



2007-2008
*Neighbourhood and
Community Champions:
The Role of Elected Members*

2006-2007
*Improving Rural Services
Empowering Communities*

2005-2006
Getting Closer to Communities



HABITATS REGULATIONS ASSESSMENT

OF

SOUTH SOMERSET DISTRICT COUNCIL'S

DRAFT CORE STRATEGY
INCORPORATING PREFERRED OPTIONS

Update Report
for
Bracket's Coppice SAC

September 2010



This report was prepared by Somerset County Council on behalf of South Somerset District Council, as the 'competent authority' under the Conservation of Habitats and Species Regulations 2010.

Cover photograph: Bechstein's bat – Joint Nature Conservation Committee

Executive Summary

This report contributes to South Somerset District Council's legal obligation under the Conservation of Habitats and Species Regulations 2010 [the 'Habitat Regulations'] to carry out an assessment on its plans for effects on Natura 2000 sites. In this case it is the Draft Core Strategy including Preferred Options that is assessed.

Before a plan can be adopted the 'competent authority' (South Somerset District Council) needs to prove that the plan would have no significant effects on Natura 2000 sites' integrity to the satisfaction of Natural England. An uncertain result is not acceptable and is treated as adverse until proven otherwise.

A Habitats Regulations Assessment (Appropriate Assessment) was carried out on the Issues and Options stage of the Core Strategy and its findings reported in '*Appropriate Assessment of South Somerset District Council's Core Strategy: Issues and Options - Screening Report for Bracket's Coppice SAC, October 2008*' (Somerset County Council, 2008). This report recommended the inclusion of a Bat Protection Zone policy and mapping specifically for Becket's Coppice SAC. However, following further research becoming available and survey work since October 2008 it has been concluded that there is no longer a requirement for this zone.

The Bat Protection Zone is replaced by a number of policy amendments and additions which are more appropriate. This is because radio tracking work between May and August has shown that Bechstein's bats forage within 980 metres of roost sites with Bracket's Coppice and therefore are not likely to cross into Somerset. Movement of Bechstein's bats outside the SAC is likely to be in dispersal to swarming areas to mate, and/or to hibernation roosts. The locations of these sites are not currently known. Therefore, it must be assumed, using the precautionary approach that they can occur over a wide area in the geographic area of South Somerset.

Following assessment of the policies contained within the Draft Core Strategy including Preferred Options report the following amendments and/or additions are recommended to ensure compliance with the Habitat Regulations before submission.

1. Policy YV2 – Yeovil urban extension

Add the following to the Policy:

'The Masterplan will be designed in such a way that features supporting bat movement are not severed and that access between feeding areas and roosts is maintained. The lighting design will also need to take account of the requirements of bats.'

2. YV5 – Modal shift for Yeovil Eco Town

Add a new paragraph in Policy text following paragraph commencing '*These measures will need to be fully costed and tested...*'

'New and improved infrastructure in support of these measures will also need to ensure that no severance is caused to habitat features used by bats in commuting between feeding areas and roost sites. The development of access routes could potentially sever movement of bats through the area. New street lighting could have similar effects and also reduce prey availability to light adverse bat species. This will need to be taken account of in the planning and design of new infrastructure.'

3. HG6 – Gypsies, travellers and travelling showpeople

Add the following to the Policy after 2nd bullet:

'Land outside a designated site which nonetheless ecologically supports the conservation objectives of a Natura 2000 site unless it can be proven that there would be no significant effect'

4. EP6 – Expansion of existing businesses in the countryside

Add the following to the Policy after 6th bullet:

'There is no adverse effect on land outside a designated site which nonetheless ecologically supports the conservation objectives of a Natura 2000 site'

5. EP7 – New tourism proposals

Add the following to the Policy after 3rd bullet:

'The proposal does not have an adverse effect on a Natura 2000 site or land outside its boundary which nonetheless ecologically supports its conservation objectives.'

6. EP8 – Major new tourist facilities

Insert the following to the 7th bullet in the Policy:

After '*... attraction effectively and sustainable.*' Add 'but also ensures that features used by bats are not adversely affected.'

7. EQ1 – Addressing climate change in South Somerset

Add a new paragraph in Policy text in the Biodiversity and Climate Change paragraph:

'However, some measures to combat climate change can potentially have adverse effects on biodiversity. Bats, all of which are afforded protection at a European level, are vulnerable to mortality from incorrectly located wind turbines,

such as those along flight lines, close to feeding areas or roost sites. Bats are killed at turbines either by direct contact or more frequently by barotrauma causing hemorrhaging of the lungs. It is expected that any proposal for wind turbines, including micro turbines, will be submitted with full survey data and assessment including for effects to populations of bats. South Somerset District Council is obliged, under the Conservation of Habitats and Species Regulations 2010, to ensure that 'Favourable Conservation Status', as defined in Article 1 of the Habitats Directive, of populations of European protected species is maintained.'

Add to Policy text after 5th bullet:

'Developers must demonstrate that proposed wind turbine developments do not pose a risk to bat populations'

8. EQ2 – Design

Insert the following bullet to the Policy:

'Ensure that habitat features that are used by bats and other wildlife are maintained so that the design does not cause severance or is a barrier to movement.'

9. EQ7 – Equine development

Add to 3rd bullet of Policy after, '*...internationally designated sites*'

'...including to features outside the site's boundaries which nonetheless ecologically support the conservation objectives of the designated site.'

It is considered that provided the counter acting measures as set out above are incorporated into the final Core Strategy including Preferred Options that the plan is unlikely to have a significant effect on the conservation objectives of the Bracket's Coppice SAC.

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1. Introduction

An Appropriate Assessment (HRA) Screening Report was produced for the Issues and Options stage of the South Somerset District Council Draft Core Strategy including Preferred Options under the provisions of the Conservation (Natural Habitats &c.) Regulations (Amendment) 2007¹ in October 2008. This report assessed the impacts of the objectives and actions on the Natura 2000 sites within the influence of the plan. It made recommendations for amendments and additions to the objectives and actions in order that any potential significant effect on any Natura 2000 site was avoided and hence ensure legal compliance of the Management Plan.

This report should be read in conjunction with the Screening Report of the Issues and Options Stage of the Core Strategy of October 2008 (Somerset County Council, 2008), where an explanation of the Habitats Regulations Assessment process is set out and terms used in the assessment, such as Natura 2000.

Since October 2008, the Core Strategy has gone through further consultative processes. The South Somerset District Council Core Strategy including Preferred Options 2006-2026: Draft Incorporating Preferred Options has resulted in a number of amendments and additions to the plan. As changes to the original plan have been made a further screening is now required to ensure that none of these would have a significant effect on any Natura sites.

This report consists of:

- Characteristics and description of Becket's Coppice SAC with additional material relating to the Bat Conservation Trust Bechstein's bat project;
- The recommendations set out in the Screening Report of May 2008 and how they have been incorporated into the revised Objectives and Targets;
- An appraisal of the use of the Somerset landscape by Bechstein's bats from Bracket's Coppice SAC;
- A review of the policies set out in the final draft version of the Core Strategy including Preferred Options. Impacts from implementing the revised plan are considered and any potential significant effect highlighted in orange. These are carried forward to the mitigation stage of the assessment;
- Consideration of counter acting (mitigation) measures that might be needed through changes to actions and objectives in order for the plan to comply with the provisions of the Habitat Regulations;

¹ Now replaced by the Conservation of Habitats and Species Regulations 2010

- An assessment of any in-combination effects from interaction with other plans or projects; and
- A statement confirming that there would be no significant effect on any Natura 2000 sites as a result of implementation of the Management Plan.

2. Characteristics and Description of Bracket's Coppice SAC

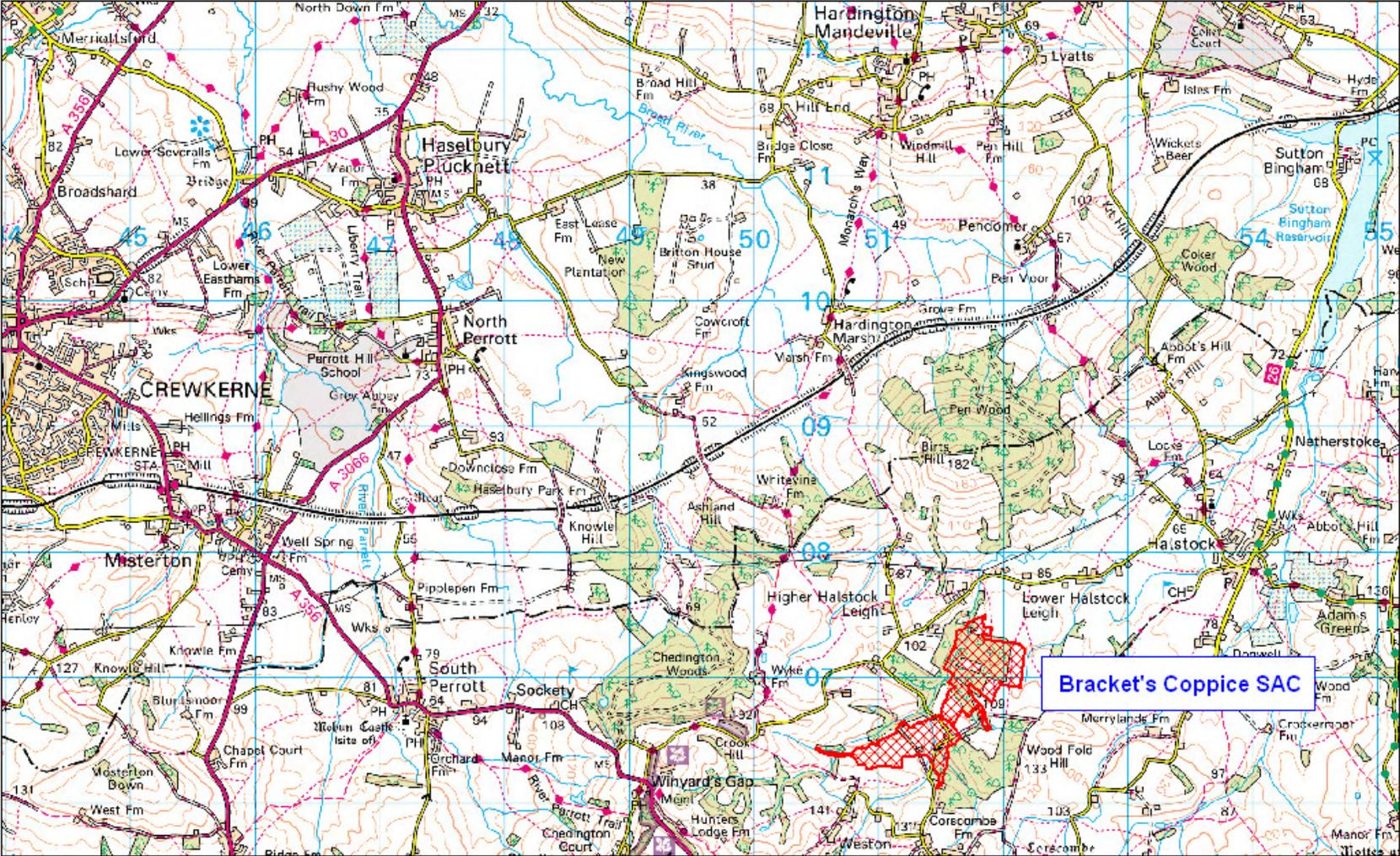
2.1 Bracket's Coppice is located about 7 kilometres south east of Crewkerne and 8 kilometres south of Yeovil near Corscombe in Dorset. Full details of each of the Bracket's Coppice SAC site can be found in Appendix 1. Table 1 below gives an analysis of Bracket's Coppice SAC listing qualifying features; give comment on their nature conservation importance; and sets out the key environmental conditions necessary to support site integrity.

Table 1: Summary of Bracket's Coppice SAC

| Site | Qualifying Features | Comments on nature conservation importance | Key environmental conditions to support site integrity |
|-----------------------|--|---|---|
| Bracket's Coppice SAC | Bechstein's bat <i>Myotis bechsteinii</i> | Bechstein's bat is one of the UK's rarest mammals, recorded from only a small number of sites in southern England and Wales. Very few maternity roosts are currently known. One of the first maternity colonies of Bechstein's bat was discovered using bat-boxes in this small woodland. | Undisturbed roosts Woodland management Availability of decaying and veteran trees Maintenance and connectivity of habitats used as flight lines on and off site. (Bechstein's bats may forage up to 3.8 kilometres from their roost sites ²) |
| | Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caeruleae</i>) | <i>Molinia</i> meadows are widely but discontinuously distributed in Britain. | Appropriate management Water table |

² Boye & Dietz, 2005)

Map 1: Bracket's Coppice SAC, Corscombe



3. Issues and Options Screening Report Recommendations

3.1 The following policies were considered to have a potential effect on the Bechstein's bat feature of the Bracket's Coppice SAC in the Issues and Options assessment of October 2010.

Table 2: Issues and Options Policies Requiring Mitigation

| Policy /Policy Option | Potential Issue | Mitigation |
|---|---|--|
| EP1 (all options) Employment, EP2 (option D) Provision of business units, EP3 (Options A & C) Retail, EP6 (all options) Tourism, TA6 (Option E) Access to services | Habitat loss | A policy forming 'Bat Protection Zones' with mapping identifying areas used by Bechstein's bats ³ in the Preferred Options stage. |
| EP5 Farm Diversification, DMEP3 Criteria policy for farm diversification | Habitat loss | A policy forming 'Bat Protection Zones' with mapping identifying areas used by Bechstein's bats in the Preferred Options stage. The policy should contain provision for the protection of bats from farm diversification. |
| EQ4 (all options) Renewable Energy | Mortality associated with wind turbines | A policy excluding wind turbine development within Bat Protection Zones |

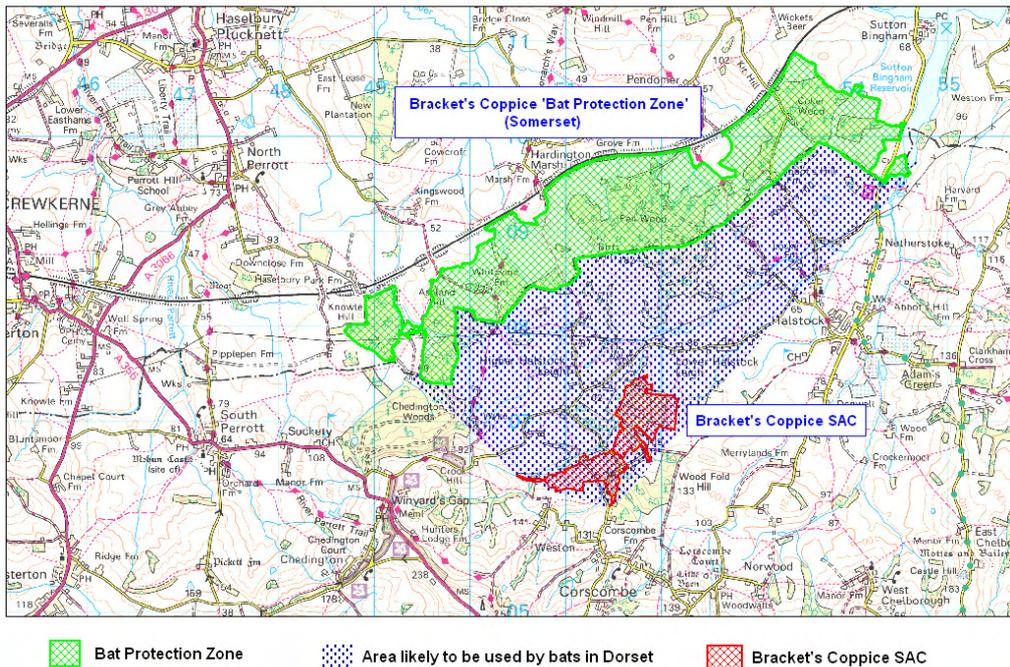
3.2 The screening report on the Issues and Options stage of the Draft Core Strategy including Preferred Options recommended that a new policy on Bat Protection Zones should be inserted into the Preferred Option for the Draft Core Strategy including Preferred Options. Bat Protection Zones are areas around a SAC designated for bat species that ecologically support and maintain the sites bat population. A policy should include a strong forewarning that any development resulting in adverse impacts on bats would not be permitted in these areas. Adverse effects would include the removal of habitat used as flight lines or for feeding, changes in land use reducing prey availability, the installation of artificial lighting and/or the erection of wind turbines of any scale. The policy should contain provision for the protection of bats

³ Bats require connectivity of habitat features for commuting and foraging. Active management of the habitats used by bats for these activities may be required. The importance of linear habitat features off site for bat flight lines should be recognised.

from farm diversification where adverse effect would be caused and the exclusion of wind turbines within the Bat Protection Zones.

3.3 Map 2 shows the extent of the Bat Protection Zone, the area in South Somerset are potentially used to support the Becket's Coppice population as drawn in the Appropriate Assessment of the Issues and Options stage of the Draft Core Strategy including Preferred Options (2008). The methodology in producing the BPZ is given in that document.

Map 2: Becket's Coppice SAC 'Bat Protection Zone' (Somerset)



4. Bracket's Coppice SAC - Zone of Influence in Somerset

- 4.1 This chapter appraises the extent that ecologically supporting features extend into and are used by Bechstein's bats from Bracket's Coppice in Somerset. These are features that are needed by Bechstein's bats in supporting its life cycle and hence maintaining the SAC population. This has been carried out since further research and new survey work has been undertaken since the Appropriate Assessment of the Issues and Options Report of October 2008.
- 4.2 Radio tracking of Bechstein's bats from Bracket's Coppice was carried out in 1998 and 1999 by the Vincent Wildlife Trust in the months between May and August. Of the bats tracked it was found that all foraging took place within the SAC or surrounding habitat. The maximum range of foraging was 0.98 kilometres from a roost site within the woodland. Mapping of bat fixes showed no activity north of the road to the north of the site within Dorset. (Schofield & Morris, 2000)
- 4.3 Within the Bat Protection Zone identified in the October 2008 report Pen Wood is unsuitable for Bechstein's bats as it's mostly conifer plantation, which in England means it's not likely to have any Bechstein's bats present. However the Marsh Wood section is approximately 25 hectares and could support some female Bechstein's. There are other small woods or copses in the area that also connect reasonably well with Bracket's, although on their own are too small. Hows Coppice and the related habitat around Whitevine Farm may also help Bechstein's bats to move about the landscape, and could support males that have less demanding requirements (Pers. Comm. Paul Kennedy, Somerset Bat Group)
- 4.4 Maternity colonies, such as at Bracket's Coppice, form socially closed units with all the females being related over the summer period from May to August. During this period males occupy separate roosting areas, often in sub-optimal habitat (Schofield and Greenaway, 2008; Safi. & Kerth, 2003; Fitzsimmons *et al*, 2002).
- 4.5 Maternity colonies disperse at the end of August and swarm at underground sites to mate (Dietz *et al*, 2009). Swarming sites have been recorded 4.5 kilometres away from maternity roost sites (Schofield & Morris, 2000). It is not known if or where swarming occurs in South Somerset by females from Bracket's Coppice.
- 4.6 Following swarming hibernation roosts are used over the winter usually in caves, tunnels or cellars but tree holes may be used (Schofield & Greenaway, 2008; Boye & Dietz, 2005). Movements between summer and winter roosts are usually less than 10 kilometres but can be up to 73 kilometres (Schofield & Greenaway, 2008; Dietz *et al*, 2009)

- 4.7 Surveys have been taken place in 2010 in Somerset by Somerset Bat Group as part of the Bat Conservation Trust (BCT) project to seek understanding of the extent of woodlands occupied by Bechstein's bats in southern England⁴.
- 4.8 The results (up to August 2010) of the BCT surveys show that Bechstein's bats are present Kings Wood near Somerton, Swell Wood near Curry Rival and Northside Wood, Templecombe. In addition, an injured juvenile Bechstein's bat has been found in the urban area of Yeovil at the town's hospital site in 2009. There are Somerset Environmental Records Centre records for Castle Cary and Bruton. This indicates that there is the possibility that juvenile bats are dispersing from the Bracket's Coppice site, as well as movement to swarming and hibernation sites, across the South Somerset area. However, taking a 10 kilometre buffer from the SAC suggests that northern Yeovil may be the extent of movements from Bracket's Coppice although there is no evidence to indicate that this is the limit of dispersal.
- 4.9 All juvenile bats at Bracket's Coppice are ringed for identification. However, none of the Bechstein's bats captured during the 2010 survey have been ringed. Nonetheless, connectivity of habitat to enable exchange between Bechstein's bats by different males originating in colonies other than Bracket's Coppice would be necessary to maintain the genetic health of the SAC population.
- 4.10 Therefore, it is important that there is sufficient structure, such as large hedgerows, in the landscape between sites to enable dispersing bats to move between sites and maintain genetic flow in the population (Dietz *et al*, 2009).

⁴ http://www.bats.org.uk/pages/bechsteins_bat_project.html

5. Assessment of Policy in the Draft Core Strategy including Preferred Options

Introduction

- 5.1 A description of the development process for the Draft Core Strategy including Preferred Options is given in the Issues and Options assessment of March 2008. Since this time there has been further work, including on-going evidence gathering and consultation. This was reported in December 2009. Workshops with parish and town councillors took place between November 2009 and January 2010 and with Areas in July 2010. This has result in a Draft Core Strategy including Preferred Options, which is the subject of this assessment. This is due to be published for public consultation in October 2010.
- 5.2 Key policy options are outlined in Table 3 below, together with a broad assessment of impacts. For full details of each of the policies refer to the South Somerset Core Strategy 2006-2026: Draft Incorporating Preferred Options.
- 5.3 For information on 'significance' and types of impact see the Appropriate Assessment of the Issues and Options Report, October 2008.

Management for Nature Conservation Purposes

- 5.4 The Draft Core Strategy including Preferred Options does not introduce any management measures for nature conservation purposes.

Potential Effects of the Plan on Bracket's Coppice SAC

- 5.5 A number of potential impacts on the features of the SAC were identified in the Appropriate Assessment of the Issues and Options Report, October 2008. These were:
- Water abstraction;
 - Recreational pressure;
 - Loss or degradation of bat habitat, including flight lines and feeding areas outside of the designated site; and
 - Mortality of bats associated with wind turbines.
- 5.6 The Appropriate Assessment of the Issues and Options (2008) found that there would be no significant effect from water abstraction or increased recreational pressure on the SAC. As the current Draft Core

Strategy including Preferred Options includes a reduction in housing numbers, no significant new policy topics and that there is no substantial shift in site allocation it is considered that this conclusion would still apply and is not assessed further.

- 5.7 Therefore, the following assessment is made on the Bechstein's bat feature of the SAC only and effects on flight lines enabling dispersal outside of the designated SAC site in Somerset. To maintain the viability of the SAC population it is important that Bechstein's bats can reach supporting habitat for feeding, dispersing and swarming. Outside of woodland Bechstein's bats, which usually avoid open spaces, are reliant on habitat features, such as large hedgerows, acting as flight lines (Fitzsimmons *et al*, 2002; Schofield & Greenaway, 2008; Limpens, & Kapteyn, 1991). Therefore, removal of habitat structure for relatively short lengths can sever dispersal routes. The same effect can occur through the introduction of artificial lighting, such as street lamps, which Bechstein's bats are averse to acting as a barrier to movement.
- 5.9 In addition any wind turbine, including micro turbines, are potentially going to cause mortality to bats, which may affect the maintaining of population numbers and hence viability (Mitchell-Jones & Carlin 2009; Matthews *et al*, 2009).
- 5.10 There may be or may not be sufficient structure in the South Somerset landscape for individual development without mitigation to continue to allow dispersal movements of Bechstein's bats without significant impact. However, this is not certain and cumulative impacts of development may prove significant. There is also a need to allow for movement of species due to climate change. In addition all surveys have been carried out in the summer period only. Therefore, it is concluded that for this reason, due to the rarity of the species⁵ and other uncertainties, such as lack evidence, the policies in the Draft Core Strategy including Preferred Options will be assessed for effects on the dispersal requirements of Bechstein's bats within the geographic area of South Somerset District Council.

Assessment of Policies

- 5.11 Table 3 gives an initial analysis of policies in the Draft Core Strategy including Preferred Options and concerns effects on the Bechstein's bat feature of the SAC only as discussed above. Note that a precautionary approach is taken throughout.

⁵ **Bechstein's bat *Myotis bechsteinii*** is one of the rarest bats in western Europe, and is regarded as endangered in several countries. A population decrease has been reported over most of its European range. The species occurs from the Iberian peninsula east to the Ukraine and Moldova. Local populations in southern England, Wales, southern Sweden and Bornholm mark the northern border of the range.

<http://www.jncc.gov.uk/protectedsites/sacselection/species.asp?FeatureIntCode=S1323>

Table 3: Plan Analysis

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|---|--|--|
| Policy SS1 – Settlement Hierarchy | The policy is for setting the hierarchy of settlements only and does not set out the amount of development in each | No significant effect likely |
| Policy SS2 – Development in rural settlements | The policy sets out criteria for development in rural settlements only | No significant effect likely |
| Policy SS3 – District wide housing provision | The policy sets out the requirement in numbers of dwellings for the District until 2026. | No significant effect likely |
| Policy SS4 – Delivery of new housing growth | The policy allocates housing numbers to settlements. 8200 dw are assigned to Yeovil. However, the policy is not locational and it is considered that at this level there is unlikely to be impacts | No significant effect likely |
| Policy SS5 - Delivering new employment land | The policy sets out employment land allocation for the District as it not locational beyond settlement | No significant effect likely |
| Policy SS6 – Phasing and cumulative impact | Policy sets out planning obligations for infrastructure to be delivered alongside growth | No significant effect likely |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|---|--|---|
| Draft Policy SS7 – Planning obligations | The policy details types of planning obligation that should lead to improvements in community infrastructure such as green spaces, facilitating enhancements to biodiversity and a reduction in CO ₂ emissions. However, it includes no provision for green infrastructure or wildlife habitat within it. | No significant effect likely |
| Draft Policy SS8 - Viability | The policy is guiding the approach to seeking developer contributions, depending upon the nature and scale of new developments. | No significant effect likely |
| Policy YV1 – Brownfield and Greenfield Housing Provision for Yeovil | The policy allocates the 8200 dwelling provision between the Urban framework of the town and adjacent Greenfield development. The policy is not locational. | No significant effect likely |
| Policy YV2 – Yeovil urban extension | The policy is for 3719 dwellings and 23 hectares of employment land and associated infrastructure at the preferred location of the Keyford/ Barwick Area of Search. Bechstein's bats have been recorded in the area. There is potential use of woodland and linking hedgerows by Bechstein's bats dispersing from Bracket's Coppice into Somerset. | Potential significant effect – housing and other development could potentially sever movement of Bechstein's bats through the area and street lighting could have similar effects |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|--|---|--|
| Policy YV3 – Yeovil urban village | This policy is for a small scale development in the centre of Yeovil to include around 400 new dwellings and additional retail and leisure provision. | No significant effect likely |
| Policy YV4 – Modal shift for Yeovil | The policy sets out measures to support modal shift in the town including public transport, cycling and walking through developer contribution. | No significant effect likely |
| Policy YV5 – Modal shift for Yeovil Eco Town | The policy details the requirement for sustainable transport and access routes through the Eco Town. Bechstein's bats have been recorded in the area. The development of access roads to transport interchanges such as Yeovil Junction and of cycle and footways would potentially sever bat flight routes through the area. Introduced lighting could also affect movement through the area and reduce prey availability. | Potential significant effect – development of access routes could potentially sever movement of Bechstein's bats through the area and street lighting could have similar effects and reduce prey availability. |
| Draft Policy CV 1 – Chard growth area | This policy is for over 3,200 dwellings, new retail provision, leisure facilities and schools in Chard. No Bechstein's presence has been recorded in the area. | No significant effect likely |
| Draft Policy CV 2 – Chard phasing | This policy details the timescales within which the housing provision will be delivered. | No significant effect likely |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|---|---|--|
| Draft Policy CV3– Chard obligations | The policy sets out proposals for developer contributions for developments in the Chard area. | No significant effect likely |
| Policy CV4 – Modal shift for Chard | The policy sets out measures to support modal shift in the town including public transport, cycling and walking through developer contribution | No significant effect likely |
| Draft Policy HG1 – Strategic housing sites | <p>This policy details the safeguarding of a number of strategic sites for future residential development, but within the current plan period. These are:</p> <ul style="list-style-type: none"> • Lufton, Yeovil • North of Thorne Lane • CLR site, Crewkerne <p>Bechstein's bats are present around the Yeovil area and probably to the east of Crewkerne but the scale of the developments are unlikely to effect movements through the landscape. No Bechstein's bats have been recorded in development surveys.</p> | No significant effect likely |
| Draft Policy HG2 – Housing density | The policy is concerned with the density of dwellings per hectare only. | No significant effect likely |
| Draft Policy HG3 – The use of previously developed land (PDL) for new housing development | The policy is for the provision of 30% of dwellings on previously developed land | No significant effect likely |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|---|--|--|
| Draft Policy HG4 – Provision of affordable housing | Policy is for proportion of affordable housing only. | No significant effect likely |
| Draft Policy HG5 – Achieving a mix of market housing | This policy defines the required mix of housing types to be provided as part of the developments. | No significant effect likely |
| Draft Policy HG6 – Gypsies, travellers and travelling showpeople | The policy sets out criteria for the development of sites but is not locational and does not allow for impacts to ecologically supporting features of designated sites outside the site boundary. Therefore, there is a potential loss of habitat forming bat flight lines used for dispersal outside of the designated SAC. Also potential effects from new lighting. | Potential significant effect – loss or degradation of flight lines affecting movement of Bechstein's bats through the landscape. |
| Draft Policy HG 7 – Replacement dwellings and extensions in the countryside | This policy is concerned with replacing existing developments in rural areas and extensions to existing buildings. This infers very small scale, localised development. Bechstein's bats normally roost in trees but have been found in dwellings in South Somerset. It is assumed that bat surveys would be carried out as appropriate to accompany planning applications and that viable mitigation would be provided. | No significant effect likely |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|---|--|--|
| Draft Policy HG8 – Housing for agricultural & related workers | This policy will ensure that new accommodation provided for full-time workers in agriculture, forestry, horticulture, and related disciplines. It includes the provision that the integrity of internationally sites will not be adversely affected. | No significant effect likely |
| Draft Policy HG9 – Removal of agricultural and other occupancy conditions | The policy ensures that permission to remove restrictive occupancy conditions (ensuring provision of homes to those people who are employed in agriculture, forestry or similar) will only be provided subject to a strict set of criteria. Bechstein's bats normally roost in trees but have been found in dwellings in South Somerset. It is assumed that bat surveys would be carried out as appropriate to accompany planning applications and that viable mitigation would be provided. | No significant effect likely |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|---|---|---------------------------------|
| Draft Policy EP1 – Strategic employment sites. | <p>The policy safeguards strategically significant employment land allocations. These are:</p> <ul style="list-style-type: none"> • Bunford Lane, Yeovil • CLR site Crewkerne • Station Road, Ilminster • Hort Bridge Ilminster <p>Bechstein's bats are present around the Yeovil area and probably to the east of Crewkerne but the scale of the developments are unlikely to effect movements through the landscape. No Bechstein's bats have been recorded in development surveys.</p> | No significant effect likely |
| Draft Policy EP2 – Office development | This policy gives criteria for the location of office development. This is to be located within urban areas or next to employment land. | No significant effect likely |
| Draft Policy EP3 – Safeguarding employment land | This policy safeguards land for employment. This is primarily focused on previously used land with changes of use not being permitted unless the proposal delivers environmental enhancement or improvements. | No significant effect likely |
| Draft Policy EP4 – Conversion or re-use of buildings in the countryside | The policy sets out criteria for re-use or conversion of buildings to dwellings and includes wording specifying that consideration is necessary for wildlife and habitats. | No significant effect likely |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|--|---|--|
| Draft Policy EP5 – New build live/work units | The policy is for the provision of dwellings within workspace and as such relates to a building only. | No significant effect likely |
| Draft Policy EP6 – Expansion of existing businesses in the countryside | This policy concerns the expansion of existing businesses in rural areas but is not locational and does not allow for impacts to ecologically supporting features of designated sites outside the site boundary. Therefore, there is a potential loss of habitat forming bat flight lines used for dispersal outside of the designated SAC. Also potential effects from new lighting. | Potential significant effect – loss or degradation of flight lines affecting movement of Bechstein's bats through the landscape. |
| Draft Policy EP7 – New tourism proposals | The policy sets out criteria for new tourist development including in the open countryside. The policy is not locational and does not allow for impacts to ecologically supporting features of designated sites outside the site boundary. Therefore, there is a potential loss of habitat forming bat flight lines used for dispersal outside of the designated SAC. Also potential effects from new lighting. | Potential significant effect – loss or degradation of flight lines affecting movement of Bechstein's bats through the landscape. |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|--|--|--|
| Policy EP8 – Major new tourist facilities | The policy sets out objectives for the location of major new tourist facilities and includes the provision for being located within or near to Yeovil or the District's Primary Service Centres. Otherwise the policy is not locational. Bechstein's bats have been recorded in the area of Yeovil. Therefore, there is a potential loss of habitat forming bat flight lines used for dispersal outside of the designated SAC. Also potential effects from new lighting. | Potential significant effect – loss or degradation of flight lines affecting movement of Bechstein's bats through the landscape. |
| Draft Policy EP9 – Farm diversification | The policy sets out criteria for development for the purpose of farm diversification and includes a criterion for adverse impacts on the integrity of international designated sites. | No significant effect likely |
| Draft Policy EP10 – Retail hierarchy | This policy concerns the Councils aspirations for retail facilities provided in town centres only. | No significant effect likely |
| Draft Policy EP11 – Presumption against major new regional shopping facilities | This policy states that new 'major' shopping facilities will not be permitted within the district other than in Yeovil town centre. | No significant effect likely |
| Draft Policy EP12 – Retail vitality and viability | This policy is again focused on town centres only | No significant effect likely |
| Draft Policy EP13 – Protection of retail frontages | The policy outlines the importance of retail units in defined shopping frontages not being transferred to non-retail use. | No significant effect likely |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|--|--|--|
| Draft Policy EP14 – Comparison floorspace in Yeovil | This policy guides the net increase in floor space arising from new goods retail developments guided under separate policies. | No significant effect likely |
| Draft Policy EP15 – District & local centres | The policy sets out the needs for District and local centres in Yeovil and Chard not to affect the viability and vitality of town centres. | No significant effect likely |
| Draft Policy EP16 – Protection and provision of local shops, community facilities and services | The policy is for ensuring the protection of local shops and other facilities. | No significant effect likely |
| Policy TA1 – Low Carbon Travel | The policy sets out criteria only for provision of travel information, vouchers, travel plans, sustainable transport and public transport connections within development. | No significant effect likely |
| Policy TA2 – Travel plans | The policy details the requirement for all development sites to provide travel plans to minimise traffic generation arising from the development and enabling modal shift to alternatives such as car sharing, public transport and cycling. | No significant effect likely |
| Policy TA3 – Transport impact of new development | The policy sets out requirements of development for transport focusing on limiting the impacts arising from increasing road traffic at new developments and maximising the opportunities for more sustainable modes of transport only. | No significant effect likely |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|--|--|--|
| Policy TA4 – Parking standards | This policy, which specifies the parking standards for new developments (residential and commercial) only. | No significant effect likely |
| Policy HW1 – Provision of open space and outdoor playing space in new development | Policy is designed to ensure that new developments provide a satisfactory level of playing and amenity space only. | No significant effect likely |
| Policy HW2 – Provision of sports, cultural and community facilities in new development | Policy provides criteria for the provision with new housing of sports, cultural and community facilities only | No significant effect likely |
| Policy HW3 – Sports Zone | The policy provides for the Council and its partners to seek a suitable location for a sport zone within or on the edge of Yeovil. No location is provided but given its scale it is unlikely to have an effect on bat features. | No significant effect likely |
| Draft Policy HW4 – Protection of play spaces and youth provision | Policy is for protection of existing provision only | No significant effect likely |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|--|--|---|
| Policy EQ1 – Addressing climate change in South Somerset | This policy is designed to address climate change in South Somerset and the introduction of renewable sources of energy features in it. The policy currently specifies that ' <i>renewables will be permitted only where there are no unacceptable adverse effects.....to biodiversity interest</i> '. Unacceptable is not defined. Biodiversity is too generic a term. The policy is not locationally or criteria specific and therefore the precautionary principle assumes a potential significant effect from loss of bat flight lines and with wind turbines from bat mortality due to collision with blades or barotrauma (see Baerwald <i>et al</i> , 2008; Hötker <i>et al</i> , 2006) | Potential significant effect – loss of flight lines used for dispersal affecting movement of Bechstein's bats through the landscape and /or mortality from wind turbines. |
| Policy EQ2 – Design | This policy is designed to ensure that the design of new developments contributes to the character and distinctiveness of the district. However, there is potential conflict between what the requirement for a safe environment addressing crime prevention and the requirements of bats. | Potential significant effect – loss or degradation of flight lines affecting movement of Bechstein's bats through the landscape. |
| Policy EQ3 – Biodiversity | This policy is designed to ensure that all new developments take full account of the potential impacts upon biodiversity and limit them wherever possible. | No significant effect likely |

| Policy | Analysis | Effect on Bracket's Coppice SAC |
|------------------------------------|--|--|
| Policy EQ4 – Green infrastructure | Policy sets out provision for green infrastructure throughout the district and gives a number of aims including creating new habitats and connecting exiting wildlife areas. | No significant effect likely |
| Policy EQ5 – Woodlands and forests | The policy supports the implementation of the South West Woodland and Forestry Framework. This would also support the ecological requirements of Bechstein's bats. | No significant effect likely |
| Policy EQ6 – Air quality | The policy is for air quality impacts resulting from development only. | No significant effect likely |
| Policy EQ7 – Equine development | The policy sets out criteria for the development of horse related facilities and enterprises in the countryside but is not locational and does not allow for impacts to ecologically supporting features of designated sites outside the site boundary. Therefore, there is a potential loss of habitat forming bat flight lines used for dispersal outside of the designated SAC. Also potential effects from new lighting. | Potential significant effect – loss or degradation of flight lines affecting movement of Bechstein's bats through the landscape. |

Summary of Policies Potentially Having a Significant Effect

5.10 The policies that have been assessed to have a potential significant effect, highlighted in orange in Table 3, are listed below:

- YV2 – Yeovil urban extension
- YV4 – Modal shift for Yeovil Eco Town
- HG6 – Gypsies, travellers and travelling showpeople

- EP6 – Expansion of existing businesses in the countryside
- EP7 – New tourism proposals
- EP8 – Major new tourist facilities
- EQ1 – Addressing climate change in South Somerset
- EQ2 – Design
- EQ7 – Equine development

Impacts Associated with Policies

Habitat Loss or Degradation

- 5.11 All policies are deemed to have a potential impact on flight lines as a result of habitat loss and/or the introduction of artificial lighting such as street lights. Bechstein's bats are likely to disperse along habitat features, such as hedgerows and tree lines, to commute between maternity roosts, swarming sites and over winter roosts (Schofield & Greenaway, 2008). Severance through removal of lengths of habitat features could prevent bats from dispersing to seasonal roost sites, or otherwise expending a larger energy budget to reach the same destination by alternative route if available.
- 5.12 Bechstein's bats are also sensitive to artificial lighting, which can disrupt or deny habitat use. Therefore, the species would avoid streetlights and may be affected by other lighting, such as from security or garden lights (Outen, 2002; Bat Conservation Trust/ Institute of Lighting Engineers, 2008). Horseshoe bats, which are similarly light averse, will only tolerate levels up to 0.5 Lux before behaviour is permanently affected (Stone, 2009; Stone *et al*, 2009)
- 5.13 Policies YV2 and YV5 would have the potential to effect dispersal by severance of flights lines. However, woodland at Ninesprings may also host roost sites supporting one or two (male?) Bechstein's bats linked to the maternity colony at Bracket's Coppice. Although none have been recorded to date a single injured bat was found in Yeovil to the north. Bechstein's bats make use of old woodpecker holes in which to roost (Schofield & Greenaway, 2008) and as woodpeckers have been recorded in these woods potential roost sites may be available.

Wind Turbines

- 5.14 Policy EQ1 – Addressing climate change in South Somerset would also potentially pose a threat of mortality to Bechstein's bats. European studies of bat casualties at wind turbines indicate that most casualties occur during migration and more recent findings have found evidence that resident bat populations are vulnerable, particularly where turbines are sited close to woodland. Locating a wind farm along a bat migration or dispersal route would increase the risk of casualties, as would siting a single turbine along a flight path next to a maternity roost, or at a woodland edge. (Mitchell-Jones & Carlin 2009; Matthews *et al*, 2009)

- 5.15 Bats are killed at turbines either by direct contact or more frequently by barotrauma causing hemorrhaging of the lungs. Bats contacting rotor blades of turbines have been recorded on thermal imaging video by Horn *et al* in 2008. The study showed that blade rotational speed was a significant negative predictor of collisions with turbine blades, suggesting that bats may be at higher risk of fatality on nights with low wind speeds. However, in a Canadian study (Baerwald *et al*, 2008) it was found that 90% of the 75 bat fatalities examined were killed by burst blood vessels in the lungs. As the wind moves through a wind turbine's blades the air pressure drops behind them drops. Any bat flying into such an undetectable low pressure zone would find its lungs and blood vessels rapidly expanding and, quickly, bursting under the new conditions.
- 5.16 Nonetheless *Myotis* species, such as Bechstein's bats, are considered to be at low risk of collision with wind turbines by Natural England (Mitchell-Jones & Carlin 2009; Matthews *et al*, 2009). It is unlikely that Bechstein's bats would be subject to collision with or suffer barotrauma from wind turbines due to their flight behaviour close to habitat structures and general avoidance of open areas. Although open fields are sometimes crossed their flight height is likely to be close to ground level. (Schofield & Greenaway, 2008)
- 5.17 Most bat fatalities at turbines have, to date, been recorded occurring during late summer and autumn and involve species that roost in trees, such as Bechstein's. Cryan (2008) hypothesises that tree bats collide with turbines while engaging in mating behaviour that centre on the tallest trees in a landscape. However, Bechstein's bats swarm at underground sites and not at tree sites (Dietz *et al*, 2009).
- 5.18 Small scale wind micro turbines are one way of producing renewable energy, and may be attached to buildings, boats or freestanding. Micro turbines are seen as a potentially important contribution to renewable energy production. A number of anecdotal bat casualties at micro turbine sites have been recorded (e.g. see Bat Conservation Trust, 2007⁶). It is considered that micro turbines located close to hedgerows or woodland edges are likely to pose a high risk to Bechstein's bats, which habitually use these features to commute.

⁶ http://www.bats.org.uk/publications_download.php/431/07.06.05_microturbine_mort_v3.pdf

6. Counter Acting Measures

Introduction

- 6.1 This chapter sets out counter acting measures for those policies where a significant effect has been potentially identified in the assessment above. The following section lists each policy and recommends counter-acting measures to negate the potential significant effect and contributes to ensuring compliance of the Draft Core Strategy including Preferred Options with the Habitats Regulations.
- 6..2 Where a counter acting measure at this stage does not obviate the potential for a significant effect, policies need to be re-considered before bringing them forward to the final Draft Core Strategy including Preferred Options.
- 6.3 All counter acting measures are to mitigate for the potential effects from plan policies on possible dispersal routes of Bechstein's bats between Bracket's Coppice, swarming sites and hibernation roosts.

Recommended Counter Acting Measures

- 6.4 It is recommended that the following policy amendments and/or additions be included in the Draft Core Strategy including Preferred Options. Adoption of these measures should eliminate the need to make any further assessment necessary in the Appropriate Assessment process and would ensure that the plan is compliant with the requirements of the Habitats Regulations with regard to Natura 2000 sites.

YV2 – Yeovil urban extension

- 6.5 The policy is for 3719 dwellings, employment land, and associated infrastructure at the preferred location of the Keyford/ Barwick Area of Search. Housing and other development could potentially sever movement of Bechstein's bats through the area and street lighting could have similar effects particularly if woodland at Ninesprings is used.

YV2 – Yeovil urban extension

Add the following to the Policy:

'The Masterplan will be designed in such a way that features supporting bat movement are not severed and that access between feeding areas and roosts is maintained. Lighting will also need to take account of the requirements of bats.'

YV5 – Modal shift for Yeovil Eco Town

- 6.6 The policy details the requirement for sustainable transport and access routes through the Eco Town. The development of access roads to transport interchanges such as Yeovil Junction and of cycle and footways would potentially sever bat flight routes through the area. Introduced lighting could also affect movement thorough the area and reduce prey availability.
- 6.7 It is considered that by adding the recommended text to Policy YV2 the potential effect of the policy would be counter acted. However, a textual reference should be made.

YV5 – Modal shift for Yeovil Eco Town

Add a new paragraph in Policy text following paragraph commencing '*These measures will need to be fully costed and tested...*'

'New and improved infrastructure in support of these measures will also need to ensure that no severance is caused to habitat features used by bats in commuting between feeding areas and roost sites. The development of access routes could potentially sever movement of bats through the area. New street lighting could have similar effects and also reduce prey availability to light adverse bat species.'

HG6 – Gypsies, travellers and travelling showpeople

- 6.8 The policy sets out criteria for the development of sites but is not locational and does not allow for impacts to ecologically supporting features of designated sites outside the site boundary. Therefore, there is a potential loss of habitat forming bat flight lines used for dispersal outside of the designated SAC. There are also potential effects from new lighting.

HG6 – Gypsies, travellers and travelling showpeople

Add the following to the Policy after 2nd bullet:

'Land outside a designated site which nonetheless ecologically supports the conservation objectives of a Natura 2000 site unless it can be proven that there would be no significant effect'

EP6 – Expansion of existing businesses in the countryside

6.9 This policy concerns the expansion of existing businesses in rural areas but is not locational and does not allow for impacts to ecologically supporting features of designated sites outside the site boundary. Therefore, there is a potential loss of habitat forming bat flight lines used for dispersal outside of the designated SAC. There are also potential effects from new lighting.

EP6 – Expansion of existing businesses in the countryside

Add the following to the Policy after 6th bullet:

‘There is no adverse effect on land outside a designated site which nonetheless ecologically supports the conservation objectives of a Natura 2000 site’

EP7 – New tourism proposals

6.10 The policy sets out criteria for new tourist development including in the open countryside. It mentions a national directive for the protection of the countryside which does not exist. The policy is not locational and does not allow for impacts to ecologically supporting features of designated sites outside the site boundary. Therefore, there is a potential loss of habitat forming bat flight lines used for dispersal outside of the designated SAC. There are also potential effects from new lighting.

EP7 – New tourism proposals

Add the following to the Policy after 3rd bullet:

‘The proposal does not have an adverse effect on a Natura 2000 site or land outside its boundary which nonetheless ecologically supports its conservation objectives.’

EP8 – Major new tourist facilities

6.11 This policy sets out objectives for the location of major new tourist facilities and includes the provision for being located within or near to Yeovil or the District’s Primary Service Centres. Otherwise the policy is not locational. Therefore, there is a potential loss of habitat forming bat flight lines used for dispersal outside of the designated SAC. There are also potential effects from new lighting.

EP8 – Major new tourist facilities

Insert the following to the 7th bullet in the Policy:

After ‘... *attraction effectively and sustainable.*’ Add ‘but also ensures that features used by bats are not adversely affected.’

EQ1 – Addressing climate change in South Somerset

6.12 This policy is designed to address climate change in South Somerset and the introduction of renewable sources of energy features in it. The policy currently specifies that ‘*renewables will be permitted only where there are no unacceptable adverse effects.....to biodiversity interest*’. However, unacceptable is not defined and it is considered that biodiversity is too generic a term when assessing features of European importance. The policy is not locationally or criteria specific and therefore the precautionary principle assumes a potential significant effect from loss of bat flight lines and with wind turbines from bat mortality due to collision with blades or barotrauma.

EQ1 – Addressing climate change in South Somerset

Add a new paragraph in Policy text in the Biodiversity and Climate Change paragraph:

‘However, some measures to combat climate change can potentially have adverse effects on biodiversity. Bats, all of which are afforded protection at a European level, are vulnerable to mortality from incorrectly located wind turbines, such as those along flight lines, close to feeding areas or roost sites. Bats are killed at turbines either by direct contact or more frequently by barotrauma causing hemorrhaging of the lungs. It is expected that any proposal for wind turbines, including micro turbines, will be submitted with full survey data and assessment including for effects to populations of bats. South Somerset District Council is obliged, under the Conservation of Habitats and Species Regulations 2010, to ensure that ‘Favourable Conservation Status’, as defined in Article 1 of the Habitats Directive, of populations of European protected species is maintained.’

Add to Policy text after 5th bullet:

‘Developers must demonstrate that proposed wind turbine developments do not pose a risk to bat populations’

EQ2 – Design

- 6.13 This policy is designed to ensure that the design of new developments contributes to the character and distinctiveness of the district. However, there is potential conflict between what the requirement for a safe environment addressing crime prevention and the requirements of bats.

EQ2 – Design

Insert the following bullet to the Policy:

‘Ensure that habitat features that are used by bats and other wildlife are maintained so that the design does not cause severance or is a barrier to movement’

EQ7 – Equine development

- 6.14 The policy sets out criteria for the development of horse related facilities and enterprises in the countryside but is not locational and does not specifically allow for impacts to ecologically supporting features of designated sites outside the site boundary. Therefore, there is a potential loss of habitat forming bat flight lines used for dispersal outside of the designated SAC. There are also potential effects from new lighting.

EQ7 – Equine development

Add to 3rd bullet of Policy after, ‘...*internationally designated sites*’

‘...including to features outside the site’s boundaries which nonetheless ecologically support the conservation objectives of the designated site.’

Re-assessment of the Bat Protection Zone

- 6.15 The Appropriate Assessment of the Issues and Options Stage of the Core Strategy (October 2008) recommended that no significant adverse effects would occur to Bracket’s Coppice SAC if a Bat Protection Zone was adopted as policy. A brief description is given in Chapter 2 of this report.
- 6.16 However, following further research and survey work for Bechstein’s bats since 2008 it is considered that, provided the above recommendations are made to amend policies in the above section,

there would be no significant adverse effect on the Bechstein's bat feature of the SAC from removal of the Bat Protection Zone.

- 6.17 This is because radio tracking work between May and August 1998 and 1999 has shown that Bechstein's bats forage within 980 metres of roost sites with Bracket's Coppice and therefore are not likely not cross into Somerset (Schofield & Morris, 2000). Movement of Bechstein's bats outside the SAC is likely to be in dispersal to swarming areas to mate, and/or to hibernation roosts. The locations of these sites are not currently known. Therefore, it must be assumed, using the precautionary approach that they can occur in the geographic area of South Somerset
- 6.18 Therefore, a more generic approach to provision in policies for maintenance of movements in dispersal is more appropriate in ensuring that the population continues to maintain itself. The Bat Protection Zone policy is no longer required.

7. Other Relevant Plans or Projects

- 7.1 Article 6(3) of the Habitats Directive requires a HRA of ‘...any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect there on, either individually or in combination with other plan or projects’. Therefore it is necessary to identify plans and projects that may have ‘in-combination’ affecting the Nature 2000 sites, which are the focus of this assessment.
- 7.2 The assessment of significant effects for the Draft Core Strategy including Preferred Options needs to take account of the impact in combination with other plans and projects. For Natura 2000 sites where it is unlikely that the Draft Core Strategy including Preferred Options on its own will require a stage 2 Appropriate Assessment in relation to that site, it has been necessary to consider whether ‘in-combination’ effects are likely to result in an Appropriate Assessment being required.
- 7.3 The guidance states that only those that are considered most relevant should be collected for ‘in combination’ testing - an exhaustive list could render the assessment exercise unworkable. The following plans or strategies are considered to have potential effects and therefore have been included within the assessment.

Table 4: Assessment of Plans and Projects for In-Combination Effects

| Plan or Project | Implications for Bracket’s Coppice SAC |
|--|--|
| Somerset Local Authorities’ Development Plan Documents | Development in other Somerset Local Authorities’ areas is unlikely to effect the movements of Bechstein’s bats from Bracket’s Coppice considering the dispersal distances for these bats. |
| Somerset Waste Local Plan | Waste is generally sent to Dimmer in South Somerset. Movement of waste is by road. Any effects from new infrastructure to facilitate development in South Somerset will be counter acted by the recommended policy changes in the Draft Core Strategy including Preferred Options. |
| Somerset Minerals Local Plan 1997 - 2011 | Within South Somerset there are several quarries extracting building stone. Within 10 kilometres of Bracket’s Coppice is Ham Hill. Currently there are two small quarries at Ham Hill, for which permission for one expires in 2009 and the other in 2017 and that the existing boundary will not be expanded in the plan period. Therefore it is considered that there is unlikely to be a significant effect in combination. |

| Plan or Project | Implications for Bracket's Coppice SAC |
|--|---|
| Somerset Local Transport Plan 2006 – 2011 | The Local Transport Plan aims to reduce congestion and tackle pollution and seeks a modal shift to public transport, cycling and walking. There are no major infrastructure proposals for South Somerset and therefore it is unlikely that there would be any in combination effects. |
| Somerset Rights of Way Improvement Plan 2006 | There is unlikely to be any effects from improvement to Rights of Way in South Somerset. |
| Somerset Community Strategy | Any new development should consider the objectives set out in the Community Strategy. As such, there are unlikely to be any in-combination impacts. |
| West Dorset District Council Local Plan | Bracket's Coppice is located in an Area of Outstanding Natural Beauty and there is unlikely to be any development in the area that would significantly interact with proposals in the South Somerset draft final Draft Core Strategy including Preferred Options |

8. Conclusion

- 8.1 It is considered that provided the counter acting measures as set out in Chapter 6 are incorporated into the final Core Strategy including Preferred Options that the plan is unlikely to have a significant effect on the conservation objectives of the Bracket's Coppice SAC.

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Appendix 1: Bracket's Coppice SAC Description

Qualifying Features

Annex I habitats that are a primary reason for selection of this site

Not applicable

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

[6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils \(*Molinia caerulea*\)](#)

Annex II species that are a primary reason for selection of this site

[1323 *Bechstein's* bat *Myotis bechsteinii*](#)

One of the first maternity colonies of Bechstein's bat was discovered using bat-boxes in this small woodland.

Annex II species present as a qualifying feature, but not a primary reason for site selection

Not applicable.

Conservation Objectives and Targets

The following tables set out the objectives and targets for each of the qualifying criteria. It is against these objectives and targets that significant effects are assessed. Only Bechstein's Bats are considered as other features lie out of Somerset influence.

Myotis bechsteinii Bechstein's bat

| Operational Feature | Criteria Feature | Attribute | Measure | Target |
|-----------------------|--|--|--|---|
| Semi-natural woodland | Bat roosts in trees Bechstein's bat | Extent of site containing suitable habitat | Extent/location of stands as identified on map | *No loss of ancient semi-natural stands * At least 80% of recent semi-natural stands maintained. *At least the area of ancient woodland retained. |

| Operational Feature | Criteria Feature | Attribute | Measure | Target |
|---------------------|------------------|--|--|--|
| | | Natural processes and structural development | Age/size class variation within and between stands Presence of open space and old trees Dense understorey in areas where bats forage and roost. Standing dead trees | *At least the current level of structural diversity maintained. *Canopy cover present over 50-90% of area *Understorey present over 50% of area *All standing dead trees retained |
| | | Regeneration potential of woodland | Successful establishment of young stems in gaps or on edge | *Signs of seedlings growing through at sufficient density to maintain required canopy cover over a 10-year period * No more than 20% of areas regenerated by planting. * All planting material of locally native stock |
| | | Composition | Cover of native versus non-native species (all layers) Death, destruction or replacement of native woodland species through effects of non-native fauna or external unnatural factors | * At least the current level of site-native species maintained. * At least 90% of cover in any one layer of site-native or acceptable naturalised species. Death, destruction or replacement of native woodland species through effects of introduced fauna or other external unnatural factors not more than 10% by number or area in a five year period. Cover of native versus non-native species (all layers) |
| | | 5. Species, habitats, structures characteristic of the site. | Presence of streams with high water quality and natural flows Presence of veteran trees with old growth | *No overall loss of open water *EA scale for quality *Maintain at least current number of veteran trees subject to natural change. *Maintain all trees known to contain natural roosts. |

| Operational Feature | Criteria Feature | Attribute | Measure | Target |
|---------------------|------------------|-----------|-------------|---|
| | | | Disturbance | Degree of human activity around roost areas |

Molinia meadows on chalk and clay (*Molinion caeruleae*)

| Operational Feature | Criteria Feature | Attribute | Measure | Target |
|-----------------------------|------------------|--|--|---|
| Unimproved marshy grassland | M24 | *Extent | Total area (ha), mapped in relation to a site-specific reference level to be determined, in period early June - end of August. | No reduction in area and any consequent fragmentation without prior consent |
| | | *Sward composition: positive indicator species | Record the frequency of positive indicator species from the list below to give an overall total of 2 frequent and 3 occasional. Record in period early June - end of August. | Overall total of at least two species/taxa frequent plus at least three species/taxa occasional throughout the sward. |
| | | *Sward composition: frequency and cover of <i>Molinia caerulea</i> | Record the frequency and % cover of <i>Molinia caerulea</i> . Record in period early June - end of August. | At least frequent throughout the sward but no more than 80% cover |
| | | *Sward composition: negative indicator species | Record the frequency and % cover of negative indicator species. Record in period early June- end of August. | No species more than occasional throughout the sward or singly or together more than 5% cover |
| | | *Sward composition: cover of <i>Juncus</i> spp | Record the % cover of <i>Juncus</i> species from groups A and B. Record in period early June - end of August. | All species combined no more than 80% cover, of which no more than 50% made up of spp. from Group B |
| | | *Sward composition: negative indicator species. | Record the % cover of negative indicator species. Record in period early June - end of August. | No more than 20% cover. |
| | | *Sward composition: negative indicator species. | Record the % cover of negative indicator species. Record in period early June - end of August. | No more than 10% cover. |

| Operational Feature | Criteria Feature | Attribute | Measure | Target |
|---------------------|------------------|--|---|--|
| | | *Sward composition: negative indicator species | Record the % cover or frequency of negative indicator species in period early June - end of August. All tree and scrub species excluding <i>Salix repens</i> and <i>Myrica gale</i> , considered together. | No more than 5% cover. |
| | | *Sward composition: % cover of <i>Phragmites australis</i> | Record the % cover of <i>Phragmites australis</i> in period early June-end of August. | No more than 10% cover. |
| | | Sward composition: % cover of <i>Myrica gale</i> . | Record the % cover of <i>Myrica gale</i> in period early June - end of August. | No more than 10% cover |
| | | Sward composition: negative indicator species. | Record the frequency and % cover of negative indicator species. Record in period early June - end of August. | No more than occasional throughout the sward or more than 5% cover |
| | | Sward structure: average height | Record sward height in period early June - end of August. (Upper target refers to pastures only.) | M24a Sward 5 cm or greater (excluding <i>Juncus</i> spp.) but no more than 25% over 60 cm M24b, M24c Sward 2 cm or greater (excluding <i>Juncus</i> spp.) but no more than 25% over 15 cm |
| | | Sward structure: litter | Record cover of litter where in a more or less continuous layer, distributed either in patches or in one larger area. Record in period early June - end of August for pastures. | Total extent no more than 25% of the sward |
| | | Sward structure: bare ground | Record extent of bare ground distributed through the sward, visible without disturbing the vegetation. Record in period early June - end of August. | No more than 10% |

Condition

Based on the tables for the equivalent Site of Special Scientific Interest the

condition of the affected components, by % of site, is as follows:

| SPA component site | Favourable | Unfavourable recovering | Unfavourable no change | Unfavourable declining | Destroyed, part destroyed |
|--------------------|------------|-------------------------|------------------------|------------------------|---------------------------|
| | 55.48 | 41.64 | 2.88 | 0 | 0 |

Description

Bechstein's bat is a woodland species. They prefer semi natural or ancient woodland but will make use of oak and mixed forestry plantations. Most summer roost sites for Bechstein's bats are in woodpecker holes, although sometimes they use loose bark or tree crevices. They change roosts nearly every day and therefore large number of sites required, perhaps as many as 50. (Greenway, 2004) In one colony the actual roost site was hedgerow tree 3.5 kilometres from the main plantation foraging area. Hedgerow trees are not uncommon for colonies foraging in plantations, as frequently they are the only trees available with woodpecker holes (Fitzsimmons *et al*, 2002)

The standard pattern of foraging within a colony is for suitable canopy areas within woodland to be divided between individuals. About 50 hectares of mature oak with good understorey and small streams seams is ideal. (Greenway, 2004) Other woodland would need to be larger to sustain a colony, for example coniferous woodland home ranges of 100 hectares per individual have been recorded. (Boye & Dietz, 2005; Fitzsimmons *et al*, 2002). They may make use of night roosts (Safi & Kerth, 2003; Kerth *et al*, 2003)

Bechstein's bats have a small range of movement around summer roost of 1 kilometre. The main foraging areas are usually 500 -1500 metres from roost. Sometimes they will fly up to 3.8 kilometres. Foraging range is smaller in continuous woodlands than those in fragmented forests. (Boye & Dietz, 2005; Fitzsimmons *et al*, 2002)

Sensitivities

Current factors considered to be causing loss or decline in Bechstein's bat include:

- Loss, damage or fragmentation of woodland habitats
- Loss, destruction or disturbance of roost sites
- Disturbance of underground swarming sites

(Bat Conservation Trust/ BMT Cordah Ltd., 2005)

Bechstein's bats are also sensitive to artificial lighting, which can disrupt or deny habitat use, and avoid streetlights (Outen, 2002; BCT/ILE, n/d).

Vulnerability

The Bechstein's bat colony at Bracket's Coppice has been intensively studied since its discovery in 1998. The species appears to require closed canopy high forest with veteran trees where old forest conditions are present for both roosting and foraging. The bat forages along adjoining hedges, around hedgerow trees and copses that extend beyond the SAC boundary.

Summary of standards/factors which maintain site integrity

- Appropriate management to maintain habitat diversity with a variety of broadleaved tree species of good age structure, a scrub layer, and other habitats such as ponds, rivers, hedges, grassy field verges and extensively managed pasture, which provide foraging areas and important habitat connectivity through linear features.
- The presence of dead, dying and “veteran” trees in situ and bat boxes are important for bat roosting, hibernating and breeding.
- Avoidance of disturbance to the bats while they are at maternity or hibernating roosts.
- Importance of the water quality within a stream passing through the site.

Existing trends and pressures

In the EA Habitats Regulations Reg. 50 Review of Consents, there is one consented abstraction identified as potentially having a significant effect on the site (with respect to there being sufficient drinking water available for the bats) and it is currently undergoing Stage 3 appropriate assessment. However, from their work to date the EA advised it is unlikely to be having an adverse effect on the site's integrity.