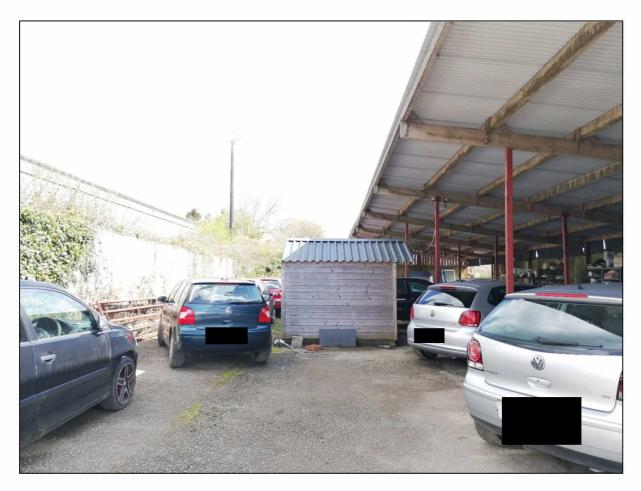


Ecological Assessment Report

Land at Trewiddland

October 2023.



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Project No: J000335

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1. Executive Summary

Introduction. Land and Heritage was commissioned by Mark Horsley in February 2023 to undertake Ecological Assessment in respect of proposed development of land at Trewidland.

Proposals. The development proposes to construct a single two-story dwelling with associated gardens and parking.

Ecological Designations. The site is not within 1km of any ecological statutory designations. There are no County Wildlife Sites, County Geology Sites or Tree Protection Orders within 1km of the site.

Habitats. Most of the site is covered in artificial surfaces, there is a small strip of bare ground south of the building and $40m^2$ of scrub.

Protected Species. There are suitable habitats and opportunities for nesting birds. There are habitats with low potential for reptiles and amphibians.

Potential impacts. The existing building will be demolished and 40m² of scrub will be lost. This may affect nesting birds, amphibians and reptiles if unmitigated.

Mitigation and Enhancement. Timing of works will avoid impacts to protected species. The resulting grassland will increase the cover of semi-natural habitat compared with the existing site. Installation of a bat box, bird box, bee brick and reptile hibernaculum will enhance the biodiversity value of the site. Tree planting to include an orchard, Cornish hedge and clusters of native trees in the owners land adjacent to the site will greatly increase the biodiversity value of the site surrounding area.

Conclusion. The proposed development will have negligible impacts on statutory and non-statutory designations. The potential impacts will be mitigated before and during construction. The resulting development will enhance biodiversity on the site.



2. Introduction & Scope

This report has been commissioned by Mark Horsley for Land at Trewidland, Dobwalls, Cornwall.

This report sets out the ecological baseline, identifies potential impacts on ecological receptors and, where appropriate, provides recommendations for mitigation, monitoring and biodiversity net gain/ecological enhancement measures



3. Methodology

Any proposed development at the site must satisfy current UK and European legal wildlife requirements, as well as national and local planning regulations. All public bodies have statutory obligations under the Natural Environment and Rural Communities Act 2006 to conserve and enhance biodiversity.

Sufficient ecological information is required to fully inform the site design and the proposed works. This Ecological Assessment follows BS42020:2013 Biodiversity – Code of practice for planning and development, and comprises the following elements:

- Desktop study of available site information;
- Phase 1 Habitat survey of the site;
- Assessment of the potential impacts of the proposed scheme;
- Application of the Ecological Mitigation Hierarchy;
- Appraisal of the requirements for further survey work;
- Appraisal of the requirements for mitigation and potential for enhancement measures.

The site was surveyed by Megan Dalton on 09/02/2023. The survey covered the habitats and features within the proposed development boundary but also the habitats and features adjacent to the site. The ecological zone of influence includes the field which the proposed development boundary, our habitat analysis therefore includes this additional area.



4. Site

4.1. Location

Grid Reference: Site Centre: 50.412080, -4.455382

Site entrance: 50.412234, -4.4562022

Address: Land at Trewidland, St Keyne, Cornwall, PL14 4RT

4.2. Description

The site of the proposed development is on the edge of Trewidland village in East Cornwall. The village sits in an agricultural landscape, the historic landscape character is indicative of medieval farmland. The site currently contains an open-sided barn and is being used to store vehicles. The site sits within the northern corner of an agricultural field which has mature Cornish hedges on the east, south and part of the western boundary.

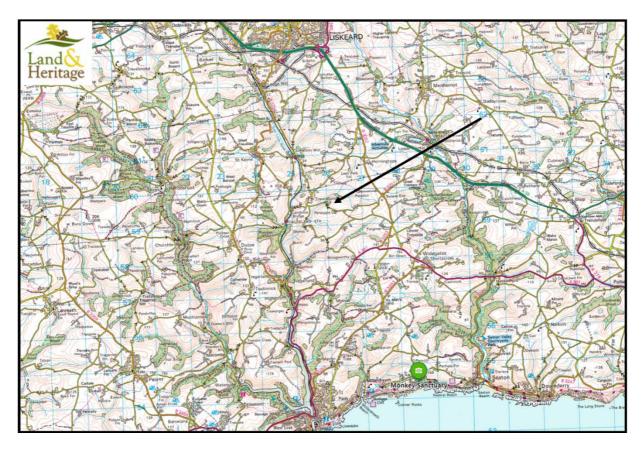


Figure 1: Wider map of several kilometre radius showing site location (Bing Maps).



4.3. Site Plan

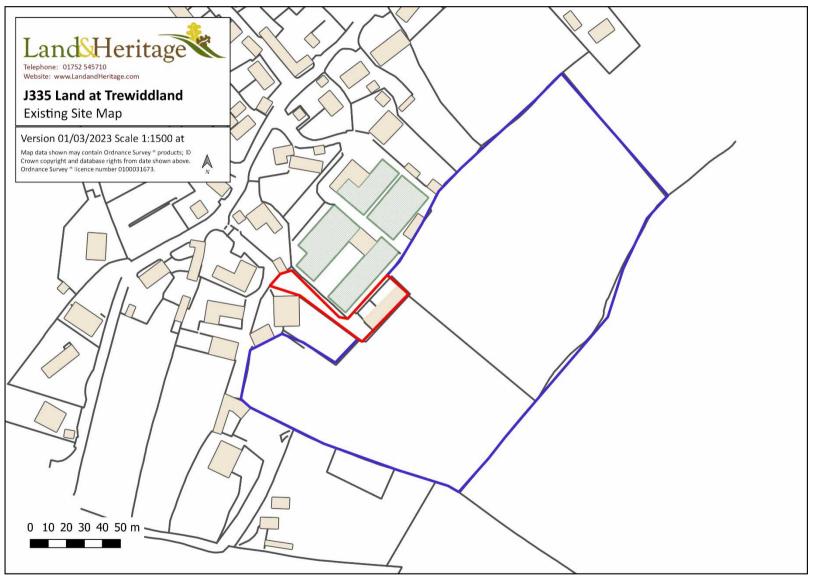


Figure 2: Plan showing the potential development area (red).



5. Designations & Records (Desk top Survey)

The following landscape and ecological designations and records are located within 1km of the study area. This information has been obtained from the Environmental Record Centre for Cornwall and the Isle of Scilly (ERCCIS), Cornwall Council Interactive Mapping and MAGIC Maps.

5.1. Statutory Designations

There are no Ramsar sites, National Nature Reserves (NNRs), Local Nature Reserves (LNRs), Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), or Special Protection Areas (SPAs within 1km of the proposed site.

The site does lie within the SSSI impact zone for the Lynher Estuary SSSI; Natural England requires consultation on rural residential developments of 100 houses or more. That requirement is not relevant to the proposed scheme, and we conclude there will be no impacts on any SSSIs.

The site falls within the Natura 2000 zone of influence for the Plymouth Sound and Estuaries SAC. It has been concluded that developments within this zone indirectly increase recreation pressures on the SAC and require mitigation measures. See section 9 for mitigation.

There are no Tree Preservation Orders within 1km of the site and ERCCIS does not show Priority Habitats within the 1km search area.

5.2. Non-statutory Designations

There are no County Wildlife Sites (CWS), County Geology Sites (CGS), RSPB Reserves, or Areas of Greater Landscape Value (AGLV) within 1km of the proposed site.



5.3. Biological Records

European Protected Species.

The following species listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) were recorded within 1km of the site.

- Eurasian Otter *Lutra lutra*,
- Common Pipistrelle Pipistrellus pipistrellus,
- Soprano Pipistrelle Pipistrellus pygmaeus,
- Brown Long-eared Bat *Plecotus auritus*.

UK Protected Species.

The above listed species also receive protection under Schedule 5 of the Wildlife and Countryside Act 1981 as amended. Adder *Viper berus* receives legal protection from killing and injuring under Schedule 5 of the Act was recorded within the desk study area:

Priority Species

There following species classified as 'Priority Species' under Section 41 of the Natural Environment and Rural Communities Act 2006 were recorded within the desk study area:

- Common Toad Bufo bufo
- House Sparrow Passer domesticus
- Atlantic Salmon Salmo salar
- Brown/Sea Trout S. trutta
- European Eel Anguilla anguilla
- Lackey (a moth) Malacosoma neustria
- Adder Vipera berus
- Eurasian Otter Lutra lutra
- Brown Long-eared Bat Plecotus auritus
- Soprano Pipistrelle Pipistrellus pygmaeus



Invasive Non-Native Species.

Certain plants and animals which are non-native to Britain have become invasive; they cause harm to, or out-compete, our native wildlife. These species are listed in Schedule 9 part 1 (animals) and part 2 (plants) of the Wildlife and Countryside Act 1981 (as amended). For many of these it is illegal to release, plant or cause them to spread in the wild.

There are records of the following non-native invasive species within the desk study area

- Three-cornered Garlic Allium triquetrum
- Himalayan Cotoneaster Cotoneaster simonsii,
- Himalayan Balsam Impatiens glandulifera
- New Zealand Pygmyweed Crassula helmsii,
- Montbretia Crocosmia x crocosmiiflora,
- Variegated Yellow Archangel Lamiastrum galeobdolon subsp. argentatum,
- Curly Waterweed Lagarosiphon major
- American Mink Neovison vison,
- Canada Goose Branta canadensis,



6. Site Ecology

6.1. Summary

The site (0.1ha) is mostly concrete hardstanding with an open sided barn currently used to store cars. Behind the barn are stored building supplies and two shipping containers. There is a strip of scrub along the north boundary between a wall and a fence. Immediately adjacent to the south is an area of bare ground which transitions into short ephemeral vegetation where there has been less disturbance. Beyond this, there is an area of grassland.

6.2. Habitats and JNCC Codes

6.2.1. Within the Proposed Development Boundary.

6.2.1.1. A2.1; Dense/Continuous Scrub

There is a strip of bramble scrub in the metre gap between a fence and the boundary wall along the northern edge of the site.



Figure 3: linear scrub habitat formed between wooden panel fence and boundary wall.



6.2.1.1. J3.6; Buildings

The large structure onsite was once used for agriculture and is now used for personal storage. It is a timber and iron structure completely open along the north side resulting in poor thermoregulation.

There is also a small shed of new construction which is well well-sealed, so unlikely to be used by birds or bats.

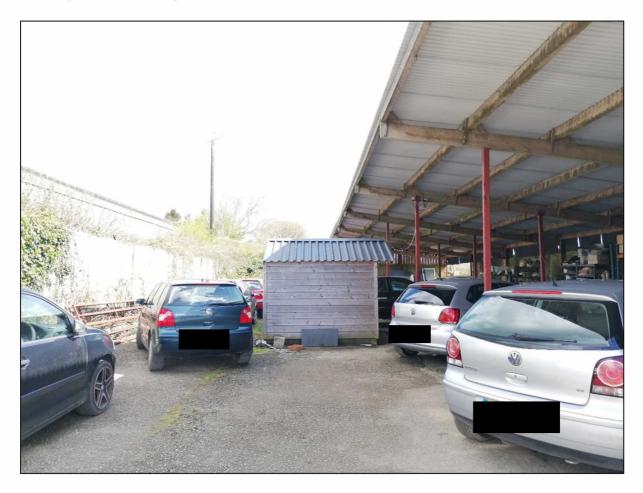


Figure 4: Existing barn structure and small shed.

6.2.1. Adjacent to the Proposed Development Boundary.

6.2.1.1. J4; Bare Ground

There are large areas of concreted hardstanding and bare unsurfaced ground surrounding the main building. The bare ground to the rear of the building has small, isolated patches of ephemeral vegetation.





Figure 5: Area of bare ground behind the existing building.

6.2.1.2. B4; Improved Grassland

The field south of the proposed site has been improved for agricultural use and has few species present. Broad-leaf Docks *Rumex obtusifolius* are dominant throughout the field.

6.2.1.3. J1.3; Ephemeral/Short Perennial Vegetation

Between the bare ground and the field is an area of previously disturbed ground which is now colonised by ephemeral species though some grassland and woodland species are beginning to re-colonise (see species list in table 1). In summer this may develop into a valuable habitat for local wildlife.

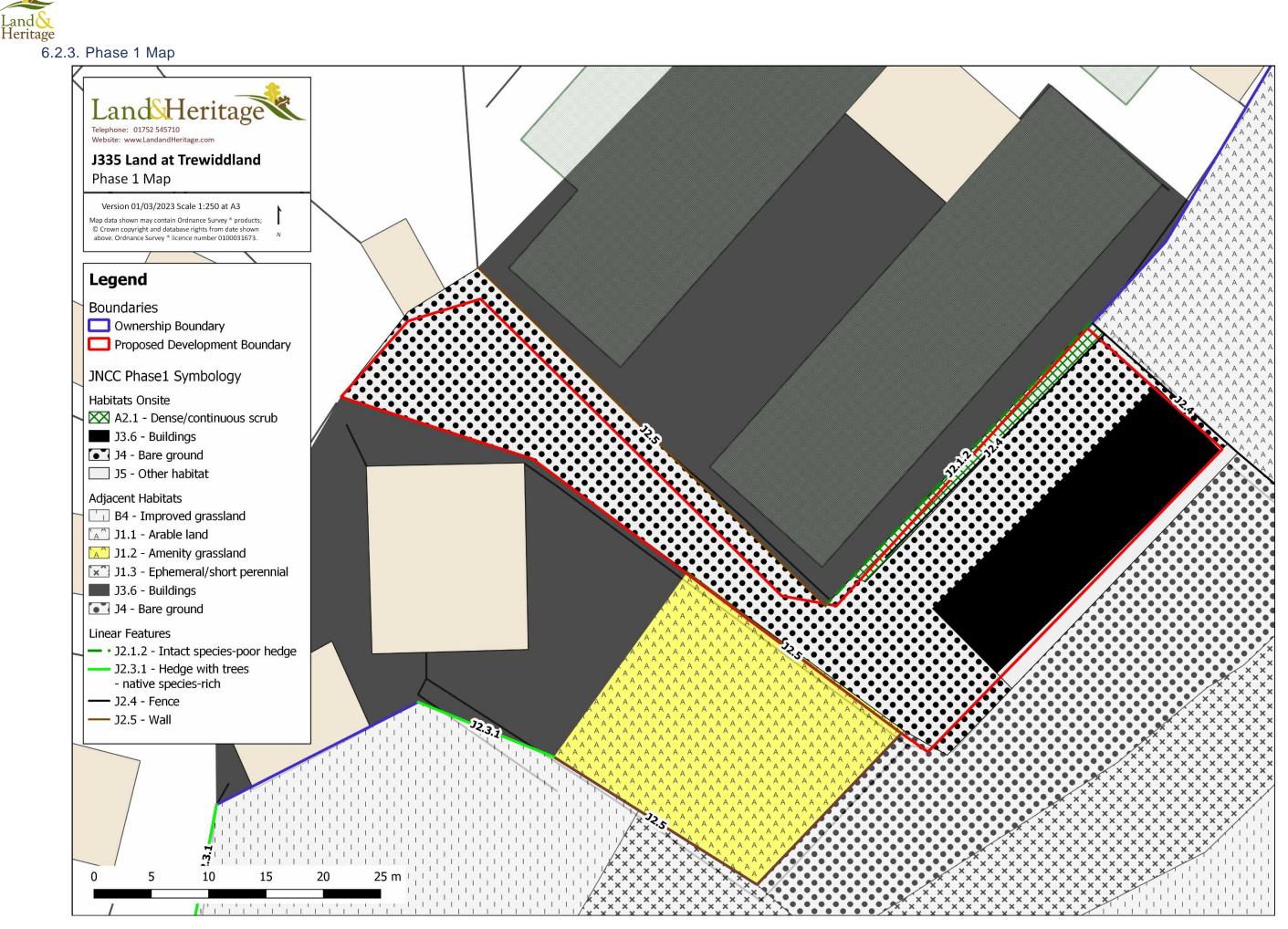
6.2.1.4. J2.3.1; Hedge with Trees – Native Species-rich

Along the south and eastern boundaries of the field are hedgerows with mature trees. There are four native tree species present plus Sycamore *Acer pseudoplatanus*. The hedgebanks also support a moderately rich species community.



6.2.2. Species Recorded

Associated Habitat Type	Common Name	Scientific Name
Improved Grassland	Dandelion	Taraxacum officinale
Improved Grassland	Creeping Buttercup	Ranunculus repens
Improved Grassland	Ribwort Plantain	Plantain lanceolata
Improved Grassland	Perennial Ryegrass	Lolium perenne
Improved Grassland	White Clover	Trifolium repens
Improved Grassland	Broad-leaf dock	Rumex obtusifolia
Ephemeral/short perennial	Broadleaf Plantain	Plantago major
Ephemeral/short perennial	Ribwort Plantain	Plantago lanceolata
Ephemeral/short perennial	Spear thistle	Cirsium vulgare
Ephemeral/short perennial	Daisy	Bellis perennis
Ephemeral/short perennial	Broad-leaf dock	Rumex obtusifolius
Ephemeral/short perennial	Germander Speedwell	Veronica chamaedrys
Ephemeral/short perennial	Pignut	Conopodium majus
Hedgerow; woody species	Pedunculate Oak	Quercus robur
Hedgerow; woody species	Sycamore	Acre pseudoplatanus
Hedgerow; woody species	Ash	Fraxinus excelsior
Hedgerow; woody species	Hazel	Corylus avellana
Hedgerow; woody species	Hawthorne	Crataegus monogyna
Hedgerow; woody species	Bramble	Rubus fructosis
Hedgerow; forbs and ferns	Common Ivy	Hedera helix
Hedgerow; forbs and ferns	Hart's tongue	Phyllitis scolopendrium
Hedgerow; forbs and ferns	Herb Robert	Geranium robertianum
Hedgerow; forbs and ferns	Red Campion	Silene dioica
Hedgerow; forbs and ferns	Primrose	Primular vulgaris
Hedgerow; forbs and ferns	Ground Ivy	Glechoma hederacea
Hedgerow; forbs and ferns	Common Dog Violet	Viola riviniana
Hedgerow; forbs and ferns	Lords and Ladies	Arum maculatum



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The following species have legal protection, and have therefore been considered in this section:

- Reptiles
- Nesting birds
- Bats: all British species
- Badgers
- Otters
- Dormice

Each species/species group is considered in detail below. This is based on site records from our survey (07/10/2022), information from neighbours, our assessment of the habitat and records from the regional biological records office (ERCCIS). Records since 2000 only have been taken into account; earlier records are considered as being of historical interest only.

The legal protections are detailed in appendix 11.1

6.3.1. Reptiles

Adder has been recorded once within 1km of the site since 2000.

There are suitable habitats for Adder and other reptiles adjacent to the site, however they are unlikely to be using habitats within the red line boundary due to the level of disturbance and extent of bare ground. No further survey or mitigation is required.

6.3.2. Nesting Birds

ERCCIS contains records of several bird species which could utilise the habitats present on site.



The buildings and scrub on site, provide ideal nesting habitats. Mitigation recommendations in Section 9 should be followed.

6.3.3. Bats

Three species of bat have been recorded within 1km of the site since 2000; Common Pipistrelle, Soprano Pipistrelle and Brown Long-eared bat.

No potential roost features were identified and no evidence of bats was found within the proposed development boundary. The buildings within the site are of negligible bat roost suitability.

There are adjacent habitats which may be used by bats as navigational features or foraging opportunities south of the site. Recommendations in Section 9 for external lighting should be followed.

6.3.4. Badger

Badgers were not recorded within 1km of the site since 2000.

No evidence of foraging routes, setts or latrines were identified within or passing through the site was observed. This species is unlikely to be present.

6.3.5. Otter

Records of Eurasian Otter within the desk study data predate 2000.

There is no suitable habitat on site and the nearest watercourse is 330m away. It is unlikely Otters are using the site in any capacity.

6.3.6. Hazel Dormouse

There are no records for Hazel Dormouse within 1km of the site in the Local Record Centre since 2000.

Scrub habitat within the site is isolated from other potential Hazel Dormouse habitats and therefore this species is unlikely to be present.



There is limited potential for Hedgehog and Common Toad to occur within the site.



7. Proposed Development & Potential Impacts

7.1. Proposed development

The proposed development consists of demolishing the current building to be replaced with an L-shaped two-story dwelling. The existing hardstanding will be removed, while the dwelling footprint, patio and parking will be new sealed surfaces the remaining area will be laid to lawn.

The existing stone faced earth bank to the south of the site will be extended to form the new eastern boundary of the property. There will be a gate installed to maintain access along the public footpath.

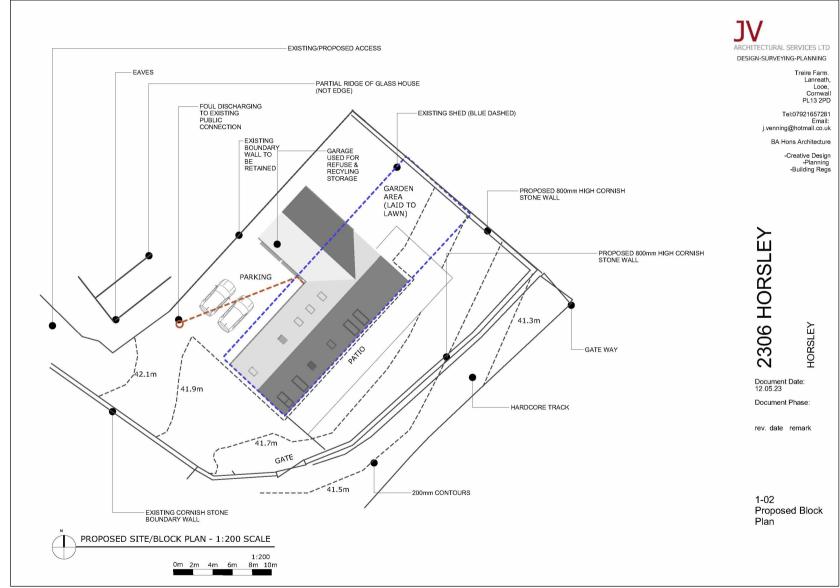
The block plan for the Proposed Development is shown overleaf in Figure 5.

7.2. Potential Impacts

There will be a loss of a small amount of scrub (40m²) and bare, un-surfaced ground. The existing building will be demolished which may affect nesting birds if unmitigated.

Mitigation is outlined in Section 9 below.







8. Further Surveys/Studies

The following surveys are recommended in order to fully inform the mitigation design and development stages of a proposed project:

• No further surveys are required.

9. Mitigation, Compensation and Enhancement.

9.1. Mitigation

Nesting birds

Any scrub or tall vegetation removal should be undertaken outside of nesting season (March to August inclusive) to avoid impacts to nesting birds. If vegetation clearance must be carried out during nesting season, there must be a hand search immediately before removal to ensure no nests are present. If active nests are found the work must be delayed until the fledgelings have left the nest.

Mammals.

All excavations must be completely covered overnight or dug so that a ramp is present on at least one side.

Bats

While there are no roosts onsite, bats may be commuting or feeding in the area. In order to minimise lighting impacts, all new external lighting associated with the development proposals would be installed in accordance with the Bats and Artificial Lighting at Night guidance note 08/23¹.

¹ <u>https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/</u>



9.2. Ecological compensation and enhancement

In accordance with the Cornwall Council Planning for Biodiversity Guidelines each dwelling must incorporate a bat box, a bird box and one bee brick or insect hotel. For bat or bird boxes we recommend choosing one of the following:

- Eco Swallow nest
- Vivara Pro Seville 32mm WoodStone Nest Box
- Vivara Pro Barcelona WoodStone Open Nest Box
- Two Crevice Bat Box
- Small Hollow Bat Box

See <u>https://www.nhbs.com/equipment</u> for bird boxes or <u>Wildlife Boxes | Greenwood's</u> <u>Ecohabitats</u> for bat boxes. For Bee Bricks, we recommend choosing one of the following <u>www.greenandblue.co.uk</u> or <u>www.rspb.org.uk</u>.

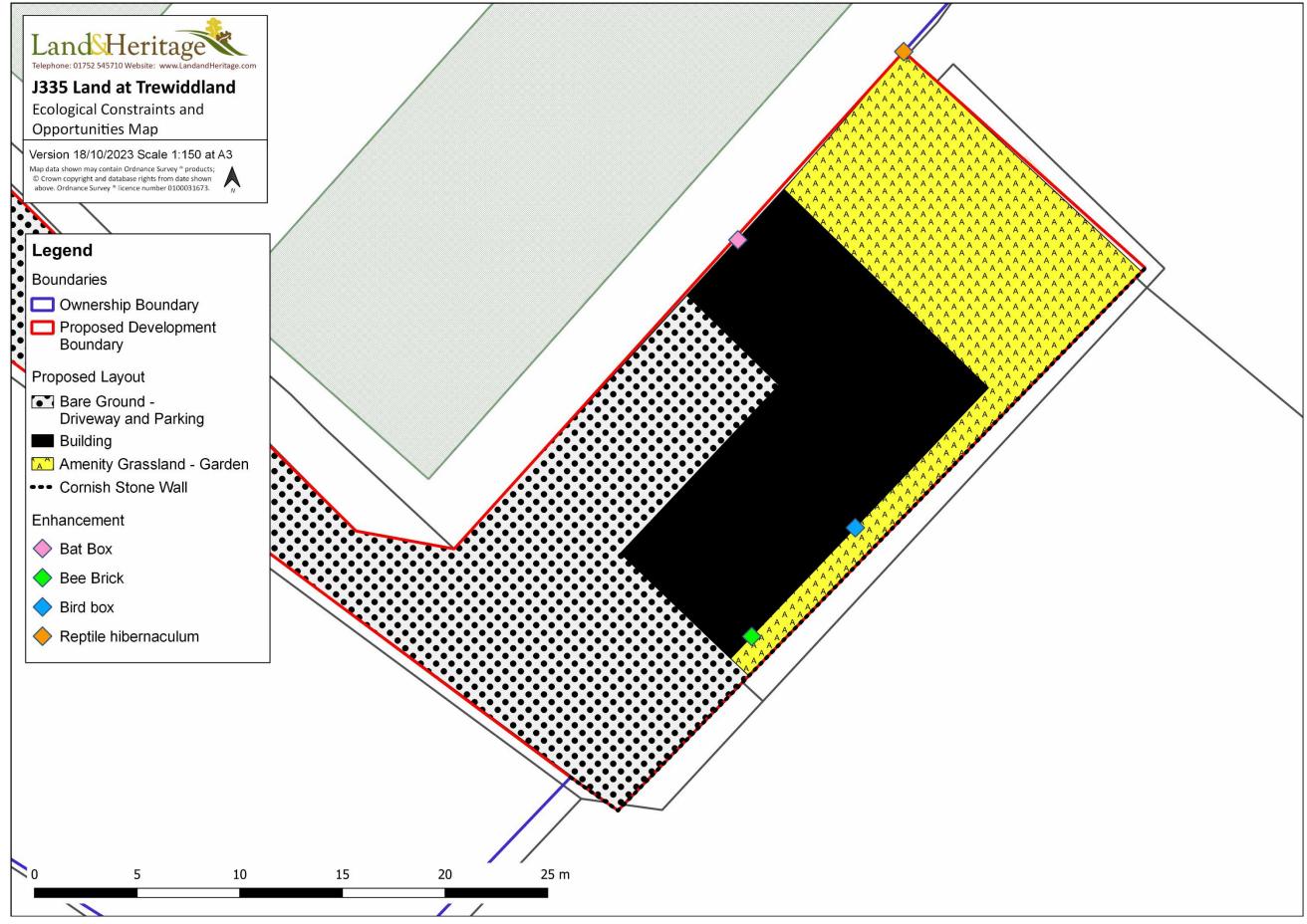
To further enhance the site and surrounding habitats a reptile and amphibian hibernaculum could be constructed in a sunny corner of the new garden area.

Due to the extent of artificial surfaces covering the existing site, a transition to lawn for some of this area will result in an overall gain of biodiversity. This is illustrated in Appendix I.

In addition to the changes being made within the Proposed Development Boundary, significant enhancements are being made adjacent to the site to soften the development within the landscape. These include an orchard to the south, and a Cornish hedge and tree clusters to the east as illustrated in Appendix II. Tree planting should follow the planting specification in Appendix III, the orchard should have a detailed establishment and management plan created by a suitably experienced professional if the planning application is successful.



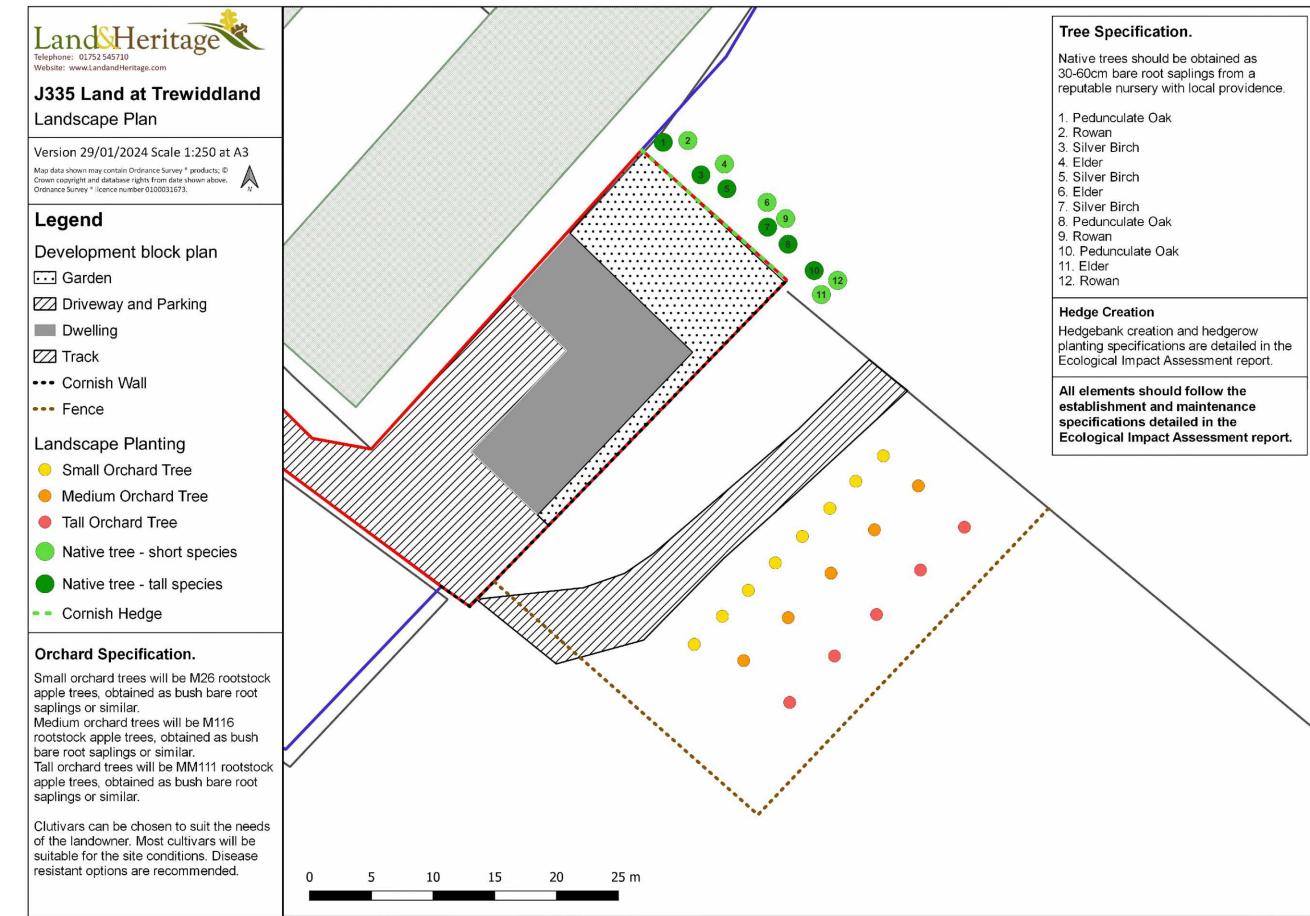
Appendix I



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Appendix II





Appendix III

Hedge Creation Specifications.

The creation of 15 metres of a stone-faced earth bank of local and traditional style as a Cornish hedge to form the new eastern boundary of the site, planted with native tree and woody shrub species appropriate to the immediate area. The <u>approximate number of plants required is 30</u> and are to be purchased in the following numbers: 8 Hazel, 8 Hawthorn, 8 Elder, and 6 Holly.

The hedge should be created as shown in figure A1 and the following steps:

- Source local stone to match adjacent hedges.
- Excavate to a firm subsoil level for base of hedge.
- Hedges to be stone faced with mineral soil infill, rammed hard to compact.
- Height of stone-faced earth bank to match existing hedge construction heights.
- Joints in stone wall to overlap. Larger stones at base in approximately horizontal courses, smaller stones in upper layers, in herring-bone design. To match existing hedge construction.

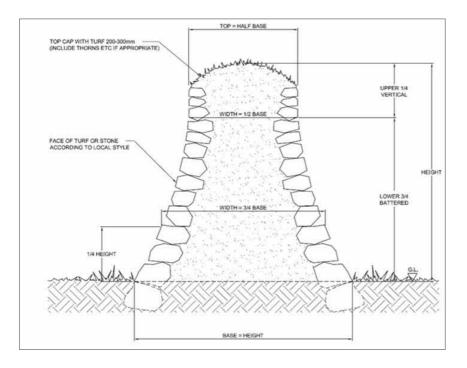


Figure A1: cross section of a Cornish Hedge.



Establishment and Maintenance.

To ensure successful establishment, all planting will follow the specification of site preparation, planting and aftercare detailed below:

Weather Conditions during Planting

The planting operations (any cultivation or planting) will only be carried out when weather and ground conditions are appropriate.

- Planting will not take place during heavy rain or whilst soils are waterlogged.
- During periods of hot weather, every precaution will be taken to maintain plants in peak condition before, during and after planting. Where necessary to maintain progress, planting may have to take place in the early morning or evening, and provision be made for protecting stock from excessive heat in the following days.
- No planting shall be carried out when the ground is frozen to a depth of 4mm or more, or when the air temperature is below 2 degrees Celsius.

Planting.

Hedges: slot plant at 30cm intervals as a zig-zag row. Biodegradable mulch mat strip <u>https://www.green-tech.co.uk/tree-planting-products/weed-mats-mulch-and-tree-spats/greenfix-mulch-mat-type-11</u> to be used with spiral rabbit-proof guards (60cm x 38mm) or Holly shelters, securely staked by bamboo canes. Keep weed free for three years and replace any losses.

Trees: slot plant 30cm from other trees within the cluster. Biodegradable mulch mat strip <u>https://www.green-tech.co.uk/tree-planting-products/weed-mats-mulch-and-tree-spats/greenfix-mulch-mat-type-11</u> to be used with spiral rabbit-proof guards (60cm x 38mm) or Holly shelters, securely staked by bamboo canes. Keep weed free for three years and replace any losses.

Maintenance.

Hedge plants to be trimmed to shape and topped after the second year, thereafter, following best practice as specified in Cornish Hedge Group *Field* <u>www.landandheritage.com</u>



Hedge Management guidelines. On older sections of hedge allow for not more than biannual trimming, to keep the required shape and height.

Trees should not be trimmed and allowed to grow naturally.



Appendix IV

Protected Species Legislation.

The following species have legal protection:

- Reptiles and amphibians. All native British reptiles are protected against intentional killing and injury under the Wildlife and Countryside Act 1981 (as amended), and the Great Crested Newt and its habitats are further protected under the Conservation of Habitats and Species Regulations (2010). The Slow-worm, Common lizard, Adder and Barred Grass Snake are also protected against killing, injury or sale, barter or exchange, but their habitats or places of shelter are not specifically protected.
- Nesting birds. All wild birds (i.e. resident visiting and introduced species) in the UK are protected by law under the Wildlife and Countryside Act 1981 (as amended) making it illegal to:
 - Kill, injure or take any wild bird
 - Take, damage or destroy the nest of any wild bird while it is being built or in use
 - Take or destroy the eggs of any wild bird
- Bats. Under the Conservation of Habitats and Species Regulations (2010), before any development works that will impact on bats or bat roosts can be carried out, a European Protected Species Licence must be obtained from Natural England.
- Badger. Under the Protection of Badgers Act (1992) it is an offence to disturb a Badger while it is occupying a sett.
- Otters. Otters are protected under both the <u>Wildlife and Countryside Act</u> <u>1981</u> (as amended) and <u>The Conservation of Habitats and Species</u> <u>Regulations 2010</u>. Otters and their resting places are fully protected, it is an offence to deliberately, capture, injure or kill them or to damage,



destroy or obstruct their breeding or resting places. It is also an offence to disturb Otters in their breeding or resting places.

- Dormice. Dormice and their habitat are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations (2010), making it illegal to:
 - Intentionally, deliberately or recklessly disturb dormice.
 - Intentionally, deliberately or recklessly damage destroy or obstruct breeding or resting sites or places used for shelter or protection (whether occupied or not)





ERCCIS Data Search Certificate

Certificate of search undertaken by **Stephen Lees**, on the **28/02/2023** for the project of **J335 Horsley Trewiddland** using a buffer of **1** kilometres.



The study comprises verified records of species, habitats and designations data hosted by the Associations of Local Environmental Records Centres (ALERC) accredited Local Environmental Records Centre for Cornwall and Isles of Scilly(ERCCIS) as of the 28/02/2023





The information reported is based only on the interpretation of data collected during the desk study investigations and the site visits. This work pertains specifically to the identification of protected species on the proposed site. When accessed, information provided to Land and Heritage Ltd by ERCCIS and other statutory information sources has been accepted as being accurate and valid.

The evaluation and conclusions do not preclude the existence of protected species, which could not reasonably have been revealed by the comprehensive desk studies and multiple site visits. Hence, this report should be used for information purposes only and should not be construed as a comprehensive characterisation of all site habitats.

In addition, this report details only the conditions on site, at the time of reporting. The dynamic nature of the natural environment will result in changes to the surrounding environment as seasons change. No responsibility is taken by Land and Heritage Ltd to the existence of additional species identified on this site later.

This report has been prepared solely for the use of the client, and may not be relied upon by other parties without written consent from Land and Heritage Ltd. In addition, it must be understood that this report does not constitute legal advice.