Granville Studio
Waterlane
Oakridge
Gloucestershire
GL6 7PJ

# VOUNDER FARM
# Meaver Road, Mullion

PRELIMINARY ECOLOGICAL APPRAISAL

*on behalf of*

**Mr D Peters**

**November 2023**

Report reference d536.0



t. & f. 01452 771010
e. info@diversity.biz
www.diversity.biz

Diversity Environmental Consultants Ltd
Registered in England No. 6129605 Registered Office : Granville Studio, Waterlane, Oakridge, Gloucestershire GL6 7PJ

**CONTENTS**



**APPENDED PLANS:**

**NON-TECHNICAL SUMMARY**

This report is prepared by Diversity on behalf of Derek Peters. It presents a preliminary ecological appraisal (PEA) of land at Vounder Farm, Meaver Road, Mullion where a change of land use is sought to enable the development of six dwellings with associated access and external works.

The site comprises a field managed as mown grass lawn that is enclosed by a combination of Cornish hedge, field boundary hedgerow and recently planted garden hedge. There are no protected or notable species recorded for the site area, however, parts of the site boundary have potential to support hedgehog (*Erinaceus europaeus*) and other 'Species of Principal Importance' listed under the Natural Environment and Rural Communities Act (2006).

The implication that the proposal has for biodiversity is discussed in this report with reference made to local and national planning policies relating to nature conservation and to wildlife legislation where relevant.

The conclusion of the study undertaken is that there are no significant ecological constraints to the proposed development and that with the inclusion of habitat creation and management measures there is potential to bring about a net increase in local biodiversity.

## 1.0 INTRODUCTION

### Background

1.1 This report is prepared by Diversity on behalf of Derek Peters. It provides an ecological baseline appraisal of land at Vounder Farm, Meaver Road where six dwellings along with associated access and external works are proposed.

1.2 Based on desk-top study and Phase 1 survey information an appraisal is made of the habitats and features that the site supports and the ecological connections that the site has to its surrounding landscape. In the context of this information comment is given regarding the impact of proposals and how net gains for biodiversity might be achieved alongside the proposed new development.

1.3 In assessing the ecological value of a site, consideration is given to the likelihood of its component habitats supporting notable or protected species. Protected species (and certain types of habitats) are covered by UK law and by local planning policy formulated in the light of national guidelines. Added to this, are notably rare and declining species that are a material consideration to planning and subject to conservation targets listed in regional and national Biodiversity Action Plans.

### Personnel

1.4 Surveying were carried out by Robert Craine. Robert holds an MSc in Ecology from Durham University and a BSc (hons) in Biology from Bangor University. He has worked as an ecologist for over 25 years in field research, field studies teaching, consultancy and within Local Authorities. He has been a full member of the Chartered Institute of Ecology and Environmental Management since 2000 and became a Chartered Environmentalist in 2005.

## 2.0 PLANNING POLICY AND LEGISLATION

### National Planning Policy

#### Biodiversity Action Plan Habitats and Species

2.1 The signing by the UK Government of the Convention on Biological Diversity, at the first international Earth Summit in 1992, led to the publication of the UK Biodiversity Action Plan (UK Biodiversity Partnership, 2006), now succeeded by the 'UK Post-2010 Biodiversity Framework'. The Framework sets out a national strategy regarding threatened native species and habitats that are priorities for conservation.

2.2 The conservation objectives of national BAPs is reinforced by ODPM Circular 06/2005 'Biodiversity and geological conservation'. The Circular states that the potential effects of a development on habitats or species listed as priorities in the UK Biodiversity Action Plan (BAP), and by Local Biodiversity Partnerships, are capable of being a material consideration in the making of planning decisions.

#### National Planning Policy Framework

2.3 The National Planning Policy Framework (NPPF), revised on 20 July 2021 sets out the Government's planning policies for England and how these should be applied. The NPPF discusses sustainability in terms of design and biodiversity. Paragraph 131 states that *"great weight should be given to outstanding or innovative designs which promote high levels of sustainability"*, whilst paragraph 175 states "*opportunities to improve biodiversity improvements 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"*.

**Local Planning Policy**

**Habitat and species protection**

2.4 Policy 22: 'European Protected Sites' of the Cornwall Local Plan (2010 – 2030) is relevant to residential development within a zone of influence (ZOI) around a European Site. The policy requires that the potential recreational impact to European Sites arising from inhabitants to new development be considered. To prevent adverse impacts there is a requirement to provide for *"appropriate management, mitigation and monitoring on site and/or financial contributions towards offsite mitigation and management."*

2.5 Policy 23: 'Natural Environment' of the Cornwall Local Plan (2010 – 2030) is relevant to development where there may be an adverse impact on biodiversity. A planning application with potential to impact on a species of principal importance needs to be accompanied by an ecological report or statement that describes the ecological value of the site and the nature and extent of any impact of the proposed development. The ecological report should also outline the measures needed to avoid and mitigate adverse effects, and the steps to be taken to enhance biodiversity. Relevant sections of the policy are referenced below.

2.6 **Biodiversity and geodiversity.** *"Development should conserve, protect and where possible enhance biodiversity and geodiversity interests and soils commensurate with their status and giving appropriate weight to their importance. All development must ensure that the importance of habitats and designated sites are taken into account and consider opportunities for the creation of a local and county-wide biodiversity network of wildlife corridors which link County Wildlife Sites and other areas of biodiversity importance, helping to deliver the actions set out in the Cornwall Biodiversity Action Plan."*

2.7 **Priority species and habitats.** *"Adverse impacts on European and UK protected species and Biodiversity Action Plan habitats and species must be avoided wherever possible (i) subject to the legal tests afforded to them, where applicable (ii) otherwise, unless the need for and benefits clearly outweigh the loss."*

2.8 **Avoidance, mitigation and compensation for landscape, biodiversity and geodiversity impacts.** *"Development should avoid adverse impact on existing features as a first principle and enable net gains by designing in landscape and biodiversity features and enhancements, and opportunities for geological conservation alongside new development. Where adverse impacts are unavoidable, they must be adequately and proportionately mitigated. If full mitigation cannot be provided, compensation will be required as a last resort."*

**Legislation**

**Natural Environment and Rural Communities Act, 2006**

2.9 Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006 lists those habitats and species considered to be of principal importance for the conservation of biological diversity in England. The list includes hedgehog (*Erinaceus europaeus*) and bird species such as song thrush (*Turdus philomelos*) that have suffered population declines in recent years.

**European Protected Species**

2.10 In England and Wales all bats (*Vespertillionidae and Rhinolophidae*) are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) against capture, killing, injury and disturbance. In addition, their breeding sites and resting places receive protection under The Conservation of Habitats and Species Regulations 2017 (as amended)[1]. Offences include damaging or destroying a breeding or resting place and obstructing access to such places.

**Birds**

2.11 All species of birds are protected under the Wildlife and Countryside Act, 1981. This legislation 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. For species listed on Schedule 1 of the Act, such as barn owl (*Tyto alba*), additional offences are to intentionally or recklessly disturb them whilst they are nest building or at or near a nest with eggs or young, or to disturb the dependent young.

[1] Although Britain is no longer part of the European Union, this EU-derived legislation continues to form part of UK domestic law and the existing associated guidance remains relevant.

**Hedgehogs**

2.12 Hedgehogs are afforded partial protection under Schedule 6 of the Wildlife and Countryside Act 1981, which prevents indiscriminate methods of capture. Hedgehogs became a UK BAP species in 2007 due to a decline in population (in England estimated now at 1m, down from 36m in the 1950s).

**Badgers**

2.13 Badgers (*Meles meles*) are protected in Britain under the Protection of Badgers Act 1992 and Schedule 6 of The Wildlife and Countryside Act, 1981. Badgers are protected under the Protection of Badgers Act 1992, Schedule 6 of the Wildlife and Countryside Act 1981 and more general animal welfare laws. The Protection of Badgers Act 1992 places legal restriction on disturbance to badgers and sett destruction.

**Reptiles**

2.14 All UK native reptile species are protected against intentional killing or injury under Schedule 5 of the Wildlife and Countryside Act, 1981. Natural England identifies potential breaches of the Law through activities such as clearing land, digging foundations and driving machinery over sensitive areas. In instances where harm could result it is necessary to implement reasonable measures to reduce the risk.

**The Environment Act, 2021**

2.15 In November 2021 The Environment Bill received Royal Assent, becoming law in England as The Environment Act, 2021. This legislation includes a target to halt the decline of nature by 2030 and mandates a Biodiversity Net Gain of at least 10% for new developments. Other elements of the Act include 'Local Nature Recovery strategies to support a nature recovery network' and 'Species Conservation Strategies to support the design and delivery of strategic approaches to deliver better outcomes for nature'.

2.16 The Environment Act is subject to secondary regulations, which are due to come into effect in January 2024. The requirement for biodiversity net gain on new developments will at that point become mandatory.

**The Hedgerows Regulations, 1997**

2.17 The Hedgerows Regulations 1997 provide arrangements for Local Planning Authorities in England and Wales to protect important hedgerows by controlling their removal through a system of notification. The protection is for hedges that meet criteria for 'importance' based on their historical and biological qualities. The removal of a hedgerow to which the Regulations apply is permitted if it is required for carrying out development for which planning permission has been granted.

## 3.0 METHODOLOGY

**Scope of Assessment**

3.1 The zone of influence of the proposed project i.e. the area over which ecological features may be affected by biophysical changes, includes habitats within the red-line planning application boundary only.

**Desk-top Study**

3.2 A search for ecological records has been undertaken for the site location and for a 1km zone (commensurate with the scale of project) extending out from a point central. Sources of information include:

- Local biodiversity records
- Biological atlases & regional reports
- Multi-Agency Geographical Information for the Countryside
- Historic topographic and Ordnance Survey maps
- Environment Agency data

3.3 Information obtained from these sources has informed the preparation of this report and, where appropriate, is included with due acknowledgement.

**Phase 1 Habitat Survey**

3.4 Surveying was carried out on 25 July 2023 for the areas shown at Plan 1. The survey method was at a level intermediate between the JNCC standard 'Phase 1' survey and 'Phase 2' (Joint Nature Conservancy Council 1990 - Handbook for Phase 1 habitat survey - a technique for environmental audit), also referred to as 'Extended Phase 1 Survey' (Institute of Environmental Assessment, 1995). This type of survey provides information on dominant plant species allowing habitats to be mapped and classified. During the survey, note is also made of conspicuous fauna and the potential for fauna and flora of conservation value or protected status.

**Limitations**

3.5 Phase 1 surveying provides only a 'snapshot' of the biodiversity evident at a particular time. Whilst some ephemeral and early flowering species may have been missed, habitat types were distinguishable, and an assessment of their ecological value was possible to make with a reasonable level of confidence.

**Ecological Assessment**

3.6 The valuation of ecological features follows the *'Guidelines for Ecological Impact Assessment in the UK and Ireland'* published by the Chartered Institute of Ecology and Environmental Management in September 2018. This process assesses the geographical scale of importance of habitats and species that may be affected by development proposals. The terms used to describe geographical scale in this report are: International (Europe), National (England), Region (South West), County (Cornwall), Local (Mullion).

3.7 The valuation process also requires consideration of relating factors that include biodiversity value, potential value, supporting value e.g. providing a buffer, and social value e.g. for health and recreation. With regards to biodiversity, there are various characteristics determining the value of a resource or feature, these include:

- Rare or uncommon species in the local, national or international context
- Endemic or locally distinct sub-populations of a species
- Species-rich assemblages of plants or animals
- Typical faunal assemblages characteristic of homogeneous habitats
- Ecosystems and their component parts, which provide the habitats required by the above species, populations and / or assemblages
- Habitat diversity, connectivity and / or synergistic associations
- Notably large populations of animals or concentrations of animals considered uncommon or threatened in a wider context
- Plant communities (and associated animals) considered typical of valued natural / semi-natural vegetation types
- Species on the edge of their range; particularly where distribution is changing as a result of global trends and climate change.

## 4.0 BASELINE ECOLOGICAL CONDITIONS

**Site context**

4.1 The site is at Vounder Farm in a rural area on the eastern outskirts of Mullion village, south of Helston. It is accessed from the B3296 (Meaver Road) connecting Mullion to the hamlet of Meaver. The site central grid reference is SW 68335 19023.

4.2 The area falls lies within 'The Lizard' National Character Area (NCA) as defined by Natural England NCA publication 157 (2013). The dominant physical characteristics of this NCA are an undulating exposed heathland plateau cut by narrow river valleys and surrounded by a rugged and geologically complex coastline. Cattle and sheep farming has historically been important to the area leaving a pattern of irregular, ancient, fields bounded by Cornish hedgebanks that can be rich in wildflowers. Patches of rough ground dominated by gorse and heather are also a common feature.

4.3 A Statement of Environmental Opportunity (SEO 2) is made within the NCA as follows: *"Manage, restore and enhance the area's rich mosaic of rare and endangered wildlife habitats, extending their range where appropriate".*

**Nearby sites notified or designated for nature conservation**

4.4 There are no nature conservation designations encompassing or next to the site area. Within 1km are a number of County Wildlife Sites the nearest of which, lying approximately 0.5km to the south, is 'Trudnoe Enclosures', listed on the England Habitat Inventory as deciduous woodland. There are no obvious connecting ecological pathways between Vounder Farm and County Wildlife Sites.

4.5 The nearest statutory designated site is Goonhilly Downs 1km to the east. This is internationally designated as part of the Lizard special area of conservation (SAC) and nationally designated as a site of special scientific interest (SSSI). The key features for which it is designated are its range of heathland communities and associated habitats, however, the location is also important for red data book (RDB) invertebrates and breeding birds such as curlew (*Numenius arquata*) and lapwing (*Vanellus vanellus*).

4.6 The next nearest internationally important site, with its closest point approximately 7km to the north-east, is the Fal and Helford SAC; selected for its sub-littoral sandbanks, mudflats, marine inlets and saltmarsh communities. Important species for which this SAC is notified is shore dock (*Rumex rupestris*), which is one of Europe's most threatened vascular plants.

## Habitats

### Overview

4.7 The site is a level field that has been re-sown and is kept regularly mown. It is enclosed by a combination of Cornish hedge, old field boundary hedgerow and recently planted garden hedge. There are no trees on site except low-growing trees within the hedgerow and there are no built structures on site. Habitats constituting the site are shown at appended Plan 1.

### Grassland

4.8 The field supports a grass lawn sown with a general-purpose seed mix. Within this mix perennial ryegrass (*Lolium perenne*) is dominant, whilst common species include cocksfoot (*Dactylis glomerata*), Yorkshire fog (*Holcus lanatus*), white clover (*Trifolium repens*), daisy (*Bellis perennis*), creeping buttercup (*Ranunculus repens*), broad-leaved plantain (*Plantago lanceolata*), common mouse-ear (*Cerastium fontanum*), dandelion (*Taraxacum* agg.) and ragwort (*Senecio jacobaea*).

4.9 Around the edges of the field additional species occur that are reflective of the varying soil and drainage conditions. These species include common nettle (*Urtica dioica*), false oat-grass (*Arrenenatherum elatius*), hogweed (*Heracleum sphondylium*), ribwort plantain (*Plantago lanceolata*), broad-leaved dock (*Rumex obtusifolius*), hedge bedstraw (*Galium mollugo*), creeping thistle (*Cirsium arvense*), herb Robert (*Geranium robertinum*), marsh willowherb (*Epilobium palustre*), cow parsley (*Anthriscus sylvestris*), hedge woundwort (*Stachys sylvatica*), bracken (*Pteridium aquilinum*), greater bird's-foot trefoil (*Lotus pendunculatus*), smooth hawksbeard (*Crepis capillaris*), and black mustard (*Brassica nigra*).

**Photo 1.** Grass field.

**Hedges**

4.10 Defining the site boundary are three distinct hedge types, each described below.

4.11 Hedge (H1) is a traditional Cornish hedgebank constructed with a stone exterior and an earth filling. This type of habitat can support a wide range of plant life, however, in this instance it is overgrown with scrub, notably bramble (*Rubus fruticosus* agg.), gorse (*Ulex europaeus*), hawthorn (*Crataegus monogyna*), and elder (*Sambucus nigra*). Growing alongside are herbaceous plants that include hedge bindweed (*Calystegia sepium*), fox-glove (*Digitalis purpurea*), wall pennywort (*Umbilicus rupestris*), false brome (*Brachypodium sylvaticum*), red campion (*Silene dioica*) and hart's-tongue fern (*Asplenium scolopendrium*). The Hedge (& Wall) Importance Test (HIT) value for this hedge translates as 'fair/good' and capable of improvement in wildlife terms.

**Photo 2.** Cornish hedge H1.

4.12 Hedge (H2) is 4-5m wide field boundary hedgerow that does not reveal any obvious indication of being ancient in terms of historical record or species composition. Dominant species are Cornish elm (*Ulmus stricta*), hawthorn, and blackthorn (*Sambucus nigra*). Though of limited botanical interest, the hedge provides structural habitat value to the landscape.

**Photo 3.** Hedgerow H2.

4.13 Hedge (H3) is a recently planted garden hedge. It comprises a single non-native species (*Griselinia* sp.) and has minimal ecological value other than potential bird nesting habitat.

**Photo 3.** Garden hedge.

**Assessment**

4.14 The grassland that constitutes most of the site area has low intrinsic value for wildlife as it is kept short and does not contain notable communities or rare plant species.

4.15 None of the hedges on site appear to meet criteria for importance under the Hedgerows Regulations 1997. However, the Cornish hedge (H1) marking the southern boundary has potential for botanical enhancement whilst field hedgerow H2 is a dense shrub habitat that is likely to provide a corridor for birds and mammals.

**Fauna**

**Birds**

4.16 There is potential for garden and woodland edge bird species to nest within the boundary vegetation, particularly within hedgerow H2. Bird species recorded within a 1km radius include BTO/RSPB include red-listed bird species song thrush (*Turdus philomelos*) and linnet (*Linaria cannabina*).

**Reptiles**

4.17 The site is generally lacking in habitats characteristic for supporting reptiles and there are no records of reptiles for the site or within a 1km radius. Nevertheless, hedges H1 and H2 provide limited potential for slow worm (*Anguis fragilis*).

**Amphibians**

4.18 There are no waterbodies within or next to the site and therefore there is minimal potential for amphibians on site.

**Mammals**

4.19 There is a record of hedgehog, a priority species for conservation, within 100m of the site. The site has habitat connectivity with the recorded location and field hedgerow H2 provides suitable habitat for this species.

4.20 There were no badger setts on site at the time of surveying, nor any evidence for badger activity.

4.21 A number of bat species are known to be roosting within 2km of the site. These include: common pipistrelle (*Pipistrellus pipistrellus*), natterer's (*Myotis nattereri*), lesser horseshoe (*Rhinolophus hipposiderus*) and greater horseshoe (*Rhinolophus ferrumequinum*). The site offers no roosting habitat for any of these but is within their commuting range.

**Invertebrates**

4.22 The site is lacking in habitats needed for supporting an abundance of invertebrates. In particular, the varied habitat structure or range of food and egg-laying plants needed by insects to complete their lifecycles. This type of habitat is especially important for pollinators such as bumblebees, moths, and butterflies, which are in decline internationally.

## 5.0 DESCRIPTION OF PROPOSED DEVELOPMENT

5.1 The proposal is for 'affordable led development of 6 dwellings (including 4 affordable bungalows), associated access and external works'. The proposed site layout is shown at the drawing labelled 'Proposed Site Plan' (ref. dwg. P/V/M/23/003).

## 6.0 ASSESSMENT OF IMPACTS

**Designated sites**

**Potential impacts**

6.1 There are no anticipated direct impacts to nearby designated wildlife sites from the proposed scheme. Nor are there any obvious ecological pathways via which proposals could affect notified features or regionally important habitats.

6.2 Vounder Farm lies within the zones of influence of two SACs: the Lizard, and the Fal and Helford. Residential development within a zone of influence requires the Local Planning Authority to consult with Natural England over strategic solutions for recreational impacts.

**Mitigation**

6.3 As the site proposal does not include any public open space, it is anticipated that mitigation of recreational impacts will be through financial contribution, understood to be £352 per dwelling.

**Residual effects**

6.4 After mitigation there should be no residual effects on designated or notified sites.

**Habitats**

**Potential impacts**

6.5 There are no nationally or regionally important plants or plant communities on site, however, there are two hedge habitats that have structural value for wildlife and also potential for ecological enhancement.

6.6 Development has potential to impact on the boundary habitats associated with the site, if not safeguarded during development or managed properly thereafter. However, with appropriate management the wildlife value of these could be enhanced.

**Mitigation**

6.7 Prior to development hedges H1 and H2 should be protected with barrier fencing e.g. Heras. All development will need to be undertaken in strict adherence to a method statement that ensures the protection and enhancement of these boundary features.

**Residual effects**

6.8 There will be some loss of Cornish hedgebank H1 to facilitate new road access. To compensate for this loss, the remaining hedgebank on either side of the entrance should be restored and enhanced.

**Fauna**

**Potential impacts**

6.9 The following issues are identified with regards to fauna:

i) Birds are likely to be nesting within boundary shrubs during spring.

ii) Hedgehog may forage and shelter on site, at hedgerow H2 in particular.

ii) Bats are likely to utilise hedgerow H2 as a flight navigational feature and foraging resource in the summer.

6.10 Direct disturbance of habitats is expected to be minimal. However, site clearance undertaken without due regard for wildlife and intensive garden management could have a harmful effect on protected species and species of principal importance.

6.11 Hedgehogs favour areas where there is a connecting network of hedges that provide refuge and access to food, particularly earthworms and insects. Therefore, the loss of hedges, the use of pesticides, and the introduction of impermeable fence barriers are a threat to this species. They are also highly vulnerable to traffic.

6.12 Site design and development, without adequate consideration of the effect of lighting on bats, could have a detrimental effect on their commuting and foraging behaviour.

**Mitigation**

6.13 To avoid causing disturbance to nesting birds, there should be no cutting of shrubs between March or and August. If this is not possible, then works should follow within 48hrs of a nesting bird survey.

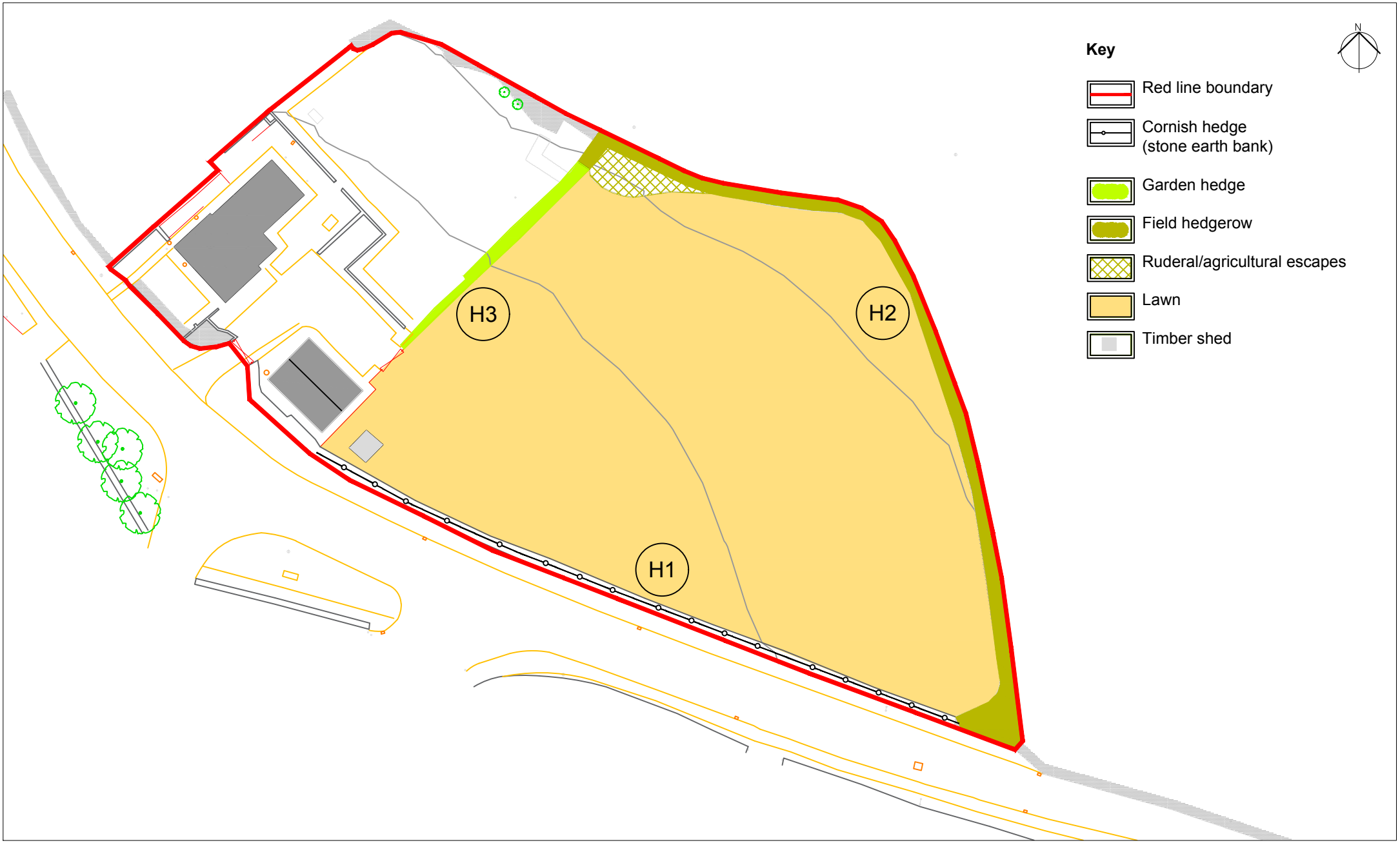
6.14 There should be no loss of hedge H2 and measures should be implemented to ensure that during development hedgehogs and other wildlife are put not at risk e.g. by leaving trenches open at night. After development further measures should be put in place to ensure that hedgehog conservation is aided. This could include, for example, printed guidance given to householders on garden management for wildlife and a recommended schedule of management for hedges.

6.15 To ensure bat flight paths are not affected, a lighting plan is recommended. Any new lighting that introduced used should comply with the parameters set out in the guidance note 08/18 'Bats and artificial lighting in the UK' published by the Institution of Lighting Professionals (ILP), which include: LED luminaires, warm white spectrum (<2700Kelvin) to reduce blue light component, peak wavelength >500nm, internal lighting recessed from windows, external lighting directional to eliminate upward light component, and use of timers.

## 7.0 ENHANCEMENT

7.1 In line with the NPPF and The Environment Act, 2021, habitat creation measures and habitat management measures are needed to increase biodiversity. These should form part of a 5-year habitat creation and maintenance plan to include the following:

- New native trees and shrubs introduced to the site wherever possible.
- Restore H1 by initially removing excess scrub (especially from the sides) and establishing along the top a wider range of native shrubs.
- Augment hedge H2 with native shrub and tree planting.
- Allow a buffer of uncut grassland, minimum 0.5m wide, to develop along the base of hedges.
- Prepare and implement a rolling schedule for the management hedges H1 and H2.
- Create refuges for hedgehogs, birds, and other fauna within hedgerow H2.
- Incorporate bird and bat boxes as part of the new development.
- Incorporate hedgehog holes in fences as part of the new development.




# Plan 1 Habitats

Project: Vounder Farm, Mullion

Client: Mr D Peters

Diversity Environmental Consultants Ltd. t: 01452 771 010 e: info@diversity.biz

Drawing no. d536_001

Scale: nts

Prepared by: KC

Date: November 2023

diversity