Sussex Bat Special Area of Conservation

Planning and Landscape Scale Enhancement Protocol

Aim of the protocol

The aim of this joint document is to:

- Facilitate sustainable development; and
- Secure a diverse and healthy landscape for bats, people and other wildlife

It builds upon Policy SD10 within the South Downs National Park Local Plan and will support the biodiversity, green infrastructure and dark skies aspirations within the local plan.

By following the guidance in this protocol, the South Downs National Park Authority can ensure that the bat populations associated with The Mens, Ebernoe Common and Singleton and Cocking Tunnels Special Areas of Conservation (SACs) thrive and development around the SACs avoids impacts on them, thereby preventing delays during their consideration at the planning stage.

The protocol provides guidance on:

- measures to avoid impacts to bats associated with the SACs,
- when surveys may be needed
- landscape- scale conservation opportunities that are required to maintain the integrity of the SACs and the populations of Bechstein's and barbastelle bats. Through securing developer contributions from major schemes and working closely with existing and future land management incentives the joint vision is to deliver an integrated conservation strategy for bats and will also deliver much wider benefits for people and wildlife.

Introduction
Sussex has a diverse landscape with significant areas of linked woodland, riparian habitat and grassland areas which support internationally important populations of bats at a number of sites; particularly within three Special Areas of Conservation (SACs).

The Sussex Bat SACs
The Sussex Bat SACs include a suite of three SACs in which the qualifying features are the population of the bats using the SAC as a roost. These include:

Ebernoe Common SAC is a complex of woodlands featuring both barbastelle and Bechstein's maternity roosts. Sites with maternity roosts are important as these are where female bats come together in the late spring and summer to give birth to and raise their young, and are therefore critical to the conservation of the species.

The Mens SAC s also a woodland which features barbastelle maternity roosts.

Singleton and Cocking tunnels SAC which are two disused railways tunnels, are home to hundreds of hibernating bats in the winter. Species recorded hibernating include barbastelles and greater horseshoe bats along with the sole remaining greater mouse-eared bat in Britain. The site is also important for bats in the autumn where large numbers congregate to swarm which includes mating.

In addition to the SACs above, there are a number of other important populations in the surrounding countryside including:

- Petworth Park - Bechstein's bats use trees within the park as maternity roosts. The park and surrounding woodland provide essential foraging.
- Slindon - barbastelle bats use this woodland as a maternity roost.
- Woodland north of Chichester - also a maternity roost for barbastelle bats.

Functionally- linked habitats and Key Conservation Areas
In addition to the SACs containing their roosting sites the bats also require access to habitats outside the boundary of the SACs. This habitat is integral to supporting bats associated with the SACs and is often referred to as functionally-linked habitat. Such functionally linked habitat includes the following:

- Flightlines – these are key commuting routes from roosts to foraging (or feeding) areas used by the bats. The barbastelle flightlines around Ebernoe Common and The Mens have been investigated through survey and are shown in Map 1. The routes to Singleton and Cocking Tunnels are less well known.
- Foraging areas – these are the areas of land where bats feed. Barbastelle bats can forage 10-15 kilometres from the roosting sites and they prefer wet meadows and riparian habitats. Bechstein's tend to forage in and around the woodland where they roost with limited outward travel.

Key Conservation Areas

Based upon published data[1], Natural England recommends that the following impact zones (detailed in Map 2) around the SACs are included:

- 6.5km Key conservation area – all impacts assessed (see Table 1)
- 12km Wider conservation area – significant impacts or severance to flightlines to be considered (see Table 1)

The 6.5 km includes the Key conservation area in which all impacts *must* be considered as habitats within this zone are considered critical for sustaining the populations of bats within the SACs.

The 12km encompasses the wider conservation area which is the full extent of the range of foraging areas required by the bats.

[1] Scoping study for the West Sussex Bat Project - Assessing current evidence to recommend conservation measures important to barbastelle and Bechstein's bats of consequence in the project area A report to Natural England. Bat Conservation Trust 2015
Bat conservation Trust Core Sustenance Zones http://www.bats.org.uk/data/files/Core_Sustenance_Zones_Explained_-_04.02.16.pdf

Legislation and Habitats Regulations Assessment

All Bats

All bats, and their breeding and resting places (irrespective of whether they fall within the boundary of the SAC) are protected in their own right as a European protected species under the Conservation of Habitats and Species Regulations 2017 and also the Wildlife and Countryside Act 1981 (as amended). Further details can be found in Natural England's standing advice[2].

Sussex SAC Bats

For the Sussex SACs, the qualifying features are the populations of Barbastelle and Bechstein's bats roosting within the SAC itself. These species are listed under Annex II of the Conservation of Habitats and Species Regulations 2017. Each individual of the relevant species is protected in its own right as a European protected species, so too are its breeding and resting places, whether it or the places are in the SAC or anywhere outside it. However, there is additional protection for the animals through designation of their key roost areas as SACs.

Functionally linked habitats

Bats roosting within the SACs rely on land outside of the site boundaries. Such land which is required to sustain the bats associated with the SACs is referred to as being 'functionally linked' to the SAC. Where impacts to such functionally linked land could result in significant effects to the bat populations associated with the SAC, full consideration needs to be undertaken under the Habitats Regulations (in the same way as habitat in the SAC).

In short, whilst the European protected species legislation protects the bats and their breeding and resting places, it is the effect of the designation of the SAC that protects, through the Habitats Regulations Assessment process, the habitat of the bats outside the SAC. Further information is available in the Natural England guidance on functional linkages[3].

Habitats Regulations Assessment

Special Areas of Conservation are classified under The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations). The Habitats Regulations require additional consideration during the planning stage to ensure that the proposed development does not affect the reasons for designation.

The planning documents should detail fully the potential impacts and how these will be avoided or reduced. Where avoidance and/or mitigation measures are detailed fully within a planning application which shown that the proposal will not have a 'likely significant effect' then permission may be granted (subject to the measures being fully secured through planning conditions of obligations) and the

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[2] https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications

[3] http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwi2zfG72KrZAhWpIMAKHd4bDH0QFgg0MAE&url=http%3A%2F%2Fpublications.naturalengland.org.uk%2Ffile%2F6572958821646336&usg=AOvVaw3i-O7z9mQnMCR0g0SnkYw8

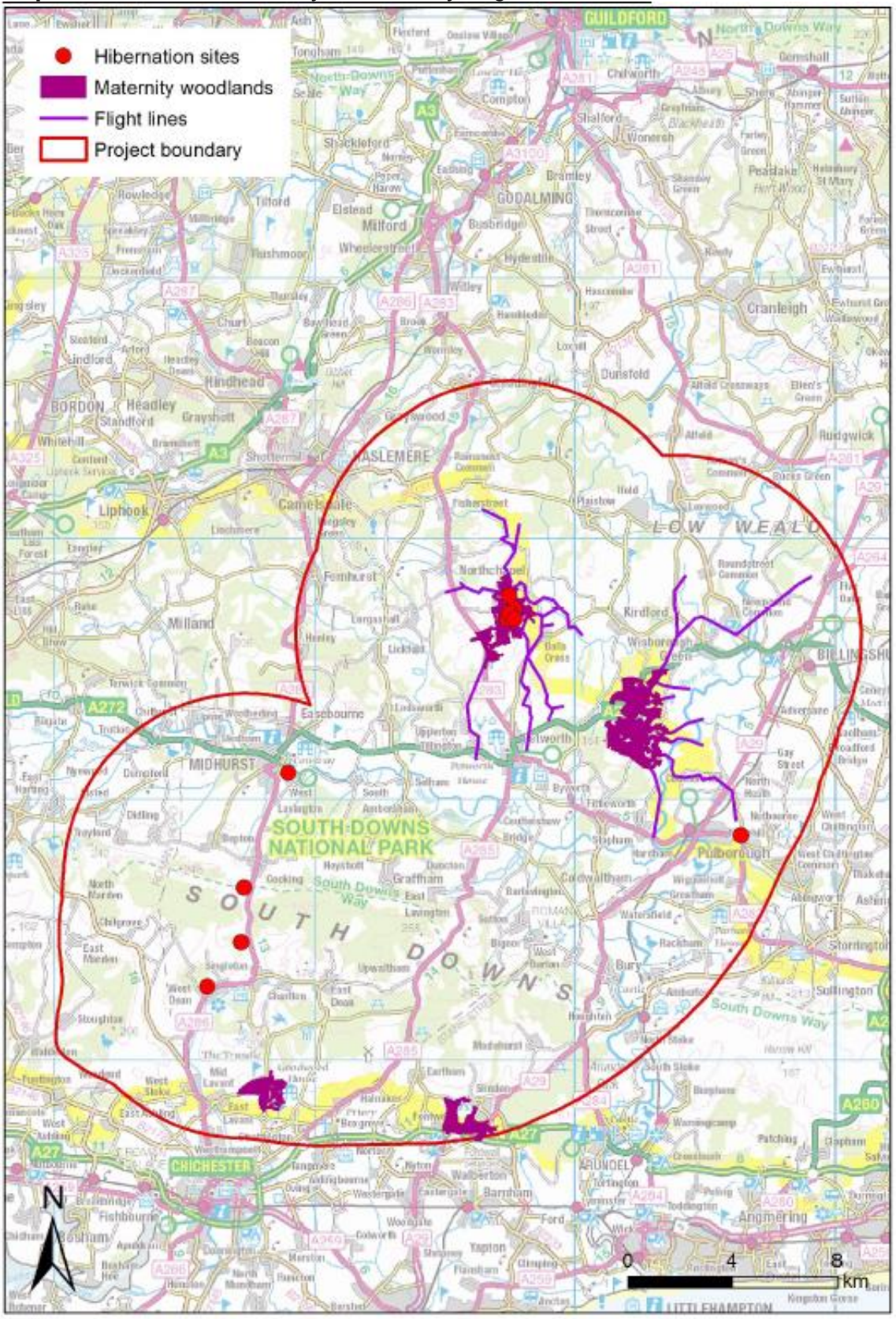
planning authority should record their assessment under the Habitats Regulations.

If, despite the inclusion of avoidance and mitigation measures, a likely significant effect cannot be ruled out, an appropriate assessment must be undertaken by the planning authority. Further guidance on the process is contained within ODPM Circular 06/2005[4] and summarised in Flow Chart 1 below

In addition to the requirements of the Habitats Regulations, all Public Bodies have a general duty, under the Wildlife and Countryside Act 1981 (as amended) to take reasonable steps consistent with the proper exercise of their functions to further the conservation and enhancement of the features for which an SSSI has been notified. Similarly, as a public authority in England you have a duty to have regard to conserving biodiversity as part of your policy or decision making. Conserving biodiversity can include restoring or enhancing a population or habitat.

[4] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf

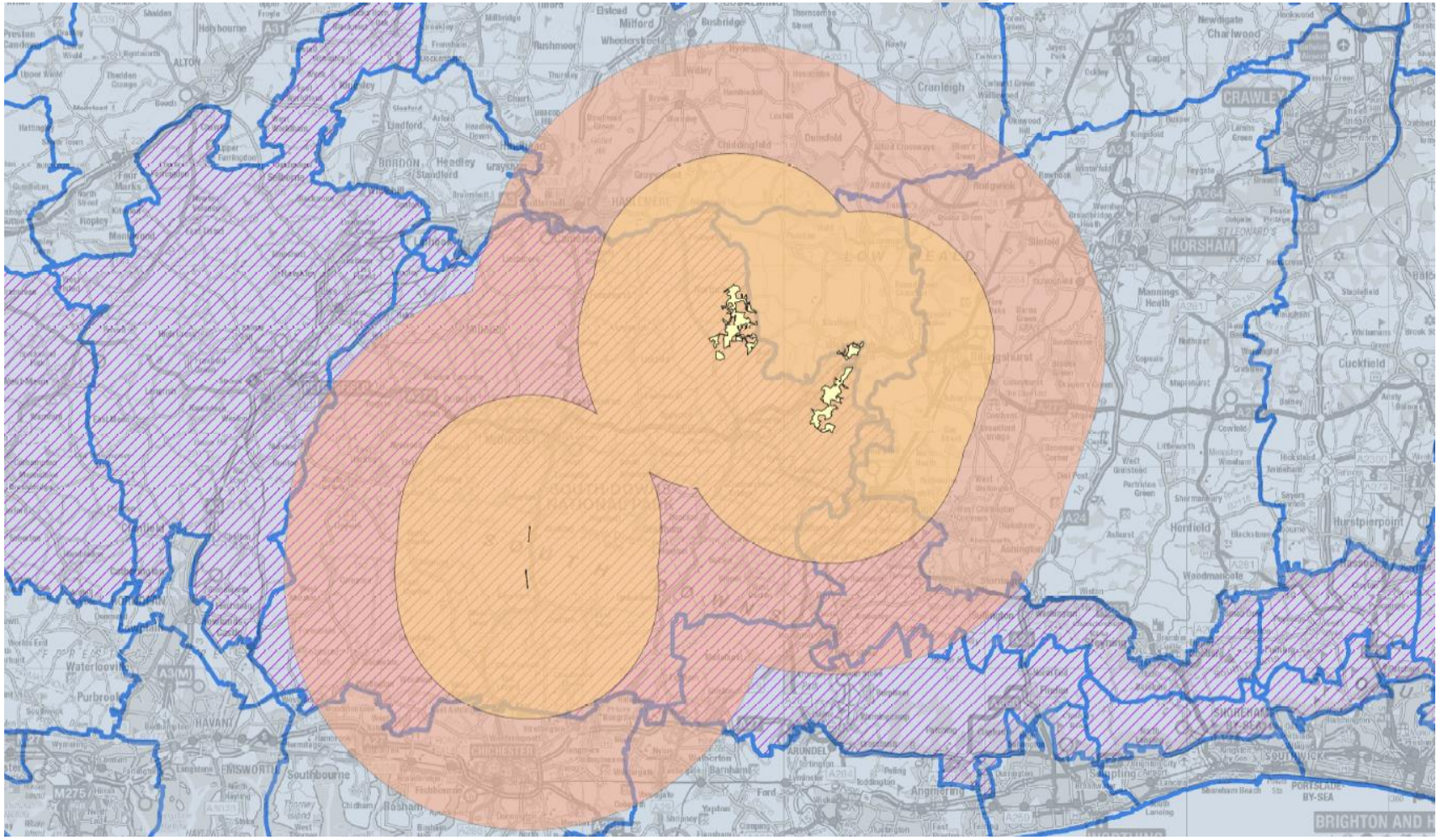
Map 1: Barbastelle Maternity Woods Key Flightlines



Source: Bat Conservation Trust 2015[5]

[5] Scoping study for the West Sussex Bat Project - Assessing current evidence to recommend conservation measures important to barbastelle and Bechstein's bats of consequence in the project area A report to Natural England. Bat Conservation Trust 2015

Map 2: Consultation zones (need to include copyright text)



Planning Policy considerations

National Planning Policy Framework (NPPF)

The following paragraphs within the NPPF are of particular relevance to this protocol and include key opportunities for developments for which the protocol applies to contribute towards the provisions of the NPPF.

Paragraph 118

In accordance with Paragraph 118 of the NPPF, developments should take all reasonable steps to avoid impacts to the SACs and biodiversity in general and where this cannot be achieved, 'mitigation' measures should be implemented and if there are still residual impacts then compensatory measures will need to be provided.

There are three main components to ecological mitigation, namely the 'avoid, mitigate, compensate' hierarchy detailed within the NPPF. These are detailed more fully in Table 1 and preference should always be given for avoiding impacts.

In addition, during all stages of the 'avoid, mitigate, compensate' hierarchy of the NPPF opportunities to deliver ecological enhancements should be secured.

Table 1: Definitions of avoidance, mitigation and compensation measures in relation to bats associated with the Sussex SACs

Measure	Definition
Avoidance	This normally means redesigning the scheme to avoid all direct and indirect impacts
Mitigation	This normally involves measures that reduce and/or minimise impacts such as altering the timing of works or using a different technique
Compensation	This generally involves the creation of new habitat, either on or off site and should only be considered as a last resort.

The Chartered Institute of Ecology and Environmental Management Guidance[6] contains further details.

Paragraph 109

This section requires the planning system to contribute to, and enhance, the natural and local environment by: *minimising impacts on biodiversity and providing* ***net gains*** *in biodiversity where possible.* We advise that all opportunities for net gains are captured in development proposals. Achieving a

[6] https://www.cieem.net/mitigation-compensation-and-enhancement

net gain for biodiversity is also a key component of the Government's 25 Year Environment Plan.

This paragraph also calls for the establishment of *coherent ecological networks that are more resilient to current and future pressures.*

Paragraph 114

Furthermore Paragraph 114 requires a strategic approach in Local Plans *planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.* Clear links can be made between the landscape-scale approach of policy SD10 (below) and this Protocol with habitat networks and green infrastructure

Paragraph 117

This section pertains to minimising impacts to biodiversity through landscape-scale planning, mapping of ecological networks, wildlife corridors and stepping stones, and the preservation, restoration and creation of priority habitats and ecological networks. This protocol not only facilitates development affecting the Sussex Bat SACs SAC but also provides for the enhancement of network of natural habitats.

Local Plan Policy SD1O: International Sites (to be confirmed)

To reflect the requirement to protect not only the SACs but also the functionally-linked habitat around these Policy SD10 of the SDNP Local Plan includes the requirement to consider impacts up12km from the SACs.(link). This protocol provides practical guidance on how to action this policy.

Potential impact arising from development

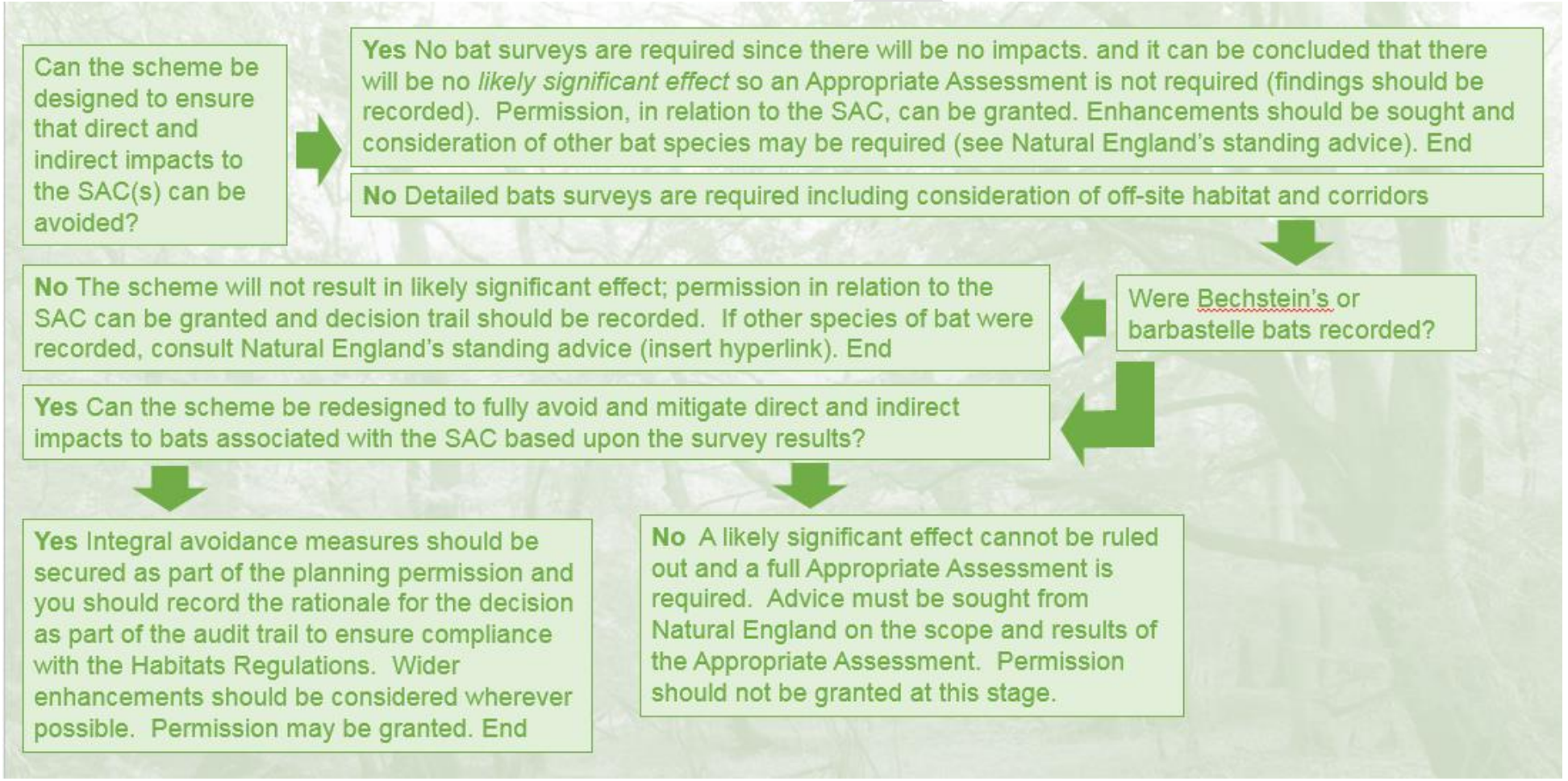
Developments can impact the SACs in a variety of direct and indirect ways and in most cases avoidance and mitigation measures are straightforward. A summary of these is provided Table 2.

Table 2: Summary of impacts and ways to facilitate development

Activity	Potential impact (examples)	How to avoid (examples)	Facilitating Development where impacts cannot be a
Physical Changes • Removal of trees, hedgerows, woodland • Development on foraging or commuting habitats • Alteration to roosts. • Changes to the management of any of the above • infrastructure development Roads, pipelines, cables, wind turbines etc.	Loss/damage/modification / isolation of • roosts, • commuting corridors, • feeding areas • Mortality/injury	• Re-design the scheme (or elements of the scheme) to ensure habitats and features used by bats are not directly or indirectly impacted	Habitats • Enhance existing habitats and reconnect severed hab of new/bolstering existing habitat to reconnect severe • Ecological Management Plan to ensure long-term pro • Maintain landscaped buffers around all existing roost • Post-construction Bat Monitoring Plan to inform site m Buildings • Incorporation of bat roosts into existing or new buildin • Provision of purpose built bat buildings/structures
Lighting during construction and operation	• Later/non emergence leading to reduced foraging opportunities • Reduction in usage of feeding and commuting areas. • Roost abandonment • Reduction in usage of feeding and commuting areas.	• Design the lighting so that the light levels for all roosts, feeding and commuting habitats during construction and operational phases does not increase above pre-development/impact levels	• Refer to the Local Plan Policy SD8: Dark Night Skies • Design scheme away from flightlines and feeding area Bats and Lighting)

Noise/vibration	• Roost abandonment • Reduction in usage of feeding and commuting areas.	• Use less disturbing techniques/machinery • Redesign the scheme so that noise impacts do not occur close to roosts	• Site potential sources of noise-vibration away from ro •

Flowchart 1: Habitats Regulations Assessment summary flowchart



Opportunities for landscape scale enhancement –linking

Creating opportunities for landscape-scale enhancements is key to delivery of conservation for all species of bat. The location of any enhancements is key to their success, for example replacement roosts, even in urban areas, should be linked to areas of greenspace to provide feeding and commuting opportunities. Enhancements can be broken down into providing roosts, places where animals can feed and safe corridors between their roosting and feeding areas.

Roosts

- Different species of bats use different structures and the same species will use different roosts at different times of the year.
- Most traditional buildings offer plenty of roosting place under tiles, boards and within soffit boxes, for example; should works be proposed to traditional buildings the works should reinstate any roosting features and also provide additional roosting opportunities.
- Modern buildings tend to offer less openings for bats but features such as integral bat bricks can offer roosting opportunities
- Conversions of traditional farm buildings should ensure they incorporate roosting opportunities.
- Trees with potential roosting features such as cracks and fissures should be retained wherever possible and opportunities to buffer them and enhance habitat connectivity should be secured.
- Underground sites including tunnels, ice houses, natural caves – are perfect hibernating roosts and can be enhanced through removing human disturbance (for example using gates to prevent access) and the provision of habitat linkages.
- Bats boxes have some value where there are no other roosting opportunities but should be maintained in the long-term

Commuting Route and Flight-lines

Bats require a landscape scale approach to their conservation, travelling several kilometres in an evening between their roost and feeding areas and they also migrate considerable distances between the summer and hibernation roosts. Connectivity of structurally diverse habitat is a key requirement for them – the diversity of wetland, grassland, scrub/hedgerow and woodland provides ideal habitat for an abundance of insect. Potential enhancements to commuting routes include:

- Creating or replanting relict/gappy hedgerows, woodland streams or small areas of scrub and woodland would great enhancements if they strengthen existing or create new corridors.
- Wetland habitat including Streams and ditches are also important navigating (and feeding) features for bats and opportunities to enhance them could include streamside woodland planting or vegetation
- Creating (or maintaining) dark corridors with no artificial lighting

Feeding (or foraging) Areas

All British bats eat insects and semi-natural habitats will have the greatest diversity of insect life. The closer the feeding/foraging areas are to the roosting

sites, the less energy bats will need to spend flying to them. Different species of bats will use different habitats and potential enhancements include:

- Woodland enhancement to create a diverse structure with rides/glades, a good variety of ground flora, shrub layer and mature canopy trees
- The planting of new woodland areas, particularly linking existing woodland areas together or using new woodland to buffer hedgerows
- Allowing a diverse woodland edge habitat to develop with a transition from woodland through scrub to a species rich grassland habitat buffer to provide structural habitat to support insects
- Creation of areas of species rich grassland
- Creation of ponds
- In more urban areas, greenspaces with areas of semi-natural habitat and native tree avenues will provide foraging

Surveys

- Where direct and indirect impacts to bats or there habitat (including habitat outside of the SACs) cannot be avoided, surveys will be required.
- All surveys should follow the Bat Conservation Trusts' Good Practice Guidelines; the following general points should may be helpful:
- Bat surveys should be undertaken by a suitably experienced and licensed ecologist
- Where deviations from the good practice survey guidelines are proposed, these need to be fully justified on ecological grounds
- For complex sites, Developers may wish to discuss their survey (and/or mitigation) requirements with Natural England on a cost recovery basis through their Discretionary Advice Service
- To fully understand how bats are using the site (and the impacts) a **minimum** of one full calendar year of survey is likely to be required (to cover winter hibernation, spring, summer maternity and autumn mating/swarming periods)
- To avoid delays in determining the application, sufficient lead-in time to undertake all necessary studies should be included and bats (along with other species) should be considered at the earliest stage of the development.
- In addition to specific surveys to understand the impacts to the SACs, surveys may also be required for all bat species and further guidance can be found in Natural England's protected species standing advice

Survey timeframes

	January	February	March	April	May	June	July	August	September	October	November	December
Initial scoping & roost potential surveys												
Tree roost potential inspection surveys												
Maternity roost emergence counts												
Bat activity surveys in the wider landscape												
Radio tracking studies												
Autumn swarming/mating site studies												
Hibernation surveys												

Need to include a case study (or two)