Preliminary Ecological Appraisal

Sulby Cottage, Barkhouse Lane, Cawthorne, Barnsley, S75 4AP

G. E. Strawbridge

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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 G. E. Strawbridge to undertake a Preliminary Ecological Appraisal (PEA) at Sulby Cottage, Barkhouse Lane, Cawthorne, Barnsley, S75 4AP (hereafter referred to as "the site"). The survey was required to inform an outline planning application - full details were unavailable at the time of writing this report, however it is thought that the development will comprise the construction of residential dwellings (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 4 of this report.

Feature	***Foreseen impacts***	***Recommendations*** *Measures required to adhere to guidance, legislation and planning policies.*
Habitats and Flora	The proposed development could result in the loss of modified grassland and groups of shrubs and trees. These habitats are however not ecologically significant. Due to the site being designated a priority habitat, there is potential for damage to the immediate and surrounding area during construction.	Best practice measures to minimise the possibility of pollution and tree damage must be implemented during construction. Any landscaping within the proposed development should include native species planting where possible.
Foraging and commuting bats	As the proposed development is unknown, an accurate impact assessment on existing flora is not possible. However, due to the low value of the habitats present onsite it is likely any loss of habitats is likely to be inconsequential for bats, due to habitats of higher quality being nearby.	A low impact lighting strategy will be adopted for the site during and post-development.
Birds	As the proposed development is unknown, an accurate impact assessment on existing flora (such as scattered trees and shrubs) is not possible. However, due to the low value of the habitats present onsite it is likely any loss of habitats is likely to be inconsequential for nearby bird populations, due to habitats of higher quality being nearby. However, it is likely that removal of these habitats could result in destruction, disturbance and subsequent abandonment of active bird nests.	Works should be undertaken outside the period 1st March to 31st August.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by G. E. Strawbridge to undertake a Preliminary Ecological Appraisal (PEA) at Sulby Cottage, Barkhouse Lane, Cawthorne, Barnsley, S75 4AP (hereafter referred to as "the site"). Full details were unavailable at the time of writing this report, however it is though that the development will comprise the construction of residential dwellings (hereafter referred to as "the proposed development").

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.

1.2 Site Context

The site is located at National Grid Reference SE 27471 07610 and has an area of approximately 0.2ha comprising of modified grassland, scattered trees, planted shrubs and small trees, groups of trees and hedges, hedgerows and hard standing. It is located directly west of Cawthorne town and east of Lower Denby.

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 Charlie Moore BSc (Hons) on 12/1/23.

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

No statutory designated sites were identified within 2km of the site.

The site lies within the impact risk zone for Pye Flatts Site of Special Scientific Interest (SSSI). The assessment of impacts to this site are not possible due to the proposed development not being finalised. However, due to the assumed small scale nature of the proposal, impacts to the SSSI are considered to be negligible.

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 1.

Table 1: Weather conditions during the survey

Date: 13-1-23	
Temperature	11°C
Humidity	91%
Cloud Cover	70%
Wind	17mph
Rain	Drizzling

Habitats and Flora

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

- Modified Grassland (g4)
- Scattered Trees (u1b11)
- Planted Shrubs and Small Trees (h3h 56)
- Groups of trees and hedges (h2 1170)
- Hedgerow (h2 56)
- Hard Standing (u1c)

A description and photograph of each habitat is provided in Table 2.

No protected or non-native invasive plant species (as listed under Schedules 8 or 9 of the Wildlife and Countryside Act 1981) were identified on the site.

The site is designated on Magic as woodpasture and parkland habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Key features and characteristics of woodpasture and parkland include ancient and veteran trees, grazing mammals and open grassland. The site does not present any of these features and based on Google Earth historical mapping, has comprised of garden habitats for at least 14 years. For this reason the habitats present on site are assessed to not meet the criteria for woodpasture and parkland habitat of principal importance and that the Magic map database is outdated. Habitats which could qualify as woodpasture and parkland were noted outside the site adjacent to the northern boundary.

Table 2: Description and photographs of habitats within and adjacent to the site

Habitat type	***Habitat description***	***Photograph***
Modified Grassland (g4)	Two separate areas of modified grassland located onsite, bordered by shrubs and trees. Species include bermuda grass (d), dandelion (o) and meadow grass (d). these two areas of grassland appear to be semi regularly maintained with a short sward length of approximately 90mm from ground level – no seed heads are visible from any species.	
Scattered trees (u1b11)	Several scattered trees (with canopies extending outside of the aerodynamic crown of the also present groups of trees) can be found within site, and include birch, pittisporum, larch and Leyland cypress. All trees onsite are well established and have been subjected to historic pruning works including crown lifting and reduction. The trees are between early mature and mature life stages. Heights range from approximately 14m and 1m, with stems between approximately 80mm and 590mm diameter.	

Planted Shrubs and Small Trees (h3h 56)	Located throughout the site are areas of planted shrubs and small trees. Species include pittisporum (a), wood spurge (a), privet (o), griselaneum (f), eucalyptus (r), bay (r), daffodil (a), willow (o), pyracantha (a), hosta (a) and mahonia (f). These groups are unmanaged. The hieghts of these ranged between approximately 2.5m and ground level herb cover and have stem diameters approximately between 50mm and 80mm.	 

Groups of trees and hedges (h2 1170)	Along the eastern and western boundary of the site is two separate groups of mature trees with a dense hedge underneath. These two groups are unmanaged and have species including laurel (a), poplar (o), yew (o), cherry (r), beech (r), maple (a), willow (r), Douglas fir (r) and Lawson cypress (a). Stem diameters for these groups range between 90mm and 550mm, and heights range between 2m and 20m. The western ground is located adjacent to a dry stone wall approximately 1.5m tall, and the eastern group has rabbit proof and chicken wire fencing underneath.	 

		
Hedgerow (h2 56)	A linear planted hedge of hawthorn along the northern boundary, with chicken wire and rabbit proof fencing.	

Hard (u1c)	Standing	An unsealed gravel driveway comprising of stone chippings.	

Fauna

An assessment of the suitability of the site for protected or notable species is provided in Table 3.

Table 3: Assessment of the suitability of the site for protected or notable species

Species	***Assessment of suitability***
Amphibians	There are no ponds or standing bodies of water suitable to support the complex lifecycles of amphibians (including great crested newts) in the immediate area of site, and none with suitable connective habitat within 500m of site. There is a large water course to the north of site, approximately 220m from the northern boundary, and a small beck approximately 400m south of site. However, these can be considered negligible for great crested newts due to the fast-flowing water not being conducive to newts. Similarly, there is a lack of connective habitat that could be used by amphibians, as there is a large open area of grassland between the brook to the north, and a main road between the beck and the site. Due to this it is unlikely that amphibians will be using the site. There are also no records of EPSLs within 2km of site pertaining to great crested newts.
Reptiles	There are no suitable areas of refugia or sheltered basking areas onsite. The site is also bordered on the southern and western sides by a wall, which is covered by dense vegetation.
Badgers	No evidence of badgers can be found onsite, and the combination of fences and walls surrounding the site (which are in good condition) will restrict access to site by badgers.

Bats	Several mature trees onsite could be used by feeding and commuting bats, however due to the age and general lack of supporting features (such as pruning wounds or rot holes) it is unlikely these trees could be exploited for roosting. There is also a large water course approximately 220m to the north which is likely to support several bats. There are two EPSLs that have been returned within 2km of site, one approximately 750m to the north, which covers the damage of a resting and breeding site, and another to the southwest which covers the destruction of a resting place. The species covered under these licences are brown long-eared bats, common and soprano pipistrelles, whiskered an natterers bat.
Hazel Dormouse	There is no supporting habitat onsite that could be used to support the complex lifecycles of hazel dormice. There are no EPSLs returned within 2km for hazel dormice.
Hedgehog	Due to the well-sealed nature of the site boundary (walls and rabbit proof chicken wire fencing) it is unlikely hedgehogs can access the site.
Riparian mammals	There is a large water course to the north of site, approximately 220m from the northern boundary. This water course could support riparian mammals such as otters and water voles, however due to the lack of connective habitat to the site (the 220m between comprises of mostly open grassland), the likelihood of riparian mammals using the site is negligible. There are also no records of EPSLs within 2km of site pertaining to otters.
Birds	Several of the scattered trees and groups of trees around site could support nesting birds. Due to the age of the trees onsite, it is unlikely that schedule 1 birds are using the site, due to a lack of suitable features that they could exploit.
Invertebrates	The habitats on site are common, widespread and of low ecological value. it is unlikely that any notable invertebrate assemblages are using the site.

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 4 presents an evaluation of the ecological value of the site and also details any ecological constraints identified in relation to the proposed development - full details were unavailable at the time of writing this report, however it is thought that the development will comprise the construction of residential dwellings.

Table 4: 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	The site is not subject to any statutory or non-statutory designation. There are no statutory designated sites within 2km of the site.	As there are no statutory designated sites within 2km, construction related impacts are not envisaged due to distance from the site. The presence of non-statutory designated sites is unknown without data from local records centre and without details of the proposed development an impact assessment cannot be undertaken. Similarly, without details of the proposed development, an assessment of operational or post development impacts on designated	None.	None.

	The site lies within the impact risk zone for Pye Flatts SSSI, however due to the lack of an impact statement available for the SSSI and lack of proposed plans, an assessment on impacts to this SSSI is not possible.	sites cannot be undertaken e.g. recreational pressure.		
Habitats and flora	The site is listed as a wood pasture and parkland habitat of principal importance, but this report has concluded that the habitats present within the site do not qualify as wood pasture and parkland habitat. However such habitat is present adjacent to the site. The site also has 5no. notable habitats within 2km of site, the closest being traditional orchards, which is located approximately 260m south. No protected or notable plant species were	No direct impacts to notable habitats are envisaged, however due to their proximity to the site, particularly woodpasture and parkland habitat, construction activities could result in tree damage or pollution. A proposed development layout has not been provided and therefore a detailed impact assessment on the onsite habitats cannot be undertaken. However any development would likely result in the loss of modified grassland, shrubs and trees which may result in a biodiversity net loss on site. It may be possible to at least partially offset this via a landscaping scheme.	Best practice measures to minimise the possibility of pollution and tree damage must be implemented during construction. Any landscaping within the proposed development should include native species planting where possible.	Native trees, shrubs and hedges could be planted in a suitable location onsite post development.

	recorded during the survey.			
Amphibians	Amphibians (including great crested newts) are unlikely to be using the site, due to a lack of suitable waterbodies (and connective habitat) within 500m of site. No EPSLs pertaining to great crested newts have been returned within 2km of site.	No impacts are anticipated on amphibians, including great crested newt, as a result of the proposed development.	None.	None.
Reptiles	Reptiles are unlikely to be using the site due to a lack of supporting habitat such as refugia or sheltered basking spots.	No impacts are anticipated on reptiles as a result of the proposed development.	None.	None.
Roosting bats (site)	The scattered trees and groups of trees present a negligible value for roosting bats due to the age and lack of supporting features that bats could exploit.	Bats are very unlikely to be roosting within this site and as such, there are not anticipated to be any impacts on roosting bats as a result of the proposed development.	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.	The installation of a minimum of two bat boxes on mature trees around the site boundaries or on retained/new buildings will provide additional roosting habitat for bats – types of bat boxes can be recommended once a proposal is completed.
Foraging and commuting bats	Scattered trees and groups of trees could be used by	As the proposed development is unknown, an accurate impact assessment on existing flora is not possible. However, due to the low value	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures:	None.

	local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	of the habitats present onsite it is likely any loss of habitats is likely to be inconsequential for bats, due to habitats of higher quality being nearby.	• 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. • 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	Badgers are unlikely to be using the site due to the barriers (fences and the	No impacts are anticipated on badgers as a result of the proposed development.	None.	None.

	walls) around the boundary of the site restricting access.			
Hazel dormouse	Hazel dormice are unlikely to be using the site due to a lack of supporting habitat. No EPSLs pertaining to hazel dormice have been returned within 2km of site.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.
Hedgehog	Hedgehogs are unlikely to be using the site due to the barriers around the boundaries of site restricting access (fences and walls).	No impacts are anticipated on hedgehogs as a result of the proposed development.	None.	The proposed development could include gaps under fencing to allow access, along with hedgehog houses located in a suitable location onsite.
Riparian Mammals	Riparian mammals are unlikely to be using the site due to the lack of connective habitat to the site from nearby watercourses. No EPSLs pertaining to otters have been returned within 2km of site.	No impacts are anticipated on otters as a result of the proposed development.	None.	None.
Birds	Larger scattered trees and groups of trees can present nesting opportunities for common species of	As the proposed development is unknown, an accurate impact assessment on existing flora (such as scattered trees and shrubs) is not possible. However, due to the low value of the habitats present onsite it is likely any loss of habitats is likely to be inconsequential for nearby bird populations, due to habitats of	Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the tree or vegetation to be cleared 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 two bird boxes on mature trees around the site boundaries or on retained/new buildings will provide additional

	bird, such as pigeon, crows and magpies. The site is unlikely to support nesting opportunities for schedule 1 birds, such as barn owls, due to a lack of supporting habitat.	higher quality being nearby. However, it is likely that removal of these habitats could result in destruction, disturbance and subsequent abandonment of active bird nests.		nesting habitat for birds e.g. Woodstone Nest Box (buildings or trees) Or a similar alternative brand. General purpose boxes should be positioned on buildings, fences, walls or trees approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Swift and sparrow boxes should be positioned at the eaves of a building and can be incorporated into the fabric of the building during construction.
Invertebrates	The habitats onsite, due to their common nature, are unlikely to support any assemblages of invertebrates of note. No EPSLs pertaining to invertebrates have been returned within 2km of site.	No impacts are anticipated on notable species or populations of invertebrates as a result of the proposed development.	None.	The following habitat creation 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. • A green roof on new buildings.

				• Retention of deadwood on the site.

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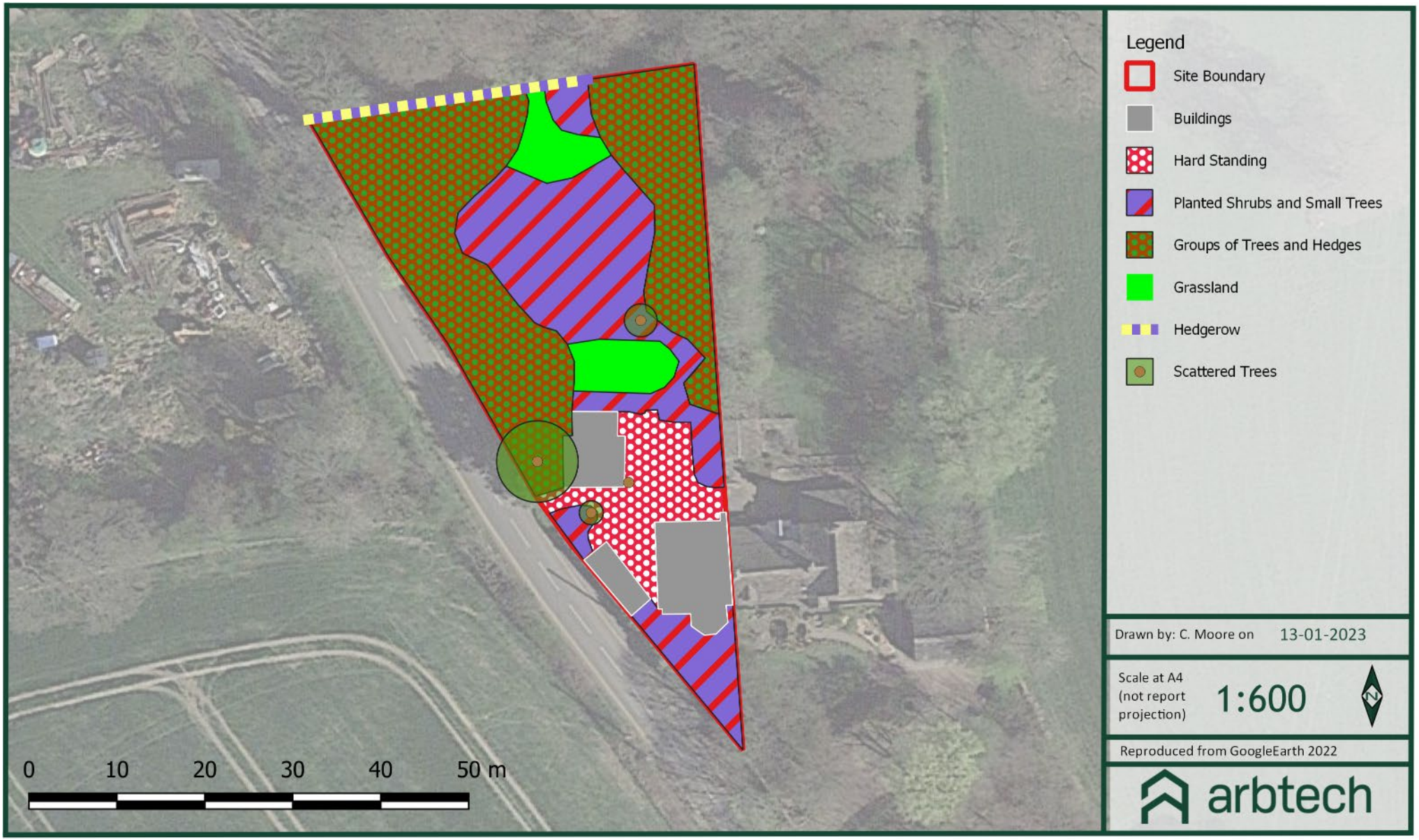
Appendix 1: Proposed Development Plan

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.