

Culm Garden Village

Culm Garden Village Masterplan &
SPD

Ecology Report 2022

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1 Introduction

Background and Description of the Project

- 1.1 LDA Design have been appointed by behalf of Mid Devon District Council (MDDC) to prepare a masterplan framework and Supplementary Planning Document (SPD) for the Culm Garden Village (CGV) to the east of Cullompton. The central part of the wider CGV 'Site' forms the Allocation Area.
- 1.2 BSG Ecology was commissioned by LDA Design to undertake ecological survey of the Site, and to input to a high-level ecology strategy to inform the masterplan.

Site description

- 1.3 The location of the Site is presented on **Figure 1 in Appendix 1**. It is located to the north and south of the main Honiton Road (A373), adjacent to the motorway M5 verge at the west, and a short distance to the east of the town of Cullompton. The centroid Ordnance Survey Grid Reference (OSGR) of the Site is ST 040 075. The River Culm flows through the western side of the Site, a tree-lined stream flows along the far north-western boundary and there are several narrow ditches with flowing water across the Site. The land next to the motorway lacked access permissions for survey; the land to the north of the Honiton Road was viewed from vantage points as far as possible, the land to the south contains a footpath and could be surveyed from the east side of the River Culm. This southern area is heavily used for recreation by residents.
- 1.4 The Allocation Area occupies approximately 156 ha of farmland within the wider CGV Site and includes enclosed improved pasture and arable fields bounded by hedgerows and tree lines.

Aims of study

- 1.5 The aim of this study is to provide baseline ecological information and to identify ecological constraints to inform the development of the masterplan framework and SPD. Therefore, the report includes:
- A review of biological records, statutory and non-statutory designated sites within the local area.
 - A description and evaluation of habitats and features present within the Site, and assessment of their potential to support protected species.
 - An outline of legislative and / or policy protection afforded to habitats and species associated with the Site.
 - Identification of ecological constraints and opportunities within the Allocation Area and CGV Site.
 - An indicative assessment of biodiversity net gain for the Allocation Area based on a draft masterplan layout.

2 Methods

Desk Study

- 2.1 A data search of the Site and a 500 m perimeter area was requested from the Devon Biodiversity Records Centre (DBRC) on 01 April 2022.
- 2.2 The MAGIC (Multi-Agency Geographic Information for the Countryside) online database¹ was searched for non-statutory and nationally designated sites and for European / internationally designated sites within 2 km of the Site (accessed 05 May 2022).
- 2.3 A review of online aerial images and Ordnance Survey mapping was undertaken to assess connectivity of the Site with features in the wider landscape.
- 2.4 The Preliminary Ecological Appraisal Report (Ethos Environmental Planning, 2019) of the Allocation Area was reviewed for further information on the presence of protected and notable species.
- 2.5 The relevant results of the desk study are summarised in the results section of this report.

Field survey

- 2.6 A habitat survey was undertaken by Senior Ecologist Caroline Boffey MRes, ACIEEM on 21 March to 24 March 2022. The survey comprised a walkover of the Site classifying and mapping the habitats present, using a large-scale approach, to gain a high-level overview of the Site. A combination of survey methods of Phase 1 habitat survey (JNCC, 2010), and UKHab (Butcher *et al*, 2020) aligned with the Defra Metric categories (Panks *et al*, 2021) was used.
- 2.7 A sub-set of the hedgerows was assessed using the Biodiversity Metric 3.0 (termed the Metric) condition assessment criteria (Panks *et al*, 2021) to gain an overview of the quality of the hedgerows within the Site. Although the Biodiversity Metric 3.0 has now been superseded by Metric 3.1, the former was the operational version at the time of survey.

Limitations to methods

- 2.8 Weather conditions for the duration of the survey were dry and sunny, with good visibility.
- 2.9 The majority of the Site was accessible for survey. However, an area of land to the far west of the Site near to the motorway lacked access permissions and was viewed from vantage points, and from a publicly accessible footpath.
- 2.10 Fields containing free-roaming horses were not entered for survey but viewed from the boundaries. Although the habitats could be assessed as species-poor grassland, a conservative approach was taken to the habitat classification.
- 2.11 The Site walkover was undertaken prior to the optimal period for botanical survey (generally taken as April to September inclusive) and as such, a full condition assessment of habitats (as required by the Defra Metric) could not be undertaken. A precautionary approach to assessing condition criteria has been used (as set out in Panks *et al*, 2021). In addition, trees and shrubs were still in bud at the time of survey. Recording of abundance of the species within the hedgerows was undertaken by viewing rapidly during the brisk Site walkover and, although the surveyor has extensive experience of recording woody species in bud, the species richness of the hedgerows should be interpreted in this context.
- 2.12 The Site covers a large area and time constraints did not allow for measurement of the tree girth of individual scattered trees to inform future condition assessment. All of the scattered trees were assessed by eye as 'Medium' size, except one tree which had notably larger girth and was recorded as 'Large'.

¹ www.magic.gov.uk

Personnel

- 2.13 Caroline Boffey Caroline has over 20 years' previous experience in ecology, with a specialism in botany, and has worked on projects across England, Scotland and Wales, in upland and lowland environments. Caroline has experience in Phase 1 Habitat Survey, NVC, UK Hab and biodiversity gain assessment including habitat condition assessments, and Common Standards Monitoring. Caroline was responsible for carrying out the field work for this project and is the author of this report.
- 2.14 This report has been reviewed by Gareth Lang ACIEEM (Principal Ecologist). Gareth has worked as a professional ecologist since 2013 and has experience in numerous ecological assessments including extended Phase 1 habitat surveys and the application of the Defra Metric to residential developments.
- 2.15 Further information about the personnel involved can be found at <https://www.bsg-ecology.com/people/>.

3 Results and Evaluation

Designated Sites

- 3.1 There are no statutory designated sites within 2 km of the Allocation Area.
- 3.2 There are thirteen non-statutory designated sites within 500 m of the CGV Site. These are presented in Table 1 below.

Table 1. Non-Statutory Designated Sites.

Designation*	Site Name	Location (OSGR)	Area (ha)	Description
CWS	Knight's Wood	ST023055	4.7	Ancient semi-natural woodland partly replanted with conifers
CWS	Aller Wood	ST045064	9.9	Plantation on ancient woodland site, wet in areas
CWS	Weekes Farm Orchard	ST032053	1	Traditional ridge and furrow orchard stocked with traditional varieties including cider apple, pear, plum and cherry. Approximately 30 mature trees.
OSWI	Peverstone Embankment	ST022052	5.3	Unimproved neutral grassland with scrub and areas of conifers
OSWI	Maddock's Farm	ST052066	1.9	Mixed plantation with a pond
UWS	Aller Wood (West)	ST041064	1.3	Broadleaved woodland
UWS	East Culm House	ST032071	0.9	Pond with amphibian interest
UWS	Willand - Cullompton Marsh	ST027096	261.7	Possible floodplain grazing marsh
UWS	Sherwoods (E)	ST036053	2.3	Orchard
UWS	Cullompton - Hele Marsh	ST016045	161.1	Possible floodplain grazing marsh
PAWS	KNIGHTS WOOD	ST023054	3.8	Ancient & Semi-Natural Woodland
		ST044063	6.1	Ancient Replanted Woodland
		ST047065	3.8	Ancient Replanted Woodland

*CWS: County Wildlife Site; OSWI: Other Sites of Wildlife Interest; UWS: Unconfirmed Wildlife Sites; PAWS: Possible Ancient Woodland Sites.

- 3.3 Of these sites, one is within the Allocation Area (East Culm House UWS), and five are within the CGV Site (Willand – Aller Wood CWS, Aller Wood (West) UWS, Weeks Farm Orchard CWS, Knights Wood CWS / PAWS, Cullompton Marsh UWS, and Sherwoods UWS).
- 3.4 Policy DM28 of the Mid Devon Local Plan (adopted 2020) states that: “*development proposals adversely affecting a County Wildlife Site [or other non-statutory site] will be considered on a case-by-case basis, according to the amount of information available about the site and its significance, relative to the type, scale and benefits of the development being proposed.*” and “*Planning permission will be granted only when:*
- The benefit of and need for the development clearly outweigh the direct and indirect impact to the protected site and the ecosystem services it provides;*
 - The development could not be located in an alternative, less harmful location; and*
 - Appropriate mitigation measures have been put in place. Where mitigation measures are not possible compensatory measures in some cases may be considered appropriate.*”

Habitats

- 3.5 The land use within the Site is predominantly agricultural, comprising arable land (crops, stubble, fallow, ploughed fields and grass/grass-clover leys), along with heavily improved, rye-grass *Lolium perenne* dominated grassland. There are a few fields of poor semi-improved grassland, but more semi-natural habitat is limited in extent and mostly concentrated at the south-west of the Site, where there are patches of habitat and habitat mosaics of semi-improved neutral grassland, swamp, tall ruderal vegetation and bramble scrub.
- 3.6 There are occasional patches of woodland across the Site comprising broadleaved semi-natural and plantation, mixed semi-natural and plantation woodlands, and a single small patch of conifer woodland. The woodlands include the Section 41 (NERC) habitats of principal importance (HPI) of lowland mixed deciduous woodland and wet woodland. There are occasional scattered mature trees across the Site, nearly all pedunculate oak *Quercus robur* species.
- 3.7 Hedgerows are a strong feature of the Site, with the majority located on an earth bank, and many also having an adjacent ditch. A large number are classified as 'Hedgerow with trees', containing tree standards, at varying frequencies, along the length. The hedgerows are mostly managed by flailing to a box-shape, although some have been unmanaged for several years and are now outgrown hedgerows or lines of trees and scrub. Many of the hedgerows and lines of trees contain species in the ground flora that are listed in the Hedgerow Regulations 1997, including bluebell *Hyacinthoides non-scripta*. The majority of the hedgerows are moderately species rich, assessed as containing an average of 3-4 woody species at frequency of occasional or higher; some hedgerows contain an average of 5 or more species at sufficient frequency and are classified as species rich hedgerows.
- 3.8 Standing and flowing water within the Site comprises several ponds, the majority of which are constructed ornamental or recreation features, and flowing water including the River Culm and several streams and ditches across the Site.
- 3.9 Small areas of habitat habitats within the Site include tall ruderal vegetation, marshy grassland, swamp, and patches of scrub.
- 3.10 Several locations, particularly in the northern half of the Site, contain invasive non-native plant species as listed on Schedule 9 of the Wildlife and Countryside Act, 1981 (amended). The majority of the locations contain populations of Himalayan balsam *Impatiens glandulifera*, however there is one location with a small population of Japanese knotweed *Reynoutria japonica*, and one location with a rhododendron bush *Rhododendron ponticum*.
- 3.11 The following habitats are present within the Site, as shown on Figure 1 and described in the paragraphs further below:
- Woodland
 - Broadleaved woodland – semi-natural.
 - Broadleaved woodland – plantation.
 - Conifer woodland.
 - Mixed woodland – semi-natural.
 - Mixed woodland – plantation.
 - Scattered broadleaved trees.
 - Scrub – bramble and mixed.
 - Grassland
 - Improved grassland.
 - Poor semi-improved grassland.
 - Semi-improved neutral grassland.

- Marshy grassland.
- Tall ruderal.
- Cropland.
- Waterbodies
 - Swamp.
 - Standing water.
 - Running water.
- Hedgerows and lines of trees.
- Buildings, built up areas and bare ground.

Woodland

Broadleaved woodland – semi-natural

- 3.12 In the northern half of the Site, adjacent to the main road is a linear area of mature/semi-mature broadleaved woodland dominated by pedunculate oak, with ivy *Hedera helix* dominating the ground flora along with abundant bluebells. The woodland is classed as lowland mixed deciduous woodland HPI.
- 3.13 In the southern half of the Site there are eight patches of woodland. The majority are classed as lowland mixed deciduous woodland, comprising: two patches in the south of the Site with mature, semi-mature and immature trees of species including pedunculate oak and ash *Fraxinus excelsior* and ancient woodland indicator species including townhall clock *Adoxa moschatellina* noted in the ground flora of one of the woodlands, mature pedunculate oak dominated woodland in the south-west of the Site, pedunculate oak dominated woodland with ash on a slope in the far south-west, an area of semi-mature ash and oak dominated woodland with adjacent woodland containing a range of tree species including mature pedunculate oak around the margin and bluebells in the ground flora also located in the south-west of the Site, and a linear strip of woodland on a bank alongside the road towards the east of the Site. Other areas of semi-natural broadleaved woodland in the southern half of the Site include a small patch of mature and semi-mature ash dominated woodland adjacent to an area of buildings within the Allocation Area, south of Honiton road, and a small area of predominantly immature ash and sycamore *Acer pseudoplatanus* woodland adjacent to the River Culm with common nettles *Urtica dioica* and bramble *Rubus fruticosus* abundant in the ground flora,
- 3.14 In the south of the Site is a small patch of grey willow *Salix cinerea* dominated wet woodland, also a HPI.

Broadleaved woodland – plantation

- 3.15 In the northern half of the Site are five patches of semi-natural broadleaved plantation. At the north, next to the Site boundary, is a small area of mature plantation containing willow *Salix* spp. and poplar *Populus* sp. species, with some windthrow, broken stems and branches. Further south are two linear areas of plantation either side of the road, with earth banks at the edge of the woodlands. At the north-east of the Site is a patch of predominantly immature, aspen *Populus tremula* dominated plantation next to the road, and at the far north-east of the Site is an area of immature broadleaved plantation of mixed broadleaved species with two streams flowing through the woodland.
- 3.16 In the southern part of the Site there are four areas of semi-natural broadleaved plantation: between the main A373 road and the River Culm is an area of mixed age plantation dominated by mature Lombardy poplar *Populus nigra* with locally abundant sycamore, and poor ground flora containing abundant bramble, common nettles and ivy. In the south-west part of the Site is a small extension of planted immature trees adjoining mature woodland in an area of semi-natural habitat, and a patch of regular-planted immature broadleaved trees next to the road at the south, and at the south-west of the Site is a small triangular area of planted young broadleaved trees in the corner of a field.

Conifer woodland – plantation

- 3.17 There is one small area of conifer plantation at the south-west corner of the Site, adjoining an area of mixed woodland.

Mixed woodland – semi-natural

- 3.18 There are four areas of semi-natural mixed woodland within the Site.
- 3.19 In the south of the Site is a band of immature/semi-mature woodland linking two other, larger areas of woodland, with mixed broadleaved species and Scots pine *Pinus sylvestris*. At the south-west of the Site there are two areas of mixed woodland next to the horse paddocks, one is a small patch of mixed broadleaved and conifer trees, the other is a rectangular patch of open woodland containing mature, semi-mature and immature trees including pedunculate oak, ash, Douglas fir *Pseudotsuga menziesii* and Scots pine, with ancient woodland indicator species present in the ground flora. In the corner of the improved grassland field within the Allocation Area, north of the Honiton Road, is a roundish patch of mature/semi-mature woodland dominated by pedunculate oak with frequent Scots pine, and a clump of *Rhododendron ponticum*, a Schedule 9 listed plant species (Target Note 2) within the understorey.

Mixed woodland – plantation

- 3.20 There are three areas of plantation mixed woodland comprising a band of woodland round the edge of the two rectangular ponds in the north-east of the Site, a small patch next to the road at the north, and an area of predominantly immature woodland in the south of the Site with species including Scots pine, pedunculate oak and ash, with semi-mature ash along the woodland boundary and a ditch and earth bank on the western edge.

Scattered trees

- 3.21 There are occasional scattered, mature trees within the fields. All recorded species are pedunculate oak, however, a small number of trees were not able to be identified during the survey due to time/access constraints and have been recorded as 'broadleaf'. The guidelines in the Metric indicate a diameter at breast height of 90 cm to qualify as a Medium sized tree, and 150 cm to qualify as Large tree (Panks *et al*, 2021). One tree is classed as Large, the remaining trees are all classed as Medium.

Scrub**Bramble scrub**

- 3.22 Small patches of species poor bramble dominated scrub are occasional within the Site. They include: three patches along a field boundary at the north of the Site; a patch next to a stable in the middle part of the Site; a single patch extending from the edge of an area of woodland in the south; and several patches alongside the River Culm, adjacent to the abandoned glasshouses, and in the semi-natural mosaic habitats in south-western part of the Site.

Mixed scrub

- 3.23 There is a single, small area of mixed scrub in the corner of a field in the far south-west of the Site.

Grassland**Improved grassland**

- 3.24 Agriculturally improved grassland is abundant within the Allocation Area and wider Site. The grasslands are generally dominated by perennial rye-grass with few accompanying species, such as broadleaved dock *Rumex obtusifolius*. The improved grassland areas fall into the UKHab category of g4 Modified grassland.

Poor semi-improved grassland

- 3.25 There are a number of fields and arable margins across the Site containing less improved grassland, with lower cover of perennial rye-grass than in the improved grasslands, but still having low species diversity. These poor semi-improved grasslands are also classed as the UKHab category of g4 Modified grassland.
- 3.26 Fields containing free-roaming horses were not entered for survey but viewed from the boundaries. A conservative approach was taken to the classification of these fields, which, although they appeared to be improved grassland, had very short-grazed swards and were mapped as poor semi-improved grassland.

Semi-improved neutral grassland

- 3.27 There are five areas of semi-improved neutral grassland in the Site. These are largely concentrated in a cluster at the south-west, where there is an area of unmanaged rough grassland dominated by grass species along with several forb species including crosswort *Cruciata laevipes*, grassland habitat in mosaic with other semi-natural habitats, and two other nearby areas of semi-improved neutral grassland located on the steeper banks within the Allocation Area.
- 3.28 A field in the northern part of the Site contains damp grassland, with frequent clumps of tufted hair-grass *Deschampsia cespitosa*. Although species-poor, the habitat is considered to fit the semi-improved neutral grassland classification.
- 3.29 The semi-improved neutral grassland habitat is classed as g3c in the UKHab classification and Other neutral grassland in the Metric.

Marshy grassland

- 3.30 There is a single patch of marshy grassland dominated by soft rush *Juncus effusus* with Himalayan balsam occurring rarely, located in the corner of a field in the middle part of the Allocation Area.

Tall ruderal

- 3.31 Tall ruderal vegetation is limited within the Site. There is a narrow band of common nettle dominated vegetation with abundant Himalayan balsam at the edge of a field in the middle part of the Site. Two areas of mosaic habitat are present in the south-west of the Site with tall ruderal vegetation intermixed with rough grassland and scrub. One of the areas also contains patches of swamp, and the other area contains scattered old machinery. Elsewhere within the Site are a few small areas of common nettle dominated tall ruderal vegetation which have established through disturbance or enrichment.
- 3.32 Tall ruderal vegetation does not have a category in the Metric and is considered as part of the accompanying grassland habitat.

Cropland

- 3.33 Arable land is abundant across the Allocation Area and wider Site. Grass ley, with single species crop of Italian rye-grass *Lolium multiflorum* features strongly. Other fields contain maize stubble, or to a lesser extent, cereal crop stubble, and a collection of fields in the east have been left fallow and an assemblage of ephemeral/short perennial species have established. A few fields contain cereal crop of wheat and barley, or ploughed land, and there is a single field of oilseed rape to the south of the Honiton Road.

Waterbodies

Swamp

- 3.34 Within the area of semi-natural habitat at the south-west of the Site (south of the Allocation Area) are several small patches of species-poor common reed *Phragmites australis* dominated swamp. One area of swamp is mapped as a distinct area of habitat, the other areas are in mosaic with other habitats of rough grassland, tall ruderal and scrub. The swamp habitat is classified as Wetland in the Metric, although it was mostly dry at time of survey.

Standing water

- 3.35 There are several artificially-constructed ponds in the northern half of the Site. The ponds appear to be used for recreation and lack aquatic vegetation. At the north-east of the Site, development works were being undertaken at the time of survey creating a mosaic of bare ground, newly-constructed ponds, improved grassland and tall ruderal vegetation present.
- 3.36 There are four ponds in the south of the Site: two very small ponds located close to each other within the semi-natural mosaic habitat of tall ruderal/scrub/rough grassland vegetation. Both ponds contain abundant bulrush *Typha latifolia* and one of the ponds contains locally abundant flag iris *Iris pseudacorus*. A pond is present within the Allocation Area, in an area of broadleaved woodland with grey willow around the pond margin; and a small ornamental pond is present south of the main road set amongst a visitor area with goats and pigs.

Running water

- 3.37 There is one river within the Site, the River Culm, at the west of the Site, approximately 3-5 m wide, with moderate flow of water at time of survey. It has occasional patches of trees and bramble scrub along the banks, and, although there is a general lack of aquatic vegetation in the river, there are occasional patches of bulrush.
- 3.38 At the far north-west of the Site is a narrow tree-lined stream, with a range of woody species along the banks including abundant alder *Alnus glutinosa* and willow *Salix* sp. with ash, and at the east of the Site is a narrow stream approximately 0.75 m wide, containing shallow flowing water, with occasional aquatic vegetation. There are several other narrow ditches with flowing water across the northern half of the Site.
- 3.39 In the south of the Site is a narrow ditch with water flowing through much of the southern part of the Site, and a stream alongside a stretch of the Honiton Road.

Hedgerows

- 3.40 Native hedgerows (a habitat of principal importance), surround the majority of the fields within the Site. Many of the hedgerows contain tree standards along their length and are classed as 'Hedge with trees', the majority of the trees are pedunculate oak and many are mature. Most of the hedgerows have been flailed this year, creating box-shaped features approximately 1-2 m high and 1-2 m wide. A range of woody species are present within the hedgerows including hawthorn *Crataegus monogyna*, English elm *Ulmus procera*, blackthorn *Prunus spinosa*, pedunculate oak, hazel *Corylus avellana*, ash, willow species, holly *Ilex aquifolium*, and elder *Sambucus nigra*. At the east of the Site, beech *Fagus sylvatica* and pedunculate oak feature strongly in the woody composition.
- 3.41 The majority of hedgerows are moderately species-rich, containing approximately 3-4 woody species at occasional frequency or higher along their length, with very few hedgerows containing just one or two species. However, these moderately species rich hedges do not qualify as 'species-rich' in accordance with the Hedgerow Survey Handbook (Defra, 2007) and hence are included within the default species-poor category in the Phase 1 classification. Several hedgerows contain five or more woody species at sufficient frequency to qualify as 'species-rich hedgerows'. These hedgerows may also fulfil the criteria to be classed as 'Important' in accordance with the Hedgerow Regulations, 1997.

- 3.42 To a lesser extent there are outgrown hedgerows, and lines of trees within the Site. The lines of trees, sometimes occurring in combination with scrub species, vary in species-richness and age, and include lines of mature pedunculate oaks in the south, species-rich and alder dominated lines of trees along streams and ditches, mixed broadleaved species along part of the River Culm, and planted trees including Norway maple *Acer platanoides* and conifers. Pedunculate oak features regularly within the species composition. There is a wide double line of line of trees in the middle part of the Site which has been mapped as an area.
- 3.43 The majority of the hedgerows and lines of trees are situated on top of a low earth bank <1 m high, with many also having an adjacent narrow ditch.
- 3.44 A sub-section (33) of the hedgerows was assessed against the Biodiversity Metric 3.0 condition assessment criteria, to gain a high-level understanding of condition within the Site. Approximately half of these (14) were assessed as species rich hedgerows, containing at least five woody species at sufficient frequency along the length of the hedgerow section. All of the hedgerows assessed scored 'Good' condition, but included undesirable species (common nettles and cleavers *Galium aparine*) in the ground flora. Many of the hedgerows contain at least one woodland species in the ground flora listed in the Hedgerow Regulations, 1997, including: lords and ladies *Arum maculatum* (particularly frequent), common polypody *Polypodium vulgare*, soft shield-fern *Polystichum setiferum*, primrose *Primula vulgaris*, dog's mercury *Mercurialis perennis*, wild garlic *Allium ursinum*, and bluebell (a species listed on Schedule 8 of the Wildlife and Countryside Act, 1981 (as amended)).

Built up areas, buildings, and bare ground

- 3.45 Areas containing buildings are block-mapped as the Buildings category, and access tracks are mapped as hardstanding. Both are contained within the U1b Developed land; sealed surface category in the Metric.
- 3.46 Tarmac main roads visible on aerial photographs have been left unmapped. Other areas without access permission have also been left unmapped.
- 3.47 An area undergoing development works at the north of the Site contains an expanse of bare ground, and there are two other areas of bare ground towards the south of the Site; one within the Allocation Area.

Species

Bats

- 3.48 DBRC provided 19 records of bat within the search area. These included: common pipistrelle *Pipistrellus pipistrellus* (1 record), soprano pipistrelle *Pipistrellus pygmaeus* (1 record), brown long-eared bat *Plecotus auritus* (7 records), Daubenton's bat *Myotis daubentonii* (1 record), Barbastelle bat *Barbastella barbastellus* (2 records), lesser horseshoe bat *Rhinolophus hipposideros* (4 records), unidentified *Pipistrellus* sp. bats (1 record), and unidentified bats (2 records).
- 3.49 Six of these records are within the Allocation Area, all at the Fordmore Farm buildings in the south-eastern corner of the Site and include 3 records of brown long-eared bat, 1 record of common pipistrelle and two records of lesser horseshoe bat. No detail is provided for these records.
- 3.50 The records of Barbastelle bat are located near Kentisbeare, west of the Site. The record of Daubenton's bat is at the River Culm in the north-western part of the Site.
- 3.51 Survey work undertaken by Ethos Environmental (2019) recorded use of the site by foraging and commuting common pipistrelle Soprano pipistrelle, Nathusius' pipistrelle *Pipistrellus nathusii*, noctule bat (*Nyctalus noctula*), serotine bat (*Eptesicus serotinus*), daubenton's bat, leisler's bat *Nyctalus leisleri*, brown long-eared bat, whiskered/brandt's bat *Myotis mystacinus/brandti*, natterer's bat *Myotis nattereri*, lesser horseshoe bat, and greater horseshoe bat *Rhinolophus ferrumequinum*.

- 3.52 Ethos Environmental (2019) also radio tracked two noctule bats to roosts in trees beyond Allocation Area boundary (one 1 km north, and one 2.5 km north of the Allocation Area). No roosts were identified within the Allocation Area.
- 3.53 Roosting bats may use existing buildings, scattered trees, hedgerow standards and woodland within the Allocation Area and wider CGV Site. Bats are likely to use hedgerows and lines of trees to commute through the landscape and forage within open habitats.
- 3.54 All species of bat are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to: capture, injure or kill bats; deliberately disturb bats; and intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of a bat.

Badger

- 3.55 Two badger *Meles meles* setts were recorded during the habitat survey work in 2022 at TN 3 (Figure 1).
- 3.56 The DBRC provided three records of badger within the search area. However, none were within the Allocation Area, and all records are more than 10 years old.
- 3.57 Ethos Environmental Planning (2019) did not find any evidence of badger during walkover surveys of the Allocation Area in 2018 and 2019.
- 3.58 Badger are present within the Allocation Area, and are likely to move through the surrounding farmland to forage. Badger are mobile animals and groups will establish multiple setts near hedgerows and wooded areas.
- 3.59 Badger is protected by the Badgers Act of 1992, which makes it an offence to take, injure or kill a badger, or to interfere with a badger sett in any way.

Dormouse

- 3.60 DBRC did not provide any records of dormouse *Muscardinus avellanarius* within the search area. However, targeted survey work undertaken by Ethos Environmental Planning (2019) during 2017 recorded dormouse at 12 locations within the Allocation Area near to Honiton Road.
- 3.61 The network of hedgerows and woodland blocks throughout the Site and wider area provide suitable habitat for dormouse dispersal.
- 3.62 Dormouse and its places of rest/shelter are fully protected under EU and UK legislation, which (in summary) makes it an offence to: intentionally kill or injure a dormouse; damage or destroy a breeding site or resting place, or intentionally or recklessly damage, destroy or obstruct access to any place used by dormouse for shelter or protection; or deliberately disturb a dormouse.

Other Mammals

- 3.63 Records of other mammals provided by DBRC include:
- Otter *Lutra lutra*: 9 records associated with the River Culm immediately west of the Allocation Area, and 2 near the River Ken, immediately beyond the north-eastern part of the CGV Site.
 - Polecat *Mustela putorius*: 1 record at Plymtree, approximately 1 km south of the proposed Allocation Area.
 - Brown hare *Lepus europaeus*: 1 record at Kingsford Farm, immediately beyond the north-eastern part of the CGV Site.

- 3.64 Otter may move through the Allocation Area given its proximity to the river Culm. However, the value of the habitats present within the Allocation Area and wider CGV Site are limited, and otter are unlikely to use the Site on more than an occasional basis.
- 3.65 Otter is protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and under Schedules 5 & 6 of the Wildlife and Countryside Act 1981 (as amended). Brown hare and polecat are species of principal importance (SPI) under Section 41 of the 2006 NERC Act..

Birds

- 3.66 DBRC provided eight records of notable species of bird within the search area. No records are located within the Allocation Area or wider CGV Site.
- 3.67 The species included in the DBRC data are: sand martin *Riparia riparia*, swift *Apus apus*, little egret *Egretta garzetta*, barn owl *Tyto alba*, sedge warbler *Acrocephalus schoenobaenus*, mallard *Anas platyrhynchos*, house sparrow *Passer domesticus*, and little owl *Athene noctua*.
- 3.68 Ethos Environmental Planning (2019) recorded the following species during survey work in 2018: blackbird *Turdus merula*, linnets *Carduelis cannabina*, blue tit *Cyanistes caeruleus*, robin *erithacus rubecula*, great tit *Parus major*, wood pigeon *Columba palumbus*, buzzard *Buteo buteo*, swallow *Hirundo rustica*, house martin *Delichon urbicum*, chaffinch *Fringilla coelebs*, house sparrow, carrion crow *Corvus corone*, magpie *Pica pica* and jackdaw *Corvus monedula*.
- 3.69 The hedgerows and trees within the Allocation Area are likely to be used for nesting by a range of commonly occurring garden and farmland species of bird. Carrion crow *Corvus corone* nests and calling buzzard *buteo buteo* were recorded in areas of woodland, and Mallard *Anas platyrhynchos* noted in ponds during the habitat survey in 2022. Cereal cropland within the Site may also provide a valuable foraging resource for SPI farmland birds such as corn bunting *Emberiza calandra* and yellowhammer *Emberiza citronella*.
- 3.70 All nesting birds are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). Greater protection is afforded to species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

Reptiles and Amphibians

- 3.71 DBRC provided two records of great crested newt *Triturus cristatus* within the search area. These records are located at Upton Lakes, immediately adjacent to the southern boundary of the Allocation Area, and south of Upton Barns; approximately 850 m south of the Allocation Area.
- 3.72 Ethos Environmental Planning (2019) confirmed the presence of great crested newt in a pond within the Allocation Area at East Culme House (at approximate OSGR ST 03294 07167).
- 3.73 Great crested newt and its places of rest/shelter are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and under Schedules 5 & 6 of the Wildlife and Countryside Act 1981 (as amended). In summary, this makes it an offence to: intentionally kill or injure a great crested newt; damage or destroy a breeding site or resting place, intentionally or recklessly damage, destroy or obstruct access to any place used by a great crested newt for shelter or protection; or deliberately disturb a great crested newt.
- 3.74 DBRC hold no records of reptiles within the search area. However, common species of reptile (such as slow worm and common lizard) may occur in restricted areas of suitable habitat (such as mosaics of rough grassland and bare ground) within the wider CGV Site.
- 3.75 All reptiles are afforded protection from intentional killing or injury under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

Invasive non-native plant species

- 3.76 Three non-native invasive species of plant are present within the Site: Himalayan balsam *Impatiens glandulifera*, Japanese knotweed *Reynoutria japonica* and rhododendron *Rhododendron ponticum*. Himalayan balsam (Target Note 1, Figure 1) is present at a number of locations, with all but one location being in the northern half of the Site. A single small plant of Japanese knotweed is present near to the ponds in the north-west of the Site (Target Note 4), and a rhododendron bush is present in a patch of woodland in the middle part of the Site (Target Note 2).
- 3.77 DBRC also provided two records of Himalayan balsam, two records of rhododendron, and one record of Japanese knotweed within the search area.
- 3.78 These species are listed under Schedule 9 Part 2 of the Wildlife and Countryside Act 1981 (as amended), prohibiting the reckless or intentional spread of these plants in the wild.

4 Ecological Constraints and Opportunities

- 4.1 There are opportunities to enhance habitats within the Allocation Area and wider CGV Site through change of use and relaxation of current land management.
- 4.2 The Site is currently dominated by heavily managed agricultural use land, comprising arable land (crops, stubble, fallow, ploughed fields and grass/grass-clover leys), along with heavily improved, rye-grass *Lolium perenne* dominated grassland. There are a few fields of poor semi-improved grassland, but more semi-natural habitat is limited in extent and mostly concentrated at the south-west of the Site, where there are patches of habitat and habitat mosaics of semi-improved neutral grassland, swamp, tall ruderal vegetation and bramble scrub.
- 4.3 The majority of hedgerows are moderately species-rich (containing approximately 3-4 woody species), and some hedgerows contain just one or two species. Fewer than half of the hedgerows surveyed were found to be species rich and in good condition.
- 4.4 **Figure 2 in Appendix 1** presents broad opportunities for habitat enhancements, both within the Allocation Area and wider CGV Site.
- 4.5 The Site supports several protected and notable species, and consideration of these and the habitats that support them will be required during formation of the masterplan framework. The key considerations are set out below.

Bats

- 4.6 The Allocation Area contains several buildings, in addition to scattered mature trees and hedgerow standards. It should be assumed that bats roost within existing buildings and trees within the Allocation Area (given the wide range of species reported within the Site) and that appropriate mitigation and compensation for their loss will need to be built into final designs. New tree planting to provide enhanced foraging opportunities, and integration of bat roost boxes in new builds should be considered to enhance the Site for bats.
- 4.7 Bats also use hedgerows and woodland for commuting, and these 'corridors' should be kept dark. Final proposals should include considerate lighting plans to retain dark corridors for bats. Hedgerow removal should be minimised and will need to be compensated for through new planting to retain connectivity and satisfy the requirements of biodiversity net gain.

Badger

- 4.8 Badger setts have been recorded within the Allocation Area. Therefore, 'wildlife corridors' alongside hedgerows and woodland should be retained to allow continued dispersal of badger and other mammals, such as hedgehog and brown hare. Providing buffers from existing field boundaries will also reduce the risk of damaging or destroying an active sett.

Dormouse

- 4.9 Dormouse has been recorded within the Allocation Area, and the network of hedges and woodland throughout the CGV Site provide suitable habitat for this species. Loss of hedgerows and woodland should be avoided in the design, with suitable buffers provided from built development to reduce possible disturbance effects. Supplementary planting within existing hedgerows, relaxing hedgerow management, new hedgerow planting, and softening woodland edges with new tree and scrub planting will benefit this species.

Great Crested Newt

- 4.10 The Allocation Area is within a great crested newt consultation zone. These consultation zones were created in order to help Local Planning Authorities, developers, and consultants identify where planning applications may need to consider the potential impacts of a development on great crested newt populations. Great crested newt have been recorded in a pond within the Allocation Area. The

masterplan should demonstrate that the availability of suitable terrestrial habitat for great crested newt will not be significantly reduced, and will not adversely affect the local population. This will necessarily require retention of the ponds and surrounding vegetation, as well as wider woody habitats and dispersal corridors. Creation of additional ponds and hibernacula with access to a retained hedge network should be part of the design.

5 High-Level Consideration of Biodiversity Net Gain for the Allocation Area

The policy and legislation background

National biodiversity net gain policy

- 5.1 Existing Government policy for England on biodiversity net gain is set out in the National Planning Policy Framework. The following paragraphs apply:
- Paragraph 8: *“Achieving sustainable development... (so that opportunities can be taken to secure net gains across each of the different objectives)...”*
 - Paragraph 174: *“Planning policies and decisions should contribute to and enhance the natural and local environment by... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures...”*
 - Paragraph 179: *“To protect and enhance biodiversity and geodiversity, plans should... promote the conservation, restoration and re-creation 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.”*
 - Paragraph 180: *“When determining planning applications... 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...”*

The Environment Act 2021

- 5.2 The Environment Act includes the provision of mandatory biodiversity gain for developments in England; this will be mandated through an amendment to the Town and Country Planning Act 1990. The two-year transition period following Royal Assent (November 2021) means that mandatory biodiversity gain will become law in autumn 2023. This will require:
- The provision of a required percentage of biodiversity gain, currently set nationally to be at 10%.
 - The use of the national Defra Biodiversity Metric to calculate the biodiversity gain, currently Metric 3.1.
 - The provision of a biodiversity gain plan to demonstrate how biodiversity gain will be delivered on and or off-site; statutory instruments and regulations are in preparation by Defra and Natural England to provide templates for reporting.
 - Biodiversity gain will be secured for a fixed period, currently nationally set at 30 years.
 - Demonstration of how the biodiversity gain will be secured; conservation covenants will be used to deliver this which are in preparation by Defra and Natural England.
 - A national register of land used for biodiversity gain will be established; this will involve setting up a new biodiversity credits market, the approach for which is in preparation by Defra and Natural England.

- 5.3 The policy basis for net gain is already set out in the NPPF. During the transition period, we would expect local planning authorities to increasingly require the measures set out within the Environment Act as part of their development decision making process.

Local planning policy

- 5.4 Policy DM26 (Green Infrastructure in Major Development) of the Mid-Devon Local Plan (adopted 2020) requires that *“major development proposals must demonstrate that green infrastructure will be incorporated within the site as follows:*
- a) *Biodiversity mitigation, resulting in a net gain in biodiversity;*

b) Flood and water resource management;

c) Green corridors and public rights of way to link the site to the wider GI network, provide walking and cycling opportunities and avoid habitat fragmentation; and

d) New green infrastructure such as the creation of native woodland where possible.”

Methods

- 5.5 To demonstrate measurable biodiversity gain, the Defra Biodiversity Metric 3.1 calculation tool (Defra, 2022) has been used to provide an indicative calculation of the biodiversity value of the Allocation Area, both for the existing baseline conditions and for the post-development masterplan scenario.
- 5.6 The habitat data from the Phase 1 habitat survey (see Figure 1) were entered into the Natural England Biodiversity Metric 3.1 calculator. The areas of each habitat type present within the Allocation Area were calculated using QGIS software. A precautionary approach to condition assessment has been adopted in order to ensure that the current condition of the Allocation Area is not underestimated. Therefore, the condition of existing habitats has been assumed to be ‘good’ in all cases where a condition assessment is applicable.
- 5.7 The habitat categorisation and condition for area habitats are shown in Table 2. Linear based habitats (i.e., hedgerows, which are assessed separately in the Defra 3.1 Metric) have not been considered at this stage, and are assumed to be retained. It is assumed that the ponds and woodland within the Allocation Area will be retained post-development, and that all other area-based habitats within the will be lost.

Table 2. Habitat classification and condition assessment of the baseline area habitats within the Allocation Area.

Metric 3.1 habitat	Area (ha)	Habitat condition
Cropland – Cereal crops	99.00	N/A
Grassland – Modified grassland	45.50	Good
Heathland and shrub	0.23	Good
Ponds	0.22	Good
Lowland mixed deciduous woodland	2.38	Good
Sealed surface	9.0	N/A
Total area	156.3	

- 5.8 Information about the post-development habitats to be created at the Allocation Area was informed by the draft masterplan (presented in **Figure 3**). The broad layout presented on the draft masterplan was converted to habitat categories in the Biodiversity Metric 3.1. The proposed habitats were assigned a target condition of ‘moderate’ (where a condition is applicable) based on professional judgment. The ‘area-based’ habitats within the Allocation Area, and the proposed target condition, are set out in Table 3 below.

Table 3. Habitat classification and condition assessment of the proposed area-based habitats.

Metric 3.1 habitat	Area (ha)	Habitat condition
Residential sealed surface	45.7	N/A
Residential gardens	30	N/A
Commercial sealed surface	18	N/A
Grassland – Neutral grassland	50	Moderate
SUDS grassland	10	Moderate

Urban trees	10 ²	Moderate
Retained ponds	0.22	Good
Retained lowland mixed deciduous woodland	2.38	Good
Total area	156.3	

Assumptions and limitations

- 5.9 The biodiversity gain assessment is based on habitats only and it does not take account of any required species actions, such as those for legally protected species. An assessment of linear habitats has not been undertaken at this stage.
- 5.10 The assessment does not give credit (in terms of a score or biodiversity units) to any actions that are taken as part of the development that add particular features to the Allocation Area, such as the provision of bird nesting boxes, that enhance the potential of the site to support particular species. Such measures fall outside the scope of the metric.
- 5.11 The following assumptions were used for the proposed habitats:
- The residential area was split into 60% developed land; sealed surface and 40% vegetated gardens for residential areas and school sites. All commercial space is assumed to be sealed surface.
 - Areas of 'SUDS grassland' were split into 85% modified grassland (moderate condition) and 15% bioswale.
 - Approximately 300 medium sized urban trees provided within the Allocation Area.
 - All woodland and ponds within the Allocation Area will be retained.

Results

- 5.12 The biodiversity calculation using the Defra Metric 3.1 yields the following key results for area-based habitats:
- Baseline habitats score: 518.72 units.
 - Proposed score following development: 513.85 units.
 - Biodiversity gain for area-based Habitats: -4.87 units.
 - Difference (i.e. biodiversity gain or loss) for area-based habitats: 0.94 % net loss.
- 5.13 The calculations provided an overall net loss for area-based habitats within the Allocation Area post-development, which does not satisfy paragraph 174 of the NPPF and Policy DM26 of the Mid Devon Local Plan.
- 5.14 Suitable land is available within the wider CGV Site to provide off-site habitat creation and enhancement. The CGV Site (excluding land within the Allocation Area) includes approximately 280 ha of cropland and 325 ha of modified grassland which have the potential to offer biodiversity net gain. As an example, the enhancement of 15 ha of existing modified grassland to create neutral grassland of moderate condition, and replacement of 15 ha of cropland to provide neutral grassland of moderate condition will provide an overall gain of 55.88 units, and a 10.77 % net gain.

² Urban trees contribute to the total number of biodiversity units only. The area of this habitat is not deducted from the total area of other habitats and the area does not count towards the total site area. 10 ha equates to approximately 300 medium-sized trees.

6 References

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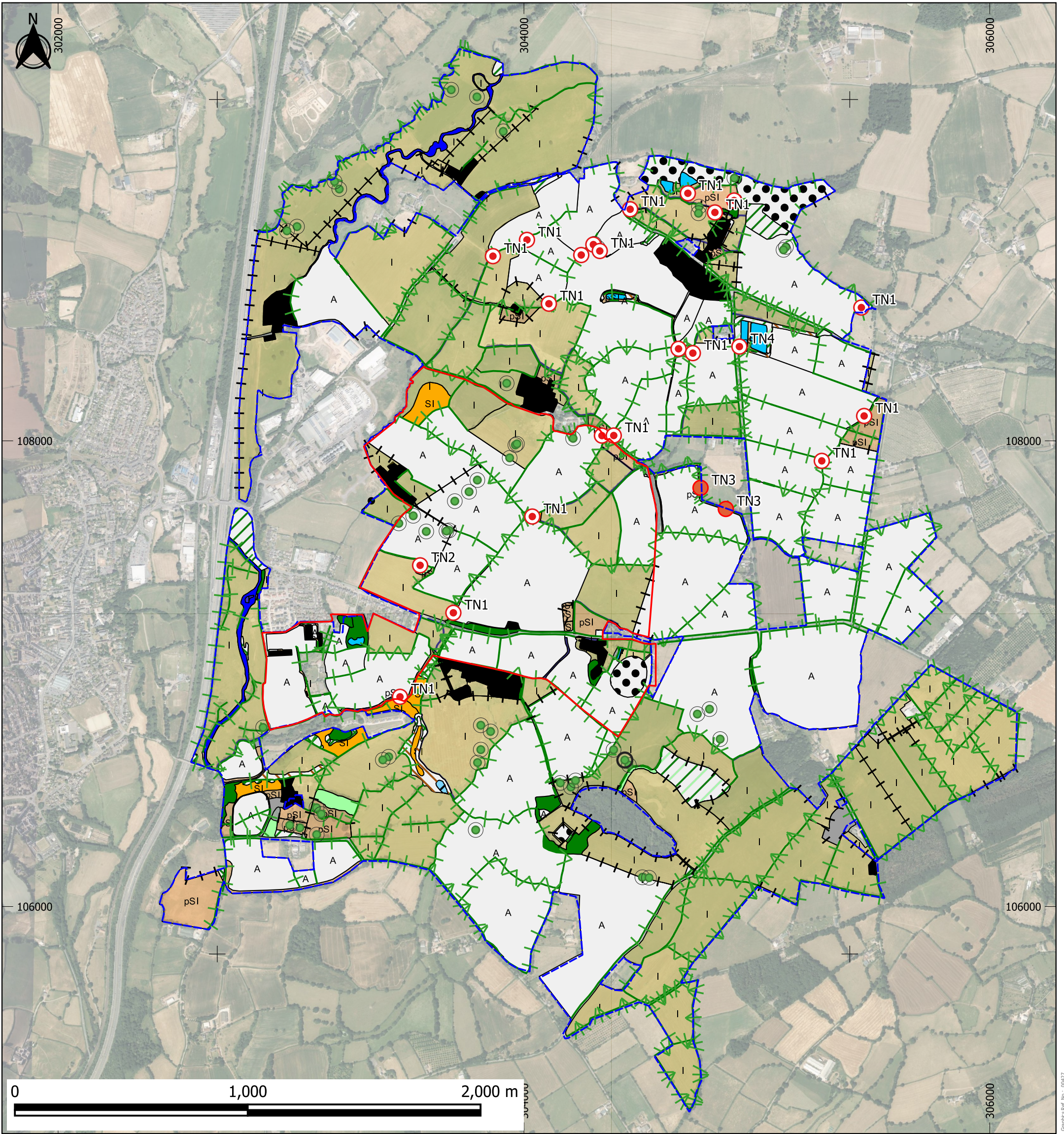
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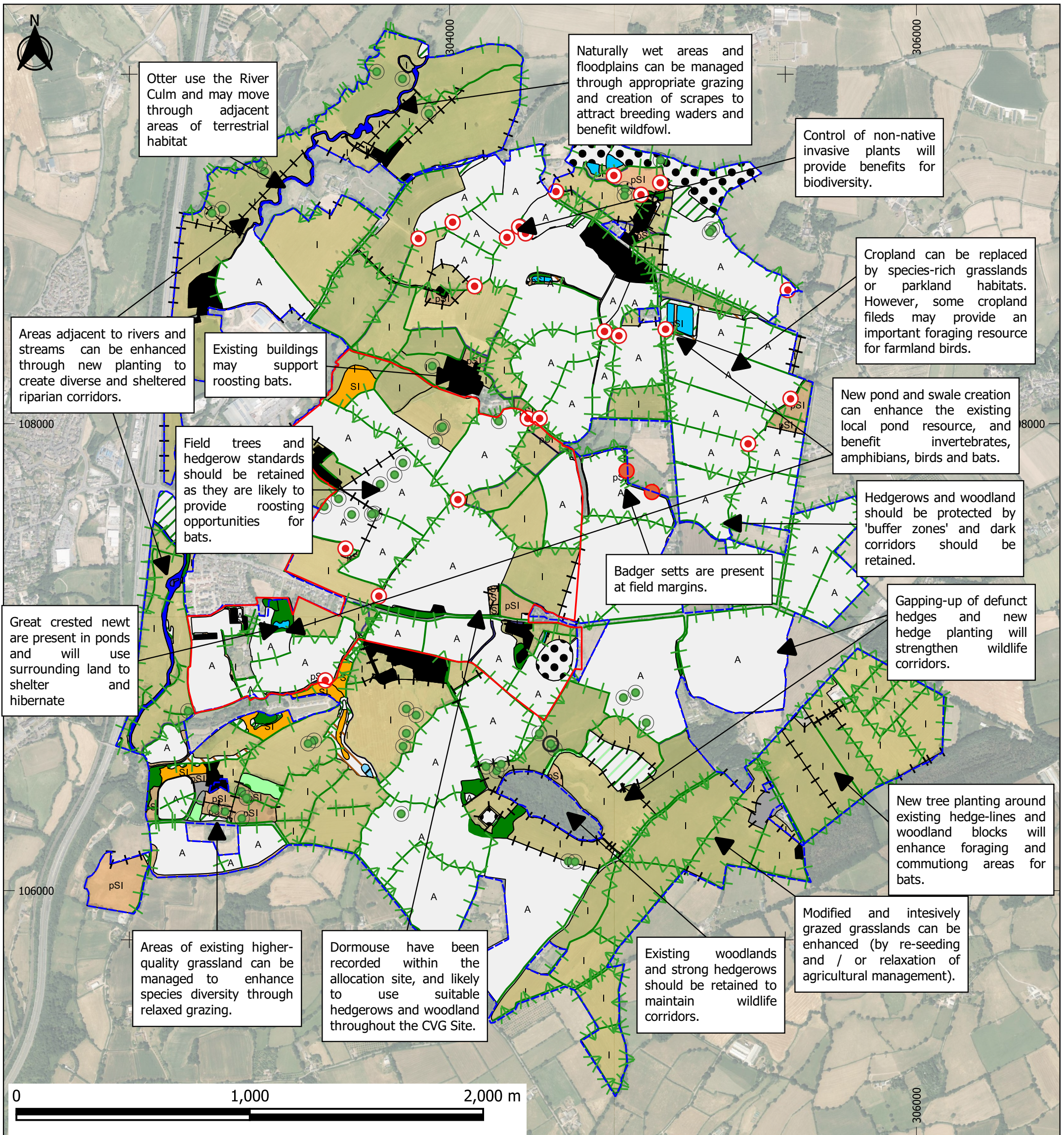
Appendix 1: Figures

(Overleaf)



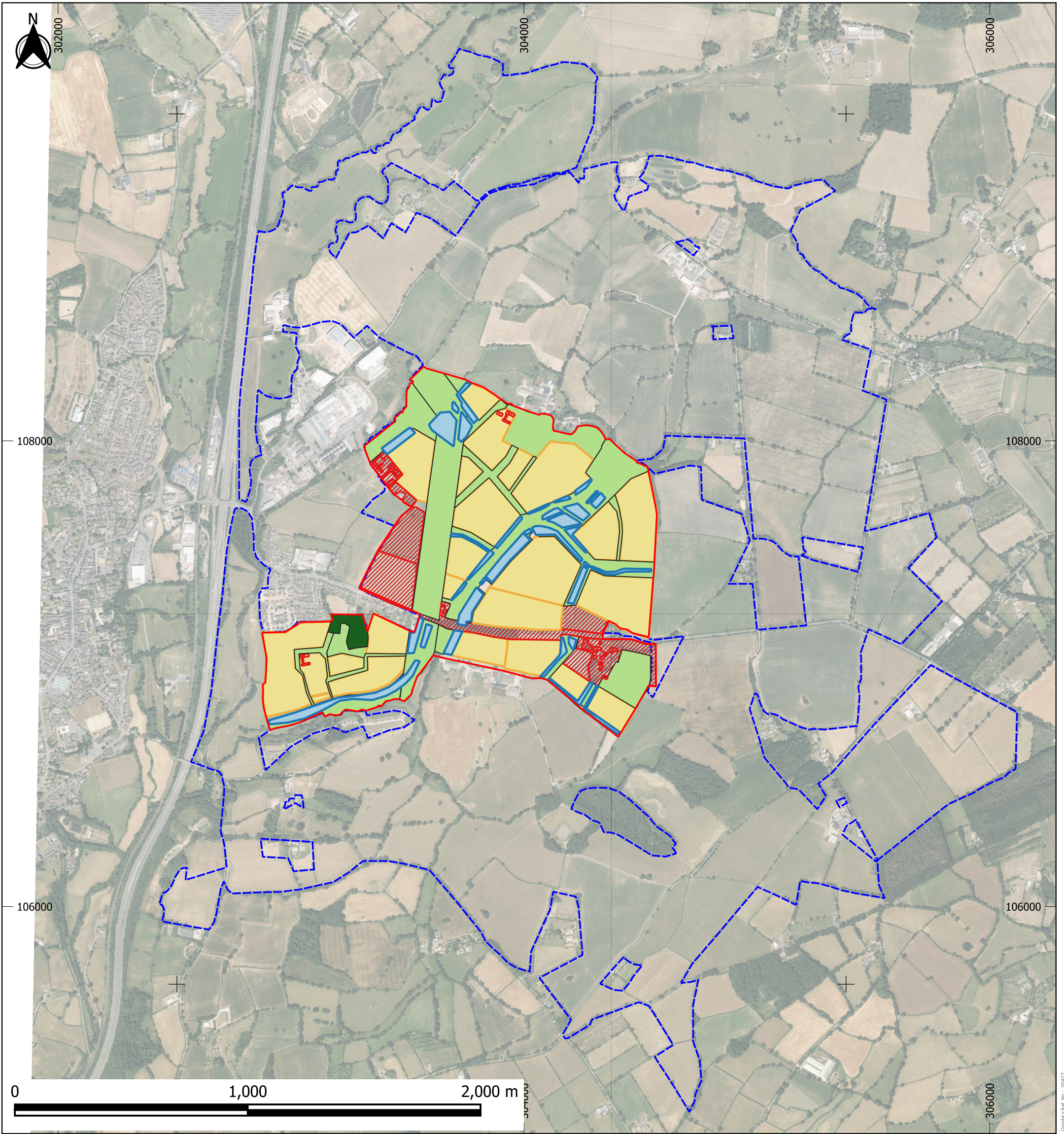
Legend

- | | |
|--|---|
| Allocation Area | Mixed woodland - semi-natural |
| CGV Site | Mixed woodland - plantation |
| Target Note | Scrub - dense/continuous |
| Existing large tree | SI Neutral grassland - semi-improved |
| Existing medium tree | Improved grassland |
| Intact hedge - native species-rich | Marsh/marshy grassland |
| Intact hedge - species-poor | pSI Poor semi-improved grassland |
| Defunct hedge - native species-rich | Other tall herb and fern - ruderal |
| Defunct hedge - species-poor | Swamp |
| Hedge with trees - native species-rich | Marginal and inundation - marginal vegetation |
| Hedge with trees - species-poor | Standing water |
| Fence | Running water |
| Earth bank | Cultivated/disturbed land - arable |
| Running water | Built up areas inc. hardstanding |
| Broadleaved woodland - semi-natural | Buildings |
| Broadleaved woodland - plantation | Bare ground |



Legend

- | | |
|--|---|
| Allocation Area | Mixed woodland - semi-natural |
| CGV Site | Mixed woodland - plantation |
| Invasive plants | Scrub - dense/continuous |
| Existing large tree | Neutral grassland - semi-improved |
| Existing medium tree | Improved grassland |
| Intact hedge - native species-rich | Marsh/marshy grassland |
| Intact hedge - species-poor | Poor semi-improved grassland |
| Defunct hedge - native species-rich | Other tall herb and fern - ruderal |
| Defunct hedge - species-poor | Swamp |
| Hedge with trees - native species-rich | Marginal and inundation - marginal vegetation |
| Hedge with trees - species-poor | Standing water |
| Fence | Running water |
| Earth bank | Cultivated/disturbed land - arable |
| Running water | Built up areas inc. hardstanding |
| Broadleaved woodland - semi-natural | Buildings |
| Broadleaved woodland - plantation | Bare ground |



Legend

- Allocation Area
- CGV Site

Indicative Allocation Layout

- Residential
- Sealed Surface
- Grassland
- SUDS
- Retained

Appendix 2: Summaries of Relevant Policy, Legislation and Other Instruments

This section briefly summarises the legislation, policy and related issues that are relevant to the main text of the report. The following text does not constitute legal or planning advice.

National Planning Policy Framework (England)

The Government issued the National Planning Policy Framework (NPPF) in July 2021. Text excerpts from the NPPF are shown where they may be relevant to planning applications and biodiversity including protected sites, habitats and species.

The Government sets out the three objectives for sustainable development (economy, social and environmental) at paragraphs 8-10 to be delivered through the plan preparation and implementation level and 'are not criteria against which every decision can or should be judged' (paragraph 9). The planning system's environmental objective is 'to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity...' (paragraph 8c).

In conserving and enhancing the natural environment, the NPPF (Paragraph 174) states that 'planning policies and decisions should contribute to and enhance the natural and local environment' by:

- Protecting and enhancing...sites of biodiversity value... '(in a manner commensurate with their statutory status or identified quality in the development plan)'.
- Recognising the wider benefits from natural capital and ecosystem services including trees and woodland.
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
- Preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability.

In respect of protected sites, at paragraph 175, the NPPF requires local planning authorities to distinguish, at the plan level, '...between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value...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.' A footnote to paragraph 175 refers to the preferred use of agricultural land of poorer quality if significant development of agricultural land is to take place.

Paragraph 179 refers to how plans should aim to protect and enhance biodiversity. Plans should: '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 for biodiversity [a footnote refers to ODPM Circular 06/2005 for further guidance in respect of statutory obligations for biodiversity in the planning system], wildlife corridors and stepping stones that connect them and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation;' and to 'promote the conservation, restoration and re-creation 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.'

Paragraph 180 advises that, when determining planning applications, '...local planning authorities should apply the following principles:

- 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;
- 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;

- 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 and a suitable compensation strategy exists; and
- 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.'

In paragraph 181, the following should be given the same protection as habitats sites:

- potential Special Protection Areas and possible Special Areas of Conservation;
- listed or proposed Ramsar sites; and
- 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.'

In paragraph 182 the NPPF refers back to sustainable development in relation to appropriate assessment and states: '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'.

In paragraph 183, the NPPF refers to planning policies and decisions taking account of ground conditions and risks arising from land instability and contamination at sites. In relation to risks associated with land remediation account is to be taken of 'potential impacts on the natural environment' that arise from land remediation.

In paragraph 185 the NPPF states that planning policies and decisions should ensure that development is appropriate to the location and take into account likely effects (including cumulative) on the natural environment and, in doing so, they 'should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation' (paragraph 185c).

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

Paragraph 98 of Government Circular 06/2005 advises that "the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult Natural England before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species' protection provisions affecting the site concerned..."

Paragraph 99 of Government Circular 06/2005³ advises 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 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".

Standing Advice (GOV.UK - England only)

The GOV.UK website provides information regarding protected species and sites in relation to development proposals: 'Local planning authorities should take advice from Natural England or the Environment Agency

³ ODPM Circular 06/2005. *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impacts within the Planning System* (2005). HMSO Norwich.

about planning applications for developments that may affect protected species.' GOV.UK advises that 'some species have standing advice which you can use to help with planning decisions. For others you should contact Natural England or the Environment Agency for an individual response.'

The standing advice (originally from Natural England and now held and updated on GOV.UK⁴) provides advice to planners on deciding if there is a 'reasonable likelihood' of protected species being present. It also provides advice on survey and mitigation requirements.

When determining an application for development that is covered by standing advice, in accordance with guidance in Government Circular 06/2005, Local planning authorities are required to take the standing advice into account. In paragraph 82 of the aforementioned Circular, it is stated that: 'The standing advice will be a material consideration in the determination of the planning application in the same way as any advice received from a statutory consultee...it is up to the planning authority to decide the weight to be attached to the standing advice, in the same way as it would decide the weight to be attached to a response from a statutory consultee.'

The Environment Act 2021

The Environment Act includes the provision of mandatory biodiversity gain for developments in England; this will be mandated through an amendment to the Town and Country Planning Act 1990. The two-year transition period following Royal Assent (November 2021) means that mandatory biodiversity gain will become law in autumn 2023. This will require:

- The provision of a required percentage of biodiversity gain, currently set nationally to be at 10%
- The use of the national Defra Biodiversity Metric to calculate the biodiversity gain, currently Metric 3.1
- The provision of a biodiversity gain plan to demonstrate how biodiversity gain will be delivered on and or off-site; statutory instruments and regulations are in preparation by Defra and Natural England to provide templates for reporting
- Biodiversity gain will be secured for a fixed period, currently nationally set at 30 years
- Demonstration of how the biodiversity gain will be secured; conservation covenants will be used to deliver this which are in preparation by Defra and Natural England
- A national register of land used for biodiversity gain will be established; this will involve setting up a new biodiversity credits market, the approach for which is in preparation by Defra and Natural England

NB. The policy basis for net gain is already set out in the NPPF. During the transition period, we would expect local planning authorities to increasingly require the measures set out within the Environment Act as part of their development decision making process.

Natural Environment and Rural Communities (NERC) Act 2006 – Habitats and species of principal importance (England)

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act require the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England as required by the Act. In accordance with the Act the Secretary of State keeps this list under review and will publish a revised list if necessary, in consultation with Natural England.

The S41 list is used to guide decision-makers such as public bodies, including local authorities and utilities companies, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions, including development control and planning. This is commonly referred to as the 'Biodiversity Duty.'

Guidance for public authorities on implementing the Biodiversity Duty⁵ has been published by Defra. One of the key messages in this document is that 'conserving biodiversity includes restoring and enhancing species

⁴ <https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications#standing-advice-for-protected-species>

⁵ Defra, 2007. *Guidance for Public Authorities on Implementing The Biodiversity Duty.* (<http://www.defra.gov.uk/publications/files/pb12585-pa-guid-english-070516.pdf>)

populations and habitats, as well as protecting them.’ In England the administration of the planning system and licensing schemes are highlighted as having a ‘profound influence on biodiversity conservation.’ Local authorities are required to take measures to “promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species. The guidance states that ‘the duty aims to raise the profile and visibility of biodiversity, clarify existing commitments with regard to biodiversity, and to make it a natural and integral part of policy and decision making.’

In 2007, the UK Biodiversity Action Plan (BAP) Partnership published an updated list of priority UK species and habitats covering terrestrial, freshwater and marine biodiversity to focus conservation action for rarer species and habitats in the UK. The UK Post-2010 Biodiversity Framework⁶, which covers the period from 2011 to 2020, now succeeds the UK BAP. The UK priority list contained 1150 species and 65 habitats requiring special protection and has been used as a reference to draw up the lists of species and habitats of principal importance in England.

In England, there are 56 habitats of principal importance and 943 species of principal importance on the S41 list. These are all the habitats and species found in England that were identified as requiring action in the UK BAP and which continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework.

European protected species (Animals)

The Conservation of Habitats and Species Regulations 2017 (as amended) consolidates various amendments that have been made to the original (1994) Regulations which transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.

“European protected species” (EPS) of animal are those which are shown on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). They are subject to the provisions of Regulation 43 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:

- a. Intentionally or deliberately capture, injure or kill any wild animal included amongst these species
- b. Possess or control any live or dead specimens or any part of, or anything derived from a these species
- c. deliberately disturb wild animals of any such species
- d. deliberately take or destroy the eggs of such an animal, or
- e. intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place

For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—

- a. to impair their ability—
 - i. to survive, to breed or reproduce, or to rear or nurture their young, or
 - ii. in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- b. to affect significantly the local distribution or abundance of the species to which they belong.

Although the law provides strict protection to these species, it also allows this protection to be set aside (derogated) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works and by Natural Resources Wales in Wales. In accordance with the requirements of the Regulations (2017, as amended), a licence can only be issued where the following requirements are satisfied:

- a. The proposal is necessary ‘to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment’

⁶ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group). 2012. *UK Post-2010 Biodiversity Framework*. July 2012. (<http://jncc.defra.gov.uk/page-6189>)

- b. 'There is no satisfactory alternative'
- c. The proposals 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.'

Definition of breeding sites and resting places

Guidance for all European Protected Species of animal, including bats and great crested newt, regarding the definition of breeding and of breeding and resting places is provided by The European Council (EC) which has prepared specific guidance in respect of the interpretation of various Articles of the EC Habitats Directive.⁷ Section II.3.4.b) provides definitions and examples of both breeding and resting places at paragraphs 57 and 59 respectively. This guidance states that 'The provision in Article 12(1)(d) [of the EC Habitats Directive] should therefore be understood as aiming to safeguard the ecological functionality of breeding sites and resting places.' Further the guidance states: 'It thus follows from Article 12(1)(d) that such breeding sites and resting places also need to be protected when they are not being used, but where there is a reasonably high probability that the species concerned will return to these sites and places. If for example a certain cave is used every year by a number of bats for hibernation (because the species has the habit of returning to the same winter roost every year), the functionality of this cave as a hibernating site should be protected in summer as well so that the bats can re-use it in winter. On the other hand, if a certain cave is used only occasionally for breeding or resting purposes, it is very likely that the site does not qualify as a breeding site or resting place.'

Birds

All nesting birds are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to disturb them whilst they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

The Conservation of Habitats and Species Regulations 2017 (as amended) places duties on competent authorities (including Local Authorities and National Park Authorities) in relation to wild bird habitat. These provisions relate back to Articles 1, 2 and 3 of the EC Directive on the conservation of wild birds (2009/147/EC, 'Birds Directive'⁸) (Regulation 10 (3)) requires that the objective is the 'preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat, as appropriate, having regard to the requirements of Article 2 of the new Wild Birds Directive...' Regulation 10 (7) states: 'In considering which measures may be appropriate for the purpose of security or contributing to the objective in [Regulation 10 (3)] Paragraph 3, appropriate account must be taken of economic and recreational requirements'.

In relation to the duties placed on competent authorities under the 2017 Regulations, Regulation 10 (8) states: 'So far as lies within their powers, a competent authority in exercising any function [including in relation to town and country planning] in or in relation to the United Kingdom must use all reasonable endeavours to avoid any pollution or deterioration of habitats of wild birds (except habitats beyond the outer limits of the area to which the new Wild Birds Directive applies).'

Badger

Badger is protected under the Protection of Badgers Act 1992. It is not permitted to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as "a structure or place, which displays signs indicating current use by a badger".

ODPM Circular 06/2005⁹ provides further guidance on statutory obligations towards badger within the planning system. Of particular note is paragraph 124, which states that "The likelihood of disturbing a badger sett, or adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions."

⁷ Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC. (February 2007), EC.

⁸ 2009/147/EC Birds Directive (30 November 2009. European Parliament and the Council of the European Union.

⁹ ODPM Circular 06/2005. *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impacts within the Planning System* (2005). HMSO Norwich.

Natural England provides Standing Advice¹⁰, which is capable of being a material consideration in planning decisions. Natural England recommends mitigation to avoid impacts on badger setts, which includes maintaining or creating new foraging areas and maintaining or creating access (commuting routes) between setts and foraging/watering areas.

Reptiles

All native reptile species receive legal protection in Great Britain under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Viviparous lizard, slow-worm, grass snake and adder are protected against killing, injuring and unlicensed trade only. Sand lizard and smooth snake receive additional protection as “European Protected species” under the provisions of the Conservation of Habitats and Species Regulations 2017 (as amended) and are fully protected under the Wildlife and Countryside Act 1981 (as amended).

All six native species of reptile are included as ‘species of principal importance’ for the purpose of conserving biodiversity under Section 41 (England) of the NERC Act 2006 and Section 7 of the Environment (Wales) Act 2016.

Current Natural England Guidelines for Developers¹¹ states that ‘where it is predictable that reptiles are likely to be killed or injured by activities such as site clearance, this could legally constitute intentional killing or injuring.’ Further the guidance states: ‘Normally prohibited activities may not be illegal if ‘the act was the incidental result of a lawful operation and could not reasonably have been avoided’. Natural England ‘would expect reasonable avoidance to include measures such as altering development layouts to avoid key areas, as well as capture and exclusion of reptiles.’

The Natural England Guidelines for Developers state that ‘planning must incorporate two aims where reptiles are present:

- To protect reptiles from any harm that might arise during development work;
- To ensure that sufficient quality, quantity and connectivity of habitat is provided to accommodate the reptile population, either on-site or at an alternative site, with no net loss of local reptile conservation status.’

Water vole

Water vole is protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to kill, injure or take any water vole, damage, destroy or obstruct access to any place of shelter or protection that the animals are using, or disturb voles while they are using such a place. Water vole is listed as a Species of Principal Importance under the provisions of the NERC Act 2006 in England and under the provisions of the Environment (Wales) Act 2016.

Hedgerows

Article 10 of the Habitats Directive¹² requires that ‘Member States shall endeavour...to encourage the management of features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure...or their function as stepping stones...are essential for the migration, dispersal and genetic exchange of wild species’. Examples given in the Directive include traditional field boundary systems (such as hedgerows).

The aim of the Hedgerow Regulations 1997¹³, according to guidance produced by the Department of the Environment¹⁴, is “to protect important hedgerows in the countryside by controlling their removal through a system of notification. In summary, the guidance states that the system is concerned with the removal of hedgerows, either in whole or in part, and covers any act which results in the destruction of a hedgerow. The procedure in the Regulations is triggered only when land managers or utility operators want to remove a hedgerow. The system is in favour of protecting and retaining ‘important’ hedgerows.

¹⁰ <http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/specieslinks.aspx>

¹¹ English Nature, 2004. *Reptiles: guidelines for developers*. English Nature, Peterborough. <https://webarchive.nationalarchives.gov.uk/20150303064706/http://publications.naturalengland.org.uk/publication/76006>

¹² Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

¹³ Statutory Instrument 1997 No. 1160 – The Hedgerow Regulations 1997. HMSO: London

¹⁴ The Hedgerow Regulations 1997: a guide to the law and good practice, HMSO: London

The Hedgerow Regulations set out criteria that must be used by the local planning authority in determining which hedgerows are 'important'. The criteria relate to the value of hedgerows from an archaeological, historical, wildlife and landscape perspective.

Invasive non-native species

An invasive non-native species is any non-native animal or plant that has the ability to spread causing damage to the environment.

Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to release, or to allow to escape into the wild, any animal which is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state or is listed under Schedule 9 of the Act.

It is an offence to plant or otherwise cause to grow in the wild invasive non-native plants listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

It is an offence to plant or cause the spread of Japanese knotweed in the wild under the Wildlife and Countryside Act 1981 (as amended). All waste containing Japanese knotweed comes under the control of Part II of the Environmental Protection Act 1990.

The Environment Agency has produced "The Knotweed Code of Practice", which provides guidance on how to manage Japanese knotweed legally on development sites¹⁵. This document provides ecological information on Japanese knotweed, details of how to prevent its spread, how to manage Japanese knotweed and information on disposal. Natural Resources Wales refers to Environment Agency guidance in respect of landowners responsibilities in Wales and to the Wildlife and Countryside Act 1981 (as amended).

¹⁵ *Managing Japanese knotweed on development sites: the knotweed code of practice* (2006). Environment Agency. <https://www.gov.uk/government/publications/japanese-knotweed-managing-on-development-sites>. See also 2013 Code of Practice update.