

Reptile Presence/Absence Surveys

Survey site:

St Stephens Church, Hamsland, Horsted Keynes RH17 7DX

Survey date:

September 2025

Project:

This report is prepared to inform a planning application with the Mid Sussex District Council. The proposal is described as:
The demolition of an existing building, followed by the erection of three dwellings.

Survey legislation can be found in Appendix 5.

Ecological Survey Factor Conclusion, Impact or Recommendations	Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.
See Survey map in Appendix 1, Location plan in Appendix 2, Proposal plans in Appendix 3, Proposed receptor location in Appendix 4, and Legislation in Appendix 5.	
Limitations	This survey follows best practice guidance to determine the presence or likely absence of reptiles and, where present, characterise the site in terms of species and distribution, habitat suitability and context with the wider landscape. However, this information is collected at finite dates and times and provides an indication of the conditions on site only. This survey cannot provide an indication of the population. There were no other specific limitations regarding access, weather, safety or equipment during the survey.
<i>Scope of report</i>	This report describes the suitability of the habitats on the site for reptiles and identifies the presence or likely absence of reptiles within the site. It identifies possible constraints in relation to reptiles as a result of the proposed development and summarises the requirements for further surveys and mitigation measures 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 field survey has been undertaken, including an assessment of habitat suitability and the deployment of artificial refugia and subsequent inspections to identify presence or likely absence of reptiles within the site. • An outline of potential impacts on reptiles has been provided, based on the proposed development. • Recommendations for further surveys and mitigation have been made. • Opportunities for the enhancement of the site for reptiles have been set out.

<i>Background and site context</i>	The reptile survey has been informed by a Preliminary Ecological Appraisal, which was completed by Arbtech Consulting Ltd on 17th June 2025. The surveys determined that the unmanaged neutral grassland and scattered scrub present on the site are considered highly suitable for foraging, commuting, and basking reptiles due to their heterogeneous structure. During the site visit, reptile exclusion fencing was observed surrounding the adjacent field to the south. The applicant has confirmed that this neighbouring site has received planning permission for the construction of 30 new dwellings and is currently undergoing a reptile translocation programme. Previous surveys undertaken on the adjacent site recorded a low population of reptiles (Ecology Solutions, 2020). Although the presence of reptile fencing is likely to significantly limit the movement of reptiles between the two areas, it is possible that remnants of the original population remain present within the site. The survey was required to inform a planning application for the demolition of an existing building, followed by the erection of three dwellings (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1. The survey site is centred on National Grid Reference TQ 38377 27893 and has an area of approximately 0.1ha. The site comprises a disused religious building, hard standing, and an area of overgrown grassland which is succeeding into scrub. An agricultural field borders the site to the south, a sparse treeline to the west, Hamsland public road to the north and a residential dwelling to the east. The site lies on the southern edge of Horsted Keynes, a small rural village surrounded by agricultural land, mature hedgerows and parcels of woodland. There are several habitats of ecological value nearby, including multiple parcels of ancient deciduous woodland such as Sandpits Wood (200m south) and Coneyborough Wood (470m west). The site is located on slightly acid loamy and clayey soils with impeded drainage, with an underlying bedrock geology of sandstone and siltstone.
<i>Methodology</i>	The surveys were overseen by Consultant Ecologist Kelly Clarke. An Ecologist with over three years of experience in reptile surveys and translocations. The survey methodology is based on the Froglife Advice Sheet 10: Reptile Survey, an introduction to planning, conducting and interpreting surveys for snake and lizard conservation (Froglife, 1999), Herpetofauna Workers' Manual (Gent, T. and Gibson, S., 2003) and the Reptile Habitat Management Handbook (Edgar, P., Foster, J. and Baker, J. 2010).

	Refugia was placed around the site in suitable reptile habitat with each refuge numbered and the locations recorded using a GPS unit for monitoring, reporting and mapping. The refugia were steel ‘tins’ (corrugated steel sheets of approximately 50cm x 50cm square) and sheets of bitumen felt (approximately 100cm x 50xm square). The steel tins are regarded to have better habitat value for certain species (particularly snakes) due to their superior thermal retention. For this site, it is assessed to be 0.038ha of potentially suitable reptile habitat on site, comprising other neutral grassland. Therefore, a total of 4 tins and 16 felts were used. Locations of refugia are illustrated in Appendix 3. The refugia were deployed on 20th August 2025 and left to ‘bed in’ for a minimum of two weeks. Seven separate site visits were completed to search for reptiles between 3rd September and 29th September. The surveyor walked slowly and carefully checked the top and underneath of each felt, as well as looking for reptiles between the felts. The surveys were undertaken during the optimal period (typically in April, May and September) and in suitable weather conditions, when temperatures between 10°C and 18°C with intermittent or hazy sunshine and little or no wind, before 11am and after 2pm.																				
Population size assessment and key reptile site characterisation	A population size assessment was completed in accordance with current guidance detailed within Froglife Advice sheet 10 (Froglife 1999). The population size assessment was determined as per the parameters outlined in Table 1. Table 1: Example results of Reptile Surveys <table><tr><th>Species</th><th>Low Population (Score 1) (Max count)</th><th>Good Population (Score 2) (Max count)</th><th>Exceptional Population (Score 3) (Max count)</th></tr><tr><td>Adder <i>Vipera berus</i></td><td><5</td><td>5 -10</td><td>>10</td></tr><tr><td>Grass snake <i>Natrix natrix</i></td><td><5</td><td>5 -10</td><td>>10</td></tr><tr><td>Common lizard <i>Zootoca vivipara</i></td><td><5</td><td>5 -20</td><td>>20</td></tr><tr><td>Slow worm <i>Anguis fragilis</i></td><td><5</td><td>5 -20</td><td>>20</td></tr></table>	Species	Low Population (Score 1) (Max count)	Good Population (Score 2) (Max count)	Exceptional Population (Score 3) (Max count)	Adder <i>Vipera berus</i>	<5	5 -10	>10	Grass snake <i>Natrix natrix</i>	<5	5 -10	>10	Common lizard <i>Zootoca vivipara</i>	<5	5 -20	>20	Slow worm <i>Anguis fragilis</i>	<5	5 -20	>20
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	In accordance with current guidance detailed within Froglife Advice sheet 10 (Froglife 1999), to qualify as a “<i>key reptile site</i>”, the surveyed site must meet at least one of the following criteria: a. Supports three or more reptile species. b. Supports two snake species. c. Supports an exceptional population of one species. d. Supports an assemblage of species scoring at least 4 (see Table 2). e. Does not satisfy criteria a-d but is of regional importance due to local rarity.																																																																
<i>Field survey results</i>	Survey dates and weather conditions are described in Table 2 below. <i>Table 2. Survey dates and weather conditions.</i> <table><tr><th>Visit No.</th><th>Date</th><th>Time</th><th>Temperature (°C)</th><th>Humidity (%)</th><th>Cloud Cover (%)</th><th>Wind speed (m/s)</th><th>Precipitation</th></tr><tr><td>1</td><td>03/09/2025</td><td>15:30</td><td>20</td><td>75</td><td>90</td><td>2.4</td><td>None</td></tr><tr><td>2</td><td>05/09/2025</td><td>10:00</td><td>17.3</td><td>70</td><td>20</td><td>1.2</td><td>None</td></tr><tr><td>3</td><td>08/09/2025</td><td>17:30</td><td>16.5</td><td>57</td><td>10</td><td>0.1</td><td>None</td></tr><tr><td>4</td><td>15/09/2025</td><td>09:15</td><td>15.8</td><td>72</td><td>0</td><td>2.4</td><td>None</td></tr><tr><td>5</td><td>22/09/2025</td><td>14:30</td><td>22.5</td><td>40</td><td>30</td><td>2.0</td><td>None</td></tr><tr><td>6</td><td>25/09/2025</td><td>09:40</td><td>14</td><td>67</td><td>30</td><td>4</td><td>None</td></tr><tr><td>7</td><td>29/09/2025</td><td>14:25</td><td>17</td><td>55</td><td>20</td><td>0.3</td><td>None</td></tr></table> Table 3 presents the results of the reptile surveys. These are also illustrated in Appendix 3.	Visit No.	Date	Time	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind speed (m/s)	Precipitation	1	03/09/2025	15:30	20	75	90	2.4	None	2	05/09/2025	10:00	17.3	70	20	1.2	None	3	08/09/2025	17:30	16.5	57	10	0.1	None	4	15/09/2025	09:15	15.8	72	0	2.4	None	5	22/09/2025	14:30	22.5	40	30	2.0	None	6	25/09/2025	09:40	14	67	30	4	None	7	29/09/2025	14:25	17	55	20	0.3	None
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	Table 3. Survey results.			
	Visit No.	Species Identified	Mat number and Refugia Location (Grid Reference)	Max Count
	1	None observed	N/A	N/A
	2	1x Adult slow worm (female)	5 - TQ3838727900	4
		1x Adult slow worm (female)	10 - TQ3836327893	
		1x Adult slow worm (female)	13 - TQ3837127889	
		1x Adult slow worm (female)	17 - TQ3838427882	
	3	None observed	N/A	N/A
	4	1x Adult slow worm (female)	5 - TQ3838727900	1
	5	1x Adult slow worm (female)	4 - TQ3838127896	2
			5 - TQ3838727900	
	6	1x Adult slow worm (female)	5 - TQ3838727900	1
	7	1x Adult slow worm (female)	4 - TQ3838127896	2
		1x Adult slow worm (female)	5 - TQ3838727900	
Survey results summary and Impact Assessment	A maximum count of 4 slow worms was recorded across the seven surveys. No other reptile species were recorded on site. As a result, it is assessed that the site supports a ‘low’ population of slow worms. The site does not support a reptile population that would classify the site as a ‘Key Reptile Site’.			

	While the final development plans have not yet been produced, the proposals are anticipated to result in the complete loss of suitable reptile habitat (0.038ha of other neutral grassland) on the site. This could result in the death or injury of individual animals during site clearance.
<i>Recommendations</i>	It is noted that the field immediately south of the site (Land South of St Stephen's Church, Hamsland, Horsted Keynes, West Sussex) has been granted planning permission for the development of 30 new residential dwellings (Mid Sussex District Council reference: DM/20/4692). This development will result in the loss of suitable reptile habitat directly adjacent to the site and will fragment the existing 'low' population of slow worms present. Consequently, it will not be possible to safeguard the on-site slow worm population through precautionary working methods and directional habitat manipulation. To ensure the protection of the existing population, a programme of reptile translocation is required. This will involve the systematic capture and relocation of slow worms from the development footprint to a suitable receptor site over 10 visits. The receptor site must provide appropriate long-term habitat, with comparable vegetation structure and ecological connectivity, and must be managed in the long term to maintain conditions that support a viable slow worm population following translocation. The Land South of St Stephen's Church development will retain and enhance an area of grassland specifically designated as a receptor site for the translocation of a 'good' slow worm population identified on that site. It is proposed that the same receptor area is utilised for the translocation of slow worms from this site. The receptor area supports suitable habitat features and will be further enhanced through overseeding with Emorsgate's EM3F Species-Rich General Purpose Wildflower Mixture, alongside the installation of log piles to provide additional structural refugia (Technical Note: Reptile Mitigation Strategy, Ecology Solutions, 2024). The location of the proposed receptor site is presented in Appendix 4.

Reptile Mitigation Strategy

Mitigation and Enhancement prescriptions to reduce adverse impacts on the 'low' population of slow worms recorded on site during construction and are detailed below.

Mitigation	Specification
<i>Persons Responsible and Lines of Communication</i>	It is recommended that a Development Biodiversity Champion is selected for the construction phase of the development. The Biodiversity Champion should be someone with significant influence during construction, such as the contract or project manager. The Development Biodiversity Champion is responsible for ensuring all actions outlined in this RMS are implemented. Any queries with regards to the mitigation and enhancement prescriptions should be addressed to the project ecologist, and communication should be retained between the Development Biodiversity Champion and the project ecologist throughout the project. The project ecologist's contact details are located on the title page of this report. It is recommended that the Biodiversity Champion informs the project ecologist of the commencement of enhancement installation works and provides updates where necessary. Once the ecological enhancements have been installed, a Post-Development Biodiversity Champion should be allocated to who has influence on site once the development is complete, such as a long-term maintenance contractor. The Post-Development Biodiversity Champion will be responsible for ensuring all recommended management is undertaken and any associated remedial measures are completed where necessary.
<i>Ecological Clerk of Works (ECoW)</i>	All works detailed below will be supervised by a suitably qualified ecologist acting as an Ecological Clerk of Works (ECoW). The ECoW will work alongside the Biodiversity Champion and all other site contractors to ensure that the mitigation and enhancement measures detailed below are implemented correctly and that any reptiles displaced during the works are removed and relocated unharmed. The primary aim of the ECoW will be to ensure a suitable receptor site is created prior to site clearance works and to supervise the sensitive removal of all habitats of value to reptiles within the development area. Once the ECoW confirms this has

	been achieved, the development can continue in the absence of the ECoW, whereby contact between the Development Biodiversity Champion and the project ecologist can be maintained to resolve any ecological issues that may arise during works.
<i>Continuation of existing grassland management until the commencement of development works</i>	The survey area comprises largely unmanaged grassland interspersed with scattered scrub and some small saplings. It is recommended that the grassland is managed to maintain its current state, as this will help prevent the grassland from increasing in ecological value, which could lead to a rise in reptile populations and, consequently, increase the ecological risks associated with the proposed works. Additionally, maintaining the existing habitat structure will support the retention of the current slow-worm population in situ until development commences.
<i>Sensitive vegetation clearance and removal of opportunities within the development area</i>	<i>Pre-commencement inspection and destruction search</i> Sensitive clearance of vegetation of value to reptiles within the development area is required. Precautionary methods of working are required to prevent causing injury or death to reptiles during site clearance. A pre-commencement walkover will be completed immediately prior to removal, whereby any dense tussocks will be subject to a finger-tip search. Any reptiles identified during the pre-commencement inspection will be displaced to the receptor area by the ECoW. All vegetation clearance will be undertaken under a watching brief of an ECoW and must take place outside of the hibernation period for reptiles, which is typically between October and March. Reptiles are mostly torpid during this timeframe and are thus most vulnerable to injury or death. Undertaking vegetation clearance works during their active period, typically between April and September, will allow individuals to disperse unperturbed to adjacent retained habitats. <i>Vegetation clearance</i> A staged approach will be undertaken. Vegetation will be cut in two phases, whereby the initial clearance will cut the vegetation to 15cm and left for a minimum of 30 minutes to allow any reptiles at ground level to be identified. Any reptiles found will be carefully moved by hand by the ECoW to the receptor site. The vegetation can then be cleared to ground level.

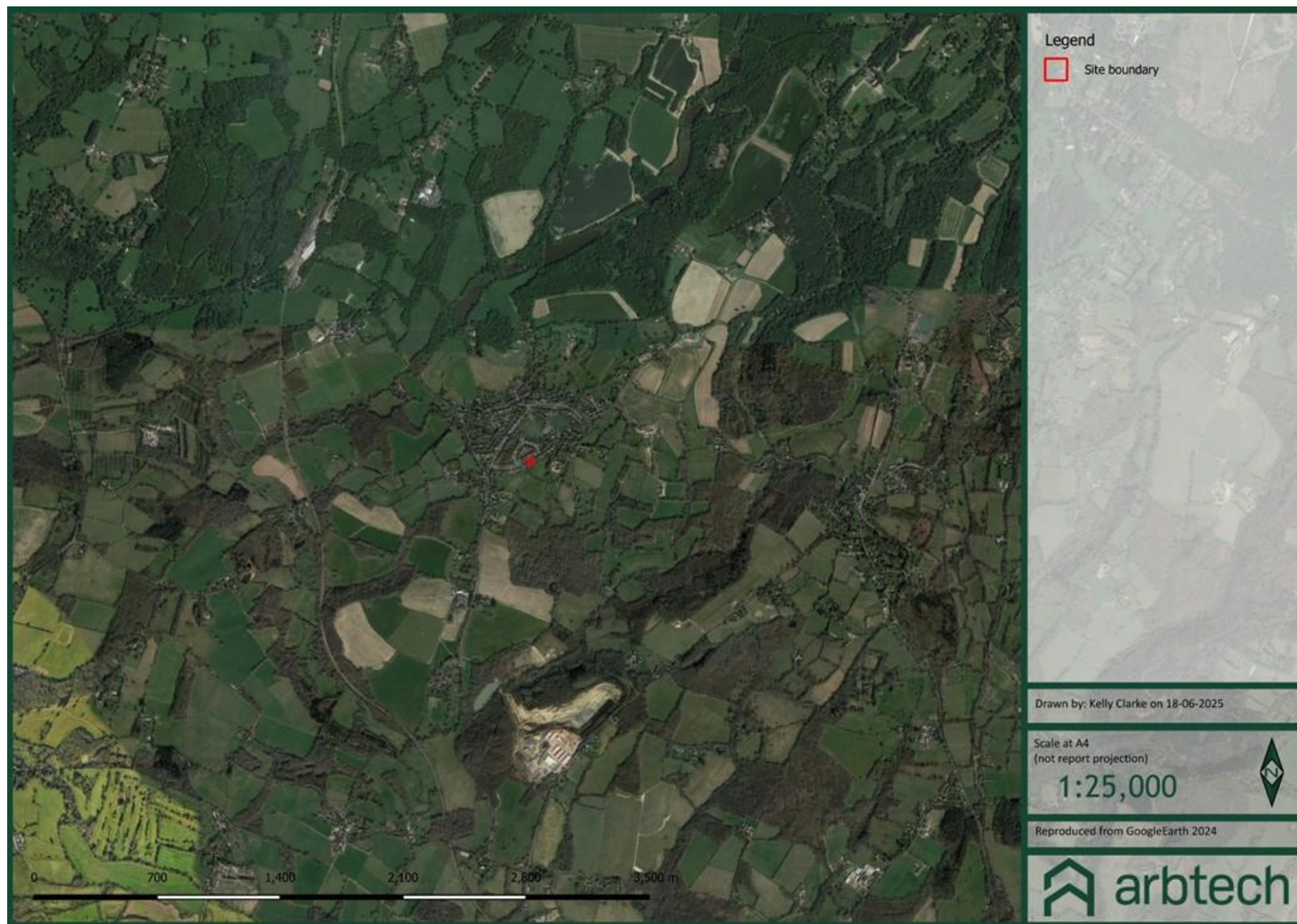
<i>Destructive searches of refugia</i>	Any refugia present within the site, such as log piles/rock piles/spoil mounds, will be sensitively removed from the development area. Potential refugia should be displaced using hand tools only and continuously searched by the ECoW for the presence of reptiles. For larger spoil piles that require removal using plant machinery, the spoil should be displaced using a phased approach, whereby shallow scrapes no deeper than 30cm are gently pulled on the surface of the spoil, which can subsequently be searched for the presence of reptiles by the ECoW. Any reptiles found during the destructive searches will be carefully moved by hand by the ECoW to the receptor area.
<i>Installation of herpetofauna fencing</i>	Prior to the commencement of works, one-way reptile exclusion fencing will be installed, separating the site and adjacent habitats from areas of construction. The one-way fencing will need to be supplied, installed, and removed by a competent habitat management contractor with suitable experience installing this fence type. The one-way exclusion fencing will be installed prior to the commencement of works or any other mitigation prescriptions (as detailed below) and will be maintained during the entirety of the construction phase of the development. One-way reptile exclusion fencing is installed at a 45-degree angle with a right-angled lip present at the top facing the receptor site. This allows reptiles to travel over the fencing from the construction area towards to receptor site but prevents re-colonisation. An example of this fencing structure is shown below in Figure 1. The proposed location of the fencing is along the south, east and west boundaries to separate the grassland on site from the surrounding gardens.

	 The figure consists of two side-by-side images. The left image is a photograph of a field with a long, low, grey, corrugated metal fence running diagonally across it. A metal railing is visible on the right side of the fence. The right image is a schematic diagram of a one-way exclusion structure. It shows a vertical post in the ground with a curved, arched structure on top. Arrows indicate the direction of movement: one arrow points up and over the arch, while two arrows point down and away from the arch, suggesting a one-way barrier. Figure 1: A photograph showing an installed one-way reptile fence (left) and a schematic representation showing the one-way exclusion structure (Legacy Habitat Management 2022). The one-way fencing will be inspected every week under the responsibility of the biodiversity champion, and any damage identified will be repaired immediately.
<i>Post-development fencing</i>	Upon the completion of the proposed development the one-way reptile fencing will be carefully removed by hand.

Appendix 1: Survey map



Appendix 2: Site location



Appendix 3: Proposed development plan

None available at the time of writing.

Appendix 4: Proposed receptor site (Ecology Solutions, 2024)



Appendix 5: Legislation and planning policy

LEGAL PROTECTION

The sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* receive full protection under Habitats Regulations through their inclusion on Schedule

2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - i. To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - ii. To impair their ability to hibernate or migrate
 - iii. To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

These species are also listed on Schedule 5 of the Wildlife and Countryside Act (WCA) 1981 (as amended) and 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.

Other native species of reptiles are protected solely under Schedule 5, Section 9(1) & (5) of the WCA, i.e. the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. It is prohibited to:

- Intentionally or recklessly kill or injure these species.

NATIONAL PLANNING POLICY

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 UK Biodiversity Action Plan priority species) 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; opportunities to incorporate biodiversity in and around developments are encouraged; 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 the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works likely to affect the breeding sites or resting places of reptile species protected under Habitats Regulations. A licence will also be required for operations liable 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 licences are to allow derogation from the relevant legislation, but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the WCA.

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