

Laverick Cottage And The Bothy, Fourstones, Hexham, NE47 5DX Blue Forest (UK) Ltd

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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.

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 Blue Forest (UK) Ltd to undertake a Preliminary Ecological Appraisal (PEA) at Laverick Cottage And The Bothy, Fourstones, Hexham, NE47 5DX (hereafter referred to as "the site"). The survey was required to inform a planning application for the erection of a 'treehouse' (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 5 of this report.

Feature	Foreseen impacts	Recommendations Measures required to adhere to guidance, legislation and planning policies.
Habitats and flora	No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats as well as the site's location and presence of some physical barriers such as main roads. The proposed development will result in the loss of scrub and deadwood habitat. This is likely to have a minimal impact on biodiversity due to the fairly low ecological value and isolated nature of these habitats. The proposed development will encroach into RPA's and tree canopies of the remaining trees on and directly adjacent to the site. Construction could result in the spread of Pontic rhododendron.	Construction activities should be informed by the relevant arboricultural impact assessments, method statements and tree protection plans. Pontic rhododendron should be dug up, including roots, and disposed of in line with appropriate controlled waste measures.
Roosting bats (on site trees)	G02 appear to be directly adjacent to the proposed treehouse where as T03 appear to be integrated into the treehouses construction. As the trees are to be retained as part of the proposed development it is anticipated the identified roosting features will not be impacted.	Owing to the nature of the proposed development and the low potential for impacts to bat roosts, further bat surveys are considered to be disproportionate. It is anticipated that any risk to bats can be reduced to an acceptably low level through the implementation of a precautionary working method during and post-development. This will include the following measures: • Works close to/impacting the trees will be scheduled during the winter months (November to March) when bats are least likely to be present, insofar as is possible. • A toolbox talk will be given to contractors to make them aware of the possible presence of bats on the site. • An inspection of the potential roost features identified in this report will be undertaken prior to works commencing.

		 In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.
Foraging and commuting bats	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. The proposed development may include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development.
Hedgehog	Areas of scrub and deadwood will be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.	A precautionary working method will be implemented during construction.
Birds	Areas of scrub will be removed during construction. The loss of such habitats is likely to be inconsequential to local bird populations owing to their low value and the presence of more extensive habitat locally. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the tree and vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.
Invertebrates	No impacts are anticipated on notable species or populations of invertebrates as a result of the proposed development.	Deadwood on site should be retained insofar as possible.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Blue Forest (UK) Ltd to undertake a Preliminary Ecological Appraisal (PEA) at Laverick Cottage And The Bothy, Fourstones, Hexham, NE47 5DX (hereafter referred to as "the site"). The survey was required to inform a planning application for the erection of a 'treehouse' (hereafter referred to as "the proposed development").

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

The aim of the PEA was to obtain data on existing ecological conditions, and to conduct a preliminary assessment of the likely significance of ecological impacts on the proposed development. No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author's knowledge, by any other consultancy. An arboricultural survey has been carried out on site by Arbtech Consulting, this report is to be read in conjunction with the stage 1 arboricultural report dated 2023.

1.2 Site Context

The site is located at National Grid Reference NY 90102 68190 and has an area of approximately 0.1ha comprising of areas of recently felled woodland and bramble scrub and a section of grazed sheep field (the current access track). It is surrounded by grazing fields with some conifer woodland to the southeast.

A site location plan is provided in Appendix 2.

1.3 Scope of the Report

This report describes the baseline ecological conditions at the site, evaluates habitats within the survey area in the context of the wider environment and describes the suitability of those habitats for notable or protected species. It identifies possible ecological constraints 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 desk study has been carried out.
- A field survey has been undertaken to record baseline information on the site and surrounding area including habitat types and their suitability for notable or protected species.
- Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act) have been identified.
- Potential impacts on features of value, as a result of the proposed development, have been identified.
- Recommendations for further surveys and mitigation have been made.
- Opportunities for the enhancement of the site for biodiversity have been set out.

2.0 Methodology

2.1 Desk Study

The desk study included a review of the magic.gov.uk database for statutory designated sites within a 2km radius of the site. Landscape value and the presence of notable habitats as well as granted European Protected Species Licence (EPSL) and notable species records held on magic.gov.uk database has also been considered where these are within influencing distance of the site.

2.2 Field Survey

The survey was undertaken by Elen Griffin BSc (Hons), MRSB, Ecological Consultant on 10th January 2023.

An extended habitat survey was undertaken, following the methodology set out in *UK Habitat Classification User Manual* (UK Habitat Classification Working Group, 2018). All land parcels are described and mapped and, where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management. Botanical species lists were compiled with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).

During the survey, habitats were assessed for their suitability to support protected species, and field signs indicating their presence recorded. The assessment takes into consideration the findings of the desk study, the habitat conditions on site and in the context of the surrounding landscape, and the ecology of the protected species.

2.3 Limitations

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape and the ecology and biology of species as currently understood.

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.

The survey was completed outside of the optimal survey period (April to October) limiting the identification of ground flora species.

These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

3.0 Results and Evaluation

3.1 Designated Sites

Details of any statutory designated sites within a 2km radius of the site, including their reasons for notification, are provided in Table 1 below.

The site lies within the impact risk zone for Wharmley Riverside and Tyne Watersmeet Site of Special Scientific Interest (SSSI). The proposed development is not listed as a possible high risk with regard to this designation.

Table 1: Statutory designated sites within 2km radius of the site

Designated site Distance from		from	Reasons for notification from Natural England	
name site (approx.)		rox.)		
Tyne and Allen River	1218m	south	This site in north-east England encompasses the most extensive, structurally varied and species-rich examples of riverine Calaminarian grasslands	
Gravels Special Area	west		in the UK. The river gravels contain a range of structural types, ranging from a highly toxic, sparsely vegetated area with abundant lichens through	
of Conservation (SAC)			to closed willow/alder Salix/Alnus woodland. In addition, the site is of considerable functional interest for the series of fossilised river channel	
			features. Spring sandwort Minuartia verna and thrift Armeria maritima are particularly abundant, and there are several rare species, including	
			Young's helleborine Epipactis youngiana, which has its main UK population at this site. The site is also of great importance for its lichen	
			communities. A number of rare and scarce species are present, including the Red Data Book-listed Peltigera venosa.	
Wharmley Riverside	1218m	south	The site supports a number of plants regarded as metallophytes. There are large populations of spring sandwort Minuartia verna and alpine	
SSSI	west		penny-cress Thlaspi alpestre, both common on mine waste tips in the Pennine orefield, thrift Armeria maritima which is normally found in coastal	
			or upland areas, and mountain pansy Viola lutea. Associated species in open habitats include red fescue Festuca rubra and meadow oat-grass	
			Avenula pratensis with herbs such as common restharrow Ononis repens, kidney vetch Anthyllis vulneraria, harebell Campanula rotundifolia,	
			bladder campion Silene vulgaris, wild thyme Thymus praecox, goldenrod Solidago virgaurea and the hairy sedge Carex hirta.	
Tyne Watersmeet	1806m	south	Watersmeet, at the confluence of the rivers North and South Tyne, is an area of diverse habitats of particular interest for its invertebrate fauna,	
SSSI	east		being regarded as one of the best sites in north east England for ground beetles. The varied flora also includes some uncommon plants.	
The plant communities vary in structure and species compos			The plant communities vary in structure and species composition, both important factors contributing to the diversity of insects. The woodlands	
	include types dominated by native sp		include types dominated by native species; oak Quercus sp., birch Betula sp. and wych elm Ulmus glabra, and others with introduced species	
			including beech Fagus sylvatica, sycamore Acer pseudoplatanus, horse-chestnut Aesculus hipposcastanum, grey poplar Populus canescens and	
			riverside willow Salix spp. and alder Alnus glutinosus communities. The ground-flora includes the locally rare yellow star-of Bethlehem Gagea	
			lutea and clustered bellflower Campanula glomerata as well as many characteristic woodland species including dog's mercury Mercurialis	
			perennis, wood melick Melica uniflora, wood millet Milium effusum and great wood-rush Luzula sylvatica which are locally dominant	

3.2 Field Survey Results

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 2.

Table 2: Weather conditions during the survey

Date: 10/01/2023			
Temperature	5°C		
Humidity	89%		

Cloud Cover	100%
Wind	13mph
Rain	Moderate

Habitats and Flora

The following habitats are present within and adjacent to the site:

- Modified grassland, grazed g4, 60
- Drystone wall u1e,67
- Other woodland; mixed; mainly conifer recently felled with some young, planted trees w1h6, 53, 56
- Bramble scrub with some tall herb and bracken h3d, 12, 16

A description and photograph of each habitat is provided in Table 3.

Pontic rhododendron (a non-native invasive plant species Listed under Schedule 9 of the Wildlife and Countryside Act 1981) was recorded close to the eastern boundary of the site.

Table 3: Description and photographs of habitats within and adjacent to the site

Habitat type	Habitat description	Photograph
Modified grassland, grazed – g4, 60	Modified grassland grazed by sheep is present surrounding the site specifically within the area to be used to access the site and within the immediate vicinity of the site. Species identified included perennial rye grass, annual blue grass, creeping buttercup, orchard grass and common velvet grass.	

Drystone wall – u1e,67	Drystone walls are present around the site boundaries. The walls specifically run along the western boundary along the proposed access road and around the southern, eastern and northern boundaries.	
Other woodland; mixed; mainly conifer recently felled with some young, planted trees – w1h6, 53, 56	The majority of the site consists of an area of recently felled mixed woodland which has been re planted with young tree whips. A number of stumps and areas of deadwood are still present throughout the site. The new tree whips were identified as predominantly dogwood, scots pine and red elderberry.	
Bramble scrub with some tall herb and bracken – h3d, 12, 16	Established areas of bramble scrub are present along the northern site boundary. Tall herb species such as nettle and creeping thistle along with bracken were also noted within the areas of scrub.	

Fauna

An assessment of the suitability of the site for protected or notable species is provided in Table 4.

Table 4: Assessment of the suitability of the site for protected or notable species

Species	Assessment of suitability			
Amphibians	No EPSL or class licences were noted within 2km of the site. There are no ponds within 500m of the proposed development therefore the presence of great crested newt (GCN) on the site is highly unlikely. Areas of scrub on site may provide some suitable terrestrial habitat for common amphibians however this likelihood is reduced due to the lack of waterbodies within the vicinity and the presence of the boundary dry stone wall which will likely act as a barrier between the site and the wider environment thus reducing the likelihood of dispersal. Furthermore, the surrounding habitat of predominantly agricultural land does not provide suitable terrestrial habitat for amphibian dispersal due to its management and lack of structural diversity.			
Reptiles	No EPSL's for rare reptiles species were noted within 2km of the site. The site comprises of recently felled woodland, the previous woodland habitat would not have been suitable for reptiles due to its dense nature reducing basking locations for reptiles. The remaining areas of scrub provide some suitability however the boundary dry stone wall is likely to act as a barrier between the site and the wider environment thus reducing the likelihood of reptiles utilising the site. Furthermore the habitats directly surrounding the site mostly comprises of agricultural fields that are both managed and grazed by sheep which are considered to provide extremely limited reptile habitat due to their managed nature and lack of structural diversity.			
Badgers	No evidence of badger was noted on or within 30m of the site. The site is considered largely unsuitable for sett excavation due to its mostly flat topography. Due to the sites rural location badgers are likely to be present within the wider environment however the presence of the dry stone wall and gates surrounding the site is likely to act as a barrier between the site and the wider environment thus reducing the likelihood of badgers being present on the site or crossing the site during foraging and commuting activities.			
Bats	The site for the most part now no longer provides suitable foraging habitat for bats due to the removal of the previous woodland. However, a number of the remaining trees (specifically within G02 and T04) were noted, from the ground, to provide some potential roosting features for bats during the survey. A number of broken limbs were noted cross the trees resulting in large cracks. Due to the presence of the remaining woodland to the east of the site bats are likely to still be present within the area.			

Hazel Dormouse	The site lies outside of the hazel dormouse natural and re-introduced range. No species required to support the complex life cycle of dormouse were noted on the site and no suitable connective habitat such as woodlands or hedgerows are present.
Hedgehog	The remaining areas of scrub and areas of deadwood may provide some suitable foraging and commuting habitat for hedgehogs if present within the wider environment. Although the drystone wall is likely to act as a barrier between the site and the wider environment the hedgehogs may be able to access the site via the gaps under the access gate.
Riparian mammals	No watercourses were noted on or directly adjacent to the site. No suitable riparian habitat was noted on the site. The boundary dry stone wall is likely to act as a barrier between the site and the wider environment.
Birds	The site does not appear to provide suitable habitat for Schedule 1 species or overwintering birds due to its small scale and previous use a re-planted woodland. The remaining trees on site along with the areas of scrub are likely to provide both nesting and foraging habitat for more common birds.
Invertebrates	The deadwood remaining on site along with the areas of scrub and remaining trees are likely to provide some suitable habitat for common invertebrates. The woodland area to the east may provide habitat for rarer species of invertebrate due to a greater structural diversity as a result of the large number of trees however the presence of the heavily managed agricultural land surrounding both the site and the woodland may reduce the presence of any rear invertebrates.

4.0 Conclusions, Impacts and Recommendations

4.1 Informative Guidelines

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

Likelihood of the Presence of Protected Species

Where physical evidence of the presence of protected species is indeterminate during the survey, the habitats on site are evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Where this report supports a planning application, the ecological interest of the study area (i.e. the area covered by the desk study and field survey) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity.

4.2 Evaluation

Taking the desk study and field survey results into account, Table 5 presents an evaluation of the ecological value of the site and also details any ecological constraints identified in relation to the proposed development which will comprise of the erection of a treehouse.

Table 5: Evaluation of the site and any ecological constraints

Ref	Summary of Survey Findings	Foreseen Impacts	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)
Designated sites	There are three statutory sites within 2km of the site, the closest being Tyne and Allen River Gravels SAC located 1281m from the site. The site lies within the impact risk zone for Wharmley Riverside and Tyne Watersmeet SSSI, the proposed development type is	No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the site's location surrounded by managed agricultural land and the presence of some barriers such as main roads.	None.	None.

	not listed as a possible high risk for this designation. The presence of nonstatutory designated sites within 2km of the site cannot be established without data from Environmental Records Information Centre North East.			
Habitats and flora	There are no notable habitats within the site but deciduous woodland, woodpasture and parkland, lowland calcareous grassland and good quality semi improved grassland habitats are present within 2km of the site, the closest being deciduous woodland located 490m from the site. Other habitats within the site are common and widespread and have moderate to low ecological value. No protected or notable plant species were recorded during the survey.	No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats as well as the site's location and presence of some physical barriers such as main roads. The proposed development will result in the loss of scrub and deadwood habitat. This is likely to have a minimal impact on biodiversity due to the fairly low ecological value and isolated nature of these habitats. The proposed development will encroach into RPA's and tree canopies of the remaining trees on and directly adjacent to the site. Construction could result in the spread of Pontic rhododendron.	Construction activities should be informed by the relevant arboricultural impact assessments, method statements and tree protection plans. Pontic rhododendron should be dug up, including roots, and disposed of in line with appropriate controlled waste measures.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development: Native tree, hedgerow and shrub planting. Creation of wildflower grassland. Species-specific enhancement opportunities are detailed later in this table.

	I			T
	Pontic rhododendron			
	was identified on the			
	site which is listed as			
	an invasive, non-			
	native species under			
	Schedule 9 of the			
	Wildlife and			
	Countryside Act			
	1981.			
Amphibians	Some suitable	No impacts are anticipated on amphibians,	None.	None.
'	terrestrial habitat for	including great crested newt, as a result of the		
	common amphibian	proposed development.		
	was noted on site	proposed development.		
	however the			
	presence of			
	amphibians on site is			
	considered highly			
	unlikely due to a lack			
	of waterbodies			
	nearby and the sites			
	isolated location			
	within areas of			
	surrounding			
	agricultural land.			
Reptiles	Limited suitable	No impacts are anticipated on reptiles as a result of	None.	None.
	habitat for reptiles	the proposed development.		
	was noted on site			
	however due to the			
	sites isolated location			
	within areas of			
	surrounding			
	agricultural land			
	which is considered			
	unsuitable for			
	reptiles it is			
	considered that			
	reptiles are likely			
	absent from site.			
Roosting bats	No EPSL's were noted	G02 appear to be directly adjacent to the proposed	Owing to the nature of the proposed development and the	The installation of a minimum
(on site trees)	within 2km of the	treehouse where as T03 appear to be integrated	low potential for impacts to bat roosts, further bat surveys	of two bat boxes on mature
	site, the closest	into the treehouses construction.	are considered to be disproportionate. It is anticipated that	trees around the site

Foreging and	noted is present 2100m north east of the site. Trees present within G02 and T04 identified within the arboricultural report are considered to provide some potential roosting features for low numbers crevice dwelling bats due to their small nature and limited number.	As the trees are to be retained as part of the proposed development it is anticipated the identified roosting features will not be impacted.	any risk to bats can be reduced to an acceptably low level through the implementation of a precautionary working method during and post-development. This will include the following measures: • Works close to/impacting the trees will be scheduled during the winter months (November to March) when bats are least likely to be present, insofar as is possible. • A toolbox talk will be given to contractors to make them aware of the possible presence of bats on the site. • An inspection of the potential roost features identified in this report will be undertaken prior to works commencing. • In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.	boundaries will provide additional roosting habitat for bats e.g. Beaumaris Woodstone Bat Box Maxi (buildings) Eco Kent Bat Box (buildings) Ecostyrocrete Three Crevice Bat Box (trees and buildings) Harlech Woodstone Bat Box (trees or building) Or a similar alternative brand. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. Alternatively, bat boxes could be incorporated into new buildings on the site e.g. Habibat Bat Box Schwegler 1FR Bat Tubes Bat tubes should be inserted into the fabric of the building during construction, positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance and facing landscapes areas, away from artificial light.
Foraging and	The remaining trees	The proposed development will not result in the	A low impact lighting strategy will be adopted for the site	The following habitat creation
commuting	on and adjacent to	removal of any habitats which could be used by	during and post-development, which will include the	and enhancement
bats	the site could be used	foraging or commuting bats.	following measures:	opportunities could be
	by local bat		 Use narrow spectrum light sources to lower the 	incorporated into the
	populations for	The proposed development may include the use of	range of species affected by lighting.	proposed development which
	foraging and	lighting which could spill on to bat roosting,		would be beneficial for foraging bats:
	commuting. These	•		

Badger	could also be used by bats dispersing from nearby roosts outside of the site.	No impacts are anticipated on badgers as a result	 Use light sources that emit minimal ultra-violet light. Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available. 	Planting of native tree, shrub and hedgerows to increase foraging opportunities. None.
Badger	No suitable habitat for badger on site.	No impacts are anticipated on badgers as a result of the proposed development.	None.	None.
Hazel dormouse	No suitable habitat for hazel dormouse on site.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.

Hedgehog	Areas of scrub on site along with the remaining deadwood may provide some suitable foraging and hibernation habitat for hedgehogs if present on site.	Areas of scrub and deadwood will be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.	 A precautionary working method will be implemented during construction, including the following measures: Site clearance will be undertaken outside of the hedgehog hibernation season (November to March) insofar as possible. A toolbox talk will be given to contractors regarding the possible presence of hedgehogs at the site. Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. If a hedgehog is found then this should be moved by gloved hand to an undisturbed and sheltered area of the site or adjacent land. 	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: • Planting fruit bearing trees and speciesrich grassland to increase foraging opportunities. • Creation of brash piles or installation of hedgehog houses in shady areas. • Installation of gaps under boundary fencing to enable hedgehogs to move freely through the site.
Riparian mammals	No suitable habitat for riparian mammals on or directly adjacent to the site.	No impacts are anticipated on otters as a result of the proposed development.	None.	None.
Birds	Some habitat suitable for more common nesting bird is present on the development site.	Areas of scrub will be removed during construction. The loss of such habitats is likely to be inconsequential to local bird populations owing to their low value and the presence of more extensive habitat locally. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the tree and vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.	The installation of a minimum of three bird boxes on retained mature trees or on the new building on site will provide additional nesting habitat for birds e.g. Vivara Pro Barcelona Woodstone Open Nest Box Woodstone Nest Box Woodstone Nest Box or a similar alternative brand. Tree boxes should be positioned approximately 3m above ground level where they will be sheltered from

Invertebrates	No suitable habitat	No impacts are anticipated on notable species or	Deadwood on site should be retained insofar as possible.	prevailing wind, rain and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree trunk where foliage will not obscure the entrance hole. The following habitat creation
	for more rare species of invertebrate however deadwood on site will provide suitable habitat for common species of invertebrate	populations of invertebrates as a result of the proposed development.		and enhancement opportunities could be incorporated into the proposed development which would be beneficial for invertebrates: • Native tree, hedgerow and shrub planting. • Creation of wildflower grassland.

5.0 Bibliography

- Biggs, J., Ewald, N., Valentini, A., Gaboriaud, C., Dejean, T., Griffiths, R., Foster, J., Wilkinson, J., Arnell, A., Brotherton, P., Williams, P. and Dunn, F. (2014). Using eDNA to Develop a National Citizen Science-based Monitoring Programme for the Great Crested Newt (*Triturus cristatus*). Biological Conservation. 183. 10.1016/j.biocon.2014.11.029.
- Bright, P., Morris, P., Mitchell-Jones, T. and Wroot, S. (2006). The Dormouse Conservation Handbook Second Edition.
- 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.
- Chanin, P. (2003). Ecology of the European Otter. Conserving Natura 2000 Rivers Ecology Series No. 10. Natural England, Peterborough.
- 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 (2017). Guidelines on Ecological Report Writing. 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.

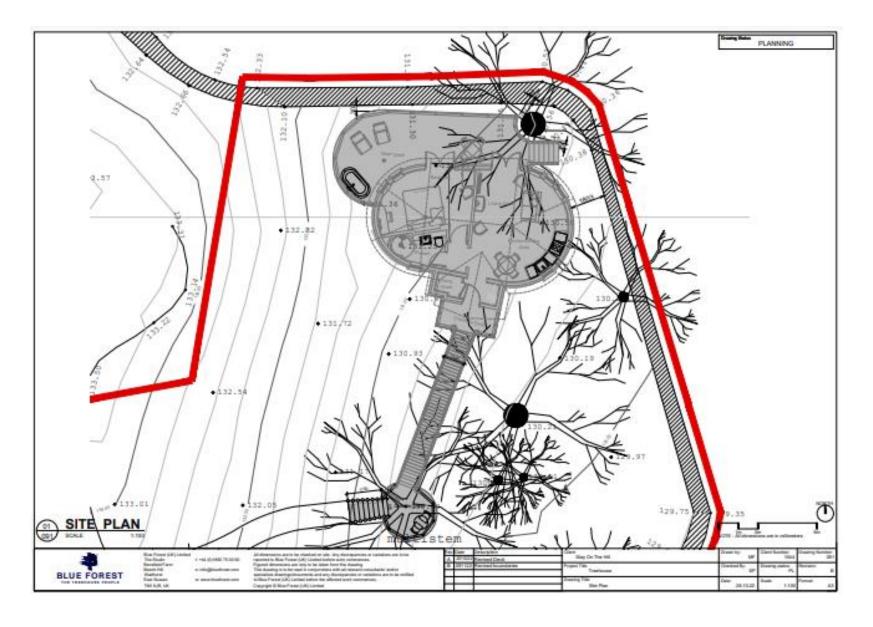
 Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Collins, J. (2016). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London.
- Defra (2007). Hedgerow Survey Handbook. A Standard Procedure for Local Surveys in the UK. Defra, London.
- Edgar, P., Foster, J. and Baker, J (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth http://downloads.gigl.org.uk/website/Reptile%20Habitat%20Management%20Handbook.pdf
- Garland, L. & Markham, S. (2008) Is Important Bat Foraging and Commuting Habitat Legally Protected? http://biodiversitybydesign.co.uk/cmsAdmin/uploads/protection-for-bat-habitat-sep-2007.pdf
- Gent, T. and Gibson, S. (2003). Herpetofauna Workers' Manual. JNCC, Peterborough.
- Gilbert, G., Gibbons, D.W., and Evans, J. (1998) Bird Monitoring Methods: A Manual of Techniques for UK Key Species. The Royal Society for the protection of Birds, Sandy, Bedfordshire, England.
- Google Earth. Accessed on 18/01/2023
- Harris, S., Cresswell, P. and Jefferies, D.J. (1989). Surveying badgers. Mammal Society, London.

- HMSO: Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 https://www.legislation.gov.uk/uksi/2019/579/contents/made
- HMSO: Countryside & Rights of Way Act (2000) http://jncc.defra.gov.uk/page-1378
- HMSO: Natural Environmental and Rural Communities Act (2006) http://www.legislation.gov.uk/ukpga/2006/16/contents
- HMSO: The Protection of Badgers Act 1992 (as amended) http://www.legislation.gov.uk/ukpga/1992/51/contents
- HMSO: Wildlife and Countryside Act 1981 (as amended 01.04.1996) http://jncc.defra.gov.uk/page-1377
- Institution of Lighting Professionals (2018). Guidance Note 08/18 Bats and Artificial Lighting in the UK. Bats and the Built Environment Series Publication: http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting.
- JNCC (2004). Bat Workers Manual, 3rd Edition. http://jncc.defra.gov.uk/page-2861
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit. http://jncc.defra.gov.uk/PDF/pub10 handbookforphase1habitatsurvey.pdf
- Langton, T., Beckett, C. and Foster, J (2001). Great Crested Newt Conservation Handbook. Froglife. Suffolk. http://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf
- Magic Database. http://www.magic.gov.uk/MagicMap.aspx Accessed on 18/01/2023.
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- National Planning Policy Framework (2021). https://www.gov.uk/government/publications/national-planning-policy-framework--2
- Natural England Designated Sites View. https://designatedsites.naturalengland.org.uk/SiteSearch.aspx Accessed on 18/01/2023.
- Natural England (2005). Organising Surveys to Determine Site Quality for Invertebrates: A Framework Guide for Ecologists. Natural England, Peterborough.
- Natural England (2007). Badgers and Development a Guide to Best Practice and Licensing. Natural England. Bristol. http://www.wildlifeco.co.uk/wp-content/uploads/2014/03/badgers-and-development.pdf
- Oldham R.S., Keeble J., Swan M.J.S. and Jeffcote M. (2000). Evaluating the Suitability of Habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10(4), 143-155. <a href="https://www.thebhs.org/publications/the-herpetological-journal/volume-10-number-4-october-2000/1617-03-evaluating-the-suitability-of-habitat-for-the-great-crested-newt-triturus-cristatus/file
- Panks, S., White., N., Newsome, A., Potter, J., Heydon, M., Mayhew, E., Alvarez, M., Russell, T., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2021). Biodiversity Metric 3.0: Auditing and Accounting for Biodiversity Technical Supplement. Natural England.
- Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747.
- Strachan, R., Moorhouse, T. and Gelling, M. (2011). Water Vole Conservation Handbook. Third Edition. Wildlife Conservation Research Unit, Oxford.

- UK Habitat Classification Working Group (2018). UK Habitat Classification User Manual at http://ecountability.co.uk/ukhabworkinggroup-ukhab
- Wray, S., Wells, D., Long, E. and Mitchell-Jones, T (2010). Valuing Bats in Ecological Impact Assessment. IEEM In-Practice. Number 70 (December 2010). Pp. 23-25.

Drawing Status PLANNING 01 FULL SITE PLAN
090 SCALE BLUE FOREST Stay On The Hill rawing Title Full Site Plan

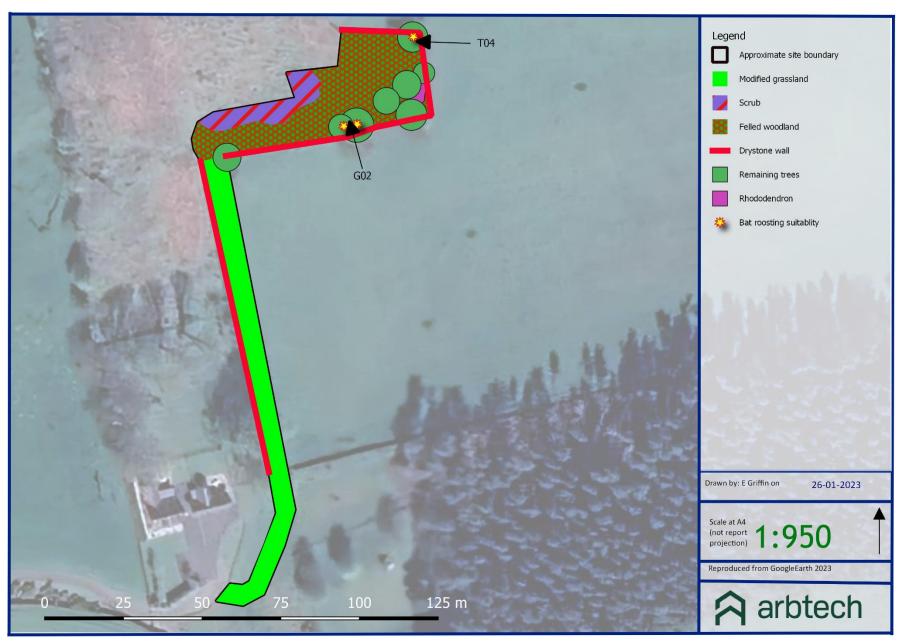
Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3: Habitat Survey Plan



Appendix 4: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds (the Wild Birds Directive) respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe. Over 1000 animal and plant species, as well as 200 habitat types, listed in the directive's annexes are protected in various ways:

Annex II species (about 900): core areas of their habitat are designated as Sites of Community importance (SCIs) and included in the Natura 2000 network. These sites must be managed in accordance with the ecological needs of the species.

Annex IV species (over 400, including many Annex II species): a strict protection regime must be applied across their entire natural range, both within and outside Natura 2000 sites.

Annex V species (over 90): their exploitation and taking in the wild is compatible with maintaining them in a favourable conservation status.

SPAs are classified under Article 2 of the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds both for rare bird species (as listed on Annex I) and for important migratory species.

The Conservation of Habitats and Species Regulations 2017 (as amended) form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12 nautical miles in England and Wales (including the inshore marine area) and to a limited extent in Scotland and Northern Ireland.

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres". However, they may also include riparian and coastal zones. Ramsar sites are statutorily protected under the Wildlife & Countryside Act 1981 (as amended 01.04.1996) with further protection provided by the Countryside and Rights of Way (CRoW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs). Further provisions for the protection and management of SSSIs have been introduced by the Nature Conservation (Scotland) Act 2004.

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within the European Natura 2000 network and globally.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non-Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved.

Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect 'important' countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys without the permission of the local authority. Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) aims to promote the maintenance of biodiversity by requiring the Secretary of State to take measures to maintain or restore wild species listed within the Regulations at a favourable conservation status.

The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979, implemented 1982) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CRoW) Act (2000).

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers Meles are protected under The Protection of Badgers Act 1992 which makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

Effects on development works:

A development licence will be required from the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) for any development works likely to affect an active badger sett, or to disturb badgers whilst they occupy a sett. Guidance has been issued by the countryside agencies to define what would constitute a licensable activity. It is no possible to obtain a licence to translocate badgers.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the WCA. Among other things, this makes it an offence to:

- Intentionally (or recklessly in Scotland) kill, injure or take any wild bird
- Intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.
- Intentionally or recklessly obstruct or prevent any wild bird from using its nest (Scotland only)

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and are commonly referred to as "Schedule 1" birds.

This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young
- Intentional or reckless disturbance of dependent young of such a bird
- In Scotland only, intentional or reckless disturbance whilst lekking
- In Scotland only, intentional or reckless harassment

Effects on development works:

Works should be planned to avoid the possibility of killing or injuring any wild bird or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Schedule 1 birds are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Amphibians and Reptiles

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, pool frog *Pelophylax lessonae* and great crested newt *Triturus cristatus* 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:

- To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
- To impair their ability to hibernate or migrate
- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

With the exception of the pool frog, these species are also listed on Schedule 5 of the WCA 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.

Effects 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 amphibian and 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.

Water Voles

The water vole *Arvicola terrestris* is fully protected under Schedule 5 of the WCA. This makes it an offence to:

- Intentionally kill, injure or take (capture) water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection

Effects on development works:

If development works are likely to affect habitats known to support water voles, the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) must be consulted. It must be shown that means by which the proposal can be re-designed to avoid contravening the legislation have been fully explored e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable, and measures to ensure minimal habitat loss. Conservation licences for the capture and

translocation of water voles may be issued by the relevant countryside agency for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will then only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of works.

Otters

Otters Lutra lutra are fully protected under the Conservation 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:
- To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
- To impair their ability to hibernate or migrate
- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Otters are also currently protected under the WCA 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

Effects 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 otter breeding or resting places (often referred to as holts, couches or dens) 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, and rear young). The licence is 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

Bats

All species are fully protected by Habitats Regulations 2010 as they are listed on Schedule 2. Regulation 41 prohibits:

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

Bats are afforded the following additional protection through the WCA as they are included on Schedule 5:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects 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 are likely to affect a bat roost or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Hazel Dormice

Hazel dormice Muscardinus avellanarius are fully protected 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:
- To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
- To impair their ability to hibernate or migrate
- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Dormice are also protected under the WCA 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

Effects on development works:

Works which are liable to affect a dormice habitat or an operation which are likely to result in an illegal level of disturbance to the species will require a European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales (NB: Hazel Dormouse are entirely absent from Scotland)). The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

White Clawed Crayfish

There is a considerable amount of legislation in place in an attempt to protect the White-clawed crayfish *Austropotamobius pallipes*. This species is listed under the European Union's (EU) Habitat and Species Directive and is listed under Schedule 5 of the Wildlife and Countryside Act (1981). This makes it an offence to:

· Protected against intentional or reckless taking

- Protected against selling, offering or advertising for sale, possessing or transporting for the purpose of sale

 It is also classified as Endangered in the IUCN Red List of Endangered Species. As a result of this and other relevant crayfish legislation such as the Prohibition of Keeping of Live Fish (Crayfish)

 Order 1996, a series of licences are needed for working with White-clawed and non-native crayfish. These are:
- A licence to handle crayfish (therefore survey work) in England
- A licence for the keeping of crayfish in England and Wales with an exemption for Signal crayfish (England).
- People in the post-code areas listed with crayfish present prior to 1996 do not need to apply for consent for crayfish already established. It does not, however, allow any new stocking of non-native crayfish into waterbodies. Consent for trapping of non-native crayfish for control or consumption is most likely to be granted in Thames and Anglian regions in the areas with "go area" postcodes.
- Harvesting of crayfish is prohibited in much of England and in any part of Scotland and Wales.

Effects on development works:

The relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will need to be consulted about development which could impact on a watercourse or wetland known to support white clawed crayfish. Conservation licences for the capture and translocation of crayfish can be issued if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of the works.

Wild Mammals (Protection Act) 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

Legislation Afforded to Plants

With certain exceptions, all wild plants are protected under the WCA. This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant, for example some species of orchid, are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits any person from:

- Intentionally (or recklessly in Scotland) picking, uprooting or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only)
- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof

- In addition to the UK legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2010. These are species of European importance. Regulation 45 makes it an offence to:
- Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species
- Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

Effects on development works:

A European Protected Species Licence (EPSL) will be required from the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) for works which are likely to affect species of planted listed on Schedule 5 of the Conservation or Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England and Wales to plant or cause to grow in the wild due to their impact on native wildlife. Species included (but not limited to):

- Japanese knotweed Fallopia japonica
- Giant hogweed Heracleum mantegazzianum
- Himalayan balsam Impatiens glandulifera

Effects on development works:

It is not an offence for plants listed in Part II of Schedule 9 of the WCA 1981 to be present on the development site, however, it is an offence to cause them to spread. Therefore, if any of the species are present on site and construction activities may result in further spread (e.g. earthworks, vehicle movements) then it will be necessary to design and implement appropriate mitigation prior to construction commencing.

Injurious weeds

Under the Weeds Act 1959 any landowner or occupier may be required prevent the spread of certain 'injurious weeds' including (but not limited to):

- Spear thistle *Cirsium vulgare*
- Creeping thistle Cirsium arvense
- Curled dock *Rumex crispus*
- Broad-leaved dock Rumex obtusifolius
- Common ragwort Senecio jacobaea

Effects on development works:

It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines and is not legally binding.

NATIONAL PLANNING POLICY (ENGLAND)

Environment Act 2021

The Environment Act 2021 (EA 2021) received Royal Assent on 9 November 2021 and is expected to become fully mandated within the next couple of years. The Act principally creates a post Brexit framework to protect and enhance the natural environment. Through amendments to the Town and Country Planning Act 1990, the Act will require all planning permissions in England (subject to exemptions which is likely to include householder applications) to be granted subject to a new general pre-commencement condition that requires approval of a biodiversity net gain plan. This will ensure the delivery of a minimum of 10% measurable biodiversity net gain. The principal tool to calculate this will be the Defra Biodiversity 3.0 Metric. Works to enhance habitats can be carried out either onsite or offsite or through the purchase of 'biodiversity credits' from the Secretary of State. However, this flexibility may be removed (subject to regulations) if the onsite habitat is 'irreplaceable'. Both onsite and offsite enhancements must be maintained for at least 30 years after completion of a development (which period may be amended).

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.

LOCAL PLANNING POLICY

Northumberland Local Plan 2016-2036

The Northumberland Local Plan 2016-2036 can be viewed here: https://www.northumberland.gov.uk/NorthumberlandCountyCouncil/media/Planning-and-Building/planning%20policy/Local%20Plan/Northumberland-Local-Plan-Adopted-March-2022.pdf

The following planning policies have implications in relation to biodiversity and the proposed development:

Policy ENV 1 –

- The character and/or significance of Northumberland's distinctive and valued natural, historic and built environments, will be conserved, protected and enhanced by: a. Giving appropriate weight to the statutory purposes and special qualities of the hierarchy of international, national and local designated and non-designated nature and historic conservation assets or sites and their settings, and, in particular, giving great weight to: i. Conserving and enhancing the Areas of Outstanding Natural Beauty, in accordance with Policies ENV 5 and ENV 6, and Northumberland National Park; ii. The conservation of designated heritage assets, with the impact of proposed development on their significance being assessed in accordance with Policy ENV 7. b. Protecting Northumberland's most important landscapes and applying a character-based approach to, as appropriate, manage, protect or plan landscape across the whole County.
- 2. In applying part (a) above, recognising that: a. Assets or sites with a lower designation or non-designated, can still be irreplaceable, may be nationally important and/or have qualitative attributes that warrant giving these the appropriate protection in-situ; b. Development and associated activity outwith designations can have indirect impacts on the designated assets or sites;
- 3. An ecosystem approach will be taken that demonstrates an understanding of the significance and sensitivity of the natural resource. This should result in a neutral impact
 on, or net benefit for those ecosystems and the ecosystem services that they provide.

Policy ENV 2 –

- 1. Development proposals affecting biodiversity and geodiversity, including designated sites, protected species, and habitats and species of principal importance in England (also called priority habitats and species), will: a. Minimise their impact, avoiding significant harm through location and/or design. Where significant harm cannot be avoided, applicants will be required to demonstrate that adverse impacts will be adequately mitigated or, as a last resort compensated for; b. Secure a net gain for biodiversity as calculated, to reflect latest Government policy and advice, through planning conditions or planning obligations.
- 2. Where sites are designated for their biodiversity or geodiversity, planning decisions will reflect the hierarchical approach set out in Policy ENV 1.
- 3. In the case of Local Wildlife and Geological Sites and Local Nature Reserves: a. If significant harm to biodiversity value 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 will be refused. b. Geological value and soils within these sites will be protected and enhanced in a manner commensurate with the identified quality. c. Where permission can be granted in accordance with (3) (a) or (b) above,

planning conditions or obligations will be used to protect the site's remaining nature conservation or geological interest and to provide appropriate compensatory measures for the harm caused.

- 4. The Council expects the ecosystem approach to be applied in development through the following measures, individually or in combination: a. The conservation, restoration, enhancement, creation and/or (where appropriate) the re-creation of priority habitats and the habitats of priority species; b. The protection and enhancement of the ecological resilience and proper functioning of all ecological networks and links to promote migration, dispersal and genetic exchange, including the South East Northumberland Wildlife Network, as shown on the Policies Map, including its linkages with Newcastle and North Tyneside; where disruption to these networks cannot be avoided, adequate mitigation or, as a last resort, compensatory measures that relate to the integrity of the network will be sought; 10. Environment 196 The Local Plan should be read as a whole. Proposals will be judged against all relevant policies. Northumberland Local Plan (Adopted March 2022) c. Measures that will buffer or extend existing sites of ecological value, support the development of the Border Uplands Nature Improvement Area and Northumberland Coalfield Nature Improvement Area or contribute to national or local biodiversity objectives; d. Minimising any adverse effects on habitats and species caused by the wider impacts of development and its associated activities including: i. Disturbance; or ii. The inadvertent introduction of non-native species: or iii. Reductions in water quality; or iv. Other forms of pollution that would adversely affect wildlife; The above to be achieved through precautionary measures including appropriate buffer zones and developer contributions to the Coastal Mitigation Service within zones shown on the Policies Map; e. Maximising opportunities to incorporate biodiversity, and ecological enhancement for species of conservation concern, through additional built-in or planted features; and f. Securing the continued management of those ecological features created, restored or enhanced as a result of development.
- o 5. Harm to geological conservation interests will be prevented and, where appropriate, opportunities for public access to those features will be provided.

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.