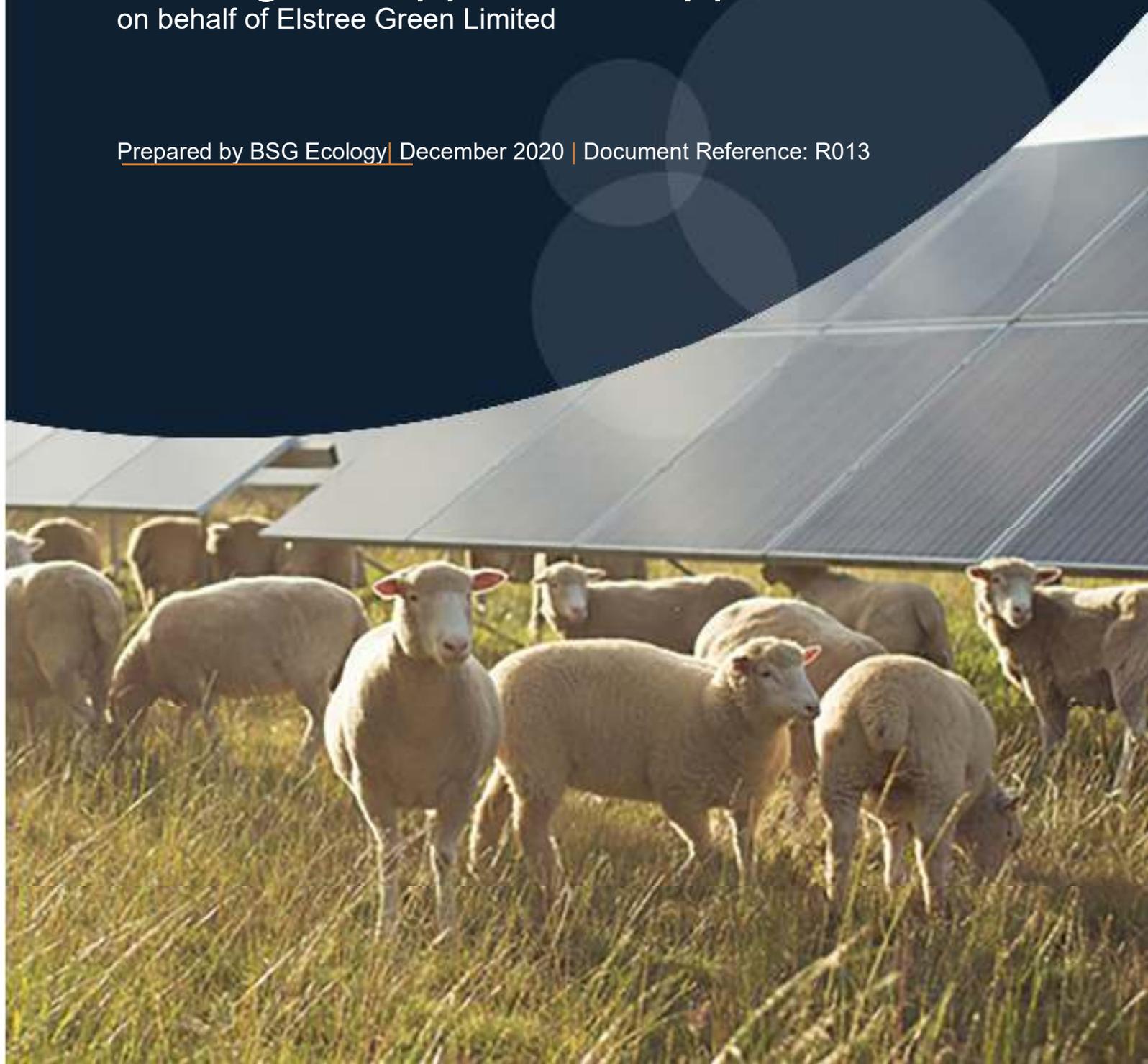




Hilfield Solar Farm and Battery Storage

Ecological Appraisal - appendices
on behalf of Elstree Green Limited

Prepared by [BSG Ecology](#) | December 2020 | Document Reference: R013



Appendix 1: Proposed site layout plan

(overleaf)

Appendix 2: Target notes

TN1-3

Mature pedunculate oaks *Quercus robur* with potential roost features (PRFs) for bats.

TN4

Mature pedunculate oak with PRFs for bats including ivy-clad trunk.

TN5-7

Mature pedunculate oaks with PRFs for bats.

TN8

Mature ash *Fraxinus excelsior* with PRFs for bats.

TN9-10

Mature pedunculate oaks with PRFs for bats.

TN11

Unmanaged tussocky semi-improved neutral grassland with abundant false oat grass *Arrhenatherum elatius* and fescue *Festuca* sp, and occasional tufted hair grass *Deschmipsia cespitosa*. Forms a matrix with scattered scrubby areas, principally banks of bramble *Rubus fruticosus* agg. but also including hawthorn *Crataegus monogyna* and blackthorn *Prunus spinosa*.

TN12

Damp ditch through grassland east of airport runway.

TN13-14

Mature pedunculate oaks with PRFs for bats.

TN15

Dead and hollow tree trunk (probably pedunculate oak) with PRFs for bats.

TN16

Dead and hollow tree trunk (probably ash) with PRFs for bats.

TN17

Mound of building materials, earth and rubbish overgrown with stinging nettle *Urtica dioica* and excavated by rabbits *Oryctolagus cuniculus*.

TN18-19

Mature pedunculate oaks with PRFs for bats.

Appendix 3: Proposed landscape plan

(overleaf)

Appendix 4: Summaries of Relevant Policy, Legislation and Other Instruments

This section briefly summarises the legislation, policy and related issues that are relevant to the main text of the report. The following text does not constitute legal or planning advice.

National Planning Policy Framework (England)

- 11.1 The Government revised the National Planning Policy Framework (NPPF) on 19 February 2019. Text excerpts from the NPPF are shown where they may be relevant to planning applications and biodiversity including protected sites, habitats and species.
- 11.2 The Government sets out the three objectives for sustainable development (economy, social and environmental) at paragraphs 8-10 to be delivered through the plan preparation and implementation level and 'are not criteria against which every decision can or should be judged.' At paragraph 8c) the planning system's environmental objective refers to 'protecting and enhancing our natural, built and historic environment' and to 'helping to improve biodiversity'
- 11.3 In conserving and enhancing the natural environment, the NPPF (Paragraph 170) states that 'planning policies and decisions should contribute to and enhance the natural and local environment' by:
- Protecting and enhancing...sites of biodiversity value... '(in a manner commensurate with their statutory status or identified quality in the development plan)'.
 - Recognising the wider benefits from natural capital and ecosystem services including trees and woodland.
 - Minimising impacts on and providing net gains in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
 - Preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability.
- 11.4 In respect of protected sites, at paragraph 171, the NPPF requires local planning authorities to distinguish, at the plan level, '...between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value...take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.'
- 11.5 Paragraph 174 refers to how plans should aim to protect and enhance biodiversity. Plans should: 'identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity [a footnote refers to ODPM Circular 06/2005 for further guidance in respect of statutory obligations for biodiversity in the planning system], wildlife corridors and stepping stones that connect them and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation;' and to 'promote the conservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.'
- 11.6 Paragraph 175 advises that, when determining planning applications, '...local planning authorities should apply the following principles:

- a. if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
 - b. development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments) should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
 - c. development resulting in the loss or deterioration of irreplaceable habitats, (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
 - d. development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.’
- 11.7 In paragraph 176, the following should be given the same protection as habitats sites¹⁰:
- i. potential Special Protection Areas and possible Special Areas of Conservation
 - ii. listed or proposed Ramsar sites; and
 - iii. sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.’
- 11.8 In paragraph 177 the NPPF refers back to sustainable development in relation to appropriate assessment and states: ‘the presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site’.
- 11.9 In paragraph 178, the NPPF refers to planning policies and decisions taking account of ground conditions and risks arising from land instability and contamination at sites. In relation to risks associated with land remediation account is to be taken of ‘potential impacts on the natural environment’ that arise from land remediation.
- 11.10 In paragraph 180 the NPPF states that planning policies and decisions should ensure that development is appropriate to the location and take into account likely effects (including cumulative) on the natural environment and , in doing so, they ‘should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.’
- Government Circular ODPM 06/2005 Biodiversity and Geological Conservation (England only)**
- 11.11 Paragraph 98 of Government Circular 06/2005 advises that “the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult Natural England before granting planning permission. They

¹⁰ Habitats sites are defined in the glossary as ‘Any site which would be included within the definition at regulation 8 of the Conservation of Habitats and Species Regulations 2017 (as amended) for the purpose of those regulations, including candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation, Special Protection Areas and any relevant Marine Sites.’

should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species' protection provisions affecting the site concerned..."

- 11.12 Paragraph 99 of Government Circular 06/2005¹¹ advises that "it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted".

Standing Advice (GOV.UK - England only)

- 11.13 The GOV.UK website provides information regarding protected species and sites in relation to development proposals: 'Local planning authorities should take advice from Natural England or the Environment Agency about planning applications for developments that may affect protected species.' GOV.UK advises that 'some species have standing advice which you can use to help with planning decisions. For others you should contact Natural England or the Environment Agency for an individual response.'
- 11.14 The standing advice (originally from Natural England and now held and updated on GOV.UK¹²) provides advice to planners on deciding if there is a 'reasonable likelihood' of protected species being present. It also provides advice on survey and mitigation requirements.
- 11.15 When determining an application for development that is covered by standing advice, in accordance with guidance in Government Circular 06/2005, Local planning authorities are required to take the standing advice into account. In paragraph 82 of the aforementioned Circular, it is stated that: 'The standing advice will be a material consideration in the determination of the planning application in the same way as any advice received from a statutory consultee...it is up to the planning authority to decide the weight to be attached to the standing advice, in the same way as it would decide the weight to be attached to a response from a statutory consultee.'

Natural Environment and Rural Communities (NERC) Act 2006 – Habitats and species of principal importance (England)

- 11.16 The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act require the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England as required by the Act. In accordance with the Act the Secretary of State keeps this list under review and will publish a revised list if necessary, in consultation with Natural England.
- 11.17 The S41 list is used to guide decision-makers such as public bodies, including local authorities and utilities companies, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions, including development control and planning. This is commonly referred to as the 'Biodiversity Duty.'

¹¹ ODPM Circular 06/2005. *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impacts within the Planning System* (2005). HMSO Norwich.

¹² <https://www.gov.uk/protected-species-and-sites-how-to-review-planning-proposals#standing-advice-for-protected-species>

- 11.18 Guidance for public authorities on implementing the Biodiversity Duty¹³ has been published by Defra. One of the key messages in this document is that ‘conserving biodiversity includes restoring and enhancing species populations and habitats, as well as protecting them.’ In England the administration of the planning system and licensing schemes are highlighted as having a ‘profound influence on biodiversity conservation.’ Local authorities are required to take measures to “promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species. The guidance states that ‘the duty aims to raise the profile and visibility of biodiversity, clarify existing commitments with regard to biodiversity, and to make it a natural and integral part of policy and decision making.’
- 11.19 In 2007, the UK Biodiversity Action Plan (BAP) Partnership published an updated list of priority UK species and habitats covering terrestrial, freshwater and marine biodiversity to focus conservation action for rarer species and habitats in the UK. The UK Post-2010 Biodiversity Framework¹⁴, which covers the period from 2011 to 2020, now succeeds the UK BAP. The UK priority list contained 1150 species and 65 habitats requiring special protection and has been used as a reference to draw up the lists of species and HPI in England.
- 11.20 In England, there are 56 HPI and 943 species of principal importance on the S41 list. These are all the habitats and species found in England that were identified as requiring action in the UK BAP and which continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework.

European protected species (Animals)

- 11.21 The Conservation of Habitats and Species Regulations 2017 (as amended) consolidates various amendments that have been made to the original (1994) Regulations which transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.
- 11.22 “European protected species” (EPS) of animal are those which are shown on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). They are subject to the provisions of Regulation 43 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:
- a. Intentionally or deliberately capture, injure or kill any wild animal included amongst these species
 - b. Possess or control any live or dead specimens or any part of, or anything derived from a these species
 - c. deliberately disturb wild animals of any such species
 - d. deliberately take or destroy the eggs of such an animal, or
 - e. intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place
- 11.23 For the purposes of paragraph (c), 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

¹³ Defra, 2007. *Guidance for Public Authorities on Implementing The Biodiversity Duty*. (<http://www.defra.gov.uk/publications/files/pb12585-pa-guid-english-070516.pdf>)

¹⁴ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group). 2012. *UK Post-2010 Biodiversity Framework*. July 2012. (<http://jncc.defra.gov.uk/page-6189>)

- 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.
- 11.24 Although the law provides strict protection to these species, it also allows this protection to be set aside (derogated) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works and by Natural Resources Wales in Wales. In accordance with the requirements of the Regulations (2017, as amended), a licence can only be issued where the following requirements are satisfied:
- a. The proposal is necessary 'to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'
 - b. 'There is no satisfactory alternative'
 - c. The proposals 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.'

Definition of breeding sites and resting places

- 11.25 Guidance for all European Protected Species of animal, including bats and great crested newt, regarding the definition of breeding and of breeding and resting places is provided by The European Council (EC) which has prepared specific guidance in respect of the interpretation of various Articles of the EC Habitats Directive.¹⁵ Section II.3.4.b) provides definitions and examples of both breeding and resting places at paragraphs 57 and 59 respectively. This guidance states that 'The provision in Article 12(1)(d) [of the EC Habitats Directive] should therefore be understood as aiming to safeguard the ecological functionality of breeding sites and resting places.' Further the guidance states: 'It thus follows from Article 12(1)(d) that such breeding sites and resting places also need to be protected when they are not being used, but where there is a reasonably high probability that the species concerned will return to these sites and places. If for example a certain cave is used every year by a number of bats for hibernation (because the species has the habit of returning to the same winter roost every year), the functionality of this cave as a hibernating site should be protected in summer as well so that the bats can re-use it in winter. On the other hand, if a certain cave is used only occasionally for breeding or resting purposes, it is very likely that the site does not qualify as a breeding site or resting place.'

Competent authorities

- 11.26 Under Regulation 7 of the Conservation of Habitats and Species Regulations 2017 (as amended) a "competent authority" includes "any Minister of the Crown..., government department, statutory undertaker, public body of any description or person holding a public office.
- 11.27 In accordance with Regulation 9, "a competent authority must exercise their functions which are relevant to nature conservation, including marine conservation, so as to secure compliance with the requirements of the [Habitats and Birds] Directives. This means for instance that when considering development proposals a competent authority should consider whether EPS or European Protected Sites are to be affected by those works and, if so, must show that they have given consideration as to whether derogation requirements can be met.

¹⁵ Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC. (February 2007), EC.

Birds

- 11.28 All nesting birds are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to disturb them whilst they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.
- 11.29 The Conservation of Habitats and Species Regulations 2017 (as amended) places duties on competent authorities (including Local Authorities and National Park Authorities) in relation to wild bird habitat. These provisions relate back to Articles 1, 2 and 3 of the EC Directive on the conservation of wild birds (2009/147/EC, 'Birds Directive'¹⁶) (Regulation 10 (3)) requires that the objective is the 'preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat, as appropriate, having regard to the requirements of Article 2 of the new Wild Birds Directive...' Regulation 10 (7) states: 'In considering which measures may be appropriate for the purpose of security or contributing to the objective in [Regulation 10 (3)] Paragraph 3, appropriate account must be taken of economic and recreational requirements'.
- 11.30 In relation to the duties placed on competent authorities under the 2017 Regulations, Regulation 10 (8) states: 'So far as lies within their powers, a competent authority in exercising any function [including in relation to town and country planning] in or in relation to the United Kingdom must use all reasonable endeavours to avoid any pollution or deterioration of habitats of wild birds (except habitats beyond the outer limits of the area to which the new Wild Birds Directive applies).'

Badger

- 11.31 Badger is protected under the Protection of Badgers Act 1992. It is not permitted to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as "a structure or place, which displays signs indicating current use by a badger".
- 11.32 ODPM Circular 06/2005¹⁷ provides further guidance on statutory obligations towards badger within the planning system. Of particular note is paragraph 124, which states that "The likelihood of disturbing a badger sett, or adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions."
- 11.33 Natural England provides Standing Advice¹⁸, which is capable of being a material consideration in planning decisions. Natural England recommends mitigation to avoid impacts on badger setts, which includes maintaining or creating new foraging areas and maintaining or creating access (commuting routes) between setts and foraging/watering areas.

¹⁶ 2009/147/EC Birds Directive (30 November 2009. European Parliament and the Council of the European Union.

¹⁷ ODPM Circular 06/2005. *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impacts within the Planning System* (2005). HMSO Norwich.

¹⁸ <http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/specieslinks.aspx>

Reptiles

- 11.34 All native reptile species receive legal protection in Great Britain under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Viviparous lizard, slow-worm, grass snake and adder are protected against killing, injuring and unlicensed trade only. Sand lizard and smooth snake receive additional protection as “European Protected species” under the provisions of the Conservation of Habitats and Species Regulations 2017 (as amended) and are fully protected under the Wildlife and Countryside Act 1981 (as amended).
- 11.35 All six native species of reptile are included as ‘species of principal importance’ for the purpose of conserving biodiversity under Section 41 (England) of the NERC Act 2006 and Section 7 of the Environment (Wales) Act 2016.
- 11.36 Current Natural England Guidelines for Developers¹⁹ states that ‘where it is predictable that reptiles are likely to be killed or injured by activities such as site clearance, this could legally constitute intentional killing or injuring.’ Further the guidance states: ‘Normally prohibited activities may not be illegal if ‘the act was the incidental result of a lawful operation and could not reasonably have been avoided’. Natural England ‘would expect reasonable avoidance to include measures such as altering development layouts to avoid key areas, as well as capture and exclusion of reptiles.’
- 11.37 The Natural England Guidelines for Developers state that ‘planning must incorporate two aims where reptiles are present:
- To protect reptiles from any harm that might arise during development work;
 - To ensure that sufficient quality, quantity and connectivity of habitat is provided to accommodate the reptile population, either on-site or at an alternative site, with no net loss of local reptile conservation status.’

Water vole

- 11.38 Water vole is protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to kill, injure or take any water vole, damage, destroy or obstruct access to any place of shelter or protection that the animals are using, or disturb voles while they are using such a place. Water vole is listed as a Species of Principal Importance under the provisions of the NERC Act 2006 in England and under the provisions of the Environment (Wales) Act 2016.

Wild mammals in general

- 11.39 The Wild Mammals (Protection) Act 1996 (as amended) makes provision for the protection of wild mammals from certain cruel acts, making it an offence for any person to intentionally cause suffering to any wild mammal. In the context of development sites, for example, this may apply to rabbits in their burrows.

Invasive non-native species

- 11.40 An invasive non-native species is any non-native animal or plant that has the ability to spread causing damage to the environment.
- 11.41 Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to release, or to allow to escape into the wild, any animal which is not ordinarily resident in and is

¹⁹ English Nature, 2004. *Reptiles: guidelines for developers*. English Nature, Peterborough. <https://webarchive.nationalarchives.gov.uk/20150303064706/http://publications.naturalengland.org.uk/publication/76006>

not a regular visitor to Great Britain in a wild state or is listed under Schedule 9 of the Act.

- 11.42 It is an offence to plant or otherwise cause to grow in the wild invasive non-native plants listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Hedgerows

- 11.43 Article 10 of the Habitats Directive²⁰ requires that 'Member States shall endeavour...to encourage the management of features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure...or their function as stepping stones...are essential for the migration, dispersal and genetic exchange of wild species'. Examples given in the Directive include traditional field boundary systems (such as hedgerows).
- 11.44 The aim of the Hedgerow Regulations 1997²¹, according to guidance produced by the Department of the Environment²², is "to protect important hedgerows in the countryside by controlling their removal through a system of notification. In summary, the guidance states that the system is concerned with the removal of hedgerows, either in whole or in part, and covers any act which results in the destruction of a hedgerow. The procedure in the Regulations is triggered only when land managers or utility operators want to remove a hedgerow. The system is in favour of protecting and retaining 'important' hedgerows.
- 11.45 The Hedgerow Regulations set out criteria that must be used by the local planning authority in determining which hedgerows are 'important'. The criteria relate to the value of hedgerows from an archaeological, historical, wildlife and landscape perspective.

Japanese knotweed

- 11.46 It is an offence to plant or cause the spread of Japanese knotweed in the wild under the Wildlife and Countryside Act 1981 (as amended). All waste containing Japanese knotweed comes under the control of Part II of the Environmental Protection Act 1990.
- 11.47 The Environment Agency has produced "The Knotweed Code of Practice", which provides guidance on how to manage Japanese knotweed legally on development sites²³. This document provides ecological information on Japanese knotweed, details of how to prevent its spread, how to manage Japanese knotweed and information on disposal. Natural Resources Wales refers to Environment Agency guidance in respect of landowners responsibilities in Wales and to the Wildlife and Countryside Act 1981 (as amended).

²⁰ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

²¹ Statutory Instrument 1997 No. 1160 – The Hedgerow Regulations 1997. HMSO: London

²² The Hedgerow Regulations 1997: a guide to the law and good practice, HMSO: London

²³ *Managing Japanese knotweed on development sites: the knotweed code of practice* (2006). Environment Agency. <https://www.gov.uk/government/publications/japanese-knotweed-managing-on-development-sites>. See also 2013 Code of Practice update.