Land at Bryher Cottage, Trethosa, Cornwall

Preliminary Ecological Appraisal

Ref:
BE1000

Date:
10th October 2023

Prepared by:
Dr Janine Bright MCIEEM CEnv

For:
Alun Lund

Bright Environment Ltd
Meadow Cott, Chute Lane, Gorran Haven, Cornwall, PL26 6NU
T:07974204078 E:janine@brightenvironment.net W:www.brightenvironment.net

CONTENTS

Bright Environment Ltd
Meadow Cott, Chute Lane, Gorran Haven, Cornwall, PL26 6NU
T:07974204078 E:janine@brightenvironment.net W:www.brightenvironment.net

1. INTRODUCTION

Bright Environment Ltd was commissioned by Alan Lund in September 2023 to undertake a preliminary ecological appraisal of land at Bryher Cottage, Trethosa, Stepaside near St Stephens, Cornwall, PL26 7QH (OS Grid Ref: SW9413254585). The appraisal is to inform a planning application to construct a residential dwelling on the land.

The site is a small garden associated with Bryher Cottage amounting to approx. 0.02Ha. The location of the site is shown on Figure 1 and the survey area defined on Figure 2.

2. AIM

The aim of the report is to undertake a Preliminary Ecological Appraisal of the proposed development. This involves the following:

- Describe and evaluate the ecological baseline of the site.
- Identify ecological impacts of the development.
- Design mitigation measures for adverse impacts and identify any requirements for further survey.
- Identify any residual impacts following mitigation.
- Identify opportunities for enhancement of biodiversity.

3. METHODOLOGY

The assessment has been carried in accordance with:

- the 'Guidelines for Preliminary Ecological Appraisal' and 'Guidelines for Ecological Impact Assessment in the UK and Ireland' produced by the Institute of Ecology and Environmental Management (CIEEM 2018 & 2017). However due to the small extent of the development and its minimal ecological impacts a reduced desk study has been undertaken (see section 3.1).
- BS42020-2013 Biodiversity – Code of Practice for Planning and Development (British Standard, 2013)
- Cornwall Planning for Biodiversity Guide (Cornwall Council, 2018)

The assessment is informed by UK and EU legislation, National and local planning policies.

The ecological baseline of the site was assessed through a desk study and site survey.

3.1 Desk study

A desk study to identify whether the site lies within a statutory designated site of nature conservation importance was undertaken. This involved the use of Magic Map (www.magic.gov.uk) and Cornwall Council Interactive Map (map.cornwall.gov.uk). Ecological records from the biological records centre were not obtained as the site is a small residential garden.

3.2 Site survey

A walk-over survey of the site was carried out on 28th September 2023 to:

- identify the habitats present within the site according to the Phase 1 Habitat Survey methodology (JNCC, 1993) and compile a list of dominant and rare vascular plants. A full species lists was not compiled.
- undertake a preliminary faunal survey / habitat assessment to identify the presence or the potential of the site to support legally protected species or species of conservation importance.
- assess the ecological 'importance' of any hedges using the criteria in the Hedgerows Regulations 1997 (if applicable).

The weather during the survey was overcast, dry and calm (16C). The survey area is defined on Figure 2.

3.3 Baseline evaluation

Evaluation of the ecological baseline for the site was undertaken following the framework provided by CIEEM (2018). The biodiversity value of ecological features is assessed according to various characteristics; including non-statutory designations, rarity, threat, diversity (species-richness), connectivity and size of populations. Each ecological feature is assigned a biodiversity value at the following geographical scales:

- International or European
- National (England)
- Regional (South West)
- County
- Local

3.4 Identification of impacts and mitigation

Assessment of impacts was undertaken following the framework provided by CIEEM (2018). The impacts magnitude, duration, reversibility, likelihood and nature (positive or negative) are described. Consideration to cumulative impacts is also given. Impacts are then assessed as being significant or not significant upon each valued ecological feature.

Mitigation measures to avoid or reduce impacts are included. To ensure proposed mitigation measures are adopted; Bright Environment Ltd consulted with the developer to agree achievable measures. Recommendations follow the mitigation hierarchy approach (CIEEM, 2018 and British Standard, 2013). The mitigation hierarchy seeks to avoid impacts, then to mitigate unavoidable impacts, and as a last resort, to compensate for residual impacts. Where possible mitigation has been designed with the aim of the development resulting in net gain (as specified in Cornwall Council, 2018). An assessment of residual impacts and whether net gain has been achieved is given at the end of this report.

3.5 Personnel

Author: This report was prepared by Dr Janine Bright. Dr Bright has been a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) since 2001 and has been a Chartered Environmentalist (CEnv) since 2005. Dr Bright has a BSc in Environmental Science and a PhD in Ecology. She has worked as an ecological consultant since 1999.

Surveyors: Dr Bright. Protected species licenses: dormice (2016-21698-CLS-CLS) and bats (2020-49235-CLS-CLS survey level 2).

3.6 Limitations

The survey was carried out in September, which is within the optimum season for carrying out this type of survey. Access within the site was good and there are no limitations to report.

As ecological features can change over time it is recommended that this report is valid until November 2024.

4. ECOLOGICAL BASELINE

4.1 Designated sites of nature conservation value

The site is not a designated site of nature conservation importance. There are designated sites within 1km of the site as follows:

- St Austell Clay Pits Special Area of Conservation (SAC) is located 640m to the north east. SACs provide protected areas for species and habitat of European nature conservation

importance. They are protected under The Conservation of Habitats and Species Regulations 2010 (HM Government, 2010) and consent from Natural England is a statutory requirement if an action (within or outside a SAC boundary) is likely to have a significant effect on the features for which a SAC was designated. The site near Trethosa is designated for supporting international important populations of Western Rustwort. This bryophyte is associated with china clay waste. The SAC is also designated as a Site of Special Scientific Interest (SSSI). SSSIs are designated under s.28 of the Wildlife and Countryside Act 1981 to safeguard and enhance the characteristic plants, animals and physical features of our natural heritage (HM Government, 1981). They are also protected under the Countryside and Rights of Way Act 2000 (HM Government, 2000). As part of the planning process, Natural England is consulted over any proposed developments that may impact upon a SSSI. Natural England specify a list of operations likely to damage (OLDS) the special interest of a SSSI. Under the Acts, Natural England has to give written consent before any of these operations, or any other activities which may affect the SSSI, can be carried out.

- Tregargus Quarries SSSI is located 900m to the southeast of the site and is designated for its geological interest.

The location of the sites is shown on Figure 1 together with the above designated sites. There are no Tree Preservation Orders (TPOs) within the site.

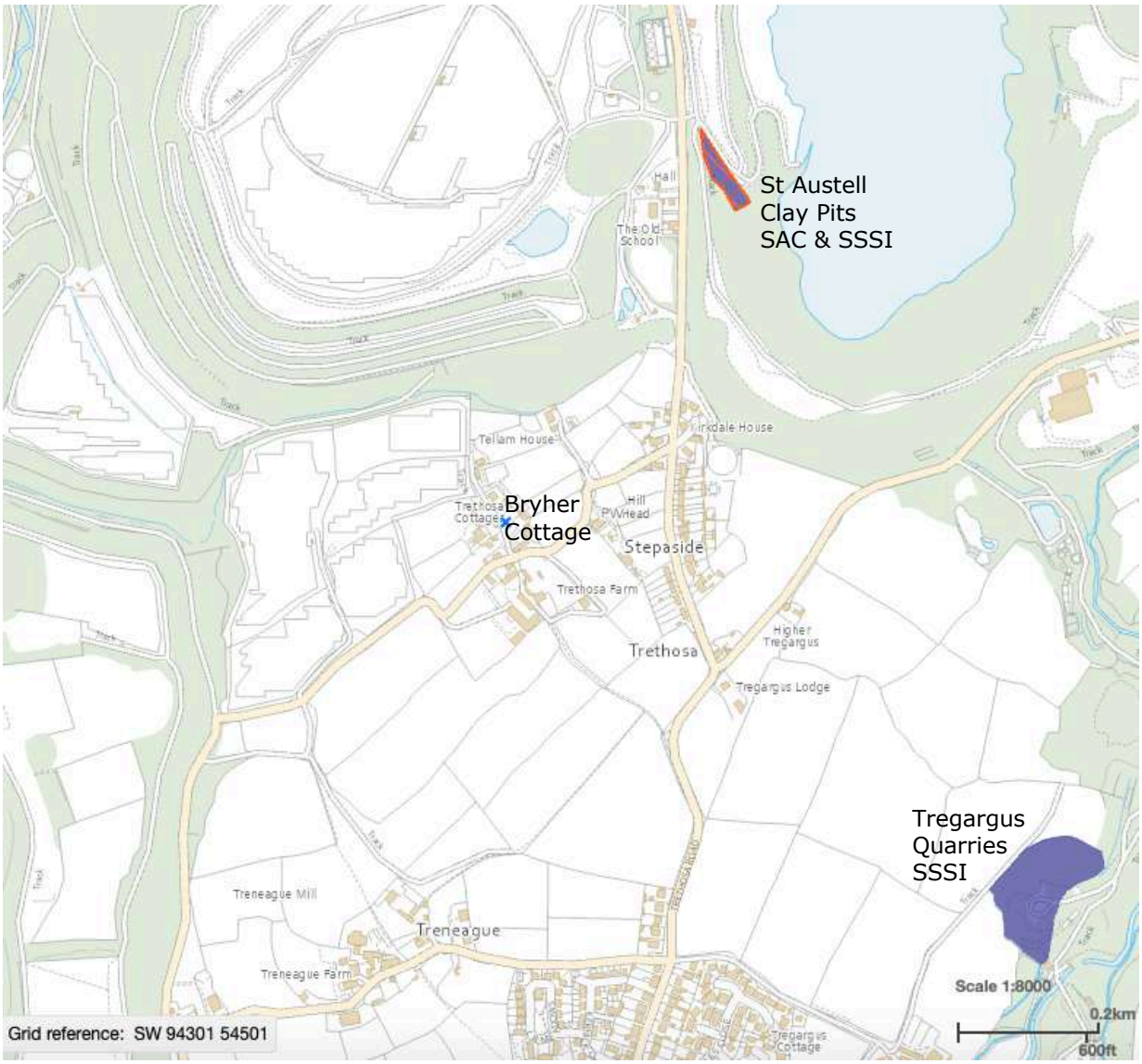
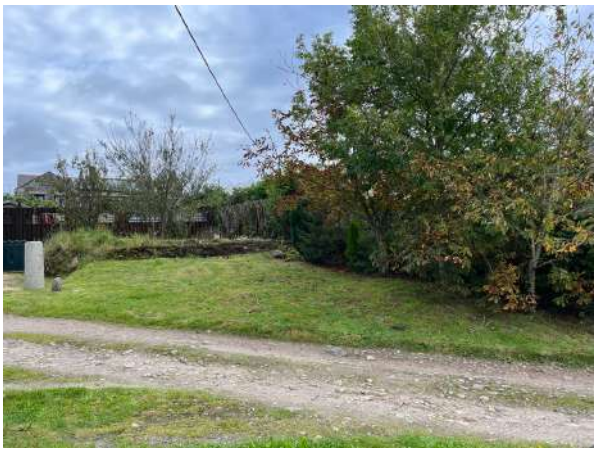


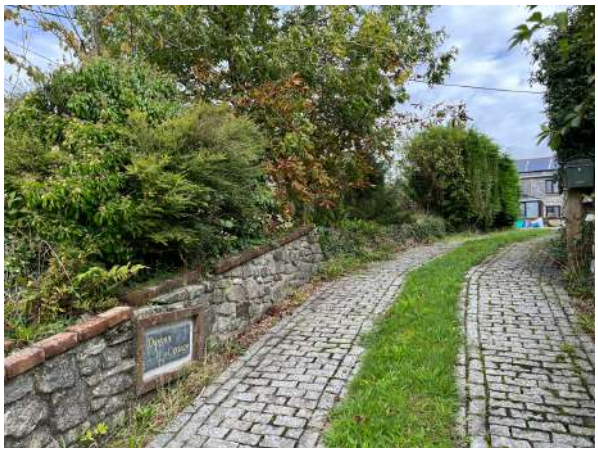
Figure 1. Designated sites of nature conservation importance within 1 km of the site.

4.2 Habitat Description and Evaluation

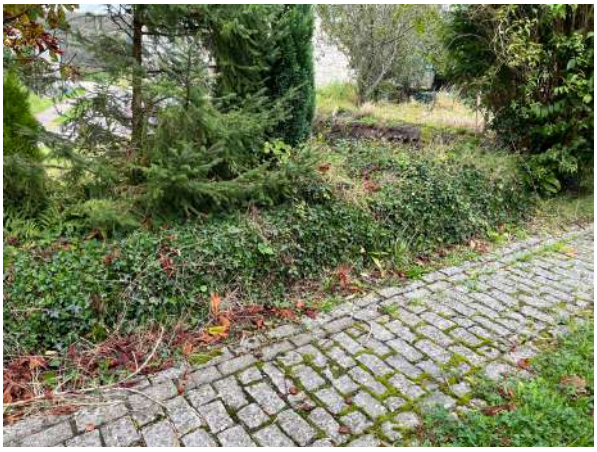
This section describes the habitats present, according to the standard Phase 1 notation (JNCC, 2010).

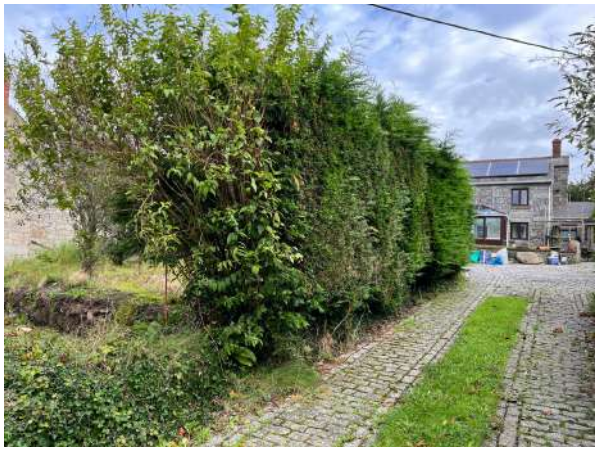
The site is a small garden associated with Bryher Cottage amounting to approx. 0.02Ha. The location of the site is shown on Figure 1 and the survey area defined on Figure 2. The south boundary of the site is marked by a short section of low stone wall and a line of trees, including horse chestnut, cherry, ash and a line of Leyland cypress. The east boundary is marked by a stone wall and wooden panel fence above. The internal area of the site includes disturbed 'made-up' ground with small areas of amenity grassland and ephemeral species. There are five fruit trees within the garden.



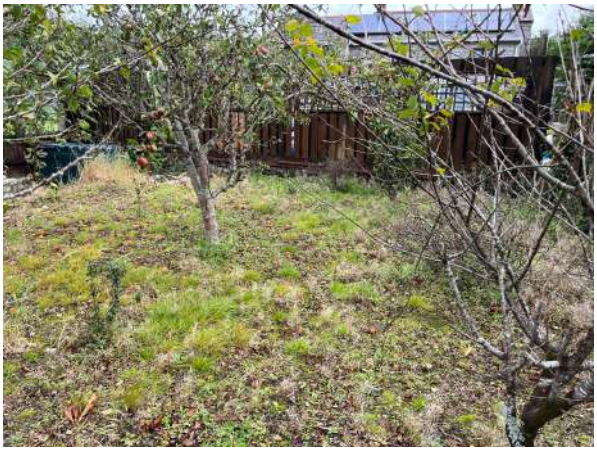


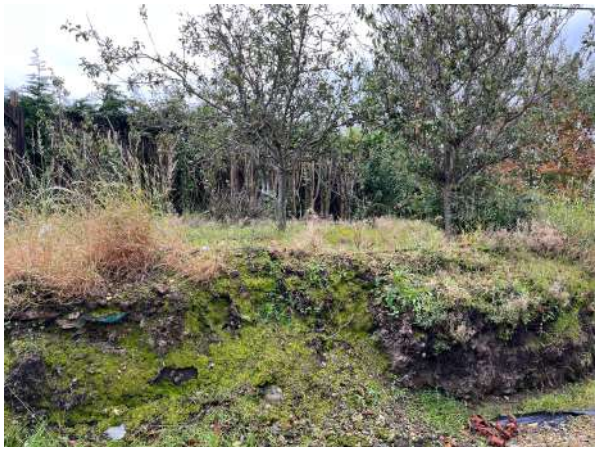
Photograph 1. View over sites from west boundary. Photograph 2. South boundary (from offsite).





Photograph 3. Low stone wall on S boundary. Photograph 4. Leyland cypress hedge on S boundary.





Photographs 5 and 6. Fruit trees on disturbed made-up ground.

Each of the habitats recorded during the Phase 1 Habitat Survey are described below and their distribution is shown on Figure 2. The dominant species recorded within each habitat are given together with any notable floral species observed.

4.2.1 Scattered trees

The south boundary of the site is marked by a short section of low stone wall and a line of trees including horse chestnut, cherry and ash. There are five fruit trees within the garden. These are all relatively young and are within an area of raised made-up and disturbed ground. They are of some biodiversity value at the site level but not at any of the geographic levels listed in section 3.3.

4.2.2 Amenity grassland

The lower part of the garden near the west boundary is regularly mown amenity grassland. It is not of any notable biodiversity value, is species poor and easily replaceable. Species include perennial ryegrass, red fescue, springy turf moss and ribwort plantain.

4.2.3 Bare ground

The raised area of made-up ground has much bare soil exposed as is best described as bare ground with ephemerals including white clover, bramble, dandelion, common bent grass, willowherb and butterfly bush saplings. It is not of biodiversity value.

A gravel driveway and path are also marked as bare ground.

4.2.4 None-native species poor hedge

Part of the south boundary is marked by a Leyland cypress hedge. This none native species poor hedge is not of biodiversity value or ecological importance in accordance with hedgerow regulations.

4.2.5 Wall

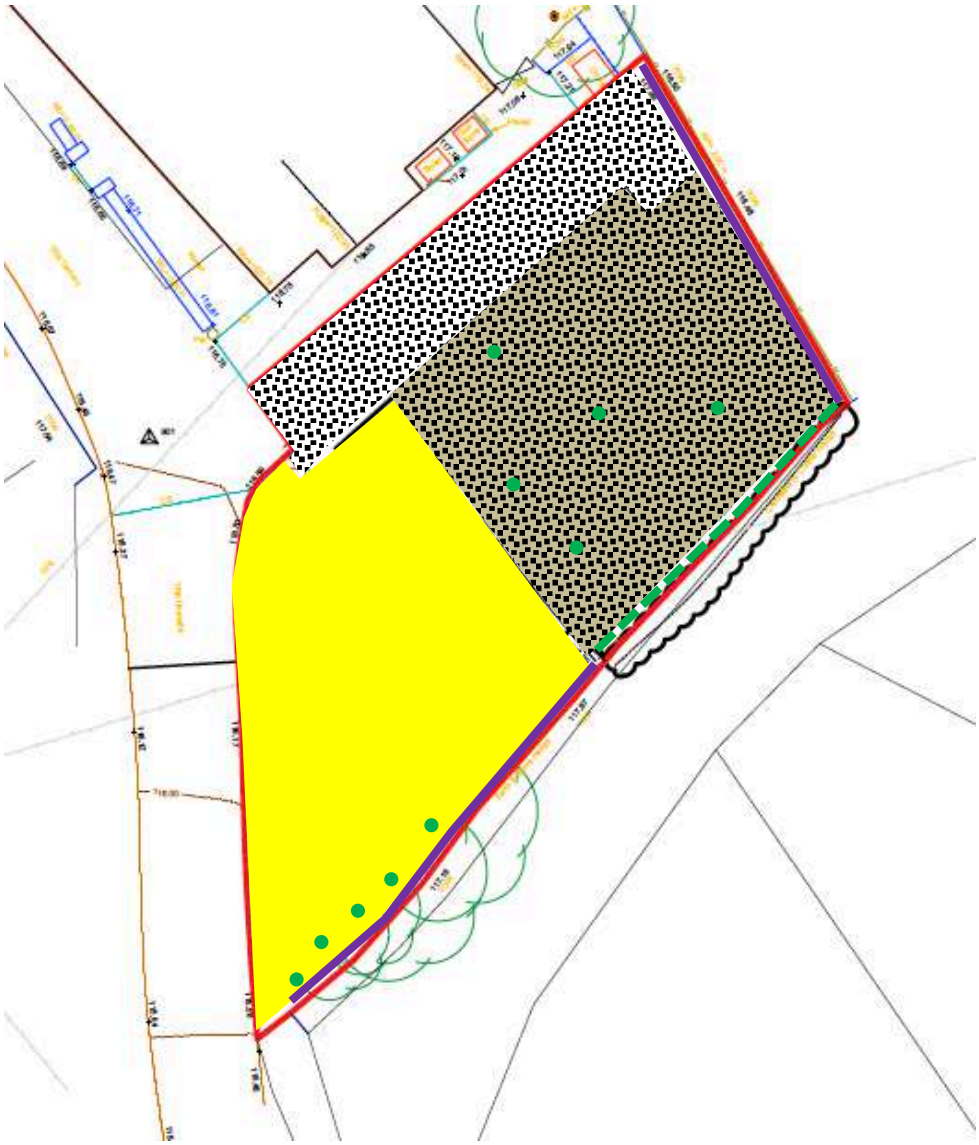
The east boundary is marked by a stone wall and wooden panel fence above. This is not of biodiversity value.

There is also a low stone wall on the south boundary which supports a native flora including ivy, navelwort, herb Robert, wild strawberry, Yorkshire fog, red fescue, male fern and polypody. This native hedge is of site biodiversity value providing food and shelter for wildlife.

4.2.6 Fence

The east boundary is marked by a stone wall and wooden panel fence above.

Figure 2 Phase 1 habitat distribution



Key:

- Site boundary
- Amenity grassland
- Bare ground
- Bare ground/ephemerals
- None native species poor hedge
- Wall
- Fence
- Scattered broad-leaved trees

4.3 Floral Species Description and Evaluation

4.3.1 Higher Plants

No notable higher plants were observed. The site is not of value for higher plants.

4.3.2 Lower Plants

The site does not have the potential to support notable assemblages of lower plants a specialised survey for non-vascular plants, bryophytes and lichens is not required. There are international important sites for Western Rustwort within 1km of the site (see section 4.1). The site does not include suitable habitat for this rare bryophyte.

4.3.3 Invasive non-native species

No invasive weeds were observed.

4.4 Faunal Species Description and Evaluation

4.4.1 Badgers

No evidence of badgers was observed and it is unlikely that any evidence was overlooked.

Although relatively common in Cornwall, the badger is afforded a high degree of legal protection. Badgers and their setts are protected under the Protection of Badgers Act 1992 (HM Government, 1992), and are also listed in Schedule 6 of the Wildlife & Countryside Act 1981 (as amended).

4.4.2 Bats

The site does not contain any features that are suitable for roosting bats. The habitats within the site are very unlikely to be of foraging or navigational value for bats.

All British bat are European protected species (EPS). EPS are protected by national law under Conservation of Habitats Regulations 2017, the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000. As a result of this legislation it is an offence to:

Deliberately capture, injure or kill an EPS;

- Intentionally or recklessly disturb an EPS in its place of rest/ breeding site;
- Intentionally or recklessly damage, destroy or obstruct access to a EPS place of rest/ breeding site (even if the EPS is not occupying the resting / breeding place at the time);
- Possess or sell or exchange an EPS (dead or alive) or part of an EPS.

Barbastelle, Bechstein's, noctule, soprano pipistrelle, brown long-eared, greater horseshoe and lesser horseshoe bats are priority species for conservation on the UK BAP and protected under the NERC Act 2006. Barbastelle, pipistrelle, greater and lesser horseshoe bats are county priority BAP species (CBI, 2004).

4.4.3 Otters

There are no watercourses or water bodies within the site and the site does not offer suitable habitat for otter. No evidence of otter or otters 'places of rest' were found during the survey and the site is not of value for otter.

Otter is a European protected species. Otter is also UK and Cornwall BAP priority species and protected under the NERC Act 2006.

4.4.4 Dormice

The habitats within the site do not have the potential to support dormice.

Dormouse is a European protected species (EPS). EPS are protected by national law under Conservation of Habitats Regulations 2017, the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000. As a result of this legislation it is an offence to:

Deliberately capture, injure or kill an EPS;

- Intentionally or recklessly disturb an EPS in its place of rest/ breeding site;
- Intentionally or recklessly damage, destroy or obstruct access to a EPS place of rest/ breeding site (even if the EPS is not occupying the resting / breeding place at the time);
- Possess or sell or exchange an EPS (dead or alive) or part of an EPS.

Dormouse is also UK and Cornwall BAP priority species and protected under the NERC Act 2006.

4.4.5 Hedgehog

Hedgehogs are associated with garden habitats with dense leaf cover and log piles. It is possible that hedgehog may use the site.

Hedgehogs are listed as a priority species for conservation on the UK BAP and are protected under the NERC Act 2006. They hibernate in log / leaf / rubble piles, at the base of Cornish hedges and under tree roots from October to March inclusive. They are listed on Schedule 6 of Wildlife & Countryside Act 1981 (as amended), which protects them from being killed or taken by certain methods under Section 11(1) of the Wildlife and Countryside Act 1981.

4.4.6 Invertebrates

The site is unlikely to support notable invertebrate populations.

4.4.7 Birds

The Leyland cypress hedge and scattered trees may support nesting birds. The habitats present do not have the potential to support notable populations of birds. The nests (while in use or being built) and eggs of all wild birds are protected against taking, damage and destruction under the Wildlife and Countryside Act 1981 (as amended). It is also an offence to kill, injure or take any wild bird. The birds listed under Schedule 1 of the Wildlife and Countryside Act are afforded additional protection against intentional or reckless disturbance whilst building a nest or in or near a nest containing eggs or dependent young.

4.4.8 Reptiles

The potential of the site to support reptiles was assessed during the site visit. The habitats are open with little cover and are ecologically isolated. There is low potential that small populations of slow worm and common lizard may be present. The site does not have the potential to support notable populations.

The common reptiles that occur in Cornwall (adder, slow worm, grass snake and common lizard) are UK BAP priority species and are partially protected under Schedule 5 (section 9(1) and 9(5)) of the Wildlife and Countryside Act 1981 (as amended) and protected under the NERC Act 2006. Cornwall is considered a UK stronghold for adder. This legislation makes it an offence to kill and/or injure reptiles and puts a duty on local authorities to have regard to list group of principle species.

4.4.9 Amphibians

The site does not offer suitable breeding habitat for amphibians as there are no watercourses or water bodies. However, it is possible that common toad and common frog could use the site during the terrestrial stages of their life cycle. The site does not have the potential to support notable populations.

The common amphibians that occur in Cornwall (common toad, common frog and smooth newt) are protected under Schedule 5 (section 9(1) and 9(5)) of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to kill and/or injure reptiles. Common toad is listed as a UK BAP Priority species due to its nationally declining population, which puts a duty on local authorities to have regard to this principal species.

4.5 Overall Site Evaluation

The site is not a designated site of nature conservation importance. There are designated sites within 1km of the site as follows:

- St Austell Clay Pits SAC and SSSI is located 640m to the north east.
- Tregargus Quarries SSSI is located 900m to the southeast of the site and is designated for its geological interest.

The site is a small garden associated with Bryher Cottage amounting to approx. 0.02Ha. The south boundary of the site is marked by a short section of low stone wall and a line of trees including horse chestnut, cherry, ash and a line of Leyland cypress. The east boundary is marked by a stone wall and wooden panel fence above. The internal area of the site includes disturbed 'made-up' ground with small areas of amenity grassland and ephemeral species. There are five fruit trees within the garden.

Of the habitats present only the scattered trees and low wall supporting native flora are considered to be of some biodiversity value. These are of value at the site level but not at any of the geographic levels listed in section 3.3.

The potential of the site to support notable or legally protected species was assessed and can be summarised as follows:

- It is possible that hedgehog is present.
- The Leyland cypress hedge and scattered trees may support nesting birds. The habitats present do not have the potential to support notable populations of birds.
- There is low potential that small populations of slow worm and common lizard may be present. The habitats are open with little cover and ecologically isolated. The site does not have the potential to support notable populations.

5. ECOLOGICAL IMPACTS, MITIGATION AND MONITORING

5.1 Details of proposed works

The appraisal is to inform a planning application to construct a residential dwelling on the land. The site is a small garden associated with Bryher Cottage amounting to approx. 0.02Ha.

The likely ecological impacts of the proposed development are considered below, along with suitable mitigation and requirements for further survey and monitoring. An assessment of the residual impacts is given at the end of this section.

5.2 Impacts to designated sites

The proposed development will not impact upon any designated sites of nature conservation importance or the features for which they were designated.

5.3 Loss of Habitats

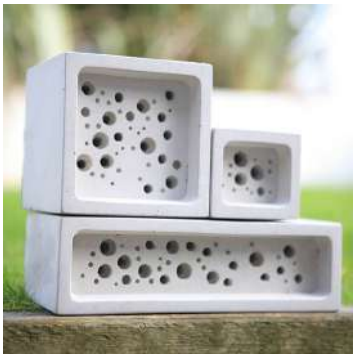
The trees along the south boundary (ash, cherry and two horseshoer chestnuts) and low stone wall (collectively of site biodiversity value) will be retained. The Leyland cypress hedge will be retained or replaced with a more valuable hedgerow habitat. All other internal habitats will be lost, this includes five fruit trees which are collectively of site value (the other internal habitats that will be lost are not of biodiversity value).

The owner wishes to move the five internally located fruit trees to an orchard within his ownership near the proposed development site. This will ensure no loss of biodiversity. Any fruit trees that do not survive the translocation will be replaced.

5.4 Habitat gain and enhancement

In an effort to achieve biodiversity gain the development will include the following habitat creation and enhancement:

- Cornwall Council's adopted Climate Emergency Development Plan Document (CEDPD, 2023) requires all major developments to provide, through the retention of existing and / or the establishment of new tree canopy coverage equal to at least 15% of the site area (excluding areas of the site that are priority habitat types). Minor developments should include where appropriate and practicable provision of new canopy. The proposed development site is small and as a result planting of trees to achieve 15% tree cover is not practical. Planting of 3 native trees offsite is suggested to achieve this target. There is nearby land in the same ownership where this off site mitigation could be implemented. Suggested species include a diverse mix of either oak, hazel, elm, willow, field maple, elder, alder or blackthorn.
- In compliance with the Biodiversity Supplementary Planning Document (SPD) and to achieve biodiversity gain the new dwelling will include one bee brick, and integral bird box and one integral bat box. The bee brick will be installed on the south-facing wall 1-2m above ground level. Bee bricks contain multiple cavities for bees to lay their eggs and are integral to a building (see photograph 7). The bat box will be installed flush with the wall surface (as shown in Photograph 9) and sited near the roof in a dark location. The 'Green and Blue' bat block works well for rendered or clad finish and the woodstone box is appropriate for stone facing. A sparrow terrace (photograph 8) will be installed flush with the wall surface and will be located under or close to the roof, on a sheltered side of the building.
- To achieve biodiversity gain it is proposed that two lengths of flower beds are created (along the north and east boundaries of the site). These will be planted with a diverse range of pollinators. Heathland plants would be appropriate in the landscape setting. Landscaping schemes should, where possible, seek to use native species of local providence. They should aim to increase structural diversity within the site, with areas of short grass, long grass, shrubs and trees. Where possible, landscaping schemes should include log and stone piles/features, which are of value for wildlife. It is proposed to create a concrete block wall demarking the north boundary. The flower bed will be created on the south side of this wall. The south facing side of the concrete block wall will be enhanced by the installation of two bee bricks. The use of climbing plants against the wall will increase structural diversity.
- There is an opportunity for further biodiversity gain by replacing the Leyland cypress hedge with one including a diverse range of native shrubs (for e.g. honeysuckle, hawthorn, holly, gorse, blackthorn, hazel and elder).



Photograph 7. Example bee brick

Photograph 8. Schwegler sparrow terrace

Photograph 9. Green and Blue' bat block and woodstone bat box '.

5.5 Disturbance/degradation to habitats

The proposed development has the potential to damage the trees to be retained. Root protection zones will be established and implemented during construction activities.

5.6 Disturbance to Species

Site clearance has the potential to injure or disturb hedgehog, slow worm, common lizard and nesting birds. The scale and risk of impacts is so low that presence/ absence surveys for reptiles is not justifiable. Mitigation to avoid disturbance or harm to these legally protected species will be implemented as follows.

Vegetation and site clearance will be carried out under the direct supervision of an ecologist. This will be carried out between April and October (inclusive) when temperatures are above 10C. At this time of year reptiles and hedgehogs are active and will be able to retreat to safety or will be captured by the ecologist and moved to a safe undisturbed area of suitable neighbouring habitat. The ecologist will carry out a search for nesting birds. If nesting birds are encountered works will be delayed until dependant young have fledged.

Any trenches left open overnight will have a means of escape for any animals that may fall in.

5.7 Further Surveys

No further surveys are required.

5.8 Monitoring

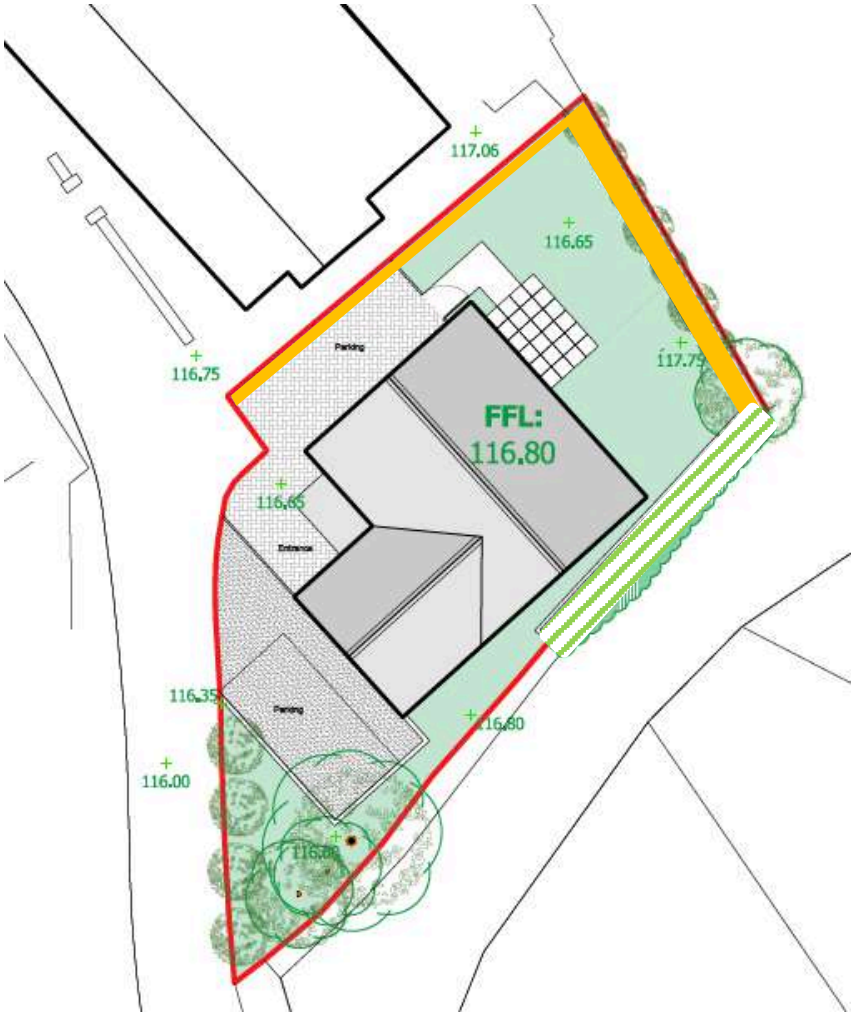
Vegetation and site clearance will be carried out under an ecological watching brief.

5.9 Residual Impacts

If all of the mitigation discussed above is implemented successfully, then it is considered likely that the residual impacts of the development will be minor positive due to the net gain of three native trees offsite and the gain of wildlife boxes and two floristically diverse pollinator beds.

There is an opportunity for further biodiversity gain by replacing the Leyland cypress hedge with one including a diverse range of native shrubs.

Figure 3. Proposed site plan and ecological mitigation.



Translocate five fruit trees to neighbouring land.

Plant three native trees in neighbouring land.

Install protective fencing to establish tree protection zones before construction activities commence.

Carry out vegetation removal and site clearance under ecological watching brief between April and October.

Construct two floristically diverse pollinator flower beds and include two bee bricks in south facing wall.

New dwelling will include one bee brick, an integral bird box and one integral bat box.

Any trenches left open overnight will have a means of escape.

There is an opportunity for further biodiversity gain by replacing the Leyland cypress hedge with one including a diverse range of native shrubs

6. REFERENCES AND BIBLIOGRAPHY

Baker, J., Hoskin, R. and Butterworth, T. (2019). Biodiversity net gain. Good practice Principles for development. A practical Guide, CIRIA, 2019. ISBN 978-0-86017-791-3.

BCT (2009). The National Bat Monitoring Programme. Annual Report 2009. The Bat Conservation Trust, London.

BCT (2011). The state of the UK's bats: National Bat Monitoring Programme Population Trends 2011. The Bat Conservation Trust, London.

Bat Conservation Trust (2011). Statement on the impact and design of artificial light on bats. Bat Conservation Trust, London.

BCT (2012). The National Bat Monitoring Programme. Annual Report 2011. The Bat Conservation Trust, London.

BCT (2018) Bats and artificial light in the UK – bats and the built environment. Guidance note 08/18. Bat Conservation Trust, London.

British Standard Institute (2013). BS 42020:2013 Biodiversity Code of Practice for Planning and Development. BSI, London.

Burns F, Eaton MA, Balmer DE, Banks A, Caldow R, Donelan JL, Douse A, Duigan C, Foster S, Frost T, Grice PV, Hall C, Hanmer HJ, Harris SJ, Johnstone I, Lindley P, McCulloch N, Noble DG, Risely K, Robinson RA, Wotton S (2020) The state of the UK's birds 2020. The RSPB, BTO, WWT, DAERA, JNCC, NatureScot, NE and NRW, Sandy, Bedfordshire.

CBI [Cornwall Biodiversity Initiative] (1997-2004) Cornwall's Biodiversity Volumes 1, 2 & 3. Cornwall Wildlife Trust, Truro.

CEC [Council of the European Communities] (1979) Council Directive 79/409/EEC on the Conservation of Wild Birds [Referred to as EC Birds Directive]. Official Journal of the European Communities: L103.

CEC [Council of the European Communities] (1992) Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora [Referred to as EC Habitats Directive]. Official Journal of the European Communities: L206.

CEDPD (2023) Climate Emergency Development Plan Document. https://www.cornwall.gov.uk/planning-and-building-control/planning-policy/adopted-plans/climate-emergency-development-plan-document/

CIEEM [Chartered Institute of Ecology and Environmental Management] (2017) Guidelines for Ecological Report Writing. 2nd Edition. CIEEM, Winchester.

CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM [Chartered Institute of Ecology and Environmental Management] (2017) Guidelines for Preliminary Ecological Appraisal Second Edition.

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

Cornwall Council (20201). Biodiversity Net Gain in Cornwall. Draft Chief Planning Officer's Advice Note. https://www.cornwall.gov.uk/media/43031716/draft-chief-planning-officer-note-biodiversity-net-gain.pdf

Cornwall Council (20202). Terrestrial European Sites Mitigation adoption draft. Supplementary Planning Document. May 2020. https://www.cornwall.gov.uk/media/43983066/european-sites-spd-terrestrial-adoption- draft.pdf

Cornwall Council (20203). Marine and Estuarine European Sites Mitigation consultation draft. Supplementary Planning Document. May 2020.

https://www.cornwall.gov.uk/media/44189445/european-sites-spd-marine-and-estuarine- v1.pdf

Cornwall Council (2018) Biodiversity Supplementary Planning Document. Available at: https://www.cornwall.gov.uk/media/35367439/biodiversity-spd-v7.pdf

Cornwall Council (2016). Cornwall Local Plan: Strategic Policies 2010-2030. Available at: https://www.cornwall.gov.uk/media/22936789/adopted-local-plan-strategic-policies-2016.pdf [Accessed 20th July 2017].

Cornwall Wildlife Trust (CWT) (2007) Biodiversity and Geological Conservation: Planning Good Practice Guidance for Cornwall. CWT.

Department for Communities and Local Government, (2012). National Planning Policy Framework. London ISBN: 978-1-4098-3413-7

DEFRA, Natural England and Environment Agency (2019). Guidance. Stop invasive non- native plants from spreading. May 2019. https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native- plants#treat-invasive-non-native-plants

DEFRA et al (2023). Multi Agency Geographic Information for the Countryside (MAGIC). Available at: http://magic.defra.gov.uk/.

Eaton et al. (2015) Birds of conservation concern 4: the population status of birds in the UK, Channel Islands and Isle of Man. British Birds 108: 708-746.

EN [English Nature] (2002). Bats in roofs: a guide for surveyors. English Nature, Peterborough, UK.

EN [English Nature] (2006). The Dormouse Conservation Handbook. Second Edition. English Nature, Peterborough.

EN [English Nature] (2004) Reptiles: Guidelines for Developers. English Nature, Peterborough.

Environment Agency (2017) Prevent Japanese knotweed from spreading [Online]. Available at: https://www.gov.uk/guidance/prevent-japanese-knotweed-from-spreading [Accessed 15th August 2017].

ERCCIS [Environmental Records Centre for Cornwall and the Isles of Scilly] Erecords computer database. Cornwall Wildlife Trust. Unpublished.

Froglife, 1999. Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife.

Gunnell, K., Grant, G and Williams, C. (2012). Landscape and Urban Design for Bats and Biodiversity. Bat Conservation Trust.

Gunnell, K., Murphy, B. and Williams, C. (2013). Designing for Biodiversity: A technical guide for new and existing buildings (2nd Edition). London.

Harris, S., Cresswell, P. & Jefferies, D. 1989. Surveying badgers. Mammal Society Publication No 9.

HM Government (1981 as amended) The Wildlife and Countryside Act 1981. HMSO, London.

HM Government (1992) Protection of Badgers Act 1992. HMSO, London.

HM Government (1997) The Hedgerow Regulations 1997. HMSO, London.

HM Government (2000) The Countryside and Rights of Way Act 2000. HMSO, London.

HM Government (2006) The Natural Environment and Rural Communities Act 2006. HMSO, London.

HM Government (2010) The Conservation of Habitats and Species Regulations 2010. HMSO, London.

Hundt (2012). Bat Surveys – Good Practice Guidelines. Bat Conservation Trust, London, UK.

JNCC [Joint Nature Conservation Committee] (2010) Handbook for Phase 1 Habitat Survey. JNCC, Peterborough.

JNCC [Joint Nature Conservation Committee] (2011) UK BAP Priority Species and Habitats. Available at www.ukbap.org.uk/PriorityHabitats

Joint Nature Conservation Committee (2004). Bat Worker's Manual (3rd Edition). Joint Nature Conservation Committee, Peterborough, UK.

Mitchell-Jones, A J (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Natural England & DEFRA (2019) Prevent harmful weeds and invasive non-native plants spreading. https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native- plants

Natural England (20192). Bats: surveys and mitigation for development projects. Standing advice for local planning authorities to assess impacts of development on bats. Published 28 March 2015; updated 4 March 2019. Available at: https://www.gov.uk/guidance/bats- surveys-and-mitigation-for-development-projects

Office of the Deputy Prime Minister (ODPM) (2005). Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impacts within the Planning System. The Stationery Office Ltd. London.

Panks, S., White, N., Newsome, A., Nash, M., Potter, J., Heydon, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S., Heaver, M., Scott, S., Treweek, J. Butcher, B. and Stone, D. (2022). Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide. Natural England.

Schofield, H.W. (2008). *The Lesser Horseshoe Bat Conservation Handbook*. The Vincent Wildlife Trust.

Shawyer, C. R. (2011) Barn owl survey methodology and techniques for ise in ecological assessment – Developing best practice in survey and reporting. IEEM, Winchester (updated 2012).

Spalding, A. (Ed.) (1997) Red Data Book for Cornwall and the Isles of Scilly. Croceago Press, Camborne.

Stace, C. (1991) New Flora of the British Isles. Cambridge University Press, Cambridge.

Stewart, A., Pearman, D.A. & Preston, C.D. (Eds.) (1994) Scarce Plants in Britain. JNCC, Peterborough

Williams C.A. and Cornwall Bat Group (2009) Bats. In CISBFR, Red Data Book for Cornwall and the Isles of Scilly. 2nd Edition. Croceago Press, Praze-an-Beeble.

Williams, C. (2010) Biodiversity for Low and Zero Carbon Buildings: A Technical Guide for New Build. RIBA, London.

Wray, S., Wells, D., Long, E. & Mitchell-Jones, T. (2010) Valuing bats in Ecological Impact Assessment. CIEEM In Practice Magazine (December 2010).

Appendix 1 Summary of relevant legislation and policies

Protection of Badgers Act (1992)

Badgers are protected by the Protection of Badgers Act (1992) and the Wildlife and Countryside Act 1981 (as amended), Schedule 6. It is an offence to intentionally kill, capture, injure or ill-treat any badger and to obstruct, destroy or damage a badger sett or disturb badgers within a sett.

Hedgerow Regulations 1997

Any hedgerows classified as 'important' under the 1997 Hedgerows Regulations cannot be removed without a Hedgerow Removal Notice issued by the relevant Local Authority unless previously approved as part of a planning permission.

National Planning Policy Framework 2012

The National Planning Policy Framework (NPPF) sets out national planning policy that is committed to minimising impacts on biodiversity and providing net gains in biodiversity where possible. Under NPPF, local planning authorities have an obligation to promote the preservation, restoration and recreation of Priority habitats, ecological networks and the protection and recovery of Priority species as identified under the Natural Environment and Rural Communities Act (2006). Section 118 of the NPPF also requires enhancements for biodiversity. The NPPF also recognises the wider benefits of ecosystem services.

Natural Environment and Rural Communities Act (NERC) 2006

The Natural Environment and Rural Communities Act (NERC) requires all public authorities, including planning authorities to have regard to the purpose of conserving biodiversity whilst carrying out their normal functions. The NERC Act includes lists of Habitats and Species of Principal Importance (HPIs and SPIs) to the conservation of biodiversity (Section 41) that should be considered in the implementation of duties under the NERC Act. In line with government circular 06/2005 (ODPM, 2005) which provides supplementary guidance, the presence of a Priority species may be a material consideration when a planning authority is considering a development proposal.

The HPI and SPI listed under the NERC Act are largely also UK BAP Priority habitats and species. The UK Post-2010 Biodiversity Framework succeeds the UK BAP partnership; though its list of Priority species and habitats agreed under the UK BAP still form the basis of much biodiversity work in the UK. The current strategy for England is 'Biodiversity 2020: A Strategy for England's wildlife and ecosystem services'.

The Wildlife and Countryside Act 1981 (as amended) (WCA)

The Wildlife and Countryside Act 1981 (as amended) is the primary legislation for England and Wales for the protection of flora, fauna and the countryside. Part 1 of the Act deals with the protection of wildlife.

Amended by the Countryside and Rights of Way (CRoW) Act 2000

Most European Protected Species are now covered under the Conservation of Habitats and Species Regulations (see below) but some activities are still covered by the WCA such as obstructing access to a bat roost.

The WCA prohibits the release into the wild of non-native animal species listed on Schedule 9. It is also an offence to 'cause the spread' of plants listed on Schedule 9.

All British birds, their nests and eggs are protected in law. It is an offence to deliberately take, kill or injure any wild bird or to take, damage, or destroy any nest or egg of any wild bird. The birds listed under Schedule 1 of the Wildlife and Countryside Act are afforded additional protection against intentional or reckless disturbance whilst building a nest or in or near a nest containing eggs or dependent young.

All species of reptile and amphibian are protected by the WCA. Under Schedule 5, Reptiles such as adder, common lizard, slow worm and grass snake are protected against intentional killing, injuring or selling, and smooth newt, palmate newt, common frog and common toad are protected only against sale. Species such as the smooth snake, sand lizard and great crested newt are afforded additional protection by European legislation as described below. These species are thought to be absent from Cornwall (apart from one site in north Cornwall where sand lizard has been reintroduced).

A number of invertebrates, including the white-clawed crayfish, are protected under Schedule 5 of the Act.

The CRoW Act also specifies the duty of Local Authorities to further the conservation of listed (UK BAP priority) habitats and species.

Conservation of Habitats and Species Regulations 2010 (as amended)

The Conservation of Habitats and Species Regulations 2010 (as amended) are the means by which the EC Habitats and Species Directive (92/43/EC) is transposed in England and Wales and update the legislation and consolidate many amendments which have been made to the Regulations since they were first made in 1994.

These Regulations provide protection for European Protected Species (animals and plants listed in Annex IV Habitats Directive which are resident in the wild in Great Britain) including bats, dormice, great crested newts and otters. The Conservation of Habitats and Species (Amendment) Regulations 2012 placed new duties on public bodies to help "preserve, maintain and re-establish habitat for wild birds".

The designation and protection of domestic and European Sites e.g. Sites of Special Scientific Interest and Special Areas of Conservation (SAC) also falls within these Regulations.

Public bodies (including the Local Planning Authority) have a duty to have regard to the requirements of the Habitats Directive in carrying out their duties i.e. when determining a planning application.

European Protected Species (EPS) occurring in Cornwall: Bats, Dormice and Otter are protected under both the Conservation Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended), it is an offence to:

- Intentionally kill, injure or capture an EPS;
- Intentionally or recklessly disturb an EPS;
- Intentionally or recklessly damage, destroy or obstruct access to a place of shelter or breeding (for example, bat roosts, hedgerows used by dormice), and this applies regardless of whether the species is actually present at the time (for example, a bat roost used in the winter for hibernation is protected throughout the year, even during the summer when it is not occupied).
- Possess or transport a bat or any part of an EPS, unless acquired legally;
- Sell, barter or exchange bats, or parts of an EPS.
- Intentionally handle a wild EPS or disturb an EPS whilst using a place of shelter/ breeding unless licensed to do so by the statutory conservation agency (Natural England).

Town and Country Planning Environmental Impact Assessment Regulations 2017

These regulations apply the amended EU directive "on the assessment of the effects of certain public and private projects on the environment" (usually referred to as the 'Environmental Impact Assessment Directive') to the planning system in England.

Case Law

There are several case laws in Britain relating to the duty of developers and planning authorities with respect to wildlife, resulting in several key principles summarised in the table below:

Case / Appeal	Providing support for
Morge v Hampshire County Council (2011)	'Disturbance' under the Conservation Regulations 2010 applies to an activity likely to impact negatively on the local population of a European Protected Species.
R v Cheshire East Council 'The Woolley Case' (2009)	Regarding European Protected Species, Local Authorities must apply the 'three tests' under the Conservation Regulations 2010 when deciding on planning applications: that there is no satisfactory alternative, there is an appropriate reason for the development, and that the development will not affect the favourable conservation status of protected species present.
APP/P9502/A/08/2070105 (Appeal decision, Brecon, 2008)	Para 18: Local Planning Authorities cannot condition provision of a mitigation scheme; detailed mitigation must be provided prior to determination.

APP/C0820/A/07/2046271 (Appeal decision, Padstow, 2007)	Para 18: Full survey information must be provided prior to determination; not just for protected species, but also for BAP species (in this case corn buntings).
R v London Borough Council Bromley (2006)	Para 30: Environmental Impact Assessment required at outline planning stage.
R v Cornwall County Council 'The Cornwall Case' (2001)	Surveys for protected species cannot be conditioned; must be undertaken prior to determination.