

Preliminary Roost Assessment

4 Stumps End, Bosham, Chichester, West Sussex P018 8RB Mags Watney

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Industry Guidelines and Standards

This report has been written with due consideration to:

• Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

This approach is enshrined in Government planning guidance, for example, paragraph 174 of the National Planning Policy Framework for England.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Mags Watney to undertake a Preliminary Roost Assessment (PRA) at 4 Stumps End, Bosham, Chichester, West Sussex PO18 8RB (hereafter referred to as "the site"). The survey was required to inform a planning application for roof replacement and small extension (hereafter referred to as "the proposed development").

The following is work you will need to commission to obtain planning permission and to comply with legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 7 of this report.

Feature	Survey conclusions (with justification)	Foreseen impacts	Recommendations Measures required to adhere to guidance, legislation and planning policies.
Roosting bats B1	B1 has moderate habitat value for bats, based on numerous suitable roosting opportunities throughout the building under roof tiles. No evidence of bat use was found which indicates a likely absence of void dwelling bats, but does not indicate absence of crevice dwelling bats as droppings will be trapped between roof tiles and roof felt. External evidence is quickly weathered away.	will replace the entire roof, destroying all suitable roost sites present. Any bats present during the work will be disturbed and	(May – September) to determine the presence or likely absence of bat roost in the property. The surveys should be completed during the optimal survey period May to August inclusive.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Mags Watney to undertake a Preliminary Roost Assessment (PRA) at 4 Stumps End, Bosham, Chichester, West Sussex PO18 8RB (hereafter referred to as "the site"). The survey was required to inform a planning application for roof replacement and small extension (hereafter referred to as "the proposed development").

A plan showing the proposed development is provided in Appendix 1 when provided.

The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging or commuting. This has been undertaken with due consideration to the "Bat Surveys for Professional Ecologists —Good Practice Guidelines" publication (Collins, 2016).

No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author's knowledge, by any other consultancy.

1.2 Site Context

The site is located at National Grid Reference SU81090383 and has an area of approximately 0.09ha of dwelling, garage and gardens.

A site location plan is provided in Appendix 2.

1.3 Scope of the Report

This report provides a description of all features suitable for roosting, foraging and commuting bats and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It provides information on possible constraints to the proposed development as a result of bats and summarises the requirements for any further surveys to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation.

To achieve this, the following steps have been taken:

- A desk study has been carried out.
- A field survey has been undertaken, including an external survey and internal inspection of built structures and a ground level assessment of trees where possible, to determine the presence or the suitability of any features which bats could use for roosting and to assess the suitability of the site's bat foraging and commuting habitat.
- An outline of potential impacts on any confirmed or unidentified roosts has been provided, based on the proposed development.
- Recommendations for further surveys and mitigation have been made, along with advice on the requirements for a European Protected Species Licence (EPSL) application if appropriate.

Opportunities for the enhancement of the site for roosting, foraging and commuting bats have been set out.

2.0 Methodology

2.1 Desk Study

The desk study included a 2km radius review of statutory designated sites with bat qualifying interests and granted EPSL records for bats held on magic.gov.uk database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

2.2 Field Survey

The survey was undertaken by Natalie Evans, (Natural England Bat Licence Number: 2018-37888-CLS-CLS) on 6th July 2022.

The PRA focussed on any buildings and trees which will be affected by the proposed development as well as providing an overview of the wider site and the surrounding landscape for bat roosting, foraging and commuting habitat.

For any surveyed buildings:

A non-intrusive visual appraisal was undertaken from the ground, using binoculars to inspect the external features of the building(s) for features which bats could use for roosting, including access or egress points and for signs of bat use including droppings, scratch marks, insect remains and urine smear marks. An internal inspection of the building(s) was also made, including the living areas and any accessible roof spaces, using a torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space. An endoscope was used to complete a close-up inspection of any accessible features, where appropriate.

For any surveyed trees:

A visual inspection was undertaken from ground level using binoculars and, where accessible and safe to do so, an internal inspection of any features which bats could use for roosting was completed using an endoscope, torch and ladders.

2.3 Breeding Birds and Other Incidental Observations

The surveyor also made note of any other ecological constraints observed during the survey, notably the likelihood of presence or signs of breeding birds, and the suitability of the site for barn owls *Tyto alba*.

2.4 Suitability Assessment

Built structures and trees were categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in Table 1 for buildings and Table 2 for trees below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 1: Features of a building that are correlated with use by bats

Classification	Feature of building and its context
Moderate to high	Buildings or structures with features of particular significance for larger numbers of roosting bats e.g. mines, caves, tunnels, icehouses
	and cellars.
	Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and
	grazed parkland.
	Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream
	valleys and hedgerows.
	Site is proximate to known or likely roosts (based on historical data).
	Buildings with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Low	A small number of possible roost sites or features, used sporadically by individual or small numbers of bats. Potential roost features may
	be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or
	predators.
	Habitat suitable for foraging in close proximity, but isolated in the landscape. Or an isolated site not connected by prominent linear
	features.
	Few features suitable for roosting, minor foraging or commuting.
Negligible	Unsuitable for use by bats.

Table 2: Features of a tree that are correlated with use by bats

Classification	Feature of tree and its context
Moderate to high	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and
	potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
	Trees with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Low	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only
	very limited roosting potential to be used sporadically by individual or small numbers of bats. Potential roost features may be suboptimal
	for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators.
Negligible	Unsuitable for use by bats.

2.5 Limitations

It should be noted that whilst every effort has been made to describe the features on site in the context of their suitability for roosting bats, this does not provide a complete characterisation of the site. This survey provides a preliminary view of the likelihood of bats being present. This is based on suitability of the habitats on site and in the local area, the ecology and biology of bats as currently understood, and the known distribution of bats as recovered during the desk study. Bats are highly mobile creatures that switch roosts regularly and therefore the usage of a site by bats can change over a short period of time.

A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.

There is asbestos present in the garage roof so access was not possible to this area.

3.0 Results and Evaluation

3.1 Desk Study Results

3.2 Designated Sites

Table 3: Statutory designated sites with bat qualifying interests or valuable bat habitat within 2km radius of the site

Designated site Distance from		Reasons for notification from Natural England			
name	site (approx.)				
Chichester and	60m west	Chichester Harbour is a large estuarine basin in which at low water extensive mud and sandflats are exposed, drained by channels			
Langstone		which unite to make a common exit to the sea. The site is of particular significance for wintering wildfowl and waders and also			
Harbours SSSI,		breeding birds both within the Harbour and in the surrounding permanent pasture fields and woodlands. There is a wide range of			
SPA, Ramsar,		habitats which have important plant communities.			
Solent Maritime					
SAC					
Chichester Harbour	Site within				
AONB	AONB				
	boundaries				

3.3 Landscape

A review of aerial photographs (Google Earth) the magic.gov.uk database and OS maps has been undertaken. Collated together, the value of the landscape for bats is described below:

The site is situated in a residential area of Bosham, in close proximity to Chichester Harbour and its associated high value habitats. To the east are arable fields with a strong hedgerow network and to the west is the coastline. There are numerous streams, ditches and water bodies in the locale. There are pockets of ancient woodland, deciduous woodland and traditional orchards in the wider landscape. The above habitats will provide good resources for the local bat population for foraging and commuting.

3.4 Historical Records

Bat records have not been obtained at this time but can be included at a later date if necessary.

Table 4: Historical records of bats within 2km of the site

Common name	Scientific binomial	Number of records	Number of roost records	Maternity roost records

A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site.

There have been 2 licenced sites within 2km with roost destruction of common pipistrelle, soprano pipistrelle, brown long-eared bats. Displaced bats from these roosts could find roosting habitat on site.

Table 5: Granted EPSLs for bats within 2km of the site

EPSL reference	Approx. distance from site	Bat species affected	Licence start date:	Licence end date:	Impacts allowed by licence
2019-43626-EPS-MIT	940m north east	BLE,C-PIP,S-PIP	13/12/2019	30/09/2024	Destruction of a resting place
2018-38339-EPS-MIT	1.8km south west	C-PIP	01/01/2019	01/03/2020	Destruction of a resting place

3.5 Field Survey Results

The PRA focussed on B1 which will be affected by the proposed development. The results of the field survey are illustrated in Appendix 3. The weather conditions recorded at the time of the survey are shown in Table 6.

Table 6: Weather conditions during the survey

Date: 06/07/2022				
Temperature	18°C			
Humidity	70%			
Cloud Cover	100%			
Wind	5mph			
Rain	None			

Building B1 Exterior

B1 -southern elevations

B1 is a detached dwelling of brick construction with gabled, clay tiled roof. There are 2 brick chimney stacks. Soffit boxes and window frames are timber and tight fitting, apart from one small hole in the front soffit box. This is unsuitable for bats as there is nowhere to land and crawl into such a small gap. There is a single storey garage attached at the eastern elevation. The garage roof contains asbestos so was not inspected internally.



B1 - southern elevations

The roof tiles across the entire building both 2 storey and single storey areas are raised and warped, providing ideal roosting habitat for crevice dwelling bats which will roost between roof tiles and roof lining. Finding any external evidence of small roosts in these areas is very rare, so an absence of evidence does not indicate the absence of a roost.



B1 -eastern elevation

The mortar along the roof verges is in good condition with no visible gaps. The chimneys appear to be tight fitting.



B1 – northern and western elevations

There are two roof lights to the northern elevation. Attached to the west is a small hipped roof extension.



B1 – interior

The loft of mostly converted to living space but crawl spaces are present along the eaves. These are well sealed with boards and no bat access points were visible. No evidence of bat use was found indicating a likely absence of void dwelling bats.



4.0 Conclusions, Impacts and Recommendations

4.1 Informative Guidelines

A summary of the relevant legislation and planning policies is provided in Appendix 4.

Bats

Bats are protected under the Wildlife and Countryside Act and the Conservation of Habitats and Species Regulations 2017 (amended by the Conservation of Habitats and Species Regulations (amendment) (EU Exit) Regulations 2019).

There are three possible outcomes of this survey, each with specific recommendations. These are outlined below:

Confirmed bat roost

Best practice survey guidelines (Collins, 2016) recommend additional surveys for confirmed roosts. Three further surveys are required to characterise the bat roost present including species, roost type and access points to inform an EPSL application to Natural England. Surveys must be completed during the active bat season (May – September). At least two of the surveys should be completed during the optimal survey period mid-May to August, and at least on the surveys should be a dawn re-entry survey.

Low, moderate or high likelihood of a bat roost present

Best practice survey guidelines (Collins, 2016) recommend additional surveys for features assessed as having low to high suitability for roosting bats. One, two or three further surveys are required to confirm presence or likely absence of a bat roost, based on a low, medium or high roost likelihood evaluation. Surveys must be completed during the active bat season (May – September). If more than one survey is recommended, at least one of them should be completed during the optimal survey period mid-May to August, and at least one the surveys should be a dawn re-entry survey. If two or one further survey is recommended these surveys must be completed during the optimal survey period (mid-May to August). For low and moderate roost likelihood evaluation the survey effort recommended at this stage is iterative and if bats roosts are confirmed in the building, a further survey will be required to provide sufficient information to inform an EPSL application to Natural England.

Negligible likelihood of a bat roost present

Buildings assessed as comprising negligible suitability for roosting bats do not normally require further surveys. However, if bats are found during any stage of the development, work should stop immediately, and a suitably qualified ecologist should be contacted for further advice.

Birds

Legislation protects all wild birds whilst they are breeding, and prohibits the killing, injuring or taking of any wild bird or their nests and eggs. Certain species of bird, including the barn owl, are subject to special provisions; it is an offence to disturb any bird or their young during the breeding season.

4.2 Evaluation

Taking the desk study and field survey results into account, Table 7 presents an evaluation of the value of the site for bats and also details any other ecological constraints identified such as nesting birds in relation to the proposed development.

Table 7: Evaluation of the site for bats and any other ecological constraints

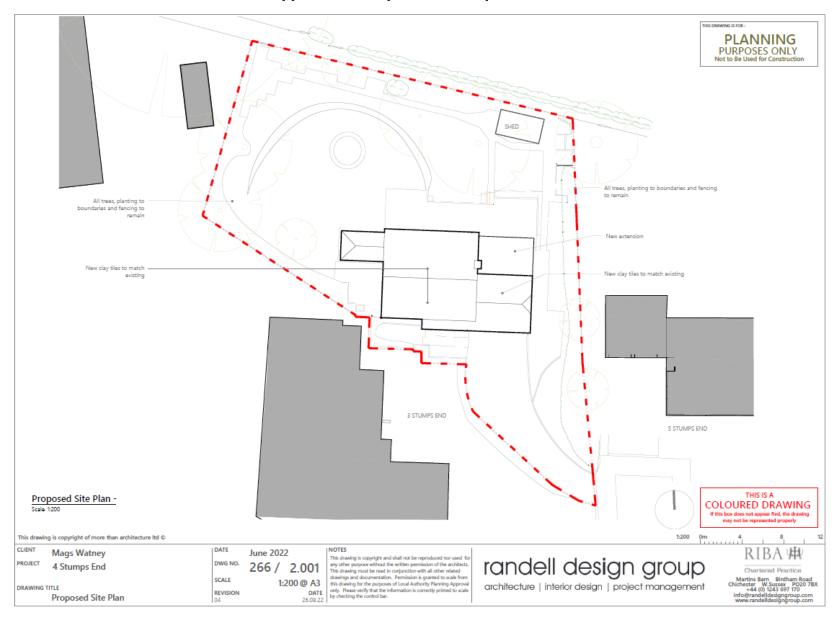
Feature	Survey conclusions (with justification)		Recommendations Measures required to adhere to guidance, legislation and planning policies.	Biodiversity Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021)
Roosting bats B1	B1 has moderate habitat value for bats, based on numerous suitable roosting opportunities throughout the building under roof tiles. No evidence of bat use was found which indicates a likely absence of void dwelling bats, but does not indicate absence of crevice dwelling bats as droppings will be trapped between roof tiles and roof felt. External evidence is quickly weathered away.	will replace the entire roof, destroying all suitable roost sites present. Any bats present during the work will be disturbed and	Two bat emergence or re-entry surveys are required during the active bat season (May – September) to determine the presence or likely absence of bat roost in the property. The surveys should be completed during the optimal survey period May to August inclusive. Two surveyors are required to provide full coverage of the building. Surveys are likely to be required before planning permission can be granted. If bat presence cannot be ruled out or bat roosts are identified after the dusk or dawn surveys, further surveys will be required to characterise the roosts and bring the survey effort up to best practice standard.	TBC following further surveys.
Nesting birds	Several areas of bird droppings were found on the roof indicating potential nesting sites under roof tiles.		If the works are to be undertaken between March and August, a nesting bird check will need to be carried out by a suitably qualified ecologist within 48 hours of the start of work. If any nests are identified then these must be left in situ until the young have fledged.	A group of swift or house sparrow boxes should be placed under the eaves. The boxes should be grouped for at least 3 nesting pairs and should be away from direct sunlight.
Other ecological considerations	The development is limited to the built areas and immediate surroundings, and will not have any secondary impacts on the nearby Chichester Harbour and associated designated sites.	None.	None.	N/A

5.0 Bibliography

- British Standard 42020 (2013). Biodiversity Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
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Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3: Bat Survey Plan



Appendix 4: Legislation and Planning Policy Related to Bats

LEGAL PROTECTION

The **Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019** came into force when Britain left the European Union on 31st January 2020. It covered amendments relevant to this survey to:

Wildlife and Countryside Act 1981: England and Wales (x1 amendment)

Conservation of Habitats and Species Regulations 2017 (x29 amendments)

All species of bat are fully protected under *The Conservation of Habitats and Species Regulations 2017* (amended by the *Conservation of Habitats and Species Regulations* (amendment) (EU Exit) Regulations 2019 which continue the same provision for European protected species, licensing requirements and protected sites after the UK leaves the EU) through their inclusion on Schedule 2.

Regulation 43: Protection of certain wild animals - offences

- (1) A person is guilty of an offence if they:
 - (a) Deliberately captures, injures or kills any wild animal of a European protected species,
 - (b) Deliberately disturbs wild animals of any such species,
 - (c) Deliberately takes or destroys the eggs of such an animal, or
 - (d) Damages or destroys a breeding site or resting place of such an animal,
- (2) For the purposes of paragraph (1) (b), disturbance of animals includes in particular any disturbance which is likely—
 - (a) To impair their ability:
 - (i) To survive, to breed or reproduce, or to rear or nurture their young; or
 - (ii) In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
 - (b) To affect significantly the local distribution or abundance of the species to which they belong.

Bats are also protected under the *Wildlife and Countryside Act 1981 (as amended)* through their inclusion on *Schedule 5*. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

NATIONAL PLANNING POLICY (ENGLAND)

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; measurable gains in biodiversity in and around developments are incorporated; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by Natural England will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored. The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008). There are 17 species of bat breeding in England and Natural England issues licences under Regulation 55 of the Habitats Regulations to allow you to work within the law. Licences are issued for specific purposes stated in the Regulations, if the following three tests are met:

- The purpose of the work meets one of those listed in the Habitats Regulations (see below);
- That there is no satisfactory alternative;

• That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range

The Habitats Regulations permits licences to be issued for a specific set of purposes including:

- 1. include preserving public health or public safety or other imperative reasons of over-riding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- 2. scientific and educational purposes,
- 3. ringing or marking
- 4. conserving wild animals

Development works fall under the first purpose and Natural England issues bat mitigation licences for developments.

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to 'local populations' of EPS and not individuals/site populations.