



Ecological Appraisal

Prepared for: **Freemantle Capital Partners (Almondsbury) Limited**

For the site of: **Oaklands Drive, Almondsbury, Bristol, BS32 4AB**

23/11/2022

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Executive Summary

Quantock Ecology undertook an updated Ecological Appraisal at a site known as Oaklands Drive, Almondsbury, Bristol, BS32 4AB. This included an extended Phase 1 Habitat Survey (P1HS). The aim of the assessment was to establish the baseline ecological condition of the site, and to conduct an assessment of the likely significance of ecological impacts of the proposed development.

The development proposals briefly comprise the erecting of a multi plot residential development on a former sports field. Preliminary development proposals are included in Appendix 2. A planning application has not been submitted to date.

Taking into consideration the desk study and site survey findings, this report concludes that the proposed development poses no significant risk to ecological receptors. No further surveys are recommended; however habitat enhancements are recommended. See table 1 below for summary.

Table 1: Summary of survey results, conclusions and recommendations

Baseline Conditions (from table 8)	
<i>Designated Sites</i>	The site is not subject to any designation. There are no statutory sites within at least ~890m to be affected by any proposed development.
<i>Habitats and trees</i>	There are no protected or notable habitats on the survey site. Mature trees are present on of the site, however, these are to remain unaffected by the proposed development.
<i>Protected Species</i>	The general site has a low habitat value for bats and reptiles, but no other protected species.
<i>Invasive and non-native species</i>	No invasive species was found on site.
Conclusions and Recommendations (from table 9)	
<i>Designated Sites</i>	No effect on any designated site. No further surveys.
<i>Habitats</i>	No effect on any protected habitat or trees. No further surveys.
<i>Protected Species</i>	The proposed development will remove the vast majority of suitable reptile habitat. However, this habitat is of very poor quality and as the site continues to transition towards scrub, the

	<p>quality of the habitat will continue to decrease. Therefore, no surveys required, but mitigation methods are recommended during the clearing stage of the site.</p> <p>The proposed development does not impact the limited low quality bat habitat on site, and as such, no further surveys are required, but mitigation is recommended.</p>
<i>Invasive and non-native species</i>	None found. No further surveys.

1.0 Introduction and Context

1.1 Background

Quantock Ecology were commissioned by Freemantle Capital Partners (Almondsbury) Limited to undertake an Ecological Appraisal at Oaklands Drive, South Gloucestershire with consideration of surrounding land, where accessible ('the site'). The survey included an Extended Phase 1 Habitat Survey, in line with methodology set out in JNCC's *Handbook for Phase 1 habitat survey – a technique for environmental audit* (JNCC, 2010); the assessment is based on the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017).

This report builds on a previous Ecological Appraisal of the site, undertaken by Quantock Ecology in December 2020.

1.2 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 significant ecological impacts as a result of the development proposals; summarises the requirements for further surveys and mitigation measures, to inform subsequent mitigation proposals, achieve planning or other statutory consent, and to comply with wildlife legislation.

The aim of the EA was to obtain data on existing ecological conditions, and to conduct an assessment of the likely significance of ecological impacts on the proposed development. To achieve this, the following steps were taken:

- The desk *study area* and field *survey area* (including the 'zone of influence' of the scheme) have been identified.
- A desk study has been carried out, which includes data received in November 2020 from Bristol Regional Environmental Records Centre (BRERC).
- Baseline information on the site and surrounding area has been recorded through an 'Extended Phase 1 Habitat Survey', including a Phase 1 Habitat Survey (JNCC 2010) and recording further details in relation to notable or protected habitats and species if present on site.
- The ecological features present within the survey area have been evaluated, if present and where possible.

- Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act [WCA]) have been identified, if present.
- Likely impacts on features of value, as a result of the development proposals, have been identified if present.
- Recommendations for further survey and assessment have been made where applicable.
- Recommendations for mitigation and opportunities for enhancement have been provided based on current information where applicable.

The Phase 1 habitat map of the survey area, with supporting target notes (if applicable) is included in Appendix 1. The proposed Project Plan is included in Appendix 2 (if provided). Photographs taken during the site survey are included in Appendix 3 and a summary of relevant legislation can be found in Appendix 4. A summary of the desk study results is outlined in Appendix 5.

1.3 Project Description

This report is prepared to accompany a future planning application, to be submitted to South Gloucestershire Council. The proposed development will involve the construction of multiple residential dwellings (see preliminary plan in Appendix 2).

The programme for the scheme is not known at the current time. All works areas, storage and haul routes will be included within the site boundary; access will be provided by existing roads and as such, no additional working footprints are anticipated.

The site does not fall within any statutory or non-statutory designated nature conservation sites.

2.0 Methodology

2.1 Site Context and basic description

The site is located at national grid reference ST 605 836 and comprises an area of approximately 1.37ha. The site is formed from a large unmanaged field bordered by housing, roads and walls.

2.2 Desk Study background and scope

Existing records relating to the site and a surrounding 2km radius (the study area) were received from the Bristol Regional Environmental Records Centre (BRERC) in November 2020, in relation to a previous ecological survey on this site. The results of this are summarised in the desk study section of this report. The data search is confidential information that is not suitable for public release.

A review of the following information sources has also been undertaken to inform the assessment:

- Landscape structure using aerial images from Google Earth
- Designated sites, habitat and species data held on magic.gov.uk.
- Information on the surrounding area using OS Opendata 2022

2.3 Desk Study results

A summary of desk study results are provided below; further details are included in Appendix 5.

2.3.1 Designated sites

A review of the MAGIC database and data search from BRERC suggests that two statutory sites and one non statutory designated site is present within 2km of the site. The details of these are found in table 2 below.

Table 2: Designated sites within 2km of the site

Designated Site Name	Distance and direction from Site (approx.)	Reasons for Notification and integral value (Natural England Citation)
Statutory Sites		
Cattybrook Brickpit, Site of Special Scientific Interest (SSSI)	890m west	This site is designated for geological reasons.
Three Brooks, Local Nature Reserve (LNR)	1km southeast	<i>“Ancient woodland, hazel coppice, man-made lake. The rich mix of habitats provides a valuable place for wildlife, providing food and shelter to a wide range of wildlife, including reed buntings, skylarks, great crested newts and slow worms”</i> – Taken from Natural England citation.
Non-statutory Sites		
Forest of Avon Community Forest	Covering the entire search area	<i>“Forests were established in 1989. Pioneering work was undertaken to bring together a wide-range of interests in partnerships to agree comprehensive land-use plans, guiding strategic tree planting, whilst conserving & enhancing the wider natural environment (all with a strong community dimension and focused on delivering public benefit). Whilst titles for strategic land use planning to deliver public benefits have and will continue to change, they are essentially reworking Community Forest principles”</i> – Taken from Forest of Avon Community Forest
Over Court, Site of Nature Conservation Interest (SNCI)	950m southwest	<i>“Ancient woodland, calcareous grassland, neutral grassland”</i> – Taken from BRERC data search.

2.3.2 Description of site within landscape structure

A review of the designated sites, aerial photographs, the MAGIC database and OS maps shows that the site is situated within the village of Almondsbury, South Gloucestershire. The landscape to the east and

south of the site is urban with medium density housing and associated gardens. The remaining landscape comprises a mixture of pastoral, and arable farmland bordered by mature hedgerows and a network of Rhynes. Some areas of woodland are found within the local area; the closest of which is found adjacent to the west of the site. A large area of what appears to be a plantation of young trees is found ~1.6km northwest of the site. Three ponds are found within a business park ~1km south of the site on the opposite side of the busy M5 motorway. A network of Rhynes is found starting ~1.6km northwest of the site.

2.3.3 Habitats of principal importance

A review of the MAGIC database shows the following habitats present within 2km of the site:

A number of small areas of deciduous woodland are found within the local landscape, the closest of which touches the western site boundary. Areas of ancient-semi-natural woodland are found ~840m north, and ~890m and ~1.7km southwest of the site. Areas of young woodland are found ~1.4km east and ~1.6km northwest. A patch of good quality, semi-improved grassland is found ~1.7km north of the site. A large area of floodplain grazing marsh is found ~1.2km northwest of the site.

The MAGIC database also suggests the following granted EPSML's (all species) present within the local area:

Table 3: Granted EPSML's within 2 km of the site

Case reference of granted application	Approx. distance from site	Species Effected	Licence Start Date:	Licence End Date:	Impacts allowed by licence
2016-23126-EPS-MIT	600m southwest	Great Crested Newt	07/10/2013	31/01/2014	Destruction of a resting place.
2015-19119-EPS-MIT	1.5km southeast	Great crested newt	03/03/2016	30/11/2017	Unknown
2017-27604-EPS-MIT	1.5km northeast	BLE,C-PIP, Noctule	11/05/2017	30/04/2027	Destruction of a resting place.
EPSM2012-4007	1.7km northeast	C-PIP;S-PIP	05/04/2013	31/08/2015	Destruction of a resting place.
EPSM2011-3661	1.8km northeast	BLE;WHISK	08/11/2011	30/09/2013	Destruction of a resting place.
2018-34320-EPS-MIT	<100m west	BLE,C-PIP,G-HORSE,L-HORSE,S-PIP	17/05/2018	15/05/2028	Destruction of a resting place.

2019-43154- EPS-MIT	1.9km west	BLE,C-PIP	28/10/2019	25/10/2029	Destruction of a resting place.
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2.3.5 Aerial photo of site showing landscape structure



2.3.6 Protected and notable species

The results below show a summary of the protected/notable species recorded present within 2km of the site, as confirmed by the Bristol Regional Environmental Records Centre.

Table 4 Protected and notable species from historic biological records search

Plants		
Scientific Binominal	Common name	Number of Records
<i>Elodea canadensis</i>	Canadian waterweed	One field record
<i>Cotoneaster integrifolius</i>	Entire-leaved cotoneaster	Two field records
<i>Cotoneaster simonsii</i>	Himalayan cotoneaster	One field record
<i>Fallopia japonica</i>	Japanese knotweed	Seven field records
<i>Lamium galeobdolon subsp. argentatum</i>	Variegated yellow archangel	Two field records

<i>Cotoneaster horizontalis</i>	Wall cotoneaster	Seven field records
<i>Azolla filiculoides</i>	Water fern	One field record
Bats		
Scientific Binominal	Common name	Number of Records
<i>Plecotus auritus</i>	Brown long-eared	Two field records
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	Seven field records
<i>Rhinolophus ferrumequinum</i>	Greater horseshoe	One field record
<i>Myotis spp.</i>	Myotis species	One field record
<i>Nyctalus noctula</i>	Noctule	Two field records
<i>Chiroptera</i>	Bat (unidentified)	One roost record
<i>Eptesicus serotinus</i>	Serotine	Four field records
Other Fauna		
Scientific Binominal	Common name	Number of Records
<i>Falco tinnunculus</i>	Kestrel	17 field records
<i>Strix aluco</i>	Tawny owl	Ten field records
<i>Alcedo atthis</i>	Kingfisher	Three field records
<i>Milvus milvus</i>	Red kite	Three field records
<i>Lasiommata megera</i>	Wall	Two field records
<i>Satyrrium w-album</i>	White-letter hairstreak	One field record
<i>Meles meles</i>	Eurasian badger	One field record, two records of droppings/latrines
<i>Triturus cristatus</i>	Great crested newt	One field record
<i>Anguis fragilis</i>	Slow worm	Two field records
<i>Erinaceus europaeus</i>	West European hedgehog	Seven field records, two dead

2.4 Extended Phase 1 Habitat Survey

The survey was undertaken by Consultant Ecologist, Tom Hird, BSc (Hons) on the 26th May 2022. Tom is an accredited agent under Natural England bat licence number: 2016-24382-CLS-CLS. The holder of the licence is Principal Ecologist Simon Pidgeon, BSc (Hons) MRSB.

Table 5: Environmental variables during survey

	26/05/2022
Temperature	20°C
Relative Humidity	81%
Cloud Cover	100%
Wind	2/8
Precipitation	No Rain

The survey area generally focussed on the land that will be directly impacted by the proposals (within the site boundary), but also a buffer around this was considered. For details of the survey site, please refer to Appendix 1.

2.4.1 Habitats and flora

The methodology for the Phase 1 Habitat Survey (P1HS) was based on the best practice publication *Phase 1 Habitat Survey methodology* (JNCC, 2010). All land parcels were described and mapped according to JNCC P1HS habitat types. Target notes provide supplementary information on habitat conditions, features too small to map, species composition, structure and management. Scientific names are given after the first mention of a species in this report, subsequently common names are used.

2.4.2 Protected species and Species of Principal Importance

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

2.4.3 Invasive / non-native species

The distribution and extent of invasive species listed on Schedule 9 of the Wildlife and Countryside Act (1981) were also noted throughout the survey area, if any.

2.5 Suitability Assessment and Ecological Value

2.5.1 Likelihood of the presence of protected species

The likelihood of occurrence of protected species is ranked according to the criteria listed in Table 6. The habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Table 6: showing criteria considered when assessing the likelihood of occurrence of protected species

Present	Species are confirmed as present from the current survey or historical confirmed records.
High	Habitat and features of high quality for species/species assemblage. Species known to be present in wider landscape (desk study records). Good quality surrounding habitat and good connectivity.
Medium	Habitat and features of moderate quality. The site in combination with surrounding land provides all habitat/ecological conditions required by the species/assemblage. Within known national distribution of species and local records in desk study area. Limiting factors to suitability, including small area of suitable habitat, some severance/poor connectivity with wider landscape, poor to moderate habitat suitability in local area.
Low	Habitats within the survey area poor quality. Few or no records from data search. Despite above, presence cannot be discounted as within national range, all required features/conditions present on site and in surrounding landscape. Limiting factors could include isolation, poor quality landscape, or disturbance.
Negligible	Very limited poor quality habitats and features. No local records from desk study; site on edge of, or outside, national range. Surrounding habitats considered unlikely to support species/species assemblage.

2.5.2 Assessment of Ecological Value

The ecological value of the survey area has been assessed based on the *Guidelines for Ecological Impact Assessment* (CIEEM, 2018) and *Handbook of Biodiversity Methods: Survey, evaluation and monitoring* (David Hill, 2005), using geographic frames of reference. The biodiversity value of the identified designated sites, habitat types and associated species/assemblages has been considered. The criteria listed below have been used to reach an evaluation; examples under each category of biodiversity value are provided in Table 7.

- Presence of designated sites or features

- Presence of UK priority habitats and species (S41 of the NERC Act), and species listed as Birds of Conservation Concern (Eaton *et al* 2009)
- Size of habitat, diversity of species, or population
- Habitats or species which are rare, species which are on the edge of their range
- Large populations of uncommon species, or plant communities that are typical of valued natural/semi-natural vegetation types
- Habitats or features that have supporting value for high value habitats, designated sites or protected species, e.g. buffer habitat to ancient woodland
- Presence of legally protected species

Table 7: Examples of criteria defining conservation evaluation

Evaluation on geographical scale	Examples of criteria defining evaluation
International	Biodiversity feature that is designated or warrants designation as a European Protected Site
National	biodiversity feature that is designated or warrants designation as a National designated site (Site of Special Scientific Interest (SSSI) or National Nature Reserve (NNR))
Metropolitan or County	Biodiversity feature that is designated or warrants designation as a county wildlife site, local nature reserve, or a Site of Metropolitan Importance for Nature Conservation (SMI). Species and habitats of principle importance.
Borough	Biodiversity feature that is designated or warrants designation as a Site of Importance for Nature Conservation (SNCI), or other feature which is one of the best examples of its type within the Borough. Diverse and/or ecologically valuable hedgerow network, or ancient woodland greater than 0.25ha
Local	Biodiversity feature which is one of the best examples of its type within a local context (i.e. within ~1km of the scheme extent)/local Parish. Habitat complex considered to enrich the habitat/biodiversity resource within the context of the local neighbourhood.
Within the vicinity of the site	Biodiversity features of value within the zone of influence (site plus approximately 50m buffer).
Negligible	Biodiversity features of negligible value.

Following CIEEM guidance it should be noted that legal protection or UK Biodiversity Action Plan (BAP) status does not necessarily imply biodiversity status at the equivalent scale. For example, a badger *Meles*

meles sett would receive legal protection at a national scale and a native hedgerow would be a UK BAP priority habitat, but neither feature is likely to be of biodiversity value at a national scale.

The ecological interest of the study area and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity. It will be clearly stated where a preliminary value can be given and where further information is required.

2.6 General 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.

Where only four figure grid references are provided for some species records, it is not possible to determine their precise location as they could be present anywhere within the given 1km x 1km National Grid square.

This survey provides a preliminary view of the likelihood of protected habitats and species being present. This is based on suitability of the habitats on the site and in the local area, the ecology and biology of protected species as currently understood, and the known distribution of species as recovered during the desk study.

2.7 Specific Limitations to the site

No specific limitations regarding weather, time or access. The survey was also undertaken during the optimal survey season for plant species identification.

3.0 Results and Evaluation

3.1 Phase 1 Habitat Survey

3.1.1 Summary land use of the site

The survey area is formed by a former field, now succeeding toward scrub and disturbed ground. A small patch of mix trees is present at the northwest corner and a line of trees running along the eastern boundary.

3.1.2 Phase 1 habitats of the site

[A3.3] Scattered Mixed Trees

A line of mature trees are found along the eastern boundary of the site and a group of trees is found on the northwest corner of the site

The line of mature trees on the eastern boundary comprises a mixture of trees such as English oak *Quercus robur*, horse chestnut *Aesculus hippocastanum*, conifer *Coniferae* sp., field maple *Acer campestre*, beech *Fagus sylvatica*, hazel *Corylus avellana*, white poplar *Populus alba* and yew *Taxus baccata*. These trees appeared in good condition, with a low number of features, such as lifted bark, visible on three oak trees.

A group of trees is found on the northeast corner of the site. These include a mixture of holm oak *Quercus ilex*, sycamore *Acer pseudoplatanus*, horse chestnut and yew. The trees were all mature and all appeared to be in good condition. The understorey contained green alkanet *Pentaglottis sempervirens*, dock *Rumex* sp., nettle *Urtica dioica*, bramble *Rubus fruticosus* agg., garlic mustard *Alliaria petiolata*, cleavers *Galium aparine*, bindweed *Convolvulus arvensis*, spindle *Euonymus europaeus*, ragwort *Senecio jacobaea*, cow parsley *Anthriscus sylvestris*, meadow buttercup *Ranunculus acris*, thistle *Cirsium*, ribwort plantain *Plantago lanceolata*, bristly oxtongue *Helminthotheca echioides*, pendulous sedge *Carex pendula*, dogwood *Cornus sanguinea*, perennial ryegrass *Lolium perenne* and false oat grass *Arrhenatherum elatius*. A single small mammal hole was located within this area. However, it appeared to be out of use due to the excessive build-up of debris filling the entrance.

[B6] Poor semi-improved grassland

The vast majority of the site was covered by an unmanaged grassland with a sward height of ~60cm - ~1m. This grassland was starting to transition into scrub, due to the unmanaged nature of the area and the encroachment and establishment of multiple tall ruderal patches around the boundaries. The sward was dominated by perennial ryegrass and meadow buttercup. Other species present included green alkanet, thistle, dock, nettle, burdock *Arctium lappa*, cock's-foot grass *Dactylis glomerata*, daisy *Bellis perennis*, comfrey *Symphytum* sp., bindweed, false oatgrass, meadow cat's tail *Phleum pratense*, field maple, red campion *Silene dioica*, Robins plantain *Erigeron pulchellus*, bramble, horse chestnut, dogwood, vetch *Vicia sativa*, ragwort *Senecio vulgaris*, ribwort plantain, red deadnettle *Lamium purpureum*, teasel *Dipsacus fullonum* and rosebay willowherb *Chamaenerion angustifolium*.

[C3.1] Tall ruderal

A number of areas along the boundaries to the north and east of the site have completed transitioned into tall ruderal habitat, with indications that they are further transitioning into scrub. The dominant species were nettle and bramble, with green alkanet, meadow buttercup, cock's-foot grass, bindweed, hogweed *Heracleum sphondylium*, dogwood, copper beech *Fagus sylvatica* and buddleia *Buddleja davidii* also present.

[J2.4] Fences

A line of heras fencing ran parallel to the eastern boundary of the site, as well as encompassing northern and western part of the survey area. A small wooden fence ran along the majority of the western survey boundary.

[J2.5] Wall

A low stone wall is present along part of the northern and entire eastern boundaries of the site. The wall is only ~1.2m in height. Some gaps were noted in the stonework; however, these mostly form shallow exposed gaps where the old mortar has become damaged and loose.

[J4] Bare Ground

An area of bare ground was present at the eastern part of the survey area where access was gained to the site. A few pioneer weed species were present in this area such as dock, bristly ox-tongue, ragwort and

dandelion *Taraxacum officinale*. The boundaries were marked by the start of the poor semi-improved grassland.

3.2 Protected habitat and species conclusions based on proposed development.

The survey evaluated the site for the presence of all protected and invasive species, summarised under general taxon groups in table 8 below.

Table 8: Assessment of likelihood of protected/invasive habitat/species occurrence, and if there are any impacts from the proposed development.

Habitat or taxon	Likelihood of impact in context of plans	Justification for evaluation and level of significance
Habitat	Negligible	It is understood that the scattered trees will remain in place after the development. There were also no protected or important botanical habitats noted on site either. Therefore, no mitigation is required
Invertebrates	Low	The site does not offer habitat to support large populations of rare and/or protected invertebrates. Floral assemblages are generally poor. It does however, offer limited potential for more generalist species within the grassland.
Amphibian	Negligible	<p>Although protected amphibians could use the grassland area for foraging and cover during their terrestrial phase, there are no ponds on site for amphibians to use. The site is isolated via a main road to the east and access road to the west, with suburban housing to the north and contains no suitable overwintering habitat.</p> <p>Therefore, it is unlikely that protected amphibians would be present on site at any time of year.</p>

Badger	Negligible	No evidence of badger activity was observed during the survey, and the site does not offer suitable foraging territory. Considering the relatively urban location of the site and the proximity to main roads and the M5 motorway. It is unlikely badgers would be regularly crossing the site at any time.
Bat	Low	There are no buildings on site to provide suitable roosting features for bats. Some of the trees along the eastern boundary did display features such as lifted bark which potentially could offer roosting habitat, albeit very low quality. However, it is understood that these trees will remain physically unaffected by the proposed development and these trees are lined along a busy main road. Bats may commute around and forage over the site.
Barn Owl	Negligible	There are no buildings or trees on site suitable for barn owl nesting. Owls could potentially roost within the trees on site. However, the site itself provides very limited hunting habitat for the species.
Bird	Low	The trees and scrub on site provide nesting habitat for breeding birds. No evidence of nesting birds was noted during the survey. However, birds are likely to utilise the trees and dense areas of scrub during the nesting season. It is however, understood that the trees will remain physically unaffected by the proposed development.
Other terrestrial mammals e.g. otter, water vole	Negligible	No evidence of any other protected mammal was found. There are no hedgerows to provide habitat for dormice and the tree habitat is not of suitable species composition or density for dormice use. No habitat for otters or water voles is noted on site or within a suitable distance to be affected by the proposed development.
Reptile	Low	There is a limited amount of suitable habitat for reptiles on the eastern boundary of the site within the scrub and denser areas of tall ruderal. Common reptiles may also use the area of bare ground for basking. Foraging opportunities are limited but a low number

		<p>of reptiles may be present on site and within the surrounding area. As such, mitigation is required to ensure no harm is caused to any resident reptiles.</p>
<p>Problematic Species</p>	<p>Negligible</p>	<p>None observed on site.</p>

4.0 Discussion and Recommendations

Table 9: Survey recommendations based on the conclusions within table 8.

Species/ Habitats	Likelihood of impact as described in Table 8.	Notes and recommendations
Sites	Negligible	The site is not subject to any statutory or non-statutory designations. Direct impacts on any designated sites are unlikely to arise as the works would be a sufficient distance to avoid dust, noise and visual effects on the reasons for designation.
Habitats	Negligible	The development proposed impacts no protected botanical habitats or trees, therefore no mitigation is needed for these.
Invertebrates	Low	No impact on protected invertebrates foreseen, therefore no further surveys required. However, enhancements recommended (see 4.3).
Amphibian	Negligible	No impacts on protected amphibians are foreseen. As such, no further surveys or mitigation is required.
Badger	Negligible	No impacts foreseen on badgers due to the urban and isolated nature of the site, along with the lack of suitable foraging territory. No further surveys or mitigation required.
Bats	Low	<p>No further surveys required on site; however, any lighting near or shining onto any trees around the boundary should be designed to minimise the impact it has on the potential bat commuting route.</p> <p>Any Lighting that may be built in the future, post development should be in-line with guidance produced by the Bat Conservation Trust and Institute of Lighting Professionals: https://www.theilp.org.uk/documents/guidance-note-8-bats-</p>

		<p>and-artificial-lighting/. Any future lighting should be of low level, be on downward deflectors and ideally be on PIR sensors.</p> <p>This will ensure that the commuting route that the bats are likely to be using is maintained. If the lighting is to be of up-lighting design then a dark corridor should be retained to allow movement of bats along the sites eastern boundary.</p>
Barn Owl	Negligible	No impacts on barn owl are foreseen. As such, no further surveys or mitigation is required.
Bird	Negligible	No impacts on nesting birds are foreseen. As such, no further surveys or mitigation is required.
Other mammals	Negligible	No impacts on otter, water voles or dormice are foreseen. As such, no further surveys or mitigation is required.
Reptiles	Low	<p>No further surveys.</p> <p>The following mitigation is recommended to prevent harm to any reptiles that may happen to be present within the development area.</p> <p>Pre-Development Clearing</p> <p>a) Before any development, the ground flora in the immediate vicinity of the building site will be strimmed down to 500mm. Any reptiles that are found should be placed outside of the development area by a suitably experienced ecologist.</p> <p>b) Rest period of at least 4-6 hours</p> <p>c) Strimming of remaining flora to ground level, to be maintained for the duration of the development.</p> <p>d) If at any other point reptiles are recorded, operations should cease immediately until further advice has been sought from the ecologist.</p>
Problematic Species	Negligible	No further surveys required. However, remain vigilant.

4.1 Opportunities for enhancement

4.1.1 Recommendations for enhancement to increase biodiversity value post-development

The bullet points below represent some broad recommendations that should be considered with the development proposals. These recommendations should be developed further in coordination with the landscape designers and other specialists as the design progresses.

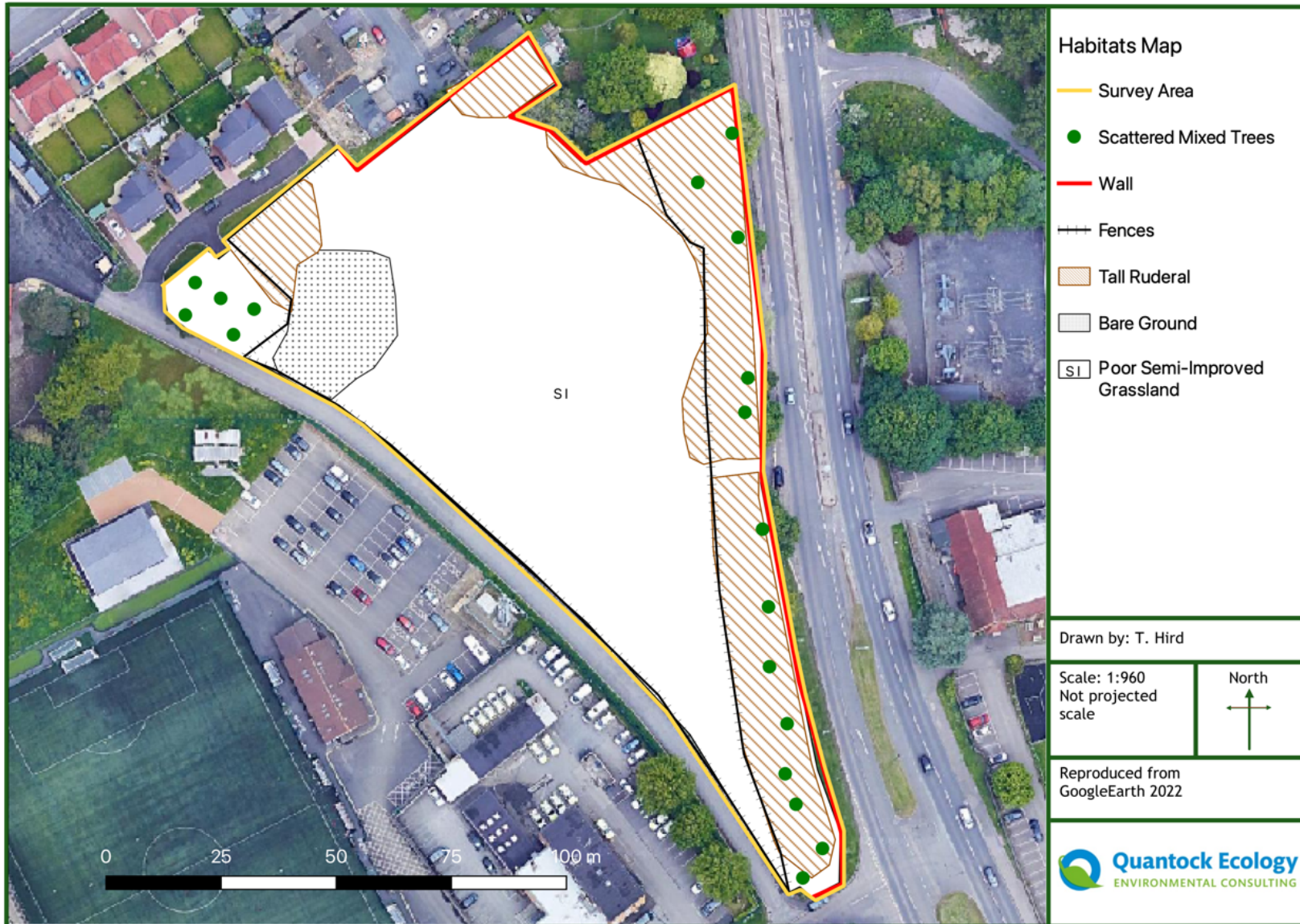
- Design of wildlife friendly lighting.
- Erection of bird and bat boxes; e.g 4x Schwegler multi-purpose bird and/or bat.
- Inclusion of plant species of known value to wildlife in any landscape design proposals.
- Where possible the boundaries between the new developments should be planted as native species rich hedgerows to create commuting routes and wildlife corridors across the site for species such as hedgehogs.

5.0 Bibliography

- Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists —Good Practice Guidelines*, 3rd edition, Bat Conservation Trust, London.
- http://www.bats.org.uk/publications_detail.php/1127/bat_surveys_good_practice_guidelines_2nd_edition
- Joint Nature Conservation Committee (2010). *Handbook for Phase 1 habitat survey a technique for environmental audit*.
- Natural England (2007). *Badgers and Development a Guide to Best Practice and Licensing*. Natural England. Bristol.
- Natural England (2022) *Three Brooks LNR*. Available at: <https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1083172>
- National Planning Policy Framework, 2019
<http://www.communities.gov.uk/publications/planningandbuilding/nppf>
- Paul Edgar, Jim Foster and John Baker (2010). *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth
- Tom Langton, Catherine Beckett and Jim Foster (2001). *Great Crested Newt Conservation Handbook*. Froglife. Suffolk.
- Cheffings, C. and Farrell, L. (eds.) (2005) *The Vascular Plant Red Data List for Great Britain*. Joint Nature Conservation Committee, Peterborough.
- Eaton MA, Brown AF, Noble DG, Musgrove AJ, Hearn R, Aebischer NJ, Gibbons DW, Evans A and Gregory RD (2009) *Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man*. *British Birds* 102, pp296-341
- Gregory R.D., et al (2009). *Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man*.
- HMSO: *Wildlife and Countryside Act 1981 (as amended)*
- HMSO: *The Protection of Badgers Act 1992 (as amended)*
- HMSO: *Countryside & Rights of Way Act (2000)*
- HMSO: *Natural Environmental and Rural Communities Act (2006)*
- HMSO: *The Conservation of Habitats and Species Regulations (2017)*

- CIEEM (2018) *Guidelines for Ecological Impact Assessment in the United Kingdom*. Available at www.ieeem.org.uk
- CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal* Institute of Ecology and Environmental Management.
- Forest of Avon Trust (2022). Available at: <https://forestofavontrust.org/the-trust/forest-of-avon-your-local-community-forest>
- JNCC (2004) Bat Workers Manual, 3rd Edition.
- JNCC (2010). *Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit*, First published 1990; reprinted in 1993; reprinted in 2003 with limited revisions & additions; reprinted in 2004; reprinted in 2007 with minor additions; reprinted in 2010.
- Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000) Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10(4), 143-155.
- Spon E & F.N (1995) *Guidelines for Baseline Ecological Assessment*. Institute of Environmental Assessment

Appendix 1: Survey Plan



Appendix 3: Photographs

Photo 1: Showing area of poor semi-improved grassland facing south.



Photo 2: Showing area of poor semi-improved grassland facing north.



Photo 3: Showing example of wooden fence on western boundary.



Photo 4: Showing southern section of line of mixed trees on the eastern boundary.



Photo 5: Showing example of scattered mixed trees at the north eastern part of the survey area.



Photo 6: Showing part of the understorey of the scattered mixed trees and its transition towards the poor semi-improved grassland.



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 respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive the, Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe in order to conserve the 189 habitats and 788 species (non- bird) identified in Annexes I and II of the Directive (as amended).

SPAs are classified under Article 2 of the EC Birds Directive both for rare bird species (as listed on Annex I) and for important migratory species.

SACs and SPAs up to 12 nautical miles (nm) from the coast are afforded protection in the UK under the Conservation of Habitats and Species Regulations 2010 which consolidate all amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994. In Scotland, the requirements of Habitats Directive are implemented through a combination of the 1994 and the 2010 (reserved matters) Regulations. The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a means for designating and protecting SACs in UK offshore waters (from 12 - 200 nm).

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)

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).

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. Further provisions for the protection and management of SSSIs have been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and the Nature Conservation (Scotland) Act 2004.

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 Habitats Directive

The EC Habitats Directive aims to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those species of European importance. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 (the Conservation Regulations) and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). The following notes are relevant for all species protected under the EC Habitats Directive:

In the Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.

The Habitats Regulations do not define the act of 'migration' and, therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.

In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three 'tests':

the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment;

there is no satisfactory alternative; and

the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) 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) and Nature Conservation (Scotland) Act 2004.

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 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 sett¹ 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

¹ A badger sett is defined in the legislation as "any structure or place which displays signs indicating current use by a badger". This includes seasonally used setts. Natural England (2009) have issued guidance on what is likely to constitute current use of a badger sett: www.naturalengland.org.uk/Images/WMLG17_tcm6-11815.pdf

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 for any development works liable to affect an active badger sett, or to disturb badgers whilst they occupy a sett. Guidance has been issued by the countryside agency's to define what would constitute a licensable activity². It is not 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.

In Scotland only, intentionally or recklessly obstruct or prevent any wild bird from using its nest

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC) 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

² For guidance on what constitutes disturbance and other licensing queries, see Natural England (2007) Badgers & Development: A Guide to Best Practice and Licensing. www.naturalengland.org.uk/Images/badgers-dev-guidance_tcm6-4057.pdf, Natural England (2009) Interpretation of 'Disturbance' in relation to badgers occupying a sett www.naturalengland.org.uk/Images/WMLG16_tcm6-11814.pdf, Scottish Natural Heritage (2002) Badgers & Development. www.snh.org.uk/publications/online/wildlife/badgersanddevelopment/default.asp and Countryside Council for Wales (undated) Badgers: A Guide for Developers. www.ccw.gov.uk.

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 August³. 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.

Herpetofauna (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

³ It should be noted that this is considered the main breeding period. Breeding activity may occur outside this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

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 herpetofauna 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 Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable 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 liable to affect habitats known to support water voles, the relevant countryside agency 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 (e.g. Natural England) 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

An EPSM Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable 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

Works which are liable 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.

Dormice

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

Impacts of legislation 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 an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

White clawed crayfish

The white clawed crayfish *Austropotamobius pallipes* receives partial protection under Schedule 5 of the WCA in respect of Sections 9(1) and 9(5). This makes it an offence to intentionally take (capture) white-clawed crayfish.

Impacts of legislation on development works

The relevant countryside agency 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:

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.

Impacts of legislation on development works

An EPSM licence will be required from the relevant countryside agency for works which are liable to affect species of plants listed on Schedule 5 of the Conservation of 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

include Japanese knotweed *Fallopia japonica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera*.

Impacts of legislation 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 land owner or occupier may be required prevent the spread of certain 'injurious weeds' such as spear thistle *Cirsium vulgare*, creeping thistle *Cirsium arvense*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, and common ragwort *Senecio jacobaea*. 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)

National Planning Policy Framework

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 UK Biodiversity Action Plan priority species) 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; opportunities to incorporate biodiversity in and around developments are encouraged; 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

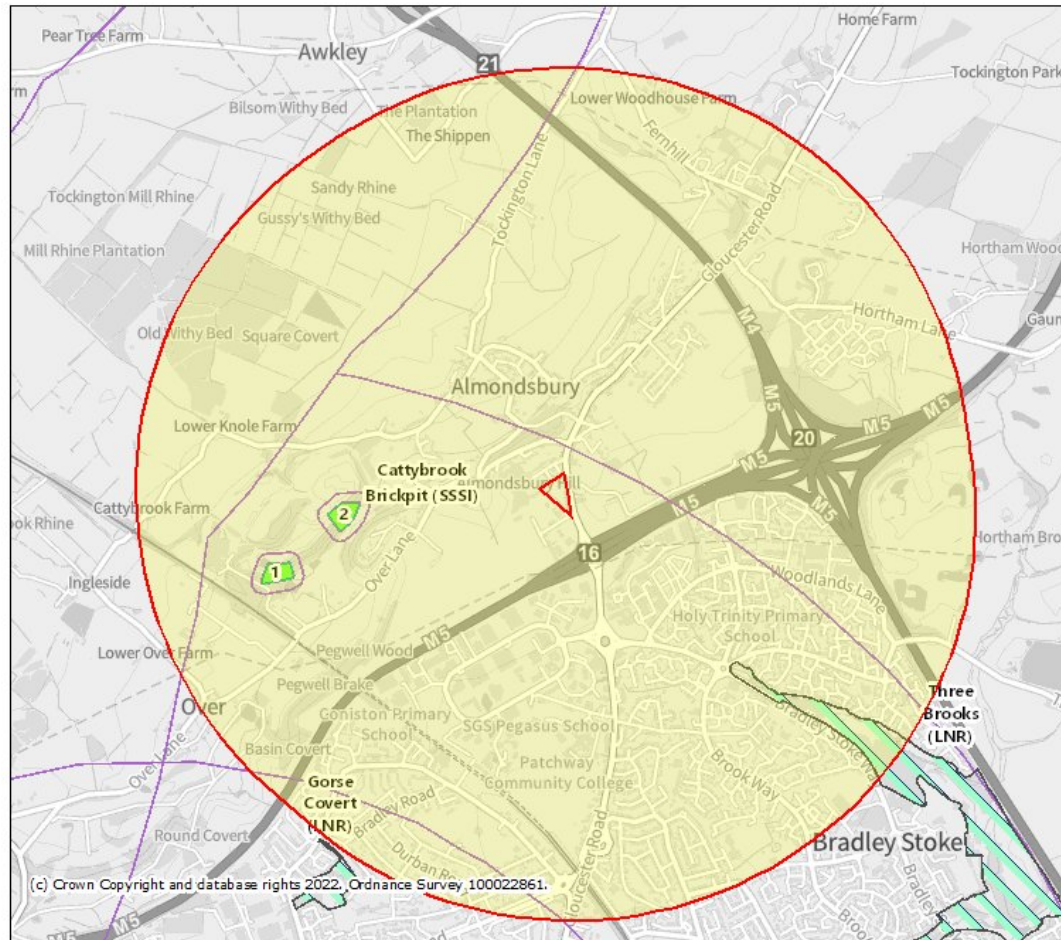
Section 40 of the Natural Environment and Rural Communities (NERC) Act, 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) 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.

Appendix 5: Desk Study Data



Designated Sites



Legend

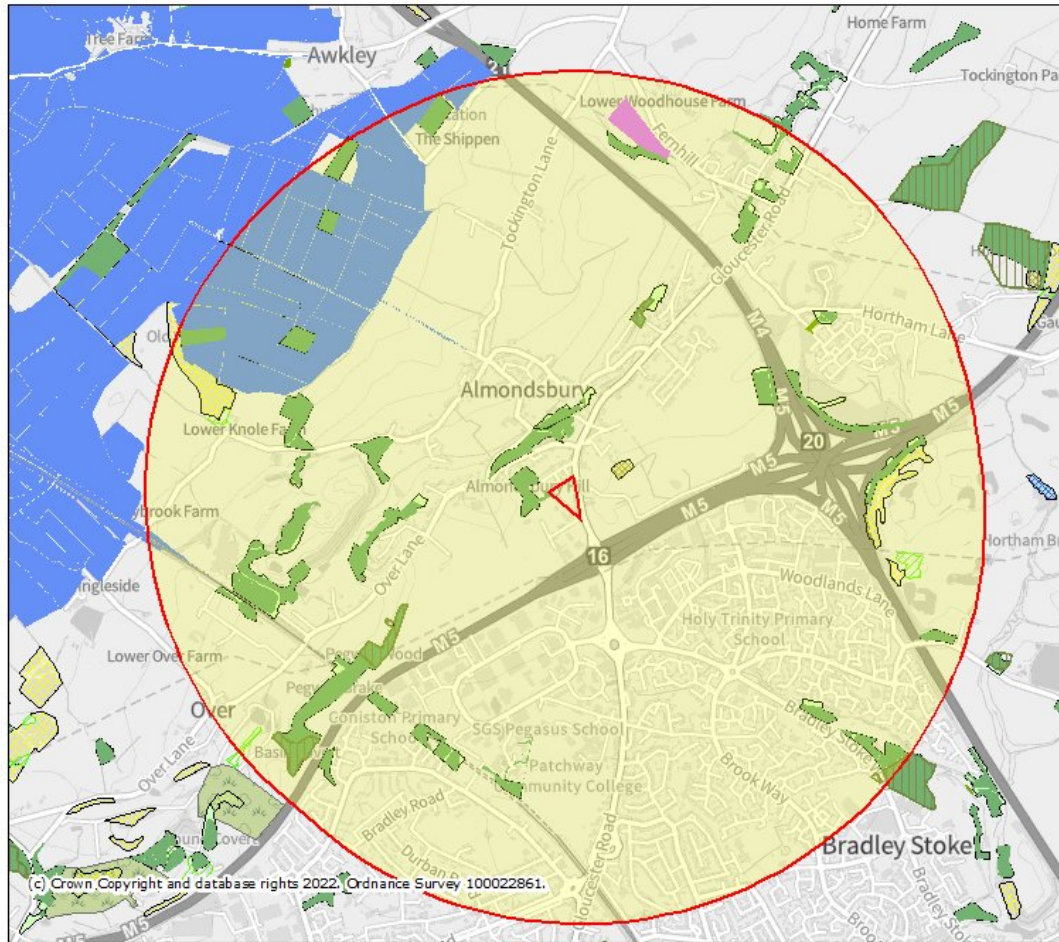
Areas of Outstanding Natural Beauty (England)	Part Destroyed
Limestone Pavement Orders (England)	Destroyed
Local Nature Reserves (England)	Not Assessed
Moorland Line (England)	Sites of Special Scientific Interest (England)
National Nature Reserves (England)	SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
National Parks (England)	Special Areas of Conservation (England)
Ramsar Sites (England)	Special Protection Areas (England)
Favourable Condition	Heritage Coasts (England)
Unfavourable Recovering	Land Management Initiatives (England)
Unfavourable no change	National Forest (England)
Unfavourable Declining	RSPB Reserves (GB)

Projection = OSGB36
 xmin = 353700
 ymin = 180600
 xmax = 367200
 ymax = 186800

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Priority Habitats



Legend

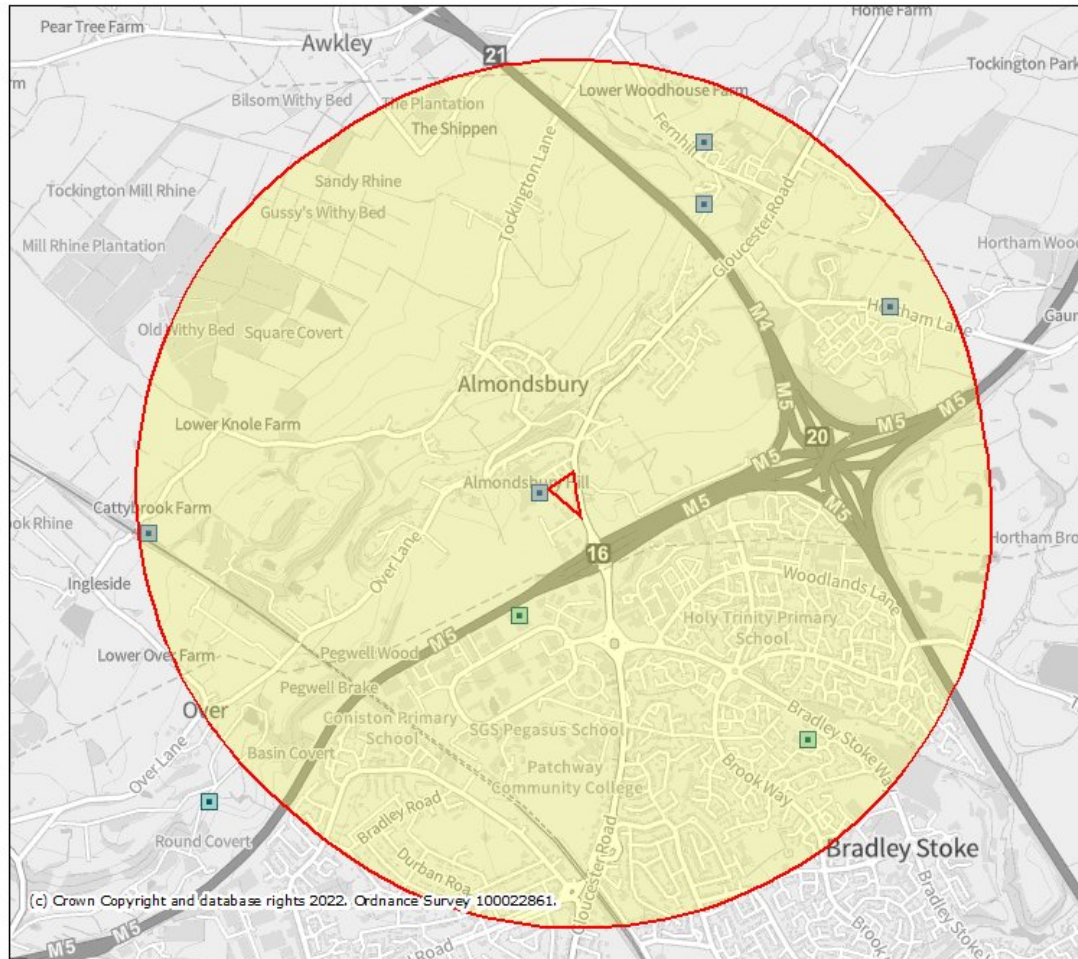
- Priority-Habitat Inventory - Coastal and Floodplain Grazing Marsh (England)
- Priority-Habitat Inventory - Good quality semi-improved grassland (Non Priority) (England)
- Ancient Woodland (England)
 - Ancient and Semi-Natural Woodland
 - Ancient Replanted Woodland
 - Priority-Habitat Inventory - Deciduous Woodland (England)
 - Forestry Commission Legal Boundary (England)
- National Forest Inventory (GB)
 - Assumed woodland
 - Broadleaved
 - Cloud \ shadow
 - Conifer
- Coppice
- Coppice with standards
- Failed
- Felled
- Ground prep
- Low density
- Mixed mainly broadleaved
- Mixed mainly conifer
- Shrub
- Uncertain
- Windthrow
- Young trees
- Priority-Habitat Inventory - Traditional Orchards (England)
- Woodpasture and Parkland BAP Priority Habitat (England)

Projection = OSGB36
 xmin = 353700
 ymin = 180600
 xmax = 367100
 ymax = 186800

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Granted EPSML



Legend

Granted European Protected Species Applications (England)

- Amphibian
- Bat
- Cetacean
- Invertebrate
- Other Mammal
- Plant
- Reptile

Projection = OSGB36
 xmin = 353700
 ymin = 180600
 xmax = 367200
 ymax = 186700

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