South Hams Special Area of Conservation (SAC)

Greater Horseshoe Bats

Habitats Regulations Assessment Guidance

October 2019

ACKNOWLEDGEMENTS

This document was prepared by, and is therefore endorsed by, the organisations forming the South Hams SAC Steering Group for greater horseshoe bats: Dartmoor National Park Authority, Devon County Council, Teignbridge District Council, South Hams District Council, Torbay Council and Natural England.

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A summary of the consultation process is available on the Devon County Council website.

Photo credit: David F Wills

Contents

1 Introduction

Every effort has been made to avoid technical terms and acronyms in this document. However, some terms and acronyms have had to be included due to the technical nature of this document and to reduce its length. Technical terms are highlighted in ***orange text*** when first used and defined, along with any acronyms, in the Glossary.

1.1 South Hams SAC and greater horseshoe bats

1.1.1 Greater horseshoe bats are one of Britain's rarest bats and are confined to South West England and South Wales [1]. Over 2500 greater horseshoe bats are found in South Devon (a significant proportion of the British population) and the Buckfastleigh ***maternity roost*** is thought to be the largest in Europe [2].

1.1.2 The ***South Hams Special Area of Conservation (SAC)*** has been designated, in part[1] to ensure the ***favourable conservation status*** of this population of greater horseshoe bats. SACs, sometimes referred to as ***European Sites***, form part of a network of designated sites across Europe. They are designated under the EU ***Habitats Directive*** and UK ***Habitats Regulations***.

1.1.3 This legislation requires ***Local Planning Authorities*** (LPAs), and other ***competent authorities***, to assess ***plans or projects*** which may have a likely significant effect on a European Site, alone or in-combination with other plans or projects. Such plans or projects can only proceed if the competent authority is convinced they will not have an ***adverse effect on the integrity*** of a European Site, other than in exceptional circumstances [3]. These requirements are known as ***Habitats Regulations Assessment*** (HRA) requirements [4] [5] [6].

1.2 What is the purpose of this document?

1.1.1 This document is aimed at those preparing and validating ***planning applications*** in the South Devon area which may impact on the South Hams SAC population of greater horseshoe bats. It provides advice on which applications may have a likely significant effect on the SAC greater horseshoe bat population. It also provides advice on the information that applicants may need to submit with a planning application in order for the LPA to undertake an HRA.

1.1.2 This guidance is relevant to five LPA areas: Dartmoor National Park Authority, Devon County Council, South Hams District Council, Teignbridge District Council and Torbay Council (referred to in this document as the LPAs) – see Figure 1. Contact details for the LPAs are given in Appendix 1.

[1] The South Hams SAC is also designated to protect habitats including sea cliffs, heathland, semi-natural grasslands, scrub, caves and woodland see http://publications.naturalengland.org.uk/publication/6279422093033472

1.2.3 By providing clarity on HRA requirements, the guidance aims to reduce costs and unnecessary delays to both applicants and LPAs.

1.2.4 This document updates and replaces the South Hams SAC Greater Horseshoe Bat Consultation Zone Planning Guidance published by Natural England in 2010 [7]. The update takes on board feedback from applicants, consultants and planners as well as new data and knowledge on greater horseshoe bats. For those familiar with the 2010 Guidance, an explanation of changes is provided in Appendix 2.

1.2.5 This approach taken here can also be used to identify other plans or projects that may be required to meet HRA requirements relating to the South Hams SAC greater horseshoe bat population.

1.2.6 Links to, or summaries of, best practice information on technical issues such as lighting will be added to the DCC website where the Steering Group agree that this will be helpful. Note however that this HRA guidance is a stand-alone resource which is not reliant on this information. https://new.devon.gov.uk/environment/wildlife/wildlife-and-geology-planning-guidance

1.2.7 This guidance specifically advises on HRA requirements relating to the South Hams SAC greater horseshoe bat population. However, it is important to remember that all bats, including greater horseshoe bats, along with their breeding sites and resting places, are protected through separate legislation. The presence of any protected species is a ***material consideration*** when an LPA is considering a proposal that, if carried out, would be likely to result in harm to the species or its habitat [5] [8]

1.3 What are the HRA requirements for Local Planning Authorities and Applicants?

Local Planning Authorities

1.3.1 Simplistically, HRA requirements for LPAs include ***HRA screening*** followed, if necessary, by an ***Appropriate Assessment***. For more information please see Defra guidance (please note that this is draft) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/82706/habitats-simplify-guide-draft-20121211.pdf

- **Stage 1 – HRA Screening**: An assessment of whether the proposal will, on its own or in-combination with other plans or projects, have a likely significant effect on the SAC's population of greater horseshoe bats before avoidance or reduction measures have been taken into account.

  The flow chart in Section 3 should be used to identify whether an application may have a likely significant effect on the South Hams SAC greater horseshoe bat population. Where it is clear that there is no likelihood of significant effect there is no need for further screening. However, where there may be a likely significant effect the LPA will need to use information provided by the applicant to undertake a ***detailed HRA*** screening. Where screening cannot rule out a likely significant effect then Appropriate Assessment must be carried out.

- Stage 2 – **Appropriate Assessment**: An assessment of whether the proposal will adversely affect the integrity of the European Site taking into account avoidance and/or reduction measures. The ***Precautionary Principle*** applies,

so that to be certain, the LPA should be convinced that no reasonable scientific doubt remains as to the absence of such effects.

The LPA must secure any required avoidance and ***mitigation*** measures *e.g.* through conditions attached to the planning permission, or a legal obligation agreed with the applicant.

Note that for the purposes of this document the term detailed HRA refers to both detailed ***HRA screening*** (where, using the Flow Chart in Section 3, likely significant effect cannot be immediately screened out) and, when required, Appropriate Assessment.

Applicants

1.3.2 It is the applicant's responsibility to provide the LPA with sufficient information to enable them to undertake HRA requirements.

Information provided in this document

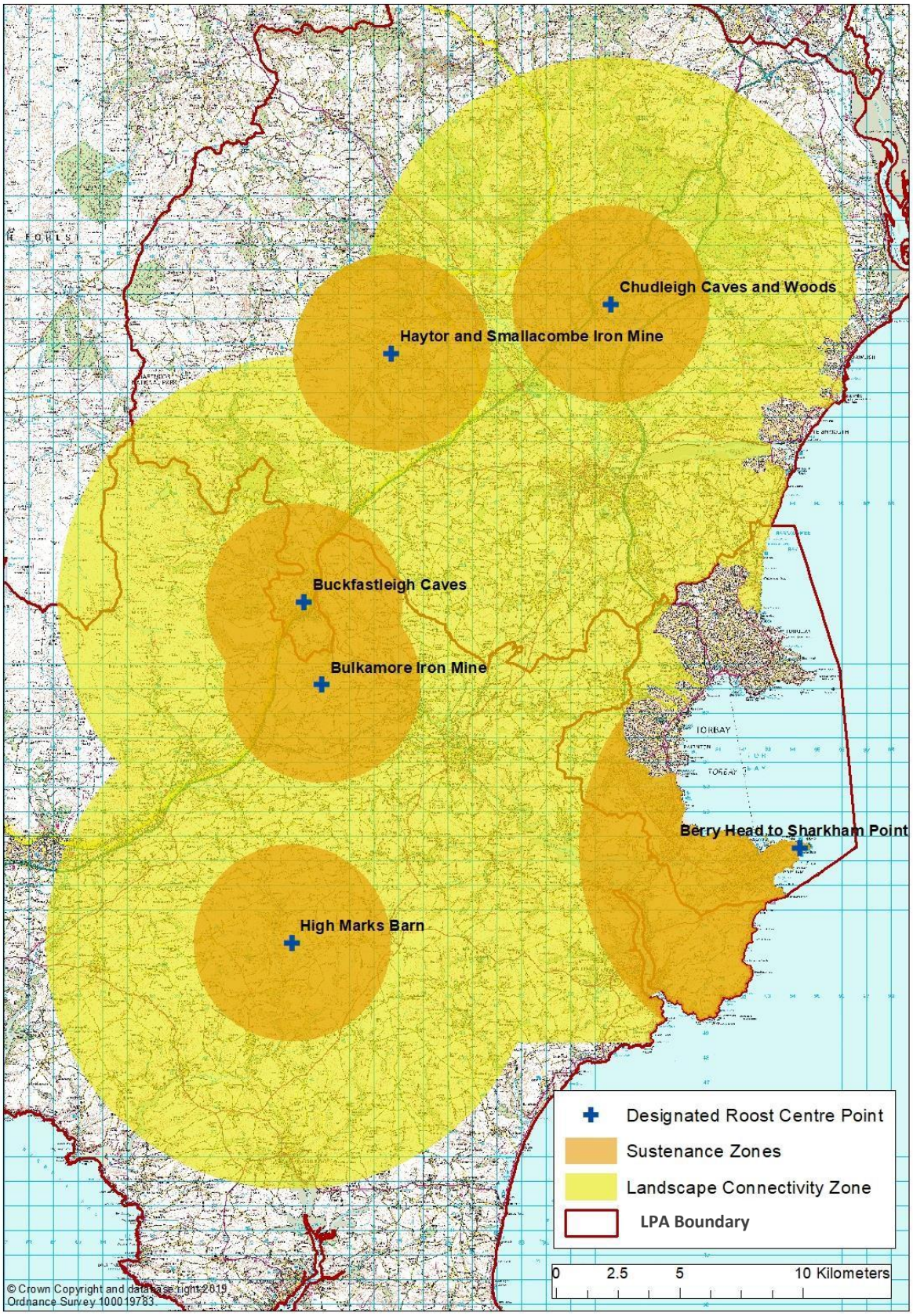
1.1.3 To help LPAs and applicants meet these requirements, this document includes:

Section 2
Background information on the South Hams SAC Greater Horseshoe Bat Consultation Area.

Section 3
A flow chart to help clarify when an application may have a likely significant effect on a European Site and therefore when detailed HRA is required.

Section 4
Guidance on the information required from the applicant.

Figure 1: South Hams SAC Greater Horseshoe Bat Consultation Area
For a more detailed map see: http://map.devon.gov.uk/DCCViewer



2 The South Hams SAC Consultation Area

2.1 General greater horseshoe bat ecological requirements

2.1.1 Greater horseshoe bats use a network of ***Roosts***, ***Foraging Habitats*** and ***Commuting Routes***. Definitions of these features are given below. Greater horseshoe bats are very sensitive to light levels and avoid lit areas [9].

Roosts - structures used by bats for shelter and protection

2.1.2 A variety of structures are used throughout the year for hibernating, raising young bats (maternity roosts), feeding, mating and resting. Greater horseshoe bats can live in excess of 30 years and remain faithful to their roosts for generations. Large numbers of bats can be found in ***hibernation roosts*** (used by bats during the winter) and ***maternity roosts*** (used during the summer by mothers and their young, some males may also be present). Other roosts tend to be used throughout the year by individuals or small numbers of bats at a time [10,11].

Foraging Habitat – areas where bats feed

2.1.3 Greater horseshoe bats feed in different habitats during the year as availability of their prey changes. Examples of Foraging Habitats include cattle grazed pastures, meadows, the edges of broadleaved woodland, stream corridors, wetlands, tree lines, tall and thick hedges, scrub, orchards and parklands - any places where prey is found (moths, dung beetles, cockchafer beetles and dung flies, crane flies, parasitic wasps and caddis flies) [12,13]. Adult greater horseshoe bats using maternity roosts largely forage within 4km of the roost while juveniles hunt mainly within 1km of the roost and are highly dependent on grazed pasture [12,13].

Commuting Routes - the routes bats use to move through the landscape, often linear landscape features.

2.1.4 Greater horseshoe bats have a 'weak' ***echolocation*** call (which bats use to navigate). They therefore generally fly close to the ground (up to ~ 2m) and close to linear landscape features such as hedges, woodland edge and vegetated watercourses which they use for navigation. Bats may use different Commuting Routes at different times of the year [11].

2.2 The South Hams SAC Greater Horseshoe Bat Consultation Area

2.2.1 The South Hams SAC Greater Horseshoe Bat ***Consultation Area*** (referred to in this document as the Consultation Area) has been developed to help clarify where and when impacts, on Roosts, Foraging Habitat and Commuting Routes, may have a likely significant effect on the SAC greater horseshoe bat population. The Consultation Area is shown on Figure 1 and consists of the features discussed below.

Designated Roosts - the six maternity and/or hibernation roosts designated as ***Sites of Special Scientific Interest*** (***SSSIs)*** and believed to support an important proportion of the total greater horseshoe bat population across South Devon.

2.1.2 Five of the ***Designated Roosts*** are included within the South Hams SAC designation. The sixth roost at High Marks Barn SSSI is considered integral to the SAC population. It was not included in the original SAC designation but is part of the SAC Consultation Area. The six Designated Roosts are listed in Table 1 and shown on Figure 1.

2.2.3 Proposals impacting on these roosts may have a likely significant effect on the SAC greater horseshoe bat population – see the flow chart in Section 3.

Table 1: The Designated Roosts

Site Name	Roost description	Maternity	Hibernation
Berry Head to Sharkham Point SSSI and NNR	Caves on sea cliffs	✓	✓
Buckfastleigh Caves SSSI (supports the largest known maternity roost in the UK)	Cave complex and barns	✓	✓
Bulkamore Iron Mine SSSI	Large disused mine		✓
Chudleigh Caves and Woods SSSI	Cave complex	✓	✓
Haytor and Smallacombe Iron Mines SSSI	Disused mines		✓
High Marks Barn SSSI (supports the second largest maternity roost in England)	Large agricultural barn	✓	

Sustenance Zones - the area within 4km of the Designated Roosts which includes critical Foraging Habitat[2] and Commuting Routes. See Figure 1.

2.2.4 The ***Sustenance Zones*** are based on research which shows that on average adult greater horseshoes using maternity roosts largely forage within 4km of the roost [12,13,14,15,16,17,18,19]. Due to the difficulties in monitoring hibernating bats, the distances which they travel from hibernation roosts to forage in the winter is currently unknown. It is possible that due to weather conditions, and the weaker physical condition of bats during the winter, they may forage closer to roosts within the hibernation Sustenance Zones. This needs to be considered when assessing impacts and carrying out HRA.

2.2.5 Proposals impacting on Foraging Habitat and Commuting Routes in Sustenance Zones may have a likely significant effect on the SAC greater horseshoe bat population – see the flow chart in Section 3.

2.2.6 Note that urban areas within Sustenance Zones may provide less

[2] Due to its location next to the sea and urban development within Brixham Town the Berry Head Sustenance Zone is based on a sustenance area equivalent to a 4km radius circle. Note that the boundaries of all the Sustenance Zones have changed slightly from those within the 2010 South Hams SAC guidance (see Appendix 2).

suitable conditions for greater horseshoe bats.

Landscape Connectivity Zone - The area that includes a complex network of Commuting Routes used by the SAC population of greater horseshoe bats and providing connectivity between the Designated Roosts. See Figure 1 and Appendix 2 for further explanation.

2.2.7 Evidence from records held by Devon Biodiversity Records Centre and research conducted by the University of Sussex [20] indicate that greater horseshoe bats commuting through the ***Landscape Connectivity Zone*** are dispersed and found in relatively low numbers compared to within the Sustenance Zones. It is therefore considered that only proposals which could severely restrict the movement of bats at a landscape scale (impacting on landscape scale permeability) may have a likely significant effect on the SAC greater horseshoe bat population – see the flow chart in Section 3. However, there may be exceptions, see Flow Chart Note c in Section 3.Pinch Points - known, or potential, Commuting Routes which are restricted *e.g.* due to urban encroachment or proximity to the sea / estuaries.2.2.8 Further restriction of ***Pinch Points*** could severely impact on the movement of bats and may therefore have a likely significant effect on the SAC greater horseshoe bat population – see the flow chart in Section 3.

Existing Mitigation Features – can include roosts, Commuting Routes and Foraging Habitat created, enhanced or protected to meet HRA greater horseshoe bat requirements for approved development.

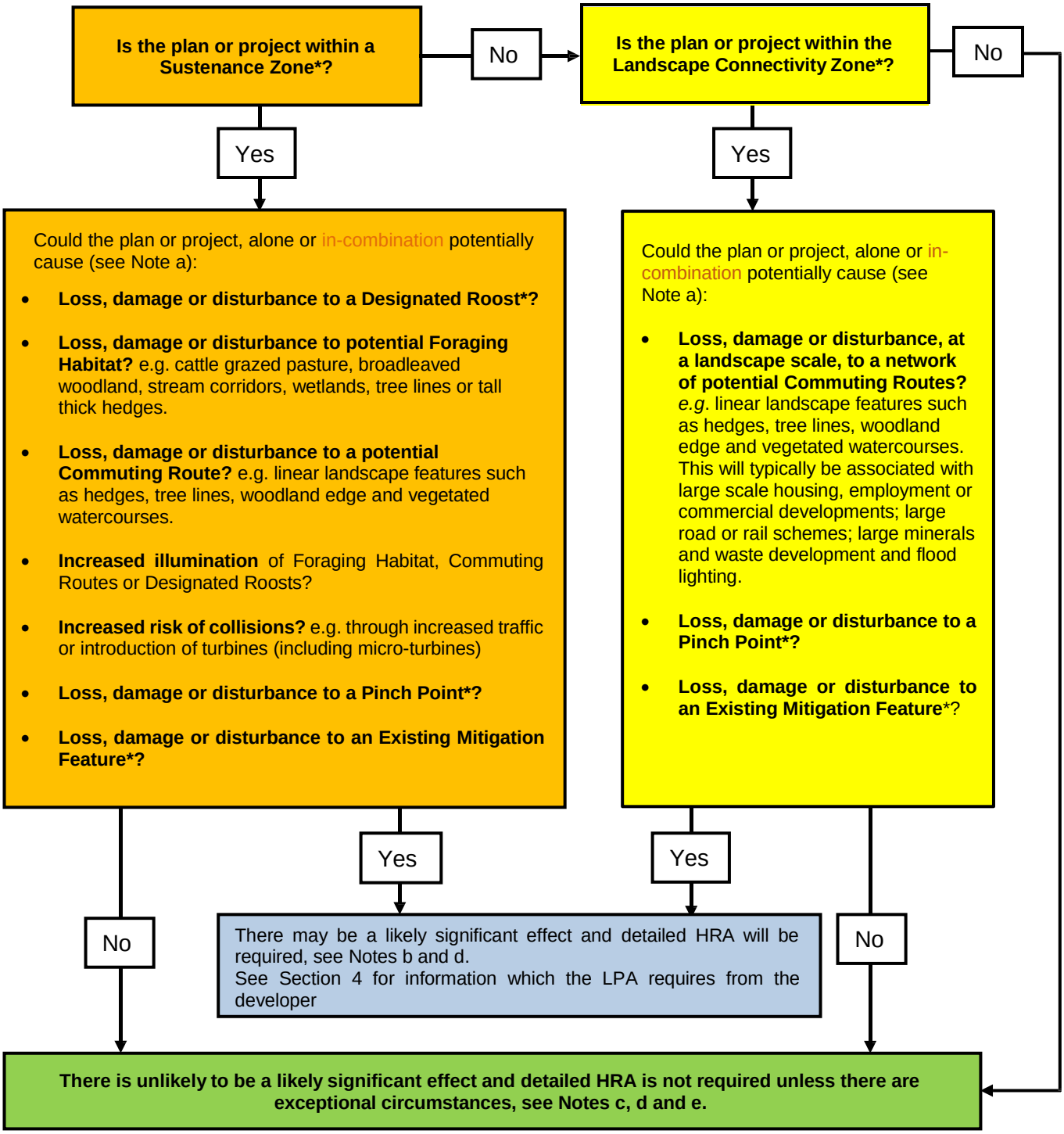
2.2.9 Impacts on these features may have a likely significant effect on the SAC greater horseshoe bat population – see the flow chart in Section 3.

Designated Roosts, Sustenance Zones, the Landscape Connectivity Zone, Pinch Points and ***Existing Mitigation Features*** are shown on the Devon County Council (DCC) Environment Viewer at: http://map.devon.gov.uk/DCCViewer.

Where new Pinch Points are agreed by the Steering Group and Mitigation Features confirmed they will be added to the Viewer. Note however that there may be a time delay and it is the responsibility of applicants to ensure that they are aware of relevant Mitigation Features not yet shown on the Viewer. Foraging Habitats and Commuting Routes are not mapped on the Viewer. For records of greater horseshoe bats please contact Devon Biodiversity Records Centre (contact details in Appendix 1).

3 Flow chart to clarify when an application may have a likely significant effect on the South Hams SAC greater horseshoe bat population

3.1. As early as possible in planning of a development (pre-application stage) the LPA and applicant should discuss the proposal and, using existing knowledge, follow the Flow Chart and associated Notes below to clarify whether there may be a likely significant effect on the SAC. Please remember that this Flow Chart only relates to the South Hams SAC greater horseshoe bat population.



***Feature is mapped on the DCC environment viewer at http://map.devon.gov.uk/DCCViewer.** Note however that there may be a time delay in adding new Mitigation Features and it is the responsibility of applicants to ensure that they are aware of relevant Mitigation Features not yet shown on the Viewer.

3.1.2 Flow Chart Notes:

a. If there is any degree of uncertainty regarding how to answer questions in the flow chart *e.g.* whether there is loss, damage or disturbance to a potential Foraging Habitat or Commuting Route, an ecologist should be consulted. Examples of how a proposal could potentially adversely affect greater horseshoe bat habitats include:

- Foraging Habitat
  - Building on pasture, wetland, or converting to improved grassland.
  - Felling woodland.
  - Altering drainage of wetland areas.
  - Indirect impacts that could lead to deterioration of the feature *e.g.* introducing public access to a Foraging Habitat.
  - Increased illumination of Foraging Habitat through internal, external and vehicular lighting sources.

- Commuting Routes
  - Removal of a hedgerow / tree line.
  - Increased illumination of sections of hedgerow/tree lines, including from internal, external and vehicular lighting sources.
  - Building in close vicinity to a hedgerow / tree line.
  - Having an indirect impact *e.g.* a change in management to hedgerows bordering residential gardens.
  - Obstructions.
  - Increased risk of collision e.g. new roads.

b. It may be possible for the LPA to screen out ***likely significant effects*** relatively quickly where it is considered that, due to factors such as location, site characteristics, size/type of the application, the proposal will not have a likely significant effect on the SAC greater horseshoe bat population.

c. Detailed HRA may be required in circumstances not listed on the flow chart if, following survey, the LPA or Natural England consider that the development could have a likely significant effect on the SAC population of greater horseshoe bats. This could include the discovery of a roost which is likely to provide significant functional support to the SAC (*e.g.* a significant mating roost or hibernation site) or the in-combination impacts of small projects in the Landscape Connectivity Zone. If a roost is considered to provide significant functional support to the SAC then HRA will be required for any impact on the Commuting Routes and Foraging Habitat which support this roost.

d. Where detailed HRA is not required the LPA should formally record that likely significant effects have been screened out.

e. The applicant and LPA must ensure that other wildlife impacts (including impacts on bats as ***European Protected Species***) are identified and mitigated appropriately through the planning process. See the Devon County Council website and Natural England standing advice for more information - https://new.devon.gov.uk/wildlife-and-geology-planning-guidanceand https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects

4 Information required for detailed HRA

4.1 Overview

Please note that the following information only relates to the HRA in relation to the South Hams SAC greater horseshoe bat population.

Pre-application Stage

4.1.1 Where detailed HRA screening is required the applicant should commission a suitably qualified ecological consultant, with experience of greater horseshoe bat survey and mitigation, to provide the LPA with the following:

- Greater horseshoe bat survey results and analysis, where required (see Section 4.2 below).
- Impact Assessment.
- Avoidance, mitigation measures and monitoring details (see 4.3 below).

4.1.2 LPAs cannot recommend consultants but can provide a list of ecological consultants known to them. See: https://new.devon.gov.uk/environment/wildlife/wildlife-and-geology-planning-guidance

4.1.3 The information provided should be up to date and follow current published guidance[3]. Departures from published guidance need to be fully justified in writing and agreed with the LPA.

4.1.4 It is advised, particularly for large or complex applications, that applicants seek pre-application advice on HRA requirements, survey and potential avoidance/mitigation measures from the LPA as well as from Natural England's Discretionary Advice Service. If detailed HRA is required and insufficient information is submitted the LPA may be unable to validate the application or may need to request further information or new mitigation measures which could affect design/layout. These scenarios may lead to delays and increased cost.

4.1.5 Applicants and LPAs should use Natural England's Conservation Objectives and related Supplementary Advice for the South Hams SAC when developing and assessing an application which may affect the SAC. See http://publications.naturalengland.org.uk/publication/6279422093033472

[3] Including guidance from the Chartered Institute for Ecologists and Environmental Managers CIEEM) https://www.cieem.net/ and the British Standard for Biodiversity (BS 42020:2013).

4.1.6 Outline applications are subject to HRA requirements. It is acknowledged that not all design and layout details will be known. However, where detailed HRA is required appropriate survey must be undertaken and any required avoidance/mitigation measures and principles secured (such as locations of areas safeguarded from detrimental light spillage) in order to provide the LPA with the confidence required that there will be no likely significant effect or, (where Appropriate Assessment is required) no adverse effect on the SAC greater horseshoe bat population. These measures and principles must then be followed when developing details for the reserved matters application.

Submission of a Planning Application

4.1.7 The applicant submits the information required for HRA as part of the planning application. For most applications the information provided by the applicants for HRA will form part of a broader Ecological Impact Assessment. If insufficient information is supplied, the LPA may not be able to validate the application.

Use of HRA in Determining a Planning Application

4.1.8 The LPA uses the information provided to undertake an HRA and, when required, consults Natural England. Note: The LPA must consult Natural England on all Appropriate Assessments.

4.1.9 If insufficient information has been supplied the LPA may have to request further information. This can lead to a delay in determining the application.

4.1.10 The LPA will secure any mitigation measures required to ensure the project will not adversely affect the integrity of the SAC via conditions and/or legal obligations agreed with the developer.

4.1.11 If the LPA is unable to conclude that the application will have no adverse effect on the integrity of the South Hams SAC, the application will be refused (except for in exceptional circumstances) [3].

4.2 Survey Requirements

4.2.1 Current national guidance should be followed as well as any local guidance. At time of writing this is Bat Surveys for Professional Ecologist, Good Practice Guidelines (Bat Conservation Trust, 2016). Exact survey requirements will need to reflect the sensitivity of the site and the nature, location and scale of the proposals plus the difficulty of detecting greater horseshoe bats. Early dialogue with the LPA and Natural England is therefore encouraged.

4.2.2 There is currently no national guidance available to inform winter bat activity surveys in the Sustenance Zones around hibernation roosts. Some foraging will occur during hibernation but at reduced rates to other times of year. The ecological consultant should discuss and agree any winter survey requirements with the LPA and Natural England.

4.2.3 Survey that is more than 2/3 years old will generally be considered out of date as per the ***British Standard for Biodiversity*** BS 42020, however see paragraph 4.2.5.

4.2.4 Surveys and assessment of the results should be informed by any relevant greater horseshoe bat data within the vicinity of the development from Devon Biodiversity Records Centre (see contact details in Appendix 1) and relevant projects where data are available. The assessment should provide an overview of how greater horseshoe bats are thought to use the landscape in and around the application site. New bat data should be shared with the Devon Biodiversity Records Centre in accordance with good practice guidelines.

4.2.5 In some circumstances it may be possible for the LPA and Natural England to agree to mitigation requirements without the need for a survey / full survey. Note that HRA will still be required. Circumstances may include:

- A minor development proposal where there is certainty (as evidenced by a competent ecological consultant) that impacts on greater horseshoe habitat can be avoided or are negligible.
- A situation in which survey (or further survey) would not contribute further to the identification of impacts and avoidance/mitigation requirements.
- A situation in which the LPA and Natural England agree that there is sufficient existing survey information for the site (see British Standard for Biodiversity BS2020 for more information).

4.3 Avoidance, Mitigation and Monitoring Principles

4.3.1 The development should be designed (using the 'mitigation hierarchy'[4] as the standard approach) to avoid impacts through:

- Avoiding loss, damage or disturbance to greater horseshoe bat roosts, Foraging Habitats and Commuting Routes and maintaining connectivity to offsite habitats.
- Where appropriate, creating sufficiently wide and dark buffers along or around habitats to protect them from impacts.
- Designing any lighting schemes to prevent impacts on known or potential greater horseshoe bat habitat.
- Designing the scheme to avoid future impacts *e.g.* impacts from the future introduction of householder lighting, safety lighting or householder hedge management.

4.3.2 Where it is not possible to avoid all impacts the applicant should put forward measures to reduce impacts (mitigation) and ensure no adverse effect on the integrity of the SAC. Required measures may include:

- Creating or enhancing new dark corridors through the development site to maintain a connected network of Commuting Routes for bats.

[4] See Guidelines for Ecological Impact Assessment in the UK and Ireland (September 2018) Chartered Institute for Ecologists and Environmental managers (CIEEM) https://www.cieem.net/ and the British Standard for Biodiversity (BS 42020:2013).

- Creating or enhancing new Foraging Habitat in suitable locations within the same Sustenance Zone.

- Maintaining Commuting Routes across road and transport routes by creating safe greater horseshoe bat crossings following best practice. This could include, for example, culverts, underpasses and green bridges.

- Imposing controls or restrictions on relevant operations, *e.g.* cutting turbine speeds.

- Creating or enhancing a roost.

- Contributing to any South Hams SAC strategic greater horseshoe bat fund which combines funding to deliver permanent high-quality greater horseshoe bat habitat and roosts in priority locations to increase population resilience. The LPAs will provide further advice where this is relevant.

4.3.3 There must be sufficient certainty that mitigation measures will be effective in ensuring *no adverse effect on the integrity* of the SAC and that they can be delivered. For example:

- Measures must be in place and functioning before impacts occur.

- All financial and legal details relating to the delivery of mitigation requirements must be clear.

- Measures should be secured and implemented to reflect the duration of the impacts. Where impacts are permanent and irreversible measures will need to be secured ***in-perpetuity***.

4.3.4 All mitigation should follow current best practice.

4.3.5 Mitigation measures must be considered in the context of the wider area *e.g.* Commuting Routes through a development site must connect to routes outside the site and off-site impacts such as lighting must be mitigated.

4.3.6 Monitoring (which ensures that mitigation has been carried out as agreed and is effective) and appropriate follow up measures must be agreed with the LPA and implemented by the developer. Any required remedial measures must be completed to a timetable agreed with the LPA.

4.3.7 All avoidance, mitigation and monitoring information (relating to purpose, timing, delivery, long-term management *etc.)* must be provided to the LPA in appropriate detail, at the agreed stage in the planning process, and in an agreed format. Generally, information required for the LPA to assess the planning application should be included in an Ecological Impact Assessment or, when required, an Environmental Statement. Further detailed information may be required through conditions imposed on any planning permission and in documents such as a Construction Environmental Management Plan (CEMP) and Landscape and Ecological Management Plan (LEMP).

Note: Whilst not required for HRA both the developer and LPA should seek enhancements for greater horseshoe bats in line with any national and local net gain policy and guidance.

5 Reviewing the South Hams SAC HRA Guidance

5.1.1 This guidance will be reviewed and updated by the Steering Group as required. This may be as a result of national policy or legislative changes, the discovery of a greater horseshoe bat roost which meets the criteria for SSSI designation, or evidence of greater horseshoe bats from the SAC population using areas outside the Landscape Connectivity Zone where evidence indicates there is a functional link to the South Hams SAC.

5.1.2 An up-to-date version of the guidance will be available on the DCC website.

5.1.3 If significant revisions are made to the document, the Steering Group will advise consultants listed on the DCC website and ensure that these amendments are set out in a table included as an Appendix to the Guidance.

Glossary

Adverse effect on integrity	Where the competent authority is unable to confirm that the plan or project, without taking into account measures to avoid or reduce harmful effects (mitigation), will not have a likely significant effect on the SAC then the LPA will ask for further information in order to undertake an ***Appropriate Assessment*** and ensure that the plan or project will not have an adverse effect on the integrity of the site. The integrity of a European site can be defined as, 'the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.' [5] In practical terms this means the habitats necessary to maintain a healthy and viable population of greater horseshoe bats.
Appropriate Assessment	Stage 2 of HRA requirements where a likely significant effect, alone or in-combination, cannot be ruled out. An assessment of whether the proposal will adversely affect the integrity of the European Site taking into account avoidance and/or reduction measures. The ***Precautionary Principle*** applies, so to be certain, the LPA should be convinced that no reasonable scientific doubt remains as to the absence of such effects.
British Standard for Biodiversity	BS42020: 2013 Biodiversity – *Code of practice for planning and development* – is the first British Standard on biodiversity planning. Consistent with the European Biodiversity Strategy and UN Aichi targets. The British Standard offers a coherent methodology for biodiversity planning.
Commuting Routes	Linear features used as flight lines by greater horseshoe bats *e.g.* hedgerows, tree lines, woodland edge and vegetated watercourses.
Competent Authority	For the purpose of the ***Habitats Regulations***, a Competent Authority includes any Minister of the Crown, government department, statutory undertaker, public body of any description or person holding a public office. For planning applications, the Competent Authority would typically be the relevant Local Planning Authority.
Consultation Area	The combined area of the ***Sustenance Zones*** and ***Landscape Connectivity Zone*** (Figure 1). Based on current evidence the LPAs consider that applications outside the consultation zone will not have a likely significant effect on the South Hams SAC population of greater horseshoe bats.
Designated Roosts	The six greater horseshoe bat maternity and/or hibernation roosts designated as SSSI. These are thought to support an important proportion of the total greater horseshoe bat population across South Devon. Five of the roosts are within the South Hams Special Area of Conservation. See Figure 1.
Detailed HRA	Where it is clear from the Flow Chart in Section 3 that the application may have a likely significant effect on the South Hams SAC, alone or in-combination with other plans or projects, the LPA will need sufficient information from the applicant to produce a detailed ***HRA Screening***,

	and then, when necessary, an ***Appropriate Assessment***. These two stages are referred to in this guidance as 'detailed HRA'.
Echolocation	The sonar-like system used by bats to detect and locate objects by emitting usually high-pitched sounds that reflect off the object and return to the animal's sensory receptors, either their ears or in the case of horseshoe bats, their nose 'leaves'.
European sites (sites protected under European legislation)	Sites within the European Union (EU) network of classified Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) designated under Article 4 of the EU Habitats Directive (EEC/92/43). Also referred to as Natura 2000 sites.
European Protected Species	Species of plants and animals (other than birds) protected by law through the European Union and listed in Annexes II and IV of the European Habitats Directive.
Existing Mitigation Features (greater horseshoe bats)	Roosts, Commuting or Foraging Habitat created, enhanced or protected to meet Habitats Regulations requirements for approved projects relating to the South Hams SAC greater horseshoe bat population.
Favourable Conservation Status	Article 1 (i) of the Habitats Directive defines conservation status for species as *"the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of the its populations within the territory referred to in Article 2'* and continues *'the conservation status may be considered 'favourable' when:* (a) *its natural range and areas it covers within that range are stable or increasing; and* (b) *the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and* (c) *there is and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis'.*
Foraging Habitat	Feeding areas for greater horseshoe bats, primarily cattle grazed pasture, semi-natural woodland, unimproved pastures, meadows, hedges and watercourses.
Habitats Directive	South Hams SAC has been designated under the European Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora ("the Habitats Directive") as part of a European network of strictly protected sites important conservation sites that will make a significant contribution to conserving habitats and species listed in Annex I and Annex II of the Directive. These habitat types and species are those considered to be most in need of conservation at a European level (excluding birds).

Habitats Regulations	Various obligations of the Habitats Directive are transposed into domestic legislation by the Conservation of Habitats and Species Regulations 2017 (SI No. 2017/1012) ("The Habitats Regulations"). The Habitats Directives continues to have a direct effect in the UK and prevail in the event of a conflict between their provision and those of the Habitats Regulations. Decisions of the Court of the European Court of Justice are directly binding on UK competent authorities.
Habitats Regulations Assessment (HRA)	The assessment, required by the Habitats Directive and Habitats Regulations, carried out by the competent authority to assess the effects of projects or proposals on European protected sites. Stage 1 includes screening for likely significant effects. Stage 2 (Appropriate Assessment) assesses whether it is possible to avoid an adverse effect on site integrity.
HRA screening	An assessment of whether the proposal will, on its own or in-combination with other plans or projects, have a likely significant effect on the SAC's population of greater horseshoe bats before avoidance or reduction measures have been taken into account. The flow chart in section 3 should be used to identify whether an application may have a likely significant effect on the South Hams SAC greater horseshoe bat population. Where it is clear that there is no likelihood of significant effect there is no need for detailed screening. However, where there may be a likely significant effect the LPA will need to use information provided by the applicant to undertake a detailed HRA screening. Where screening cannot rule out a likely significant effect then ***Appropriate Assessment*** must be carried out.
Hibernation roost	Roosts where bats hibernate during the winter. Greater horseshoe bats in South Devon largely use caves and disused mines but occasionally also use buildings with stable, cool temperatures and high humidity e.g. unheated cellars and ice houses unheated cellars and ice houses.
In-combination effects	• Effects that occur from a plan or project, in combination with other plans or projects to protect sites from cumulative effects of more than one project when the effects of project acting on the site alone would not be likely to be significant. The key purpose is to ensure no significant cumulative adverse effects on a site. Projects generally include [6]: Projects started but not finished • Projects with consent but not started • Applications lodged and not determined • Refusals subject to appeal • Known projects not needing consent • Proposals in adopted plans • Firm proposals in published final draft plans • Firm proposals in final draft plans.
In-perpetuity	For the purposes of HRA, mitigation must cover the duration of impacts. Where impacts are permanent and irreversible mitigation should be delivered 'in-perpetuity'. Legal counsel may need to be sought in some cases when a defined time frame is required under The Perpetuities and Accumulations Act 2009.

Integrity Test	In the context of the Habitats Regulations, the 'integrity' of a site is defined in England and Wales as *'the coherence of its ecological structure and function across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which the site is (or will be) designated'*. A site can be described as having a high degree of integrity where the inherent potential for meeting site conservation objectives is realized, the capacity for self-repair and self-renewal under dynamic conditions is maintained, and a minimum of external management support is required. The integrity test must be considered on a case-by-case basis, taking account of the potential effects of the particular plan or project on the particular site and its qualifying features. [6]
Landscape Connectivity Zone	The area that includes a complex network of Commuting Routes used by the SAC population of greater horseshoe bats and providing connectivity between the Designated Roosts.
Likely significant effects	Effects, considered in HRA screening, which would undermine the SAC's Conservation Objectives. If, on the basis of information provided, a likely significant effect cannot be ruled out then Stage 2 of the HRA (an ***Appropriate Assessment***) must be undertaken by the competent authority. In HRA terms, 'likely' is not a certainty or a probability but a possibility or a risk of a significant effect [6].
LPA – Local Planning Authority	The Local Planning Authority is the Authority responsible for plan- making and development management functions.
Material consideration	A material consideration is a matter that should be taken into account in deciding a planning application or in an appeal against a planning decision.
Maternity roost	The place where, during summer, female greater horseshoe bats gather to have and raise their pups. Most breeding females use buildings, choosing sites with large entrance holes with access to open roof spaces warmed by the sun. Such sites are normally in larger older houses, churches and barns.
Mitigation	Measures to avoid and reduce significant adverse effects on the integrity of the South Hams SAC population of greater horseshoe bats.
Permitted development	Permitted development rights are a national grant of planning permission which allows certain building works and changes of use to be carried out without having to make a planning application. Permitted development rights are subject to conditions and limitations to control impact and to protect local amenity. Rules relating to permitted development are set out in the General Permitted Development Order.
Pinch Point	Known or potential greater horseshoe bat commuting routes which are significantly restricted *e.g.* due to urban encroachment or proximity to the sea / estuaries. Further restriction to a Pinch Point could significantly impact on the movement of greater horseshoes and potentially have a likely significant effect on the SAC.

Plans or projects	Plans or projects in the context of HRA are defined as [6] A plan is: • any new document (or modification alteration or revocation) whatever form or title it may have • a detailed proposal for doing, planning, regulating or achieving something OR • an intention/decision about what is going to be done • excluding statements of general aspiration or political will or general intentions. A project is capable of being: Anything that requires any form of new or renewed, or periodically renewable, authorisation or any variation, modification or revocation of an authorisation.
Planning applications	As well as planning applications this term includes prior approval notices and non-material amendments.
Precautionary Principle	HRA incorporates the 'precautionary principle' as established in case law. It is not for the competent authority to show that there would be harm to the European site's integrity before refusing authorization, but for it to establish that there would be no harm to site integrity before granting authorisation [6].
Roosts	A bat's breeding site or resting place. UK bats do not construct roosts but use structures that are already available. Different sites are used at different times of year and typically include: older houses, churches, barns, caves, tunnels and cellars. Bats need different roosting conditions at different times of year and they will often move around to find a roost that meets their needs.
SAC - South Hams Special Area of Conservation	South Hams Special Area of Conservation. Designated for its internationally important greater horseshoe bat population and habitats including dry heaths, semi-natural dry grasslands, scrub, woodland, cliffs and caves.
Site of Special Scientific Interest (SSSI)	An area or site that is designated by Natural England under the Wildlife and Countryside Act 1981 for its nationally important biodiversity.
Sustenance Zone	The area within 4kms of Designated Roosts which includes critical Foraging and Commuting Habitat for greater horseshoe bats. Note: the Sustenance Zone for Berry Head is based on a sustenance area equivalent to a 4km radius circle.

Appendix 1 – Contact Details

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TQ2 5QW
planning@torbay.gov.uk
01803 208804

Natural England
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Discretionary Advice Service Form: https://www.gov.uk/government/publications/charged-environmental-advice-service-request-form
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Appendix 2 – Overview of updates to the 2010 Guidance

This guidance updates and replaces the South Hams SAC Greater Horseshoe Bat Consultation Zone Planning Guidance published by Natural England in 2010.

Evolving the Strategic Flyways into a Landscape Connectivity Zone

Strategic Flyways

Strategic Flyways were mapped for the 2010 guidance using a combination of greater horseshoe bat data available at that time (including radiotracking data) and knowledge of greater horseshoe bat ecology. The Strategic Flyways were drawn to connect known roosts (particularly the Designated SAC roosts) and were based on contiguous landscape features which were thought most likely to be used by greater horseshoe bats (especially river corridors and sheltered valleys). For clarity it should be noted that, except for those used by radiotracking studies, there was no evidence for the majority of Strategic Flyways, as to whether or not they were used by greater horseshoe bats. The flyways were made 500 metres wide to offer several pathways and provide alternative routes to accommodate variance in weather.

The introduction of Strategic Flyways through the 2010 guidance was critically important in raising awareness of the importance of commuting routes (through the South Devon landscape) in supporting the SAC's population of greater horseshoe bats, and the potential for applications to have a likely significant effect on the SAC population of greater horseshoe bats away from the Designated Roosts and Sustenance Zones.

Data update

Since 2010 the number of records of greater horseshoe bats held by Devon Biodiversity Records Centre (DBRC) has increased, in part due to the Devon Bat Survey which began as part of the Devon Greater Horseshoe Bat Project in 2016. During 2015/16 in order to ensure that the evidence base for this Guidance was as complete as possible, the LPAs collated further records from planning applications and from local experts (through one-to-one meetings and a 2017 workshop with ecological consultants, bat workers and Devon Bat Group members). These records were added to the DBRC data set. The methodology for this work is available on the Devon County Council website and the majority of the bat data (other than in situations in which the source of the data does not want it shared) is available through DBRC's standard data services and Devon Bat Group.

It is important to be aware that the updated evidence base is composed of *ad hoc* records and does not provide a complete picture of greater horseshoe bat distribution and activity. Blank spaces do not equate to no bats. However, the evidence base does illustrate that there are records of greater horseshoe bats and small roosts (away from the Designated roosts) across much of the South Devon landscape.

In addition to the evidence base collated by the LPAs, a University of Sussex research study collected data during 2016 from static recorders placed at increasing distances from three SAC maternity roosts (Buckfastleigh, Chudleigh and High Marks Barn). These data support the findings of the evidence review that SAC greater horseshoe bats are widely dispersed across the landscape at increasing distance from the designated roosts, using a complex and widely distributed network of commuting routes [20].

Implications

All existing evidence (from research and records) indicates that away from Designated Roosts and Sustenance Zones greater horseshoe bats are dispersed across the landscape in low numbers. They use a complex network of sheltered hedges, woodland edge, stream corridors *etc.* to move around the landscape between the Designated Roosts and also between other smaller roosts as required through the year (mating roosts, day roosts, hibernation roosts, transitional roosts *etc*.). Schofield (1996) highlights the importance of maintaining access to smaller roosts in order to help ensure future population resilience. He states that regular use of satellite roosts over a number of years could promote the establishment of new maternity roosts as more individuals use them [21].

In order to maintain long term Favourable Conservation Status of the population it is therefore important that we maintain sufficient connectivity across the whole of this landscape (allowing landscape scale permeability), rather than just protecting a number of Flyways.

In order to achieve this broader landscape connectivity, the Strategic Flyways have been replaced with a Landscape Connectivity Zone (LCZ). This change was agreed at a Steering Group meeting which included Professor Fiona Mathews (greater horseshoe bat expert) and Steve Markham (bat consultant and one of the authors of the 2010 guidance).

The LCZ has been drawn up, using best available evidence and following the precautionary principle, to include the landscape most likely to be regularly used by the majority of the bats forming the SAC greater horseshoe bat population, noting that there will always be some movement of bats into and out of this zone and that very little is known on how bats use the landscape throughout the year.

The LCZ includes:

a. The landscape between the Designated Roosts - included to maintain landscape permeability between these key roosts.

b. The landscape up to 10kms from Designated Maternity Roosts.10kms is based on:

- Advice from Billington and Rawlinson (2006) to the Countryside Council for Wales (CCW) on consultation zones for greater and lesser horseshoe bats [22]. The zones identified extended to 10km from roosts for both species. Guidance on this 10km zone states, 'only a small part of this area is likely to be used for foraging, but flight routes may lead further connecting to other roost sites. The aim should be to maintain habitat links through the area….Before any major developments are allowed within 10km of any greater horseshoe roost...detailed studies should be made to consider potential impacts.'
- Research by Jones *et a*l. (1995) who recorded many individuals flying distances of 10km from maternity roosts to hibernate [23].
- Including all of the smaller roosts (largely day and night roosts) identified through radiotracking to be used by bats from the Designated Maternity Roosts [16,17,18,19].

As bats occur at a low density in this zone it is considered that impacts on individual commuting routes would be unlikely to have a significant effect on the population as a whole. However, impacts on a network of commuting routes within this area could

result in a significant number of bats having to find new, longer routes across the countryside (potentially reducing their ability to survive due to using up energy pre and post hibernation) or being prevented from accessing roosts altogether. These impacts could have a likely significant effect on the South Hams SAC population as a whole. Given that greater horseshoe bats in the Landscape Connectivity Zone are found in low numbers it is considered that there is sufficient evidence to reasonably assume that impacts on roosts and habitat beyond this boundary will impact on so few bats that there will not be a likely significant effect on the SAC's greater horseshoe bat population (unless there is evidence to the contrary).

The LPAs are committed to working with DBRC and others to keep records of greater horseshoe bats as up to date as is reasonably possible and to work with partners to ensure that surveys of any potentially significant roosts are undertaken. The LCZ boundary will be updated to reflect any new findings where appropriate.

Amended boundaries to the Sustenance Zones

Note that all the boundaries of the 2010 Sustenance Zones have been amended. The boundaries are now 4km from the centre of the roosts rather than 4km from the edge of the mapped SSSI. Due to its location next to the sea and urban development within Brixham Town the Berry Head Sustenance Zone remains (as for the 2010 Guidance) based on a sustenance area equivalent to a 4km radius circle.

Survey

In 2016 the Bat Conservation Trust (BCT) published new survey guidelines. The LPAs and Natural England have agreed that these guidelines should replace the survey specification in the 2010 South Hams SAC guidance.

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