

South Cambridgeshire District Council and Cambridge City Council

Greater Cambridge Local Plan Strategic Spatial Options Assessment: HRA

Final Report

Prepared by LUC

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South Cambridgeshire District Council and Cambridge City Council
 Greater Cambridge Local Plan
 Review of Strategic Spatial Options in relation to HRA

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Chapter 1 : Executive Summary

1.1 This review of spatial options in relation to Habitat Regulations Assessment (HRA) has been prepared by LUC on behalf of South Cambridgeshire District Council and Cambridge City Council (the Councils) as part of the HRA of their Local Plan.

1.2 This report forms part of a wider HRA process, which began in 2019 with the production of the HRA Scoping Report of the Greater Cambridge Local Plan Issues and Options 2020¹, which identified European sites with potential to be affected by the Local Plan. This report draws on the findings of the HRA Scoping Report to determine the impacts of each strategic spatial option.

1.3 This report presents the findings of the assessment of the spatial options being considered by the Council and will be used to inform the Council's decision making regarding, which spatial options to take forward.

Summary of findings

1.4 The Councils have identified three growth level options for homes and jobs and eight strategic (non-site specific) spatial options for testing. Description of the options and explanation of how they were developed is set out in the Greater Cambridge Local Plan: strategic spatial options for testing – methodology document. This review focusses on the primary location of development for each strategic option rather than on each growth level option identified. The potential impacts to European sites for each Strategic Spatial Option identified are summarised below.

1.5 Due to the high-level nature of the options presented at this stage, there are no site-specific boundaries provided. Therefore, in line with a precautionary approach where there was any uncertainty in relation to potential impacts to a European site an adverse impact was assumed. It is therefore expected that as proposals are developed further for each option that potential impacts identified at this stage will be refined.

- Option 1: Densification of existing urban areas and Option 2: Edge of Cambridge - outside the Green Belt
 - Physical damage and loss (offsite): Eversden and Wimpole Woods SAC.
 - Non-physical Disturbance: Eversden and Wimpole Woods SAC.
 - Non-Toxic Contamination: Eversden and Wimpole Woods SAC.
 - Air Pollution: Devil's Dyke SAC, Ouse Wash SAC, SPA and Ramsar.
 - Recreation: Wicken Fen Ramsar and Fenland SAC.
 - Water Quantity and Quality: Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar, Fenland SAC.
- Option 3: Edge of Cambridge - Green Belt
 - Physical Damage and Loss (offsite): Eversden and Wimpole Woods SAC.
 - Non-physical Disturbance: Eversden and Wimpole Woods SAC.

¹ LUC, 2020, HRA Scoping Report of Greater Cambridge Local Plan.

- Non-Toxic Contamination: Eversden and Wimpole Woods SAC.
- Air Pollution: Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar.
- Recreation: Eversden and Wimpole Woods SAC, Devil's Dyke SAC, Wicken Fen Ramsar, Fenland SAC.
- Water Quantity and Quality: Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar, Fenland SAC.
- Option 4: Dispersal - new settlements, Option 5: Dispersal - villages and Option 6: Public transport corridors
 - Physical Damage and Loss (offsite): Eversden and Wimpole Woods SAC, Ouse Washes SAC, SPA and Ramsar.
 - Non-physical Disturbance: Eversden and Wimpole Woods SAC, Ouse Washes SAC, SPA and Ramsar.
 - Non-Toxic Contamination: Eversden and Wimpole Woods SAC, Ouse Washes SAC, SPA and Ramsar.
 - Air Pollution: Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar.
 - Recreation: Eversden and Wimpole Woods SAC, Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar, Portholme SAC, Wicken Fen Ramsar, Fenland SAC.
 - Water Quantity and Quality: Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar, Fenland SAC.
- Option 7: Supporting a high-tech corridor by integrating homes and jobs and Option 8: Expanding a growth area around transport nodes
 - Physical Damage and Loss (offsite): Eversden and Wimpole Woods SAC.
 - Non-physical Disturbance: Eversden and Wimpole Woods SAC.
 - Non-Toxic Contamination: Eversden and Wimpole Woods SAC.
 - Air Pollution: Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar.
 - Recreation: Eversden and Wimpole Woods SAC, Wicken Fen Ramsar, Fenland SAC.
 - Water Quantity and Quality: Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar, Fenland SAC.

1.6 The review has identified a range of potential impacts for each option. Although, there are a greater number of potential impacts identified in relation some options compared to others, it cannot be assumed that these options will result in a greater level impact overall. This will be dependent on the level of risk and severity of impact to each European site. which will be assessed in more detail as part of the HRA.

Chapter 2 : Introduction

Introduction to evidence base

2.1 South Cambridgeshire District Council and Cambridge City Council (the Councils) have commissioned LUC to undertake a Habitat Regulations Assessment (HRA) of their emerging Local Plan. HRA refers to the assessment of the potential effects of a development plan on one or more European sites, including Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites. It is a requirement under the Conservation of Habitats and Species Regulations 2017² for the Council undertake an HRA to ensure that the development plan does not adversely affect the integrity of any European site.

2.2 The purpose of this document is to undertake a high-level review of the likely impacts of the strategic spatial options in relation to HRA and does not constitute a formal HRA Report.

Initial findings

2.3 The HRA process began in 2019 with the production of the HRA Scoping Report of the Greater Cambridge Local Plan Issues and Options 2020¹, which identified European sites with potential to be affected by the Local Plan. This report draws on the findings of the HRA Scoping Report to determine the impacts of each strategic spatial option.

Assessment of strategic (non-site specific) spatial options

2.4 Cambridge City Council and South Cambridgeshire District Council completed public consultation on the Greater Cambridge Local Plan First Conversation (Issues and Options) in early 2020. Building on the initial options set out in the First Conversation, the Councils have identified three growth level options for homes and jobs and eight strategic (non-site specific) spatial options for testing. Description of the options and explanation of how they were developed is set out in the Greater Cambridge Local Plan: strategic spatial options for testing – methodology document.

2.5 The Councils have asked consultants producing Local Plan evidence studies, including the Sustainability Appraisal, to assess the strategic options with regard to their initial evidence findings. This report forms one element of that assessment.

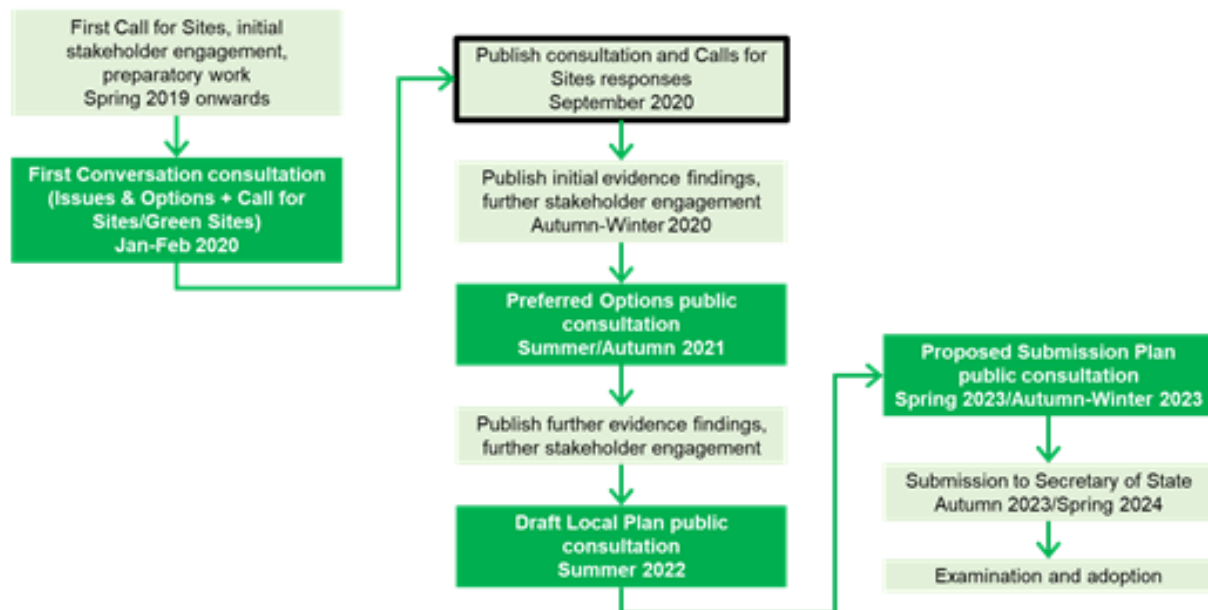
2.6 The initial evidence findings will be reported to the Joint Local Plan Advisory Group autumn 2020 and help to inform further engagement with stakeholders.

2.7 Preferred Options public consultation is planned for summer/autumn 2021, including a preferred strategy and draft allocations. The process of Local Plan preparation is set out below in Figure 2.1.

² The Conservation of Habitats and Species Regulations 2017 (2017) SI No. 2017/1012, TSO (The Stationery Office), London.

Figure 2.1 Process of Local Plan Preparation

Process of Local Plan preparation



The strategic options

2.8 The three growth level options tested through this report are:

- Minimum – Standard Method homes-led
- Medium – central scenario employment-led
- Maximum – higher employment-led

2.9 The spatial scenarios tested through this report are:

1. Densification of existing urban areas
2. Edge of Cambridge – outside the Green Belt
3. Edge of Cambridge – Green Belt
4. Dispersal – new settlements
5. Dispersal – villages
6. Public transport corridors
7. Supporting a high-tech corridor by integrating homes and jobs
8. Expanding a growth area around transport nodes

Methodology

2.10 A review of each strategic spatial option was undertaken to identify potential impacts to European sites that may arise from proposed development within each option. This review was informed by the findings of the HRA Scoping Report of the Greater Cambridge Local Plan 2020¹, which identified European sites with potential to be affected by the Local Plan. This

report has been reviewed and updated accordingly to reflect comments provided by Natural England.

2.11 Whilst considering this review, reference should be made to Table 4.1 in Appendix A, which provides a summary of the Scoping Assumptions and the map of European Sites identified as part of the HRA Scoping report, which is provided in Appendix B.

Precautionary Principle

2.12 HRA is based on a precautionary principle meaning that where uncertainty or doubt remains about the likely effects of the proposals, a precautionary approach will be applied. This approach assumes an adverse impact unless there is sufficient certainty of no impacts to ensure that the qualifying features of the European sites are fully protected. This precautionary approach has been applied in this review.

2.13 To identify the potential impacts of each Strategic Spatial Option, a set of assumptions were applied. These assumptions are guided by a set of distances and buffers, which are set out below. Given there are many uncertainties associated with using set distances as a result of limited availability of standards available, a precautionary approach has been applied to determine the potential impacts to each European site in relation to each strategic spatial option.

Limitations and Constraints

2.14 Each Strategic Spatial Option presents three high level options at a minimum, medium and maximum growth level over the plan period. At this stage, due to the high level nature of the options provided with limited information on the location of proposed growth and overlap between the sites included in each option, this assessment focusses on the primary location of growth for each of the spatial options until a more detailed assessment can be complete.

2.15 At this stage, as there are no site-specific boundaries identified for proposed development within each Strategic Spatial Option. In line with a precautionary approach, where there is any uncertainty or doubt about the likely effects of proposed development within an option in relation to a European site, a likely significant effect was assumed.

Chapter 3 : Assessment of Strategic Spatial Options

3.1 This chapter presents the HRA findings of the strategic spatial options set out in the document 'Greater Cambridge Local Plan: strategic spatial options for testing – methodology' (the methodology document).

Precautionary Assumptions

Physical Damage and Loss

3.2 Any development resulting from the Local Plan would take place within Greater Cambridge, therefore, only European sites within the boundary of this area could be affected direct by physical damage or loss of habitat within the site boundaries. Eversden and Wimpole Woods SAC is the only site, which lies within Greater Cambridge and is therefore the only European sites considered to have potential to be directly affected by physical damage and/or loss from development. It is understood that there is a commitment by the Council for no development proposed as part of the Local Plan to result in the direct physical damage and loss of European sites. This review therefore only considers the potential impact of physical damage and loss to offsite functional habitat.

3.3 Habitat loss from development in areas outside of the European site boundaries may result in likely significant effects where that habitat contributes towards maintaining the interest feature for which the European site is designated. This includes land which may provide offsite movement corridors or feeding and sheltering habitat for mobile species such as bats, birds and fish.

Eversden and Wimpole Woods SAC

3.4 Eversden and Wimpole SAC supports barbastelle, which is a qualifying feature of the site. This is a mobile species, which relies on habitat within the SAC and functionally linked habitat in the wider area, which provides important foraging habitat for this species.

3.5 A review of data sources has identified that this species travels within a Core Sustainance Zone (CSZ) of 6km. The CSZ refers to the area surrounding a bat roost for barbastelle bats within which habitat availability and quality will have a significant influence on the resilience and conservation of the bat colony using the roost. It is however understood that this species will travel up to 20km providing there are suitable commuting corridors, such as woodland edges, hedgerows and rivers, are present and that the habitats present provide sufficient foraging resources to make the longer distance worthwhile. In line with a precautionary approach, a 20km buffer was applied in this assessment.

Ouse Washes SAC

3.6 The Ouse Washes SAC is designated for supporting populations of spined loach. This species has limited dispersal and occurs patchily in a variety of waterbodies, including small streams, large rivers and both large and small drainage ditches. It is assumed that likely significant effects will only arise from proposed development that directly discharges into waterbodies within the River Ouse catchment.

Ouse Washes SPA and Ramsar

3.7 The Ouse Washes SPA and Ramsar supports a range of wetland bird species, which may rely on land, which is functionally linked to the SPA and Ramsar, but outside the site boundaries. Natural England has previously advised that their recognised distance for the consideration of offsite functionally linked land is generally 2km, but for certain species, including most notably golden plover and lapwing, a greater distance of 15km may be appropriate. As the SPA and Ramsar do not support either golden plover or lapwing, a distance of 2km was applied in this assessment.

Non-physical Disturbance

3.8 Noise and vibration effects, e.g. during the construction of new housing or employment development, are most likely to disturb bird and bat species and are thus a key consideration with respect to European sites where these species are the qualifying features. Artificial lighting at night (e.g. from streetlamps, flood lighting and security lights) has the potential to affect species where it occurs in close proximity to key habitat areas, such as key roosting sites of SPA birds and movement or feeding areas of SAC bats.

3.9 It has been assumed that the effects of noise, vibration and light are most likely to be significant within a distance of 500 metres. There is also evidence of 300 metres being used as a distance up to which certain bird species can be disturbed by the effects of noise ; however, it has been assumed (on a precautionary basis) that the effects of noise, vibration and light pollution are capable of causing an adverse effect if development takes place within 500 metres of a European site with qualifying features sensitive to these disturbances.

Non-toxic Contamination

3.10 Habitats can be subject to non-toxic contamination, such as nutrient enrichment, changes in salinity and smothering from dust, due to industrial action, agriculture, construction and water abstraction and discharge. European sites with potential to be affected by non-toxic contamination are likely to be those sites that lie within close proximity, or those that are hydrologically connected to areas of development provided for by the plan but potential changes to water quantity and quality are considered separately.

3.11 Ouse Washes SAC, SPA and Ramsar sites, and Eversden and Wimpole Woods SAC lie within or adjacent to Greater Cambridge and therefore have potential to be susceptible to impacts from non-toxic contamination.

Air Pollution

3.12 Air pollution is most likely to affect European sites where plant, soil and water habitats are the qualifying features, but some qualifying animal species may also be affected, either directly or indirectly, by deterioration in habitat as a result of air pollution. Deposition of pollutants to the ground and vegetation can alter the characteristics of the soil, affecting the pH and nitrogen levels, which can then affect plant health, productivity and species composition.

3.13 In terms of vehicle traffic, nitrogen oxides (NO_x, i.e. NO and NO₂) are considered to be the key pollutants. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NO_x can cause eutrophication of soils and water.

3.14 Based on the Highways Agency Design Manual for Road and Bridges (DMRB) Manual Volume 11, Section 3, Part 114 (which was produced to provide advice regarding the design,

assessment and operation of trunk roads including motorways), it is assumed that air pollution from roads is unlikely to be significant beyond 200m from the road itself. Where increases in traffic volumes are forecast, this 200m buffer needs to be applied to the relevant roads in order to make a judgement about the likely geographical extent of air pollution impacts.

3.15 The DMRB Guidance for the assessment of local air quality in relation to highways developments provides criteria that should be applied at the Screening Stage of an assessment of a plan or project, to ascertain whether there are likely to be significant impacts associated with routes or corridors. Based on the DMRB guidance, affected roads which should be assessed are those where:

- Daily traffic flows will change by 1,000 AADT (Annual Average Daily Traffic) or more; or
- Heavy duty vehicle (HDV) flows will change by 200 AADT or more; or
- Daily average speed will change by 10 km/hr or more; or
- Peak hour speed will change by 20 km/hr or more; or
- Road alignment will change by 5 m or more.

3.16 Where significant increases in traffic are possible on roads within 200m of European sites, traffic forecast data may be needed to determine if increases in vehicle traffic are likely to be significant. In line with the Wealden judgment³, the traffic growth considered by the HRA should be based on the effects of development provided for by the Plan in combination with other drivers of growth such as development proposed in neighbouring districts and demographic change.

3.17 It has been assumed that only those roads forming part of the primary road network (motorways and 'A' roads) are likely to experience any significant increases in vehicle traffic as a result of development (i.e. greater than 1,000 AADT). As such, where a site is within 200m of only minor roads, no significant effect from traffic-related air pollution is considered to be the likely outcome.

3.18 The following European sites within 15km of Greater Cambridge and within 200m of a strategic road include:

- Devil's Dyke SAC (A14, A1304);
- Ouse Washes SAC, SPA and Ramsar (A1123);
- Portholme SAC (A14).

3.19 These European sites support habitats, which are susceptible to increases in air pollution and therefore any increase vehicle traffic as a result of proposed development within the plan has the potential to significantly affect the qualifying features of these European sites. To fully understand the impacts of increased development within this strategic spatial option in combination with other plans and projects, AADT traffic modelling data, which calculates the change in trips that would result from this option, over the plan period is required. If AADT exceeds the threshold of 1,000 AADT, air quality modelling will be required to understand whether the Plan will result in AEoI and whether avoidance and mitigation measures can be applied which would prevent AEoI.

³ Wealden v SSCLG [2017] EWHC 351 (Admin)

Recreation

3.20 Recreational activities and human presence can result in significant effects on European sites as a result of erosion and trampling, associated impacts such as fire and vandalism or disturbance to sensitive features, such as birds through both terrestrial and water-based forms of recreation.

3.21 The Local Plan will result in housing growth, and associated population increase within Greater Cambridge. Where increases in population are likely to result in significant increases in recreation at a European site, either alone or in-combination, the potential for likely significant effects will require assessment.

Table 3.1 Cambridgeshire Recreational Pressure IRZ Component SSSIs

SSSI	Zone of Potential Risk: Higher (H) or Lower (L)
Eversden and Wimpole Woods SAC	H – 5km
Ouse Washes SAC, SPA and Ramsar	L – 2km
Portholme SAC	H – 5km
Devil's Dyke SAC	H – 5km

3.22 Following advice provided by Natural England on the draft HRA Scoping Report for the Greater Cambridgeshire Local Plan, a 'zone of potential risk' for recreational pressure of 2km and 5km, which has been derived from the Impact Risk Zones (IRZ) has been applied to inform initial impacts to recreation on European sites. IRZs have been developed by Natural England as a tool to define zones of key sensitivities, including recreational pressure to SSSIs from proposed development. Given the overlap between SSSI and European sites, this zone of potential influence can therefore be used to appropriately identify the potential risks to European sites from the Local Plan in this assessment. Table 3.1 above outlines the zones of potential of risk for each European site, which are considered to be at significant risk from recreational pressure.

3.23 No zone of potential risk was identified by Natural England for SSSI's overlapping Wicken Fen Ramsar, Chippenham Fen Ramsar or Fenland SAC. This is due to the fact that these sites were either not considered to be at significant risk from recreational pressure or in the case of Wicken Fen Ramsar a zone of potential risk has not been included as it is subject to a detailed study as outline below. Therefore, precautionary approach has been applied, which is detailed below.

Wicken Fen Ramsar

3.24 No zone of potential risk was identified for Wicken Fen Ramsar. However, in line with a precautionary approach and following the completion of the visitor surveys within Wicken Fen Vision Area, a Zone of Influence has been applied. The survey data that was collected at the Wicken Fen Main Entrance and found that the majority of visitors travelled between 10km and 20km to visit these sites. Based on these findings and in line with a precautionary approach a ZOI of 20km was applied in this assessment.

Chippenham Fen Ramsar

3.25 No zone of potential risk was identified for Chippenham Fen Ramsar. To ensure that a precautionary approach is taken, this assessment has applied a 5km zone of potential risk, which is the higher zone of potential risk outlined in Table 3.1. This approach has been applied as part of the HRA of the Draft North East Cambridge Local Plan, which has been consulted with by Natural England. No issues were raised by Natural England with regards to this approach. More specific Zone of Influence (ZOI) may be defined following targeted visitor surveys and discussions with land managers, as it is not always appropriate to apply a generic ZOI. Should specific survey data become available, this would be taken into consideration in future iterations of the formal HRA report.

Fenland SAC

3.26 No zone of potential risk was identified for Fenland SAC. However, as this site overlaps with both Wicken Fen Ramsar and Chippenham Fen Ramsar, the respective ZOI have been applied.

Water Quantity and Quality

3.27 An increase in demand for water abstraction and treatment resulting from the growth proposed in the Local Plan could result in changes in hydrology at European sites. Depending on the qualifying features and particular vulnerabilities of the European sites, this could result in likely significant effects; for example, due to changes in environmental or biotic conditions, water chemistry and the extent and distribution of preferred habitat conditions. To fully understand the potential impacts of proposed development on European sites a review of emerging Water Cycle Study being produced as part of the Integrated Water Management Study, which the Councils have commissioned as an evidence base for the Greater Cambridge Local Plan and liaison with the Environment Agency and relevant water companies will be required.

Ouse Washes SAC, SPA and Ramsar

3.28 Impacts from water pollution and changes in hydrology are considered in the Standard Data Forms and Natural England Site Improvement Plan (SIP) to be key threats to the Ouse Washes SAC, SPA and Ramsar site.

3.29 The European sites are located adjacent to the Greater Cambridge district and as a result there is potential for changes in the flow and volume of water entering the River Cam and Ely Ouse associated with proposed development to result in reduced flow downstream of the Denver, which may exacerbate existing siltation problems. This is known to have a knock-on effect onto the Hundred Foot River, which has a significant effect on increased and prolonged flooding at the Ouse Washes SAC, SPA and Ramsar.

Devil's Dyke SAC

3.30 Devil's Dyke SAC supports qualifying semi-natural dry grassland habitat. This habitat is not considered to be susceptible to impacts from water and due to a lack of hydrological connectivity to waterbodies is not considered to be affected by increased development within the district.

Portholme SAC

3.31 Portholme SAC supports qualifying lowland hay meadows habitat. This habitat is not considered to be susceptible to impacts from water and due to a lack of hydrological connectivity to waterbodies is not considered to be affected by increased development within the district.

Wicken Fen Ramsar / Fenland SAC

3.32 Wicken Fen Ramsar is one of Europe's most important wetlands supporting fen habitat and is one of the few fens that has not been drained. Although, impacts from water pollution or hydrological changes have not been highlighted as a key threat within the Ramsar Information Sheet, this habitat is known to be highly sensitive to changes in the quality and quantity of water supply.

Chippenham Fen Ramsar / Fenland SAC

3.33 Chippenham Fen Ramsar supports fenland and grassland habitat and associated invertebrate species, which is dependent upon an adequate supply of high-quality water from a chalk aquifer. This Ramsar site is reliant on the same chalk aquifer, which serves the wider area, including the area the Greater Cambridge district relates to.

A Review of Strategic Spatial Options in relation to each Impact

3.34 The high-level review of each strategic spatial option is presented in Table 3.2 below. This is based on the set of assumptions, which are set out above and should be referred to whilst considering this information.

Table 3.2 Review of each Strategic Spatial Option in relation to HRA

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
Option 1: Densification of existing urban areas	This option would result in an increase in the density of development in Cambridge, and therefore an increase in population, particularly in North East Cambridge where there is the last major brownfield site that is going to be brought forward via an Area Action Plan.	No European sites were recorded within Cambridge and therefore no likely significant effects (LSE) were considered in relation to direct physical damage and loss. There is however potential for LSE to occur in relation to loss of offsite functional habitat used by qualifying barbastelle	No European sites were recorded within 500m of Cambridge and therefore no LSE was considered in relation to non-physical disturbance. However, there is potential for LSE to occur in relation to non-physical disturbance from proposed development to offsite functional habitat used by qualifying	No European sites lie within or adjacent to broad areas of proposed growth in Option 1. There is however potential for non-toxic contamination to occur in relation to offsite functional habitat used by the qualifying barbastelle species of Eversden and Wimpole Woods SAC. Therefore, there is potential for LSE to occur	Option 1 will result in development within Cambridge, particularly in relation to North East Cambridge, which is being brought forward within the AAP. Although, the proposed development has the potential to reduce people travelling to Cambridge and will encourage the use of sustainable	Proposed development within Option 1 lies outside of the zone of potential risk and ZOI for all sites with exception to Wicken Fen Ramsar and Fenland SAC. Therefore, there is potential LSE from recreational disturbance in relation to Wicken Fen Ramsar and Fenland SAC only.	An increase in development in strategic growth areas proposed within Option 1 have the potential to result in an LSE in relation to Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar and Fenland SAC. Further evidence is required to determine the potential impact

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		species of Eversden and Wimpole SAC. Due to the nature of the habitats present within Option 1, which is of limited value for this species and the distance of proposed development, which lies outside of the CSZ, any impacts are considered unlikely to result in a LSE on the SAC. However, in line with a precautionary, approach	barbastelle bat species of Eversden and Wimpole SAC. As development for this option will be focussed within Cambridge, particularly in areas of existing urban development and brownfield site located in North East Cambridge, habitats present are considered to have limited value for this species and due to the distance of proposed	in relation to this European site.	modes of transport, there is potential that proposed development will result in increased vehicle traffic to strategic roads in the district and wider area. Therefore, there is potential for LSE to occur as a result of air pollution in relation to Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar and Portholme SAC, which lie within 200m of		of this option as detailed above.

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		<p>impacts cannot be ruled out and will need to be considered in more detail as the spatial growth options are developed further.</p> <p>No LSE is considered in relation to Ouse Washes SAC, SPA and Ramsar due to distance of these sites from proposed development in Option 1 and the dispersal range of the qualifying species of</p>	<p>development, impacts are considered unlikely to result in a likely significant effect. However, in line with a precautionary approach this will need to be considered in more details as spatial growth options area developed further.</p> <p>Due to the distance of the Ouse Washes SAC, SPA and Ramsar from proposed development</p>		<p>a strategic road.</p> <p>Further evidence is required to determine the potential impact of this option as detailed above</p>		

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		these European sites.	within Option 1 and the dispersal range of qualifying species of these sites, no LSE was considered.				
Option 2: Edge of Cambridge – outside of the Greenbelt	This option would result in the creation of new homes and jobs in extensions on the edge of Cambridge, using land not in the green belt. The only large site on the edge of Cambridge not in the Green Belt is	No European sites were recorded on the edge of Cambridge in relation to Cambridge Airport and therefore no LSE was considered in relation to direct physical damage and loss. There is however	No European sites were recorded within 500m of edge of Cambridge outside of the green belt, including Cambridge Airport where development is primarily proposed and therefore no LSE were considered in relation to non-	No European sites lie within of adjacent to broad areas of proposed growth in Option 2. There is however potential for non-toxic contamination to occur in relation to offsite functional habitat used by the qualifying barbastelle	Option 2 will result in development on the edge of Cambridge, primarily at Cambridge Airport. Although, the proposed development has the potential to reduce travel by people to Cambridge and will encourage	Proposed development within Option 2 lies outside of the zone of potential risk and ZOI for all sites with exception to Wicken Fen Ramsar and Fenland SAC. Therefore, there is potential LSE from recreational	An increase in development in strategic growth areas proposed within Option 2 have the potential to result in an LSE in relation to Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
	Cambridge Airport.	potential for LSE to occur in relation to loss of offsite functional habitat used by qualifying barbastelle species of Eversden and Wimpole SAC. Due to the nature of habitat present within Option 2, which is of limited value for this species and the distance of proposed development, which lies outside of the CSZ, any impacts are	physical disturbance. However, there is potential for LSE to occur in relation to non-physical disturbance from proposed development to offsite functional habitat used by qualifying barbastelle bat species of Eversden and Wimpole SAC. As development will be focussed at Cambridge Airport, which supports habitats of	species of Eversden and Wimpole Woods SAC. Therefore, there is potential for LSE to occur in relation to this site.	the use of sustainable modes of transport, there is potential that proposed development at the edge of Cambridge will result in increased vehicle traffic to strategic roads in the district and wider area. An increase in vehicle traffic from development within this strategic growth option has the potential to result in LSE as a result of air	disturbance in relation to Wicken Fen Ramsar and Fenland SAC only.	and Fenland SAC. Further evidence is required to determine the potential impact of this option as detailed above.

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		<p>considered unlikely to result in a significant effect on the SAC. However, in line with a precautionary, approach impacts cannot be ruled out and will need to be considered in more detail as spatial growth options are developed further.</p> <p>No LSE was considered in relation to Ouse Washes SAC, SPA and Ramsar due to distance of</p>	<p>limited value for bats and which lies outside of the CSZ, impacts are considered unlikely to result in a significant effect on the SAC. However, in line with a precautionary, approach impacts cannot be ruled out and will need to be considered in more detail as spatial growth options are developed further.</p> <p>Due to the distance of the</p>		<p>pollution in relation to Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar and Portholme SAC, which lie within 200m of a strategic road.</p> <p>Further evidence is required to determine the potential impact of this option as detailed above.</p>		

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		these sites from proposed development in Option 2 and the dispersal range of the qualifying species of these European sites.	Ouse Washes SAC, SPA and Ramsar from proposed development within Option 2 and the dispersal range of qualifying species of these sites, no LSE was considered.				
Option 3: Edge of Cambridge – Green Belt	Option 3 includes the development of new sites in Green Belt on the edge of the city with three sites for the minimum growth scenario and five sites for the medium	Eversden and Wimpole Woods SAC lies within the Green Belt. However, as there is a commitment that no development will be permitted within	Eversden and Wimpole Woods SAC lies within the Green Belt and therefore has potential LSE to occur as a result of proposed development within Option 3	Due to the location of Eversden and Wimpole SAC, including areas of offsite functional habitat used by the qualifying species of the European site, within and	Option 3 will result in development within the Green Belt, which links to strategic roads within the district. An increase in vehicle traffic in development	Proposed development within Option 3 lies within the zone of potential risk and ZOI of the following sites: □ Eversden and Wimpole Woods SAC;	An increase in development in strategic growth areas proposed within Option 3 have the potential to result in an LSE on Ouse Washes SAC, SPA and Ramsar,

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
	and maximum growth scenarios across a broad range of locations.	<p>a European site, it can be concluded that Option 3 will not result in an LSE in relation to direct physical damage and loss.</p> <p>However, there is potential for Option 3 to result in LSE to offsite functional habitat used by barbastelle species of Eversden and Wimpole Woods SAC. This option has the potential to focus development</p>	<p>as a result of non-physical disturbance.</p> <p>There is potential for Option 3 to result in non-physical disturbance to offsite functional habitat used by qualifying barbastelle bat species of Eversden and Wimpole Woods SAC. This option has potential to focus development within the CSZ used by this species and</p>	<p>adjacent to the Green Belt where proposed growth in Option 3 is to be delivered, there is potential for LSE to occur in relation to non-toxic contamination.</p> <p>All other European sites were situated outside of the broad areas of proposed development and therefore no LSE was considered.</p>	<p>within this strategic spatial option has the potential to result in LSE as a result of air pollution in relation to Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar Portholme SAC, which lie within 200m of a strategic road.</p> <p>Further evidence is required to determine the potential impact of this option as detailed above.</p>	<p>☐ Devil's Dyke SAC;</p> <p>☐ Wicken Fen Ramsar; and</p> <p>☐ Fenland SAC.</p> <p>There is potential for LSE to occur in relation to these European sites as a result of recreational disturbance.</p>	<p>Wicken Fen Ramsar, Chippenham Fen Ramsar and Fenland SAC.</p> <p>Further evidence is required to determine the potential impact of this option as detailed above.</p>

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		<p>within the CSZ of this species, which is of key importance for maintaining the viability of populations within the SAC.</p> <p>Due to the distance and dispersal range of its qualifying species, no LSE was considered in relation to physical damage and loss of offsite functional habitat used by qualifying species of the Ouse Washes</p>	<p>therefore proposed development have potential to have LSE.</p> <p>Due to the distance and dispersal range of its qualifying species, no LSE was considered in relation to Ouse Washes SAC, SPA and Ramsar.</p> <p>The remaining European sites lie over 500m from the Green Belt where development is proposed and was therefore not considered</p>				

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		SAC, SPA and Ramsar. All other European sites were situated outside of the broad areas of proposed development and therefore no LSE was considered.	to result in a LSE.				
Option 4: New Settlements	Option 4 includes the development of new settlements that would establish a whole new town or village including homes, jobs and supporting infrastructure.	Eversden and Wimpole Wood SAC lies within the district of Greater Cambridge where new settlements are proposed. However, as there is a commitment that no	Eversden and Wimpole Woods SAC and Ouse Washes SAC, SPA and Ramsar lie within 500m of Greater Cambridge where new settlements are proposed and	Due to the location of Eversden and Wimpole SAC and Ouse Washes SAC, SPA and Ramsar, including areas of offsite functional habitat used by the qualifying	Option 4 will result in an increase in development within this strategic growth option. This has the potential to result in LSE as a result of air pollution in relation to Devil's Dyke	Depending on the exact location of proposed development within Option 4, there is potential for proposed development to lie within the zone of potential risk	An increase in development in strategic growth areas proposed within Option 4 have the potential to result in an LSE on Ouse Washes SAC, SPA and Ramsar, Wicken Fen

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		<p>development will be permitted within a European site, it can be concluded that Option 4 will not result in a LSE in relation to direct physical damage and loss.</p> <p>In addition to this, there is potential for Option 4 to result in LSE to offsite functional habitat used by transient species for which Eversden and Wimpole Woods SAC</p>	<p>therefore has potential to be affected by proposals for development within Option 4 as a result of non-physical disturbance.</p> <p>There is also potential for Option 4 to result in non-physical disturbance to offsite functional habitat used by qualifying species of Eversden and Wimpole Woods SAC and Ouse Washes SAC,</p>	<p>species of the European site, within and adjacent to the district where proposed growth in Option 4 is to be delivered, there is potential for LSE to occur in relation to non-toxic contamination.</p> <p>All other European sites were situated outside of the broad areas of proposed development and therefore no LSE was considered.</p>	<p>SAC, Ouse Washes SAC, SPA and Ramsar and Portholme SAC, which lie within 200m of a strategic road.</p> <p>Further evidence is required to determine the potential impact of this option as detailed above.</p>	<p>and ZOI of the following sites:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Eversden and Wimpole Woods SAC; <input type="checkbox"/> Ouse Washes SAC, SPA and Ramsar; <input type="checkbox"/> Devil's Dyke SAC; <input type="checkbox"/> Portholme SAC; <input type="checkbox"/> Wicken Fen Ramsar; and <input type="checkbox"/> Fenland SAC. <p>There is potential for LSE to occur in relation to these European sites</p>	<p>Ramsar, Chippenham Fen Ramsar and Fenland SAC.</p> <p>Further evidence is required to determine the potential impact of this option as detailed above.</p>

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		and Ouse Washes SAC, SPA and Ramsar. All other European sites were situated outside of the broad areas of proposed development and therefore no LSE was considered	SPA and Ramsar. The remaining European sites lie over 500m from the district where development is proposed and was therefore not considered to result in a LSE.			as a result of recreational disturbance.	
Option 5: Dispersal – Villages	Option 5 for all growth scenarios would result in an increase in development at villages across Greater Cambridge.	Eversden and Wimpole Wood SAC lies within the district of Greater Cambridge where new village settlements are proposed. However, as	Eversden and Wimpole Woods SAC and Ouse Washes SAC, SPA and Ramsar lie within 500m of Greater Cambridge where new	Due to the location of Eversden and Wimpole SAC and Ouse Washes SAC, SPA and Ramsar, including areas of offsite functional	Option 5 will result in an increase in development within this strategic growth option. This has the potential to result in LSE as a result of air pollution in	Depending of the exact location of proposed development within Option 5, there is potential for proposed development to fall within the	An increase in development in strategic growth areas proposed within Option 5 have the potential to result in an LSE on Ouse Washes SAC, SPA and

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		<p>there is a commitment that no development will be permitted within a European site, it can be concluded that Option 5 will not result in a LSE in relation to direct physical damage and loss.</p> <p>In addition to this, there is potential for Option 5 to result in likely significant effects to offsite functional habitat used by transient</p>	<p>village settlements are proposed and therefore has potential to be affected by proposals for development within Option 5 as a result of non-physical disturbance.</p> <p>There is also potential for Option 5 to result in non-physical disturbance to offsite functional habitat used by qualifying species of Eversden and Wimpole</p>	<p>habitat used by the qualifying species of the European site, within and adjacent to the district where proposed growth in Option 4 is to be delivered, there is potential for LSE to occur in relation to non-toxic contamination.</p> <p>All other European sites were situated outside of the broad areas of proposed development and therefore</p>	<p>relation to Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar and Portholme SAC which lie within 200m of a strategic road.</p> <p>Further evidence is required to determine the potential impact of this option as detailed above.</p>	<p>zone of potential risk and ZOI of the following sites:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Eversden and Wimpole Woods SAC; <input type="checkbox"/> Ouse Washes SAC, SPA and Ramsar; <input type="checkbox"/> Devil's Dyke SAC; <input type="checkbox"/> Portholme SAC; <input type="checkbox"/> Wicken Fen Ramsar; and <input type="checkbox"/> Fenland SAC. <p>There is potential for LSE to occur in</p>	<p>Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar and Fenland SAC.</p> <p>Further evidence is required to determine the potential impact of this option as detailed above.</p>

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		species for which Eversden and Wimpole Woods SAC and Ouse Washes SAC, SPA and Ramsar. All other European sites were situated outside of the broad areas of proposed development and therefore no LSE was considered	Woods SAC and Ouse Washes SAC, SPA and Ramsar. The remaining European sites lie over 500m from the district where development is proposed and was therefore not considered to result in a LSE.	no LSE was considered.		relation to these European sites as a result of recreational disturbance.	
Option 6: Public Transport Corridors	Option 6 proposes development along key public transport corridors and hubs through	Eversden and Wimpole Wood SAC lies within the district of Greater Cambridge. Given the	Eversden and Wimpole Woods SAC and Ouse Washes SAC, SPA and Ramsar do not	No European sites lie within of adjacent to broad areas of proposed growth in Option 6.	Option 6 will result in an increase in development within this strategic growth option. This has	Dependent on the exact location of proposed development along transport corridors within	An increase in development in strategic growth areas proposed within Option 6 have the potential to

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
	the expansion or intensification of existing villages or through more new settlements.	location of proposed future transport corridors within Greater Cambridge as detailed in the figure presented in Appendix A, it is considered unlikely that proposals associated within Option 6 will result in LSE from direct physical damage and loss. In addition to this, as there is a commitment that no development will be	lie within 500m of proposed future transport corridors within Greater Cambridge as detailed in the figure presented in Appendix A. However, in line with a precautionary approach more specific detail on proposed location of growth is required to determine LSE in relation to non-physical disturbance. There is also potential for	However, in line with a precautionary approach no LSE can be ruled out in relation to Eversden and Wimpole SAC and Ouse Washes SAC, SPA and Ramsar until spatial growth options are developed further. All other European sites were situated outside of the broad areas of proposed development and therefore	the potential to result in LSE as a result of air pollution in relation to Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar and Portholme SAC. Further evidence is required to determine the potential impact of this option as detailed above.	Option 6. There is potential for proposed development to fall within the zone of potential risk and ZOI of the following sites: <input type="checkbox"/> Eversden and Wimpole Woods SAC; <input type="checkbox"/> Ouse Washes SAC, SPA and Ramsar; <input type="checkbox"/> Devil's Dyke SAC; <input type="checkbox"/> Portholme SAC; <input type="checkbox"/> Wicken Fen Ramsar; and	result in an LSE on Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar and Fenland SAC. Further evidence is required to determine the potential impact of this option as detailed above.

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		<p>permitted within a European site, it can be concluded that Option 6 will not result in a LSE in relation to direct physical damage and loss.</p> <p>There is however potential for Option 5 to result in an LSE to offsite functional habitat used by barbastelle species of Eversden and Wimpole Woods SAC. Proposals This option has the</p>	<p>Option 7 to result in non-physical disturbance to offsite functional habitat used by qualifying barbastelle species of Eversden and Wimpole Woods SAC. This is particularly in relation to future transport corridors to the south-west of Cambridge, which lie within the CSZ.</p> <p>Given the location of future transport</p>	no LSE was considered.		<p>☐ Fenland SAC.</p> <p>There is potential for LSE to occur in relation to these European sites as a result of recreational disturbance.</p>	

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		<p>potential to focus development within the CSZ of this species, which is of key importance for maintaining the viability of populations within the SAC.</p> <p>Given the location of future transport corridors and limited dispersal of qualifying species of Ouse Washes SAC, SPA and Ramsar, LSE is considered unlikely in relation to</p>	<p>corridors and limited dispersal of qualifying species of Ouse Washes SAC, SPA and Ramsar, LSE is considered unlikely in relation to non-physical disturbance. However, in line with a precautionary approach this will need to be reviewed once more specific detail is available to rule out no LSE.</p> <p>The remaining European sites</p>				

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		<p>physical damage and loss of offsite functional habitat. However, in line with a precautionary approach this will need to be reviewed once more specific detail is available to rule out no LSE.</p> <p>All other European sites were situated outside of the broad areas of proposed development and therefore no LSE was considered.</p>	<p>lie over 500m from the district where development is proposed and was therefore not considered to result in an LSE.</p>				

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
Option 7: High-tech corridor by integrating homes and jobs (southern cluster)	Option 7 focuses development in the south of Cambridge in villages and a new settlement close to the life science cluster area.	<p>No European sites were recorded in the south of Cambridge and therefore no LSE was considered in relation to direct physical damage and loss.</p> <p>However, there is potential for Option 7 to result in LSE to offsite functional habitat used by barbastelle species of Eversden and Wimpole Woods SAC. This option has</p>	<p>No European sites were recorded within 500m of south Cambridge and therefore no LSE was considered in relation to non-physical disturbance.</p> <p>There is potential for Option 7 to result in non-physical disturbance to offsite functional habitat used by qualifying barbastelle species of Eversden and Wimpole</p>	<p>No European sites lie within of adjacent to broad areas of proposed growth in Option 7. However, in line with a precautionary approach no LSE can be ruled out in relation to Eversden and Wimpole SAC until spatial growth options are developed further.</p> <p>All other European sites were situated outside of the broad areas of</p>	<p>Option 7 will result in an increase in development within this strategic growth option. This has the potential to result in LSE as a result of air pollution in relation to Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar and Portholme SAC.</p> <p>Further evidence is required to determine the potential impact</p>	<p>Proposed development within Option 7 lies within the zone of potential risk and ZOI of the following sites:</p> <ul style="list-style-type: none"> □ Eversden and Wimpole Woods SAC; □ Wicken Fen Ramsar; and □ Fenland SAC. <p>There is potential for LSE to occur in relation to these European sites as a result of</p>	<p>An increase in development in strategic growth areas proposed within Option 7 have the potential to result in an LSE on Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar and Fenland SAC.</p> <p>Further evidence is required to determine the potential impact of this option as detailed above.</p>

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		<p>the potential to focus development within the CSZ of this species, which is of key importance for maintaining the viability of populations within the SAC.</p> <p>Due to the distance and dispersal range of its qualifying species, no LSE was considered in relation to physical damage and loss of offsite functional habitat used by qualifying</p>	<p>Woods SAC. This is particularly in areas, which lie within the CSZ.</p> <p>Given the location of proposed development within Option 7 and limited dispersal of qualifying species of Ouse Washes SAC, SPA and Ramsar, no LSE is considered in relation to this site.</p> <p>The remaining European sites lie over 500m from the broad</p>	<p>proposed development and therefore no LSE was considered.</p>	<p>of this option as detailed above.</p>	<p>recreational disturbance.</p>	

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		species of the Ouse Washes SAC, SPA and Ramsar. All other European sites were situated outside of the broad areas of proposed development and therefore no LSE was considered.	location of where development is proposed and was therefore not considered to result in an LSE.				
Option 8: Expanding a growth area around transport nodes	Option 8 focuses homes at Cambourne and surrounding villages, along the A428 public transport corridor. These areas are to be served by A	Eversden and Wimpole Wood SAC lies within the broad area of proposed development as part of Option 8. However, as there is a commitment that no	Eversden and Wimpole Woods SAC and Ouse Washes SAC, SPA and Ramsar lies within 500m of broad areas of proposed development	Due to the location of Eversden and Wimpole SAC, including areas of offsite functional habitat used by the qualifying species of the European site,	Option 8 will result in an increase in development within this strategic growth option. This has the potential to result in LSE as a result of air pollution in	Proposed development within Option 7 lies within the zone of potential risk and ZOI of the following sites:	An increase in development in strategic growth areas proposed within Option 8 have the potential to result in an LSE on Ouse Washes SAC, SPA and

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
	new railway station and Cambridgeshire Autonomous Metro.	<p>development will be permitted within a European site, it can be concluded that Option 8 will not result in a LSE in relation to direct physical damage and loss.</p> <p>In addition to this, there is potential for Option 8 to result in LSE to offsite functional habitat used by barbastelle species of Eversden and Wimpole Woods SAC.</p>	<p>associated with Option 8. Therefore, there is potential for LSE to occur in relation to this site as a result of non-physical disturbance.</p> <p>There is potential for Option 7 to result in non-physical disturbance to offsite functional habitat used by qualifying barbastelle species of Eversden and Wimpole Woods SAC.</p>	<p>in west of Greater Cambridge where proposed growth in Option 8 is to be delivered, there is potential for LSE to occur in relation to non-toxic contamination.</p> <p>All other European sites were situated outside of the broad areas of proposed development and therefore no LSE was considered.</p>	<p>relation to Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar and Portholme SAC.</p> <p>Further evidence is required to determine the potential impact of this option as detailed above.</p>	<p>☐ Eversden and Wimpole Woods SAC;</p> <p>☐ Wicken Fen Ramsar; and</p> <p>☐ Fenland SAC.</p> <p>There is potential for LSE to occur in relation to these European sites as a result of recreational disturbance. .</p>	<p>Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar and Fenland SAC.</p> <p>Further evidence is required to determine the potential impact of this option as detailed above.</p>

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		<p>This option has the potential to focus development within the CSZ of this species, which is of key importance for maintaining the viability of populations within the SAC.</p> <p>Due to the distance and dispersal range of its qualifying species, no LSE was considered in relation to physical damage and loss of offsite functional habitat used by</p>	<p>This is particularly in areas, which lie within the CSZ.</p> <p>Given the location of proposed development within Option 7 and limited dispersal of qualifying species of Ouse Washes SAC, SPA and Ramsar, no LSE is considered in relation to this site.</p> <p>The remaining European sites lie over 500m from the broad location of</p>				

Strategic Spatial Options	Broad Description of Spatial Option	Potential Impacts on European Sites					
		Physical Damage and Loss	Non physical Disturbance	Non toxic Contamination	Air Pollution	Recreational Disturbance	Water Quantity and Quality
		qualifying species of the Ouse Washes SAC, SPA and Ramsar. All other European sites were situated outside of the broad areas of proposed development and therefore no LSE was considered	where development is proposed and was therefore not considered to result in an LSE				

Chapter 4 : Conclusions and Next Steps

4.1 This document has been produced to provide guidance on the likely impacts to European sites that may arise from each Strategic Spatial Option. Due to the high-level nature of the review, it is not possible at this stage to determine, which options are preferred in relation to the HRA.

4.2 A review of each Strategic Spatial Option identified the following potential impacts to European sites for each option as detailed in Table 3.2 above and summarised below.

4.3 Due to the high-level nature of the options presented at this stage, there are no site-specific boundaries provided. Therefore, in line with a precautionary approach where there was any uncertainty in relation to potential impacts to a European site an adverse impact was assumed. It is therefore expected that as proposals are developed further for each option that potential impacts identified at this stage will be refined.

- Option 1: Densification of existing urban areas and Option 2: Edge of Cambridge - outside the Green Belt
 - Physical damage and loss (offsite): Eversden and Wimpole Woods SAC.
 - Non-physical Disturbance: Eversden and Wimpole Woods SAC.
 - Non-Toxic Contamination: Eversden and Wimpole Woods SAC.
 - Air Pollution: Devil's Dyke SAC, Ouse Wash SAC, SPA and Ramsar, Portholme SAC.
 - Recreation: Wicken Fen Ramsar and Fenland SAC.
 - Water Quantity and Quality: Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar, Fenland SAC.
- Option 3: Edge of Cambridge - Green Belt
 - Physical Damage and Loss (offsite): Eversden and Wimpole Woods SAC.
 - Non-physical Disturbance: Eversden and Wimpole Woods SAC.
 - Non-Toxic Contamination: Eversden and Wimpole Woods SAC.
 - Air Pollution: Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar, Portholme SAC.
 - Recreation: Eversden and Wimpole Woods SAC, Devil's Dyke SAC, Wicken Fen Ramsar, Fenland SAC.
 - Water Quantity and Quality: Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar, Fenland SAC.
- Option 4: Dispersal - new settlements, Option 5: Dispersal – villages and Option 6: Public transport corridors
 - Physical Damage and Loss (offsite): Eversden and Wimpole Woods SAC, Ouse Washes SAC, SPA and Ramsar.
 - Non-physical Disturbance: Eversden and Wimpole Woods SAC, Ouse Washes SAC, SPA and Ramsar.
 - Non-Toxic Contamination: Eversden and Wimpole Woods SAC, Ouse Washes SAC, SPA and Ramsar.
 - Air Pollution: Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar, Portholme SAC.

- Recreation: Eversden and Wimpole Woods SAC, Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar, Portholme SAC, Wicken Fen Ramsar, Fenland SAC.
- Water Quantity and Quality: Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar, Fenland SAC.

4.4 Option 7: Supporting a high-tech corridor by integrating homes and jobs and Option 8: Expanding a growth area around transport nodes

- Physical Damage and Loss (offsite): Eversden and Wimpole Woods SAC.
- Non-physical Disturbance: Eversden and Wimpole Woods SAC.
- Non-Toxic Contamination: Eversden and Wimpole Woods SAC.
- Air Pollution: Devil's Dyke SAC, Ouse Washes SAC, SPA and Ramsar, Portholme SAC.
- Recreation: Eversden and Wimpole Woods SAC, Wicken Fen Ramsar, Fenland SAC.
- Water Quantity and Quality: Ouse Washes SAC, SPA and Ramsar, Wicken Fen Ramsar, Chippenham Fen Ramsar, Fenland SAC.

4.5 The review has identified a range of potential impacts for each option. Although, there are a greater number of potential impacts identified in relation some options compared to others, it cannot be assumed that these options will result in a greater level impact overall. This will be dependent on the level of risk and severity of impact to each European site. which will be assessed in more detail as part of the HRA.

Next Steps

4.6 An HRA assessment will be required as the strategic spatial options are developed as part of the plan making process. This will need be informed by relevant evidence base documents, including traffic modelling data, air quality modelling and water cycle study where required.

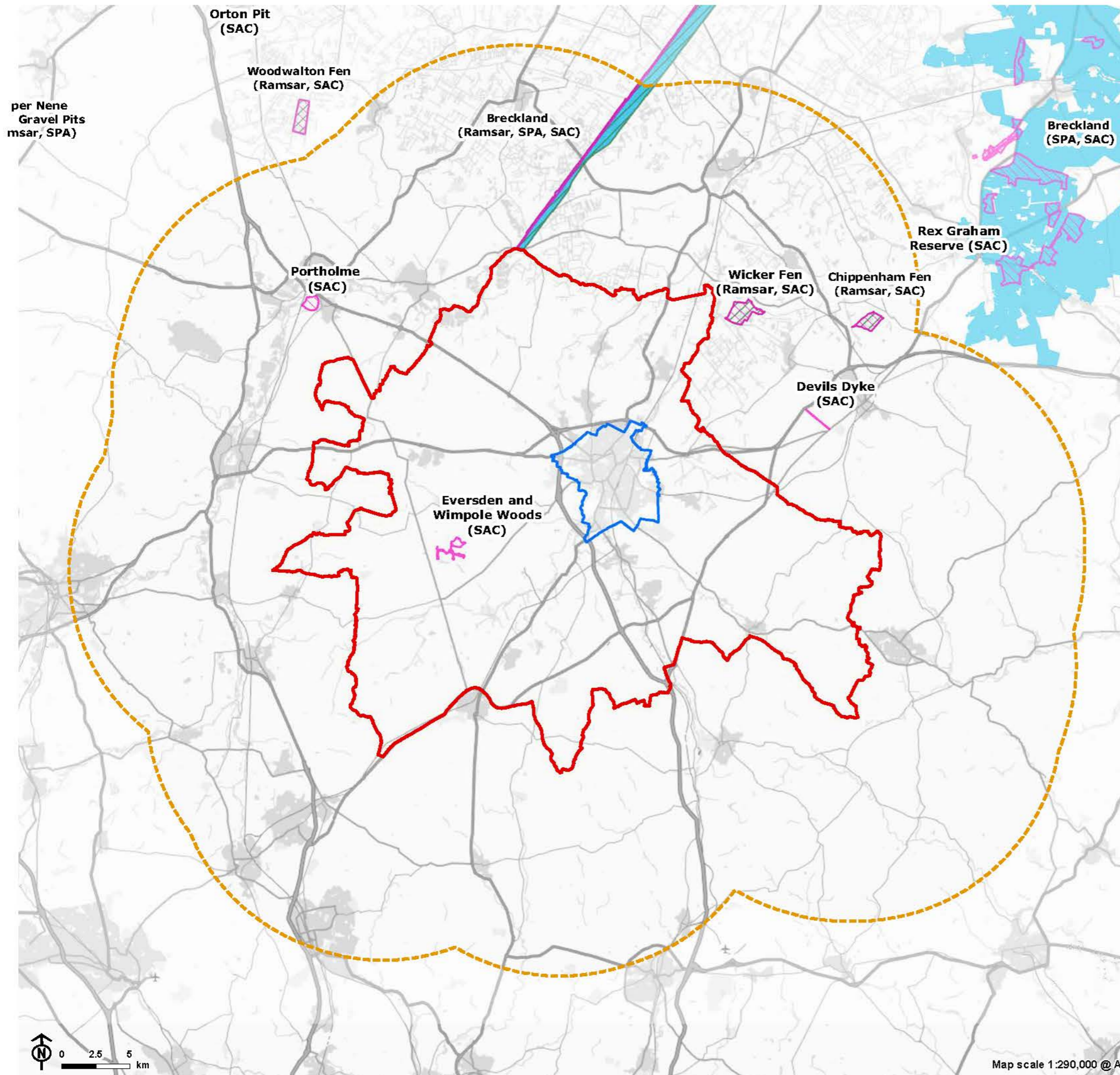
Appendix A: Summary of Scoping Assumptions

Figure A. 1 Summary of Scoping Assumptions presented in the HRA Scoping report.

	Physical damage/ loss of habitat	Non physical disturbance	Non toxic contamination	Air pollution	Recreation pressure	Water quantity and quality
Eversden and Wimpole Woods SAC	Scoped in	Scoped in	Scoped in	Scoped out	Scoped in	Scoped out
Ouse Washes SAC	Scoped in	Scoped out	Scoped in	Scoped in	Scoped in	Scoped in
Portholme SAC	Scoped out	Scoped out	Scoped out	Scoped in	Scoped in	Scoped in
Devils Dyke SAC	Scoped out	Scoped out	Scoped out	Scoped in	Scoped out	Scoped in
Fenland SAC	Scoped out	Scoped out	Scoped out	Scoped in	Scoped in	Scoped in
Ouse Washes SPA	Scoped in	Scoped in	Scoped in	Scoped in	Scoped in	Scoped in
Ouse Washes Ramsar	Scoped in	Scoped in	Scoped in	Scoped in	Scoped in	Scoped in
Wicken Fen Ramsar	Scoped out	Scoped out	Scoped out	Scoped in	Scoped in	Scoped in
Chippenham Fen Ramsar	Scoped out	Scoped out	Scoped out	Scoped in	Scoped out	Scoped in

Appendix B: European Sites within 15km of Greater Cambridge

Appendix 1: European Sites within 15km of Greater Cambridge



- South Cambridgeshire
- South Cambridgeshire 15km Buffer Boundary
- Cambridge City
- Special Areas of Conservation
- Ramsar Sites
- Special Protection Areas



Map scale 1:290,000 @ A3

Appendix C: Potential Future Transport in Cambridge City and South Cambridgeshire Areas

Cambridge City and South Cambridgeshire Areas - Future Transport

