

Appendix IV: SA of Strategic Options

Strategic SA of Areas A-D for Approaches to Development Growth

Key:

Categories of Significance		
Symbol	Meaning	Sustainability Effect
++	Major Positive	Proposed development encouraged as would resolve existing sustainability problem
+	Minor Positive	No sustainability constraints and proposed development acceptable
0	Neutral	Neutral effect
?	Uncertain	Uncertain or Unknown Effects
-	Minor Negative	Potential sustainability issues: mitigation and/or negotiation possible
--	Major Negative	Problematical and improbable because of known sustainability issues; mitigation likely to be difficult and/or expensive
-	+	SA Objectives 2, 4, 5, 9 & 11 consider more than one sub-topic such that more than one significant effect may be predicted with two symbols. No 2 Communities – first symbol refers to in/out of Green Belt; second symbol refers to community & settlement identities No 4 Employment – first symbol refers to employment support; second symbol refers to vitality/viability of town centres No 5 Health & Equality – first symbol refers to regeneration/deprivation & equality; second symbol refers to Green Infrastructure for health & well-being No 9 Water – first symbol refers to water resources; second symbol relates to water quality No 11 Soil & Land – first symbol refers to greenfield & agricultural land qualities; second symbol relates previously developed land

Potential Areas A-D for Approaches to Development Growth (http://www.centralbedfordshire.gov.uk/planning/policy/local-plan/shaping-central-beds-consultation.aspx)	
A	South & West/M1 Corridor
B	East/A1 Corridor
C	East/West Corridor
D	Central Section

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Options for Approaches to Growth			
		A South & West/M1	B East/A1	C East/West Corridor	D Central Section
1. Housing To ensure that the housing needs of all residents and communities are met	<p>All the options have the potential for positive effects but there is some uncertainty about whether each option could provide sufficient housing to meet identified needs within the Plan area and/or housing needs outside the Plan area. All the options could provide an appropriate mix of types of housing but this is more likely to be deliverable with more certain major positive effects for the medium to larger scale growth that could be potentially possible in Areas A, B & C.</p> <p>There is some potential for medium scale growth along the major transport corridor following the M1, A5 and the railway (Midland Main Line) with positive effects for meeting housing needs of communities in Area A, particularly Dunstable. There is potential for some large-scale growth immediately adjacent to Luton that could be linked to the Luton-Dunstable Busway with positive effects for helping to meet the needs arising from the Luton Council area.</p> <p>Area B has the potential for major growth with positive effects for</p>	++?	++?	++?	+

	<p>meeting the needs of communities within this area of the Plan; some uncertainty as there would need to be associated provision of employment to minimise out-commuting and care with regard to avoiding any negative effects for the existing communities.</p> <p>Area C is an important economic area with close links to Milton Keynes and well-connected with the improved A421, M1 and the planned upgrading for the East West Rail between Oxford and Cambridge. There is the potential for major positive effects in the long-term but uncertainty at this stage of plan-making.</p> <p>Area D is characterised by market towns and villages linked by rural roads; any growth potential is likely to be small-medium and focused around settlements with good services; unlikely to meet the needs of the Plan area and would not contribute to housing needs outside the Plan area. Minor positive effects and some uncertainty as depends on availability of suitable sites.</p>								
<p>2. Communities</p> <p>To maintain and enhance community and settlement identities</p>	<p>Major development in Area A will result in loss of the Green Belt (GB) with potential major cumulative negative effects for coalescence of existing settlements without significant landscape buffering. However, these constraints are recognised such that Area A suggests some growth potential for around Luton and only limited growth for settlements along major transport routes. Depends upon justification for release of Green Belt land. The recent Green Belt Study¹ has identified those areas that only weakly contribute to GB aims, including areas adjacent to the Luton Council area – therefore, although there is potential for major negative effects, this is uncertain as it would depend upon the precise location of development sites. Mitigation measures may be possible through reducing the amount of development to non-strategic levels of new homes (<500) to better integrate development within existing settlements and locating sites on those areas that only weakly contribute to GB aims.</p>	<p>--?</p>	<p>?</p>	<p>+</p>	<p>?</p>	<p>+</p>	<p>?</p>	<p>+</p>	<p>?</p>

¹ LUC for Central Bedfordshire Council (September 2016) Green Belt Study

	<p>Growth in Areas B, C & D will avoid the Green Belt with minor positive effects.</p> <p>All the options have the potential for negative or positive effects with regard to integration and the identity of a settlement or community – uncertainty at this stage as this depends upon the sensitivity of the settlement/community and the scale/design of the development proposal. Whilst smaller developments might seem to be more readily integrated, larger developments can be more creative in scope and design offering enhancements to existing communities. This is acknowledged by Government, for example, with regard to the recent call for interest in locally-led garden villages².</p>				
<p>3. Services & Facilities</p> <p>To improve accessibility to services and facilities³</p>	<p>All new development can ensure that there are no negative effects on existing facilities & services and all could have the potential to improve accessibility. Generally, although the major development sites (including new villages or extensions to settlements) have the potential to have major negative effects on services, they also have the greater potential for positive effects through early, creative masterplanning with the scale/scope to provide sustainable community infrastructure.</p> <p>A Development Management Policy: Provision for Social & Community Infrastructure is being drafted for the Local Plan – developers will be required to deliver new facilities & services taking an integrated approach, ensuring timely delivery, and applying the principles of multi-functional space. This will provide mitigation measures but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.</p> <p>Strategic areas for development and then potential allocation sites will be investigated, including testing through SA; further mitigation measures will be developed for any negative effects identified – through Policy and site specific requirements.</p>	<p>+</p>	<p>+</p>	<p>+</p>	<p>+</p>

² <https://www.gov.uk/government/publications/locally-led-garden-villages-towns-and-cities>

³ This relates to the provision of services and facilities, such as schools, healthcare centres, shops, and hospitality (café, restaurant, pub).

<p>4. Employment</p> <p>To support the economy and ensure that there are suitable opportunities for employment</p>	<p>There is some potential for medium scale growth along the major transport corridor following the M1, A5 and the railway with positive effects for meeting employment needs of communities in Area A. Potential for major positive effects but uncertainty at this stage. This option offers strong opportunities to support and enhance the vitality and viability of town centres – Dunstable and Luton.</p> <p>Area B, along the A1 corridor and the potential for EWR to the north of Sandy, has the potential for major employment growth associated with positive effects for meeting the needs of communities within this area of the Plan; uncertainty at this stage and care will be needed with regard to avoiding any negative effects for the existing communities. Growth in this area will be expected to generate investment to benefit town centres and improve local services.</p> <p>Area C is an important economic area with close links to Milton Keynes and well-connected with the improved A421, M1 and the planned upgrading for the East West Rail between Oxford and Cambridge. There is the potential for major positive effects on the economy & employment in the long-term but uncertainty at this stage of plan-making.</p> <p>Area D is characterised by market towns and villages linked by rural roads; any growth potential is likely to be small-medium and focused around settlements with good services. Minor positive effects and uncertainty as local need not known and depends on availability of suitable sites.</p> <p>There are no known requirements for employment land to help meet needs arising from outside the Plan area, and especially for Luton Borough adjacent to Area A.</p> <p>All the options could provide opportunities to support and enhance the vitality and viability of town centres with positive effects – uncertainty at this stage of assessment.</p>	<p>+++?</p>	<p>+++?</p>	<p>+++?</p>	<p>++?</p>
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	<p>Development Management Policies on Employment Sites & Uses are being drafted for the Local Plan, including proposed strategic site allocations and guidance on use. These will provide mitigation measures but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.</p> <p>Strategic areas for development and then potential allocation sites will be investigated, including testing through SA; further mitigation measures will be developed for any negative effects identified – through Policy and site specific requirements.</p>				
<p>5. Health & Equality</p> <p>To improve the health and wellbeing of communities and reduce inequalities</p>	<p>Area A includes areas of high deprivation⁴, particularly around Houghton Regis. Therefore, potential for major positive effects but uncertainty as depends on size and location of development. Also, potential for positive effects for deprived communities in Luton (59 most deprived out of 326 authorities in England) – with identified needs outside the Plan area; care would be needed to ensure that health facilities & green infrastructure (GI) have the capacity to accommodate increased numbers of people.</p> <p>Area A has opportunities for enhancing GI⁵ around Leighton Buzzard/Linslade and around Luton/Dunstable in the south; also, the proposed Greensand Ridge Cycle Route.</p> <p>Areas B & C have the potential for major growth – and the scale/scope of such development offers possibilities for provision of health facilities & GI enhancement. There is some deprivation around Sandy in the north of Area B and trends indicate that deprivation is increasing here, although this does remain outside the most 30% deprived areas in England – so potential for further positive effects in the north of the Plan area.</p> <p>Area B has possibilities for GI enhancement around the river corridor throughout the area. Area C has a band of GI in the north-east with</p>	<p>++?</p>	<p>+?</p>	<p>++?</p>	<p>0?</p>

⁴ <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>

⁵ http://www.centralbedfordshire.gov.uk/images/environmental-framework-v4_tcm3-14493.pdf

	<p>opportunities for enhancement at the Forest of Marston Vale and an identified accessible greenspace deficit near St Neots. The planned Bedford & Milton Keynes Waterway⁶ will link Milton Keynes, Bedford & the Grand Union Canal with Eastern waterways via a series of waterway parks – creating a permanent green/blue corridor through the heart of the growth area with major positive long term effects that would be cumulative & synergistic. Uncertainty at this stage of assessment for details and timing of implementation.</p> <p>Area D is characterised by market towns and villages linked by rural roads; any growth potential is likely to be small-medium and focused around settlements with good services. Neutral effects and uncertainty as depends on availability of suitable sites and capacity of existing services and GI. Possibilities for GI enhancement through GI corridor Number 4 and the proposals for the Greensand Ridge Cycle Route and new accessible greenspace to serve Potton and Sandy.</p> <p>The scale and scope of major developments, including new villages, can offer thresholds for sustainable development through creative masterplanning with major improvements/provision of health services and Green Infrastructure. The positive effects of green infrastructure on health is well evidenced⁷. This is acknowledged by Government, for example, with regard to the ongoing trials for healthy new towns⁸ that are seeking to rethink how health and care services can be delivered. There are 2 demonstrator sites at Bicester, Oxon and Northstowe, Cambs and these may provide lessons learnt that could be applied to Central Bedfordshire.</p> <p>A Development Management Policy: Provision for Social & Community Infrastructure is being drafted for the Local Plan – developers will be required to deliver new facilities & services & Green Infrastructure. This will provide mitigation measures but still uncertainty for the SA at this</p>				
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⁶ <http://www.b-mkwaterway.org.uk/the-waterway/route/>

⁷ <http://planningguidance.communities.gov.uk/blog/guidance/natural-environment/green-infrastructure/>; Also, guidance from Natural England, Landscape Institute, RTPI, TCPA and <http://www.centralbedfordshire.gov.uk/planning/green/plans.aspx>

⁸ <https://www.england.nhs.uk/ourwork/innovation/healthy-new-towns/>

	<p>stage as effects will depend upon the scale/scope of development and the precise location.</p>				
<p>6. Highways & Air Quality To maintain and improve the existing highway network and reduce associated indirect impacts on air quality and greenhouse gas emissions</p>	<p>Strategic road & rail links north-south are good but there are gaps for strategic movement east-west that will be improved with the A5-M1 link road⁹. Long journey times exacerbated by high out-commuting are established characteristics for the Plan area.</p> <p>There is some potential for medium scale growth along the major transport corridor following the M1, A5 and the railway with the potential for negative effects in Area A; uncertainty as this depends on the location and scale of development and further transport capacity studies. Mitigation measures are available by ensuring that new development is located where there is existing capacity with potential neutral effects.</p> <p>The A1 corridor running through the Plan Area B is a strategic location for the warehousing industry with good, fast access to the national/international road network and important to maintain; also, the East Coast Railway. Major growth in this area has potential but it would need to be associated with jobs to minimise increased out-commuting and the capacity of the rail and road networks will need to be investigated; likely cumulative negative effects but uncertainty until further studies are completed. Larger developments are more likely to be able to support funding for upgrading the strategic road network.</p> <p>Area C is well-connected with the improved A421, the M1 and the planned section upgrade for East West Rail¹⁰ between Oxford and Cambridge. There is the potential for major development, including new settlements, to contribute to further improvements and ensure the continuing capacity of the strategic road and rail networks;</p>	0?	-?	-?	-?

⁹ Central Bedfordshire Local Transport Plan 3 2011-2026

¹⁰ <http://www.eastwestrail.org.uk/>

	<p>uncertainty until further transport and capacity studies completed. Larger developments are more likely to be able to support funding for upgrading the strategic road network.</p> <p>Area D is characterised by market towns and villages linked by rural roads; the potential to upgrade roads is unlikely such that negative effects are likely from increased development. Mitigation measures are possible by limiting new development to a size and location that can be accommodated within the capacity of the local road network – uncertainty remains until further studies.</p> <p>Effects on traffic and the highway network will have concomitant effects on air quality and greenhouse gas emissions. Significant negative effects are more likely to occur in the short-term as it is assumed that long-term air quality is likely to improve as a result of stringent emissions controls on new vehicles via European standards¹¹. In 15 to 20 years' time low emission vehicles will make up the majority of cars on the roads in the UK. It is also likely that there will be reductions in various contributing sectors that will also result in reductions in background concentrations of atmospheric pollutants. However, this is uncertain at this stage. This along with the potential improvements to strategic road infrastructure and public transport could help to improve air quality. Particular consideration will be needed for Sandy, Ampthill and Dunstable that have Air Quality Management Areas designated primarily due to traffic.</p>				
<p>7. Sustainable Transport To encourage a demonstrable modal shift and reduce the need to travel</p>	<p>Development within walking/cycling distance of mainline railway stations and services/jobs to discourage out-commuting will provide mitigation measures to reduce the potential negative effects. Potential for a neutral effect. Careful and early masterplanning will help to ensure that opportunities for a modal shift are progressed but uncertainty at this stage of assessment until further studies are completed.</p>	+?	++?	++?	0?

¹¹ <http://ec.europa.eu/environment/air/transport/road.htm>

	<p>Area A is well connected to the Midland Main railway line and smaller-medium sized developments for towns/villages such as, Flitwick, Westoning & Harlington, along well-connected public transport routes could encourage a modal shift with positive effects. Larger scale developments with major opportunities to promote sustainable transport are only likely to be possible adjacent to Luton and to help meet the needs outside the Plan area. Uncertain at this stage as depends upon precise locations and housing numbers.</p> <p>Area C with possibilities for major development, including new settlements/villages, has the potential to support the delivery of the proposed East West Rail Link with major positive effects but uncertainty at this scale of assessment. Larger scale developments also have the scope for effective design and implementation of sustainable transport modes – cycling and walking – with the potential for major positive effects, especially if this can be linked into the limited networks available in the Plan area. Similarly, Area B with the potential for upgrading the A1 and the East Coast Railway; it also includes the long distance Great North Cycleway with potential for links and positive effects beyond the Plan area.</p> <p>Area D is characterised by market towns and villages linked by rural roads and limited sustainable transport modes; there is also an issue for the long distances needed to access services and facilities in the rural area, encouraging car use. Mitigation measures are possible by limiting new development to a size and location focused around settlements with existing services and suitable sites. Potential for neutral effects but uncertainty remains until further studies.</p>				
<p>8. Energy & Climate Change To maximise the</p>	<p>All development has the potential for high energy efficiency and carbon neutrality but generally, the scale and scope of the larger developments, especially new villages, offers potential possibilities for exemplar design and construction including local renewable energy</p>	0?	0?	0?	0?

<p>potential for energy efficiency, reduce greenhouse gas emission and withstand the effects of climate change¹²</p>	<p>schemes where appropriate, with potential positive effects. Potential for minor negative effects during the construction phases with potential for neutral effects in the longer term but uncertainty at this stage of assessment for all 4 Areas.</p> <p>This is supported by strong policy mitigation provided through Local Plan policies (Successful and Sustainable Places, Modern Methods of Construction, Climate Change and Sustainability and Renewable Energy Development) which seek to deliver high levels of efficiency as well as maximise opportunities for climate change mitigation and adaptation.</p>				
<p>9. Water Resources & Quality To minimise the demand for water and maintain or improve water quality</p>	<p>All development has the potential for high water efficiency and water neutrality but generally, the scale and scope of the larger developments, especially new villages, offers potential possibilities for exemplar design and construction including local water reuse/recycling schemes where appropriate. This is particularly relevant in the Anglian Water region with issues for water resources – high population and relatively low rainfall. Therefore, potential for neutral effects but uncertain until further studies including the Water Cycle Study are completed.</p> <p>Development Management Policies to protect environmental resources, including water quality, are being drafted for the Local Plan. These will provide mitigation measures with resultant neutral effects but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.</p>	0?	0?	0?	0?
<p>9. Flood Risk To reduce the risk of flooding from all sources</p>	<p>A Development Management Policy on Flood Risk is being drafted for the Local Plan in line with Government guidance. This will provide mitigation measures with resultant neutral effects but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of</p>	0	0	0	0

¹² Please note that Flood Risk is considered by the SA within objective number 10

	<p>development and the precise location.</p> <p>The larger developments, including new villages and settlements, have the scale and scope to provide creative design and potentially contribute to resolving existing flood risk issues – however, uncertain until further studies and depends upon location.</p>				
<p>10. Soil To protect and conserve soil</p>	<p>The Plan area is predominantly rural and Defra identifies small pockets of best and most versatile agricultural land situated largely around the borders of the Plan area, particularly surrounding Bedford and Milton Keynes, and an area surrounding Biggleswade¹³. However, most rural land is greenfield and less important agricultural land Grade 3b-5.</p> <p>All development will take land and the soil resource will be lost with permanent negative effects. However, mitigation is available to avoid the best and most versatile agricultural land resulting in minor effects. The scale and scope of larger developments tend to offer possibilities for higher densities of housing and the potential for soil/greenfield enhancement through Green Infrastructure and possibilities for allotments and community gardens.</p>	-	-	-	-
<p>12. Biodiversity & Geodiversity To protect, enhance and manage biodiversity & geodiversity</p>	<p>There are no European designated sites within the Plan area although there are several outside the area but within the Plan's influence. There are nationally and locally important sites for biodiversity and geodiversity.</p> <p>Development Management Policies on Green Infrastructure, Enhancing Ecological Networks and Nature Conservation are being drafted for the Local Plan and these will avoid important assets to avoid negative effects. These will provide mitigation measures with resultant potential neutral effects but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.</p>	0?	0?	0?	0?

¹³ Defra Magic Map Application

	The larger developments, including new villages or a new settlement, will have the scale and scope to provide creative design and contribute to enhancement of green infrastructure and ecological networks – however, this is uncertain until further studies and will depend upon the location.				
13. Landscape Protect and enhance the landscape and townscape	All development has the potential for negative effects on landscape and townscape – and this may be particularly significant for the Plan area with its' predominantly rural character with larger areas of flat land and high levels of tranquillity. Vulnerability and sensitivity to change have been identified ¹⁴ for a number of settlements – this will be taken into account in further studies such that potential major negative effects may be reduced. Development Management Policies on Landscape Character & Value are being drafted for the Local Plan and these will avoid important assets and settings to avoid negative effects. These will provide mitigation measures with resultant potential cumulative negative effects but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.	-	-	-	-
14. Historic Environment To ensure the protection and enhancement of heritage assets, the historic environment and its setting	The Plan area has a rich historical heritage with nationally and locally important assets. Development Management Policies on the Historic Environment are being drafted for the Local Plan and these will avoid important assets and settings to avoid any major negative effects. These will provide mitigation measures with resultant potential cumulative neutral effects but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.	0	0	0	0

¹⁴ CBC Landscape Character Assessment (2016)

Appendix IV: Strategic SA of Approaches to Distribution of Development Growth

Key:

Categories of Significance		
Symbol	Meaning	Sustainability Effect
++	Major Positive	Proposed development encouraged as would resolve existing sustainability problem
+	Minor Positive	No sustainability constraints and proposed development acceptable
0	Neutral	Neutral effect
?	Uncertain	Uncertain or Unknown Effects
-	Minor Negative	Potential sustainability issues: mitigation and/or negotiation possible
--	Major Negative	Problematical and improbable because of known sustainability issues; mitigation likely to be difficult and/or expensive
-	+	SA Objectives 2, 4, 5, 9 & 11 consider more than one sub-topic such that more than one significant effect may be predicted with two symbols. No 2 Communities – first symbol refers to in/out of Green Belt; second symbol refers to community & settlement identities. No 4 Employment – first symbol refers to employment support; second symbol refers to vitality/viability of town centres. No 5 Health & Equality – first symbol refers to regeneration/deprivation & equality; second symbol refers to Green Infrastructure for health & well-being; No 9 Water – first symbol refers to water resources; second symbol relates to water quality. No 11 Soil & Land – first symbol refers to greenfield & agricultural land qualities; second symbol relates to previously developed land

Potential Approaches for Distributing Development Growth	
1	New Settlement (village scale) – assumed to be between 2,000 to 5,000 new homes
2	New Settlement (town scale) – assumed to be between 7,000 to 10,000 new homes
3	Village Extensions – especially those with services & facilities
4	Growth in Transport Corridors – north-south ((A1 & East Coast Main Railway Line); north-south (M1 & Midland Main Railway Line); east-west (A421 & proposals for East-West Railway)
5	Urban Extensions – assumed for extensions 1,500-2,000 (& up to 4,000) new homes & for the larger settlements
6	Urban Intensification around Transport Hubs – especially for settlements with railway stations, bus stations, and park & ride
7	Higher Densities – development offering from 75 to 130 dwellings per hectare (compared to typical densities in England of 30-40 dph)

SA Topic	SA Objective & Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Approaches for Distribution of Growth						
		1 New Settlements (village scale)	2 New Settlements (town scale)	3 Village Extensions	4 Transport Corridors	5 Urban Extensions	6 Intensification at Transport Hubs	7 Higher Densities
1. Housing To ensure that the housing needs of all residents and communities are met	To ensure that the housing needs of all residents and communities are met All the options have the potential for positive effects but there is some uncertainty about whether each option could provide sufficient housing to meet identified needs of all communities within the Plan area and/or housing needs outside the Plan area. The greater scale of new development in Options 1,2, 4, 5, 6 & 7 for new settlements, transport corridors, urban extensions and higher densities is more likely to have major positive effects that will be cumulative in the longer term. For Option 3 village extensions, positive effects may only be minor since it is less clear that the scale of the identified need could be delivered. All the options could provide an appropriate mix of types of housing but this is more likely to be deliverable with more certain major positive effects for larger scale growth that is indicated by Options 1, 2, 5 & 7. The scale & scope of a new settlement or urban extension is more likely to have major positive effects for affordable & adaptable housing (including self-build, key workers & starter homes) which are critical issues for the CBC area. Development Management Policies are drafted and include specific housing requirements for starter, affordable, and supporting older people – these provide mitigation measures to help ensure that the mix of housing will be implemented with cumulative positive effects in the longer term. Option 2 with a town scale new settlement is more likely to offer more certain & a wider range of housing. All the options could offer an opportunity to help meet housing needs arising from outside the Plan area but uncertainty at this stage of sustainability assessment as effects depend upon proposals and specific locations.	+++?	+++?	++?	+++?	+++?	+++?	+++?

<p>2. Communities</p> <p>To maintain and enhance community and settlement identities</p>	<p>To maintain and enhance community and settlement identities</p>	+	+	-?	+ ?	?	+?	+?	?
<p>The scale and scope of new settlements and urban extensions for Options 1,2 & 5 respectively can promote new thriving & inclusive communities through good & early design with positive effects. Urban extensions at the larger settlements are also more likely to be able to integrate with existing communities.</p> <p>The ability of villages to accommodate development growth for Option 3 is uncertain – potential negative effects for existing communities may be mitigated through reducing the number of new homes proposed; positive effects may be possible as new residents can invigorate or enhance communities – depends on scale & location. Similar effects are indicated for Options 4 & 6 for growth in transport corridors to the east (Area B) and north (Areas C & D) – uncertainty at this stage of SA as depends upon scale & location. The key transport corridors to the south and west (Area A) pass through Green Belt land with the potential for negative cumulative effects.</p> <p>Higher density development in Option 7 can promote new thriving & inclusive communities through good & early design with positive effects, as with each option; effectiveness of integration within existing settlement patterns is uncertain at this stage as depends upon precise location. Higher densities in the Luton area may facilitate opportunities for Luton’s unmet need in areas that only weakly contribute to Green Belt aims or avoiding Green Belt land – with positive effects.</p> <p>Major development in Area A for all the Options will result in loss of the Green Belt (GB) with potential major cumulative negative effects for identity and coalescence of existing settlements without significant landscape buffering. However, the recent Green Belt Study¹⁵ has identified those areas that only weakly contribute to GB aims, including areas adjacent to the Luton Council area – therefore, potential for neutral effects but uncertainty as depends upon scale and the precise location of potential development sites.</p> <p>All the options have the potential for negative and/or positive effects with regard to integration and the identity of a settlement or community – uncertainty at this stage as this depends upon the sensitivity of the settlement/community and the scale/design of the development proposal. Whilst smaller developments might seem to be more readily integrated, larger developments can be more creative in scope and design offering enhancements to existing</p>									

¹⁵ LUC for Central Bedfordshire Council (September 2016) Green Belt Study

	communities. This is acknowledged by Government, for example, with regard to the recent call for interest in locally-led garden villages ¹⁶ .							
<p>3. Services & Facilities</p> <p>To improve accessibility to services and facilities¹⁷</p>	<p>To improve accessibility to services and facilities¹⁸.</p>	<p>++?</p>	<p>++?</p>	<p>+</p>	<p>++?</p>	<p>++?</p>	<p>++?</p>	<p>++?</p>
<p>All new development can ensure that there are no negative effects on existing facilities & services and all could have the potential to improve provision & accessibility. Options 1, 2, 5, 6 & 7 with major developments have the potential for major negative effects on services; they also have the greater potential for major positive effects through early, creative masterplanning with the scale/scope to provide sustainable community infrastructure. The new settlements indicated in Options 1 & 2 are likely to have requirements for new infrastructure that will have a long lead-in time so positive effects are likely in the longer-term. It is assumed that the scale of any new development as village extensions would be less than other options (acknowledging the likely limited capacity of villages) and likely to be at least less than 1000 new homes such that effects will be reduced – both positive and negative.</p> <p>A Development Management Policy: Provision for Social & Community Infrastructure is being drafted for the Local Plan – developers will be required to deliver new facilities & services taking an integrated approach, ensuring timely delivery, and applying the principles of multi-functional space. This will provide mitigation measures for potential negative effects associated with the capacities of existing settlements to accommodate the additional growth - but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.</p> <p>Strategic Growth Locations for development and then potential allocation sites will be investigated, including testing through SA; further mitigation measures will be developed for any negative effects identified – through Policy and site specific requirements – and to consider opportunities for enhancing potential positive effects – but uncertainty remains at this stage of assessment until the further studies are completed at the next stage of plan-making.</p>								

¹⁶ <https://www.gov.uk/government/publications/locally-led-garden-villages-towns-and-cities>

¹⁷ This relates to the provision of services and facilities, such as schools, healthcare centres, shops, and hospitality (café, restaurant, pub).

¹⁸ This relates to the provision of services and facilities, such as schools, healthcare centres, shops, and hospitality (café, restaurant, pub).

<p>4. Employment</p> <p>To support the economy and ensure that there are suitable opportunities for employment</p>	<p>To support the economy and ensure that there are suitable opportunities for employment</p>	<p>+</p>	<p>+</p>	<p>-</p>	<p>++</p>	<p>+</p>	<p>+</p>	<p>?</p>
<p>All the options have the potential to provide a range of employment opportunities that are suitable for the skills of the workforce and will help to meet the identified needs of the communities – uncertainty remains at this strategic stage of assessment.</p> <p>Larger areas, & including adjacent to existing larger settlements, tend to provide more sustainable employment to meet the needs of existing businesses, to attract future inward investment, and to be more resilient to change – with potential positive effects indicated for Options 1,2, 4, 5 & 6. The limited scale for employment land opportunities through village extensions in Option 3 will not support the economic focus for larger warehousing facilities that must have good accessibility to transport corridors – potential for negative effects. Conversely, this indicates potential major positive effects for Option 4, particularly in Area C to the north west, Area B with the north-south corridor to the east, and Area A to the south east with London Luton Airport, including a new 24-hour light rail link between the railway station and the terminal. Uncertainty remains as depends upon precise locations.</p> <p>There is some potential for medium scale employment growth along the major transport corridor following the M1, A5 and the railway with positive effects for meeting employment needs of communities in Area A, particularly for Dunstable with higher rates of unemployment. Potential for minor positive effects for Options 4, 5 & 6 - but uncertainty at this stage.</p> <p>It is unclear how higher densities in Option 7 would affect the economy & employment with uncertainty at this stage of SA.</p> <p>Options 4, 5 & 6 offer opportunities to support and enhance the vitality and viability of town centres with the potential for positive effects but uncertainty at this stage as depends upon precise location.</p> <p>Development Management Policies on Employment Sites & Uses are being drafted for the Local Plan, including proposed strategic site allocations and guidance on use. These will provide mitigation measures but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.</p> <p>Strategic Growth Locations for development and then potential allocation sites will be investigated, including testing through SA; further mitigation measures will be developed for any negative effects identified – through Policy and site specific requirements, and including possibilities for enhancement of positive effects.</p>								

<p>5. Health & Equality</p>	<p>To improve the health and wellbeing of communities and reduce inequalities</p>	<p>+++</p>	<p>+++</p>	<p>++</p>	<p>++</p>	<p>+++</p>	<p>++</p>	<p>++</p>
<p>To improve the health and wellbeing of communities and reduce inequalities</p>	<p>All options have the potential for improving health and well-being through provision of Green infrastructure (GI), open space & recreation but this is more likely to be implemented through the scale and scope of the larger developments that are indicated for Options 1, 2 & 5 with major cumulative positive effects in the longer term. Careful and creative masterplanning will be needed to ensure that there are no negative effects for existing nearby communities and that opportunities for reducing any inequalities are identified. Uncertainty remains at this strategic stage.</p> <p>The approaches for Options 4, 5, 6 & 7 in Area A with its' communities of high deprivation¹⁹, particularly around Houghton Regis and the boundary with Luton, have the potential for major positive effects – but uncertainty as depends on size and precise location of development. Also, potential for positive effects for deprived communities in Luton (59 most deprived out of 326 authorities in England) – with identified needs outside the Plan area. Care would be needed to ensure that existing health facilities & green infrastructure (GI) have the capacity to accommodate increased numbers of people.</p> <p>The village extensions in Option 3 are assumed to be of less size than other options and thus with less effects likely – both positive and negative.</p> <p>Higher densities in Option 7 may have positive effects as open space & GI might be used more creatively, including roof & vertical wall gardens, but may have negative effects through limited capacity of open space due to higher numbers of people using the space and increased pressures on the multifunctionality of GI. Mitigation for potential negative effects has been demonstrated in city urban environments such as Hong Kong & Singapore, but effectiveness is less known applied to English rural areas such as Central Bedfordshire. Nonetheless, there could be opportunities for exemplar developments with creative design implementing sustainable development with potential positive effects.</p> <p>The scale and scope of major developments, including new villages & towns, can offer thresholds for sustainable development through creative masterplanning with major improvements/provision of health services and Green Infrastructure. The positive effects of green infrastructure on health is well evidenced²⁰. This is acknowledged by</p>							

¹⁹ <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>

²⁰ <http://planningguidance.communities.gov.uk/blog/guidance/natural-environment/green-infrastructure/>; Also, guidance from Natural England, Landscape Institute, RTPI, TCPA and <http://www.centralbedfordshire.gov.uk/planning/green/plans.aspx>

	<p>Government, for example, with regard to the ongoing trials for healthy new towns²¹ that are seeking to rethink how health and care services can be delivered. There are 2 demonstrator sites at Bicester, Oxon and Northstowe, Cambs and these may provide lessons learnt that could be applied to Central Bedfordshire. The higher numbers in Option 2 (town scale) could place higher pressures on GI but also might facilitate more creative masterplanning – uncertain at this stage until further studies undertaken.</p> <p>A Development Management Policy: Provision for Social & Community Infrastructure is being drafted for the Local Plan – developers will be required to deliver new facilities & services & Green Infrastructure. This will provide mitigation measures but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.</p>								
<p>6. Highways & Air Quality</p> <p>To maintain and improve the existing highway network and reduce associated indirect impacts on air quality and greenhouse gas emissions</p>	<p>To maintain and improve the existing highway network and reduce associated indirect impacts on air quality and greenhouse gas emissions.</p> <p>Strategic road links north-south are good but there are gaps for strategic movement east-west that will be improved with the A5-M1 link road²² and the potential Expressway. Long journey times exacerbated by high out-commuting are established characteristics for the Plan area. Whilst the LTP3 identifies several strategic transport schemes that are either planned or under construction, the identified need for development growth will place demands on the capacities of the highway networks with the potential for cumulative negative effects in both short and longer terms – particularly for Option 4 where growth would be concentrated along the transport corridors; uncertainty at this stage as depends upon further transport impact studies.</p> <p>New settlements through Options 1 & 2 have the potential for positive effects as they can be designed through creative masterplanning to minimise negative effects on the existing transport networks and contribute to resolving existing problems but may need major infrastructure investment with associated uncertainties of funding and timing – and depends on precise likely location. The higher housing numbers in Option 2 may exacerbate both negative and positive effects. Uncertainty at this stage of assessment until further site specific studies are undertaken. Mitigation measures are available by locating near a railway station and other sustainable transport modes to reduce the additional loading on the existing network.</p> <p>The scale of identified development growth spread around the larger villages in Option 3 is likely to have major negative effects on the transport network as the villages are characterised by their rural nature (and with limited</p>	<table border="1"> <tr> <td style="background-color: #90EE90;">+?</td> <td style="background-color: #90EE90;">+?</td> <td style="background-color: #FFD700;">--?</td> <td style="background-color: #FFFF00;">-?</td> <td style="background-color: #0000FF;">0?</td> <td style="background-color: #0000FF;">0?</td> <td style="background-color: #90EE90;">+?</td> </tr> </table>	+?	+?	--?	-?	0?	0?	+?
+?	+?	--?	-?	0?	0?	+?			

²¹ <https://www.england.nhs.uk/ourwork/innovation/healthy-new-towns/>

²² Central Bedfordshire Local Transport Plan 3 (LTP3) 2011-2026

sustainable transport services – see SA Objective No 7 following) – and this will be synergistic and cumulative in the longer term. Approximately 50% of residents commute for work to surrounding areas predominantly using private vehicles²³. Some mitigation is provided through focusing new development on those villages with services & facilities, thus reducing some need to travel, negative effects are still indicated unless employment is also provided and sustainable transport modes enhanced. Uncertainty remains until further locationally specific studies are undertaken.

Urban Extensions as suggested through Option 5 have the potential to mitigate likely negative effects on the transport networks by careful masterplanning that minimises the need to travel by car because of the location of such developments adjacent to the larger settlements. The scale and scope of such developments is sufficient to support transport improvements with the potential for overall neutral effects – uncertainty at this stage as depends upon precise locations. Similarly, potential for neutral effects through Option 6 with urban intensification around transport hubs that should reduce the need to travel by car.

The effects of Option 7 and the effectiveness of higher densities in maintaining the highway network is uncertain, although this could offer positive effects by reducing the need to travel (and please see SA Objective No 7 following).

Effects on traffic and the highway network will have concomitant effects on air quality and greenhouse gas emissions. Significant negative effects are more likely to occur in the short-term as it is assumed that long-term air quality is likely to improve as a result of stringent emissions controls on new vehicles via European standards²⁴. In 15 to 20 years' time low emission vehicles will make up the majority of cars on the roads in the UK. It is also likely that there will be reductions in various contributing sectors that will also result in reductions in background concentrations of atmospheric pollutants. However, this is uncertain at this stage. These reductions in emissions, together with the potential improvements to strategic road infrastructure and public transport, could help to improve air quality – and contributions to climate change (please see SA Objective No 8). Particular consideration will be needed for Sandy, Ampthill and Dunstable that have Air Quality Management Areas designated primarily due to traffic.

Development Management Policies are being drafted that specifically seek to mitigate transport impacts on the network, including requirements for a Travel Assessment and/or Travel Plan, and encouragement of low emission vehicles - this will provide more certainty of implementation of mitigation measures to reduce potential negative effects to neutral in the longer term. However, depends upon the overall scale and location of new development.

²³ ONS: Neighbourhood Statistics for Central Bedfordshire Local Authority

²⁴ <http://ec.europa.eu/environment/air/transport/road.htm>

<p>7. Sustainable Transport</p>	<p>To encourage a demonstrable modal shift and reduce the need to travel</p>	<p>+++</p>	<p>+++</p>	<p>-?</p>	<p>+++</p>	<p>+++</p>	<p>+++</p>	<p>++</p>
<p>To encourage a demonstrable modal shift and reduce the need to travel</p>	<p>Development within walking/cycling distance of mainline railway stations and services/jobs to discourage out-commuting will provide mitigation measures to reduce the potential negative effects.</p> <p>Larger scale developments including those through Options 1, 2 & 5 have the scope for effective design and implementation of sustainable transport modes – cycling and walking – with the potential for major positive effects, especially if this can be linked into the limited networks available in the Plan area. Careful and early masterplanning will help to ensure that opportunities for a modal shift are progressed but uncertainty at this stage of assessment until further studies are completed. Larger scale development also offers the opportunity to support the delivery of proposed sustainable transport infrastructure such as the East-West Rail Link with major positive effects</p> <p>The scale of potential growth in village extensions in Option 3 may not be sufficient to support new provision of sustainable transport modes. The villages are characterised by rural roads and limited sustainable transport modes; there is also an issue for the long distances needed to access services and facilities in the rural area, encouraging car use. Mitigation measures are possible by limiting new development to a size and location focused around settlements with existing services and suitable sites. Potential for minor negative effects but depends upon location specificity and uncertainty remains until further studies.</p> <p>Option 4 with growth in transport corridors will encourage the use of railways with positive effects where development is focused near to railway stations. However, rail use has been increasing and is predicted to continue increasing, so there are likely to be issues for capacity in the longer term. Larger developments are more likely to be able to provide cycling/walking/bus links to railway stations with cumulative positive effects. Similarly, for Option 6 with urban intensification in settlements with railway stations.</p> <p>The effects of Option 7 and the effectiveness of higher densities to offer positive effects by reducing the need to travel seems likely but some uncertainty at this stage of assessment. It has been found in the Netherlands²⁵ that the success of high density development is closely linked to the effectiveness of public transport – not just provision but encouragement of use. The London Plan (2016) includes Housing Supplementary Planning Guidance²⁶ that aligns densities of dwellings with public transport accessibility. This is likely to be more readily designed and implemented</p>							

²⁵ For example, see: Paul Kuitenbrouwer & Raf De Saeger High-density, Low-rise – a challenge for Dwelling Landscapes in the Netherlands, Architectural Research by Design as a process towards incorporated typologies Conference paper for Housing & Welfare – Boundaries | Encounters | Connections, Copenhagen, 7-9 May 2015

²⁶ https://www.london.gov.uk/sites/default/files/housing_spg_final.pdf

	<p>through new settlements & major extensions such as in Options 1, 2 & 5, and perhaps particularly in Area A around Luton with an established urban environment.</p> <p>Development Management Policies are being drafted that promote enhanced access to encourage more public transport use and ensure accessibility through realistic alternatives to use of the car – these will provide mitigation measures to reduce negative effects and confirm more certainty of potential positive effects for sustainable transport.</p>							
<p>8. Energy & Climate Change</p> <p>To maximise the potential for energy efficiency, reduce greenhouse gas emission and withstand the effects of climate change²⁷</p>	<p>To maximise the potential for energy efficiency, reduce greenhouse gas emission and withstand the effects of climate change</p>	0?	0?	0?	0?	0?	0?	0?
	<p>All development has the potential for high energy efficiency and carbon neutrality but generally, the scale and scope of the larger developments, especially new settlements & urban extensions in Options 1,2 & 5, offer potential possibilities for exemplar design, construction & occupation, including local renewable energy schemes where appropriate.</p> <p>Potential for minor negative effects during the construction phases with potential for neutral or positive effects in the longer term but uncertainty at this stage of assessment for all the options.</p>							
<p>9. Water Resources &</p>	<p>To minimise the demand for water and maintain or improve water quality</p>	0?	0?	0?	0?	0?	0?	0?

²⁷ Please note that Flood Risk is considered by the SA within objective number 10

<p>Quality</p> <p>To minimise the demand for water and maintain or improve water quality</p>	<p>All development has the potential for high water efficiency and water neutrality but generally, the scale and scope of the larger developments, especially new settlements & urban extensions in Options 1, 2 & 5, offers potential possibilities for exemplar design and construction including local water reuse/recycling schemes where appropriate. This is particularly relevant in the Anglian Water region with issues for water resources – high population and relatively low rainfall.</p> <p>The Anglian area is known to be under water resources stress²⁸ but water companies are under a statutory obligation to provide potable water regardless of the level of development growth. This has implications for the timing of necessary infrastructure – for water resources, wastewater treatment & the associated sewerage network. Some issues have already been identified with regard to the capacity of wastewater facilities at Chalton WWTW²⁹.</p> <p>Uncertainty at this stage of assessment until more locational specificity and further studies are undertaken including the Water Cycle Study Stage 2.</p> <p>Development Management Policies to protect environmental resources, including water quality, are being drafted for the Local Plan. These will provide mitigation measures with likely residual neutral effects for both water resources & water quality, but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.</p>							
<p>10. Flood Risk</p> <p>To reduce the risk of flooding from all sources</p>	<p>To reduce the risk of flooding from all sources</p>	<p>0?</p>	<p>0?</p>	<p>0?</p>	<p>0?</p>	<p>0?</p>	<p>0?</p>	<p>0?</p>
	<p>A Development Management Policy on Flood Risk is being drafted for the Local Plan in line with Government legislation & guidance to avoid & reduce flood risk. This will provide mitigation measures with resultant neutral effects but still some uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.</p> <p>The larger developments, including new settlements and Urban Extensions in Options 1, 2 & 5, have the scale and scope to provide creative design and potentially contribute to resolving existing flood risk issues – however, uncertain until further studies such as the Water Cycle Stage 2, and depends upon location. Higher densities in Option 7 may reduce the potential risks of flooding through less land take & less run-off compared to other options.</p>							

²⁸ Anglian Water, Water Resources Management Plan 2014

²⁹ JBA for Central Bedfordshire Council (Jan 2017) Water Cycle Study Stage 1

<p>11. Soil</p> <p>To protect and conserve soil</p>	<p>To protect and conserve soil</p>	-	-	-	-	-	-	-?
<p>12. Biodiversity & Geodiversity</p> <p>To protect, enhance and manage biodiversity & geodiversity</p>	<p>To protect, enhance and manage biodiversity & geodiversity</p>	0?	0?	0?	0?	0?	0?	0?

³⁰ Defra Magic Map Application

³¹ Habitats Regulations Assessment for Central Bedfordshire Local Plan (2014)

	<p>however, uncertainty until further studies and depends upon location. Opportunities for resolving existing problems and promoting aspirations for enhancing local biodiversity can be identified through the Environmental Framework³².</p> <p>Higher densities in Option 7 may reduce the potential risks of negative effects on locally important biodiversity through less land take & creative Green Infrastructure, such as is established in major urban areas, for example, including Singapore³³, indicating opportunities for mitigation and enhancement.</p>								
<p>13. Landscape</p> <p>Protect and enhance the landscape and townscape</p>	<table border="1" data-bbox="465 467 2029 568"> <tr> <td data-bbox="465 467 1288 568">Protect and enhance the landscape and townscape</td> <td data-bbox="1288 467 1393 568">-</td> <td data-bbox="1393 467 1500 568">-</td> <td data-bbox="1500 467 1606 568">--?</td> <td data-bbox="1606 467 1711 568">-</td> <td data-bbox="1711 467 1818 568">-</td> <td data-bbox="1818 467 1924 568">-</td> <td data-bbox="1924 467 2029 568">-?</td> </tr> </table> <p>All development has the potential for negative effects on landscape and townscape – and this may be particularly significant for the Plan area with its' predominantly rural character with larger areas of flat land and high levels of tranquillity. Vulnerability and sensitivity to change have been identified³⁴ for a number of settlements – this will be taken into account in further studies such that potential major negative effects may be reduced to minor negative effects.</p> <p>Extensions to the larger villages through Option 3 may have the potential for more major negative effects as it may be more difficult to mitigate the cumulative effects throughout the dispersed and rural landscape of the area – depends upon scale and location of proposed development & uncertainty at this stage until further detailed studies including possibilities for local mitigation are undertaken.</p> <p>The larger developments in Options 1, 2 & 5 may have the potential for greater negative effects but also have the opportunity for more creative design and mitigation through careful early masterplanning. Higher densities in Option 7 can reduce land take with less negative effects dispersed through the landscape but uncertain at this stage as depends upon precise location and design factors.</p> <p>Development Management Policies on Landscape Character & Value are being drafted for the Local Plan and these will avoid important assets and settings to avoid negative effects. They will provide mitigation measures but with likely potential cumulative negative effects overall due to the overall quantum of new development; however, still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.</p>	Protect and enhance the landscape and townscape	-	-	--?	-	-	-	-?
Protect and enhance the landscape and townscape	-	-	--?	-	-	-	-?		
14. Historic	<p>To ensure the protection and enhancement of heritage assets,</p> <table border="1" data-bbox="1288 1230 2029 1265"> <tr> <td data-bbox="1288 1230 1393 1265"></td> <td data-bbox="1393 1230 1500 1265"></td> <td data-bbox="1500 1230 1606 1265"></td> <td data-bbox="1606 1230 1711 1265"></td> <td data-bbox="1711 1230 1818 1265"></td> <td data-bbox="1818 1230 1924 1265"></td> <td data-bbox="1924 1230 2029 1265"></td> </tr> </table>								

³² <http://www.centralbedfordshire.gov.uk/environment/natural/environmental-framework.aspx>

³³ For example, see (Jan 2014), The Role of Green Infrastructure in the Sustainable City: A vision for Singapore, workshop hosted by Centre for Urban Greenery & Ecology

³⁴ LUC for Central Bedfordshire Council, Landscape Character Assessment (2016)

Environment To ensure the protection and enhancement of heritage assets, the historic environment and its setting	the historic environment and its setting	0?	0?	0?	0?	0?	0?	0?
	The Plan area has a rich historical heritage with nationally and locally important assets. Development Management Policies on the Historic Environment are being drafted for the Local Plan and these will avoid important assets and settings to avoid any major negative effects. They will provide mitigation measures with the potential for residual and cumulative neutral effects - but still uncertainty for the SA at this stage as effects will depend upon the scale/scope of development and the precise location.							

Appendix IV: Strategic SA of Growth Scenario Options

Key:

Categories of Significance		
Symbol	Meaning	Sustainability Effect
++	Major Positive	Proposed development encouraged as would resolve existing sustainability problem
+	Minor Positive	No sustainability constraints and proposed development acceptable
0	Neutral	Neutral effect
?	Uncertain	Uncertain or Unknown Effects
-	Minor Negative	Potential sustainability issues: mitigation and/or negotiation possible
--	Major Negative	Problematical and improbable because of known sustainability issues; mitigation likely to be difficult and/or expensive
-	+	SA Objectives 2, 4, 5, 9 & 11 consider more than one sub-topic such that more than one significant effect may be predicted with two symbols. No 2 Communities – first symbol refers to in/out of Green Belt; second symbol refers to community & settlement identities No 4 Employment – first symbol refers to employment support; second symbol refers to vitality/viability of town centres No 5 Health & Equality – first symbol refers to regeneration/deprivation; second symbol refers to Green Infrastructure for health & well-being No 9 Water – first symbol refers to water resources; second symbol relates to water quality No 11 Soil & Land – first symbol refers to greenfield & agricultural land qualities; second symbol relates previously developed land

	Growth Scenario Options Potential Housing Numbers				
	1	2	3	4	5
Area A					
North of Luton	4,000	4,000	4,000	0	4,000
Green Belt Villages	2,000	2,000	2,000	0	3,000
West of Luton	2,000	0	2,000	0	0
Area B					
Tempsford	7,000	7,000	0	7,000	0
East of Biggleswade	3,000	0	0	3,000	0
Biggleswade			500		
East of Arlesey	2,000	2,000	2,000	2,000	2,000
Villages	0	0	500	0	2,500
Area C					
Marston Vale	5,000	5,000	5,000	5,000	5,000
Apsley Guise	3,000	3,000	3,000	3,000	0
Wixams South	1,000	1,000	1,000	1,000	1,000
Villages	0	0	0	0	650
Area D					
RAF Henlow	1,000	1,000	1,000	1,000	1,000
Villages	500	500	500	500	1,500
Totals	30,500	25,500	21,500	22,500	20,650

Please note that these potential numbers for housing reflect the potential full capacity for development. Since enabling infrastructure for the larger strategic areas may not be achievable within the 20-year plan period, only a proportion of the overall capacity figures for new homes may be taken forward. This first draft CBLP only considers Growth Locations that are typically of a strategic scale (more than 1,000 new homes).

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
1. Housing To ensure that the housing needs of all residents and communities are met	<p>Options 1, 2, 3, & 5 have the potential for significant positive effects through the delivery of housing to meet the needs of all residents and communities. The greater the total number of dwellings the more significant these positive effects are considered to be i.e. the higher growth in Scenario 1 is considered to have the potential for the most significant positive effects for this SA Objective.</p> <p>Option 4 however fails to meet the housing needs of the residents and communities located in the southern half of the Borough (the Green Belt), as well as the cross-boundary needs of Luton under the Duty to Cooperate in what could be considered reasonable locations to meet Luton Council's needs. This is considered to have the potential for minor long term negative effects.</p> <p>Draft Local Plan policies (Housing Mix, Housing Standards, Affordable Housing, Starter Homes, and Self and Custom Build Housing) should ensure that all options deliver a range and appropriate mix of types and tenures of housing to meet local needs and aspirations.</p>	++	++	++	-	++

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options									
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500		2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500		3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500		4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500		5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500	
2. Communities³⁵ To maintain and enhance community and settlement identities.	Options 1, 2, 3 & 5 all have the potential for significant growth within the Green Belt and thus significant negative effects that will be cumulative in the longer-term. The recent Green Belt Study ³⁶ however has identified areas of land which are considered to weakly contribute towards Green Belt purposes, and the direction of development towards these areas has the potential to reduce the extent of the identified negative effects. Reducing the size of potential growth to small-medium (<500-1000 new homes) also provides mitigation measures but this remains uncertain at this stage of assessment as it depends upon the precise location of development sites. Option 4 avoids any development within the Green Belt and the associated negative effects; at this strategic level of assessment, minor positive effects for this SA objective. However, uncertainty as these communities would not then benefit from the positive effects of development – new residents can revitalise communities.	--?	++?	--?	++?	--?	++?	++?	++?	--?	--?

³⁵ Please note that first symbol relates to location in/out of Green Belt designation; second symbol relates to effects on integration & identity for existing settlements

³⁶ LUC for Central Bedfordshire Council (September 2016) Green Belt Study

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>For all the options, there is the potential for negative effects through coalescence of settlements, but these effects can be avoided through the appropriate sizing & siting of development – uncertainty at this stage of assessment until more information & precise locations. Emerging Strategic Policies are likely to guide and manage development growth to avoid coalescence or loss of identity.</p> <p>There is the potential for minor negative effects through loss of identity & integration for new communities with existing settlements. Mitigation is possible through careful sizing & siting of development. Options 1,2 & 4 include potential new settlements in Area B that provide mitigation measures by reducing the development pressures on the identity of other settlements & less issues for integration with existing communities – potential for major positive effects for Options 1 & 2 - but uncertain at this stage. New settlements offer opportunities for creating thriving & inclusive communities through good & early design with positive effects for identity.</p> <p>The lower overall housing numbers in Options 3, 4 & 5 will</p>					

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	reduce the likelihood of significant negative effects on integration & identity compared to the other options. However, Option 5 includes significantly higher growth (2,500 vs 500) for villages in Area B with the potential for negative effects. Focusing development in urban extensions to the east of Biggleswade as in Options 1, 4 will help reduce the likelihood of significant negative effects on the villages, compared to Option 3. Option 5 also has more growth (3000 vs 2000) in Area A compared to other options, thus overall, Option 5 has potential for major negative effects – but some uncertainty at this stage of strategic assessment.					
3. Services & Facilities To improve accessibility to services and facilities ³⁷ .	All the growth options propose significant levels of growth that could support the delivery of new services and facilities with the potential for long-term positive effects. The extent of the positive effects will vary depending on the scale of development at individual settlements, and there remains an element of uncertainty until precise locations are determined. Edge of settlement	++?	++?	++?	+	+

³⁷ This relates to the provision of services and facilities, such as schools, healthcare centres, shops, and hospitality (café, restaurant, pub).

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>development at a smaller scale, for example, has the potential for minor negative effects on existing services and facilities, however these effects can be avoided or minimised through appropriate siting and scale. There may be issues for timing and phasing of delivery of services & facilities but mitigation can be provided through strong policy requirements set out in the next draft of the CBLP for proposed strategic site allocations policies.</p> <p>Draft Local Plan policies (Provision for Social and Community Infrastructure and Indoor Sport and Leisure Facilities) also reduce the potential for negative effects by seeking to ensure that new development provides for new social and community infrastructure that integrates well with the existing urban area.</p> <p>Option 4 however avoids development in the south of the Plan area which indicates that there will be little change to the accessibility to services and facilities for many communities in this area. This may indirectly exacerbate existing sustainability issues such as areas of high deprivation where communities have poor access to existing services and facilities – with negative effects</p>					

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>for Area A thus reducing the overall likely significant positive effects for the whole of the area and in consideration of unmet need from Luton Borough.</p> <p>Option 5 includes more growth (3000 vs 2000) for villages in Area A; this is unlikely to be at sufficient scale to support significant services & facilities so positive effects also reduced to potentially minor for this option.</p> <p>Options 1, 2 & 4 with new settlements offer the scale & scope for major positive effects that will be cumulative in the longer term. However, and with the higher quanta of development for Option 1, strong planning requirements will be needed in specific policy at the next CBLP draft to ensure timely & good provision of services & facilities to guide masterplanning. So, some uncertainty remains at this stage.</p>					
<p>4. Employment To support the economy and ensure that there are suitable opportunities for employment.</p>	<p>Options 1 & 4 direct higher levels of new development to Area B. The potential for improvements to rail and strategic road connections in this area supports access to strategic employment areas, particularly in London. Focusing the growth at Tempsford and Marston Vale capitalises on opportunities to sustainably connect this area with major employment areas in the west (e.g.</p>	++	++	+	+	+

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>Milton Keynes) with the future development of the East-West rail, with the potential for major long-term and cross-boundary positive effects.</p> <p>Option 3 directs significantly less development towards Area B, along with Option 5; these Options deliver no new development at Tempsford, failing to capitalise on opportunities to improve East-West connectivity in Area B. Although the Options do still provide significant growth in Area C which can support improved connectivity, particularly to nearby major employment area Milton Keynes – overall minor positive effects.</p> <p>Option 4 avoids development in the south of the Plan area and thus fails to capitalise on opportunities to connect development to the Midland Main railway line and increase accessibility to significant employment areas in this respect – with reduced positive effects overall.</p> <p>Option 5 directs most development within the Green Belt. This area is well connected to strategic employment areas via the Midland Main railway line and in its proximity to both Luton and Milton Keynes. The option</p>					

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>however directs less development to Areas B and C compared to the other options – overall minor positive effects likely.</p> <p>Options 1 & 2 distribute growth in a manner which seeks to capitalise on opportunities to improve East-West connections in both Areas B and C, as well as significant growth in Area A supporting existing strategic connections to the Midland Main railway line and Luton and Milton Keynes – with major positive effects likely overall for CBC.</p> <p>All the options 1-5 capitalise on opportunities to sustainably connect with major employment areas with EWR (due to proximity of Ridgmont Station, in CBC, which will be the location of a EWR station connecting to the Western Section) with the potential new settlement (5000) at Marston Vale in Area C with major positive effects.</p> <p>Strategic level sites would not only potentially improve access and connectivity to employment areas but as they are large scale they would be mixed-use and so also provide employment areas with positive effects but</p>					

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	some uncertainty still at this stage of assessment as depends upon precise locations. No town centre comments and this section not split like other appraisals? Might not be needed here?					
5. Health & Equality To improve the health and wellbeing of communities and reduce inequalities.	All the options have the potential to deliver investment and regeneration in areas of deprivation with the potential for long term positive effects. Most areas of highest deprivation in Central Bedfordshire however are largely located in the south ³⁸ (around Dunstable and Houghton Regis, in Flitwick, Caddington and Leighton Buzzard North). As Option 4 avoids any development in the south of the Plan area it is less likely to result in significant positive effects and fails to capitalise on opportunities to address inequalities. All the options have the potential to support investment and improvement in priority GI corridors; however, Option 4 again by avoiding development in the south of the Plan area is less likely to distribute these gains across the Plan area and reduce inequalities in this respect with only neutral effects indicated for the Borough overall.	++	++	++	0	++

³⁸ <http://www.centralbedfordshire.gov.uk/council/census/deprivation.aspx>

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		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
6. Highways & Air Quality To maintain and improve the existing highway network and reduce associated indirect impacts on air quality and greenhouse gas emissions.	<p>Effects at this stage remain largely uncertain. Long journey times exacerbated by high out-commuting are established characteristics for the Plan area. Major growth in all scenarios would need to be associated with jobs to minimise increased out-commuting. Likely cumulative negative effects but uncertain at this stage.</p> <p>Options 3 and 5 do not deliver growth at Tempsford and thus fail to capitalise on opportunities to connect development to the future East-West rail line, and thus support a modal shift that can reduce stress on the highway network.</p> <p>Option 4 avoids development in the south of the Plan area and thus fails to capitalise on opportunities to connect development to the strategic Midland Main railway line and support a modal shift in this respect. This could potentially exacerbate stress on the highway network through increased development in less strategically connected locations.</p> <p>Option 1 with a higher quantum of proposed development - there could be a likelihood of more significant negative effects – but this is mitigated by the</p>	-?	-?	-?	-?	-?

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>inclusion of new settlements (as with Options 2 & 4) that will have the scale & scope for enabling infrastructure including potential for contributing to highway infrastructure.</p> <p>Effects on traffic and the highway network will have concomitant effects on air quality and greenhouse gas emissions. Significant negative effects are more likely to occur in the short-term as it is assumed that long-term air quality is likely to improve because of stringent emissions controls on new vehicles via European standards³⁹. In 15 to 20 years' time low emission vehicles will make up most cars on the roads in the UK. It is also likely that there will be reductions in various contributing sectors that will also result in reductions in background concentrations of atmospheric pollutants. However, this is uncertain at this stage.</p> <p>Particular consideration in all Options will be needed for development in and around Sandy, Dunstable (e.g. Luton North and Houghton Regis) and Ampthill (e.g. Flitwick) which have Air Quality Management Areas</p>					

³⁹ <http://ec.europa.eu/environment/air/transport/road.htm>

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		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	designated primarily due to traffic, and new development could provide the opportunity to help resolve an existing sustainability problem.					
7. Sustainable Transport To encourage a demonstrable modal shift and reduce the need to travel.	Options 1 & 2 seek to deliver development in all Areas and capitalise on opportunities to support a modal shift. For example, through strategic growth in Area A which is well connected to the Midland Main railway line, and strategic growth in Areas B and C which will support improved sustainable East-West connections in the future development of the East-West rail. Options 3 and 5 do not deliver growth at Tempsford and thus fail to capitalise on opportunities to connect development to the future East-West rail line, and support a modal shift in East-West movement across the north of the Plan area. Option 4 avoids development in the south of the Plan area and thus fails to capitalise on opportunities to connect development to the strategic Midland Main railway line and support a modal shift in this respect.	++?	++?	-	-	-?

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>Option 5 disperses a larger proportion of development across village locations, which are less likely to support viable public transport services. New development in village locations has the potential to both exacerbate a reliance on the private vehicle in this respect with negative effects, and support investment and improvement in public transport services to make them more viable with positive effects. At this stage the overall effects are uncertain.</p> <p>Option 1 has a higher quantum of development than other options but includes new settlements that will have the scale & scope to provide exemplar sustainable transport that could benefit the wider areas in B & C. Potential for major positive effects but uncertain as depends on further studies.</p>					
8. Energy & Climate Change	All the options present opportunities to deliver energy efficient development that can withstand the effects of climate change with the potential for long term positive effects. This is supported by strong policy mitigation	+	+?	0?	+?	0?

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
To maximise the potential for energy efficiency, reduce greenhouse gas emission and ensure that the built and natural environment and its communities withstand the effects of climate change ⁴⁰ .	<p>provided through Local Plan policies (Successful and Sustainable Places, Modern Methods of Construction, Climate Change and Sustainability and Renewable Energy Development) which seek to deliver high levels of efficiency as well as maximise opportunities for climate change mitigation and adaptation.</p> <p>Although there is the potential for large scale development schemes to deliver carbon neutral development or renewable energy gains in each option, it is recognised that this is largely dependent on the precise location and masterplan or design scheme and so remains uncertain at this stage.</p> <p>The potential for minor short-term negative effects during construction phases can also be minimised through site level mitigation, for example, through a requirement for Construction Environmental Management Plans.</p> <p>Options 3 and 5 have less large scale developments (of over 5000 homes) and as such are less likely to deliver</p>					

⁴⁰ Please note that Flood Risk is considered by the SA within objective number 10

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		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>positive effects compared to other options, on the assumption that larger scale development has greater potential for renewable energy technology and production - but with uncertainty at this stage of assessment.</p> <p>Options 1, 2, & 4 include new settlements with the scale & scope to deliver energy efficiencies (including exemplar) with more certainty of positive effects.</p>					
<p>9. Water Resources & Quality To minimise the demand for water and maintain or improve water quality.</p>	<p>Development across all the options has the potential for high water efficiency and water neutrality. Each scenario option contains large scale developments in which exemplar design and construction with water efficiency schemes can be promoted (e.g. water reuse/recycling schemes). This can support the objectives of the relevant WRMPs and measures to address current / predicted deficits in the water supply-demand balance in both Ruthamford South Water Resource Zone (WRZ) and Lee WRZ.</p> <p>Most watercourses in Central Bedfordshire are not currently meeting an overall 'good' classification for water quality, most are considered 'moderate'. The most common Reason for Not Achieving Good Status (RNAG)</p>	0?	0?	0?	0?	0?

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>is 'pollution from waste water' impacting 22 of the 32 watercourses. The Water Cycle Study⁴¹ identifies that all WwTWs have some capacity within their existing quality permits to accommodate future development without causing a class of 10% deterioration, however in some settlements the available capacity is quite small, reflecting the limited dilution potential available in the receiving watercourse, and in cases of large scale development WwTW upgrades may also be required. All options include large scale development and thus may require water infrastructure investment to avoid negative effects on water quality – uncertainty at this stage of assessment & there may be issues of timing for enabling infrastructure that needs to be considered – when the next stage of the Water Cycle Study is completed.</p> <p>Draft Local Plan policies (Climate Change & Sustainability, Flood Risk Management, Sustainable Drainage, Water Quality and Pollution) seek to maintain and improve the water environment, and ensure that new development does not exacerbate the existing water constraints in the Plan area, e.g. high population</p>					

⁴¹ JBA for Central Bedfordshire Council (Jan 2017) Water Cycle Study Stage 1

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>and relatively low rainfall in the Anglian water region, as well as ensuring new development has no adverse impact on the quality of waterbodies or prevent future attainment of good status. The policies seek to deliver high levels of water efficiency in new development (Policy Climate Change & Sustainability seeks to deliver a 110l/person/day standard) which will support the objectives of WRMPs. Strong policy mitigation should ensure at least neutral effects are achieved across all options, however there remains an element of uncertainty until site level assessments have been completed.</p> <p>Option 1 has a higher quantum with likelihood of more pressures on capacities but also include new settlements (as do Options 2 & 4) that will have the scale & scope for water efficiencies & exemplar sustainable water management.</p>					
10. Flood Risk To reduce the risk of flooding from all sources.	<p>All Options are likely to result in neutral effects against SA Objective 10 given the strong policy mitigation provided through the draft Local Plan (Flood Risk Management).</p> <p>Draft Local Plan policies (Flood Risk Management, Successful and Sustainable Places and Sustainable</p>	0	0	0	0	0

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	Drainage) requires development to maximise opportunities for Sustainable Drainage Systems, where applicable, and there may be possibilities for enhanced effects to help resolve existing flooding problems with the potential for some positive effects but this is uncertain at this stage of appraisal.					
11. Soil To protect and conserve soil.	The Plan area is predominantly rural and there are areas of best of most versatile agricultural land, particularly around Biggleswade and Marston Moretaine. Options 2 and 5 avoid development around Biggleswade, however all options include a large development at Marston Vale which is likely to result in the loss of best and most versatile agricultural land (Grade 2) with permanent major negative effects. It is recognised however at this stage that there is an element of uncertainty until the precise location of development has been determined & possibilities for mitigation are investigated. Development at the rest of the locations in each option is likely to result in the loss of greenfield land with permanent negative effects. However, there are also likely to be opportunities in each option for	--?	--?	--?	--?	--?

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	soil/greenfield enhancement through Green Infrastructure investment and provisions including allotments and community gardens. Larger developments may also offer opportunities for higher densities of housing that may provide some mitigation by reducing the amount of soil/land taken.					
12. Biodiversity & Geodiversity To protect, enhance and manage biodiversity & geodiversity.	There are no European designated sites within the Plan area although there are several outside the area and within the Plan's influence. There are nationally and locally important sites for biodiversity and geodiversity, including the Greensand Nature Improvement Area (NIA) stretching across the Plan area in a north-east/south-west direction. All options include some development within the NIA and such development should have the potential to contribute to biodiversity improvements in this area. It is considered that strategic level development within each option has the potential to contribute to ecological networks and overall biodiversity connectivity through investment and new provisions. Option 5 with less strategic locations and more growth in villages may offer less opportunities, so only uncertain neutral effects	+	+	+	+	0

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>indicated at this stage.</p> <p>Draft Local Plan policies (Green Infrastructure, Enhancing Ecological Networks, Nature Conservation, Trees, Woodlands and Hedgerows, Greensand Ridge Nature Improvement Area, Forest of Marston Vale, The Bedford & Milton Keynes Waterway Park, Development Close to Watercourses) seeks to protect designated biodiversity and to ensure that all new development positive contributes to biodiversity networks. Given the potential opportunities and strong policy mitigation it is considered that each option has the potential for minor long term positive effects with an element of uncertainty until lower level assessments have been completed.</p>					
13. Landscape Protect and enhance the landscape and townscape.	<p>All Options have the potential for negative effects on landscape and townscape. This may be particularly significant for the Plan area with its predominantly rural character including large areas of flat land and high levels of tranquillity.</p> <p>Option 4 avoids development in the south of the Plan area and thus largely avoids the potential for significant negative effects on the designated AONB landscape.</p>	-?	-?	-?	-?	-?

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	<p>Options 1, 2, 3, & 5 are likely to affect the designated AONB landscape to some degree, particularly through development North of Luton and in some of the Green Belt villages (including Barton-le-Clay, Caddington, Slip End, Harlington and Westoning). Mitigation is provided through draft Local Plan policies (Trees, Woodlands and Hedgerows, Landscape Character and Value, Tranquillity, The Chilterns Area of Outstanding Natural Beauty, Greensand Ridge Nature Improvement Area, Forest of Marston Vale, and Outdoor Sport, Leisure and Open Space) which seek to protect designated landscapes, and the landscape qualities of the Plan area. However, these options are still likely to negatively affect the landscape to some degree given that there will be development in previously undeveloped areas. The effectiveness of potential mitigation measures is unknown at this stage of assessment until further more locationally specific studies are undertaken.</p> <p>Options 1 has a higher quantum of development with likely more significance of negative effects but this may be mitigated through the inclusion of new settlements (as with Options 2 & 4) that have the scale & scope for exemplar design – uncertain at this stage until further</p>					

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Growth Scenario Options				
		1. 30,500 new homes Areas: A 8000; B 12000; C 9000; D 1500	2. 25,500 new homes Areas: A 6000; B 9000; C 9000; D 1500	3. 21,500 new homes Areas: A 8000; B 3000; C 9000; D 1500	4. 22,500 new homes Areas: A 0; B 12000; C 9000; D 1500	5. 20,650 new homes Areas: A 7000; B 4500; C 6650; D 2500
	studies are completed.					
14. Historic Environment To ensure the protection and enhancement of heritage assets, the historic environment and its setting.	<p>The Plan area has a rich historical heritage with nationally and locally important assets. Many of the settlements in Central Bedfordshire contain Conservation Areas as well as Archaeological Notification Areas. There is significant potential to increase archaeological knowledge of the Plan area through surveys and investigations in development in areas which include Archaeological Notification Areas across all the scenario options.</p> <p>Draft Local Plan policies (Archaeology, Historic Parks and Gardens, and Built Heritage) seek to avoid negative effects arising on designated and non-designated heritage assets and their settings, as well as promote sensitive and responsive design that enhances heritage settings and historical understanding and appreciation. It is considered that this policy mitigation should ensure at least residual neutral effects, however there remains an element of uncertainty until lower level assessments have been completed.</p>	0?	0?	0?	0?	0?

Growth Scenario Options: Employment

	Strategic Employment Scenarios (numbers of jobs)	
	1	2
Area A		
Sundon Rail Freight Interchange	2,300	0
Area B		
Biggleswade, West of A1	2,000	2,000
Area C		
M1 Junction 13	1,700	1,700
Area D		
	0	0
Total Numbers of Jobs	6,000	3,700

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Employment Growth Scenario Options			
		Scenario 1: 6,000 New Jobs	Scenario 2: 3,700 New Jobs		
1. Housing To ensure that the housing needs of all residents and communities are met	This assessment is considering employment growth scenario (in terms of overall provision) and so housing is not considered, although there would be synergies with housing provision in and proximate to the Growth Locations (through providing employment opportunities for residents). Likely neutral effect.	0	0		
2. Communities⁴² To maintain and enhance community and settlement identities.	Both scenarios include development in areas that are unlikely to adversely affect settlement identities. The provision of additional employment may have significant benefits for residents in terms of choice and opportunities directly associated with the sites and in the wider local and sub-regional economies. The Sundon Growth Location would involve development within the Green Belt and so Scenario 1 would be likely to have a minor negative effect compared with Scenario 2 (although the site is located adjacent to the railway line and M1 and effects on openness may be limited – the contribution of the site to the functions of Green Belt would need further review).	-	+	+	+
3. Services & Facilities To improve accessibility to services and facilities ⁴³ .	Increasing employment may put pressure on existing services, but also provide increased patronage improving their viability, and provision of additional and sufficient services in conjunction with employment development is likely to be possible at all sites and for both options. Sundon is close to Luton and its services, and to Harlington and Leagrave rail stations, and increased employment may help to improve the quality of services associated with Scenario 1. Similarly, increased employment provision at Biggleswade would be expected to have similar wider benefits in terms of provision of services. Ridgmont Junction 13 of the M1 is relatively remote from existing major settlements (although	+	+?		

⁴² Please note that first symbol relates to location in/out of Green Belt designation; second symbol relates to effects on integration & identity for existing settlements

⁴³ This relates to the provision of services and facilities, such as schools, healthcare centres, shops, and hospitality (café, restaurant, pub).

		Employment Growth Scenario Options	
SA Objective	Assessment of Effects	Scenario 1:	Scenario 2:
	Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	6,000 New Jobs	3,700 New Jobs
	still within 5km of MK) and while provision of services together with employment is likely, the associated benefits to services in existing settlements are likely to be less clear, although development of employment at this site would complement wider development associated with Aspley Guise and EWR at Ridgmont. The difficulty of assessing the potential effects indicates the need for masterplanning and integration between provision of employment land together with provision of appropriate services and connectivity and accessibility from existing and new housing as demonstrated in the North of Luton and Sundon RFI Framework Plan		
4. Employment To support the economy and ensure that there are suitable opportunities for employment.	Both scenarios will have major employment benefits and a major positive effect on this objective, in terms of overall economic benefits and provision of employment sites, but Scenario 1, in providing for an additional 2,300 jobs, would have the largest potential positive, cumulative and long term benefits. These strategic employment site areas are primarily located at major transport. Both scenarios include a strategic site at the south of Biggleswade and such development could provide opportunities that contribute to the viability and viability of the town centre with the potential for further positive effects.	++	+
5. Health & Equality To improve the health and wellbeing of communities and reduce inequalities.	The provision of a range of employment opportunities in a number of locations is likely to be beneficial in terms of improving people's wellbeing. The urban areas of southern Central Bedfordshire experience higher levels of deprivation than the rest of the Plan area, and so development at Sundon (included in Scenario 1) may be expected to have a positive effect in contributing to reducing deprivation through providing a large number of employment opportunities. However, this would also involve development in the Green Belt, although the Framework Plan provides for mitigation for loss of greenfield and Green Belt land and for enhanced green infrastructure provision.	+	+
6. Highways & Air Quality To maintain and	Development of new employment land may generate increased traffic and resulting congestion and emissions at all locations. Scenario 1 through providing for a greater number of jobs would be likely to	0?	0?

SA Objective	Assessment of Effects Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	Employment Growth Scenario Options	
		Scenario 1: 6,000 New Jobs	Scenario 2: 3,700 New Jobs
improve the existing highway network and reduce associated indirect impacts on air quality and greenhouse gas emissions.	<p>generate more traffic and movements. This may be mitigated through implementation of other policies in the Plan particularly T6 Strategic Transport Improvements, T2 Mitigation of Transport Impacts on the Network, T1 Connectivity and Accessibility, T5 Development and Public Transport Interchanges and T6 Low Emission Vehicles. The proximity of the sites to the M1 and A1, and mainline rail stations may provide adequate capacity, particularly if sites are developed in tandem with infrastructure improvements and opportunities for integrated public transport options are developed to reduce increases in car traffic.</p> <p>Thus, while development at this scale is likely to have a negative effect through increased traffic and emissions, there will clearly be opportunities through improvements in public transport, to reduce adverse effects. Therefore, a residual neutral negative effect is predicted but some uncertainty at this stage until further transport modelling is completed.</p>		
<p>7. Sustainable Transport To encourage a demonstrable modal shift and reduce the need to travel.</p>	<p>Sundon (Scenario 1) is located adjacent to a railway line in close proximity to the existing railway stations at Harlington and Legrave. Biggleswade and Ridgmont are also in proximity to mainline rail stations and so all Scenarios and sites present opportunities for sustainable transport to be used and enhanced with the potential for enhanced positive effects. Sundon is proximate to Luton, and the North of Luton & Sundon FRI Framework Plan identifies opportunities to enhance sustainable transport. Likewise at Biggleswade development has the potential to extend existing bus services to enhance sustainable transport connections between the site and railway station resulting in potential positive effects. These locations adjacent to major settlements also reduces the need to travel for many potential employees – all with potential for major positive effects that will be cumulative in the longer-term.</p>	++	++

SA Objective	Assessment of Effects	Employment Growth Scenario Options	
		Scenario 1:	Scenario 2:
	Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	6,000 New Jobs	3,700 New Jobs
8. Energy & Climate Change To maximise the potential for energy efficiency, reduce greenhouse gas emission and ensure that the built and natural environment and its communities withstand the effects of climate change ⁴⁴ .	While the increase in employment proposed in both scenarios would be likely to lead to an increase transport and traffic, opportunities to make use and develop sustainable transport would be expected to partially mitigate for this, with associated mitigation of emissions of greenhouse gases. The development of employment floorspace would be expected to comply with national policy and regulations regarding energy efficiency and design standards, and Local Plan policies CCI, CC3, CC5, and HQ6. Development at these scales has the potential for delivery of high standards of energy efficiency and on-site renewable energy.	+ ?	+ ?

⁴⁴ Please note that Flood Risk is considered by the SA within objective number 10

		Employment Growth Scenario Options	
SA Objective	Assessment of Effects	Scenario 1:	Scenario 2:
	Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	6,000 New Jobs	3,700 New Jobs
9. Water Resources & Quality To minimise the demand for water and maintain or improve water quality.	Employment growth will lead to increased consumption of water and demand for wastewater treatment. The assessment of each Employment Growth Location (Appendix V) identifies potential issues with regard to water resources availability, water quality and wastewater treatment capacity but concludes that the effects of development in these areas is uncertain, but that there are no strategic limitations on development due to water supply. Policies CCI Climate Change & Sustainability, CC6 Water Quality and CC7 Pollution provide for mitigation to ensure at least neutral effects on water quality, and ensure that development supports Water Resource Management Plans with high water efficiency targets.	0	0
10. Flood Risk To reduce the risk of flooding from all sources.	Development in all of the locations would be likely to avoid Flood Zones 2 and 3 and so with incorporation of sustainable drainage (Policy CC5,) neither Scenario is likely to have an adverse effect on flooding and flood risk.	0	0
11. Soil To protect and conserve soil.	Both scenarios would involve development of greenfield land and so loss of soils, although this is unlikely to be Best and Most Versatile agricultural land. Scenario 1 would involve development of a larger area and so have potential for more negative effect on loss of greenfield land and soils. Some uncertainty until further site specific studies completed.	-?	-?

SA Objective	Assessment of Effects	Employment Growth Scenario Options	
		Scenario 1:	Scenario 2:
	Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	6,000 New Jobs	3,700 New Jobs
12. Biodiversity & Geodiversity To protect, enhance and manage biodiversity & geodiversity.	There are a number of SSSIs and County Wildlife Sites proximate to Sundon and so potential for minor negative effects of development at this location primarily through indirect effects of recreation and disturbance, although the North of Luton and Sundon Framework Plan sets out measures to mitigate effects and achieve gains in biodiversity and green infrastructure. There are a number of County Wildlife Sites proximate to Biggleswade and Ridgmont. Development at all locations would need to comply with Plan Policies EE1, EE2, EE3 and EE4 and seek enhancements to biodiversity and green infrastructure, reflecting the opportunity areas and local priorities. It is unlikely that an increased provision of jobs and employment space in the different scenarios would have an increased effect or risk of effect on biodiversity, due to the strong mitigation measures and potential for enhancements to be delivered in tandem with development. Some uncertainty remains at this level of assessment until further studies confirm the possibilities for any biodiversity enhancements	0?	0?
13. Landscape Protect and enhance the landscape and townscape.	Sundon (included in Scenario 1) is in close proximity to the Chilterns AONB. However, the village of Sundon lies between a Growth Location (North of Luton) and the AONB, and the site is adjacent to the M1 and rail line and on the northern edge of Luton, and so an area where there already is significant development reducing the likelihood of a significant effect on the AONB – so some uncertainty remains regarding significance of effects until further project level studies. The other Growth Locations (Scenario 2) are not proximate to areas of protected landscape but could have an urbanising effect on rural landscape character.	-?	0

SA Objective	Assessment of Effects	Employment Growth Scenario Options	
		Scenario 1:	Scenario 2:
	Nature of the likely sustainability effect (including positive/negative, short - medium term (5-10 years)/long term (10 - 20 years plus), permanent/temporary, secondary, cumulative and synergistic); Uncertainty	6,000 New Jobs	3,700 New Jobs
14. Historic Environment To ensure the protection and enhancement of heritage assets, the historic environment and its setting.	Heritage Assets in the growth locations are limited and so the effects of each Scenario are likely to be limited with neutral effects. There are Archaeological Notification Areas in the Biggleswade and Ridgmont Growth Locations areas and so there may be potential to investigate and record heritage assets of archaeological significance (according with draft Local Plan Policy Archaeology), resulting in increased archaeological knowledge.	0	0