of the University's built footprint, the assumption is that it would yield 80% of the number of dwellings. This does not take account of any change in the proportions of individual land uses that the University may advise is	On a pro-rata reduction of the 2,500 dwellings in 10.1, the indicative built environment this option would be 2305 dwellings

Topic	Criteria	Description and assessment
	appropriate in view of the relative priorities for specific uses. It also does not consider potential to achieve a greater proportion of development through measures such as increased densities. Note: housing requirements are by district but it is not possible to make any realistic assumptions of dwelling yield by district for a mixed use site in the absence of masterplanning.	
Contribution to Strategic Employment Provision	Assess the potential to contribute towards strategic employment provision as set out Structure Plan Policy P2/3.	On a pro-rata reduction of option 10.1, this option would provide floorspace of 92,208 m2 or 32.73 ha of employment land.
Green Belt	Assess against the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2b: 1. Retain any area required to maintain the purposes of Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form;; 2. Have regard for the compact form of the City; 3. Provide green separation	1. This option would have a reduced impact on views and upon the green foreground to the City as the northern part of its western edge respects the 20 metre contour identified as important by the Green Belt Landscape Study of 2006. It does descend the slope further in the southern sector but the impact on views and setting is limited by the shape of the slope and the existing hedge-line, although this would need to be strengthened to be effective. 2. This option has a reduced footprint and therefore maintains the compact nature of the City better than 10.1 or 10.2. The width of the green gap between Girton and Cambridge, which is around 200m in width at Huntingdon Road narrows to 100m just south of the SSSI which allows a compact development site. 3. Provides adequate if limited separation between Girton

Topic	Criteria	Description and assessment
	between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. Ensure protection of green corridors running from open countryside into the urban area as generally indicated on the Key Diagram; 5. Maintain views of the historic core.; 6. provide, where appropriate, for limited development in identified Rural centres in accordance with Policy P1/1. The purposes of the Green Belt as stated in Policy P9/2a are to: • Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre; • Maintain and enhance the quality of its setting; • Prevent communities in the Cambridge environs of Cambridge from	as the green gap narrows to 100m. The width of the strategic gap between Girton village and Cambridge at Huntingdon Road is approximately 200m. south of Huntingdon Road the linkage between the proposed University development and Girton becomes increasingly remote. In this option, just south of the SSSI, the gap narrows to 100m and minimises the problems caused by open space affecting the integration of the development into a new community. 4. The green corridor along Madingley Road is maintained. 5. There is no direct impact on the views of the Historic Core. 6. This is not considered relevant in this assessment.

Topic	Criteria	Description and assessment
	merging into one another and with the city. The assessment of the impact on the quality of the setting of Cambridge, will include consideration of topography, landscape character, short and long distance views from main vantage points, and providing an attractive green foreground to the City.	
Historic landscape	Assess the historic landscape character of the area and the impact on the quality and integrity of the landscape. This includes consideration of ridge and furrow, pre-enclosure hedgerows, pre-enclosure field boundaries and recorded crop marks.	This Option would 'set' the north west edge of the new development within an green and open foreground protecting to some extent an element of the historic setting of the city because much of the development is defined by the break of the slope at the 20m contour. The loss of historic landscape elements with this option would be of high significance. Historic field patterns, pre-enclosure boundaries, pre-enclosure hedgerows and ridge and burrow patterns, which are rare survivals from the former open field system which dates back to at least medieval times, will be lost. These heritage landscape elements provide the historic core of Cambridge with a setting and context. The Option would include a 'piecemeal' retention of features from the historic landscape, including the veteran oak and the historic hedgerows, which would erode their value in terms of context and historical relevance and it is also unlikely to sustain these features in the long term.

Topic	Criteria	Description and assessment
		The impact of the level of development on the historic landscape would also be significant in terms of the adverse effects of the development itself combined with infrastructure issues because of the extent of the development across the historic fields to the south west.
Biodiversity	Assess the biodiversity value of the area and the impact on that value. This includes protected species such as Great Crested Newts and badgers. The Washpit Brook area is of particular biodiversity value. Also assess the impact on the Travellers Rest Pit SSSI, designated for its geological importance.	This option has less impact than 10.1 on the Washpit Brook to the northwest edge of the site, which is a known area of ecological interest as development is largely limited to the higher ground. It would probably require the relocation and careful re-establishment of a secondary badger sett which lies behind the houses fronting Huntingdon Road. A main badger sett in the vicinity of the Travellers Rest SSSI is protected by a green corridor but this which could have an impact on foraging and social routes to a greater extent. Ponds known to have or have potential to have Great Crested Newt populations could be slightly affected by the proximity of development. The geological SSSI of the Travellers' Pit remains within the green corridor of 200m width at this point.
Surface water attenuation	The development will generate significant volumes of surface water, which will drain into Washpit Brook. The floodplain starts at the edge of the area and extends to the River Great Ouse, along the route of the brook and its continuations. Assess the ability to provide surface water attenuation within the area of control of the University	Most of the development drains towards Washpit Brook with the possible exception of part of the site to the east of the north-south strategic gap. Provided that sustainable drainage systems (SUDS) are incorporated within the built footprint, there is no reason to expect that this option could not satisfactorily accommodate measures to attenuate surface water so that off-site flooding and drainage problems are not made worse. Any necessary water storage areas would be likely to be located in the low lying parts of the site to the south and adjoining the M11

Topic	Criteria	Description and assessment
		and the Washpit Brook.
Health and amenity	Assess the implications of noise and air pollution as well as the visual impact arising from the M11 as a whole and for all uses (including built and open uses within the site). This would include the environmental & visual impact of any necessary mitigation measures including built form, landscaping and sound attenuation barriers.	This performs much the same as 10.3 and 10.4 although some development in the south west of the site is closer to the M11 than in those options. The greater distance of development from the M11 by being limited to the higher ground in the northern sector may reduce the impact of sound, but it allows less opportunity for employment buildings to shield residential development. Development on the eastern side of the site furthest from the M11 is less likely to be affected. As in most of options, mitigation measures will be needed. This may include a mix of solutions including a 3m acoustic barrier along the M11 and a 5m bund closer to the development, and careful design and orientation of buildings. It will be necessary for buildings to be situated so as to prevent the creation of noise corridors into the site.
Sustainable Development	Development of sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle. This will include a neighbourhood centre , some local shopping and provision for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800 dwellings and a 2 form	The scale of development would be sufficient to support a local centre with a range of services and facilities. The configuration of the site with a narrow green corridor (200m at Huntingdon Road but just around 100m south of the SSSI) would encourage a cohesive new community where distances to the neighbourhood centre were minimised thus encouraging journey on foot and cycle.

Topic	Criteria	Description and assessment
	entry is required for larger developments).	
Site configuration	Ensuring the site is of a shape capable of being developed satisfactorily to ensure: 1) a sustainable form of development; 2) a sense of place; 3) an appropriate level, location and quality of open space. Also consider whether the site provides an opportunity to create an enhanced gateway on an entrance to Cambridge, ie on Huntingdon Road or Madingley Road.	These two new variant options A and B are very similar, other than a slightly wider green gap between the two principal portions of the site, so they will be treated as one here in terms of site configuration. Given the difference in the gap width however, there is a difference of developable land between the options in that option A provides for 71ha and option B provides for 67ha. The development is capable of being delivered in a sustainable fashion with both these options in that they provide for sufficient land area in which to develop robust urban blocks with sufficient land for services, facilities, and related infrastructure within the site footprints. A sense of place is possible, with the ability to create a single centre serving both parts. In addition, the level/location/quality of open space is possible in both options and allows for both strategic (off-site) open space and formal (on site) open space, as well as informal open space within the site. An enhanced gateway is possible on the Huntington Road frontage at its westerly end. In terms of the two options, option A works slightly better in terms of site configuration criteria as it provides for a larger footprint in which to develop larger and more flexible urban blocks in this central part of the overall footprint (it is anticipated that a central “spine” route would be provided connecting the two parts and running roughly at a mid point of the site in an east-west fashion).

Topic	Criteria	Description and assessment
Satisfactory mix of predominantly University related uses	Assess the scope to include a mix of uses having regard to: 1. the focus of the development on predominantly University related uses; 2. identified University-related uses; 3. the need for Key Worker housing with the emphasis on University and College staff.	The University has not formally considered this new variant. In terms of the scale of development, it is slightly larger than 10.2 which the University indicated in the initial assessment of 10.2 by consultants acting for the University was that the required volume of development could be accommodated on a site of this scale whilst maintaining a character and scale of development compatible with its context.
Transport infrastructure	1. Assess the ability to provide for different modes of transport with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic. 2. Assess the ability to accommodate future strategic transport provision, including proposals emerging from the Cambridge Area Transport Strategy and the North West Cambridge Transport Study. 3. Assess the ability to provide a high level of public transport	1. Large area of development (particularly to the NW) is likely to generate a large number of trips and requiring corresponding transport infrastructure. 2. Majority of development links well to the proposed orbital link road, if this is to the west of the strategic gap, but not so well if it is to the east of the strategic gap. Proposed radial link road will need to cross strategic gap. 3. Greater width in NW part of site will make it more difficult to meet 400m walk distance. Size of development should be sufficient to justify site specific bus services.

Topic	Criteria	Description and assessment
	accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park with West Cambridge.	
Relationship with adjoining communities	Assess the degree to which it can link with and respect existing parts of Cambridge, including the rest of the University, the other part of the north west quadrant and Girton.	The University's development does not present any real opportunities to connect with Girton village which lies essentially to the north of Huntingdon Road. South of Huntingdon Road the only development in Girton is the small number of large houses in extensive plots which front Huntingdon Road. There is no real opportunity for the University development, to the rear of these properties, to connect to them or the main community of Girton village. As such, the development will function as a separate neighbourhood of "Girton South", rather than as an extension to Girton village, albeit that they physically abut. Development on the eastern part of the site would be well related and connected to adjoining parts of the City. It connects well with the existing built-up area of the city and with the proposed development at NIAB. However, development of the western part would be somewhat remote from adjoining areas. It does not connect directly to the University's West Cambridge site although this does not preclude transport links being created.
Accessibility to community uses by walking and cycling	1. Within the development 2. Links between the new development and community	1. Larger north-south dimension and greater site area may make walking and cycling distances to community uses longer than other options.

Topic	Criteria	Description and assessment
	uses outside the site relied on to serve the development. 3. Accessibility to community uses within the site from residents outside the development so that the development contributes to meeting the needs of the wider City community consistent with the vision set out in the AAP.	2. Larger north-south dimension and greater site area may make walking and cycling distances to external community uses longer than other options. 3. Larger north-south dimension and greater site area may make walking and cycling distances from existing residential areas longer than other options, particularly from north east of Huntingdon Road.
Development viability and delivery	Development viability, and therefore delivery, may be affected by the site footprint in terms of the overall scale of development and its ability to fund its infrastructure needs. However, without information on the development economics, development viability of any particular option cannot be assessed.	There is no evidence to suggest that this option is not viable and deliverable. The University has not formally considered this new variant. In terms of the scale of development, it is slightly larger than 10.2. The initial assessment of 10.2 by consultants acting for the University was that the required volume of development could be accommodated on a site of this scale whilst maintaining a character and scale of development compatible with its context. They did not suggest that development on such a scale was unviable. This suggests that the University may consider that development of a site based on Option A is viable. Initial work on masterplanning by officers suggests that it is deliverable.

2. Sustainability Appraisal

It is a requirement of the Planning and Compulsory Purchase Act (2004) for all planning policy documents to undergo a Sustainability Appraisal in order to determine its impacts on social, economic and environmental objectives (the **Sustainability Objectives**), for example: to ensure everyone has access to decent, appropriate and affordable housing. As part of this process, site options A – D

have been appraised and reported in an addendum (2007) to the Interim Sustainability Appraisal Report prepared by Scott Wilson (2006). A summary of the appraisal for this option is outlined below and for ease of interpretation the appraisal scoring system has been included.

Table 1: Appraisal Scoring System

SHADING	LIKELY IMPACT ON THE SUSTAINABILITY OBJECTIVE
Dark green text	Significant positive impact
Light green text	Some positive impact
Orange text	Moderate adverse impact
Red text	Negative impact
Yellow text	Uncertain or insufficient information to enable determination of impact
X	No significant effect / no clear link to the objective

Environmental

Predominantly Red and Orange: This option is for a relatively large development, which has a footprint comparable in size to option 10.2. The larger development footprint will have increased resource demands compared to smaller development footprints (e.g. Option 10.5). Greater development results in more light, noise pollution, greater energy and water use, greater area of hard surface, which in turn may have drainage and flooding implications, which could be exacerbated by climate change.

Some ecological impacts of development are expected, including impact on badgers, habitat area in north of site and pre-enclosure hedgerows in the south. Less impact on wetland area around brook than 10.1. Significant area of open space and areas of historic interest lost, particularly to the south west of the site. Significant land take in green belt area and risk of merger of new development with Girton as only a relatively narrow open space area separates them. Limited development on slope but extension to the south west which will cross the 20m contour may impact on views. Some views may be blocked of Girton and the city.

Uncertainty: As 10.1

Also, the presence of a buffer around the SSSI could have a positive impact but the limited extent could also mean there will be a negative impact on the SSSI from the new development.

Social

Red and Orange: Significantly reduced open space for recreation. Reduced public access to open space.

Light green: Local centre provided, however, quality of services and facilities will depend on final development plan.

Dark green: Affordable housing will be provided on the site and a local centre provided.

Economic

Dark green: This option could meet development aspirations of the University. This could allow for the full development requirements of the University, including a local centre and a school. These developments, together with research facilities would provide employment opportunities and would improve business development.

North West Cambridge – Issues & Options

1. Site Assessment

Option B

Topic	Criteria	Description and assessment
OVERVIEW		
Development Option	Brief description of the site option.	In this option, development is withdrawn to the 20m contour line in the SCDC part of the site such that it does not extend down the slope to the Washpit Brook and M11. To the south of the site in the City, development departs from the 20m contour behind the established hedge line towards the point where the M11 runs in a cutting to the south. A 200m strategic gap is retained running southwards towards Madingley road and which then extends westwards in order to provide a green buffer for the newts.
Developable land	Size of site option in hectares.	67ha Indicative built environment
University Aspirations	Comparison of the site option against: 1. the built footprint as proposed by the University in its masterplan (Option 10.1). 2. the built footprint of Option 10.2, which the representations by the University indicate could meet its	The University has indicated that its needs would be accommodated on the built footprint of 77ha (option 10.1). By comparison, with other factors being equal, this option could provide for 87% or two thirds of the development aspirations of the University. The University has also indicated that most of its needs could be accommodated on the built footprint of 68 ha

Topic	Criteria	Description and assessment
	needs. The proportional indication of the overall scale of development against the full aspirations of the University. These reflect the University's potential to contribute to the further development of Cambridge and its sub region as a world leader in the fields of higher education and research.	(Option 10.2) therefore, this option could provide for 98% of the development aspirations of the University.
CONSIDERATIONS		
Sub regional housing requirement	Assess how the potential housing yield contributes to meeting the housing requirements of Cambridge City and South Cambs as set out in the RSS. Provide a pro rata assessment of housing and student accommodation yields, eg. if the site option were 80% of the University's built footprint, the assumption is that it would yield 80% of the number of dwellings. This does not take account of any change in the proportions of individual land uses that the University may advise is appropriate in view of the relative priorities for specific uses. It also does not consider potential to achieve a greater proportion of development through measures such as increased densities. Note: housing requirements are by	On a pro-rata reduction of the 2,500 dwellings in 10.1, the indicative built environment this option would be 2175 dwellings.

Topic	Criteria	Description and assessment
	district but it is not possible to make any realistic assumptions of dwelling yield by district for a mixed use site in the absence of masterplanning.	
Contribution to Strategic Employment Provision	Assess the potential to contribute towards strategic employment provision as set out Structure Plan Policy P2/3.	On a pro-rata reduction of option 10.1, this option would provide floorspace of 87,013 m2 or 30.8 ha of employment land.
Green Belt	Assess against the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2b: 1. Retain any area required to maintain the purposes of Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form;; 2. Have regard for the compact form of the City; 3. Provide green separation between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. Ensure protection of green corridors running from open countryside into the urban area as generally indicated on the Key Diagram;	1. This option would have a reduced impact on views and upon the green foreground to the City as the northern part of its western edge respects the 20 metre contour identified as important by the Green Belt Landscape Study of 2006. It does descend the slope further in the southern sector but the impact on views and setting is limited by the shape of the slope and the existing hedge-line, although this would need to be strengthened to be effective. 2. This option has a reduced footprint and therefore maintains the compact nature of the City better than 10.1 or 10.2. The width of the green gap between Girton and Cambridge, which is around 200m in width at Huntingdon Road is maintained which allows a compact development site, although to a slightly lesser extent than Option A. 3. Provides adequate separation between Girton as the green gap is maintained at 200m. 4. The green corridor along Madingley Road is maintained. 5. There is no direct impact on the views of the Historic Core. 6. This is not considered relevant in this assessment.

Topic	Criteria	Description and assessment
	5. Maintain views of the historic core.; 6. provide, where appropriate, for limited development in identified Rural centres in accordance with Policy P1/1. The purposes of the Green Belt as stated in Policy P9/2a are to: • Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre; • Maintain and enhance the quality of its setting; • Prevent communities in the Cambridge environs of Cambridge from merging into one another and with the city. The assessment of the impact on the quality of the setting of Cambridge, will include consideration of topography, landscape character, short and long distance views from main vantage points, and providing an attractive green foreground to the City.	
Historic landscape	Assess the historic landscape character of the area and the impact on the quality	This Option would 'set' the north west edge of the new development within a green and open foreground protecting

Topic	Criteria	Description and assessment
	and integrity of the landscape. This includes consideration of ridge and furrow, pre-enclosure hedgerows, pre-enclosure field boundaries and recorded crop marks.	to some extent an element of the historic setting of the city because the extent of the development is defined by the break of the slope at the 20m contour. The loss of historic landscape elements with this option would be of high significance. Historic field patterns, pre-enclosure boundaries, pre-enclosure hedgerows and ridge and burrow patterns, which are rare survivals from the former open field system which dates back to at least medieval times, will be lost. These heritage landscape elements provide the historic core of Cambridge with a setting and context. The Option would include a 'piecemeal' retention of features from the historic landscape , including the veteran oak and the historic hedgerows, which would erode their value in terms of context and historical relevance and it is also unlikely to sustain these features in the long term. The impact of the level of development on the historic landscape would also be significant in terms of the adverse effects of the development itself combined with infrastructure issues because of the extent of the development across the historic fields to the south west.
Biodiversity	Assess the biodiversity value of the area and the impact on that value. This includes protected species such as Great Crested Newts and badgers. The Washpit Brook area is of particular biodiversity value. Also assess the impact on the Travellers Rest Pit SSSI,	This option has less impact than 10.1 on the Washpit Brook to the northwest edge of the site, which is a known area of ecological interest as development is largely limited to the higher ground. It would probably require the relocation and careful re-establishment of a secondary badger sett which lies behind the houses fronting Huntingdon Road. A main badger sett in the vicinity of the Travellers Rest SSSI is

Topic	Criteria	Description and assessment
	designated for its geological importance.	protected by a green corridor of just 200m width. Ponds known to have or have potential to have Great Crested Newt populations are largely unaffected. The geological SSSI of the Travellers' Pit remains within the green corridor which is 200m in width.
Surface water attenuation	The development will generate significant volumes of surface water, which will drain into Washpit Brook. The floodplain starts at the edge of the area and extends to the River Great Ouse, along the route of the brook and its continuations. Assess the ability to provide surface water attenuation within the area of control of the University	Most of the development drains towards Washpit Brook with the possible exception of part of the site to the east of the north-south strategic gap. Provided that sustainable drainage systems (SUDS) are incorporated within the built footprint, there is no reason to expect that this option could not satisfactorily accommodate measures to attenuate surface water so that off-site flooding and drainage problems are not made worse. Any necessary water storage areas would be likely to be located in the low lying parts of the site to the south and adjoining the M11 and the Washpit Brook.
Health and amenity	Assess the implications of noise and air pollution as well as the visual impact arising from the M11 as a whole and for all uses (including built and open uses within the site). This would include the environmental & visual impact of any necessary mitigation measures including built form, landscaping and sound attenuation barriers.	This performs much the same as 10.3 and 10.4 although some development in the south west of the site is closer to the M11 than in those options. The greater distance of development from the M11 by being limited to the higher ground in the northern sector may reduce the impact of sound, but it allows less opportunity for employment buildings to shield residential development. Development on the eastern side of the site furthest from the M11 is less likely to be affected. As in most of the options, mitigation measures will be needed. This may include a mix of solutions including a 3m acoustic barrier along the M11 and a 5m bund closer to the development, and careful design

Topic	Criteria	Description and assessment
		and orientation of buildings. It will be necessary for buildings to be situated so as to prevent the creation of noise corridors into the site.
Sustainable Development	Development of sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle. This will include a neighbourhood centre , some local shopping and provision for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800 dwellings and a 2 form entry is required for larger developments).	The scale of development would be sufficient to support a local centre with a range of services and facilities. The configuration of the site with a narrow green corridor (200m at Huntingdon Road and maintained though the development) would encourage a cohesive new community where distances to the neighbourhood centre were minimised (although not as much as in Option A) thus encouraging journey on foot and cycle.
Site configuration	Ensuring the site is of a shape capable of being developed satisfactorily to ensure: 1) a sustainable form of development; 2) a sense of place; 3) an appropriate level, location and quality of open space. Also consider whether the site provides an opportunity to create an enhanced gateway on an entrance to Cambridge,	These two new variant options A and B are very similar, other than a slightly wider green gap between the two principal portions of the site, so they will be treated as one here in terms of site configuration. Given the difference in the gap width however, there is a difference of developable land between the options in that option A provides for 71ha and option B provides for 67ha. The development is capable of being delivered in a sustainable fashion with both these options in that they provide for sufficient land area in which to develop robust

Topic	Criteria	Description and assessment
	ie on Huntingdon Road or Madingley Road.	urban blocks with sufficient land for services, facilities, and related infrastructure within the site footprints. A sense of place is possible, with the ability to create a single centre serving both parts. In addition, the level/location/quality of open space is possible in both options and allows for both strategic (off-site) open space and formal (on site) open space, as well as informal open space within the site. An enhanced gateway is possible on the Huntington Road frontage at its westerly end. In terms of the two options, option A works slightly better in terms of site configuration criteria as it provides for a larger footprint in which to develop larger and more flexible urban blocks in this central part of the overall footprint (it is anticipated that a central "spine" route would be provided connecting the two parts and running roughly at a mid point of the site in an east-west fashion).
Satisfactory mix of predominantly University related uses	Assess the scope to include a mix of uses having regard to: 1. the focus of the development on predominantly University related uses; 2. identified University-related uses; 3. the need for Key Worker housing with the emphasis on University and College staff.	The University has not formally considered this new variant. In terms of the scale of development, it is slightly smaller than 10.2 which the University indicated The initial assessment of 10.2 by consultants acting for the University was that the required volume of development could be accommodated on a site of this scale whilst maintaining a character and scale of development compatible with its context.

Topic	Criteria	Description and assessment
Transport infrastructure	1. Assess the ability to provide for different modes of transport with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic. 2. Assess the ability to accommodate future strategic transport provision, including proposals emerging from the Cambridge Area Transport Strategy and the North West Cambridge Transport Study. 3. Assess the ability to provide a high level of public transport accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park with West Cambridge.	1. Large area of development (particularly to the NW) is likely to generate a large number of trips and requiring corresponding transport infrastructure. 2. Majority of development links well to the proposed orbital link road, if this is to the west of the strategic gap, but not so well if it is to the east of the strategic gap. Proposed radial link road will need to cross strategic gap. 3. Greater width in NW part of site will make it more difficult to meet 400m walk distance. Size of development should be sufficient to justify site specific bus services.
Relationship with adjoining communities	Assess the degree to which it can link with and respect existing parts of Cambridge, including the rest of the University, the other part of the north west quadrant and Girton.	The University's development does not present any real opportunities to connect with Girton village which lies essentially to the north of Huntingdon Road. South of Huntingdon Road the only development in Girton is the small number of large houses in extensive plots which front Huntingdon Road. There is no real opportunity for the University development, to the rear of these properties, to connect to them or the main community of Girton village. As

Topic	Criteria	Description and assessment
		such, the development will function as a separate neighbourhood of “Girton South”, rather than as an extension to Girton village, albeit that they physically abut. Development on the eastern part of the site would be well related and connected to adjoining parts of the City. It connects well with the existing built-up area of the city and with the proposed development at NIAB. However, development of the western part would be somewhat remote from adjoining areas. It does not connect directly to the University’s West Cambridge site although this does not preclude transport links being created.
Accessibility to community uses by walking and cycling	1. Within the development 2. Links between the new development and community uses outside the site relied on to serve the development. 3. Accessibility to community uses within the site from residents outside the development so that the development contributes to meeting the needs of the wider City community consistent with the vision set out in the AAP.	1. Larger north-south dimension and greater site area may make walking and cycling distances to community uses longer than other options. 2. Larger north-south dimension and greater site area may make walking and cycling distances to external community uses longer than other options. 3. Larger north-south dimension and greater site area may make walking and cycling distances from existing residential areas longer than other options, particularly from north east of Huntingdon Road.
Development viability and delivery	Development viability, and therefore delivery, may be affected by the site footprint in terms of the overall scale of development and its ability to fund its	There is no evidence to suggest that this option is not viable and deliverable. The University has not formally considered this new variant. In terms of the scale of development, it is slightly smaller than 10.2. The initial assessment of 10.2 by

Topic	Criteria	Description and assessment
	infrastructure needs. However, without information on the development economics, development viability of any particular option cannot be assessed.	consultants acting for the University was that the required volume of development could be accommodated on a site of this scale whilst maintaining a character and scale of development compatible with its context. They did not suggest that development on such a scale was unviable. This suggests that the University may consider that development of a site based on Option B is viable. Initial work on masterplanning by officers suggests that it is deliverable.

2. Sustainability Appraisal

It is a requirement of the Planning and Compulsory Purchase Act (2004) for all planning policy documents to undergo a Sustainability Appraisal in order to determine its impacts on social, economic and environmental objectives (the **Sustainability Objectives**), for example: to ensure everyone has access to decent, appropriate and affordable housing. As part of this process, site options A – D have been appraised and reported in an addendum (2007) to the Interim Sustainability Appraisal Report prepared by Scott Wilson (2006). A summary of the appraisal for this option is outlined below and for ease of interpretation the appraisal scoring system has been included.

Table 1: Appraisal Scoring System

SHADING	LIKELY IMPACT ON THE SUSTAINABILITY OBJECTIVE
Dark green text	Significant positive impact
Light green text	Some positive impact
Orange text	Moderate adverse impact
Red text	Negative impact
Yellow text	Uncertain or insufficient information to enable determination of impact
X	No significant effect / no clear link to the objective

Environmental

Predominantly Red and Orange: This option is for a relatively large development, which has a footprint comparable in size to option 10.2. The larger development footprint will have increased resource demands compared to smaller development footprints (e.g. Option 10.5). Greater development results in more light, noise pollution, greater energy and water use, greater area of hard surface, which in turn may have drainage and flooding implications, which could be exacerbated by climate change. There will be less impact on the wetland area around the brook than option 10.1.

The effects are likely to be the same as Option A with some ecological impacts and a significant area of open space and areas of historic interest lost. The wider buffer provided near the SSSI should mean the risk of negative impacts on the SSSI and of the merger of new development with Girton is lessened slightly. Nevertheless, the development will involve significant land take in the green belt. Limited development on slope but extension to the south west which will cross the 20m contour may impact views. Some views may be blocked to Girton and the city.

Dark green: The designated SSSI has a larger buffer than under Option A which should help protect this site.

Uncertainty: As 10.1

Social

Orange: Reduced area of open space for recreation although a greater area than under option A and option 10.1 will be provided.

Light green: Local centre provided, however, quality of services and facilities will depend on final development plan.

Dark green: Affordable housing will be provided on the site and a local centre provided.

Economic

Dark green: As option A. This option could meet development aspirations of the University. This could allow for the full development requirements of the University, including a local centre and a school. These developments, together with research facilities would provide employment opportunities and would improve business development.

North West Cambridge – Issues & Options

1. Site Assessment

Option C

Topic	Criteria	Description and assessment
OVERVIEW		
Development Option	Brief description of the site option.	Based on the 2006 modifications to the University's original draft masterplan, development is drawn slightly further up the slope leaving a 200 –250 metre wide strip of landscape buffer between the motorway and the edge of development. A Strategic Gap close to Huntingdon Road widens out into a roughly circular open space in the vicinity of the Travellers' Rest Pit SSSI.
Developable land	Size of site option in hectares.	72 ha Indicative built environment.
University Aspirations	Comparison of the site option against: 1. the built footprint as proposed by the University in its masterplan (Option 10.1). 2. the built footprint of Option 10.2, which the representations by the University indicate could meet its needs. The proportional indication of the overall scale of development against the full aspirations of the University. These	The University has indicated that its needs would be accommodated on the built footprint of 77ha (option 10.1). By comparison, with other factors being equal, this option could provide for 94% of the development aspirations of the University. The University has also indicated that most of its needs could be accommodated on the built footprint of 68ha (option 10.2) therefore, this option could provide for 105% of the development aspirations of the University.

Topic	Criteria	Description and assessment
	reflect the University's potential to contribute to the further development of Cambridge and its sub region as a world leader in the fields of higher education and research.	
CONSIDERATIONS		
Sub regional housing requirement	Assess how the potential housing yield contributes to meeting the housing requirements of Cambridge City and South Cambs as set out in the RSS. Provide a pro rata assessment of housing and student accommodation yields, eg. if the site option were 80% of the University's built footprint, the assumption is that it would yield 80% of the number of dwellings. This does not take account of any change in the proportions of individual land uses that the University may advise is appropriate in view of the relative priorities for specific uses. It also does not consider potential to achieve a greater proportion of development through measures such as increased densities. Note: housing requirements are by district but it is not possible to make any realistic assumptions of dwelling yield by district for a mixed use site in the absence of masterplanning.	On a pro-rata reduction of the 2,500 dwellings in option 10.1, the indicative built environment of this option would 2338 dwellings.
Contribution to Strategic	Assess the potential to contribute	On a pro-rata reduction of option 10.1, this option would

Topic	Criteria	Description and assessment
Employment Provision	towards strategic employment provision as set out Structure Plan Policy P2/3.	provide floorspace of 93,506 m2 or 33 ha of employment land.
Green Belt	Assess against the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2b: 1. Retain any area required to maintain the purposes of Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form;; 2. Have regard for the compact form of the City; 3. Provide green separation between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. Ensure protection of green corridors running from open countryside into the urban area as generally indicated on the Key Diagram; 5. Maintain views of the historic core.; 6. provide, where appropriate, for limited development in identified Rural centres in accordance with	1. In this option development is not confined to the 20 metre contour line and does result in a significant loss of green foreground on the slope of land down to the Washpit Brook and M11 which provides a key part of the setting of the City with views from the M11 and the Madingley area compromised. The rising landform makes this area very prominent in views from the west of Cambridge The open and pastoral character of this land presents the quintessential rural setting that is associated with the setting of Cambridge. This openness also allows the visual, historical and cultural connections between the two prominent existing focal points in the landscape; the Chapel of the American Cemetery and the tower of Girton College. In short, it is a visually sensitive landscape that currently enhances the setting of Cambridge and which would very largely lost under this option. This sweep of open rising ground that is so important to the setting of Cambridge is effectively lost and the proximity to the M11 and the rising landform will lead to this area not being perceived as a significant foreground. The rising land also means that development will be viewed over some distance as it extends up the slope and would not be able to be effectively screened, increasing its visual impact. 2. This option does extend into the open countryside although not as much as option 10.1 and therefore does reduce the compact nature of the City. 3. This option does provide a certain degree of

Topic	Criteria	Description and assessment
	Policy P1/1.. The purposes of the Green Belt as stated in Policy P9/2a are to: • Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre; • Maintain and enhance the quality of its setting; • Prevent communities in the Cambridge environs of Cambridge from merging into one another and with the city. The assessment of the impact on the quality of the setting of Cambridge, will include consideration of topography, landscape character, short and long distance views from main vantage points, and providing an attractive green foreground to the City.	separation between Girton and Cambridge. The gap at Huntingdon Road is around 200m wide, but in this option it opens up into a wider area of around 300m. 4. The green corridor along Madingley Road is maintained. 5. There is no direct impact on the views of the Historic Core 6. This is not considered relevant in this assessment. The primary impact would arise from the extent to which this option would visually impact on views and the green foreground to the City.
Historic landscape	Assess the historic landscape character of the area and the impact of each option on the quality and integrity of the landscape. This includes consideration of ridge and furrow, pre-enclosure hedgerows, pre-enclosure field boundaries and recorded crop marks.	The loss of historic landscape elements with this option would be of high significance. Historic field patterns, pre-enclosure boundaries, pre-enclosure hedgerows and ridge and burrow patterns, which are rare survivals from the former open field system which dates back to at least medieval times, will be lost. These heritage landscape elements provide the historic core of Cambridge with a setting and context. The loss of so much of the rural setting

Topic	Criteria	Description and assessment
		will be of a high significance and a diminution of the value of the historic core itself. The Option would include a 'piecemeal' retention of features from the historic landscape e.g. Veteran oak and historic hedgerows, which would erode their value in terms of context and historical relevance and it is also unlikely to sustain these features in the long term.
Biodiversity	Assess the biodiversity value of the area and the impact of each option on that value. This includes protected species such as Great Crested Newts and badgers. The Washpit Brook area is of particular biodiversity value. Also assess the impact on the Travellers Rest Pit SSSI, designated for its geological importance.	The primary impact arises from the extent of the development area with development encroaching upon Washpit Brook to the northwest edge of the site, which is a known area of ecological interest. It would also probably require the relocation and careful re-establishment of a secondary badger sett which lies behind the houses fronting Huntingdon Road. A main badger sett in the vicinity of the Travellers Rest SSSI is relatively well protected by an area of wide open space although there would be some disturbance. Ponds known to have or have potential to have Great Crested Newt populations are largely unaffected. The geological SSSI of the Travellers' Pit forms part of a wider open space within the green gap and would therefore be well protected.
Surface water attenuation	The development will generate significant volumes of surface water, which will drain into Washpit Brook. The floodplain starts at the edge of the area and extends to the River Great Ouse, along the route of the brook and its continuations. Assess the ability of the	Given the size of this option, it could be expected to generate a relatively large volume of surface water arising from hard surfaces in need of attenuation. Most of the development drains towards Washpit Brook with the possible exception of part of the site to the east of the north-south strategic gap. Provided that sustainable drainage systems (SUDS) are incorporated within the built footprint,

Topic	Criteria	Description and assessment
	development to provide surface water attenuation within the area of control of the University	there is no reason to expect that this option could not satisfactorily accommodate measures to attenuate surface water so that off-site flooding and drainage problems are not made worse. Any necessary water storage areas would be likely to be located in the low lying parts of the site to the south and adjoining the M11 and the Washpit Brook.
Health and amenity	Assess the implications of noise and air pollution as well as the visual impact arising from the M11 on each site option as a whole and for all uses (including built and open uses within the site). This would include the environmental & visual impact of any necessary mitigation measures including built form, landscaping and sound attenuation barriers.	The main issues are noise and air quality as a result of the proximity of the M11. Residential development is unlikely to be appropriate at the northern tip of the site where it is close to the Girton Interchange on air quality issues. However employment may be suitable here and on the western limits of the development close to the M11 itself. It is possible that employment here could shield residential development to the east of it, improving the noise environment of the site, although this may be limited by the rise in land levels. Development on the eastern side of the site furthest from the M11 is less likely to be affected. As in most of the options, mitigation measures will be needed. This may include a mix of solutions including a 3m acoustic barrier along the M11 and a 5m bund closer to the development, and careful design and orientation of buildings. It will be necessary for buildings to be situated so as to prevent the creation of noise corridors into the site.
Sustainable Development	Development of sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle.	Given the scale of development in this option, it is likely to bring forward a good range of local facilities and ensure that the centre is viable. However, the configuration of the site with a wide green corridor fragmenting the new community would increase distances to the centre which could thus

Topic	Criteria	Description and assessment
	This will include a neighbourhood centre , some local shopping and provision for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800 dwellings and a 2 form entry is required for larger developments).	discourage journeys on foot and cycle.
Site configuration	Ensuring the site is of a shape capable of being developed satisfactorily to ensure: 1) a sustainable form of development; 2) a sense of place; 3) an appropriate level, location and quality of open space. Also consider whether the site provides an opportunity to create an enhanced gateway on an entrance to Cambridge, ie on Huntingdon Road or Madingley Road.	This option will no doubt allow for various sustainable approaches to be implemented, whether in terms of block layout, use of sustainable drainage, or predominant south facing building orientation, amongst others. A sense of place, while being a relatively difficult goal to achieve simply from a plan given that it is so much also influenced by social and economic factors, would be possible in this option given the large area available to create a new development. In terms of open space, there is a generous amount of open space provided in the form of a strategic gap from Girton and the relatively large amount of development land would allow for a greater amount of on site open space. However, the gap between the site and the M11 relatively narrow and low lying hence not of great use for formal open space use. Finally, the provision of an enhanced gateway is achievable, in terms of providing a strong built frontage on to Huntington Road.
Satisfactory mix of predominantly University related uses	Assess the scope for each site option to include a mix of uses having regard to:	It is assumed that as the University put this option forward, it will meet their aspirations in full.

Topic	Criteria	Description and assessment
	1. the focus of the development on predominantly University related uses; 2. identified University-related uses; 3. the need for Key Worker housing with the emphasis on University and College staff.	
Transport infrastructure	1. Assess the ability of each option to provide for different modes of transport with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic. 2. Assess the ability of each option to accommodate future strategic transport provision, including proposals emerging from the Cambridge Area Transport Strategy and the North West Cambridge Transport Study. 3. Assess the ability of each option to provide a high level of public transport accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park with West Cambridge.	1. Large area of development (particularly to the NW) is likely to generate a large number of trips and requiring corresponding transport infrastructure. 2. Majority of development links well to the proposed orbital link road, if this is to the west of the strategic gap, but not so well if it is to the east of the strategic gap. Proposed radial link road will need to cross strategic gap. 3. Greater width in NW part of site will make it more difficult to meet 400m walk distance. Size of development should be sufficient to justify site specific bus services.

Topic	Criteria	Description and assessment
Relationship with adjoining communities	Assess the degree to which it can link with and respect existing parts of Cambridge, including the rest of the University, the other part of the north west quadrant and Girton.	This option does not present any real opportunities to connect with Girton village, which lies essentially to the north of Huntingdon Road. South of Huntingdon Road the only development in Girton is the small number of large houses in extensive plots, which front Huntingdon Road. There is no real opportunity for the University development, to the rear of these properties, to connect to them or the main community of Girton village. As such, the development will function as a separate neighbourhood of "Girton South", rather than as an extension to Girton Village, albeit that they physically abut. It connects well with the existing built-up area of the city and with the proposed development at NIAB. It does not connect directly to the University's West Cambridge site although this does not preclude transport links being created.
Accessibility to community uses by walking and cycling	1. Within the development 2. Links between the new development and community uses outside the site relied on to serve the development. 3. Accessibility to community uses within the site from residents outside the development so that the development contributes to meeting the needs of the wider City community consistent with the vision set out in the AAP.	1. Larger north-south dimension and greater site area may make walking and cycling distances to community uses longer than other options. 2. Larger north-south dimension and greater site area may make walking and cycling distances to external community uses longer than other options. 3. Larger north-south dimension and greater site area may make walking and cycling distances from existing residential areas longer than other options, particularly from north east of Huntingdon Road.
Development viability and delivery	Development viability, and therefore delivery, may be affected by the site	Whilst this is an important matter there is no evidence to assess the various options. However, this option is

Topic	Criteria	Description and assessment
	footprint in terms of the overall scale of development and its ability to fund its infrastructure needs. However, without information on the development economics, development viability of any particular option cannot be assessed	considered viable and deliverable by the University

2. Sustainability Appraisal

It is a requirement of the Planning and Compulsory Purchase Act (2004) for all planning policy documents to undergo a Sustainability Appraisal in order to determine its impacts on social, economic and environmental objectives (the **Sustainability Objectives**), for example: to ensure everyone has access to decent, appropriate and affordable housing. As part of this process, site options A – D have been appraised and reported in an addendum (2007) to the Interim Sustainability Appraisal Report prepared by Scott Wilson (2006). A summary of the appraisal for this option is outlined below and for ease of interpretation the appraisal scoring system has been included.

Table 1: Appraisal Scoring System

SHADING	LIKELY IMPACT ON THE SUSTAINABILITY OBJECTIVE
Dark green text	Significant positive impact
Light green text	Some positive impact
Orange text	Moderate adverse impact
Red text	Negative impact
Yellow text	Uncertain or insufficient information to enable determination of impact
X	No significant effect / no clear link to the objective

Environmental

Predominantly Red and Orange

The development will represent significant land take of open space and Green belt land. The option is for a larger development footprint comparable in size to option 10.1 which will have increased resource demands, e.g. energy use and water use, and emissions of pollutants. This option will result in greater land take than Options A and B. This will have implications for open space provision and potentially for habitats and species across the site.

The incorporation of a wider buffer to the west of the SSSI reduces the risk to this site compared to options A, B and D. This will also extend the strategic gap through the site more successfully than the other options, which should reduce the risk of merger between the development and Girton. The footprint is further away from the sites of historic value to the south west of the site, than options A and B. The development extends beyond the 20m contour along the full length of the site which could obstruct views. This could cause greater obstruction than Options A and B but will be determined by the details of the design for the development.

Green The larger area of open space surrounding the SSSI should help protect the site from the development.

Unknown As 10.1.

Social

Orange: Reduced area of open space for recreation. Inclusion of open space into the development should provide some mitigation for this loss.

Light green: Local centre provided, however, quality of services and facilities will depend on final development plan.

Dark green: Affordable housing will be provided on the site and a local centre provided.

Economic

Dark green: As option A. This option could meet development aspirations of the University. This will allow for the full development requirements of the University, including a local centre and a school. These developments, together with research facilities will provide employment opportunities and will improve business development.

North West Cambridge – Issues & Options

1. Site Assessment

Option D

Topic	Criteria	Description and assessment
OVERVIEW		
Development Option	Brief description of the site option.	Based on Option C, development in this option extends down the slope towards the Washpit Book and the M11 leaving a 200-250 metre wide strip of landscape buffer between the motorway and the edge of the development. Additional green indentations into the development are also featured. A 200m Strategic Gap is retained from Huntingdon Road running roughly southwards towards Madingley Road.
Developable land	Size of site option in hectares.	75ha Indicative built environment
University Aspirations	Comparison of the site option against: 1. the built footprint as proposed by the University in its masterplan (Option 10.1). 2. the built footprint of Option 10.2, which the representations by the University indicate could meet its needs. The proportional indication of the overall scale of development against the full aspirations of the University. These reflect the University's potential to	The University has indicated that its needs would be accommodated on the built footprint of 77ha (option 10.1). By comparison, with other factors being equal, this option could provide for 97% of the development aspirations of the University. The University has also indicated that most of its needs could be accommodated on the built footprint of 68ha (option 10.2) therefore, this option could provide for 110% of the development aspirations of the University.

Topic	Criteria	Description and assessment
	contribute to the further development of Cambridge and its sub region as a world leader in the fields of higher education and research.	
CONSIDERATIONS		
Sub regional housing requirement	Assess how the potential housing yield contributes to meeting the housing requirements of Cambridge City and South Cambs as set out in the RSS. Provide a pro rata assessment of housing and student accommodation yields, eg. if the site option were 80% of the University's built footprint, the assumption is that it would yield 80% of the number of dwellings. This does not take account of any change in the proportions of individual land uses that the University may advise is appropriate in view of the relative priorities for specific uses. It also does not consider potential to achieve a greater proportion of development through measures such as increased densities. Note: housing requirements are by district but it is not possible to make any realistic assumptions of dwelling yield by district for a mixed use site in the absence of masterplanning.	On a pro-rata reduction of the 2,500 dwellings in option 10.1, the indicative built environment of this option would 2435 dwellings.
Contribution to Strategic Employment Provision	Assess the potential to contribute towards strategic employment provision	On a pro-rata reduction of option 10.1, this option would provide floorspace of 97,403m2 or 34 ha of employment

Topic	Criteria	Description and assessment
	as set out Structure Plan Policy P2/3.	land.
Green Belt	Assess against the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2b: 1. Retain any area required to maintain the purposes of Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form;; 2. Have regard for the compact form of the City; 3. Provide green separation between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. Ensure protection of green corridors running from open countryside into the urban area as generally indicated on the Key Diagram; 5. Maintain views of the historic core.; 6. provide, where appropriate, for limited development in identified Rural centres in accordance with Policy P1/1..	1. In this option development is not confined to the 20 metre contour line and does result in a significant loss of green foreground on the slope of land down to the Washpit Brook and M11 which provides a key part of the setting of the City with views from the M11 and the Madingley area compromised. The rising landform makes this area very prominent in views from the west of Cambridge The open and pastoral character of this land presents the quintessential rural setting that is associated with the setting of Cambridge. This openness also allows the visual, historical and cultural connections between the two prominent existing focal points in the landscape; the Chapel of the American Cemetery and the tower of Girton College. In short, it is a visually sensitive landscape that currently enhances the setting of Cambridge and which would very largely lost under this option. This sweep of open rising ground that is so important to the setting of Cambridge is effectively lost and the proximity to the M11 and the rising landform will lead to this area not being perceived as a significant foreground. The rising land also means that development will be viewed over some distance as it extends up the slope and would not be able to be effectively screened, increasing its visual impact. 2. This option does extend into the open countryside although not as much as option 10.1 and 10.2. 3. This option provides adequate separation between Girton as the Strategic Gap is maintained at 200m. 4. The green corridor along Madingley Road is

Topic	Criteria	Description and assessment
	The purposes of the Green Belt as stated in Policy P9/2a are to: • Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre; • Maintain and enhance the quality of its setting; • Prevent communities in the Cambridge environs of Cambridge from merging into one another and with the city. The assessment of the impact on the quality of the setting of Cambridge, will include consideration of topography, landscape character, short and long distance views from main vantage points, and providing an attractive green foreground to the City.	maintained. 5. There is no direct impact on the views of the Historic Core 6. This is not considered relevant in this assessment. The primary impact would arise from the extent to which this option would visually impact on views and the green foreground to the City.
Historic landscape	Assess the historic landscape character of the area and the impact of each option on the quality and integrity of the landscape. This includes consideration of ridge and furrow, pre-enclosure hedgerows, pre-enclosure field boundaries and recorded crop marks.	The loss of historic landscape elements with this option would be of high significance. Historic field patterns, pre-enclosure boundaries, pre-enclosure hedgerows and ridge and burrow patterns, which are rare survivals from the former open field system which dates back to at least medieval times, will be lost. These heritage landscape elements provide the historic core of Cambridge with a setting and context. The loss of so much of the rural setting will be of a high significance and a diminution of the value of

Topic	Criteria	Description and assessment
		the historic core itself. The Option would include a 'piecemeal' retention of features from the historic landscape e.g. Veteran oak and historic hedgerows, which would erode their value in terms of context and historical relevance and it is also unlikely to sustain these features in the long term.
Biodiversity	Assess the biodiversity value of the area and the impact of each option on that value. This includes protected species such as Great Crested Newts and badgers. The Washpit Brook area is of particular biodiversity value. Also assess the impact on the Travellers Rest Pit SSSI, designated for its geological importance.	The primary impact arises from the extent of the development area with development encroaching upon Washpit Brook to the northwest edge of the site, which is a known area of ecological interest. It would also probably require the relocation and careful re-establishment of a secondary badger sett which lies behind the houses fronting Huntingdon Road. A main badger sett in the vicinity of the Travellers Rest SSSI is relatively well protected by an area of open space although there would be some disturbance. Ponds known to have or have potential to have Great Crested Newt populations are largely unaffected. The geological SSSI of the Travellers' Pit forms part of the open space within the strategic gap and would therefore be well protected.
Surface water attenuation	The development will generate significant volumes of surface water, which will drain into Washpit Brook. The floodplain starts at the edge of the area and extends to the River Great Ouse, along the route of the brook and its continuations. Assess the ability of the development to provide surface water	Given the size of this option, it could be expected to generate a relatively large volume of surface water arising from hard surfaces in need of attenuation. Most of the development drains towards Washpit Brook with the possible exception of part of the site to the east of the north-south strategic gap. Provided that sustainable drainage systems (SUDS) are incorporated within the built footprint,

Topic	Criteria	Description and assessment
	attenuation within the area of control of the University	there is no reason to expect that this option could not satisfactorily accommodate measures to attenuate surface water so that off-site flooding and drainage problems are not made worse. Any necessary water storage areas would be likely to be located in the low lying parts of the site to the south and adjoining the M11 and the Washpit Brook.
Health and amenity	Assess the implications of noise and air pollution as well as the visual impact arising from the M11 on each site option as a whole and for all uses (including built and open uses within the site). This would include the environmental & visual impact of any necessary mitigation measures including built form, landscaping and sound attenuation barriers.	The main issues are noise and air quality as a result of the proximity of the M11. Residential development is unlikely to be appropriate at the northern tip of the site where it is close to the Girton Interchange on air quality issues. However employment may be suitable here and on the western limits of the development close to the M11 itself. It is possible that employment here could shield residential development to the east of it, improving the noise environment of the site, although this may be limited by the rise in land levels. Development on the eastern side of the site furthest from the M11 is less likely to be affected. As in most of consultation options, mitigation measures will be needed. This may include a mix of solutions including a 3m acoustic barrier along the M11 and a 5m bund closer to the development, and careful design and orientation of buildings. It will be necessary for buildings to be situated so as to prevent the creation of noise corridors into the site.
Sustainable Development	Development of sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle.	Given the scale of development in this option, it is likely to bring forward a good range of local facilities and ensure that the centre is viable. The configuration of the site with a narrow strategic gap (200m at Huntingdon Road and maintained though the development) it would encourage a

Topic	Criteria	Description and assessment
	This will include a neighbourhood centre , some local shopping and provision for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800 dwellings and a 2 form entry is required for larger developments).	cohesive new community where distances to the neighbourhood centre were minimised (although not as much as in Option A) thus encouraging journey on foot and cycle.
Site configuration	Ensuring the site is of a shape capable of being developed satisfactorily to ensure: 1) a sustainable form of development; 2) a sense of place; 3) an appropriate level, location and quality of open space. Also consider whether the site provides an opportunity to create an enhanced gateway on an entrance to Cambridge, ie on Huntingdon Road or Madingley Road.	The option will no doubt allow for various sustainable approaches to be implemented, whether in terms of block layout, use of sustainable drainage, or predominant south facing building orientation, amongst others. A sense of place, while being a relatively difficult goal to achieve simply from a plan given that it is so much also influenced by social and economic factors, would be possible in this option given the large area available to create a new development. In terms of open space, there is a good amount of open space provided in the form of a strategic gap from Girton and the relatively large amount of development land would allow for a greater amount of on site open space. However, the gap between the site and the M11 is narrow and low lying (but wider than 10.1) hence not of great use for formal open space use. Finally, the provision of an enhanced gateway is achievable, in terms of providing a strong built frontage on to Huntington Road.
Satisfactory mix of predominantly University related uses	Assess the scope for each site option to include a mix of uses having regard to: 1. the focus of the development on	It is assumed that as the University put this option forward, it will meet their aspirations in full.

Topic	Criteria	Description and assessment
	predominantly University related uses; 2. identified University-related uses; 3. the need for Key Worker housing with the emphasis on University and College staff.	
Transport infrastructure	1. Assess the ability of each option to provide for different modes of transport with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic. 2. Assess the ability of each option to accommodate future strategic transport provision, including proposals emerging from the Cambridge Area Transport Strategy and the North West Cambridge Transport Study. 3. Assess the ability of each option to provide a high level of public transport accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park with West Cambridge.	1. Large area of development (particularly to the NW) is likely to generate a large number of trips and requiring corresponding transport infrastructure. 2. Majority of development links well to the proposed orbital link road, if this is to the west of the strategic gap, but not so well if it is to the east of the strategic gap. Proposed radial link road will need to cross strategic gap. 3. Greater width in NW part of site will make it more difficult to meet 400m walk distance. Size of development should be sufficient to justify site specific bus services.
Relationship with	Assess the degree to which it can link	This option does not present any real opportunities to

Topic	Criteria	Description and assessment
adjoining communities	with and respect existing parts of Cambridge, including the rest of the University, the other part of the north west quadrant and Girton.	connect with Girton village, which lies essentially to the north of Huntingdon Road. South of Huntingdon Road the only development in Girton is the small number of large houses in extensive plots, which front Huntingdon Road. There is no real opportunity for the University development, to the rear of these properties, to connect to them or the main community of Girton village. As such, the development will function as a separate neighbourhood of "Girton South", rather than as an extension to Girton Village, albeit that they physically abut. It connects well with the existing built-up area of the city and with the proposed development at NIAB. It does not connect directly to the University's West Cambridge site although this does not preclude transport links being created.
Accessibility to community uses by walking and cycling	1. Within the development 2. Links between the new development and community uses outside the site relied on to serve the development. 3. Accessibility to community uses within the site from residents outside the development so that the development contributes to meeting the needs of the wider City community consistent with the vision set out in the AAP.	1. Larger north-south dimension and greater site area may make walking and cycling distances to community uses longer than other options. 2. Larger north-south dimension and greater site area may make walking and cycling distances to external community uses longer than other options. 3. Larger north-south dimension and greater site area may make walking and cycling distances from existing residential areas longer than other options, particularly from north east of Huntingdon Road.
Development viability and delivery	Development viability, and therefore delivery, may be affected by the site footprint in terms of the overall scale of	Whilst this is an important matter there is no evidence to assess the various options. However, this option is considered viable and deliverable by the University

Topic	Criteria	Description and assessment
	development and its ability to fund its infrastructure needs. However, without information on the development economics, development viability of any particular option cannot be assessed	

2. Sustainability Appraisal

It is a requirement of the Planning and Compulsory Purchase Act (2004) for all planning policy documents to undergo a Sustainability Appraisal in order to determine its impacts on social, economic and environmental objectives (the **Sustainability Objectives**), for example: to ensure everyone has access to decent, appropriate and affordable housing. As part of this process, site options A – D have been appraised and reported in an addendum (2007) to the Interim Sustainability Appraisal Report prepared by Scott Wilson (2006). A summary of the appraisal for this option is outlined below and for ease of interpretation the appraisal scoring system has been included.

Table 1: Appraisal Scoring System

SHADING	LIKELY IMPACT ON THE SUSTAINABILITY OBJECTIVE
Dark green text	Significant positive impact
Light green text	Some positive impact
Orange text	Moderate adverse impact
Red text	Negative impact
Yellow text	Uncertain or insufficient information to enable determination of impact
X	No significant effect / no clear link to the objective

Environmental

Predominantly Red and orange

The development is for a large footprint comparable to option 10.1. The larger development footprint will have increased resource demands compared to smaller development footprints (e.g. Option 10.5). Greater development results in more light, noise pollution,

greater energy and water use, greater area of hard surface, which in turn may have drainage and flooding implications, which could be exacerbated by climate change. This option will result in greater land take than Options A and B and to a lesser extent, C.

The extent of the spatial footprint impacts significantly on habitats and species, including badgers and habitat near brook and wetlands area. The spatial footprint results in a significant reduction in open space and access to wildlife areas. The significant land take increases the risk of merger of new development with Girton and the sweep of open rising land and setting of the city will be lost. The extension of the footprint into the line of the strategic gap could also increase the risk of merger. Some views of Girton College and the historic centre lost due to development on the ridge. The sensitive historic landscape and features may be impacted although not as significantly as for Options A and B.

Unknown

As 10.1

Also, the presence of a buffer around the SSSI could have a positive impact but the limited extent could also mean there will be a negative impact on the SSSI from the new development.

Social

Red and orange: Reduced area of open space and public access to open space.

Light green: Local centre provided, however, quality of services and facilities will depend on final development plan.

Dark green: Affordable housing will be provided on the site and a local centre provided.

Economic

Dark green: As option A. This option could meet development aspirations of the University. This will allow for the full development requirements of the University, including a local centre and a school. These developments, together with research facilities will provide employment opportunities and will improve business development.

North West Cambridge – Issues & Options

1. Site Assessment

Option E

Topic	Criteria	Description and assessment
OVERVIEW		
Development Option	Brief description of the site option.	In this option, development is withdrawn to the 20m contour line in the SCDC part of the site such that it does not extend down the slope towards the Washpit Brook and M11. To the south of the site in the City, development departs from the 20m contour behind the established hedge line towards the point where the M11 runs in a cutting to the south. A 200m strategic gap is retained immediately south of Huntingdon Road which then extends into a large central green space. Just south of the central green space, the gap then narrows to 100 metres as it runs towards Madingley Road.
Developable land	Size of site option in hectares.	69ha Indicative built environment
University Aspirations	Comparison of the site option against: 1. the built footprint as proposed by the University in its masterplan (Option 10.1). 2. the built footprint of Option	The University has indicated that its needs would be accommodated on the built footprint of 77ha (option 10.1). By comparison, with other factors being equal, this option could provide for 90% of the development aspirations of the University. The University has also indicated that most of its needs could

Topic	Criteria	Description and assessment
	10.2, which the representations by the University indicate could meet its needs. The proportional indication of the overall scale of development against the full aspirations of the University. These reflect the University's potential to contribute to the further development of Cambridge and its sub region as a world leader in the fields of higher education and research.	be accommodated on the built footprint of 68 ha (Option 10.2) therefore, this option could provide for 102% of the development aspirations of the University.
CONSIDERATIONS		
Sub regional housing requirement	Assess how the potential housing yield contributes to meeting the housing requirements of Cambridge City and South Cambs as set out in the RSS. Provide a pro rata assessment of housing and student accommodation yields, eg. if the site option were 80% of the University's built footprint, the assumption is that it would yield 80% of the number of dwellings. This does not take account of any change in the proportions of individual land uses that the University may advise is	On a pro-rata reduction of the 2,500 dwellings in 10.1, the indicative built environment this option would be 2,240 dwellings

Topic	Criteria	Description and assessment
	appropriate in view of the relative priorities for specific uses. It also does not consider potential to achieve a greater proportion of development through measures such as increased densities. Note: housing requirements are by district but it is not possible to make any realistic assumptions of dwelling yield by district for a mixed use site in the absence of masterplanning.	
Contribution to Strategic Employment Provision	Assess the potential to contribute towards strategic employment provision as set out Structure Plan Policy P2/3.	On a pro-rata reduction of option 10.1, this option would provide floorspace of 89,610 m2 or 31.81 ha of employment land.
Green Belt	Assess against the relevant (saved) Structure Plan criteria for carrying out the Green Belt review on the edge of Cambridge as stated in Policy P9/2b: 1. Retain any area required to maintain the purposes of Green Belt as set out in Policy P9/2a in the context of delivering sustainable development and planned settlement form;; 2. Have regard for the compact form of the City; 3. Provide green separation	1. This option would have a reduced impact on views and upon the green foreground to the City as the northern part of its western edge respects the 20 metre contour identified as important by the Green Belt Landscape Study of 2006. It does descend the slope further in the southern sector but the impact on views and setting is limited by the shape of the slope and the existing hedge-line, although this would need to be strengthened to be effective. 2. This option has a reduced footprint and therefore maintains the compact nature of the City better than 10.1 or 10.2. The width of the green gap between Girton and Cambridge, which is around 200m in width at Huntingdon Road and narrows to 100m just south of a large central green space which allows a compact development site.

Topic	Criteria	Description and assessment
	between existing settlements and any urban expansion of Cambridge to maintain the identity of the individual settlements; 4. Ensure protection of green corridors running from open countryside into the urban area as generally indicated on the Key Diagram; 5. Maintain views of the historic core.; 6. provide, where appropriate, for limited development in identified Rural centres in accordance with Policy P1/1. The purposes of the Green Belt as stated in Policy P9/2a are to: • Preserve the unique character of Cambridge as a compact, dynamic city with a thriving historic centre; • Maintain and enhance the quality of its setting; • Prevent communities in the Cambridge environs of Cambridge from	3. Provides adequate separation between Girton as the green gap is maintained at 200m to the south of Huntingdon Road. In this option, just south of the large central green space , the gap narrows to 100m and so minimises the problems caused by open space affecting the community cohesion of the two parts of the development. 4. The green corridor along Madingley Road is maintained. 5. There is no direct impact on the views of the Historic Core. 6. This is not considered relevant in this assessment.

Topic	Criteria	Description and assessment
	merging into one another and with the city. The assessment of the impact on the quality of the setting of Cambridge, will include consideration of topography, landscape character, short and long distance views from main vantage points, and providing an attractive green foreground to the City.	
Historic landscape	Assess the historic landscape character of the area and the impact on the quality and integrity of the landscape. This includes consideration of ridge and furrow, pre-enclosure hedgerows, pre-enclosure field boundaries and recorded crop marks.	This Option would 'set' the north west edge of the new development within an green and open foreground protecting to some extent an element of the historic setting of the city because much of the development is defined by the break of the slope at the 20m contour. The loss of historic landscape elements with this option would be of high significance. Historic field patterns, pre-enclosure boundaries, pre-enclosure hedgerows and ridge and burrow patterns, which are rare survivals from the former open field system which dates back to at least medieval times, will be lost. These heritage landscape elements provide the historic core of Cambridge with a setting and context. The Option would include a 'piecemeal' retention of features from the historic landscape, including the veteran oak and the historic hedgerows, which would erode their value in terms of context and historical relevance and it is also unlikely to sustain these features in the long term.

Topic	Criteria	Description and assessment
		The impact of the level of development on the historic landscape would also be significant in terms of the adverse effects of the development itself combined with infrastructure issues because of the extent of the development across the historic fields to the south west.
Biodiversity	Assess the biodiversity value of the area and the impact on that value. This includes protected species such as Great Crested Newts and badgers. The Washpit Brook area is of particular biodiversity value. Also assess the impact on the Travellers Rest Pit SSSI, designated for its geological importance.	This option has less impact than 10.1 on the Washpit Brook to the northwest edge of the site, which is a known area of ecological interest as development is largely limited to the higher ground. It would probably require the relocation and careful re-establishment of a secondary badger sett which lies behind the houses fronting Huntingdon Road. A main badger sett in the vicinity of the Travellers Rest SSSI is protected by a green corridor and a large central green space. Ponds known to have or have potential to have Great Crested Newt populations could be slightly affected by the proximity of development. The geological SSSI of the Travellers' Pit remains within the central green space.
Surface water attenuation	The development will generate significant volumes of surface water, which will drain into Washpit Brook. The floodplain starts at the edge of the area and extends to the River Great Ouse, along the route of the brook and its continuations. Assess the ability to provide surface water attenuation within the area of control of the University	Most of the development drains towards Washpit Brook with the possible exception of part of the site to the east of the north-south strategic gap. Provided that sustainable drainage systems (SUDS) are incorporated within the built footprint, there is no reason to expect that this option could not satisfactorily accommodate measures to attenuate surface water so that off-site flooding and drainage problems are not made worse. Any necessary water storage areas would be likely to be located in the low lying parts of the site to the south and adjoining the M11 and the Washpit Brook.

Topic	Criteria	Description and assessment
Health and amenity	Assess the implications of noise and air pollution as well as the visual impact arising from the M11 as a whole and for all uses (including built and open uses within the site). This would include the environmental & visual impact of any necessary mitigation measures including built form, landscaping and sound attenuation barriers.	This performs much the same as 10.3 and 10.4 although some development in the south west of the site is closer to the M11 than in those options. The greater distance of development from the M11 by being limited to the higher ground in the northern sector may reduce the impact of sound, but it allows less opportunity for employment buildings to shield residential development. Development on the eastern side of the site furthest from the M11 is less likely to be affected. As in most of options, mitigation measures will be needed. This may include a mix of solutions including a 3m acoustic barrier along the M11 and a 5m bund closer to the development, and careful design and orientation of buildings. It will be necessary for buildings to be situated so as to prevent the creation of noise corridors into the site. In this option a large central green space would benefit from noise shielding provided by built development to the west and south west and so would be of a high amenity value. The greater enclosure of this large central green space by development would be likely to mean that it would perform better than option 10.1 in this regard.
Sustainable Development	Development of sufficient scale to provide for a range of local community services and facilities to enable a degree of self containment and to minimise travel and support a sustainable lifestyle. This will include a neighbourhood centre , some local shopping and provision	The scale of development would be sufficient to support a local centre with a range of services and facilities. The configuration of the site with a narrow green corridor just south of the large central green space would encourage a cohesive new community where distances to the neighbourhood centre were minimised thus encouraging journey on foot and cycle.

Topic	Criteria	Description and assessment
	for primary education proportionate to the number of dwellings proposed (a 1form entry primary is required for up to 800 dwellings and a 2 form entry is required for larger developments).	
Site configuration	Ensuring the site is of a shape capable of being developed satisfactorily to ensure: 1) a sustainable form of development; 2) a sense of place; 3) an appropriate level, location and quality of open space. Also consider whether the site provides an opportunity to create an enhanced gateway on an entrance to Cambridge, ie on Huntingdon Road or Madingley Road.	The development is capable of being delivered in a sustainable fashion in that it provides a sufficient land area in which to develop robust urban blocks with sufficient land for services, facilities, and related infrastructure within the site footprint. A sense of place is possible, with the ability to create a single centre serving both parts. In terms of open space, there is a generous amount of open space provided in the form of a strategic gap from Girton which extends out into a larger, central green space and then narrows to 100metres as it runs towards Madingley Road. Finally, an enhanced gateway is possible on the Huntington Road frontage at its westerly end.
Satisfactory mix of predominantly University related uses	Assess the scope to include a mix of uses having regard to: 1. the focus of the development on predominantly University related uses; 2. identified University-related uses; 3. the need for Key Worker	The University has not formally considered this new variant. In terms of the scale of development, it is slightly larger than 10.2 which the University indicated in the initial assessment of 10.2 by consultants acting for the University was that the required volume of development could be accommodated on a site of this scale whilst maintaining a character and scale of development compatible with its context.

Topic	Criteria	Description and assessment
	housing with the emphasis on University and College staff.	
Transport infrastructure	1. Assess the ability to provide for different modes of transport with priority to walking, cycling and public transport provision, and minimising the scale of infrastructure for other motorised traffic. 2. Assess the ability to accommodate future strategic transport provision, including proposals emerging from the Cambridge Area Transport Strategy and the North West Cambridge Transport Study. 3. Assess the ability to provide a high level of public transport accessibility, based on maximum walking distances to bus stops of 400m and good connections to dedicated public transport corridors in the wider network e.g. an orbital route to link the Science Park with West Cambridge.	1. Large area of development (particularly to the NW) is likely to generate a large number of trips and requiring corresponding transport infrastructure. 2. Majority of development links well to the proposed orbital link road, if this is to the west of the strategic gap, but not so well if it is to the east of the strategic gap. Proposed radial link road will need to cross strategic gap. 3. Greater width in NW part of site will make it more difficult to meet 400m walk distance. Size of development should be sufficient to justify site specific bus services.

Topic	Criteria	Description and assessment
Relationship with adjoining communities	Assess the degree to which it can link with and respect existing parts of Cambridge, including the rest of the University, the other part of the north west quadrant and Girton.	The University's development does not present any real opportunities to connect with Girton village which lies essentially to the north of Huntingdon Road. South of Huntingdon Road the only development in Girton is the small number of large houses in extensive plots which front Huntingdon Road. There is no real opportunity for the University development, to the rear of these properties, to connect to them or the main community of Girton village. As such, the development will function as a separate neighbourhood of "Girton South", rather than as an extension to Girton village, albeit that they physically abut. Development on the eastern part of the site would be well related and connected to adjoining parts of the City. It connects well with the existing built-up area of the city and with the proposed development at NIAB. However, development of the western part would be somewhat remote from adjoining areas. It does not connect directly to the University's West Cambridge site although this does not preclude transport links being created.
Accessibility to community uses by walking and cycling	1. Within the development 2. Links between the new development and community uses outside the site relied on to serve the development. 3. Accessibility to community uses within the site from residents outside the development so that the development contributes to meeting the needs of the wider City community	1. Larger north-south dimension and greater site area may make walking and cycling distances to community uses longer than other options. 2. Larger north-south dimension and greater site area may make walking and cycling distances to external community uses longer than other options. 3. Larger north-south dimension and greater site area may make walking and cycling distances from existing residential areas longer than other options, particularly from north east of Huntingdon Road.

Topic	Criteria	Description and assessment
	consistent with the vision set out in the AAP.	
Development viability and delivery	Development viability, and therefore delivery, may be affected by the site footprint in terms of the overall scale of development and its ability to fund its infrastructure needs. However, without information on the development economics, development viability of any particular option cannot be assessed.	There is no evidence to suggest that this option is not viable and deliverable. The University has not formally considered this new variant. In terms of the scale of development, it is slightly larger than 10.2. The initial assessment of 10.2 by consultants acting for the University was that the required volume of development could be accommodated on a site of this scale whilst maintaining a character and scale of development compatible with its context. They did not suggest that development on such a scale was unviable. This suggests that the University may consider that development of a site based on Option E is viable. Initial work on masterplanning by officers suggests that it is deliverable.

2. Sustainability Appraisal

It is a requirement of the Planning and Compulsory Purchase Act (2004) for all planning policy documents to undergo a Sustainability Appraisal in order to determine its impacts on social, economic and environmental objectives (the **Sustainability Objectives**), for example: to ensure everyone has access to decent, appropriate and affordable housing. As part of this process, site options A – D have been appraised and reported in an addendum (2007) to the Interim Sustainability Appraisal Report prepared by Scott Wilson (2006). A summary of the appraisal for this option is outlined below and for ease of interpretation the appraisal scoring system has been included.

Table 1: Appraisal Scoring System

SHADING	LIKELY IMPACT ON THE SUSTAINABILITY OBJECTIVE
Dark green text	Significant positive impact
Light green text	Some positive impact

Orange text	Moderate adverse impact
Red text	Negative impact
Yellow text	Uncertain or insufficient information to enable determination of impact
X	No significant effect / no clear link to the objective

Environmental

Predominantly Red and orange

This option is for a relatively large development, which has a footprint comparable in size to Option B and 10.2. The larger development footprint will have increase resource demands compared to smaller development footprints (e.g. option 10.5). Greater development results in more light, noise pollution, greater energy and water use and greater area of hard surfaces. Hard surfaces may have drainage and flooding implications that could be exacerbated by climate change.

The option will result in less land take than options A, C & D. The development could have some ecological impacts and a significant area of open space and areas of historic interest lost. Less impact on wetland area around brook than 10.1. The wider buffer provided near the SSSI should mean the risk of negative impacts on the SSSI and of the merger of new development with Girton is less than for Options A,B & D. Nevertheless, the development will involve significant land take in the green belt. Limited development on slope but extension to the south west which will cross the 20m contour may impact views and the sensitive historical features in this area. Some views may be blocked to Girton and the city.

Dark green: The larger area of open space surrounding the SSSI should help protect the site from the development.

Unknown: As 10.1

Social

Orange:

Reduced area of open space for recreation although a greater area than under option A will be provided.

Light green: Local centre provided, however, quality of services and facilities will depend on final development plan.

Dark green: Affordable housing will be provided on the site and a local centre provided.

Economic

Dark green: As option A. This option could meet development aspirations of the University. This could allow for the full development requirements of the University, including a local centre and a school. These developments, together with research facilities will provide employment opportunities and will improve business development.

Appendix 1.11 – Maps of Site Options A to E

Option A

N

SSSI

Indicative Built Environment

Principal Open Space

0 100 200 400 600 800 1,000 Metres

Option B

N

SSSI

Indicative Built Environment

Principal Open Space

0 100 200 400 600 800 1,000 Metres

Option C

N

SSSI

Indicative Built Environment

Principal Open Space

0 100 200 400 600 800 1,000 Metres

Option D

N

SSSI

Indicative Built Environment

Principal Open Space

0 100 200 400 600 800 1,000 Metres

Option E

N

SSSI

Indicative Built Environment

Principal Open Space

0 75 150 300 450 600 750 Metres

Appendix 1.12 – Three Dimensional Modelling

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Sara Cass
Urban Extensions Project Manager
Planning Policy
Cambridge City Council
The Guildhall
Cambridge CB2 3QJ

6 June 2007

Dear Sara,

Re: Technical Assessment of Views of Northwest Cambridge Development Site

Please find enclosed a summary of the outcome of the initial three-dimensional modelling of the Northwest Cambridge site. It was agreed that we would undertake an additional technical study relating to the development options for Northwest Cambridge set out in the Area Action Plan as well as those developed further by the Councils. The images enclosed illustrate the preliminary three-dimensional modelling of the site. We have a number of points of discussion that relate to these images; however, as you are unable to meet to discuss them in person, we have set them out in this letter.

1) Methodology

The methodology to undertake this technical study was discussed with you at our meeting in April and confirmed in email correspondence. As requested, we have modelled the four different development footprints, using only the building line and not considering built form within the development footprint or specific details of masterplans. The steps to undertake this work were as follows:

a) GIS was used to pinpoint the agreed viewpoints, which are illustrated in the attached report. These include 2 long distance views, 2 views from the M11 and 3 views from in or immediately adjacent to the proposed development.
b) The topography of the site was modelled using GIS and the Sketchup programme.
c) The 3D model of each of the proposed development lines was draped on the topography using Sketchup. Each of the options was modelled as a 'ribbon' of development along the proposed site boundary.

The four options modelled are:

i) Option 10.1 (University's Illustrative Masterplan, 4 storeys): This is based on the University's masterplan, developed through an extensive masterplanning exercise as well as stakeholder consultation.
ii) 2007 Discussion Plan (4 storeys): Following a series of meetings between the University and the Councils, the University's masterplan has been developed further to respond to emerging responses.
iii) Option A/B (4 storeys): Options A & B are additional plans tabled by the Councils following the Issues & Options consultation. The exact status of the options is unknown. The building line along the M11 is the same for both options, and they differ only in the treatment of the Girton Gap.

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iv) Option A/B (5 storeys): Options A & B were also modelled at 5 storeys to reflect the need to accommodate the University's development requirements within a smaller building footprint.

d) 50mm views of each of the options were captured in the Sketchup from all viewpoints
e) The Sketchup views were overlaid onto 50mm photographs of the site to obtain a photomontage showing a wall of development in the site.

2) Initial Assessment of Views

The results of the modelling exercise are detailed in the attached document. Our summary conclusions from this exercise are as follows:

a) Long Distance Views (Viewpoints 1&2):
   i) No difference between different development options.
   ii) No difference in impact on views of Girton College or setting of Cambridge.
b) Views from the M11 (Viewpoints 3&4):
   i) No noticeable difference in impact on views of the historic setting of Cambridge.
   ii) Minor perceived difference in green setting as Option 10.1 and Discussion Option building lines are closer to M11. Although the actual perceived difference cannot be quantified, as this is a static assessment of what would normally be a moving view in vehicles attaining speeds of up to 70 miles per hour. For Viewpoint 4, there would be an impact on views of Girton College if the University was required to develop Option A or B to 5 storeys to accommodate its requirements.
c) Views immediately in or adjacent to the site (Viewpoints 5, 6 & 7):
   i) View 5: No real difference in views from Viewpoint 5. The development's proximity to viewpoint means that all development will have impact on views.
   ii) Views 6 & 7: University's preferred option is least obtrusive in View 6 and not visible in View 7. Discussion Option & Options A&B have different perceived impact because they project into Girton Gap more substantially than Option 10.1.

3) Further Considerations

The approach taken in the modelling exercise, at the request of the Councils, was specifically adopted to allow the simply comparison to be made on the impact of development assuming different locations within the site for different building footprint edges. Consequently, the development edge was modelled as a consistent and monolithic wall of development for all four options, to allow for consistency between the different options. However, the actual development form will not be a continuous built edge. As demonstrated throughout the masterplanning exercise to date, and one which will be continued in the future, in finalising the University's Masterplan the emerging solution will be based on a developed and articulated building edge that would not appear as a continuous 4 storey wall of development along the development edge. In practice the actual urban edge will be broken in a number of places to allow for green links from the surrounding areas as well as enabling views of centrepiece spaces and buildings within the development all set within a landscaped framework. As such, until the masterplan design is developed in greater detail it will be difficult to ascertain specific differences in impact for short distance views.

In closing, therefore, we believe that this exercise has been instrumental in demonstrating that there is no discernable difference between the long distance views which can be seen as both static and moving views between Option 10.1 and the other Options. Turning to the views from the M11, the exercise indicates a minor difference in perspective as a static view. However, even this is of course a distortion as most of these views will be form vehicles travelling at up to 70mph and therefore only be a fleeting view.

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Consequently, we believe Option 10.1 provides a realistic building footprint edge from which to undertake the detailed iterative detailed design work to create a new quality urban edge to Cambridge which combines quality built forms and landscaped areas.

Yours sincerely,

Charles Ledward
Principal

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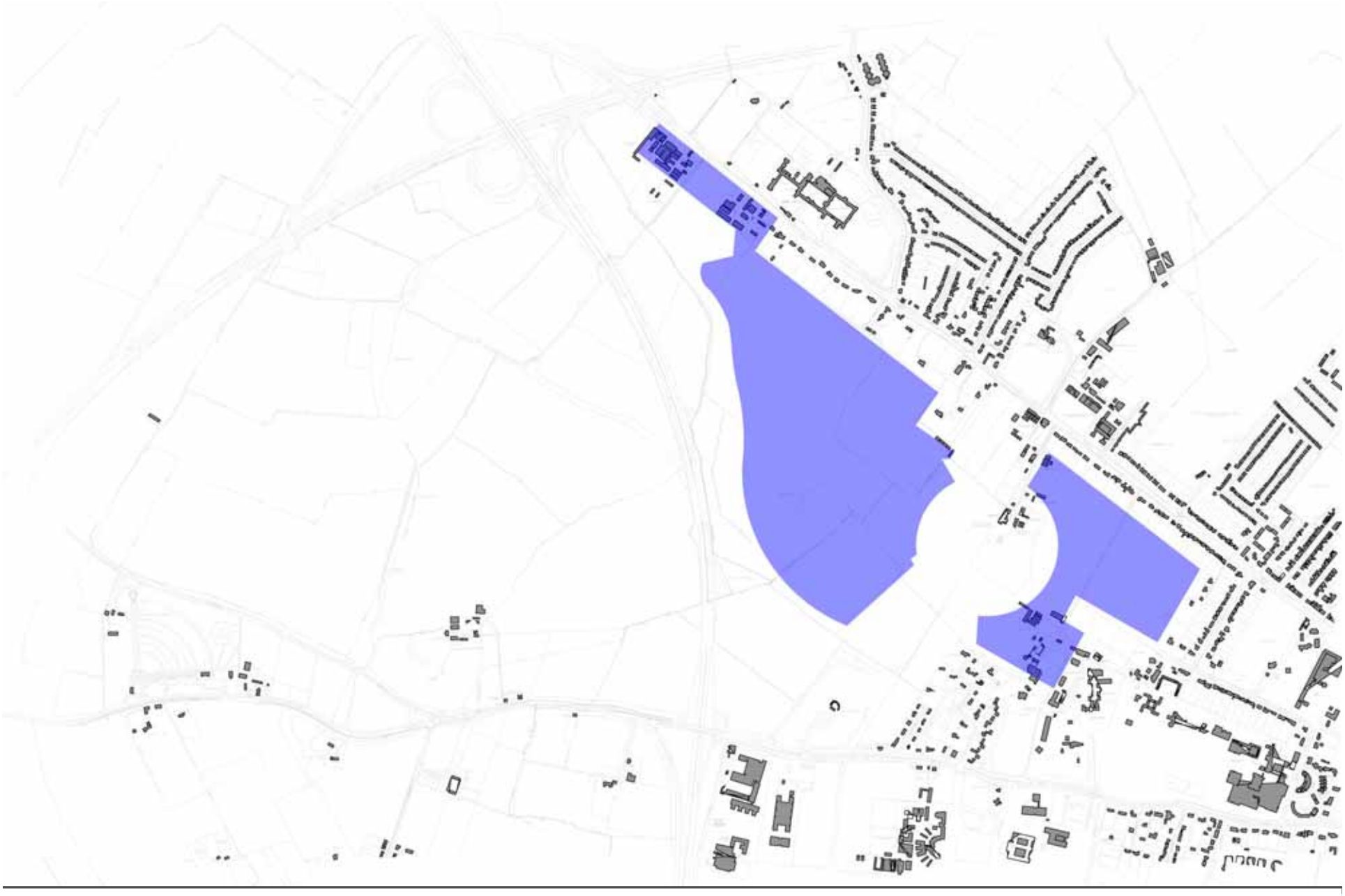
North West Cambridge

Views & Modelling

May 2007

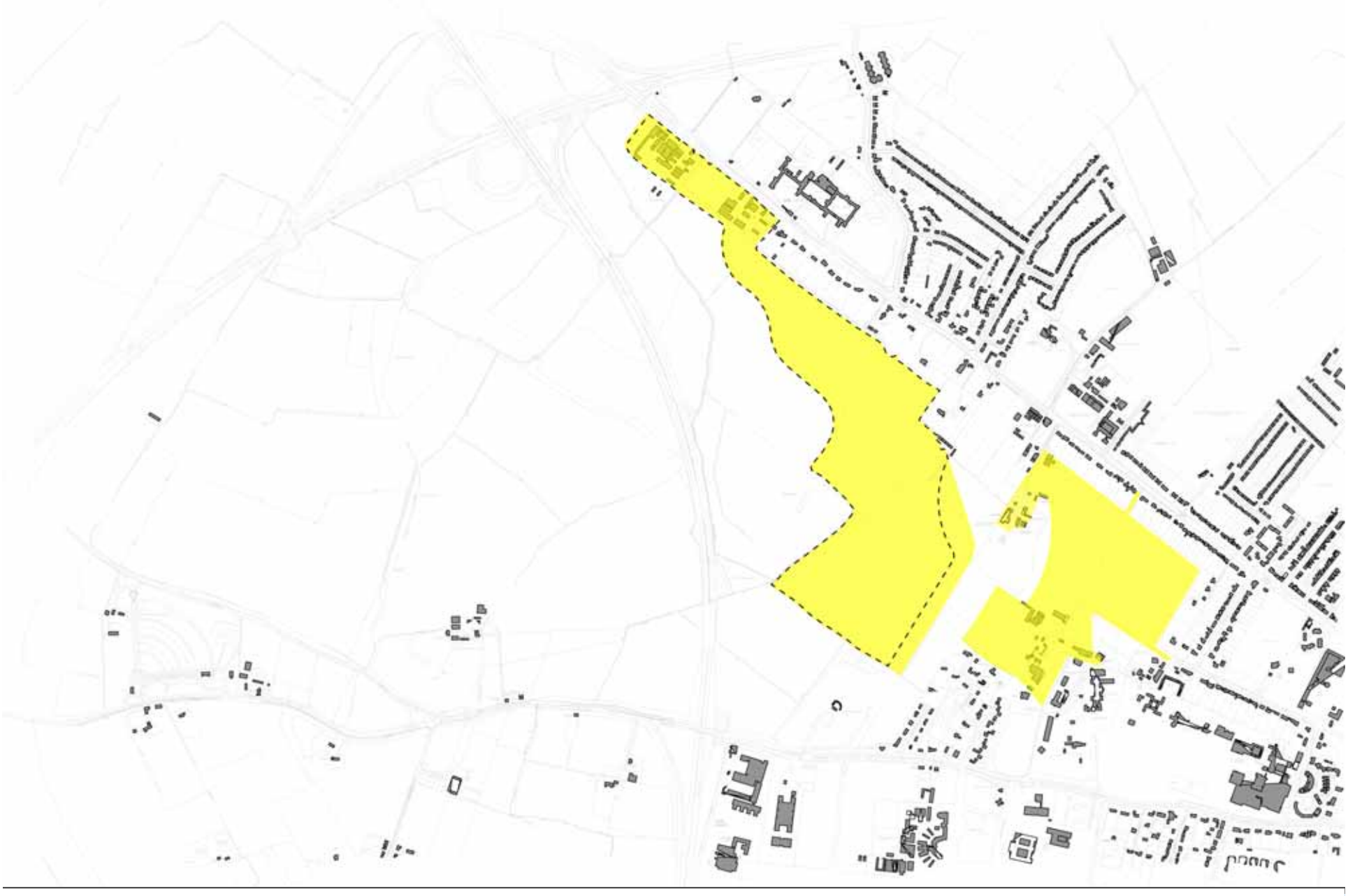
EDAW | AECOM



Option 10.1 (University's Illustrative Masterplan)

2007 Discussion Plan

EDAW | AECOM



Option A/B

Viewpoint Locations

EDAW | AECOM

Modelling Approach & Methodology

1. Use GIS to pinpoint agreed viewpoints
2. Model topography of site using GIS & Sketchup
3. Overlay/drape 3D site model on topography (4 site options)

   Each option modelled as a 'ribbon' of development along the site boundary

   -Option 10.1 (University's Illustrative Masterplan, 4 storeys)

   -2007 Discussion Plan (4 Storeys)

   -Option A/B (4 storeys)

   -Option A/B (5 storeys)
4. Capture views of Sketchup model from selected viewpoints (50mm view)
5. Create photomontage using 50mm photographs.

Option 10.1 (University's Illustrative Masterplan)

EDAW | AECOM

View 1: 2007 Discussion Plan

EDAW | AECOM

View 1: Option A/B

EDAW | AECOM

View 1: Option A/B: 5 Storeys

EDAW | AECOM

Option 10.1 (University's Illustrative Masterplan)

EDAW | AECOM

View 2: 2007 Discussion Plan

EDAW | AECOM

View 2: Option A/B

EDAW | AECOM

View 2: Option A/B: 5 Storeys

EDAW | AECOM

Option 10.1 (University's Illustrative Masterplan)

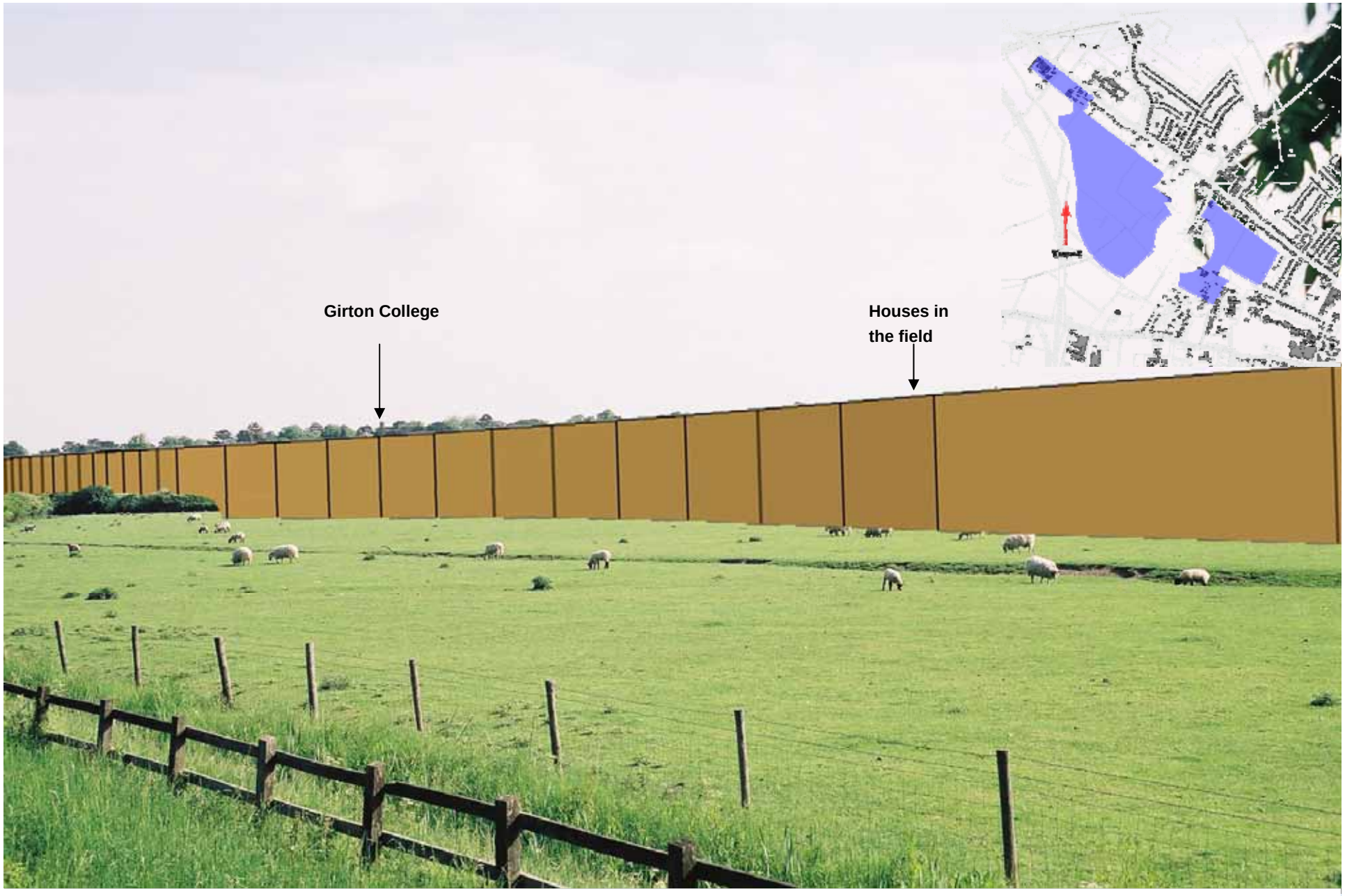
EDAW | AECOM

View 3: 2007 Discussion Plan

EDAW | AECOM

View 3: Option A/B

View 3: Option A/B: 5 Storeys

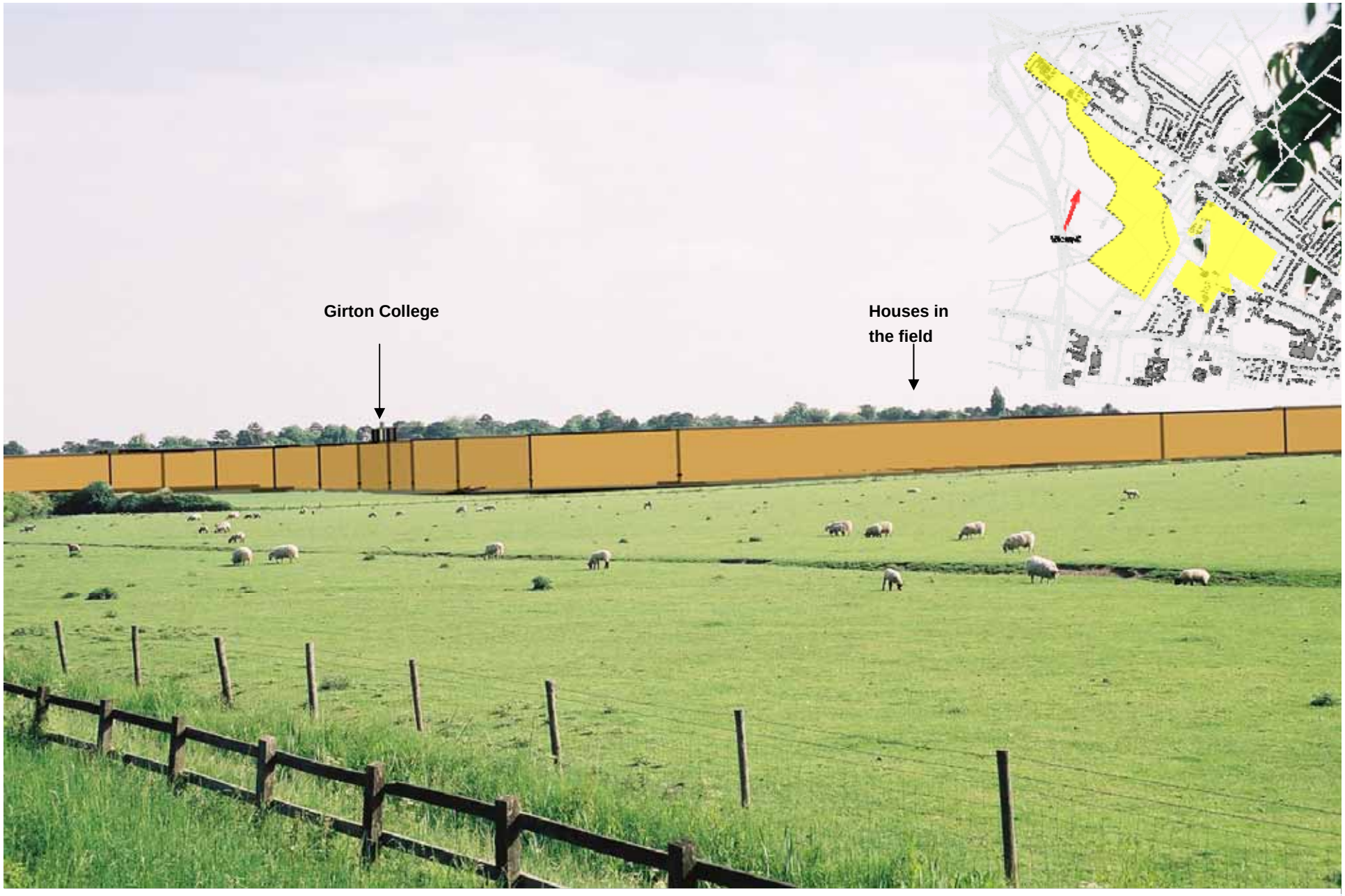


Option 10.1 (University's Illustrative Masterplan)

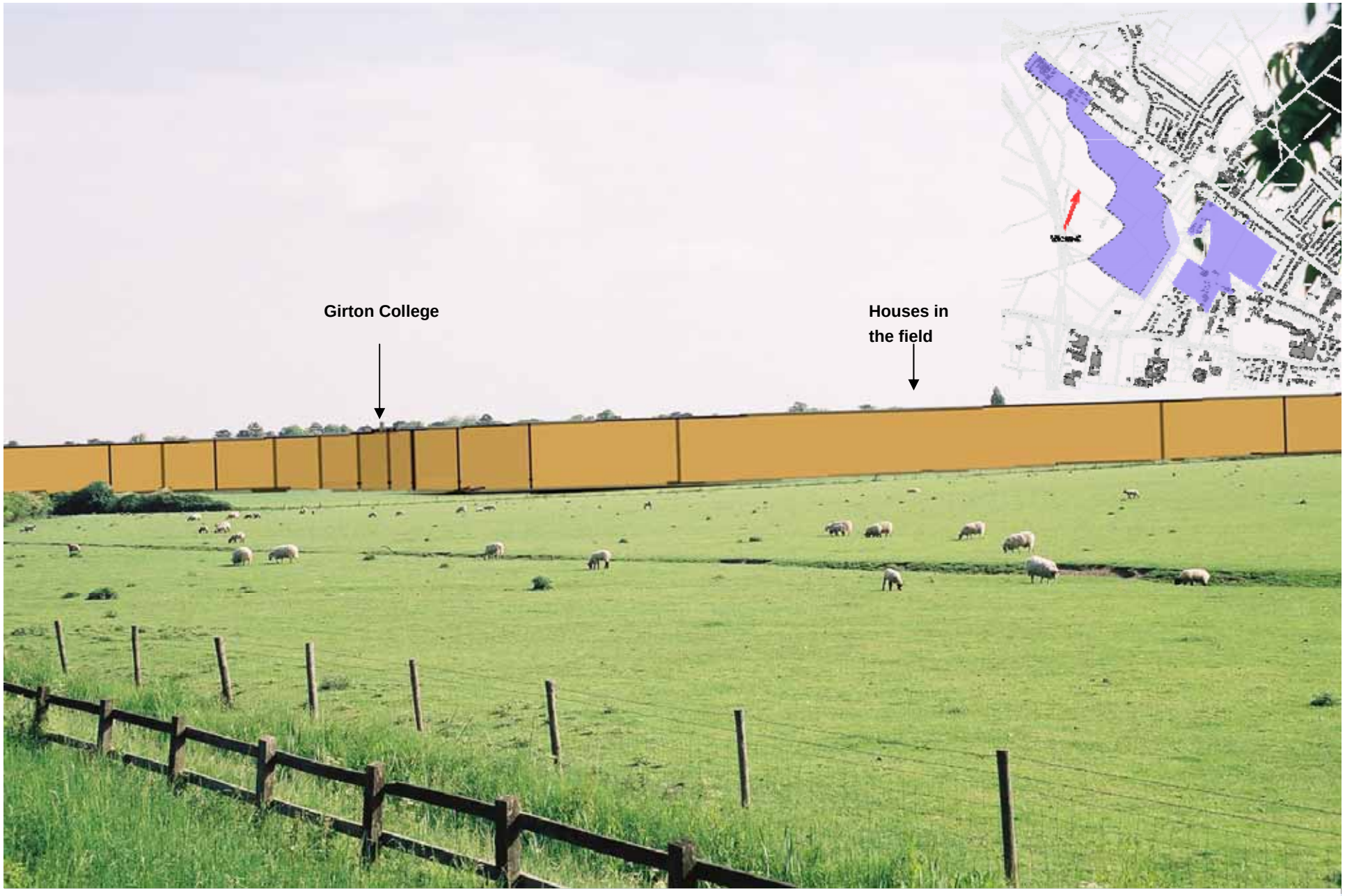
EDAW | AECOM

View 4: 2007 Discussion Plan

EDAW | AECOM

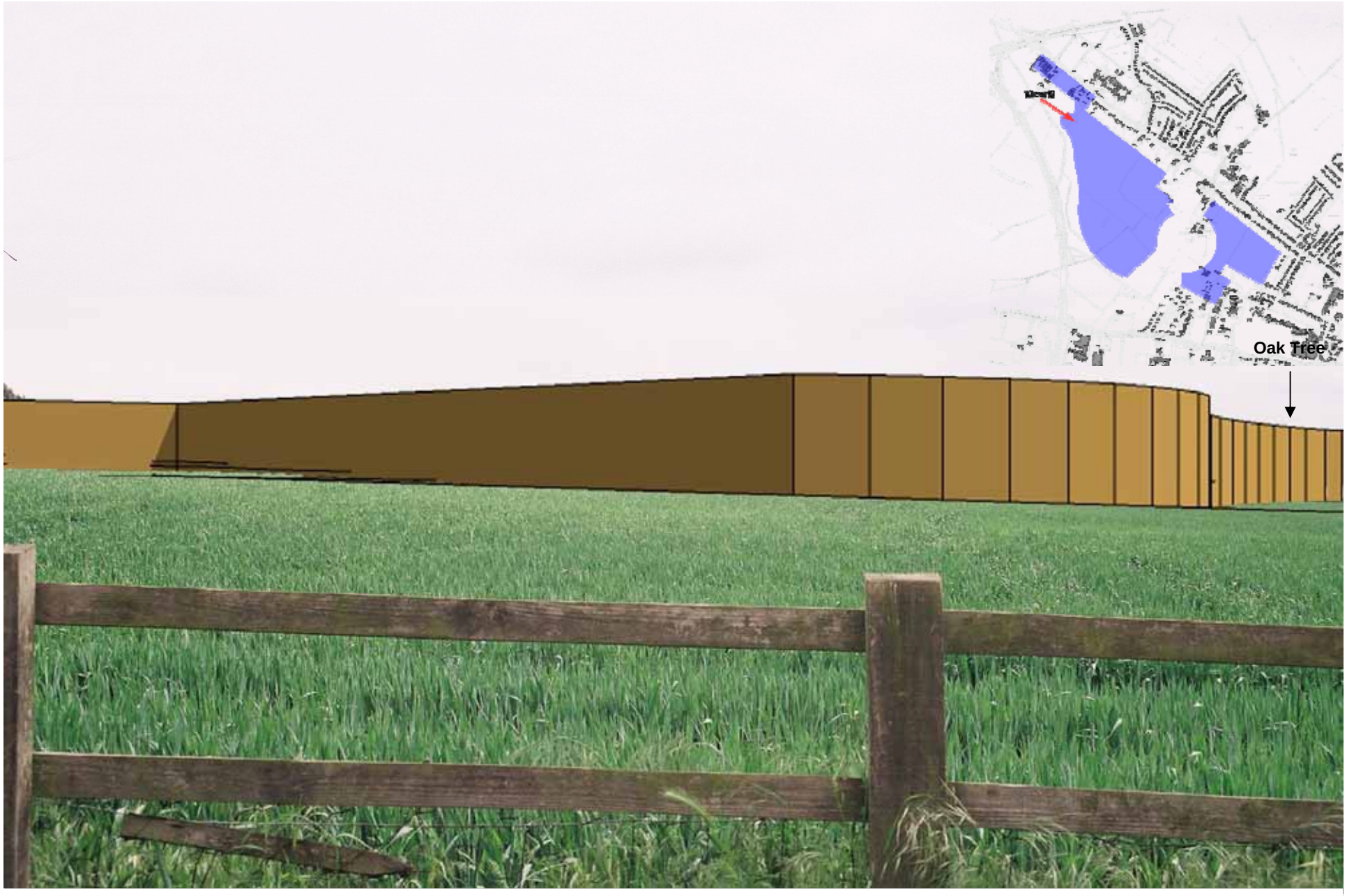


View 4: Option A/B



View 4: Option A/B: 5 Storeys

EDAW | AECOM

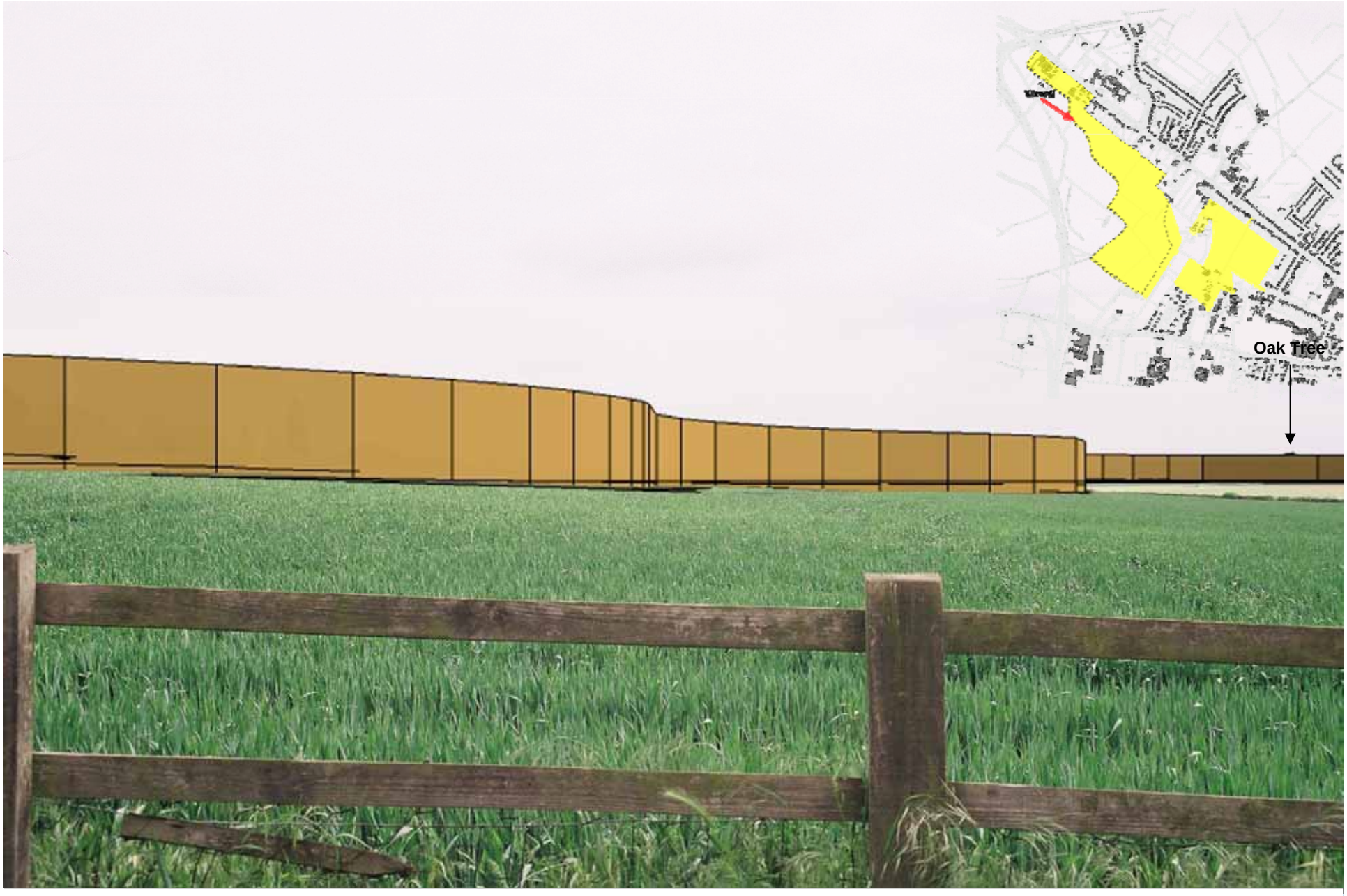


Option 10.1 (University's Illustrative Masterplan)

EDAW | AECOM

View 5: 2007 Discussion Plan

EDAW | AECOM



View 5: Option A/B

EDAW | AECOM

View 5: Option A/B: 5 Storeys

EDAW | AECOM

Option 10.1 (University's Illustrative Masterplan)

EDAW | AECOM

View 6: 2007 Discussion Plan

EDAW | AECOM

View 6: Option A

View 6: Option B

EDAW | AECOM

View 6: Option A: 5 Storeys

EDAW | AECOM

View 6: Option B: 5 Storeys

EDAW | AECOM

Option 10.1 (University's Illustrative Masterplan)

EDAW | AECOM

View 7: 2007 Discussion Plan

EDAW | AECOM

View 7: Option A/B

EDAW | AECOM

View 7: Option A/B: 5 Storeys

EDAW | AECOM

Appendix 1.13 – Illustrative Masterplan

OPTION A - ILLUSTRATIVE MASTERPLAN