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Preliminary Ecological Appraisal

Tanfield Lea

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Lichfields



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Summary

OS Ecology Ltd were commissioned by Lichfields in September 2021 to undertake a Preliminary Ecological Appraisal of land at Tanfield Lea. The site is proposed for residential housing with associated infrastructure.

Summary Table	
Impacts on Designated Sites	<p>The site is found within an identified SSSI Impact Risk Zone for Causey Bank Mires SSSI, due to the nature of the proposals and the habitats on site, consultation with the LPA and Natural England will be required.</p> <p>The site is in close proximity to Tanfield Lea Marsh Local Nature Reserve. Due to the nature of the proposals (residential development) there is potential for additional recreational pressure as a result of the development to impact this site. There are also seven Local Wildlife Sites present within 2km, the closest of which is present 400m to the north east.</p>
Habitat Assessment	<p>The site comprises primarily a mosaic of hardstanding and ephemeral short perennial vegetation, bordered by a broadleaf woodland belt. Within the site there are small parcels of semi-improved grassland and two buildings. There are broadleaf trees and scattered scrub across the site and a small area of swamp to the north west of the site. Habitats present on site are considered likely to qualify as the Priority Habitat, open mosaic on previously developed land.</p> <p>Habitats on site are considered likely to be of up to at least local value excluding their value to protected and priority species and pending the outcome of additional botanical survey work.</p>
Invasive Species	<p>Two species listed as invasive on Schedule 9 of the Wildlife and Countryside Act 1981 were recorded on site; montbretia sp. and cotoneaster sp..</p>
Bats	<p>Building 1 is considered to be of low suitability for roosting bats. Whilst gaps were evident between the timber fascia and the wall tops, these were limited in depth and considered suboptimal in nature and are unsuitable to support a maternity roost. Building 2 is considered to be of negligible suitability.</p> <p>The site provides good foraging habitat through the woodland, scrub, grassland and ephemeral vegetation. These habitats are considered to be well connected to the wider landscape through the broadleaved woodland bordering the site.</p>
Birds	<p>The site provides abundant nesting opportunities within the broadleaved woodland and scattered trees and scrub on site.</p> <p>The woodland, grassland, scrub and scattered trees are considered likely to offer foraging opportunities to the local assemblage of birds.</p>
Great Crested Newts	<p>No areas of standing water were recorded at the time of survey, although the area recorded as swamp (TN1) may hold water intermittently.</p>

	<p>Ordnance Survey maps and aerial imagery identify three waterbodies and a small number of potentially suitable field ditches within 500m of the site.</p> <p>On site, the broadleaf woodland, unmanaged grassland and scrub provide suitable habitat for this species during their terrestrial phase and provide good connectivity to suitable habitats within the wider area.</p>
Badger	<p>The habitats on site offer suitable habitat for both sett creation and foraging through the broadleaf woodland and grassland. Hard standing on the site is of poor suitability and no evidence of this species was recorded during the walkover survey.</p>
Other Protected Species	<p>The habitats on site are considered to be suboptimal and of low value to otter and water vole. Habitats more suitable to support these species are available associated with the various watercourses in the wider area.</p> <p>The ephemeral short perennial and hardstanding mosaic provide suitable areas of habitat for reptiles. However there are no recent records of reptile species within 2km and the potential for reptiles to be present on site is considered to be low.</p> <p>Other protected species are considered likely to be absent from the site.</p>
Priority Species	<p>The site is considered to be suitable to support dingy skipper, with updating survey work recommended.</p> <p>The site is considered likely to support common toad and hedgehog within the grassland, scrub and woodland belt.</p>
Impact Assessment	<ul style="list-style-type: none"> • Loss of habitats considered likely to be of up to local value, pending updating survey work. • Potential reduction in ecological connectivity, through disturbance of the adjacent woodland and treelines. • Loss/degradation of bat foraging/commuting habitat • Loss of roosting opportunities considered to be of low suitability for bats. • Loss of nesting opportunities to a range of bird species, though both direct habitat loss and disturbance. • Harm and/or disturbance to nesting birds, should works be undertaken in the breeding bird season (March to August inclusive). • Disturbance to wildlife that may utilise the site, through increased noise, light and human presence, both during the construction and operational phases. • Risk of impacts on amphibians, including great crested newts, should they be present on site. • Very low risk of harm to reptiles, should they be present. • Loss of habitat and harm to dingy skipper, should the site support a population. • Low residual risk of harm to otter and water vole should they be on site on occasion. • Risk of entrapment to badger and other small mammals such as hedgehog should they be present on-site during construction works.

	<ul style="list-style-type: none"> • Damage to the crowns and roots of retained trees and scrub during works on site through severance or asphyxiation. • Impacts on the adjacent habitats, as a result of increased run off and potential pollution events as well as increased recreational disturbance. • Increased predation of species using retained and newly created habitats as a result of an increased pet population associated with the development. • Spread of montbretia sp. and cotoneaster sp., which are listed as invasive on Schedule 9 of the Wildlife and Countryside Act 1981.
Recommendations	<p>Habitats present within the site have changed since the previous survey work was completed in 2011. An updated detailed avoidance, mitigation and compensation strategy for the site cannot be produced until the additional survey work outlined in this report has been undertaken.</p>
Further Survey	<ul style="list-style-type: none"> • A detailed updating botanical survey of the habitats on site. • Monthly bat transect and remote monitoring surveys. • A single dusk vantage point survey of building 1. • Should the broadleaf woodland belt not be retained, survey work to assess the suitability of the trees for roosting bats will be required. • Great crested newt eDNA survey of the ponds situated within 500m of the site and considered to be connected to the site. • Butterfly surveys for dingy skipper.

1. Introduction

Site Location

1.1 The site is located approximately 500m north east of Tanfield Lea village, County Durham at an approximate central grid reference of NZ 190 548. The site location is illustrated within figure 1 in the appendices.

Site Description

1.2 The site is large, approximately 15.6ha in size and comprises primarily ephemeral short perennial vegetation and hardstanding with areas of semi-improved grassland of varying quality. A broadleaf woodland belt borders the site to the north west and south east. There are two buildings left within the site footprint after previous structures have been demolished¹.

Objectives of the Study

1.3 The objectives of this report are:

- To identify and describe any potential ecological receptors that may be present on site or within an identified zone of influence.
- To identify and assess whether proposals may impact on the identified receptors.
- To identify potential mitigation, compensation or enhancement measures if required.
- To identify and detail further surveys if required.

Development Proposals

1.4 The site has been granted outline planning (Application Number 1/2012/0661/85673) for mixed use re-development comprising housing, 1357sq.m of retained industrial units (B1, B2 and B8) 1,454 sq.m. of retail (A1). Associated landscaping, parking and access.

1.5 The site was surveyed previously by E3 Ecology Ltd in 2011².

1.6 This report fulfils condition 35 in the outline planning permission ensuring compliance with the E3 Ecology Ltd report. Mitigation point 3 states that: *If the development does not happen within 12 months of this report, confirming surveys before the start of works to check that the situation has not changed and that the level of mitigation remains appropriate.*

² Extended Phase 1 and Protected Species Survey R02 E3 Ecology

2. Methodology

Scope of Study

- 2.1 The site was surveyed to identify whether the following were present for legislative and planning purposes:
 - Habitats of conservation value
 - Priority Habitats
 - Protected and Priority Species
- 2.2 A summary of relevant legislation and national and local planning policy is provided within Appendix 2.
- 2.3 The ecological characteristics of the site were reviewed to identify the scope of the assessment, with the zone of influence determined through professional judgement.
- 2.4 The survey area comprised the "site" defined within figure 1 (Appendix 4) and where access was available an approximate 50m buffer³.
- 2.5 Access permitting, all potential bat roosting sites within the survey area were assessed. Guidance regarding the assessment of the suitability of sites for use by bats is provided within Appendix 1.

Planning Policy

- 2.6 Planning policy relevant to this site (National Planning Policy Framework, the County Durham Local Plan) can be found within Appendix 2.

Desk Study

- 2.7 Desk study was undertaken to assess the nature of the surrounding habitats and included:
 - Assessment of aerial imagery and Ordnance Survey mapping.
 - A search of the MAGIC website⁴ for designated sites and European protected species within 2km of the survey area.
 - A data search request submitted to the Local Records Centre.

³ The survey buffer may be increased depending on the species present and their identified core sustenance zones.

⁴ Multi Agency Geographic Information for the Countryside (www.magic.gov.uk)

Field Survey

Habitats/Protected Species

- 2.8 The site was subject to a preliminary walk over, during which habitats were assessed in line with the Joint Nature Conservation Committee's Phase 1 Habitat Survey methodology⁵.
- 2.9 During the preliminary survey the site was checked for evidence of protected species and habitats were assessed for their potential to support such species.

Bats

- 2.10 Survey effort has been based on that provided by the Bat Conservation Trust Good Practice Survey Guidelines⁶.
- 2.11 Structures and trees within the site and adjacent to the site, were inspected⁷, where access was available, for potential roosting features (PRFs) and to record any field signs, including bats, if present⁸.
- 2.12 Assessment follows the Bat Conservation Trust Guidelines⁹, which classifies the suitability (negligible, low, moderate or high) of the potential roosting, foraging and commuting habitats within the site. Full details of the classifications are provided within the table in Appendix 1.
- 2.13 Survey was undertaken by Mandy Rackham MCIEEM, an experienced bat surveyor who holds a Class 4 Natural England survey licence (2020-44857-CLS-CLS). Assistance was provided by Zoe Dunnett.
- 2.14 The following equipment was utilised during the survey:
- High power torch.
 - Binoculars.
 - Digital camera.
- 2.15 The survey was undertaken on the 7th of September 2021 in the following weather conditions:

⁵ Handbook for Phase 1 Habitat Survey, A Technique for Environmental Audit, JNCC, 2010

⁶ Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

⁷ It should be noted that assessment relates entirely on the structure or tree's suitability to support bats and or other protected species. Assessment must in no way be taken as an assessment of the structure's integrity or safety.

⁸ If bats are recorded during appropriate measures are undertaken to limit any potential disturbance

⁹ Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

Table 1: Survey Conditions				
Date	Temperature	Cloud Cover	Precipitation	Wind Conditions
7/9/2021	24°C	30%	Dry	F1

Limitations to Survey

- 2.16 Survey was undertaken outside of the core botanical survey period and as such not all plant species were evident or identifiable. Due to the objectives of the survey this was not considered to be a significant constraint.
- 2.17 Access was not available into the grassland to the south east so survey was conducted from a vantage point. The grassland was visibly dominated by false oat grass, therefore it was determined as poor semi-improved grassland with updating botanical survey work recommended to confirm this assessment.

Assessment Methodology

- 2.18 Guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM) is utilised to provide habitat valuations.
- 2.19 The level of value of specific ecological receptors is assigned using a geographic frame of reference. For, example international value being most important (SACs, SPAs and pSPAs), then national (SSSIs), regional, county (LWS), district (LNR), local and lastly, within the immediate zone of influence of the site only (low).
- 2.20 In terms of species, for example breeding birds, should the population within the site constitute greater than 1% of the geographic population, it would be considered significant at that level. In addition, presence of designated sites, scarce species and or quality¹⁰/diversity of habitats are used to guide that valuation
- 2.21 Assessment methods for bats have been undertaken with reference to Wray et al. (2007)¹¹, which correlates with the geographic frame of reference. Within which they define the relative rarity of each species based on the known distribution¹² at the time and the value of the roost type, assuming that roosts such as feeding perches are of lower value that maternity roosts or sites that have a high level of fidelity.

¹⁰ Quality can be subjective and vary in different geographic areas. Reasoned professional judgement is therefore used to inform the assessment.

¹¹ Wray et al (2007) Valuing Bats in Ecological Impact Assessment. In Practice. Based on a presentation at the Mammal Society – Specific Issues with Bats

¹² It should be noted that there are regular changes to our understanding of distribution as further studies are undertaken.

2.22 Examples of ecological receptors at various levels of value are provided within Appendix 3.

3. Results

Desk Study

Designated Sites

3.1 A search of the Multi Agency Geographic Information for the Countryside Website¹³ indicated that the following designated sites for nature conservation lie within 2km of the site:

Table 2: Designated Sites Within 2km			
Designation	Site Name	Reason for Designation	Distance from Survey Area (Closest point)
Site of Special Scientific Interest	Causey Bank Mires	Causey Bank Mires SSSI comprises a series of species-rich flushes with scrub in acid and neutral grassland, a habitat of restricted distribution in County Durham. The site supports a number of locally rare species including globeflower and smooth-stalked sedge.	2km north east
SSSI Impact Risk Zone (IRZ) The site is found within an identified SSSI Impact Risk Zone for the above sites, due to the nature of the proposals and the habitats on site, consultation with the LPA and Natural England will be required.			
Local Nature Reserve	Tanfield Lea Marsh	Primarily fen habitat with wet woodland, broadleaved woodland, grassland, scrub, hedgerow and open water. Pipistrelle bats have previously been recorded foraging on the site.	20m south east
	Harperley and Pea Woods	Harperley Wood and Kyo Burn are an important corridor for wildlife in the Tanfield area. In 2009, Tanfield Lea Countryside Group and Living Waterways cleaned up Kyo Burn and restored the ponds, which are an important habitat for great crested newts.	1.1km south

¹³ Multi Agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk (Accessed October 2021)

Priority Habitats

3.2 A search of the MAGIC website identified the following priority habitats with 2km of the site:

- Lowland heath
- Deciduous woodland
- Traditional orchard
- Woodpasture and parkland
- Open mosaic habitats on previously developed land (draft)

3.3 Parcels of ancient and semi-natural woodland were also recorded within 2km of the site, the closest of which is located 300m north east of the site as the closet point.

European Protected Species Licensing

3.4 The MAGIC website identified the following granted Natural England European Protected Species licences within 2km of the site.

Licence Reference	Species	Licensed Work	License Period
EPSM2009-1252	Common pipistrelle	Destruction of a resting place.	October 2009- November 2009
EPSM2009-1018	Brown long-eared	Destruction of a resting place	August 2009- October 2009

General Land Use

3.5 A review of aerial imagery and Ordnance Survey mapping highlighted that the general land use in the surrounding area is dominated by arable land interspersed with parcels of woodland, residential housing and industrial units.

3.6 A railway line associated with East Tanfield station lies adjacent to the site to the north east, alongside Houghwell Burn.

Data Search

Local Records Centre

3.7 A data search with ERIC North East provided the following notable and protected species records within 2km of the site.

Taxon	Species	No. of Records within Search Area	Records of Particular Note
Amphibians	Common Frog	6	-

Table 4: Records from LRC Data Search			
Taxon	Species	No. of Records within Search Area	Records of Particular Note
	Common Toad	1	-
	Great Crested Newt	19	Most recently in 2011, 1.2km from the site.
	Smooth Newt	5	-
Mammals (excluding bats)	Brown Hare	2	-
	Eurasian Red Squirrel	12	Most recently recorded in 2011.
	Eastern Grey Squirrel	7	Most recently recorded in 2011.
	Eurasian Badger	9	Roadkill recorded in Tanfield Lea, most recently in 2019.
	European Otter	7	Spraint recorded at Tanfield Lea bridge in 2019.
	European Water Vole	5	Most recently in 2008, in Tanfield Lea LNR.
Bats	West European Hedgehog	20	Most recently recorded in 2020.
	Common Pipistrelle	12	Most recently recorded in 2020.
	Soprano Pipistrelle	3	-
Butterflies	Dingy Skipper	14	Historic record, 200m from the site.
	Pearl-bordered Fritillary	1	-
	Small Heath	59	-
	Small Pearl-bordered Fritillary	1	-
	Wall	25	Recorded in Tanfield in 2005.
	White-letter Hairstreak	2	-
Birds (Red-listed)	Cuckoo	5	-
	Curlew	32	-
	Fieldfare	17	-
	Grasshopper Warbler	12	-
	Grey Partridge	14	-
	Grey Wagtail	38	-
	Herring Gull	10	-
	House Sparrow	38	-
	Lapwing	48	Recorded 600m from the site in 2015.
	Lesser Redpoll	12	-
	Linnet	41	-
	Marsh Tit	17	-
	Mistle Thrush	34	-
	Red Kite	119	-
	Redwing	24	-
	Skylark	43	-
	Song Thrush	78	-
	Spotted Flycatcher	15	-
Starling	62	-	

Table 4: Records from LRC Data Search			
Taxon	Species	No. of Records within Search Area	Records of Particular Note
	Tree Pipit	2	-
	Tree Sparrow	19	-
	Willow Tit	51	-
	Woodcock	11	-
	Yellow Wagtail	2	-
	Yellowhammer	79	-
Reptiles	Grass Snake	2	Historic records (1963).

3.8 The records centre also provided information regarding the following Local Wildlife Sites (LWS) which lie within 2km of the site:

- Fortune Hill LWS
- Beckley Wood LWS
- Causey Burn Wood LWS (1) and (2)
- Tanfield Lea Marsh LWS
- Barn Hill Heath, Stanley LWS
- Harperley and Pea Woods LWS

3.9 The closest of which is Causey Burn Wood (1) LWS, which lies approximately 400m north east of the site at the closest point.

Field Survey

Habitats

Table 5: Habitat Descriptions	
<p>Overview of habitats</p> <p>The site comprises primarily a mosaic of hardstanding and ephemeral short perennial vegetation, bordered by a broadleaf woodland belt. Within the site there are small parcels of semi-improved grassland varying in quality and two buildings. There are broadleaf trees and scattered scrub across the site, with particularly high densities within the field to the south east. A small area of swamp was recorded to the north west of the site, this area was not holding water at the time of survey, although it is considered likely to do so intermittently. Habitats on site are considered likely to qualify as the Priority Habitat, open mosaic on previously developed land and further botanical survey will be required.</p> <p>Two species listed as invasive on Schedule 9 of the Wildlife and Countryside Act 1981 were recorded on site; <i>Montbretia</i> sp. and <i>Cotoneaster</i> sp..</p> <p>The habitats within the site are illustrated within Figure 3.</p>	
Habitat Description	Photographs
Neutral Semi-improved grassland	

There are small parcels of grassland classified as neutral semi-improved within the site. The sward is unmanaged and comprised of false oat (*Arrhenatherum elatius*), ox-eye daisy (*Leucanthemum vulgare*), cocksfoot (*Dactylis glomerata*), red fescue (*Festuca rubra*), common hogweed (*Heracleum sphondylium* L.), common cat's-ear (*Hypochaeris radicata*), timothy (*Phleum pratense*), creeping buttercup (*Ranunculus repens*), colts foot (*Tussilago farfara*), vetch sp. (*Vicia* sp.), montbretia (*Crocasmia* sp.), lesser trefoil (*Trifolium dubium*), couch grass (*Elymus repens*), mouse-eared hawkweed (*Pilosella officinarum*), common nettle (*Urtica dioica*), field speedwell (*Veronica persica*), sweet vernal grass (*Anthoxanthum odoratum*), meadow grass (*Poa* sp.), spear thistle (*Cirsium vulgare*), poppy (*Papaver* sp.), red valerian (*Centrathus ruber*), perforated St John's-wort (*Hypericum perforatum*), teasel (*Dipsacus* sp.), knapweed (*Centaurea* sp.), occasional birds-foot trefoil (*Lotus corniculatus*), self-heal (*Prunella vulgaris*) and common toadflax (*Linaria vulgaris*).



Poor semi-improved grassland

The areas of poor semi-improved grassland are comprised primarily of false oat with abundant cocksfoot and Yorkshire fog (*Holcus lanatus*). White clover (*Trifolium repens*), ragwort (*Jacobaea vulgaris*), self-heal, meadow vetchling (*Lathyrus pratensis*), tufted hair grass (*Deschampsia cespitosa*), creeping buttercup, vetch sp., bent grass (*Agrostis* sp.), ribwort plantain (*Plantago lanceolata*), spear thistle and meadow grass are also present.



Ephemeral short perennial and hardstanding mosaic



The majority of the site comprises hardstanding which has been colonised by ephemeral short perennial vegetation. Species present include rosebay willowherb (*Chamaenerion angustifolium*), yarrow (*Achillea millefolium*), broad-leaved willowherb (*Epilobium montanum*), ragwort, cocksfoot, bent grass, Yorkshire fog, tufted hair grass, self-heal, orchid sp., woodrush (*Luzula* sp.), St John's wort sp., herb Robert (*Geranium robertianum*), crane's bill (*Geranium* sp.), stonecrop (*Sedum* sp.), purple toadflax (*Linaria purpurea*), red valerian, tansy (*Tanacetum vulgare*), mugwort (*Artemisia vulgaris*), teasel, yellow-wort (*Blackstonia perfoliata*) and fox-and-cubs (*Pilosella aurantiaca*).



Broadleaf woodland

A broadleaf woodland belt borders the majority of the site. The woodland is young in age and comprises birch (*Betula* sp.), alder (*Alnus* sp.), poplar (*Populus* sp.), copper beech (*Fagus sylvatica*), sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*) and rowan (*Sorbus aucuparia*).

There are various scattered broadleaf trees on site, which are up to semi-mature in age and consist of species present within the woodland belt and a row of coniferous trees, Lawson cypress (*Chamaecyparis lawsoniana*) to the north west of the site.



Scattered Scrub



Scattered scrub can be found across the site, with a high density associated with the grassland to the east. The scrub comprises of young broadleaf species in the main including birch, willow (*Salix* sp.), rowan, cherry (*Prunus* sp.) and ash with shrub species such as buddleia, cherry laurel (*Prunus laurocerasus*), broom (*Cytisus scoparius*), bramble (*Rubus* sp.), barberry (*Berberis* sp.), cotoneaster sp., hawthorn (*Crataegus* sp.), elder (*Sambucus nigra*), dog rose (*Rosa canina*) and dog wood (*Cornus* sp.) also present.



Target Notes

Table 6: Target Notes	
<p>Target Note 1 - Swamp</p> <p>An area of swamp was noted to the north west of the site. The swamp is dominated by reed mace (<i>Typha</i> sp.) with soft rush (<i>Juncus effusus</i>) also present.</p>	

Bats

3.10 The results of the bat risk assessment of the structures on site are provided below:

Table 7: Bat Assessment	
<p>Summary</p> <p>The site offers limited roosting opportunities overall. Building 1 offers roosting opportunities to crevice dwelling bats within the gap between the timber fascia boards and the wall tops. Building 2 is considered to be of negligible suitability to roosting bats.</p> <p>The broadleaf woodland belt is dominated by semi mature trees which overall were noted to lack suitable features, however should the woodland not be retained survey work to confirm this will be required.</p> <p>The site offers good foraging and commuting habitats for bats and is considered to be well connected to the wider landscape.</p>	
<p><i>Building 1</i></p> <ul style="list-style-type: none"> • Building 1 is a warehouse style building with a brick base and brick-built extension with corrugated metal walls and flat roof on the main building. • Metal roller door and metal fire door which appear to be well sealed to the brick. • Timber barge board on the brick-built extension and on the brick built walls surrounding the yard area. • There is a small gap along the barge board, at the wall tops. This gap is limited in depth by the width of the boards. 	

- The brick and mortar is in fair condition, with some erosion of the mortar, leaving small gaps between the bricks.
- Building 1 is considered to be of low suitability for roosting bats.

Building 2

- Building 2 comprises a single story three sided brick built structure, which is rendered in places and with a flat bitumen felt roof.
- The bricks and mortar are well sealed overall with no gaps or crevices apparent.
- Building 2 is considered to be of negligible suitability for roosting bats.



Commuting and Foraging Habitats

The site offers good quality foraging and commuting habitats for bats. Within the site the neutral grassland and woodland belt and scattered scrub are considered to provide the most valuable foraging habitats.

The woodland edge is considered to offer a commuting route across the site and to the wider landscape. The woodland edge connects the site with Houghwell Burn and Causey Burn, and associated vegetation to the north east including an old railway line. To the south west, the woodland connects the site to additional woodland habitat and the Farleith Burn.



Birds

- 3.11 The scrub and woodland on site are considered to offer various nesting opportunities to the typical assemblage of local woodland birds such as chaffinch, robin and willow warbler.
- 3.12 The trees, scrub, neutral grassland and swamp are considered to offer abundant foraging opportunities to the local bird assemblage.
- 3.13 Approximately fifteen herring and black headed gulls were recorded on the area of hardstanding on site during the survey.

Great Crested Newts

- 3.14 The man-made waterbody, previously recorded in 2011 by E3 Ecology is no longer present on site. There is an area of swamp within the northern area of the site, it was dry at the time of the survey however is considered likely to hold standing water intermittently through the year.
- 3.15 From a review of aerial imagery and Ordnance Survey mapping three waterbodies are noted to be present within 500m of the site including 60m to the north, 300m to the west and 380m south. Several field ditches are present within 500m however most are separated from the development site by watercourses.
- 3.16 On site the broadleaf woodland, unmanaged grassland and scrub provide suitable habitat for this species during their terrestrial phase and provide good connectivity to suitable habitats within the wider area.

Otter and Water Vole

- 3.17 There are no watercourses on site, although the Causey and Houghwell Burn lie south east of the site, approximately 30m at the closest point and Farleith Burn, adjacent to the site to the south west. These burns may support these species, should they be present in the local area.
- 3.18 The habitats on site are not those preferred by riparian species, however, due to the proximity of the site from the burns, and the undisturbed nature of the site, the broadleaf woodland belt may offer a suboptimal commuting route for otter to access the Farleith burn.
- 3.19 There are no suitable watercourses on site with the potential to support water vole.

Badger

- 3.20 No field signs to suggest badger are utilising the site were recorded during survey.
- 3.21 The broadleaf woodland has the potential to provide suitable sett creation habitat.

3.22 The grassland, woodland and scrub are considered to provide numerous foraging opportunities to the local badger population, should they be present on site.

Reptiles

3.23 The ephemeral short perennial and hardstanding mosaic provide suitable areas of habitat for this taxon.

3.24 The woodland belt bordering the site is considered to offer suitable hibernacula habitat should this taxon be on site.

3.25 The grassy banks bordering the site are considered to offer suitable areas for basking, should this taxon be on site.

Other protected species

3.26 Due to the nature of the site other protected species are considered likely to be absent.

Priority Species

3.27 The larval food plant for dingy skipper, a priority butterfly species, was recorded on site. The survey was undertaken outside of the flight period for dingy skipper, therefore their status on site cannot be confirmed. During the survey common tortoiseshell, speckled wood and large white butterfly were recorded.

3.28 The habitats on site are considered to be suitable for hedgehog, with the grassland providing a potential foraging resource and the woodland belt providing suitable shelter and hibernacula habitat.

3.29 The habitats are considered to be suitable to support common toad, if present in the local area. The woodland and neutral grassland are considered to be most valuable to this species.

4. Site Assessment

Assessment of Survey Findings

Habitats

- 4.1 Habitats on site are considered likely to be of up to at least local value excluding their value to protected and priority species and pending the outcome of additional botanical survey work.
- 4.2 The neutral grassland and ephemeral short perennial mosaic habitat are considered to be of the highest ecological value, likely to be of at least local value. Habitats on site are considered likely to qualify as the Priority Habitat, open mosaic on previously developed land and further botanical survey will be required.
- 4.3 The woodland is young in age and widely replicated in the local area. However, broadleaf woodland is listed as a priority habitat, therefore it is considered to be of local ecological value.

Bats

- 4.4 Building 1 is considered to be of low suitability for roosting bats. Whilst gaps were evident between the timber fascia and the wall tops, these were limited in depth and are likely to be used only opportunistically and are unsuitable to support a maternity roost.
- 4.5 Building 2 is considered to be of negligible suitability.
- 4.6 The trees within the broadleaf woodland are generally semi mature and well sealed, limiting opportunities for roosting bats. However, should the woodland belt not be retained in the development plans, additional survey work to confirm this assessment will be required.
- 4.7 The site provides good foraging habitat through the woodland, scrub, grassland and ephemeral vegetation. These habitats are connected to the wider landscape through the broadleaved woodland bordering the site which connects to additional parcels of woodland and vegetation associated with Houghwell and Farleith Burn to the west and east and an old railway line associated with East Tanfield station.

Birds

- 4.8 The site provides abundant nesting opportunities within the broadleaved woodland and scattered trees and scrub on site.
- 4.9 The woodland, grassland, scrub and scattered trees are considered likely to offer foraging opportunities to the local assemblage of birds.

Great Crested Newts

- 4.10 From the data search with the local records centre, great crested newts are known to occupy habitats within the wider area, with the most recent record, a peak count of three, recorded in 2011, 1.2km south of the site, associated with a pond at Tanfield School. They are also known to utilise the ponds at Harperley and Pea Woods LNR 1.1km south.
- 4.11 No areas of standing water were recorded at the time of survey, although the area recorded as swamp (TN1) may hold water intermittently.
- 4.12 Ordnance Survey maps and aerial imagery identified three waterbodies and a small number of potentially suitable field ditches within 500m of the site.
- 4.13 On site, the broadleaf woodland, unmanaged grassland and scrub provide suitable habitat for this species during their terrestrial phase and provide good connectivity to suitable habitats within the wider area.

Otter and Water Vole

- 4.14 There are no watercourses within the site, as such, water vole are considered likely to be absent.
- 4.15 The habitats on site are considered to be suboptimal and of low value to otter.
- 4.16 The data search with the local records centre returned a record of an otter spraint with Tanfield Lea in 2019 and a record of water vole in Tanfield Lea LNR in 2011.
- 4.17 If otter are utilising the burns in the vicinity of the site, there is a low risk they may pass through site on occasion, although due to the absence of a watercourse on site, the potential is considered to be low.

Badger

- 4.18 The habitats on site offer suitable habitat for both sett creation and foraging through the broadleaf woodland and grassland. However no evidence of this species was recorded on site during the survey.
- 4.19 The data search with the local records centre would suggest there is a resident badger population associated with Tanfield Lea.

Reptiles

- 4.20 The habitats on site were previously described as unsuitable for reptiles in 2011. Areas of hard standing, grassland, scrub, woodland and swamp have the potential to provide suitable habitat. However there are no recent records of reptile species within 2km and overall the potential for reptiles to be present on site is considered to be low.

Other Protected Species

4.21 Due to the nature of the site other protected species are considered likely to be absent.

Priority Species

4.22 Due to the nature of the site and the presence of birds-foot trefoil the priority species dingy skipper may be present on site.

4.23 Common toad is considered likely to be present of site due to the proximity of the site to Tanfield Lea Marsh, the swamp on site and the suitable habitats within the site for terrestrial amphibians.

4.24 Hedgehog is considered likely to be on site utilising the grassland for foraging and the broadleaf woodland for shelter and hibernation.

Designated Sites

4.25 The site is found within an identified SSSI Impact Risk Zone for Causey Bank Mires SSSI, due to the nature of the proposals and the habitats on site, consultation with the LPA and Natural England will be required.

4.26 The site is in close proximity to Tanfield Lea Marsh Local Nature Reserve. Due to the nature of the proposals (residential development) there is potential for additional recreational pressure as a result of the development to impact this site.

5. Impact Assessment

5.1 The following impact assessment is based on the survey work to date and the understanding that the Client wishes to develop the site with mixed use including residential housing and industrial units.

5.2 As a result of the assessment completed and the nature of the proposed works, the likely impacts, without appropriate avoidance measures, mitigation and/or compensation scheme, are anticipated to be:

- Loss of habitats considered likely to be of up to at least local value, pending updating survey work.
- Potential reduction in ecological connectivity, through disturbance of the adjacent woodland and treelines.
- Loss/degradation of bat foraging/commuting habitat.
- Loss of roosting opportunities considered to be of low suitability for bats during demolition of the buildings.
- Loss of nesting opportunities to a range of bird species, though both direct habitat loss and disturbance.
- Harm and/or disturbance to nesting birds, should works be undertaken in the breeding bird season (March to August inclusive).
- Disturbance to wildlife that may utilise the site, through increased noise, light and human presence, both during the construction and operational phases.
- Risk of impacts on amphibians, including great crested newts, should they be present on site.
- Risk of harm to reptiles, should they be utilising the site.
- Loss of habitat and harm to dingy skipper, should the site support a population.
- Low residual risk of harm to otter should they be on site on occasion.
- Risk of entrapment to badger and other small mammals such as hedgehog should they be present on-site during construction works.
- Damage to the crowns and roots of retained trees and scrub during works on site through severance or asphyxiation.
- Impacts on the adjacent habitats, as a result of increased run off and potential pollution events as well as increased recreational disturbance.
- Increased predation of species using retained and newly created habitats as a result of an increased pet population associated with the development.
- Spread of *Montbretia* sp. and *Cotoneaster* sp., which are listed as invasive on Schedule 9 of the Wildlife and Countryside Act 1981.

6. Recommendations

Further Survey

6.1 Based on the nature of the site the following additional survey work is recommended:

- A detailed updating botanical survey of the habitats on site, to be undertaken during the core botanical survey period.
- Monthly bat transect and remote monitoring surveys, in line with the BCT recommendations for a moderate suitability site.
- A single dusk vantage point survey of building 1, in line with the BCT recommendations for a structure of low suitability for roosting bats.
- Should the broadleaf woodland belt not be retained, survey work to assess the suitability of the trees for roosting bats will be required.
- eDNA survey of the ponds situated within 500m of the site and considered to be connected to the site through habitats to test for the presence of great crested newt and to advise on additional survey work if required.
- Three butterfly surveys for dingy skipper which should be undertaken during the peak flight times in order to confirm the presence / absence of this species.

Appendix 1 – Bat Suitability and Survey Effort

Classifications of suitability are based on those provided within the Bat Conservation Trust Good Practice Survey Guidelines¹⁴, with the table below taken from page 35 of the guidelines (table 4.1).

Table 8: Guidelines for Assessing the Potential Suitability of Proposed Development Sites for Bats
(based on the presence of habitat features within the landscape, to be applied using professional judgement)

Suitability	Description	
	Roosting Habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site, likely to be used by roosting bats	Negligible habitat features on site, likely to be used by commuting and foraging bats
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically.</p> <p>However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions^a and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e unlikely to be suitable for maternity or hibernation^b).</p> <p>A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential^c.</p>	<p>Habitat that could be used by small numbers of commuting bats such as gappy hedgerow or unvegetated stream, but isolated, i.e not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^a and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^a and surrounding habitat	<p>Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourse and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>

a. For example in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.
b. Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2015). This phenomenon requires some research in the UK but ecologists should be aware of potential for larger numbers of this species to be present during the autumn and winter in larger buildings in highly urbanised environments.
c. The system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015)

¹⁴ Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust

The classification of the suitability relates to the level of further survey recommended.

Table 9: Survey Effort and Timing Depending on Suitability of the Structure or Tree <i>(Tables 7.1-7.3 in the BCT Guidelines)</i>			
	Low roost suitability	Moderate suitability	High roost suitability
Survey Effort	One survey visit One dusk emergence or dawn re-entry survey	Two separate visits One dusk emergence and a separate dawn re-entry survey	Three separate visits At least one dusk emergence and a separate dawn re-entry survey. The third can be either dusk or dawn.
Timings	May-August (structures) No further survey (trees)	May to September. At least one must be in the optimum period (May to August)	May to September. two must be in the optimum period (May to August)
If bats are recorded	If bats emerge from or enter a building during surveys, the survey schedule will be adjusted to increase the survey effort so that enough information can be collected to characterise the roost and provide data should a Natural England Licence be required.		

Appendix 2 – Policy and Legislation

Planning Policy

National Planning Policy Framework (NPPF)¹⁵

The revised National Planning Policy Framework sets out the government's planning policies for England and how these are expected to be applied. It provides a framework within which locally prepared plans for housing and other development can be produced. Planning law requires that applications for planning permission be determined in accordance with the development plan. The key paragraphs from the relating to the natural environment are detailed below.

Table 10: Ecologically Relevant Paragraphs of the NPPF	
Paragraph	Statement
8	Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives): a) an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure; b) a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being; and c) an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy
174	Planning policies and decisions should contribute to and enhance the natural and local environment by: a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate; d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate
175	Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries
179	To protect and enhance biodiversity and geodiversity, plans should: a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance

¹⁵ National Planning Policy Framework July 2021
 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf)

Table 10: Ecologically Relevant Paragraphs of the NPPF	
Paragraph	Statement
	for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
180	When determining planning applications, local planning authorities should apply the following principles: a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons ⁶³ and a suitable compensation strategy exists; and d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.
181	The following should be given the same protection as habitats sites: a) potential Special Protection Areas and possible Special Areas of Conservation; b) listed or proposed Ramsar sites ⁶⁴ ; and c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites
182	The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Local Planning Policy

The following table details the ecologically relevant policies of the local plan relevant to this site.

Table 11: Ecologically Relevant Policies of the County Durham Plan¹⁶	
Policy No.	Policy
Policy 40	<p>Trees, Woodlands and Hedges</p> <p>Proposals for new development will not be permitted that would result in the loss of, or damage to, trees of high landscape, amenity or biodiversity value unless the benefits of the proposal clearly outweigh the harm. Where development would involve the loss of ancient or veteran trees it will be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists.</p> <p>Proposals for new development will be expected to retain existing trees where they can make a positive contribution to the locality or to the development, maintain adequate stand-off distances between them and new land-uses, including root protection areas where necessary, to avoid future conflicts, and integrate them fully into the design having regard to their future management requirements and growth potential.</p> <p>Where trees are lost, suitable replacement planting, including appropriate provision for maintenance and management, will be required within the site or the locality.</p>

¹⁶ County Durham Plan, Adopted 2020, Durham County Council

Table 11: Ecologically Relevant Policies of the County Durham Plan¹⁶	
Policy No.	Policy
	<p>Where applications are made to carry out works to trees in Conservation Areas or that are covered by a Tree Preservation Order, they will be determined in accordance with the council's Tree Management Policy Document (or any subsequent revisions).</p> <p>Proposals for new development will not be permitted that would result in the loss of, or damage to, woodland unless the benefits of the proposal clearly outweigh the impact and suitable replacement woodland planting, either within or beyond the site boundary, can be undertaken.</p> <p>Proposals for new development resulting in the loss or deterioration of ancient woodlands as shown on the policies map, will be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists. Proposals affecting ancient woodland (including planted ancient woodland sites) not previously identified as such, will be subject to the same considerations.</p> <p>Proposals for new development will be expected to maintain adequate stand-off distances between woodland and new land-uses to avoid future conflicts, and integrate them fully into the design having regard to their future management requirements and growth potential.</p> <p>Proposals for new development will not be permitted that would result in the loss of hedges of high landscape, heritage, amenity or biodiversity value unless the benefits of the proposal clearly outweigh the harm.</p> <p>Proposals for new development will be expected to retain existing hedgerows where appropriate and integrate them fully into the design having regard to their management requirements.</p> <p>Where any hedges are lost, suitable replacement planting or restoration of existing hedges, will be required within the site or the locality, including appropriate provision for maintenance and management.</p>
Policy 41	<p>Biodiversity and Geodiversity</p> <p>Proposals for new development will not be permitted if significant harm to biodiversity or geodiversity resulting from the development cannot be avoided, or appropriately mitigated, or, as a last resort, compensated for.</p> <p>Proposals for new development will be expected to minimise impacts on biodiversity by retaining and enhancing existing biodiversity assets and features and providing net gains for biodiversity including by establishing coherent ecological networks(152) . Measures should be appropriate, consistent with the biodiversity of the site and contribute to the resilience and coherence of local ecological networks.</p> <p>Proposals for new development will be expected to protect geological features and have regard to Geodiversity Action Plans, the Durham Geodiversity Audit and where appropriate promote public access, appreciation and interpretation of geodiversity.</p> <p>Development proposals where the primary objective is to conserve or enhance biodiversity or geodiversity will be permitted, where they accord with other relevant policies in the Plan.</p> <p>Development proposals which are likely to result in the loss or deterioration of irreplaceable habitat(s) (such as peatlands or lowland fen) will not be permitted unless there are wholly exceptional reasons and a suitable compensation strategy exists.</p>
Policy 42	<p>Internationally Designated Sites</p> <p>Development that has the potential to have an effect on internationally designated site(s), (including all development within 0.4 kilometres of the sites, as shown on Map B of the policies map document), either individually or in combination with other plans or projects, will need to be screened in the first instance to determine whether significant effects on the site are likely and, if so, will be subject to an Appropriate Assessment.</p> <p>Development will be refused where it cannot be ascertained, following Appropriate Assessment, that there would be no adverse effects on the integrity of the site, unless the proposal is able to pass the further statutory tests of 'no alternatives' and 'imperative reasons of overriding public interest' as set out in Regulation 64 of the Conservation of Habitats and Species Regulations 2017. In these exceptional circumstances, where these tests are met, appropriate compensation will be required in accordance with Regulation 68.</p> <p>Where development proposals would be likely to lead to an increase in recreational pressure upon internationally designated sites, a Habitats Regulations screening assessment and, where necessary, a full Appropriate Assessment will need to be undertaken to demonstrate that a proposal will not adversely affect the integrity of the site. In determining whether a plan or project will have an adverse effect on the integrity of</p>

Table 11: Ecologically Relevant Policies of the County Durham Plan¹⁶	
Policy No.	Policy
	<p>a site, the implementation of identified strategic measures to counteract effects, can be considered during the Appropriate Assessment.</p> <p>Land identified and/or managed as part of any mitigation or compensation measures should be maintained in perpetuity. Development proposals which have an adverse impact on mitigation or compensation measures will not be allowed.</p>
Policy 43	<p>Protected Species and Nationally and Locally Protected Sites</p> <p>All development proposals in, or which are likely to adversely impact upon (either individually or in combination with other developments), any of the following national designations (where not a component of an internationally designated site):</p> <ul style="list-style-type: none"> • Sites of Special Scientific Interest • National Nature Reserves <p>will only be permitted where the benefits of development in that location clearly outweigh the impacts on the interest features on the site and any wider impacts on the network of sites.</p> <p>All development proposals in, or which are likely to adversely impact upon, any of the following local designations:</p> <ul style="list-style-type: none"> • Local Sites (Geology and Wildlife) • Local Nature Reserves (LNRs) <p>will only be permitted when it can be demonstrated that the benefits of development in that location outweigh the impacts on the local nature conservation interest or scientific interest on the site and any wider impacts on the network of sites.</p> <p>In all cases where development impacts adversely on a designated site, mitigation, or as a last resort compensation, must be provided and it must be demonstrated that the proposed mitigation or compensatory measures are appropriate to the designations assigned to the site and deliver clear net gains for the habitats and/or species assemblages the site is designated for.</p> <p>In relation to protected species and their habitats, all development which, alone or in combination, has a likely adverse impact on the ability of species to survive, reproduce and maintain or expand their current distribution will not be permitted unless:</p> <p>a. appropriate mitigation, or as a last resort compensation, can be provided, which maintains a viable population and where possible provides opportunities for the population to expand; and</p> <p>b. where the species is a European protected species, the proposal also meets the licensing criteria (the 3 legal tests) of overriding public interest, no satisfactory alternative and favourable conservation status.</p>

Government Circular ODPM 06/2005 Biodiversity and Geological Conservation¹⁷ (England only)

This Circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

Part IV - Conservation of Species protected by Law details that the presence of a protected species is a material consideration when considering a development proposal that may result in harm to the species or its habitat and that planning authorities must have regard to species protected under the Habitat Regulations.

It goes on to say that: *it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is*

¹⁷ODPM Circular 06/2005 Office of the Deputy Prime Minister Eland House, Bressenden Place, London SW1E 5DU
Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System

granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted.

Natural Environment and Rural Communities (NERC) Act 2006^{18 19}

Section 40 – To conserve biodiversity

This section puts a duty on public authorities to conserve biodiversity when undertaking its duties and functions.

Section 41 – Biodiversity list and Action

Requires the Secretary of State to *publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity. They must also take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section or promote the taking by others of such steps.*

The 2007 lists were superseded by the UK Post-2010 Biodiversity Framework.

UK BAP Broad Habitat	UK BAP Priority Habitat
Rivers and Streams	<ul style="list-style-type: none"> • Rivers
Standing Open Waters and Canals	<ul style="list-style-type: none"> • Oligotrophic and Dystrophic Lakes • Eutrophic Standing Waters • Ponds • Aquifer Fed Naturally Fluctuating Water Bodies • Mesotrophic Lakes
Arable and Horticultural	<ul style="list-style-type: none"> • Arable Field Margins
Boundary and Linear Features	<ul style="list-style-type: none"> • Hedgerows
Broadleaved, Mixed and Yew Woodland	<ul style="list-style-type: none"> • Traditional Orchards • Upland Mixed Ashwoods • Wood-Pasture and Parkland • Wet Woodland • Upland Oakwood • Lowland Mixed Deciduous Woodland • Lowland Beech and Yew Woodland • Upland Birchwoods
Coniferous Woodland	<ul style="list-style-type: none"> • Native Pine Woodlands
Acid Grassland	<ul style="list-style-type: none"> • Lowland Dry Acid Grassland
Calcareous Grassland	<ul style="list-style-type: none"> • Lowland Calcareous Grassland • Upland Calcareous Grassland
Neutral Grassland	<ul style="list-style-type: none"> • Lowland Meadows • Upland Hay Meadows

¹⁸ <https://www.legislation.gov.uk/ukpga/2006/16/section/40>

¹⁹ <https://www.legislation.gov.uk/ukpga/2006/16/section/41>

²⁰ <http://jncc.defra.gov.uk/page-5706>

UK BAP Broad Habitat	UK BAP Priority Habitat
Improved Grassland	<ul style="list-style-type: none"> Coastal and Floodplain Grazing Marsh
Dwarf Shrub Heath	<ul style="list-style-type: none"> Lowland Heathland Upland Heathland
Fen, Marsh and Swamp	<ul style="list-style-type: none"> Upland Flushes, Fens and Swamps Purple Moor Grass and Rush Pastures Lowland Fens Reedbeds
Bogs	<ul style="list-style-type: none"> Lowland Raised Bog Blanket Bog
Montane Habitats	<ul style="list-style-type: none"> Mountain Heaths and Willow Scrub
Inland Rock	<ul style="list-style-type: none"> Inland Rock Outcrop and Scree Habitats Calaminarian Grasslands Open Mosaic Habitats on Previously Developed Land Limestone Pavements
Supralittoral Rock	<ul style="list-style-type: none"> Maritime Cliff and Slopes
Supralittoral Sediment	<ul style="list-style-type: none"> Coastal Vegetated Shingle Machair Coastal Sand Dunes

Protected Species Legislation

European Protected Species

European Protected Species (EPS) are species of plants and animals (other than birds) protected by law throughout the European Union. They are listed in Annexes II and IV of the European Habitats Directive and receive full protection under The Conservation of Species and Habitats Regulations 2017 (as amended). This make it an offence to:

- deliberately capture, injure or kill any European Protected Species (EPS)
- deliberately disturb any European Protected Species (EPS);
- damage or destroy a breeding site or place of rest or shelter used by any European Protected Species (EPS).

The Wildlife and Countryside Act 1981 (as amended) adds further protection by making it an offence to intentionally or recklessly²¹ disturb an EPS while it is occupying a structure or place which it uses for shelter or protection, or to obstruct access to any structure or place the species uses for shelter or protection.

Animals		Plants	
All bat species	Great Crested Newt	Yellow saxifrage	marsh Creeping marshwort

²¹ Under the Countryside and Rights of Way Act 2000 (CROW Act) extended the protection to cover reckless damage or disturbance

Animals		Plants	
Large blue butterfly	Otter	Shore dock	Slender naiad
Wild cat	Smooth snake	Killarney fern	Fen Orchid
Dolphins, porpoises and whales (all species)	Sturgeon fish	Early gentian	Floating-leaved water plantain
Dormouse	Natterjack toad	Lady's slipper	
Sand lizard	Pool Frog		
Fisher's Estuarine Moth	Snail, Lesser Whirlpool Ram's-horn		
Marine turtles			

Other Protected Species

Species	Legislation	Level of Protection
Water vole	Wildlife and Countryside Act 1981 (as amended) Wild Mammals (Protection) Act 1996	The species is listed on Schedule 5 of the Wildlife and Countryside Act (1981) makes the following actions offences: <ul style="list-style-type: none"> intentionally killing, injuring, or taking water vole intentionally or recklessly damaging, destroying or obstructing access to any structure or place used for shelter or protection disturbing water vole whilst they are using any structure or place used for shelter or protection <p>Under the Wild Mammals (Protection) Act, water vole are protected from unnecessary suffering by a number of methods.</p>
Birds	Wildlife and Countryside Act 1981 (as amended)	Under the Wildlife and Countryside Act (1981) it is an offence if any person: <ul style="list-style-type: none"> intentionally kills, injures or takes any wild bird intentionally takes, damages or destroys the nest of any wild bird whilst that nest is in use of being built; intentionally takes, damages or destroys eggs of any wild bird; <p>Wild birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are protected from:</p> <ul style="list-style-type: none"> intentional or reckless disturbance whilst it is building a nest or is in, on or near a nest containing eggs or young; disturbance of dependent young
Badger	Protection of Badgers Act 1992 Wild Mammals (Protection) Act 1996	The Protection of Badgers Act (1992) makes it an offence to wilfully or attempt to: <ul style="list-style-type: none"> kill or injure a badger possesses a dead badger or any part of, or anything derived from a dead badger; digs for badgers; damages a badger sett or any part of it; destroys a badger sett

Table 14: Other Protected Species Legislation		
Species	Legislation	Level of Protection
		<ul style="list-style-type: none"> • obstructs access to, or any entrance of, a badger sett; • causes a dog to enter a badger sett; • disturbs a badger whilst it is occupying a badger sett. <p>Under the Wild Mammals (Protection) Act, badgers are protected from unnecessary suffering by a number of methods.</p>
Slow-worm Adder Grass Snake Common Lizard	Wildlife and Countryside Act 1981 (as amended)	<p>Under the Wildlife and Countryside Act (1981) it is an offence if any person:</p> <ul style="list-style-type: none"> • intentionally kill or injures these slow-worms, adders, grass snakes or common lizards • sells, offers or exposes for sale, or has in his possession or transports for the purpose of sale, any live or dead slow-worm, adder, grass snake or common lizard or any part of, or anything derived from, such an animal

Appendix 3 - Receptor Valuation

The importance of ecological features is considered within a defined geographic context, examples of which are provided within the table below. The valuation of features is a complex process and, in many cases, requires the application of expert judgement. Valuation considers a range of factors including statutory designations, national biodiversity lists, biodiversity action plan lists and lists of declining, rare or legally protected species. Other factors to be considered include the 'naturalness' of habitats, the functional importance of features and whether habitats are irreplaceable.

Importance	Designated Site	Habitat	Species
International and European	Special Protection Area/Proposed Special Protection Area Special Area of Conservation/Proposed Special Area of Conservation Ramsar Site	A significant area of a Priority Habitat listed on Annex 1 of the Habitats Directive or a smaller area of such habitat that is thought to be functionally linked to a significant area of such habitat	An area that is functionally important to a species listed on Annexes II, IV or V of the Habitats Directive or Annex I of the Birds Directive which is present in internationally significant numbers (> 1% of the biogeographic population)
National	Site of Special Scientific Interest	A significant area of a Priority Habitat listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities Act 2006 or a smaller area of such habitat that is thought to be functionally linked to a significant area of such habitat	An area that is functionally important to a species listed as a species of principal importance under Section 41 of the Natural Environment and Rural Communities Act 2006, which is present in nationally significant numbers (> 1% of the national population)
Regional	-	An area of a Priority Habitat listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities Act 2006 which is not significant enough in extent to be considered of national importance but is considered to be of greater than metropolitan or county value.	An area that is functionally important to a species which is present in regionally significant numbers (> 1% of the regional population)
Metropolitan area or County	Local Wildlife Site designated at a metropolitan area or county level	A significant area of a Priority Habitat listed within the relevant local Biodiversity Action Plan or a smaller area	An area that is functionally important to a species listed as a Priority Species within the relevant local Biodiversity

²² Based on information provided within Guidelines for Ecological Impact Assessment in the UK and Ireland (2018) CIEEM

Local (District/ Borough of Parish)	Local Wildlife Site designated at a district or borough level	of such habitat that is thought to be functionally linked to a significant area of such habitat	Action Plan, which is present in significant numbers within the geographic context.
Low	-	Habitats that are unexceptional in a local context and do not meet the above criteria.	Species populations that are unexceptional in a local context and do not meet the above criteria.

Appendix 4 – Figures







