



Habitats Regulations Implications and
considerations relating to the Stroud
Local Plan Review Draft Plan
Additional housing options
consultation October 2020

FOOTPRINT ECOLOGY, FOREST OFFICE, BERE
ROAD, WAREHAM, DORSET BH20 7PA
WWW.FOOTPRINT-ECOLOGY.CO.UK
01929 552444



FOOTPRINT
ECOLOGY

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Summary

This short report considers the Habitats Regulations Assessment (HRA) implications in relation to different spatial options and some additional sites for the Stroud District Local Plan Review Draft Plan.

In November 2019, Stroud District Council consulted on a Draft Local Plan Review, which set out the Council's preferred strategy and sites for development, alongside policies for shaping future development and protecting the natural and built environment.

The timetable for the production of the new Local Plan has now been delayed and the Council is undertaking further consultation relating to additional housing options. The consultation sets out four different spatial options for growth across the District (options A, B, C and D) which are represented by stylised maps and it also provides detail of some additional housing sites and growth point options. This report considers the implications with respect to the HRA for the Draft Local Plan. A full HRA will accompany the final version of the Plan (in 2021), and the purpose of this document is simply to consider whether there are particular concerns, evidence gaps or issues that need addressing with respect to this new consultation.

In line with the previous HRA work, we focus consideration on three European sites that are relevant:

- The Severn Estuary SAC/SPA/Ramsar
- Cotswold Beechwoods SAC
- Rodborough Common SAC

We highlight the following concerns and issues:

Urban effects to Rodborough Common SAC. Spatial Options B, C and D could all potentially involve development in close proximity to the site boundary. Policy wording ensuring no net increase in housing around the periphery of the site (e.g. out to 400m) would avoid these risks and may need to be considered were these options to be pursued.

Urban effects and Cotswold Beechwoods SAC. Spatial Option D could involve some relatively small levels of development within close proximity and, as with Rodborough Common, protective policy wording may be necessary to limit growth directly adjacent (within 400m) of the site boundary.

Urban effects, loss of supporting habitat and the Severn Estuary SPA/SAC/Ramsar. Spatial options B and D potentially involve development in proximity to the Severn Estuary SAC/SPA/Ramsar, around Sharpness. Site checks and further work are necessary to ensure adverse effects can be ruled out at this location (see 2019 HRA report for detail). This information will need to inform the next full iteration of the HRA in 2021.

Recreation impacts and the Cotswold Beechwoods SAC. The mitigation strategy (in preparation) will need to be finalised before the final version of the Local Plan. Spatial Options A, B, C and D all include growth within 15.4km (the potential zone of influence for the strategy) however Spatial Option A has particular risks with the focus for growth around the south of Gloucester and this will need to be addressed within the strategy. The two growth point locations are of a particular scale that bespoke mitigation measures may be necessary to be confident that adverse effects on integrity can be ruled out. Bespoke green space provision, in and around the sites or nearby, at such a scale to work to deflect recreation use away from the European sites, is likely to be required.

Recreation impacts and the Severn Estuary SAC/SPA/Ramsar. There is an established mitigation approach which sets out a series of costed measures. Spatial Options A, B, C and D all include growth within 7.7km (the zone of influence) and in particular all growth in Option A is within the zone. The strategy will need to be reviewed/updated to ensure adequate mitigation is in place. As with the Cotswold Beechwoods SAC, the two growth point locations are of a particular scale that bespoke mitigation measures may be necessary to be confident that adverse effects on integrity can be ruled out.

Recreation impacts and Rodborough Common SAC. Visitor data suggests growth within 3.8km would result in increased recreational use of the site. Spatial Option A would therefore avoid risks to the site. The other three Spatial Options potentially include growth within 3.8km and it will be necessary to ensure adequate mitigation is in place.

Water issues and Cotswold Beechwoods SAC. Spatial Option D may require some further checks to ensure there are no hydrological issues to the SAC from run-off, flood water risk or local modifications to the hydrology. Risks are likely to be relatively slight and will be avoided if there is a presumption against development around the site periphery.

Water issues and Rodborough Common SAC. Spatial Options B, C and D may require some further checks to ensure there are no hydrological issues to the SAC from run-off, flood water risk or local modifications to the hydrology. Risks are likely to be relatively slight and will be avoided if there is a presumption against development around the site periphery.

Water issues and the Severn Estuary SAC/SPA/Ramsar. Spatial options B and D will require further checks relating to water issues including run-off, contamination of water courses feeding into the estuary, and flood management. Policy wording may be required to ensure adequate protection to the estuary. There are particular risks in relation to the Sharpness sites (included in Options B and D). The Berkeley Cluster sites have a direct hydrological link to the Severn Estuary SPA/SAC/Ramsar and as such any development in this location will need to ensure no issues for site integrity, from contamination, run-off and flood-water. Should these sites be included in the next stage of the Plan, protective wording should ensure hydrological issues are addressed at project level HRA.

Air quality and the Cotswold Beechwoods SAC and Rodborough Common SAC. Traffic modelling will be necessary to ascertain the scale of traffic change along the A46 and other relevant roads within 200m of the European sites. Further air quality modelling may also be

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necessary to quantify the extent to which growth will result in negative impacts for the European sites. Spatial Option D appears to be the most likely to result in increased use of the A46 and the other roads around the Cotswold Beechwoods and Rodborough Common.

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1. Introduction

- 1.1 Stroud District Council is producing a new Stroud District Local Plan. Work on the plan commenced in 2017 and in November 2019 the Council consulted on a Draft Local Plan Review, which set out the Council's preferred strategy and sites for development, alongside policies for shaping future development and protecting the natural and built environment.
- 1.2 As a result of the Covid-19 pandemic the timetable for the production of the new Local Plan has been delayed. The Government has also published a consultation document which proposes changes to the way the Government calculates minimum housing requirements. This revised standard method would increase the requirement for Stroud District and the Council may therefore need to find land for an additional level of housing growth.
- 1.3 Stroud District Council is therefore undertaking further consultation prior to the production of a final Plan. The additional consultation has a specific focus and relates to:
- What is the best strategy for identifying where to accommodate additional housing, if necessary?
 - Whether and where a reserve housing supply should be identified in the event it is needed in the future?
 - Are there issues or constraints associated with some specific sites?
 - Are there any other sites that may have future potential?
- 1.4 The new Draft Local Plan from November 2019 was accompanied by a Habitats Regulations Assessment (HRA) report (Hoskin, Liley, Saunders, & Panter, 2019).
- 1.5 This short report has been commissioned to accompany the October 2020 consultation¹ and considers the HRA implications in relation to the different spatial strategy options considered and the additional sites. As such it simply builds on the previous HRA work and should be read alongside the November 2019 HRA report. The November 2019 report contains much additional and relevant information, for example relating to the legislative context, HRA process and the qualifying features of the European sites. That background and context is not repeated here.

¹ A version of which was shared with Footprint Ecology on 8th October 2020.

2. Relevant European sites and issues

2.1 The November 2019 HRA work identified the following European sites as relevant to the plan and screening for likely significant effects:

- Severn Estuary SAC/SPA/Ramsar
- Cotswold Beechwoods SAC
- Rodborough Common SAC.

2.2 These European sites are shown on Map 1. Map 2 shows the different spatial options in relation to the European sites and in Map 3 we show the additional housing sites and growth points included in the consultation.

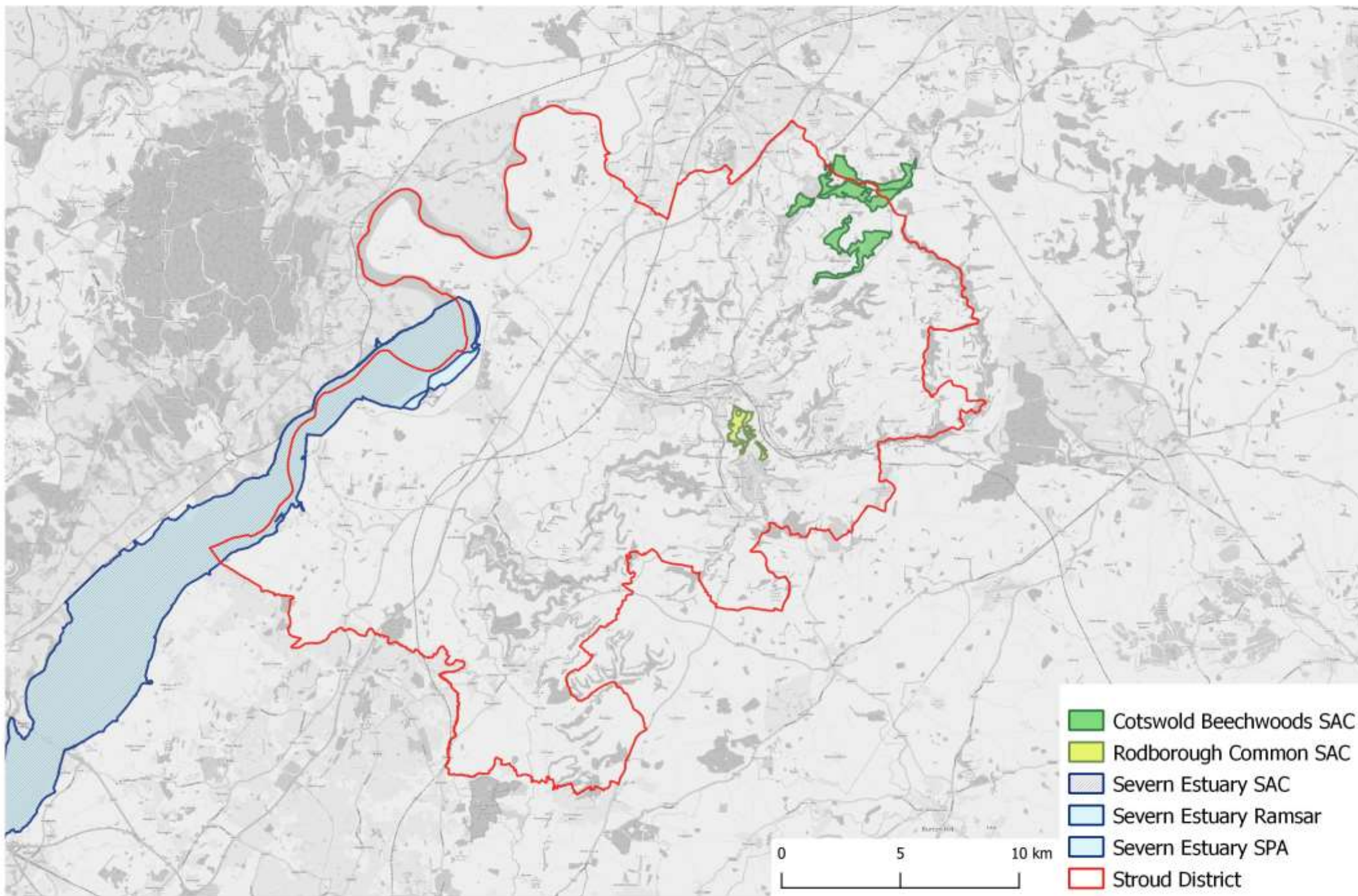
2.3 There are a range of possible means by which the content of the Stroud Local plan could affect European site interest features. Potential impact pathways, adapted from the previous HRA work, are summarised in Table 1.

Table 1: Summary of potential impact pathways – i.e. potential mechanisms whereby the different European sites could be impacted. (✓)= possible/lower concern

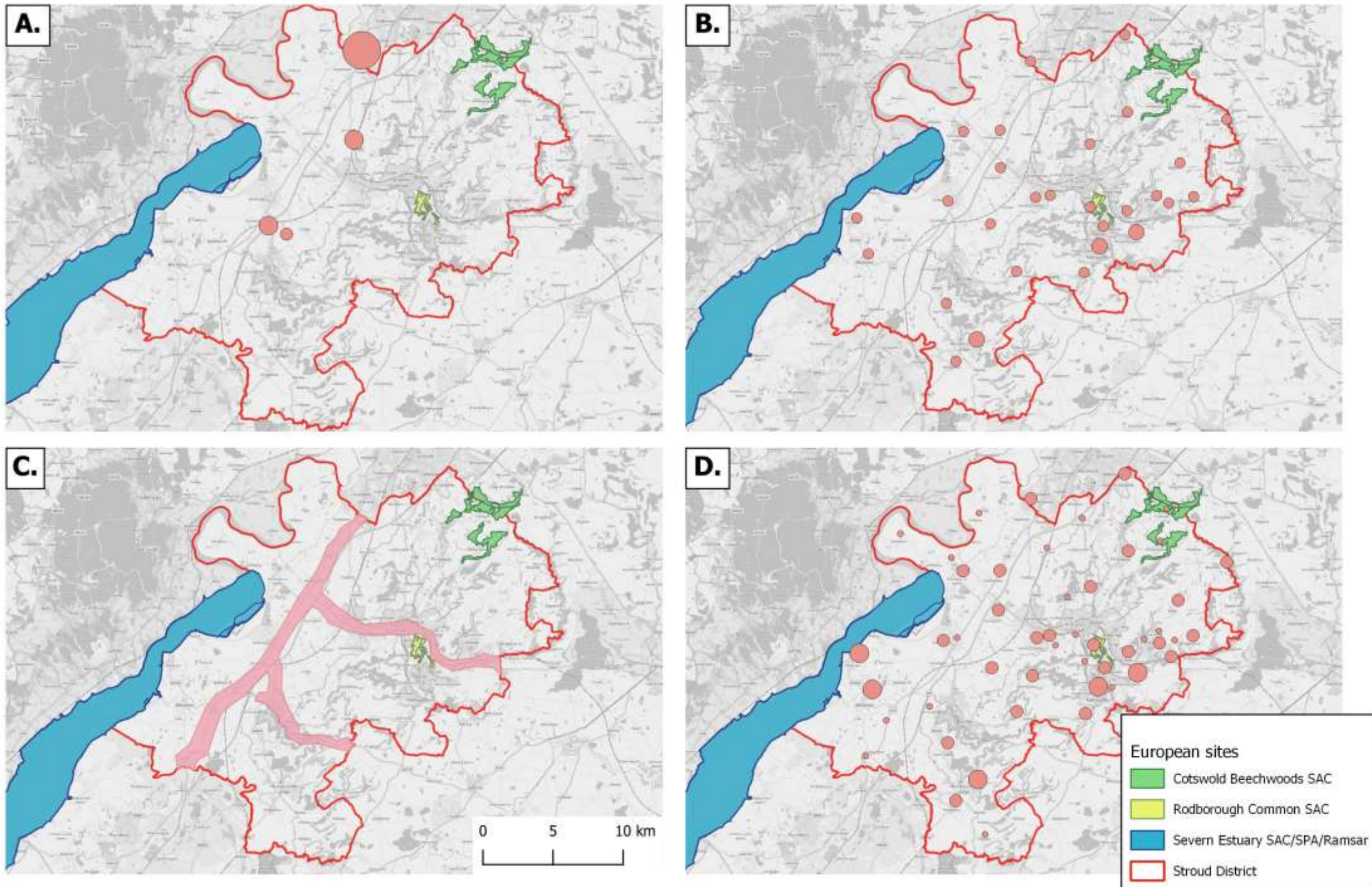
Site	Urban effects	Loss of supporting habitat	Recreation	Water quality	Water abstraction	Air quality
Severn Estuary SPA/Ramsar site	✓	✓	✓	✓	✓	✓
Severn Estuary SAC		✓	✓	✓	✓	✓
Cotswold Beechwoods SAC	✓		✓	(✓)	(✓)	✓
Rodborough Common SAC	✓		✓	(✓)	(✓)	✓

2.4 We use the impact pathways to structure this report and for each pathway consider the implications of the different spatial options and the additional sites included in the consultation.

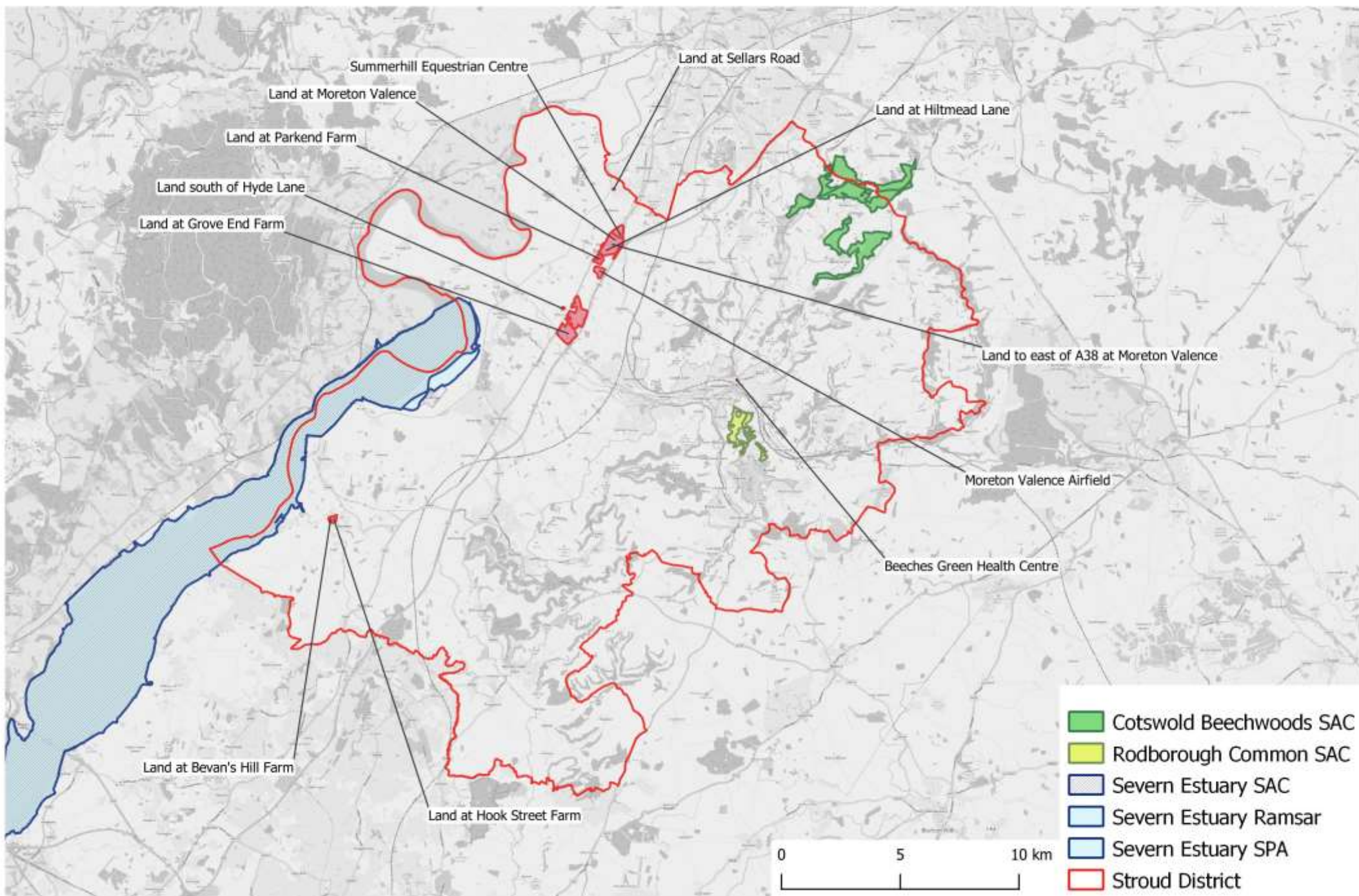
Map 1: Relevant European sites



Map 2: Spatial options (indicative and stylised) in relation to the European sites



Map 3: Additional potential housing sites



3. Urban effects

3.1 Urban effects relate to issues where development is close to the European site boundary and is an umbrella term relating to impacts such as cat predation, impacts from lighting, invasive species, fly tipping and vandalism (e.g. Underhill-Day, 2005; Corney et al., 2008; Ryan, 2012). These impacts are particularly relevant where development is in close proximity, within a few hundred metres of the site boundary.

Spatial options

3.2 The spatial options are mapped as indicative and the mapping is stylised. The options could involve development in relative proximity to European sites as follows:

- Severn Estuary SPA/SAC/Ramsar: Option D (and to some extent B) includes development in close proximity at Sharpness – the 2019 HRA report includes detailed consideration of this particular location;
- Rodborough Common SAC: Options B, C and D could all involve development in close proximity;
- Cotswold Beechwoods SAC: Option D could involve some relatively small levels of development within close proximity.

3.3 For the Rodborough Common SAC and the Cotswold Beechwoods SAC, risks would relate to cumulative impacts in housing around the periphery of the sites and risks could be avoided through proactive policy wording to ensure no net increase in the vicinity of the European site boundary. A number of other SAC sites have such protective policies in place, for example Cannock Chase SAC (400m), Dorset Heaths (2 different SACs, 400m), Burnham Beeches SAC (500m).

Additional potential housing sites/growth points

3.4 None of the additional potential housing sites are in close proximity of the European sites and as such there are no risks from urban effects.

4. Loss of supporting habitat

- 4.1 Many European sites support mobile species which can use land outside the European site boundary (Chapman & Tyldesley, 2016), for example waders and wildfowl can use farmland and low-lying land around estuaries as feeding or roost sites. Land around the periphery of European sites may also be important for land management or for future management, for example in relation to realignment and coastal squeeze on estuaries.
- 4.2 These issues are particularly relevant to the Severn Estuary SPA/SAC and Ramsar. There are risks that the future adaptation of the estuary as a dynamic geomorphological habitat that will change over time, and those changes will be amplified by climatic changes. Flood defences impede these changes and alteration or loss of habitats over time, and high value development in close proximity, can lead to calls for the retention and maintenance of existing defences that might otherwise be planned for decline and breaching over time, and can also strongly support the building of new defences.

Spatial options

- 4.3 Spatial options B and D potentially involve development in proximity to the Severn Estuary SAC/SPA/Ramsar, around Sharpness. Site checks and further work are necessary to ensure adverse effects can be ruled out at this location (see 2019 HRA report for detail).

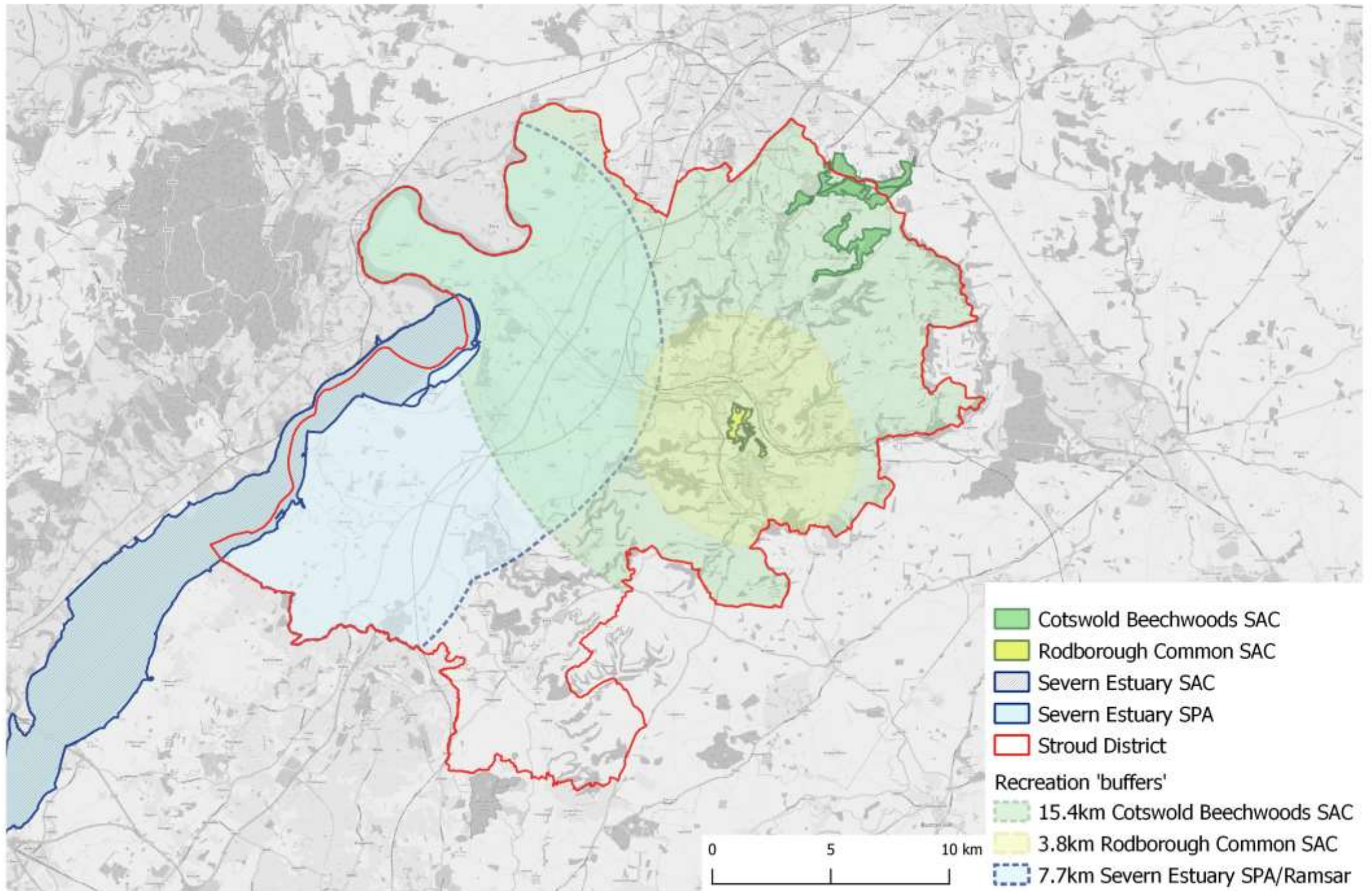
Additional potential housing sites/growth points

- 4.4 The sites are predominantly set back from the Severn Estuary. The Berkeley Cluster sites, with a potential for around 60 dwellings, are just over 1km from the SAC/SPA/Ramsar boundary. The two sites lie between Berkeley and Hook Street and are not on open ground likely to be used by waterbirds. Given there are existing houses on the estuary side of the two sites, concerns relating to constraints to the future adaptation of the estuary can be ruled out.

5. Recreation

- 5.1 Recreation impacts relate to the increased use of European sites (and functionally-linked land) for recreation, as a result of more people living nearby. All the relevant sites have extensive public access and are attractive, extensive countryside sites. They therefore provide obvious destinations for recreational use. Issues include disturbance, trampling, eutrophication (e.g. dog fouling) and other contamination and increased fire risk (Liley et al., 2010; Lowen, Liley, Underhill-Day, & Whitehouse, 2008; Saunders, Selwyn, Richardson, May, & Heeps, 2000).
- 5.2 Visitor survey work from the relevant European sites provides information on where visitors originate. For the Severn Estuary there is an established mitigation approach that applies a zone of 7.7km around the SPA/Ramsar. Visitor surveys from the Cotswold Beechwoods show that 75% of visitors (who were on a day-trip/short visit directly from home) originated from within 15.4km of the interview location (Panter & Caals, 2019a). The equivalent figure for Rodborough Common is 3.8km (Panter & Caals, 2019b).
- 5.3 A mitigation strategy is in preparation for the Cotswold Beechwoods SAC and this will ensure cumulative growth from multiple authorities can be adequately mitigated. A mitigation approach for Rodborough Common is also established for Rodborough Common, however this will require review and revision to take account of new growth in the Local Plan.
- 5.4 The relevant distances are shown on Map 4 as buffers around the relevant European sites. The buffers have been clipped to the Stroud District boundary and the Cotswolds Beechwoods zone has been extended to include the Arlingham peninsula, so that it follows the Severn Estuary/District boundary for simplicity (in line with the emerging mitigation strategy).

Map 4: Recreation zones around relevant European sites indicating where most visitors originate



Spatial options

- 5.5 Development within the zones shown in Map 4 is likely to result in increased recreation use of the relevant sites. It is the cumulative effects of growth that are of particular concern and it should also be noted that recreation use from within a given zone will not be uniform – the closer people live to a particular site the more likely they are to visit, and so spatial options with high levels of growth relatively close to European sites will result in higher recreation use (and therefore a greater need for mitigation) compared to options where growth is set further back. All the spatial options contain growth within the zones for multiple sites, but there are some differences in the relative proportions, and these will influence the mitigation requirements associated with each option.
- 5.6 Spatial Option A would involve growth within the zones for the Cotswold Beechwoods and the Severn Estuary, but would avoid risks for Rodborough Common. With a focus on growth towards the south of Gloucester there are particular risks for the Cotswold Beechwoods
- 5.7 Spatial Option B involves growth spread across the zones for all three European sites, with a particular focus around Rodborough Common. Levels of growth around the Cotswold Beechwoods, compared to option A, are lower and largely set further back, albeit with some sites such as around Painswick in close proximity.
- 5.8 Spatial Option C, with the focus around the major roads, would on the whole set development back from the Cotswold Beechwoods and the Severn Estuary (but still with development in the respective zones), however there is a risk of some marked growth in close proximity to Rodborough Common.
- 5.9 Spatial Option D, like B, spreads the pressure between the three relevant sites, but again there is a greater emphasis towards Rodborough Common. There is also the potential for some low levels of growth very close to the Cotswold Beechwoods. As such mitigation for the Cotswold Beechwoods, should this option be selected, would need to incorporate measures relating to increased use by those living very close to the site – potentially regular visits from local residents for activities such as dog walking.

Additional potential housing sites/growth points

- 5.10 For the additional potential housing sites/growth points:

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- Beeches Green Health Centre is the only one relevant to Rodborough Common;
- The Berkeley Cluster sites are within the Severn Estuary 7.7km zone but would avoid risks to other sites;
- The 2 growth point sites, at Moreton Valence and Whitmoor are with the 7.7km zone for the Severn Estuary and also within the 15.4km zone for the Cotswold Beechwoods.

5.11 The two growth point locations are of a particular scale that bespoke mitigation measures may be necessary to be confident that adverse effects on integrity can be ruled out. Bespoke green space provision, in and around the sites or nearby, at such a scale to work to deflect recreation use away from the European sites, is likely to be required.

6. Water issues

- 6.1 Water issues include water quality and water quantity (i.e. water availability), and flood management. Run-off, outflow from sewage treatments and overflow from septic tanks can result in increased nutrient loads and contamination of water courses. Abstraction and land management can influence water flow and quantity, resulting in reduced water availability at certain periods or changes in the flow. Such impacts particularly relate to aquatic and wetland habitats.
- 6.2 Assessment of water related issues are primarily a check that the overall quantum of growth can be accommodated without compromising the ecological integrity of hydrologically sensitive European sites. The Cotswolds Beechwoods SAC and Rodborough Common SAC do not have any qualifying features that are wetland habitats or species and the topography of these sites means flooding as a result of urban development is of low concern. As such the risks for these sites are relatively low. Water supply was not deemed to be an issue for the District and the 2019 HRA work did not raise any concerns.

Spatial options

- 6.3 Spatial options B, C and D have the potential for growth in close proximity to Rodborough Common and Option D in close proximity to Cotswold Beechwoods. For these options there may need to be further checks to ensure there are no hydrological issues to the SACs from run-off, flood water risk or local modifications to the hydrology. Site specific mitigation measures should be possible to resolve concerns and risks could be avoided by ensuring development was set back from the site boundaries (see urban effects).
- 6.4 Spatial options B and D both include development in close proximity to the Severn Estuary. Water issues in such locations will relate to run-off, contamination of water courses feeding into the estuary and flood management. Option D has the greater level of potential growth focussed towards the Estuary at a greater number of locations. Further checks of water issues will be necessary for these options and any policies may need to ensure adequate protection is in place for the Estuary.

Additional potential housing sites/growth points

- 6.5 The Berkeley Cluster sites have a direct hydrological link to the Severn Estuary SPA/SAC/Ramsar and as such any development in this location will need to ensure no issues for site integrity, from contamination, run-off and flood-water. Should these sites be included in the next stage of the Plan, protective wording should ensure hydrological issues are addressed at project level HRA.
- 6.6 The other locations are suitably distant from the relevant European sites that there are unlikely to be any site-specific issues relating to water.

7. Air Quality

- 7.1 Increased levels of traffic on roads that cross or run adjacent to European sites can result in reductions in air quality. These are primarily as a result of increased nitrogen deposition but are also related to increases in both sulphur and ammonia. Traffic generated air quality reductions can impact on vegetation communities (Bobbink, Hornung, & Roelofs, 1998; Stevens et al., 2011).
- 7.2 Concerns relate to when there are roads within 200m of the European site. All sites have minor roads that run within 200m. Major roads of concern are primarily the A46 which runs within 200m of both Rodborough Common and the Cotswold Beechwoods. For the Severn Estuary the only major roads within 200m are well outside Stroud District at the two Severn crossings on the M4 and M48.

Spatial options

- 7.3 Traffic modelling will be necessary to ascertain the scale of traffic change along the A46 and other relevant roads within 200m of the European sites. Further air quality modelling may also be necessary to quantify the extent to which growth will result in negative impacts for the European sites.
- 7.4 Option D would appear to be the option most likely to result in increased use of the A46 and the other roads around the Cotswold Beechwoods and Rodborough Common. To some extent Option B and perhaps C will also result in more traffic on these roads, while Option A, with the growth to the south of Gloucester and adjacent to the motorway, is potentially the option with the lowest risk in terms of air quality.

Additional potential housing sites/growth points

- 7.5 As with the spatial options, traffic modelling and potentially air quality modelling will be necessary to ascertain the risks, which will relate primarily to the cumulative effects of growth. The two growth points will result in a marked increase in people and therefore traffic originating from set areas. The potential growth points are adjacent to the M5 motorway and it is likely that the traffic increase would be focussed on the motorway, with low risks to the European sites.

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