

Ryeland, St Mawgan, Cornwall

Preliminary Ecological Appraisal

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For:

Smart Bluefrog Ltd





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1. INTRODUCTION

Bright Environment Ltd was commissioned by Smart Bluefrog Ltd in October 2023 to undertake a preliminary ecological appraisal of land at Ryeland, Trevenna Cross, St Mawgan, Cornwall, TR8 4HB (OS Grid Ref: SW 88191 65917). The appraisal is to inform a planning application to construct two residential dwellings on the land.

The site is a garden and paddocks associated with the dwelling Ryeland. The location of the site is shown on Figure 1 and the survey area is defined in Figure 2. The proposed site layout is included as Figure 3. The dwellings will be located within the garden associated with Ryeland.

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 due to the small nature of the scheme.

3.2 Site survey

A walk-over survey of the site was carried out on 12th October 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 light rain, breezy and overcast (17C). The survey area is indicated 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 owner 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 October, 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 is one designated site within 1km of the site. Carnanton/Nanskeval Wood County Wildlife Site (CWS) is located 600m south of the site. CWSs are designated by the Cornwall Wildlife Trust and Cornwall County Council. They are designated in accordance with a set of criteria (ERCCIS & CWT, 2010). Although not statutory designations, they are given greater protection through the planning process with respect to development. They are prime sites for wildlife in Cornwall, having been identified as supporting species, groups of species or habitats of at least county importance.

There are no Tree Preservation Orders (TPOs) within the site.

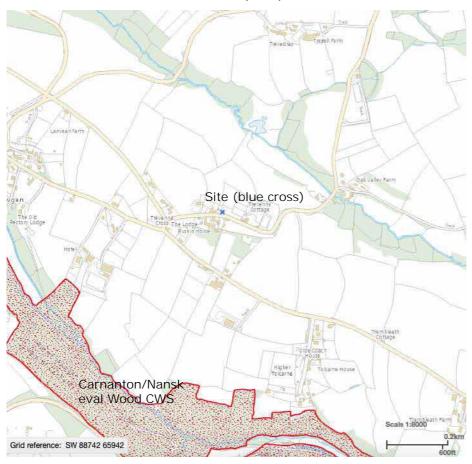


Figure 1. Designated sites of nature conservation importance within 1 km of the site.

4.2 Habitat Description and Evaluation

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

The site includes three enclosures, one is a garden (with polytunnel, vegetable patch and fruit trees) and the other two are a small paddocks supporting improved grassland. The south and east boundaries of these enclosures are native species-rich Cornish hedges (stone and earth banks) with trees. Some of the internal boundaries are native hedges that were planted by the owners in 2007. Native mixed hedge species were planted directly into the field and the owner is in the process of laying these hedges. The north boundary of the garden is a more recently defined mixed thorn hedge. The site is accessed via an existing entrance and trackway that routes along the west then north side of Ryeland.

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.







Photograph 1. Garden enclosure. Photograph 2. Paddock (mproved grassland and planted hedges).

4.2.1 Amenity grassland

The grassland in and around the polytunnel, vegetable patch and fruit trees in the southern most enclosure is regularly mown (photograph 1). It is species-poor, easily replaceable and not of notable biodiversity value.

4.2.2 Improved grassland

The two enclosures to the north of the polytunnel enclosure support improved grassland (photograph 2). The land was formerly used for market gardening (pers. comm. Andrea Bawden 2023) but was sown to grass more recently. It is a rank sward dominated by Yorkshire fog with abundant creeping buttercup. Other species include ribwort plantain, common sorel and creeping thistle. The enclosures are regularly cut and are occasionally used for pony and donkey grazing. The grassland is not floristically diverse and not of notable biodiversity value.

4.2.3 Native species-rich hedge

The south and east boundaries of these enclosures are native species-rich Cornish hedges (stone and earth banks) with trees.

Some of the internal boundaries are diverse native hedges that were planted by the owners in 2007. 1000 trees/shrubs were planted in total to create a series of small enclosures. Native mixed hedge species were planted directly into the field and the owner is in the process of laying these hedges.

The north boundary of the garden is defined by a more recently planted mixed thorn hedge. It is younger in age and more sparse.



Photograph 3. Southern boundary hedge from road.



Species within the hedges include hazel, hawthorn, blackthorn, elm, sycamore, bramble, red campion, herb robert, hedge bindweed, ivy and red campion. The hedgerows within the survey area do not qualify as 'ecological important' according to the criteria specified in the Hedgerows Regulations 1997. However, both hedge types (Cornish hedges and recently planted hedges) are floristically diverse and are considered to be of local biodiversity value. Hedgerows are listed as a priority habitat for conservation in the county and UK (Biodiversity Action Plans) BAPs. They can provide valuable habitat for wildlife including birds, reptiles, invertebrates and mammals; and provide corridors via which wildlife can travel through agricultural landscapes, linking larger areas of semi-natural habitat.

4.2.4 Buildings

There is a poly tunnel in the garden enclosure.

4.2.5 Bare ground

The site is accessed via an existing entrance and trackway that routes along the west (photograph 4) then north side (photograph 5) of Ryeland. The west section of track is hardcore/gravel. The north section of track is a sandy track with willowherb and other ephemerals alongside. The vegetable patch to the east of the polytunnel is bare earth and marked as bare ground on Figure 2. The bare ground habitats are not of biodiversity value.





Photograph 4. West section of access track.

Photograph 5. North section of access track.

4.2.6 Scattered trees

There are nine apple trees within the garden enclosure as marked on Figure 2. These are not of value at any of the geographic scales listed in section 3.3 but do have some site-level value.

4.2.7 Fence

The north section of access track is lined by fencing.

4.2.8 Target notes

Variegated yellow archangel is present in the south boundary hedge (see target note on Figure 2). This is a scheduled invasive weed (see section 4.3.3)







- Site boundary
- Improved grassland
- Amenity grassland
- Buildings
- Native species-rich hedge with trees
- Recently planted native hedge
- Fence
 - Scattered broad-leaved trees
- Bare ground
 - Target note variegated yellow archangel schedule 9 invasive weed



4.3 Floral Species Description and Evaluation

Section 4.3 and 4.4 describes and evaluates the species of plants and animals found within the site based on the results of the field survey.

4.3.1 Higher Plants

No notable higher plants were observed. The site is considered unlikely to be 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.

4.3.3 Invasive non-native species

Variegated yellow archangel is present in the south boundary hedge (see target note on Figure 2). This species is included under Schedule 9 of the Wildlife and Countryside Act 1981 making it an offence to 'cause it to spread'. Non-native, invasive species represent a significant threat to nature conservation. Not only do they directly compete with the native flora, but they also threaten native fauna indirectly through the displacement of their food plants.

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

There are no potential bat roost features within the site. The shrubby and diverse hedgerows are likely to be of value for foraging 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 considered to be 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

Most of hedgerows offer suitable habitat for dormouse and it is possible that this species may be present. The recently planted north boundary of the garden is thin and only has very low potential for 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. The hedgerows offer suitable habitat for hedgehog and it is possible that this species is present.

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 hedgerows provide nesting habitat for birds. The habitats present are unlikely 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 grassland habitats are regularly mown which will discourage reptiles and remove potential cover for reptiles. It is possible that small populations of slow worm, common lizard and potentially adder may be present near and associated with the boundary Cornish hedgerows where there is more cover. There is a newly created wildlife pond in the adjoining garden which may provide some habitat for grass snake.

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, especially as there is a newly created wildlife pond nearby. It is unlikely that notable populations are present.

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 is one designated site within 1km of the site. Carnanton/Nanskeval Wood County Wildlife Site (CWS) is located 600m south of the site.

The site includes three enclosures, one is a garden (with polytunnel, vegetable patch and fruit trees) and the other two are a small paddocks supporting improved grassland. The south and east boundaries of these enclosures are native species-rich Cornish hedges (stone and earth banks) with trees. The internal boundaries are native hedges that were planted by the owners in 2007. Native mixed hedge species were planted directly into the field and the owner is in the process of laying these hedges. The site is accessed via an existing entrance and trackway that routes along the west then north side of Ryeland.

Of the habitats present, the hedgerows are considered to be of biodiversity value at the local level and the apple trees are of some value at the level of the site.

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

Variegated yellow archangel is present in the south boundary hedge (see target note on Figure 2). This species is included under Schedule 9 of the Wildlife and Countryside Act 1981 making it an offence to 'cause it to spread'.

The shrubby and diverse hedgerows are likely to be of value for foraging bats and may support dormice, hedgehog and nesting birds.

It is possible that small populations of slow worm, common lizard and potentially adder may be present near and associated with the boundary Cornish hedgerows. There is a newly created wildlife pond in the adjoining garden which may provide some habitat for grass snake.

It is possible that common toad and common frog could use the site during the terrestrial stages of their life cycle, especially as there is a newly created wildlife pond nearby. It is unlikely that notable populations are present.

5. ECOLOGICAL IMPACTS, MITIGATION AND MONITORING

5.1 Details of proposed works

It is proposed to construct two dwellings on the land. The dwelling plots will utilise the garden enclosure and the small paddock to the north of the garden and will involve the removal of 35m of newly created hedge. There will be a small localised disturbance in the second paddock to the north to allow the installation of a soakaway. After construction this will return to its existing use as a paddock for ponies and donkeys.

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. The proposed site plan is included as Figure 3 together with agree mitigation.

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 dwelling plots will utilise the garden enclosure. The recently planted thorn hedge marking the north boundary of the garden (35m in length) will be removed and replaced by a Cornish hedge planted with native shrubs (the location of the replacement Cornish hedge will be slightly further



north than the existing hedge line). This replacement hedgerow will be a stone and earth hedge and will be planted with a diverse mix of native shrubs. The following species mix is suggested hazel, holly, hawthorn, blackthorn, European gorse, elder, dogrose and honeysuckle. Planting will avoid periods of drought.

Nine apple trees, of site value, will be lost to the development. To mitigate for this loss a replacement orchard will be created in the garden of the new dwellings. This will include at least ten trees (this may be entirely fruit trees or may be a mix of fruit and native tree specimens).

The polytunnel, amenity grassland, improved grassland and the bare ground of the vegetable patch will be lost to the development. These are not of biodiversity value.

5.4 Habitat gain

In an effort to achieve biodiversity gain (in addition to the habitats created as mitigation for habitat loss detailed in section 5.3) the following habitats will be created:

To provide biodiversity gain it is proposed to create three new Cornish hedgerows as indicated on Figure 3. 20m of new Cornish hedgerow will be created to separate the new dwellings from the existing dwelling. Two new Cornish hedgerow sections will be created off site to the west of the entrance driveway as indicated on Figure 3. These new sections of hedgerow will be stone and earth hedges and will be planted with a diverse mix of native shrubs. The following species mix is suggested hazel, holly, hawthorn, blackthorn, European gorse, elder, dogrose and honeysuckle. Planting will avoid periods of drought.

In compliance with the Biodiversity Supplementary Planning Document (SPD) and to achieve biodiversity gain the new dwellings will each include one bee brick, an 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 6). The bat box will be installed flush with the wall surface (as shown in Photograph 8) 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 7) 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, the south boundary hedgerow will be enhanced by the planting of native shrubs on the top of the hedge. These may be pruned or strimmed to create a dense shrubby feature to provide privacy and shelter as well as creating good wildlife niches. A diverse mix of the following is recommended; hazel, holly, hawthorn, blackthorn, European gorse, elder, field maple and honeysuckle.

To achieve biodiversity gain a wildlife pond will be created. The pond will be created near with good ecological connection with a Cornish hedge. The crevices within the hedges will provide good refuges and niches for wildlife. Wildlife ponds can make a significant contribution to local biodiversity. To maximise biodiversity benefits the pond will be designed with a convoluted edge to maximise edge habitat. The pond side will be shall to allow the development of marginal vegetation that will provide refuges for wildlife. The pond will not be stocked with fish. The pond will include a deep central area for ice-free overwintering. The boundaries of the pond will include stone pile and log pile features to provide niches for wildlife. The pond margins will either be allowed to vegetate naturally; any planting will involve native.

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.







Photograph 6. Example bee brick

Photograph 7. Sparrow terrace



Photograph 8. Green and Blue' bat block and woodstone bat box '

5.5 Disturbance/degradation to habitats

The proposed development has the potential to damage hedgerows (that are considered to be of local biodiversity value) during the construction phase through the movement of vehicles and the storage of materials. The boundary hedgerows will be protected during construction activities by the erection of a protective fence installed 1m from the base of the hedge.

Hedgerows may also be degraded during the 'operational' phase of the development through 'domestication'. A change of a hedgerow from an agricultural boundary to a domestic boundary is treated as a 50% loss of habitat due to domestication and degradation impacts (in accordance with Biodiversity SPD). Hedges marking domestic boundaries can be degraded through over trimming and planting of none natives. The owners are encouraged not to do this and the existing value of the Cornish hedgerows is stressed. Hedgerow creation as detailed in section 5.3 will mitigate and loss through degradation.

Variegated yellow archangel is present in the south boundary hedge (see target note on Figure 2). This species is included under Schedule 9 of the Wildlife and Countryside Act 1981 making it an offence to 'cause it to spread'. There is a risk of accidental spread of this weed during construction activities. All invasive weeds will be eradicated prior to site works. Control methods will follow government guidance (Natural England and DEFRA, 2019).

5.6 Disturbance to Species

The shrubby and diverse hedgerows are likely to be of value for foraging bats and may support dormice, hedgehog and nesting birds.

The dwelling plots will utilise the garden enclosure. The recently planted thorn hedge marking the north boundary of the garden (35m in length) will be removed and replaced by a Cornish hedge planted with native shrubs (the location of the replacement Cornish hedge will be slightly further north than the existing hedge line). The recently planted north boundary of the garden is thin and only has very low potential for dormice. Given that it is the intention to replace this low potential



hedge with one that will mature to have much greater potential for dormice, so long as measures are implemented to avoid injury and disturbance then a presence /absence survey for dormice is not required. The hedge will be removed under an ecological watching brief. The ecologist will carry out a fingertip search for dormice, nesting birds and hedgehog. This can be achieved with ease as the hedge is young, thin and cropped with no earth or stone bank. If dormice are found works will stop and Natural England consulted.

It is possible that small populations of slow worm, common lizard and potentially adder may be present near and associated with the boundary Cornish hedgerows. There is a newly created wildlife pond in the adjoining garden which may provide some habitat for grass snake. Boundary hedgerows will not be directly impacted and will be protected from damage by protective fencing (see section 5.5). The grassland will continue to be regularly mown to retain low reptile potential until construction activities commence. Vegetation clearance (excluding hedgerows) will be carried out under an ecological watching brief between April and October. At this time of years reptiles are active and able to retreat to safety or will be moved to an area of undisturbed habitat by the ecologist.

Removal of 35m of hedgerow is unlikely to have a notable impact on foraging bats given the habitat creation proposed.

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

5.7 Further Surveys

No further surveys are required.

5.8 Monitoring

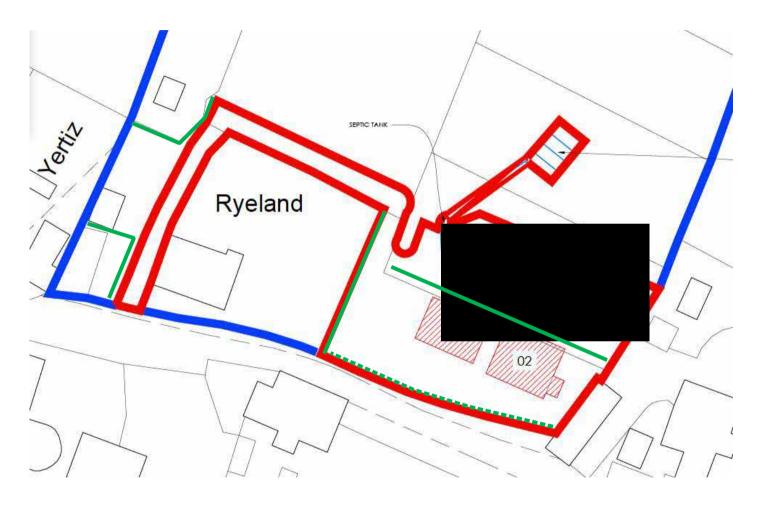
Hedgerow and vegetation removal will be carried out under an ecological watching brief.

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 hedgerows, a wildlife pond, wildlife boxes and hedgerow enhancement.



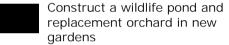
Figure 3. Proposed site plan and ecological mitigation.



Install protective fencing to protect retained hedges before construction activities commence.

Continue to regularly mow grassland to retain low reptile potential until construction activities commence.

Carry out hedgerow removal and vegetation removal under ecological watching brief.



Create new sections of Cornish hedgerow with native planting

Enhance existing hedgerow with native planting

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

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



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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.