

BATH AND NORTH EAST SOMERSET COUNCIL LOCAL PLAN OPTIONS DOCUMENT: Initial scoping of issues relating to the Habitat Regulations

Introduction

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) protect the sites of greatest significance and international importance for nature, for which the UK has a special responsibility. These sites include breeding and resting sites for rare and threatened species, and/or important natural habitats that are at risk.

The Regulations provide these sites with protection through the designations of Special Areas of Conservation (SACs), which provide protection to a variety of special species and habitats, and also Special Protection Areas (SPAs), which provide protection for rare and vulnerable birds and their habitats. Functionally linked land that supports the sites or species assemblages also receive protection. These designated sites are collectively referred to as European sites.

The Habitats Regulations designations (SAC and SPA), give a higher level of legal protection than domestic protections, such as Sites of Special Scientific Interest (SSSIs), including through a legal requirement to assess the potential impacts of development plans or projects on protected sites prior to their approval (Habitats Regulations Assessment or HRA). Where derogation does not apply, development projects or plans that would result in adverse impacts to the integrity of any European site should not be approved without recourse to the secretary of state.

There are 3 species (Bat) SACs, 2 habitat SACs, 1 SPA and extensive areas of functionally linked land of relevance to spatial planning and policy making for B&NES. This scoping document considers potential issues arising from the Options Document in the light of the regulations and designations.

Context

The Local Plan Options Document is prepared for consultation under Reg 18 of the Town and County Planning (Local Planning) (England) Regulations 2012. It does not set out policies or proposals but provides a series of options to consider for inclusion in the new Local Plan. A formal Habitat Regulations Assessment (HRA) is therefore not required at this stage. An initial scoping of potential issues is considered helpful and appropriate to support consideration of the options and the next stage of plan making.

This HRA scoping has therefore been undertaken to scope the possible impacts and environmental outcomes of the policies and site allocations being considered, and judge whether these options, if translated into formal planning policies and site allocations would be likely to have a significant effect on any European Site, and to then consider if, and what, changes or mitigation measures may be needed for the drafting and refining of policies and site allocations. The objective being to support the drafting of a new local plan that would not result in adverse impacts to the integrity of European sites within and adjacent to the district.

This initial scoping exercise has therefore been undertaken with a view to determining any potentially significant issues from policy areas and site allocations being considered, and

what measures or approaches may be needed or available to moderate the plan and avoid significant effects on any European Site. It represents an initial scoping and recommendation exercise. A precautionary approach has been taken.

Purpose

This report provides a brief overview of potential issues relating to the Habitat Regulations arising from the options set out in the Local Plan Options Consultation document. It considers the scope of possible impacts to the European Sites within and adjacent to the district, and provides recommendations to guide the next stage of plan preparation.

New Local Plan Options Document

The new local plan options document builds on the previous Composite Plan i.e. the Core Strategy, Placemaking Plan and incorporating the Local Plan Partial Update adopted in Jan 2023, and proposes to retain many of the existing plan policies and unimplemented site allocations, albeit with some changes to bring them up to date with current circumstances, guidance and legislation. The options document also proposes some new policy approaches and significant new site allocation options. In terms of compliance with the habitat regulations it is the options for strategic and non-strategic housing growth that pose the biggest risks to the plan.

The retained and/or modified policies and existing site allocations have already been subject to a formal HRA process and would have been adjusted as necessary to address any HRA issues. The need for policy amendments relate largely to updating wording to better address issues relating to the Climate and Ecological Emergencies, and new guidance, as opposed to substantive change in policy objectives. Therefore, whilst it is feasible that amendments and updating of existing policies and site allocations could result in impacts to the protected sites or functionally linked land, or could potentially cause cumulative effects of significance, the risks of this are considered to be low. The emphasis of this review is therefore on new site allocations and new or substantially modified policies.

Methods and approach

Both site allocation options and policy options have been screened for potential impacts/ areas of concern. Policy options have been screened using defined screening criteria set out in the HRA Handbook published by Tyldesley and Chapman (2013)¹ and with an understanding of the sites Conservation Objectives, Conservation Condition reports and Site Improvement Priorities. Given the nature of the policy options, this is a high-level screening. The screening results are included in the appendices.

The policies retained unchanged from the existing local plan have not been revisited at this point, but potential cumulative effects will need to be considered during the HRA of the draft Local Plan (that will be consulted upon under Reg 19).

The site allocation options have been screened using mapped buffer zones and consultation zones, with an understanding of the sites Conservation Objectives, Conservation Condition reports and Site Improvement Priorities.

Screening categories	Code
A general statement of policy	A
Policy listing general criteria for testing proposals	B
proposals referred to but not proposed by the plan	C
environmental protection policies	D
steering change away from positive sites	E
do not propose change, but control approach (e.g. design)	F
no conceivable effect	G
actual or theoretical effects cannot undermine conservation objectives	H
LSE on a site alone	I
no LSE alone but an effect - check in combination	J
no LSE even in combination	K
LSE in combination	L

Any policy or site allocated screening category I, J or L and highlighted in yellow will require action / amendment.

Alert buffers and SAC bat consultation zones

A series of alert buffers around European sites have been used, firstly, to identify the European sites of relevance to the B&NES Local Plan, and then to determine the possible impact pathways and effects of each new site allocation option or policy area. This reflects best practice. The details of the buffer zones used, and their justification are provided in Appendix 1. (These zones were developed in consultation with WECA in 2019).

A series of consultation zones around the Bat SACs are then used to consider the nature of potential impact pathways, and the scope for mitigation. Potential cumulative impacts are also considered. These zones are evidenced in unpublished guidance produced for B&NES by Larry Burrows (2019) and reflect adopted SPD/ Guidance in North Somerset and Somerset CC.

The Bat Consultation Zones illustrate the geographic areas where SAC bats may be found in Functionally Linked Land. The zones are divided into three bands, A, B and C, reflecting the density at which SAC Bats are likely to be found at a distance from a roost site, with zone A being the highest expected density and zones C being the lowest expected density mapped.

In addition, juvenile bat sustenance zones and adult sustenance zones have also been considered.

These screening buffers and consultation zones are precautionary areas provided to aid decision making, and are based on our best knowledge and shared understanding of what and where significant impacts are most likely to occur. They are designed to filter in areas where different types of development pressure could conceivably have an impact on the priority issues that have been identified for each European site. These are set out in Site Improvement Plans (SIPs) which are published by Natural England. These consider the Conservation Objectives for each site and the factors that impact most significantly on the conservation status of each site. The buffers have been used to scope the likelihood of significant issues and impacts arising from the options document.

Maps showing the HRA alert buffer zones, SAC bat consultation zones and site allocation options are provided in the appendices, together with a series of spreadsheets that summarise where impacts could potentially occur. The approach is precautionary.

The European sites and key vulnerabilities considered to be of relevance to the new Local Plan are:

European Site	Key vulnerability to development with B&NES
Chew Valley Lake SPA	vulnerable to unmitigated increased water demands and recreational pressures
Bath & Bradford on Avon Bat SAC	vulnerable to unmitigated loss or disturbance (including lighting impacts) to green field land that provides key foraging habitat and flightlines
North Somerset & Mendips Bat SAC	vulnerable to unmitigated loss or disturbance (including light impacts) to green field land that provides key foraging habitat and flightlines
Mells Valley Bat SAC	vulnerable to unmitigated loss or disturbance (including light impacts) to green field land that provides key foraging habitat and flightlines & to unmitigated air pollution from increased traffic generation, air pollution and to unmitigated impacts of illegal access & disturbance
Mendip Woodlands SAC	vulnerable to unmitigated air pollution from increased traffic generation, and to unmitigated impacts of illegal access & disturbance
Avon Gorge SAC	vulnerable to unmitigated air pollution from increased traffic generation, air pollution and to unmitigated impacts of illegal access & disturbance

Using the buffers and consultation zones to guide the spatial likelihood of impacts and risks to the European sites, each site allocation option has been considered for possible impacts to the relevant European sites, and associated species (see Appendix 3).

Within B&NES the presence of the bat SACs and the mobility of bat species is a key factor to consider across much of the district.

For the bat SACs that may be impacted by development within B&NES, the formal HRA must consider whether site allocations and /or policies are likely to result in:

1. the destruction of a SAC bat roosts (maternity, hibernation or subsidiary roost)
2. loss of foraging habitat for SAC bats
3. fragmentation of commuting habitat for SAC bats
4. increase in luminance in close proximity to a roost and/or increase in luminance to foraging or commuting habitat
5. impacts on foraging or commuting habitat which supports the SAC bat populations structurally or functionally

These potential issues have been considered during the screening and scoping exercise.

Policy Options – early review and scoping of potential issues

The Development Management policies identified for review and updating include the existing suite of Natural Environment policies designed to protect sites, including European, national and local wildlife sites, and protected species, to protect and enhance ecological networks, to require species and habitat enhancement and to deliver at least 10% biodiversity net gain. Improvements to these policies are proposed to achieve more for nature recovery, including options to require at least 20% BNG for some or all development types, and to use the emerging Local Nature Recovery Strategy to define our ecological networks.

These potential changes and provisions are very positive and would contribute to the safeguarding of important habitat and habitat networks of importance to European sites, including functionally linked land.

However, it is recognised that the protection of European sites should not be left to stand alone nature conservation policies, particularly where a policy is directing development to specific sites or features, or to the use of land that could potentially have impacts to European sites, or the species associated with them, or to functionally linked land.

A summary of findings of the review of policies and a series of recommendations is provided in the table attached (see Appendix 4). This suggests that whilst some policy options could potentially cause some impact, there is likely to be scope to add clauses to minimise or avoid any significant effect.

Recommendation

- The re-drafting of existing policies in the Draft Local Plan may need to include additional mitigation measures, and should be drafted with an awareness of the need to safeguard European sites and functionally linked land.

Local Plan Site Allocation Options- early review and scoping of potential issues

Bath and its Environs

Given components of the Bath & Bradford on Avon SAC are located within this sub-area of the district it is the most sensitive region in terms of potential HRA issues.

The Local Plan Options document lists a number of existing site allocations in Bath that will be retained. For these it is proposed, where relevant, to update the development requirements to include references to the need for a transformational approach to the protection and enhancement of biodiversity to deliver outcomes that genuinely contribute to nature recovery, whilst enabling new development, improving the relationship to the river, the integration of green infrastructure and the need for lighting in this location to safeguard the dark corridor for bats. This approach is beneficial and should ensure that none of the existing and retained allocations would raise an HRA issue. It is anticipated that the new allocation options for West of Bath and South of Burnett would benefit from similar and

bespoke requirements to fully mitigate impacts to the Bat SAC. However, given these are completely new development areas on green field land, they are likely to require specific surveys to establish the evidence base needed to inform detailed site requirements.

Recommendations:

- The re-drafting of existing site allocations may need to include additional mitigation measures, and should be drafted with an awareness of the need to safeguard European sites and functionally linked land.
- SAC bat activity surveys may be required to inform site development requirements for any allocations to the West of Bath or South of Burnett

Bath to Bristol corridor and south-east edge of Bristol

Various options are being considered for site allocations at Keynsham & Saltford; Hicks Gate and Whitchurch.

Keynsham & Saltford

None of the Keynsham and Saltford options are flagged by the SAC alert buffers. However, all but one these option areas fall within a bat SAC zone for consideration where strategic development could impact on the favourable conservation status of lesser horseshoe bat maternity colonies (LHB Maternity Consideration Zone). Significant green field development within these zones has the potential to have such impacts through the loss or disturbance to foraging grounds and flight lines. Specific site surveys and development requirements may therefore be needed.

Recommendations:

- The drafting of site allocation development requirements may need to include specific mitigation measures, and, should be drafted with an awareness of the need to safeguard European sites and functionally linked land.
- SAC bat activity surveys may be required to inform site development requirements

Whitchurch & Hicks Gate

The use of the alert buffers alone identifies that the options at Whitchurch and Hicks Gate may have the potential to impact the Avon Gorge SAC through any increase in traffic caused to the road networks within 200m of the gorge. Whilst it seems unlikely that a significant increase in traffic along the Portway would result from these allocations, without detailed traffic modelling it is not possible to rule this potential impact out at this stage. This does however help to inform site requirements, for example reinforcing the need for an allocation to provide local employment opportunities to reduce the need to travel and to ensure adequate provision of and access to public transport.

The options for Whitchurch also fall within the Chew Valley Lake SPA. A potential increase in recreational pressures at the site are feasible, but probably not significant, unless in combination with impacts from strategic development projects elsewhere, including that planned in neighbouring authorities Local Plans. For the HRA of the B&NES Draft Local Plan

(Reg 19) the in-combination effects of any allocation for development at Whitchurch, along with any relevant development site allocations in the Bristol Local Plan and North Somerset Local Plan, will be assessed with reference to the HRAs underpinning the respective Local Plans.

Recommendations:

- Transport modelling may be needed to determine if development at Hicks Gate would generate significantly increased traffic movements within 200m of Avon Gorge Woodland SAC
- The drafting of site allocation development requirements may need to include specific mitigation measures to reduce travel into Bristol by private car.
- The potential for cumulative impacts of increased recreational pressures at Chew Valley Lake SPA need to be considered as site options are selected, and site development requirements are designed. Specific provision of local accessible green space/ green infrastructure may be a requirement and/or the delivery of significant accessible green infrastructure may be appropriate to serve developments at Whitchurch, Hicks Gate and Keynsham.

Somer Valley

Various options are being considered for strategic allocations at Peasedown, Radstock, and Farrington Gurney. In addition, a number of non-strategic housing sites are being considered.

Peasedown

The Peasedown strategic sites fall within the Bath & Bradford on Avon Bat SAC alert buffer. The housing site is adjacent to ancient woodland that is within the Draft Greater Horseshoe Bat Foraging Corridor used to help identify potentially linked habitat / functionally linked habitat. The development requirements at this site would need to ensure adequate protection and enhancement of the woodland to support bats, including maintenance of a dark buffer adjacent to the woodland edge and linked hedgerows.

2 of the non-strategic potential sites (Pau11 & Pau12) fall within the outer zone of the Chew Lake SPA consultation zone. The scale of development does not raise concerns in terms of generating significant increases in recreational pressures, which would be the key concern. The other non-strategic allocation options fall within the Mells Valley bat SAC, Mendips Woodland SAC, and within the Lesser Horseshoe Bat (LHB) zone of consideration for other Maternity colonies zone. The scale of development is not significant, but loss of green field land and supporting habitat features could contribute to cumulative impacts.

Recommendations

- SAC bat activity surveys may be required to inform site development requirements.
- The drafting of site allocation development requirements for the strategic sites may need to include specific mitigation measures, such as provision of a dark corridor and adequate buffering of the adjacent woodland, the provision of on-site compensatory habitat and retention of internal and boundary hedgerows with supporting buffers.
- There may be opportunities to provide compensatory habitat / habitat enhancements on the optional solar site at Peasedown of benefit to foraging bats (grazing habitat) subject to site operating requirements of lighting etc
- The drafting of site allocation development requirements for the non-strategic sites may need to include specific mitigation measures such as retention of boundary habitat features, and control of light spill to maintain dark bat corridors.

Radstock

The East Radstock strategic sites fall within the outer zones of the Mells Valley SAC and Mendip Woodlands SAC alert buffers. The land to west of the Somer Valley Enterprise Zone (SVEZ) and Farrington Gurney south also both fall within the outer zones of the Mells Valley Bat SAC. Habitat features of importance to foraging and commuting SAC bats would need to be protected and enhanced.

The non-strategic allocations options (MSN 23; MSN 28 a&b; WF01; RAD31c) fall within the Mells Valley bat SAC, Mendips Woodland SAC, and within the Lesser Horseshoe Bat (LHB) zone of consideration for other Maternity colonies. The scale of development is not significant, but loss of green field land and supporting habitat features could contribute to cumulative impacts.

Recommendations

- The drafting of site allocation development requirements for the strategic and non-strategic sites may need to include specific mitigation measures such as retention of boundary habitat features, and control of light spill to maintain dark bat corridors.

Farrington Gurney

The site allocations options at Farrington Gurney both fall within the Chew Valley Lake SPA consultation zone, and within the LHB Maternity FCS Consultation zone. The Farrington Gurney south option also falls within the Mells Valley Bat SAC outer zone. A potential increase in recreational pressures at Chew Valley Lake SPA is feasible, but probably not significant, unless in combination.

Habitat features of importance to foraging and commuting SAC bats would need to be protected and enhanced.

Recommendations

- The drafting of site allocation development requirements for the strategic sites may need to include specific mitigation measures such as retention of boundary habitat features, and control of light spill to maintain dark bat corridors.
- The potential for cumulative impacts of increased recreational pressures at Chew valley lake SPA need to be considered as site options are selected, and site development requirements are designed. Specific provision of local accessible green space/ green infrastructure may be a requirement.

Rural Areas

With the exception of Timsbury all the villages identified for limited proportionate growth within the wider rural area are within bat SAC buffers or within the Chew Valley Lake SPA buffer. Options for Bathampton, Batheaston, Bathford and Freshford could potentially all impact on the functionally linked land associated with the Bath & Bradford on Avon SAC. The cumulative effects could be an issue. Corston, Temple Cloud, Clutton, Bishops Sutton, Chew Magna, and Chew Stoke villages identified for limited proportionate growth falls within the LHB zone of consideration for other Maternity colonies.

8 of the rural villages identified for limited proportionate growth are within the Chew Valley Lake SPA buffer zone and in combination could potentially cause an increase in recreational pressure.

Recommendations

- The drafting of site allocation development requirements for the villages may need to include specific mitigation measures such as retention of boundary habitat features, and control of light spill to maintain dark bat corridors for impacts to Bat SACs.
- The potential for cumulative impacts of increased recreational pressures at Chew Valley lake SPA need to be considered as site options are selected, and site development requirements are designed. Specific provision of local accessible green space/ green infrastructure may be a requirement and/or contributions to the management of public facilities at the Lake may be appropriate.

Potential for Cumulative Effects

Until the full extent and location of new housing and employment sites is defined it is not possible to fully assess the likelihood of the plan resulting in cumulative significant effects on the European sites of relevance to B&NES. It is however potentially instructive to look briefly at the extent and location of cumulative impacts from the options identified for each European Sites. (NB. This does not consider cumulative impacts from other plans or projects).

Bath & Bradford on Avon Bat SAC

Potential site allocations at South Burnett and West of Bath, in combination with the proposals for Bathampton, Batheaston, Bathford and Freshford, and for Pensford, and other proposals potentially impacting the other LHB maternity colonies, could result in significant cumulative effects. A strategic mitigation strategy / approach may be appropriate requiring developer contributions to an agreed costed SAC action plan.

North Somerset & Mendip Bat SAC

This SAC could be affected by cumulative impacts of development arising from the identification of Chew Magna, Chew Stoke, and Bishop Sutton as villages for limited proportionate growth. Chew Magna and Chew Stoke, and potentially Bishop Sutton, have habitat connectivity and are linked by the draft key horseshoe bat corridor. However, these villages are likely to have only modest growth. Site development requirements to maintain and enhance foraging and flight line corridors, including strict control of lighting may be sufficient to avoid significant cumulative effects.

Mells Valley SAC

This SAC is potentially affected by the strategic site allocations at Radstock and West of SVEZ, and by a number of the non-strategic site allocation options. However, these options all fall within the outer zones of concern, and with appropriate site development requirements are considered unlikely to result in significant cumulative effects.

Mendip Woodland SAC

This SAC is potentially affected by the strategic allocations at Radstock and by two of the non-strategic sites. These options all fall within the outer zones of concern, and with appropriate site development requirements are considered unlikely to result in significant cumulative effects.

Avon Gorge Woodland SAC

This SAC is potentially affected by strategic allocations at Whitchurch and Hicks Gate. The potential impacts relate to increased traffic movements and if demonstrated through traffic modelling are likely to be modest. Measures to reduce car use would mitigate against this impact.

Chew Valley Lake SPA

This SAC is potentially affected by the strategic allocations at Whitchurch and Farrington Gurney, and by non-strategic allocations at Paulton. In addition, the identification of Chew Magna, Chew Stoke, Bishop Sutton, Clutton, Temple Cloud, Pensford, High Littleton and Farmborough as villages for limited proportionate growth may impact the site. There is therefore potential for cumulative effects, and specific provision of local accessible green space/ green infrastructure may be a requirement and/or contributions to the management of public facilities at the Lake may be appropriate. The latter could be through an agreed costed action plan.

Conclusions

A few of the policy options raise potential concerns. However, it is likely that wording can be included within the new or amended policies to mitigate any potential issues.

None of the site allocation options being considered raise outright concerns alone, (although the options for West of Bath and south of Burnett may need bat activity surveys to inform site development requirements) and it is considered that potential impacts of individual sites could be minimised through the development of specific site development requirements.

However, the potential cumulative impacts to the Bradford on Avon Bat SAC, and to the Chew Valley Lake SPA, cannot be ruled out and there may be requirements for contributions to costed actions plans for these sites (not yet developed). Consultation with Natural England to explore this need is recommended.

References

1. Tyldesley, D and Chapman, C, (2013) The Habitat Regulation Assessment Handbook DTA Publications Ltd.
2. Burrow, L (unpublished) Bath and Bradford on Avon Bats Special Areas of Conservation (SAC) Guidance on Development Version 1.2 – April 2019

Appendix 1: Alert Buffer Zones for European Sites within and around Bath and North East Somerset used for screening (developed in consultation with WECA 2019)

Buffer zone	Reasoning
<p>8km buffer</p>	<p>To identify the area around SACs (or important satellite roosts linked to SACs) designated for greater horseshoe bats where loss of bat foraging and commuting habitat would be most likely to affect the ability of the SAC to continue to support its bat population.</p> <p>The area of greatest bat activity surrounding a roost is defined as the Core Sustenance Zone (CSZ)¹. This term refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost. This bat species uses commuting corridors along linear landscape features and forages in permanent pasture and woodland. The Bat Conservation Trust identifies a weighted average CSZ of 3km for greater horseshoe bats² based on weighted averages from four studies. However, confidence in this zone size is described in the guidance as Moderate because the calculation is based on a reasonable sample size from multiple colonies and studies but is rounded down from weighted average. Other radio-tracking research on greater horseshoe bats has shown that they make longer foraging trips foraging from their roost sites than lesser horseshoe bats, up to 9-10km from their roost^{3 4} and the West of England LTP4 HRA cites studies⁵ that identify greater horseshoe bats have shown to have a maximum home range of up to 8km from a roost.</p> <p>Given the somewhat conflicting evidence, on balance an 8km zone would be reasonable to define the area of greatest importance for a greater horseshoe colony, being precautionary (compared to the CSZ approach) but without trying to encapsulate every area that might be visited by greater horseshoe bats associated with a given SAC.</p>

¹ https://cdn.bats.org.uk/pdf/Resources/Core_Sustenance_Zones_Explained_04.02.16.pdf?mtime=20190219173135

[Accessed on the 26/05/21]

² Schofield H.W. 2008. The Lesser Horseshoe Bat Conservation Handbook.

³ Billington G. 2008. Radio-tracking Study of Greater Horseshoe Bats at Dean Hall, Littledean, Cinderford. Natural England Commissioned Report NERR012.

⁴ Billington G. 2009. Radio Tracking Study of Greater Horseshoe Bats at Dean Hall, Littledean, Cinderford. Natural England Commissioned Report. NECR021.

⁵ Billington, G. 2003. Radio tracking study of Greater Horseshoe bats at Buckfastleigh Caves Site of Special Scientific Interest: English Nature Research Report no. 573. Peterborough: English Nature.

Billington, G. 2001. Radio tracking study of Greater Horseshoe bats at Brockley Hall Stables Site of Special Scientific Interest, May – August 2001. English Nature Research Report No. 442. Peterborough: English Nature

Buffer zone	Reasoning
	<p>The use of such a zone would not mean that greater horseshoe bat habitat more than 8km from the SAC (or a key satellite roost) did not also need preserving, but more distant habitat could be dealt with as part of the Ecological Impact Assessment process for any planning application since bats are protected species and material considerations in the planning process wherever they are found.</p> <p>To identify potential risk of water pollution/litter applicable to all European sites where water quality is a priority issue currently affecting or threatening the condition of a feature of the site.</p> <p>Considering dilution factors, it is reasonable for a zone of this size upstream from Severn Estuary SAC/SPA/Ramsar to be considered precautionary. For example, the average depth of the River Avon is 6m so an 8km buffer upstream from the Severn Estuary SAC/SPA/Ramsar would provide 48,000m³ (10.4 million gallons) of dilution, which is very likely to render any pollution reaching the European site from the kind of activities associated with the SDS well below the limit of detection. Moreover, it is in any event illegal to pollute watercourses irrespective of designation, under the Environmental Damage (Prevention and Remediation) (England) Regulations 2015 and the Environmental Permitting (England and Wales) Regulations 2016.</p> <p>It should be noted that if a 'nutrient neutrality' approach were deemed necessary (such as is required for Somerset Levels SPA/Ramsar) then a whole catchment approach would need to be taken, Natural England have confirmed that this is not planned for Severn Estuary SAC/SPA/Ramsar.</p>
7km buffer	<p>To identify potential risk of increased recreational pressures applicable to all European sites where recreational is a priority issue currently affecting or threatening the condition of a feature of the site.</p> <p>Recreational catchments vary from European site to European site but for catchments for inland sites are often in the range of 2-7km while those for coastal sites are often larger. Various research reports have provided compelling links between changes in housing and access levels. The results of studies compiling visitor survey data for a range of European sites⁶ demonstrate that more housing consistently means more visitors to protected sites, across most habitats. This is particularly the case for on-foot visitors that originate from housing within</p>

⁶ Weitowitz D.C., Panter C., Hoskin R. & Liley D. 2019. The effect of urban development on visitor numbers to nearby protected nature conservation sites. *Journal of Urban Ecology* 5. <https://doi.org/10.1093/jue/juz019>

Buffer zone	Reasoning
	<p>1.5 km, highlighting that additional housing development in close proximity to protected sites is likely to significantly increase recreation pressure. For those sites with car parks, levels of housing within 15 km of protected sites were also a significant predictor of visitor pressure but depended on habitat type.</p> <p>In the Combined Authority region, the Severn Estuary SAC/SPA/Ramsar site is likely to have the largest recreational catchment. For this site, a range of visitor surveys have been undertaken by different local councils including Lydney⁷, Stroud District⁸ and unpublished survey work by AECOM for Monmouthshire and Torfaen Councils in Wales, and survey work undertaken for Combined Authority itself. The Lydney survey indicated that the visit patterns in the Severn Estuary SAC, particularly those of dog walkers, walker and joggers, highlight that visitors tend to live very close to the SAC. For example, dog walkers travelled a median distance of 2.3km. The Stroud visitor survey identified that the 75th percentile for Stroud residents was 7.7km (i.e. 75% of visitors living in Stroud lived within 7.7km of the SAC/SPA/Ramsar site). The emerging surveys for Monmouthshire and Torfaen are identifying a core recreational catchment for residents of those authorities of 6.8km. Visitor survey work undertaken for Combined Authority by Land Use Consultants in February 2019 covered four survey locations: two in North Somerset and two in South Gloucestershire. It led to a proposed core catchment/zone of influence of 7.36km. This distance captured 86.8% of respondent's postcodes within the West of England boundary. The buffer also covers 93.4% of respondents who reported visiting the sites at least once a week and included 89.6% of dog walkers.</p> <p>One notable aspect of the various surveys undertaken is that the core recreational catchments, even though the surveys have been undertaken for different local councils, have a broad consistency of c. 7km for the zone within which 75% of visitors derive. This is useful since it is standard practice when European sites are involved for the affected local councils to agree on an applicable core catchment rather than each authority setting its own core catchment. Since it is typical to draw the zone of influence or core catchment around the 75th percentile and Severn Estuary</p>

⁷ Liley D., Panter C. & Hoskin R. 2017. Lydney Severn Estuary Visitor Survey and Recreation Strategy. Unpublished report by Footprint Ecology for the Forest of Dean District Council. 55pp. Available at: <https://www.footprint-ecology.co.uk/reports/Liley%20et%20al%202017%20Lydney%20Severn%20Estuary%20Visitor%20Survey%20and%20Recreation%20Strategy.pdf> [Accessed on the 05/11/2019]

⁸ Southgate J. & Colebourn K. 2016. Severn Estuary (Stroud District) Visitor Survey Report. Report for Stroud District Council. Ecological Planning & Research, Winchester. 68pp. Available at: https://www.stroud.gov.uk/media/2902/severnestuaryvs_report_15581c_final_060616.pdf [Accessed on the 05/11/2019]

Buffer zone	Reasoning
	<p>SAC/SPA/Ramsar is likely to have the largest zone of influence of any European site in the Combined Authority area 7km is a reasonable precautionary recreational buffer for all European sites in the West of England. Based on relatively recent (2019) survey undertaken for Combined Authority itself that broadly fits with a range of other surveys of different parts of the SPA/SAC/Ramsar undertaken for other local councils, it is not considered that further survey is essential to inform the SDS HRA. It is noted from the LUC work in 2019 that a second National Trust car park (Hucker's Bow Car Park) is located at the eastern end of Sand Point in close proximity to two easily accessible bird roosts and was closed due to maintenance work at the time of survey and therefore not surveyed. As a result, it is possible that the levels of recreational activity recorded around these two roosts were lower than usual. However, given the small size of the Hucker's Bow car park and the relatively isolated location, it is not considered likely that normal activity levels (i.e. when that car park is open) are high.</p> <p>To identify potential risk of invasive species applicable to all European sites where invasive species is priority issue currently affecting or threatening the condition of a feature of the site. It makes sense for this to be similar to that for recreational pressure as recreational visits to a site could be accompanied by fly tipping (for example).</p>
<p>4km buffer</p>	<p>To identify the area around SACs (or important satellite roosts) designated for lesser horseshoe bats where loss of bat foraging and commuting habitat would be most likely to affect the ability of the SAC to continue to support its bat population.</p> <p>The area of greatest bat activity surrounding a roost is defined as the Core Sustenance Zone (CSZ)⁹. This term refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost. Generally, lesser horseshoe bats forage between 2 and 3km from their roost but they have been observed to range up to 4km in their nightly foraging trips¹⁰. The Bat Conservation Trust identifies a weighted average CSZ of 2km for lesser horseshoe bats. Confidence in this zone size is described in the guidance as good, because the calculation is based on a reasonable sample size from multiple colonies and studies. As a result, 4km sounds a reasonable precautionary distance. The use of a 4km zone would</p>

⁹ [https://cdn.bats.org.uk/pdf/Resources/Core Sustenance Zones Explained 04.02.16.pdf?mtime=20190219173135](https://cdn.bats.org.uk/pdf/Resources/Core_Sustenance_Zones_Explained_04.02.16.pdf?mtime=20190219173135)
[Accessed on the 26/06/21]

¹⁰ Schofield H.W. 2008. The Lesser Horseshoe Bat Conservation Handbook.

Buffer zone	Reasoning
	<p>also identify the area within which positive habitat creation and enhancement should be targeted.</p> <p>The use of such a zone would not mean that lesser horseshoe bat habitat more than 4km from the SAC (or a key satellite roost) did not also need preserving, but more distant habitat could be dealt with as part of the Ecological Impact Assessment process for any planning application since bats are protected species and material considerations in the planning process wherever they are found.</p> <p>To identify potential risk of habitat loss around the SPA designated for wintering waterfowl and wader bird assemblages not including golden plover.</p> <p>The Natural England document 'Impact Risk Zones Guidance Summary Sites of Special Scientific Interest Notified for Birds Version 1.1' (dated March 2019) identifies that for SSSIs designated for wintering waterfowl and waders other than golden plover and lapwing) a maximum of 2km is appropriate for the identification of potential functionally-linked land for development with the exception of wind energy (3km) and airports (10km). Chew Valley Lake SPA is only designated for shoveler, while Severn Estuary SPA/Ramsar is designated for Bewick's swan, shelduck, gadwall, dunlin, redshank, and greater white-fronted goose. It is also designated for its non-breeding waterfowl assemblage, but the Regulation 33 advice does not mention either golden plover or lapwing in the list of assemblage species. Therefore, it is reasonable (and precautionary) to use 4km.</p>
<p>1km buffer</p>	<p>To identify potential risk of urban effects i.e. fire/arson or fly tipping applicable to all European sites where urban effects are priority issues currently affecting or threatening the condition of a feature of the site.</p> <p>Research has shown that urban effects including arson and damage/disturbance are more likely to occur where developments occur within 500m of a European Site¹¹ although they do occasionally occur at greater distances. A 1km buffer zone is considered precautionary for the purposes of screening.</p> <p>Also used as a juvenile sustenance zone for horseshoe bats and a core sustenance zone for Bechstein bats.</p>

¹¹ Kirby, J. S. & Tantram, D.A.S. (1999) 'Monitoring heathland fires in Dorset: Phase 1' Report to Department of the Environment, Transport and the Regions: Wildlife and Countryside Directorate
19 Rylatt, F. Garside, L. Robin, S (2017) Human Impacts on Nature Reserves – The Influence of Nearby Settlements. In Practice Issue 97.

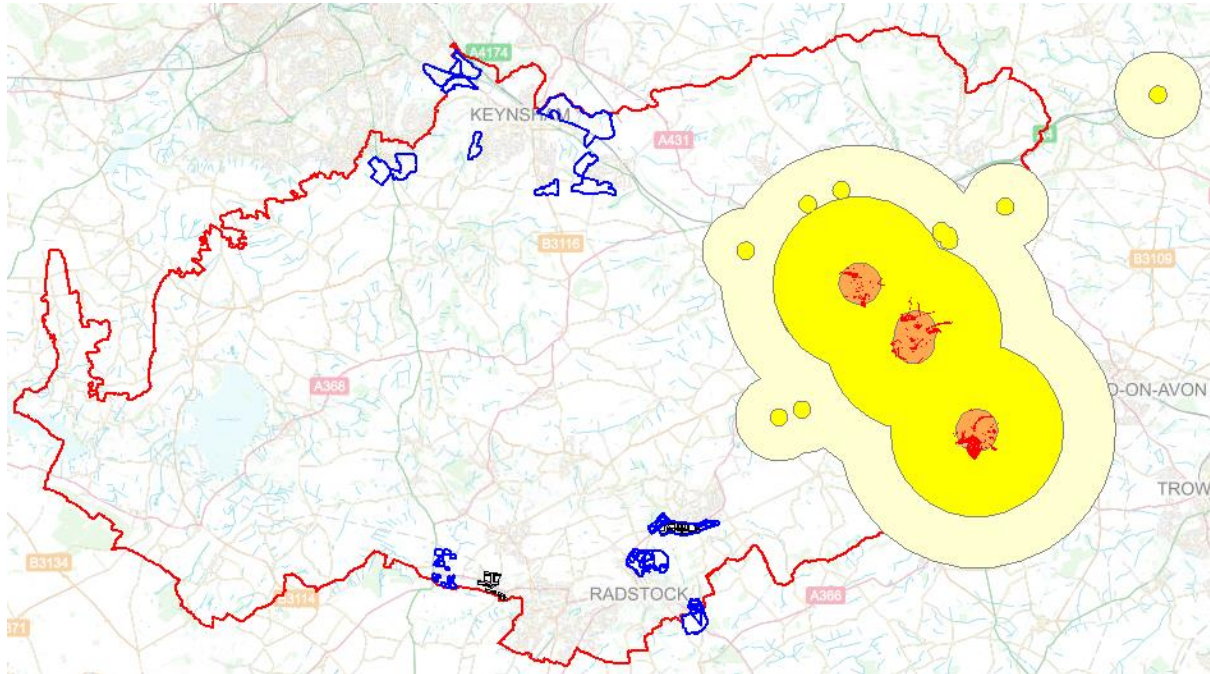
Buffer zone	Reasoning
500m buffer	A 500m zone is also used on a precautionary basis to identify Broad Locations for Growth where the greatest risk of disturbance during construction of development (or operation of non-residential development). Studies indicate that noise levels in excess of 84 dB(A) typically elicit a flight response in birds ¹² and the same research recommends that construction noise levels are kept below 70 dB to avoid excessive disturbance of birds ¹³ . The noisiest construction activity is generally impact piling, where a hammer is dropped on the pile. This has a typical maximum noise level of 100-110dB at 1m from source. Noise attenuates by 6dB for every doubling of distance, such that impact piling typically results in noise levels below 70 dB at distances of more than 100m from source. Therefore, a 500m separation between construction activity and the SPA/Ramsar is very unlikely to result in any disturbance.
200m buffer	To identify potential risk of localised (rather than dispersed) effects on air quality applicable to all European sites where air quality is a priority issue currently affecting or threatening the condition of a feature of the site. The 200m zone is well evidenced, based on monitoring data, is in line with the standard approach in Design Manual for Roads and Bridges and will certainly cover the zone along each relevant road where traffic pollution will be most elevated.

¹² Cutts N & Allan J. 1999. Avifaunal Disturbance Assessment. Flood Defence Works: Saltend. Report to Environment Agency).

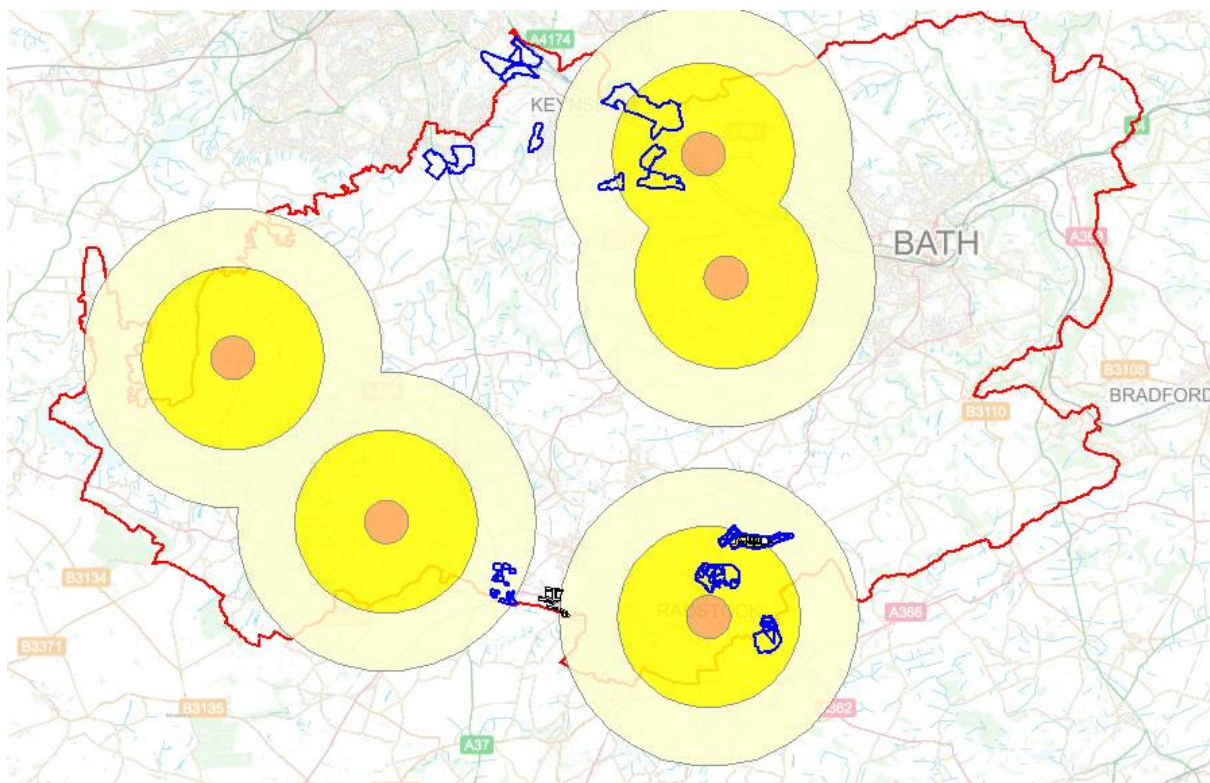
¹³ Cutts, N., Phelps, A. and Burdon, D. (2009) Construction and waterfowl: Defining Sensitivity, Response, Impacts and Guidance. Report to Humber INCA, Institute of Estuarine and Coastal Studies, University of Hull

Appendix 2: Bat SAC Consultation Zones

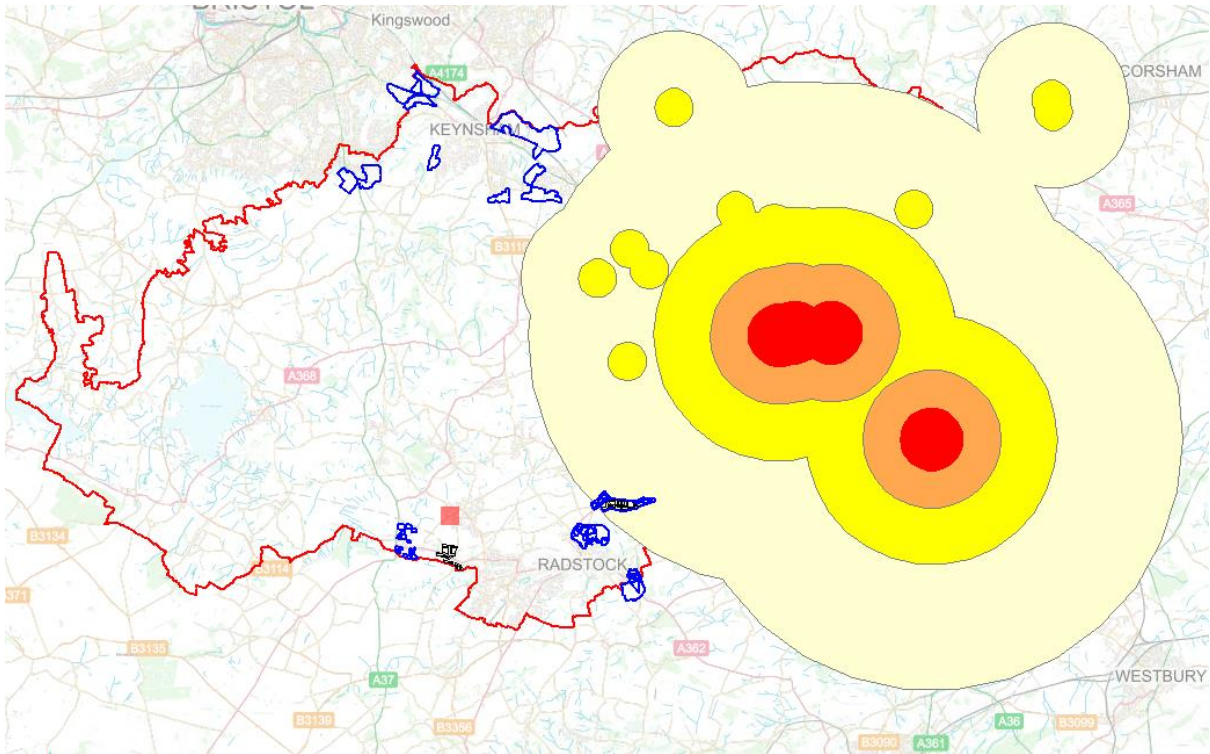
Lesser Horseshoe Bat Juvenile Sustenance Zones (red) and Consultation Zones (A-amber; B-yellow; C-pale yellow) with site allocation options



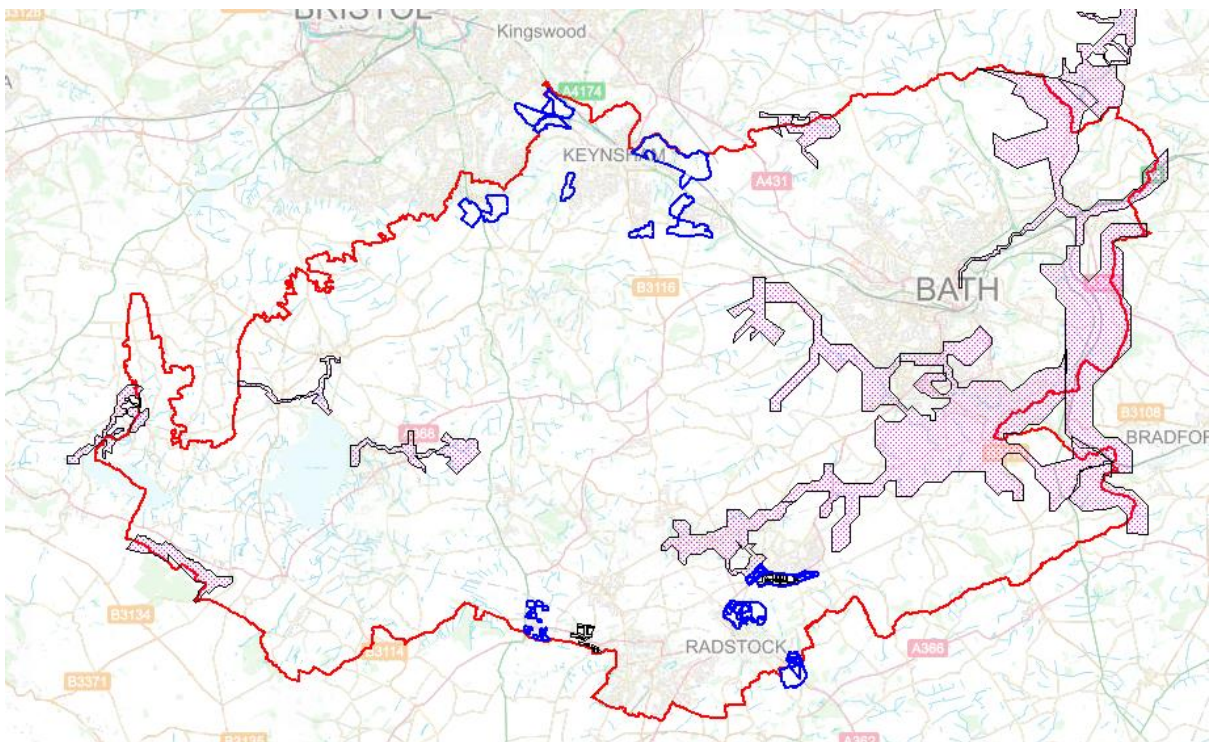
Lesser Horseshoe Bat Consideration Zones for other Maternity Colonies with site allocation options



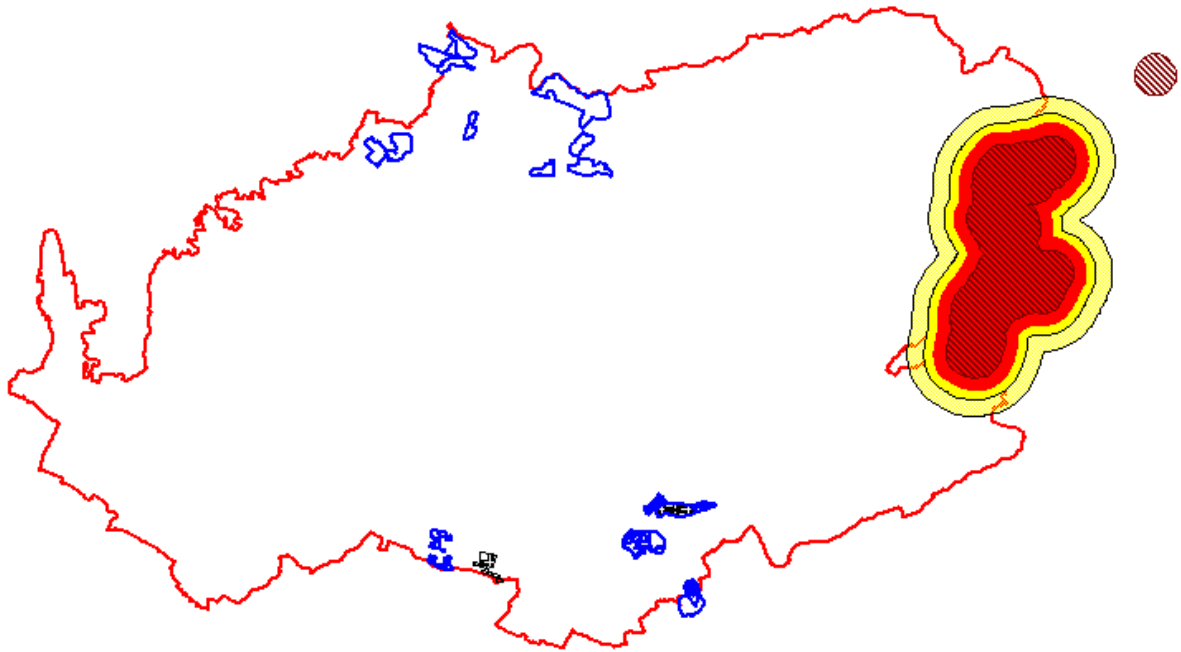
Draft Greater Horseshoe Bat Juvenile Sustenance Zones (red) and Consultation Zones (A-amber; B-yellow; C-pale yellow) with site allocation options



Draft Key Horseshoe Bat Corridors with site allocation options



Bechstein's bat zone (red hatched) and Consultation Zones (A-amber; B-yellow; C-pale yellow) with site allocations



Appendix 3: Screening of summary of site allocation options

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
1		Alert Buffers for European Sites within or adjacent to B&NES													
2	Site →	Bath & Bradford Bat Special Area of Conservation (SAC)						North Somerset Bat Special Area of Conservation (SAC)	Mells Valley Bat Special Area of Conservation (SAC)	Mendip Woodland Special Area of Conservation (SAC)	Avon Gorge Woodland Special Area of Conservation (SAC)	Chew Valley Special protection Area (SPA)			
3	Condition Status → (extrapolated from Natural England Site of Special Scientific Interest (SSSI) data)	100% favourable or unfavourable recovering						100% Unfavourable	100% Unfavourable	Mixed	100% favourable or unfavourable recovering	100% favourable or unfavourable recovering			
4	Option	8km	7km	4km	1km	500m	200m	8km	8km	7km	8km	8km	8km	7km	
50	Bishop Sutton														
51	Temple Cloud														
52	Timsbury														
54															
55				Screened in for potential impacts which may require mitigation through site development requirements and/or											
56															
57				Not screened in for potential impacts											

Appendix 4: Screening of Development Management policy options and amendments

	A	B	C	D	H
1	Development management policies				
2	Policy ref	Theme	Type	Screening category	Any policy or site allocated screening category I,J or L and highlighted in yellow will require detailed consideration and may require mitigation action / amendment.
3	H/AH	Affordable housing	New	F	
4	H/AF	First homes	New	F	
5	H/AH	Affordable housing (small)	New	F	
6	H/AH	Viability	New	F	
7	H/RS	Affordable housing regeneration schemes	New	F	
8	H/RES	Rural Exception Sites (location)	Amended	I/J/K ?	
9	H/RES	Rural Exception Sites (scale)	Amended	I/J/K ?	
10	H/RES	Rural Exception Sites (cross subsidy)	Amended	F	
11	H/RES	First Homes exception sites	New	I/J/K ?	
12	H/RES	Community led housing	New	I/J/K ?	
13	H/SH	Specialist housing & homes for older people	New / amended	F	
14	H/EC	Affordable Housing Requirements within Older Person and Specialist Housing (including Extra Care)	New	F	
15	H/AS	Accessible Homes	New	F	
16	H/AS	Residential Space Standards	New	F	
17	H/AS	Residential Space Standards in Market Housing	New	F	
18	H/HM	Housing Mix	Amended	F	
19	H/BtR	Build to rent	New	F	

	A	B	C	D	H
1	Development management policies				
2	Policy ref	Theme	Type	Screening category	Any policy or site allocated screening category I,J or L and highlighted in yellow will require detailed consideration and may require mitigation action / amendment.
20	H/BtR	Build to Rent Developments – Affordable Private Rent Discount Level	New	F	
21	H/BtR	Build to Rent Developments – Affordable Private Rent homes required in each development	New	F	
22	H/CL	Co-living Schemes	New	F	
23	H/CL	Co-living Schemes – Affordable Housing Provision	New	F	
24	H/CL	Co-living Schemes – Amenity Standards	New	F	
25	H/PBSA	Purpose Built Student Accommodation - Provision and Location	New	F	
26	H/PBSA	Purpose Built Student Accommodation - Affordable Housing or Rent	New	F	
27	H/SBCHB	Self and Custom Housebuilding	New	I/J/K ?	
28	H/GT	Gypsies, Roma, Travellers and Travelling Show People	New	I/J/K ?	
29	H/M	Moorings	Amended	I/J/K ?	
30	C/Rd	Sustainable Construction for New Residential Development	Amended	F	
31	C/NRB	Sustainable Construction for New Non-Residential Development	Amended	F	

	A	B	C	D	H
1	Development management policies				
2	Policy ref	Theme	Type	Screening category	Any policy or site allocated screening category I,J or L and highlighted in yellow will require detailed consideration and may require mitigation action / amendment.
32	C/EC	Embodied Carbon	Amended	F	
33	C/RE	Renewable Energy Target	New	I/J/K ?	
34	C/REA	Renewable Energy Approach	New	I/J/K ?	
35	N/SHS	Sites, Habitats & Species	Amended	D	
36	N/BNG	Biodiversity Net Gain	Amended	D	
37	N/GI	Green Infrastructure	Amended	D	
38	N/OS	Open Spaces	Amended	D	
39	N/TWC	Trees & Woodland Conservation	Amended	D	
40	N/LC	Conserving and Enhancing the Landscape and Landscape Character	Amended	D	
41	N/LSS	Landscape Setting of Settlements	Amended	D	
42	N/FRSD	Flood Risk Management and Sustainable Drainage	Amended	D	
43	N/ES	Ecosystem Services	Amended	D	
44	N/EN	Ecological Networks	Amended	D	
45	GB/1	Infilling in the Green Belt (existing GB2)	Amended	B	
46	J/o	Office Development and Change of Use	Amended	F	
47	J/I	Strategic Industrial Locations and Locally Significant Industrial Sites Policy	Amended	F	
48	J/UI	Undesignated Industrial sites	Amended	F	
49	J/EM	Employment & Skills	Amended	F	
50	HVC/TC	Town Centre Network and Hierarchy	Amended	F	

	A	B	C	D	H
1	Development management policies				
2	Policy ref	Theme	Type	Screening category	Any policy or site allocated screening category I,J or L and highlighted in yellow will require detailed consideration and may require mitigation action / amendment.
51	HVC/TCD	Development within Centres	Amended	F	
52	HVC/LS	Dispersed Local Shops	Amended	F	
53	HVC/H	Healthy Places	New	F	
54	HVC/HIA	Health Impact Assessments	New	F	
55	HVC/HFT	Hot Food Takeaways	New	F	
56	HVC/CF	Community Facilities	Amended	I/J/K ?	
57	HVC/PS	Safeguarding Land for Primary School Use	Amended	I/J/K ? But change really G	
58	HVC/PSC	Primary School Capacity	Amended	I/J/K ?	
59	HVC/CF	Safeguarding land for cemeteries	Amended	I/J/K ?	
60	HVC/A	Protecting Allotments	Amended	G	
61	HVC/LGS	Local Green Spaces	New	D	
62	HD/EQ	Environmental quality	Amended	D	
63	HD/ WHSS	World Heritage Site and its Setting	Amended	F	
64	HD/HE	Historic Environment	Amended	D	
65	HD/SSCW	Somersetshire Coal Canal and the Wansdyke	Amended	D	
66	HD/GUD	General Urban Design Principles	Amended	F	
67	HD/LCD	Local Character and Distinctiveness	Amended	F	
68	HD/UF	Urban Fabric	Amended	F	
69	HD/SS	Streets and Spaces	Amended	F	
70	HD/BD	Building Design	Amended	D/F	
71	HD/A	Amenity	Amended	F	
72	HD/IBD	Infill & Backland Development	Amended	F	
73	HD/LCD	Lighting	Amended	D	

	A	B	C	D	H
1	Development management policies				
2	Policy ref	Theme	Type	Screening category	Any policy or site allocated screening category I,J or L and highlighted in yellow will require detailed consideration and may require mitigation action / amendment.
74	HD/AOSF	Advertisements & Outdoor Street Furniture	Amended	F	
75	HD/PR	Public Realm	Amended	F	
76	HD/DC	Design Code	New	F/D	
77	ST1	Promoting Sustainable Travel And Healthy Streets	Amended	I/J/K ?	
78	ST2a	Active Travel Routes	Amended	I/J/K ?	
79	ST7	Transport Requirements for Managing Development	Amended	I/J/K ?	
80	PCS/NV	Noise and Vibration	Amended	F	
81	PCS/AQ	Air Quality	Amended	F	
82	PCS/BHS	Bath Hot Springs	Amended	F	
83	M/M	Strategic Approach to Minerals (Existing CP8A)	Amended	F/D	
84	MIN/2	Mineral Safeguarding Areas (Existing M1)	Amended	I/J/K ?	
85	MIN/2a	Minerals Safeguarding Areas – Policy Map	Amended	I/J/K ?	
86	MIN/3a	Minerals Allocations - Policy Map	Amended	G	
87	Min/4	Aggregate Recycling Facilities (Existing M3)	Amended	F	
88	MIN/5	Winning & Working of Minerals	Amended	I/J/K ?	

	A	B	C	D	H
1	Development management policies				
2	Policy ref	Theme	Type	Screening category	Any policy or site allocated screening category I,J or L and highlighted in yellow will require detailed consideration and may require mitigation action / amendment.
89	MIN/6	Minerals development: environmental enhancement through restoration	New	D	
90	MIN/WW	Conventional and Unconventional Hydrocarbons (existing policy M5)	Amended	D	
91	?	Waste	to be developed?	I/J/K ?	
92	I/1	Infrastructure Provision (Existing Policy CP13)	Amended	I/J/K ?	
93					
94		Screening categories	Code		
95		A general statement of policy	A		
96		Policy listing general criteria for test	B		
97		proposals referred to but not proposed	C		
98		environmental protection policies	D		
99		steering change away from positive	E		
100		do not propose change, but control	F		
101		no conceivable effect	G		
102		actual or theoretical effects cannot	H		
103		LSE on a site alone	I		
104		no LSE alone but an effect - check in	J		
105		no LSE even in combination	K		
106		LSE in combination	L		