

Preliminary Ecological Appraisal and Preliminary Roost Assessment

Ivy Tree Farm, Shelley, Ipswich, Suffolk, IP7 5RE

Mark Westwood

Status	Issue	Name	Date
Draft	1	George Collier-Smith Msci (Hons), Graduate Ecologist	19/07/2022
Reviewed	1.1	Lizi Pimlott BSc (Hons) MSc MCIEEM MRSB, Principal Ecologist	20/07/2022
Final	2	George Collier-Smith Msci (Hons), Graduate Ecologist	21/07/2022

Arbtech Consultant's Contact Details:

George Collier-Smith Graduate Ecologist **Tel:** 07706 320 940 **Email:** georgecs@arbtech.co.uk <u>https://arbtech.co.uk</u>

Limitations and Copyright

Arbtech Consulting Limited has prepared this report for the sole use of the above-named client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

Industry Guidelines and Standards

This report has been written with due consideration to:

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

Proportionality

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

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

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

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Mark Westwood to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Ivy Tree Farm, Shelley, Ipswich, Suffolk, IP7 5RE (hereafter referred to as "the site"). The survey was required to inform a planning application for the demolition of the existing workshop, with the erection of a new building in the same place (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 9 of this report.

Feature	Foreseen impacts	Recommendations
		Measures required to adhere to guidance, legislation and planning policies.
Foraging and Commuting Bats	The proposed development will include the use of lighting which could spill	A low impact lighting strategy will be adopted for the site during and post-
	on to bat roosting, foraging or commuting habitat and deter bats from	development
	using these areas.	

Contents

1.0 Introduction and Context	6
1.1 Background	6
1.2 Site Context	6
1.3 Scope of the Report	6
2.0 Methodology	8
2.1 Desk Study	
2.2 Field Survey	
2.3 Limitations	9
3.0 Results and Evaluation	
3.1 Desk Study Results	
3.2 Field Survey Results	
4.0 Conclusions, Impacts and Recommendations	
4.1 Informative Guidelines	
4.2 Evaluation	
5.0 Bibliography	
Appendix 1: Proposed Development Plan	
Appendix 2: Site Location Plan	
Appendix 3: Desk Study Information	Error! Bookmark not defined.
Appendix 4: Habitat Survey Plan	
Appendix 5: Legislation and Planning Policy	

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Mark Westwood to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Ivy Tree Farm, Shelley, Ipswich, Suffolk, IP7 5RE (hereafter referred to as "the site"). The survey was required to inform a planning application for the demolition of the existing workshop, with the erection of a new building in the same place (hereafter referred to as "the proposed development"). A plan showing the proposed development will be provided in Appendix 1 when available. 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. The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging or commuting.

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

1.2 Site Context

The site is located at National Grid Reference TM 0139 0404 and has an area of approximately 0.1ha. The building impacted by the works is located in the southern corner of Ivy Tree Farm, immediately bordering a large grazed paddock and a main road. The site is located between Polstead Heath and Shelley.

A site location plan is provided in Appendix 2.

1.3 Scope of the Report

The PEA element of 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.

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

To achieve this, the following steps have been taken:

- A desk study has been carried out.
- A field survey has been undertaken to record baseline information on the site and surrounding area including habitat types and their suitability for notable or protected species, including roosting bats.
- 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 2km radius review of statutory designated sites and notable habitats as well as a 2km radius review of granted European Protected Species Licence (EPSL) and notable species records held on magic.gov.uk database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

2.2 Field Survey

The survey was undertaken by George Collier-Smith (Accredited Agent on Natural England Bat Licence Number: 2018-33540-CLS-CLS) on 06/07/22.

Preliminary Ecological Appraisal

An extended habitat survey was undertaken, following the methodology set out in *Phase 1 Habitat Survey Methodology* (JNCC, 2010). 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.

Ponds on and adjacent to the site were assessed for their suitability to support great crested newts using the Habitat Suitability Index (HSI) Assessment Methodology (Oldham et al, 2000).

Preliminary Roost Assessment

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

For any surveyed buildings

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

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

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

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

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, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records. 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. 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 Desk Study Results

A summary of desk study results is provided below.

Designated Sites

Details of any statutory designated sites within a 2km radius of the site, including their reasons for notification, are provided in Table 3 below.

Table 3: Statutory designated sites within 2km radius of the site

Designated site	Distance from	Reasons for notification from Natural England
name	site (approx.)	
Dedham Vale Are of	900m west	The characteristic lowland English landscape on the Suffolk-Essex border, made famous worldwide by artists, is still recognisable today as it was
Outstanding Natural		when painted by Constable and Gainsborough. The charm of the villages, fascinating local attractions and beauty of the surrounding countryside
Beauty (AONB)		mean there's no shortage of places to go and things to see.

Landscape

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

The site is located in a rural area of Suffolk. The landscape is dominated by large arable fields, with small, scattered woodland copses and tree lines around the area, which could be used by wildlife for shelter, foraging and commuting. Scattered irrigation ditches around the area will provide abundant insect foraging for birds and bats.

Notable Habitats

Notable habitats within 2km are listed in Table 4.

Table 4: Notable habitats within 2km of the site

Habitat	Closest distance from site (approx.)
Deciduous woodland	500m northeast
Ancient woodland	950m northwest
Woodpasture and parkland	1000m northeast
Traditional orchards	1400m east
Lowland dry acid grassland	1850m southwest

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 5.

Table 5: Weather conditions during the survey

Date: 06/07/2022		
Temperature	16°C	
Humidity	56%	
Cloud Cover	10%	
Wind	4mph	
Rain	None	

Habitats and Flora

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

- Buildings
- Hardstanding
- Amenity grassland
- Ditch
- Ponds

A description and photograph of each habitat is provided in Table 6. No protected or non-native invasive plant species were identified on the site.

Table 6: Description and photographs of habitats within and adjacent to the site

Habitat Type	Habitat description	Photograph
Buildings	One building on site is due to be impacted by the works. Its description and value to roosting bats is described in the PRA section of the report below:	Photographs of the building are provided below.
Hardstanding	The site is dominated by hard standing in the form of a driveway.	N/A

Amenity grassland	A small section of amenity grassland is present to the south of B1. It has a retained short length and as a result of regular management has limited structural and species diversity. Species include perennial rye (D), red fescue (D) and cleavers (D).	
Ditch	A drainage ditch is present to the south of B1. At the time of the survey the ditch contained a small amount of water.	



Fauna

<u>Bats</u>

A search of the magic database returned no granted EPSLs for bats within 2km of the site.

Foraging and commuting habitat is present on site in the form of tree lines and hedgerows.

The results of the PRA are provided in Table 7. No evidence of roosting bats was identified during the survey.

Table 7: Assessment of the suitability of the site for bats

Feature Ref	Description	Photographs
B1 – northern elevation	B1 is a timber-built workshop with a pitched roof and is set on hard standing. The western elevation features a set of large doors and gable end. The doors are usually shut, and structurally are in a good overall condition. The gable end is also in a good condition and does not provide any access opportunities.	

B1 – eastern elevation	The exterior features vertical wooden cladding. There are a few broken features present, but these are all low to the floor. In addition, as they are vertical in nature there are no suitable crevices formed which could be utilised by bats. There is a door present which is in a good condition. The corrugated roofing provides no roosting value for bats.	
B1 – southern elevation	The external cladding is in excellent condition, and there are no gaps present between the boarding. The window is in a good condition and does not provide any access points. The gable end is also in a good overall condition.	

	A clear view of the cladding was obscured by the presence of Ivy. The cladding	
	could be viewed internally, and no gaps or breaks were present. The corrugated	
	roofing does not provide any roosting value to bats present.	
		Although the second of the second sec
		The same state
B1 – western		
elevation		
		ANA CONTRACTOR
	Internally B1 comprises an old timber structure and does not contain a loft space.	
	There are numerous stored items present, which can be a good indicator of bat	
	activity as droppings can accumulate on them. There were a few cracks in the	
	external cladding due to age, however these were limited to the eastern elevation	
	and were all low down. There is no lining present on the underside of the roof,	
	meaning the interior will be subject to temperature fluctuations due to the nature	
	of the roofing. No signs of bat activity were found within B1.	
B1 internal		
1		

Other Species

A search of the magic database returned no granted EPSLs within 2km of the site.

An assessment of the suitability of the site for protected or notable species is provided in Table 8.

Table 8: Assessment of the suitability of the site for protected or notable species

Species	Assessment of suitability			
	There are no ponds present on site. H Pond 1 is located approximately 20m aquatic vegetation. The water quality Pond 2 is located approximately 80m and there are signs of use by waterfor Both ponds have been assessed for t Table 8a: HSI calculation of ponds.	However, then a west of the s y is poor and t a east. It is lar, pwl. heir value for	re are two pc ite. It is sepa :here are sigr ger than pon great crested	nds present within 250m of the site. rated from the site by a busy road. It does not contain fish and is lacking in emerging is of use by waterfowl. d 1 and has a large population of fish present. It lacks any bank or aquatic vegetation d newts below:
	SI Description	SI Value P1	SI Value P2	
	Geographic location	1	1	
	Pond Area	0.1	0.2	
	Pond Permanence	0.5	0.9	
Amphibians	Water Quality	0.33	0.33	
	Shade	1	1	
	Waterfowl Effect	0.01	0.01	
	Fish Presence	1	0.01	
	Pond Density	0.6	0.6	
	Terrestrial Habitat	0.33	0.33	
	Macrophyte Cover	0.3	0.3	
	HSI Score	<0.5	<0.5	
	HSI Category	Poor	Poor	
	There is no suitable terrestrial habita opportunities. Furthermore, the contained ponds; such as hardstanding and	nt on site. The nectivity of th I short grazed	habitats on le site to oth grassland to	site are assessed to be unsuitable due to the lack of foraging, commuting and refuge er suitable areas is poor due to the presence of suboptimal habitat between the site the east.

Reptiles	The small section of amenity grassland is considered to be suboptimal for reptiles. This is because it has a lack of structural and species diversity, and its short length does not provide refuge opportunities from predators. Connectivity of the site to areas of higher suitability, such as high value grassland and scrub is poor.
Badgers	No evidence of badger activity was recorded on site. Furthermore, no badger setts were recorded on or within 30m of the site. The site provides no suitable sett building opportunities due to the flat terrain.
Hazel Dormouse	No suitable habitat present.
Hedgehog	The small section of amenity grassland provides adequate foraging and commuting opportunities for hedgehogs.
Otter and Water Vole	No suitable riparian habitat present.
Birds	No habitats recorded on site are assessed to provide nesting opportunities for birds. However, habitats surrounding the site provide nesting opportunities for common species of breeding birds in the form of hedgerows and trees.
Invertebrates	Invertebrate activity and presence were high on site. Habitats on site are considered suitable to support an invertebrate assemblage that is common and widespread only.

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 9 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 the demolition of the current workshop, and subsequent erection of a replacement building.

Table 9: Evaluation o	of the site and an	v ecoloaical	constraints
rable bi Evaluation o	j the site and an	y ccorogrear	constraints

Ref	Summary of Survey	Foreseen Impacts	Recommendations	Biodiversity Enhancements
	Findings		Measures required to adhere to guidance, legislation and	The Local Planning Authority
			planning policies.	has a duty to ask for
				enhancements under the NPPF
				(2021)
Designated	The site is not	No impacts to designated sites are anticipated due	None.	None.
sites	subject to any	to the small scale and distance of the proposed		
	statutory or non-	development from such sites (where known) as		
	statutory	well as the urban location of the site with		
	designation.	surrounding physical barriers.		
	Thoro is ono			
	statutory site			
	within 2km of the			
	sito the closest			
	being Dedham Vale			
	900m from the site			
	500mmonn the site.			
	The presence of			
	non-statutory			
	designated sites			
	within 2km of the			
	site cannot be			
	established without			
	data from Suffolk			
	Biodiversity			
	Information Service			
	(SBIS).			
Habitats and	Inere are no	Ine proposed development is limited to the	None.	and and analyzed
nora	within the site but	now building on the existing bard standing. No		and ennancement
	within the site but	hebitete efuelue en site will be lest er imported. No		opportunities could be
	nive nabilals are	impacts to any potable babitate are apticipated due		development:
	of the site the	to the small scale and distance of the prepared		the opposition of
	of the site, the	to the small scale and distance of the proposed		Ine enhancement of
	dociduous	development from such habitats as well as the		existing pond for
	aeciduous	location of the site with surrounding physical		wildlife to include
		barriers.		

woodland located 500m from the site. Other habitats within the site are common and widespread and have low ecological value. No protected or notable plant species were recorded during the survey.	Enhancements for biodiversity are provided in other areas of the site in the form of the planting of over 100 native trees, shrubs and fruit trees. Around half an acre of wildflower grassland is also present.		native plant species and no fish. Species-specific enhancement opportunities are detailed later in this table.
AmphibiansBoth ponds located within 250m of the site were assessed to provide poor suitability to support great crested newts. Furthermore, the site is dominated by hard standing which is unsuitable habitat for great crested newts. The only vegetation present is also considered to be suboptimal due to a lack of refuge opportunities. In addition to this, there are physical barriers present	No impacts are anticipated on amphibians as a result of the proposed development.	None.	None.

	and the ponds in			
	the form of a busy			
	road and			
	suboptimal habitat			
	(amenity			
	grassland). As such			
	it is considered			
	nighly unlikely that			
	great crested newts			
	would be present			
D 11	on site.			••
Reptiles	The site is	No impacts are anticipated on reptiles as a result of	None.	None.
	dominated by hard	the proposed development.		
	standing, which is			
	unsuitable habitat			
	for reptiles.			
	Furthermore,			
	connectivity to			
	higher value areas			
	is poor. Therefore,			
	it is considered			
	highly unlikely that			
	reptiles will be			
	present on site.			
Roosting bats	The workshop has	Bats are very unlikely to be roosting within this	In the unlikely event that a bat or evidence of bats is	The installation of a minimum
	negligible value for	building and as such, there are not anticipated to	discovered during the development all work must stop and	of two bat boxes on mature
	roosting bats due to	be any impacts on roosting bats as a result of the	a bat licensed ecologist contacted for further advice.	trees around the site
	a lack of potential	proposed development.		boundaries will provide
	roost features.			additional roosting habitat for
				bats e.g.
	A search of the			2F Schwegler Bat Box
	magic database			1FF Schwegler Bat Box
	returned no			2FN Schwegler Bat Box
	granted EPSLs			Or a similar alternative brand.
	within 2km of the			Bat boxes should be positioned
	site.			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 building 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 commuting bats	The ponds, scattered trees and hedgerows that surround the wider site could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. The proposed development will 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, which will include the following measures: Use narrow spectrum light sources to lower the range of species affected by lighting. 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. 	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats: • Planting of native tree, shrub and hedgerows to increase foraging opportunities.

			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.	
Badger	No badger setts	No impacts are anticipated on badgers as a result	None.	None.
	were identified	of the proposed development.		
	within 30m of the			
	site. Furthermore,			
	activity woro			
	recorded on site			
	Due to the			
	dominating			
	unsuitable habitats			
	present, it is			
	considered highly			
	unlikely that			
	badgers will be			
	present on site.			
Hazel	No suitable habitat	No impacts are anticipated on hazel dormice as a	None.	None.
dormouse	present.	result of the proposed development.		
Hedgehog	The dominating	No impacts are anticipated on hedgehogs as a	None.	The following habitat creation
	unsuitable habitats	result of the proposed development.		and enhancement
	present on site			opportunities could be
	mean it is	Enhancements for hedgehogs are provided in other		incorporated into the proposed
	considered highly	areas of the site in the form of the planting of over		development which would be
	unlikely that	100 native trees, shrubs and fruit trees. Around half		beneficial for hedgehogs:
	hedgehogs will be	an acre of wildflower grassland is also present.		 Installation of gaps
	present on site.			under boundary
				fencing to enable

				hedgehogs to move freely through the site.
Otter and Water Vole	No suitable riparian habitat present.	No impacts are anticipated on otters or water vole as a result of the proposed development.	None.	None.
Birds	There are no habitats found on site which could support nesting birds.	No impacts are anticipated on nesting birds as a result of the proposed development.	None.	The installation of a minimum of two bird boxes on mature trees around the site boundaries will provide additional nesting habitat for birds e.g. Schwegler 1B Nest Boxes Schwegler 2H Robin Boxes Woodstone Nest Box Or a similar alternative brand. Tree boxes should be positioned approximately 3m above ground level where they will be sheltered from 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.
Invertebrates	Habitats on site are considered suitable to support an invertebrate assemblage that is common and widespread only.	No impacts are anticipated on notable species or populations of invertebrates as a result of the proposed development. Enhancements for invertebratess are provided in other areas of the site in the form of the planting of over 100 native trees, shrubs and fruit trees. Around half an acre of wildflower grassland is also present.	None.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for invertebrates: • Retention of deadwood on the site.

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.
- Eaton, M.A., Aebischer, N.J., Brown, A.F., Hearn R.D., Lock, L., Musgrove, A.J., Noble, D.G., Stroud, D.A. and Gregory, R.D. (2015). Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds 108, 708–746
- 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? <u>http://biodiversitybydesign.co.uk/cmsAdmin/uploads/protection-for-bat-habitat-sep-2007.pdf</u>
- 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 18/07/2022
- 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. <u>http://www.magic.gov.uk/MagicMap.aspx</u> Accessed on 18/07/2022
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- National Planning Policy Framework (2021). <u>https://www.gov.uk/government/publications/national-planning-policy-framework--2</u>
- Natural England Designated Sites View. https://designatedsites.naturalengland.org.uk/SiteSearch.aspx Accessed on 18/07/2022
- 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. <u>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
 </u>
- 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.

- 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.

Appendix 1: Proposed Development Plan

Not available at the time of writing this report.



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 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.

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.