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Summary

- Cove Ecological Surveys was commissioned to undertake a Preliminary Ecological Appraisal of land at Gwarackewenbyghan, St Buryan, TR19 6DF (SW41242500). The c.0.45ha site is situated at Boskennal near St Buryan. It comprises an existing semi-detached residential property (the Granary), a ruined stone barn, a piggery, an old polytunnel and a large garden planted with an extensive collection of bamboos, introduced trees and shrubs surrounded by Cornish hedges with trees.
- No plans are available at the time of writing. Development proposals include repairs and alterations to the granary, conversion of the stone barn to residential accommodation and demolition of the piggery and polytunnel and building of a new studio on the footprint of the two existing buildings
- A walkover survey was undertaken on 1 February 2023 by John Sproull MSc, MCIEEM. Plant species and habitats present were recorded and mapped. A preliminary search for signs of protected/notable faunal species was also undertaken. A dedicated bat survey has been separately undertaken.
- This report describes and evaluates ecological features within the proposed development site and provides an account of baseline conditions. Anticipated ecological impacts of the proposed development are then assessed and recommendations are made.
- The survey area includes introduced shrubs, scattered trees and hedges of local conservation value. It is assessed as of value within the immediate vicinity for vascular plants, Badger, Hedgehog, bats, birds, reptiles and amphibians. A number of invasive plant species are also present (a more informed assessment of the value of the site to bats will be made in the separate bat report).
- Development will result in habitat loss and without mitigation has the potential to impact protected faunal species including bats, nesting birds, reptiles, badger and hedgehog.
- Recommendations for mitigation include:
 - Develop detailed plans and a landscape plan to offset habitat loss and deliver BNG
 - Buffer all hedges from built development by at least 2m / crown-spread of hedgerow trees. Fence off site during construction to protect surrounding areas of retained habitat.
 - Ensure contractors are made aware of the presence of non-native invasive species and take steps to dispose of any arising material containing these species appropriately.
 - Follow guidance within the bat report (Tunmore, 2023). Carry out further survey work to assess if and how bats are using the buildings within the site and inform a more accurate assessment of the value of the site to bats.
 - Design lighting to minimise light spill from the new development into the surrounding area. Refer to Cornwall Council (2018) and Bat Conservation Trust (2018) for best practice guidance.
 - If significant trees need to be removed (in addition to Leylandii in H1) they may need to be assessed for potential roost features by a bat ecologist.
 - Undertake vegetation clearance affecting woody vegetation (including felling of the Leylandii and removal of Ivy cladding wall-tops on the barn and lean-to adjacent to the Granary) during the winter months (1 October to the end of February) to avoid impacting nesting birds. Check buildings for nesting birds prior to demolition.
 - Adopt a precautionary approach (see section 4.1.10) when undertaking vegetation clearance in grassland areas, soil stripping (including work to re-expose cobbles and the drainage ditch / swale outside the Granary), demolition of the piggery and moving of slate / log piles to avoid impacting reptiles and amphibians which may be present.
- Recommendations for site enhancement include:
 - Plan the future management of the garden so as to minimise impacts upon protected faunal species and maximise opportunities for native flora and fauna.
 - Incorporate a series of roosting / nesting features for bats, birds and invertebrates within the development.

1. INTRODUCTION

Christopher Morris commissioned Cove Ecological Surveys on 23 January 2023 to undertake a Preliminary Ecological Appraisal of land at Gwarackewenbyghan, St Buryan, TR19 6DF (SW41242500).

The c.0.45ha site is situated on the edge of a small collection of residential buildings at Boskennal c.500m to the south-east of St Buryan. It comprises an existing semi-detached residential property (the granary), a ruined stone barn, a piggery, an old polytunnel and a large garden planted with an extensive collection of bamboos, introduced trees and shrubs surrounded by Cornish hedges with trees.

No plans are available at the time of writing. A site meeting was held with the client on the day of the survey and it is understood that development proposals are as follows:

- Repairs and alterations to the granary: new windows (including Velux), enlarge doors, new roof on existing lean-to, general roof repairs and creation of vaulted ceilings
- Conversion of the stone barn to residential accommodation
- Demolition of the piggery and polytunnel and building of a new studio on approximately the existing footprint of the two (removal of adjacent leylandii).

Although not forming part of the proposed planning application the client also intends to manage / restore the garden and potentially install a new summer house in the future.

This report seeks to describe and evaluate the baseline ecological conditions within the site at the time of the site survey, assess the likely ecological impact of the proposal and inform the planning application. General advice is provided regarding plans to manage / restore the garden. Recommendations for further ecological surveys and mitigation will be made (if appropriate). The potential for impacts upon bats have been separately assessed by a qualified bat ecologist and are dealt with in a separate report (Tunmore, 2023). This report should be used (as required) to inform the development of the site such that negative ecological impacts are avoided and/or minimised wherever possible. Where further surveys are recommended an update or addendum to this report may be required before submission to planning. The local authority is generally unable to condition ecological surveys and will normally be unable to determine an application for planning permission until all surveys have been completed.

It is understood that the scale of the development will fall below Cornwall Council's stated threshold for *major development* beyond which use of the DEFRA Biodiversity Metric calculation tool is required to demonstrate Biodiversity Net Gain (BNG). General recommendations for achieving BNG are made in this report but BNG calculations are not included.

2. METHODOLOGY

This assessment has been carried out in accordance with the 'Guidelines for Preliminary Ecological Appraisal' produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017). It comprises three elements: a desk study, a site survey and a report as detailed below.

2.1. Desk Study

A desk study search for designated sites of nature conservation interest and records for notable species occurring within a 1km radius of the site (centred at approximately SW41242500) was undertaken using the information held by the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS).

2.2. Field Survey

A walkover survey was undertaken in accordance with standard Phase 1 Habitat Survey guidelines (JNCC, 2010) on Wednesday 1 February 2023 by an experienced ecologist, John Sproull MSc, MCIEEM. Dominant plant species and habitats present within and adjacent to the development site were recorded and mapped. A preliminary search for signs of protected and/or notable faunal species (such as tracks, prints, hairs, droppings, nests and burrows) was also undertaken.

2.3. Report

This report was written by John Sproull MSc, MCIEEM, it describes and evaluates ecological features within the proposed development site and provides an account of existing baseline conditions at the time of the site visit. Anticipated ecological impacts of the proposed development are then assessed and recommendations are made for their mitigation (including any need for further survey). Possible enhancements are also detailed.

The biodiversity value of ecological features and resources is evaluated according to various characteristics such as designation, rarity, threat, species richness, etc, based on the Guidelines for Ecological Impact Assessment (CIEEM, 2006). Based on such characteristics, each ecological feature is assigned a biodiversity value using a geographic scale:

- International
- National
- County
- District
- Local
- Immediate vicinity

2.4. Limitations

This assessment is based upon a site visit undertaken during February 2023; the findings of the survey concern the condition of the site as it appeared on the day of the visit. February is an acceptable, though sub-optimal, time of year to undertake this type of survey: it is acknowledged that some flowering plant species may not have been visible or readily identifiable at this stage in the year. The weather on the day of the survey was dry with light winds and cool temperatures in line with seasonal norms.

There was good access across the site but dense vegetation (such as scrub along hedgerows) obscured a clear view of some parts of the site. Although considered unlikely, it remains possible that further ecological features (such as a badger sett) not visible at the time of the survey, may be present within the site.

Due to the nature of the site (which contains the former national collection of bamboos) recording of plant species concentrated on dominant species within semi-natural areas that had not obviously been planted. A comprehensive attempt has not been made to record all of the species present but a detailed annotated plan showing the planted species was provided by the client (many species are also individually labelled).

No development plans are available at the time of writing. If the final nature of the development differs significantly from how here characterised this report should be updated. As a guide it is suggested that this report should remain valid for 12–18 months from the date of survey. If work does not start on the development site during this period this report should be updated.

Amenity based designations including Tree Preservation Orders (TPO's) and Conservation Area status are beyond the scope of this ecological report.

3. ECOLOGICAL DESCRIPTION AND EVALUATION

3.1. Survey area description

The c.0.45ha site is situated on the southern edge of the small hamlet of Boskennal c.500m to the south-east of St Buryan. It includes an existing semi-detached residential property (the granary), a ruined stone barn, a piggery, an old polytunnel and a large garden planted with an extensive collection of bamboos (the former national collection) as well as introduced trees and shrubs. The site is mostly surrounded by Cornish hedges supporting frequent trees.

The surrounding landscape is primarily agricultural (with bulb fields immediately surrounding the site at the time of the survey) sub-divided by a rich hedgerow network and pockets of broadleaved woodland. The wooded Loy Valley lies c.400m to the south of the site leading down to the sea at St Loys Cove c.2km further to the south-east.



Photo 1: Aerial photo of site showing survey area in red.

3.2. Designated Sites

There are no statutory designated sites of nature conservation interest (such as Sites of Special Scientific Interest / SSSIs) within a 1km radius of the site.

There are three non-statutory designated sites of nature conservation interest within a 1km radius of the site as follows:

- West Selena Moor County Wildlife Site (CWS) lies c.900m to the south-west
- East Selena Moor CWS lies c.200m to the south
- Rospanel, Alsia and Trevorgans Moors CWS lie c.1km to the north-west

These sites are designated as of county wildlife conservation value by the Cornwall Wildlife Trust and Cornwall Council for supporting notable habitats and species. Although not statutorily protected there is a presumption against development of or harm to these sites in planning policy and legislation. **The nature and location of the proposed development is such that (provided precautions are followed) no impacts would be anticipated upon any of the above designated sites should it be given planning permission and proceed as planned.**

3.3. Habitats

Phase 1 habitats recorded within the site are briefly described below with reference to the annotated plan (included with this report as *Map 1, Appendix 1*). A list of the species recorded within each habitat is included in *Appendix 2*.

3.3.1. Introduced shrubs and scattered trees

An area of dense, mature planting extends for c.100m to the south-east of the polytunnel covering approximately 0.3ha. It contains an extensive collection of bamboo (a former national collection, planted by the previous owner) as well as a number of rare trees and shrubs, many originating from the southern hemisphere. Given the nature of the site, a comprehensive attempt has not been made to record all of the species present but a detailed annotated plan showing the planted species was provided by the client (many species are also individually labelled). Surrounding hedges (described separately below) and planted semi-mature trees, predominantly Monterrey Pine *Pinus radiata* and Monterrey Cypress *Cupressus macrocarpa* as well as occasional Eucalyptus *Eucalyptus* sp., provide a sheltering canopy up to c.25m high. Occasional smaller trees include species such as Chinese Elm *Ulmus parviflora*, Yew *Taxus baccata*, Coast Redwood *Sequoia sempervirens*, Paperbark Maple *Acer griseum* and Kauri *Agathis australis*. Mature clumps of bamboo, including numerous varieties of *Phyllostachys* as well as *Borinda* dominate the planting beneath and between the tree canopy, forming a sub-canopy in places up to at least c.10m high. Scattered shrubs include species such as Chilean Myrtle *Luma apiculata*, rhododendron *Rhododendron* spp., camellia *Camellia* sp., azalea *Azalea* sp. and Fatsia *Fatsia japonica* and there are occasional palms including Chinese Windmill-palm *Trachycarpus fortunei* and Chilean Wine Palm *Jubaea chilensis*. The ground flora is typically sparse (see photos 3 & 4), presumably suppressed by the predominantly evergreen canopy and dense bamboo leaf litter. Where the canopy is more open there is more diversity; Atlantic-ivy *Hedera helix* and Bramble *Rubus fruticosus* are frequent, Common Nettle *Urtica dioica*, Red Campion *Silene dioica* and Tutsan *Hypericum androsaemum* are occasional. There is an excavated fernery with granite boulders toward the central area and across the planted area ferns, both introduced species, such as Australian Tree fern *Dicksonia antarctica* and Chain Fern *Woodwardia radicans* as well as native species such as Male Fern *Dryopteris filix-mas*, Broad-buckler Fern *D. dilatata* and Hart's-tongue *Asplenium scolopendrium*, are occasional—locally frequent. A series of paths run through the plated area and it is subject to light management and seasonal pruning, etc. Some limited arboricultural work has recently been undertaken to prune / remove some of the trees, creating occasional openings in the canopy.

To the south of the Granary there is a small corner of the garden enclosed by trees on three sides (photo 6, target note 2). The majority of the trees are within H1 (described below) but a series of small Ash *Fraxinus excelsior* saplings and small Monterrey Cypress are also present along the west-facing boundary as well as a further semi-mature, partially ivy-clad, free-standing Ash c.10m to the south of the Granary. The surrounding ground appears to have been recently cleared and supports locally abundant Ivy as well as coarse grasses and patches of bare ground. The invasive species Three-cornered Leek *Allium triquetrum* is present in this area

(see below). The planted area is clearly of considerable horticultural value; in general, however, exotic, evergreen species and collections of single plant-types (such as bamboo) will tend to support less associated floral and faunal diversity than a range of native species. Having said this, the plantings are extensive and mature with naturalistic features and reasonable structural development in places akin to woodland; as such they provide an extensive sheltered area within a predominantly open landscape and are likely to provide habitat for a range of faunal species such as birds, badger and bats (see also below). In view of this, the area of introduced shrubs and scattered trees is assessed as of **local conservation value**.



Photo 1: general view of area of introduced shrubs and scattered trees.



Photo 2: showing more open area where work has recently been undertaken to prune Eucalyptus.



Photo 3: showing general paucity of ground flora in areas dominated by bamboo.



Photo 4: showing ground flora; Ivy and ferns are locally frequent.



Photo 5: area for proposed summerhouse dominated by low growing / ground-cover bamboo species.



Photo 6: area of scattered trees to the south of the Granary.

It is understood that the main planted area of introduced shrubs and scattered trees will not be directly affected by the current proposal: the client intends to manage and develop the garden so as to preserve existing interest whilst enhancing its value for wildlife. In addition, a summer house may be installed at the eastern end of the garden in the future within an area currently dominated by a low growing spreading species of bamboo and a sparse covering of Atlantic-ivy beneath (see photo 5). A new septic tank will be installed within the area surrounded by trees to the south of the Granary.

Without care, management of the garden and installation of a summerhouse and septic tank (involving activities such as vegetation clearance, access by machinery and excavation, etc) could impact faunal species as well as the rooting zone of trees and soils more generally (see mitigation recommendations below).

3.3.2. Buildings

Buildings are briefly described in this report in respect of their capacity to support ecological features – see also the separate bat report (Tunmore, 2023) for more detailed information.

- The Granary (Photo 7) is a semi-detached, two-storey, granite, slate-roofed building serving as existing accommodation. This building was not surveyed internally as part of the present survey but was assessed as part of the bat report. The building is in a good state of repair; Bramble grows along the base of the walls with locally abundant Montbretia *Crococsmia xrococsmiiflora* (see below). The stone walls of a collapsed lean-to adjoining the south-western elevation support dense Atlantic-ivy.
- The barn (Photos 9 & 10) is in ruinous condition with no roof, consisting only of c.2m high stone walls, partially collapsed at the southern end, supporting dense coverings of Atlantic-ivy. The interior appears to have been recently cleared and is largely bare ground with scattered stone fragments and locally frequent Bramble, occasional Common Nettle, Willowherb *Epilobium* sp. and more rarely, species such as Herb Robert *Geranium robertianum* and Smooth Sow-thistle *Sonchus oleraceus*.
- The former piggery has block-built end walls and a corrugated plastic roof forming a tunnel, evidently latterly used as a propagation house. The interior contains potted plants as well as tender specimens in planting beds and self-seeded cultivated species such as holly fern *Cyrtomium* sp., jasmine *Jasminum* sp., ribbon fern species *Pteris* sp., Hart's-tongue, Krauss's Clubmoss *Selaginella kraussiana* and Pellitory of the Wall *Parietaria judaica*.
- The polytunnel (Photo 12) is without a plastic cover and comprises of metal hoops and timber boarded ends with geotextile covering the interior; self-seeded weeds growing within include frequent Annual Meadow-grass *Poa annua*, occasional Yorkshire Fog *Holcus lanatus*, Wavy Bitter-cress *Cardamine flexuosa*, Shining Crane's-bill *Geranium lucidum* and rarely Common Cat's-ear *Hypochaeris radicata*.
- The chalet (Photo 13) is of timber construction with windows across the front; it appeared to be weatherproof, in a good state of repair and was not noted to support any vegetation.
- Other structures within the site include a plastic shed within the south-east corner and a small wooden shed to the east of the site entrance. These too appeared to be weatherproof, in a good state of repair and were not noted to support any vegetation.

The potential of the above structures to support bats has been separately assessed by a bat ecologist (Tunmore, 2023). Dense Ivy on the old lean-to attached to the granary and around the wall-tops of the ruined stone barn has some potential for faunal species, such as birds and potentially bats, the interior area of both the stone barn and the piggery could have the capacity to support reptiles (see species section below). Beyond associated value for the faunal species they may support, these structures are assessed as of **no particular conservation value (see also separate bat report)**.

No plans are available at the time of writing; it is understood that development proposals are as follows:

- Repairs and alterations to the granary: new windows (including Velux), enlarge doors, new roof on existing lean-to, general roof repairs and creation of vaulted ceilings
- Conversion of the stone barn to residential accommodation

- Demolition of the piggery and polytunnel and building of a new studio on approximately the existing footprint of the two (removal of adjacent leylandii).

These proposals will obviously involve removal of existing dense Ivy growth as well as widespread disturbance / removal of existing areas of habitat which have some potential to impact faunal species including nesting birds and reptiles (if present). A precautionary approach must therefore be followed.



Photo 7: the Granary.



Photo 8: collapsed lean-to on southern elevation of the Granary supporting dense Atlantic-ivy growth.



Photo 8: looking south-east from the Granary; barn in the foreground with piggy and polytunnel beyond.



Photo 9: ruinous stone barn.



Photo 10: ruinous stone barn showing interior and dense Ivy on wall-tops.



Photo 11: interior of the former piggery.



Photo 12: poly-tunnel frame



Photo 13: the chalet (with vegetated spoil pile in foreground).

3.3.3. *Amenity grassland*

Areas of rough grassland / lawn surround the buildings as shown on Map 1. The assemblage is more or less dominated by Yorkshire Fog with frequent Cock's-foot *Dactylis glomerata* and Perennial Rye-grass *Lolium perenne*. Associated diversity is fairly low but includes frequent Ribwort Plantain *Plantago lanceolata*, White Clover *Trifolium repens* and Creeping Buttercup *Ranunculus repens*, locally frequent Daisy *Bellis perennis* and Knapweed *Centaurea nigra* and occasionally Common Cat's-ear and Sheep's Sorrel *Rumex*

acetosella. The sward is lightly managed and somewhat tussocky in part with scattered bare / disturbed patches where common moss species such as *Calliergonella cuspidata* and *Brachythecium rutabulum* are locally frequent. The area of grassland shows some diversity but is not species rich or of particular botanical interest. On this basis the amenity grassland is assessed as **no particular conservation value**.

Notwithstanding this, less managed areas around the perimeter and adjacent to areas of scrub, walls and hedges etc may provide some suitable habitat for reptiles (see below).

As plans are not available at the time of writing the exact footprint of the new accommodation and studio are not known. The existing area of grassland will inevitably be subject to widespread disturbance with some habitat loss as a result of the proposed works. It is understood that the client also intends to re-instate an area of cobbles currently buried under the grass adjacent to the Granary as well as a culverted ditch running through this area. Without care, this work could also disturb protected species (if present). A precautionary approach should therefore be followed (see below).



Photo 14: showing amenity grassland in front of the Granary.



Photo 15: amenity grassland between the barn and piggery.

3.3.4. Scrub

Dense Bramble dominates across two overgrown shrub beds opposite the Granary. Planted shrubs such as Phormium *Phormium australis*, Cherry Laurel *Prunus laurocerasus* and Olive *Olea europaea* are rare. These areas may provide potential cover for faunal species such as birds but beyond this are assessed as of **no conservation value**. It is understood that these areas will be retained and potentially replanted with garden species in the future.



Photo 16: Bramble scrub.

3.3.5. Hedges

Hedges are shown on Map 1 as H1–H4. All are of typical Cornish-type construction, consisting of stone-faced earthen-cored banks with at least some woody growth along their tops. Hedgerow trees are frequent, forming a canopy up to perhaps 20m high: conifers including Leylandii *Cuprocyparis leylandii*, Monterey Pine *Pinus radiata* and Monterey Cypress *Cupressus macrocarpa* are locally dominant within H1, which runs along the length of the south-western boundary and H4 which bounds the eastern end of the site. Sycamore *Acer pseudoplatanus* is locally dominant along the north-eastern boundary (H3); H2, for the most part, lacks any tree cover but supports mature garden shrubs including Cherry Laurel. Natives shrubs including Blackthorn *Prunus spinosa*, Hawthorn *Crataegus monogyna* and Elder *Sambucus nigra* are locally frequent beneath the tree cover and in places these have been supplemented by planted species such as Pittosporum *Pittosporum tenuifolium*, Eleagnus *Elaeagnus* sp. and Hydrangea *Hydrangea* sp.

Within the ground flora Atlantic Ivy dominates, ferns such as Broad-buckler Fern, Soft Shield-fern *Polystichum setiferum* and Hart's-tongue are locally frequent to occasional and rarely there are species such as Betony *Stachys officinalis* and Sheep's-bit *Jasione montana*.

Hedgerows are listed as a priority habitat for conservation under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006¹. Hedges can provide potential habitat for a range of wildlife including birds, reptiles, invertebrates and mammals; they can also provide valuable corridors via which wildlife can travel through agricultural landscapes, linking larger areas of semi-natural habitat. Although not formally assessed as part of this survey all of the hedges would be likely to qualify as ‘ecologically important’ if assessed against the criteria within the Hedgerows Regulations (1997). In view of this, the hedges are assessed as of **local conservation value**.

It is understood that it is proposed to fell four Leylandii within H1 adjacent to the piggery and polytunnel to alleviate over-shading of the new accommodation and proposed studio (on the footprints of the barn and the piggery and polytunnel respectively). It is assumed that there will be no other direct impacts to hedges at this stage but it is understood that further coniferous species (Monterrey Cypress, visible in Photo 5 above) may be felled within H4 in order to create an open aspect for a summer house. Without care there is also some potential for degradation to retained hedges adjacent to the area of work during demolition and construction resulting from factors such as vehicle movements, dust deposition, materials storage and unintentional release of pollutants etc.



Photo 17: showing trees within H1–H4 x Leylandii (to the left) will be removed to alleviate over shading, the Pine and Monterrey Cypress (to the centre and right) will be retained.

¹ This legislation requires the Secretary of State to publish a list of species of flora and fauna and habitats considered to be of principal importance for the purpose of conserving biodiversity. It is the duty of Local Authorities to further the conservation of NERC / Section 41 (S41) habitats and species under section 40 of NERC Act and in accordance with the National Planning Policy Framework (NPPF, 2012).



Photo 18: H2 to the west of the site entrance.



Photo 19: H3 adjacent to the shed.



Photo 19: H4 in the south-east corner of the site (badger track visible).

3.4. Species

3.4.1. Flowering Plants

In total, 105 flowering plant species were recorded during the site visit. This is a relatively high number of species but only reflects a small proportion of the species actually present on site given that all of the planted species have not been comprehensively recorded. The site is dominated by introduced species but does also support a suite of native species and includes some semi-natural, species-rich habitats (such as hedges).

Sheep's-bit *Jasione montana* was recorded within H2 during the survey. This species is listed as near threatened on the *Vascular Plants Red List for England* (Stroh *et al.*, 2014), it is typically associated with free draining sunny, hedge banks and is often found in coastal grassland. No other notable species were recorded during the survey. There are records within the ERCCIS desk study for a suite of species for which there is no suitable habitat within the site. Included are arable weeds such as (vulnerable) Corn Spurrey *Spergula arvensis* and Corn Marigold *Glebionis segetum* as well as heathland species such as (near threatened) Heather *Calluna vulgaris* and Tormentil *Potentilla erecta*. Whilst these species are likely to be present within surrounding bulb fields and areas of semi-natural habitat toward the coast they are not considered likely to occur within the site.

On this basis the site is assessed as of **value within the immediate vicinity for vascular plants.**

3.4.1. Non-flowering plants

A dedicated survey of bryophytes (mosses and liverworts) was beyond the scope of the survey. Common species were recorded within more open areas of grassland during the survey including *Calliergonella cuspidate* and *Brachythecium rutabulum*. *Kindbergia praelongum* was locally frequent within the planted

area mapped as introduced shrubs with scattered trees. There are no desk study records for notable species from the area and the site is **not considered to be of particular value for this group**.

3.4.2. Invasive Plants

Invasive alien plant species are those listed on Schedule 9 of the Wildlife and Countryside Act making it an offence to “cause [them] to spread in the wild”. Montbretia *Crocoshia xrocoshiiiflora*, Three Cornered Leek *Allium triquetrum* and Gunnera *Gunnera* sp. are present within the site as shown on Map 1. Winter Heliotrope *Petasites fragrans* is also locally abundant at the northern end of H2; although not listed in Schedule 9 this species is locally invasive and can also dominate at the expense of other more desirable native species.

Without care the proposed works could lead to the unintentional spread of these species.



Photo 21: Montbretia is abundant at the base of the Granary wall.



Photo 22: Three-cornered leek is present near to the area where the septic tank will be installed (Gunnera is also present nearby).

3.4.3. Badger

Potential signs of Badger *Meles meles* including signs of digging and frequent worn tracks leading through the vegetation and ‘up-and-over’ hedges within and surrounding the area of planted shrubs and scattered trees during the survey (as shown on Map 1). There are desk study records for badger from the surrounding area, this species is relatively common and widespread in Cornwall and understood to be present within the surrounding area (Christopher Morris, pers. comm.). It is likely therefore that badger may make use of the site, passing through and / or foraging here. No setts were found during the survey and although considered unlikely it is possible that further features are present within the site which remained undiscovered during the survey. Based on current findings the site is assessed as **of value within the immediate vicinity for badger**. A precautionary approach should be followed during site clearance and construction (see below).

Badgers are widespread and common in Cornwall. Badgers and their setts are legally protected under the Protection of Badgers Act 1992 (HM Government, 1992).

3.4.4. Bats

The site has been separately assessed by a bat ecologist for its potential to support bats (see Tunmore, 2023). There are desk study records for Common Pipistrelle *Pipistrellus pipistrellus* and Noctule *Nyctalus noctula* from the surrounding area.

Further survey work has been recommended to determine if and how bats are using the buildings within the site and inform mitigation if required. The trees proposed for felling (4 x *Leylandii*, see above) are not considered to contain any potential roost features (PRFs) such as rot holes, hollows, loose flaking bark or dense ivy cladding etc. It is possible, however, that some of the more mature trees within the site could support such features. The mature plantings within the garden provide sheltered habitat and strong linear landscape features which are likely to be used by bats when foraging.

On this basis the site is provisionally assessed as **of value at least within the immediate vicinity for bats**.

The capacity of the proposed works to impact bats can only be assessed following the further survey work recommended in the bat report.

All UK bat species and their roosts are legally protected under the Conservation Regulations 2010, amended (by the EU Exit Regulations) 2019; most are also S41 priority species.

3.4.5. Hedgehog

Hedgehog *Erinaceus europaeus* could occur within the site, potentially nesting and / or hibernating within the garden and associated hedges. There are desk study records for this species from the surrounding area. Although formerly common this species is in decline due to the loss of suitable habitat and is listed on S41 of the NERC Act as a priority species for conservation. The site is therefore considered to be of **value within the immediate vicinity for this species**.

If present, Hedgehog could be negatively impacted during aspects of site clearance.

3.4.1. Dormouse

Dormice *Muscardinus avellanarius* are typically found in native species-rich and / or ancient woodland and associated hedgerows. They are primarily arboreal and require good structural development and horizontal connectivity to move through the canopy. There are no desk study records for this species: Dormouse distribution within Cornwall is concentrated around the middle and eastern parts of the county with records very scarce around Truro and further to the west (Groves, 2013). On this basis, the site is **not considered to be important for dormice**.

Dormice and their nests are legally protected under the Conservation Regulations; they are also UK and Cornwall BAP Priority species.

3.4.2. Otter

There is no aquatic habitat within the site and no suitable habitat for Otter *Lutra lutra*. Although this species has been recorded within the desk study associated with watercourses in the nearby area the site is sub-optimal for this species and assessed as of **no value for otter**.

Otters and their resting places are legally protected under the Conservation Regulations 2010 and are a S41 priority species for conservation.

3.4.3. Other mammals

There are no desk study records for other protected mammal species (such as Brown Hare *Lepus lepus* or Harvest Mouse *Micromys minutus*) and the site is considered to be of **no value for these species**.

3.4.4. Birds

Bird species seen and / or heard during the February site visit include Collared Dove *Streptopelia decaocto*, Dunnock *Prunella modularis*, Goldcrest *Regulus regulus*, Robin *Erithacus rubecula*, Greenfinch *Chloris chloris*, Chiffchaff *Phylloscopus collybita*, Wren *Troglodytes troglodytes*, Blackbird *Turdus merula*, Blue Tit *Cyanistes caeruleus* and Great Tit *Parus major*. A dedicated bird survey was beyond the remit of the survey and this merely reflects the species that were conspicuous within the site on the day. Of the species listed above Dunnock is a S41 species also listed on the amber list of species of conservation concern (Stanbury *et al.*, 2022). Although the site is dominated by non-native and predominantly evergreen species which tend to be less attractive for most nesting birds the scale and maturity of the planting makes it likely that a reasonable range of species may nest and / or forage here.

There are desk study records for a range of notable bird species, including red listed, S41 (though relatively common and widespread) species such as Song Thrush *Turdus philomelos*, Bullfinch *Pyrrhula pyrrhula* and House Sparrow *Passer domesticus* which could potentially make use of the site. Also listed are less common migrants such as Serin *Serinus serinus*, Spotted Flycatcher *Muscicapa striata*, Yellow-browed Warbler *Phylloscopus inornatus* and Wryneck *Jynx torquilla*. Although the site itself may not be important for these species the location of St Buryan near to Land's End does mean that unusual species are likely to occur from time to time within the area and the garden may therefore be used by such species. Other records for waders and seabirds such as Green Sandpiper *Tringa ochropus* and Gannet *Morus bassanus* are likely to relate to coastal habitats within the desk study area but not present within the site.

On this basis, the site is considered to be of **value to birds at least within the immediate vicinity**.

Without mitigation, vegetation clearance of trees, hedges and to some extent introduced shrubs could impact nesting birds.

All birds are legally protected whilst nesting under the Wildlife & Countryside Act 1981, as amended.

3.4.5. Reptiles and amphibians

Reptiles and amphibians require small scale variations in habitat with bare ground or short vegetation immediately adjacent to taller dense vegetation in which to retreat from predators and protected sites for hibernation. Whilst reptiles require open habitat for basking, amphibians require aquatic habitat for breeding.

There are desk study records for Adder *Vipera berus* and Slow-worm *Anguis fragilis* but no records for amphibians from the surrounding area. The presence of low numbers of common species (such as Slow Worm and Common Toad *Bufo bufo*) within marginal areas of the grassland and hedges, as well as, within the sheltered environment of the piggery cannot be ruled out. In addition, dry stone granite walls to the east of the entrance gate, a vegetated spoil mound and log pile near to the chalet (visible in Photo 13 above) and stacked roofing slates outside the piggery provide potential habitat for this group. On this basis the site is assessed as **potentially of value within the immediate vicinity for reptile and amphibians** and a precautionary approach during site clearance is therefore advised (see below).

Adder, Common Lizard *Zootoca vivapora*, Slow Worm, Grass Snake *Natrix natrix* and Common Toad are priority S41 species. All UK native reptiles and amphibians are partially protected under the Wildlife and Countryside Act 1981.

3.4.6. Invertebrates

No invertebrates were recorded during the survey. There are desk study records for a number of S41 moth species from near to the site including species such as Garden Tiger *Arctia caja*, Lackey *Malacosoma Neustria* and White Ermine *Spilosoma lubricipeda* as well as Wall butterfly *Lasiommata megera*.

Garden areas and the hedges within the site are likely to support a suite of invertebrate species, including potentially some of the species listed above. The site is assessed as of **value within the immediate vicinity for invertebrates**. Proposals for the site are likely to have a localised temporary effect on this, generally, highly mobile group. Nevertheless, opportunities to enhance the site through future management for invertebrates should be pursued.

4. RECOMMENDATIONS

4.1. Relevant legislation/policy and recommended mitigation

Based upon the above evaluation of the ecological features within the site and assessment of likely ecological impacts of the proposed development the following mitigation is recommended. Key relevant legislation/policy is highlighted to provide context (see also *Appendix 3* for a summary of relevant wildlife legislation and policy).

4.1.1. General

Local authorities have a duty to further the conservation of UK S41/BAP priority habitats under Section 74 of the Countryside and Rights of Way (**CROW**) Act 2000 and to protect, restore, re-create and aid recovery of these habitats under the **National Planning Policy Framework** (NPPF, 2021). The Natural Environment and Rural Communities (**NERC**) Act (HM Government, 2006) also confers a legal duty on every public authority to conserve biodiversity under Section 40(1). **Cornwall Council Planning for Biodiversity Guide** (Cornwall Council, 2018) sets out what the planning department expects from applicants when considering potential impacts upon biodiversity.

- Develop plans to accurately establish the area of work and areas of habitat to be maintained and lost such that areas outside of the site can be adequately protected.
- Develop a landscape plan to favour native plant species and species of known wildlife value to maximise habitat and opportunities for as wide a range of species as possible.
- Cut vegetation (following guidance below) and strip any topsoil from parts of the site where built development is planned prior to the start of work and store appropriately for subsequent re-use within landscaped areas of the site where possible. To avoid negatively impacting hedges and the rooting zones of trees do not pile up or store soil or otherwise change existing ground levels alongside hedge-banks or under the crown spread of trees.

4.1.2. Introduced shrubs and scattered trees

- Carry out vegetation clearance and pruning outside the bird nesting season (see below).
- Plan the future management of the garden so as to minimise impacts upon protected faunal species and maximise opportunities for wildlife (see also enhancement section below)

- Excavate area for septic tank outside the crown spread of surrounding trees—if this is not possible a tree survey (to BS5837) to establish trees to be removed / retained and inspection of trees to be impacted for potential roost features by a bat ecologist may be required. Arising spoil should be appropriately disposed of and not lead to significant changes in levels within rooting zones which could lead to root asphyxiation and impact the long term viability of trees within the surrounding area.

4.1.3. Grassland

- Follow a precautionary approach during site clearance for reptiles (see below).

4.1.4. Hedges

Local authorities have a duty to further the conservation of UK S41/BAP priority habitats under Section 74 of the Countryside and Rights of Way (**CROW**) Act 2000 and to protect, restore, re-create and aid recovery of these habitats under the **National Planning Policy Framework** (NPPF, 2021). The Natural Environment and Rural Communities (**NERC**) Act (HM Government, 2006) also confers a legal duty on every public authority to conserve biodiversity under Section 40(1). **Cornwall Council Planning for Biodiversity Guide** (Cornwall Council, 2018) sets out what the planning department expects from applicants when considering potential impacts upon biodiversity.

- Remove the Leylandii within H1 during winter following guidance for birds (and bats) below.
- Following Cornwall Council (2018) all retained hedges should be buffered from built development by at least 2 metres (and to at least the crown-spread where hedgerow trees are present). Fence off sections of hedges in proximity to the development area during construction with Heras fence or similar to secure this buffer and prevent construction works from degrading this habitat.

4.1.5. Invasive species

These species are listed on Schedule 9 of the **Wildlife and Countryside Act** making it an offence ‘to cause [them] to spread in the wild’.

- Contractors must be made aware of the presence of non-native invasive species and the importance of not causing them to spread.
- Where disturbance of invasive species cannot be avoided care must be taken to retain arising material within the site and to ensure appropriate disposal (such as deep burial or desiccation in a designated area followed by burning).

4.1.6. Badger

Badgers and their setts are legally protected under the **Protection of Badgers Act** 1992 (HM Government, 1992).

- As a precaution, any excavations left open overnight during construction should be covered or provided with a means of escape such as a sloping plank to prevent Badgers (and / or other mammals) from becoming trapped. Ensure that no wire or other material which could present a risk of entanglement are left on site.
- Any new fencing surrounding the site (if required) should be wildlife permeable, incorporating small gaps to allow foraging species to continue to pass through the site.

4.1.7. Bats

All UK bat species and their roosts are legally protected under the **Conservation Regulations 2010**. UK BAP / S41 priority species are protected under legislation and planning policy as follows: **CROW Act 2000**, the **NERC Act 2006** and **NPPF 2021**.

- Follow guidance within the bat report (Tunmore, 2023). Carry out further survey work to assess if and how bats are using the buildings within the site and inform a more accurate assessment of the value of the site to bats.
- As a precaution an effort should be made to reduce potential light spill from the new development into the surrounding area. Refer to Cornwall Council (2018) and Bat Conservation Trust (2018) for best practice guidance.
- If further trees need to be removed they may need to be assessed for potential roost features by a bat ecologist.

4.1.8. Hedgehog

Local authorities have a duty to further the conservation of UK BAP priority species under the **NERC Act (2006)**, the **CROW Act (2000)** and **NPPF (2021)**.

- Carry out site clearance and any work impacting hedges with care during the active season for hedgehogs (March–October).
- Any new fencing surrounding the site should be hedgehog permeable, incorporating small gaps to allow them to continue to pass through the site.

4.1.9. Birds

All birds, their young and eggs are legally protected whilst nesting under the **Wildlife & Countryside Act 1981**, as amended. Local authorities have a duty to further the conservation of UK BAP priority species under the **NERC Act (2006)**, the **CROW Act (2000)** and **NPPF (2021)**.

- Avoid disturbance to nesting birds by undertaking vegetation clearance affecting woody vegetation (including felling of the *Leylandii* and removal of Ivy cladding wall-tops on the barn and lean-to adjacent to the Granary) during the winter months (1 October to the end of February). If this is not practicable, an ecologist must carry out a search of the vegetation / buildings immediately before clearance / demolition / removal. If nesting birds are found, work within 5m of the active nest must stop until the chicks have fledged. Peak nesting season is usually April to July and works are most likely to be delayed during these months.
- As a precaution the piggery should also be checked for nesting birds prior to demolition. If nesting birds are found, work must stop (as above).

4.1.10. Reptiles and amphibians

Local authorities have a duty to further the conservation of S41 priority species under the **NERC Act (2006)**, the **CROW Act (2000)** and **NPPF (2021)**. Legal protection is also given under the **Wildlife & Countryside Act 1981**.

- Adopt a precautionary approach when undertaking work with potential to impact these groups as follows: vegetation clearance in grassland areas, soil stripping (including work to re-expose cobbles and the drainage ditch / swale outside the Granary), demolition of the piggery, moving of slate / log piles and other debris as required. Work during the active season for reptiles and amphibians (March to October) during warm weather, working in one direction toward areas of suitable retained habitat (such as the hedges). This will allow any individuals present a chance to move out of the way and avoid them becoming trapped in areas of unsuitable habitat. Remove all stored items within the

piggery and stored slates with care and by hand prior to the start of works. If significant numbers of reptiles are found contact an ecologist for further advice.

4.2. Potential for Site Enhancement

Under the **Environment Act** recently passed into law (HM Government, 2021) there is a legal requirement for all development requiring planning permission to deliver at least a 10% Biodiversity Net Gain (BNG). Provision is made for this in terms of planning policy under **NPPF** (2021) in the **Cornwall Local Plan** (Cornwall Council 2016). Best practice guidance for developers is provided in the **Cornwall Planning for Biodiversity Guide** (Cornwall Council, 2018).

BNG calculations are not included in this report as the scale of the development falls below that beyond which formal use of the DEFRA Metric is required by Cornwall Council. Recommendations for achieving BNG are provided below:

- Develop a landscape plan to favour native plant species and species of known wildlife value in order to offset habitat loss and maximise opportunities for as wide a range of species as possible.
- Favour areas of grassland lightly managed for species richness rather than frequently mown, species poor lawn within at least some less regularly used areas when planning the layout of the garden. Cut these areas as infrequently and late in the season as possible to allow plants a chance to flower and set seed and always remove the arisings in order to avoid a build-up of fertility which will help less competitive wildflower species to establish and persist.
- Enhance hedges by planting appropriate native shrub whips such as Hazel *Corylus avellana*, Blackthorn and Hawthorn where possible.
- Incorporate appropriate native trees and shrubs, such as Hazel, Sessile Oak *Quercus petraea* Hawthorn and Blackthorn, within the landscape plan and / or species of known wildlife value. Berry or fruit bearing species with single, scented flowers are, in general, likely to be more attractive to wildlife.
- Whilst it is acknowledged that there is a desire to maintain the integrity of the garden and the collection of rare cultivated species it should be possible to plan future management of the main planted areas to allow for some increase in opportunity for native species. Further thinning / pruning of the tree canopy and some reduction of the current extent of spreading bamboo species to re-establish more defined clumps could be used to create additional openings allowing more light in and having the effect of creating a series of small glades connected by widened paths with occasional scalloped edges. Intermittent removal of some of the built-up litter of bamboo leaves would be likely to encourage the ground flora to develop and additional species could be planted into newly opened up areas. Native woodland understory species including Hazel, Blackthorn, Hawthorn, Wild Apple *Malus sylvestris*, Wild Service Tree *Sorbus torminalis* and / or fruits such as Raspberry *Rubus idaeus*, Redcurrant *Ribes rubrum* and Gooseberry *Ribes uva-crispa* might, for-instance, be planted in some areas. This would increase diversity and provide an additional food source for faunal species whilst opening up the canopy could enhance foraging opportunities for bats. Reducing the current extent of more vigorous spreading bamboo species is likely to be challenging and may require the use of a mini-digger. Subsequent installation of root barriers to restrict some species may be desirable. Canopy thinning would need to be carefully undertaken so as not to affect the micro-climate required by more tender cultivated species within the collection and it is suggested that specialist horticultural advice is sought to develop a management plan for the site prior to carrying out extensive work. If machinery is used, regard should be paid to factors such as the potential impacts upon tree roots and soil compaction as well as potential for disturbance to protected species (such as nesting birds and badger—with further ecological input as required).
- If a summerhouse is installed at the eastern end of the site in the future, carry out site clearance following guidance for nesting birds above and avoid the need for excavated foundations so as to

minimise impacts upon soils and tree roots. The structure should remain unlit so as to minimise light spill and the potential impacts upon faunal species such as bats.

- Cornwall Council, (2018) requires that all new *residential* development should incorporate bat or bird boxes / bricks and bee bricks. Purpose built features can easily be incorporated into the scheme and a number of potentially suitable products are commercially available. Further advice can be provided regarding the most suitable products on request.

Report ends.

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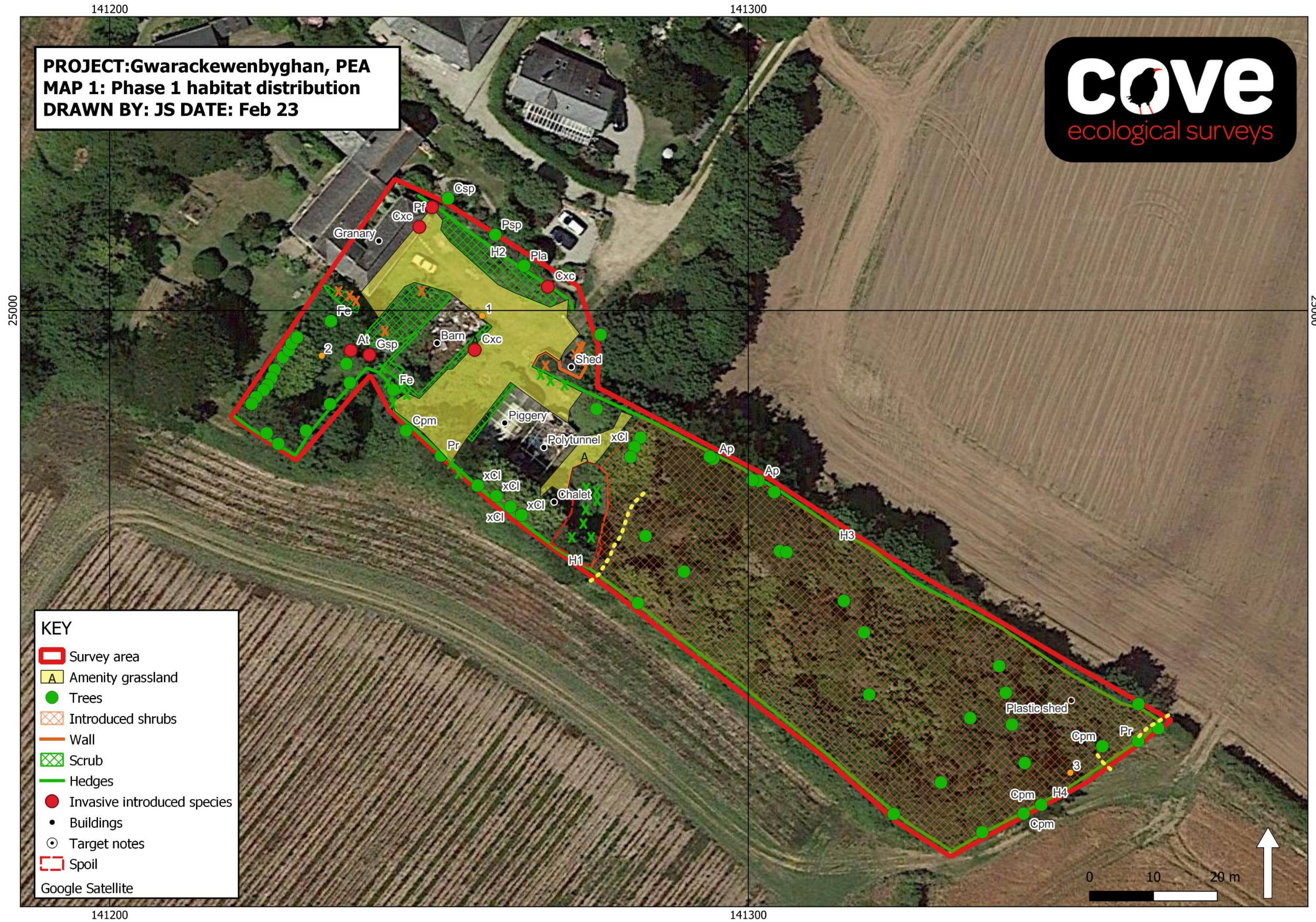
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Appendix 1:

Map 1 Phase 1 Habitat Distribution



Target Notes to Map 1

1. Pile of roofing slates – some potential for reptiles
2. Proposed location of septic tank
3. Proposed location of future summerhouse

Species codes

Ap *Acer pseudoplatanus* Sycamore
At *Allium triquetrum* Three-cornered Leek
Csp *Crataegus* sp Hawthorn species
Cpm *Cupressus macrocarpa* Monterrey Pine
Cxc *Crocsmia xcrocsmiiflora* Montbreta
XCl XCuprocyparis *leylandii* Leylandii
Fe *Fraxinus excelsior* Ash
Gsp *Gunnera* sp. Gunnera species
Pf *Petasites fragrans* Winter Heliotrope
Pla *Prunus laurocerasus* Cherry Laurel
Pr *Pinus radiata* Monterrey Pine
Psp *Prunus* sp. Cherry species

Appendix 2: Table 1 Species list

Common Name	Latin Name	Barn	Garden	Trees	Scrub	Amenity grassland	Hedge	Granary	Piggery	Polytunnel
Bear's breeches	<i>Acanthus mollis</i>		O							
Sycamore	<i>Acer pseudoplatanus</i>						LD			
Maple sp	<i>Acer sp</i>		O							
Agave	<i>Agave americana</i>		R							
Three-cornered garlic	<i>Allium triquetrum</i>		LA							
Cow parsley	<i>Anthriscus sylvestris</i>		O							
Italian lords-and-ladies	<i>Arum italicum</i>		R							
Hart's tongue	<i>Asplenium scolopendrium</i>	O	O				O		O	
Spotted laurel	<i>Aucuba japonica</i>		O							
Azalea	<i>Azalea sp.</i>		LF							
Bamboo	<i>Bambusoideae sp.</i>		D							
Daisy	<i>Bellis perennis</i>					LF				
Betony	<i>Betonica officinalis</i>						R			
A moss	<i>Brachythecium rutabulum</i>				LF					
Buddleja	<i>Buddleja davidii</i>		R							
A moss	<i>Calliergon cuspidata</i>					LA				
Camellia	<i>Camellia sp.</i>		F							
Wavy bitter-cress	<i>Cardamine flexuosa</i>	O	R							O
Pendulous sedge	<i>Carex pendula</i>				O					
Black knapweed	<i>Centaurea nigra</i>					LF				
Common mouse-ear	<i>Cerastium fontanum</i>					R				
Mediterranean fan palm	<i>Chamaerops humilis</i>		R							
Spear thistle	<i>Cirsium vulgare</i>					R				
Hawthorn	<i>Crataegus monogyna</i>						LF			
Hawthorn species	<i>Crataegus sp</i>			R						
Crinodendron	<i>Crinodendron hookerianum</i>		R							
Montbretia	<i>Crocsmia x crocosmiiflora</i>						R	LA		
Leylandii	<i>XCuprocyparis leylandii</i>						LD			
Monterrey cypress	<i>Cupressus macrocarpa</i>			LF			O			
Holly fern sp	<i>Cyrtomium sp.</i>								R	
Cock's-foot	<i>Dactylis glomerata</i>					F				
Tree fern	<i>Dicksonia antarctica</i>		R							
Foxglove	<i>Digitalis purpurea</i>				O					R
Teasel	<i>Dipsacus fullonum</i>						R			
Broad buckler fern	<i>Dryopteris dilatata</i>		O				F			
Common male fern	<i>Dryopteris filix-mas</i>		O				O			
Eleagnus species	<i>Eleagnus species</i>		O				R			
Willowherb	<i>Epilobium sp.</i>	O	O							
Eucalyptus species	<i>Eucalyptus sp</i>		O							

Common Name	Latin Name	Barn	Garden	Trees	Scrub	Amenity grassland	Hedge	Granary	Piggery	Polytunnel
Evergreen spindle	<i>Euonymus japonicus</i>		O							
Honey spurge	<i>Euphorbia mellifera</i>		O						R	
Petty spurge	<i>Euphorbia peplus</i>									R
Fatsia	<i>Fatsia japonica</i>		O							
Lesser celandine	<i>Ficaria verna</i>		O							
Ash	<i>Fraxinus excelsior</i>				O					
Fumitor sp	<i>Fumaria sp</i>		R							
Shining crane's-bill	<i>Geranium lucidum</i>									O
Dove's-foot crane's-bill	<i>Geranium molle</i>					O	O			
Herb-robert	<i>Geranium robertianum</i>	R	R							
Griselinia	<i>Griselinia littoralis</i>		O							
Giant-rhubarb	<i>Gunnera tinctoria</i>		LA							
Hebe	<i>Hebe sp.</i>		O							
Atlantic ivy	<i>Hedera hibernica</i>	LA/D	LA		LD		A/LD			
Ginger lilly	<i>Hedychium gardenerianum</i>		O							
Hogweed, cow parsnip	<i>Heracleum sphondylium</i>		O							
Yorkshire fog	<i>Holcus lanatus</i>					D	LF			O
Hydrangea	<i>Hydrangea sp.</i>		O							
Tutsan	<i>Hypericum androsaemum</i>		O							
Common cat's ear	<i>Hypochaeris radicata</i>					O				R
Holly	<i>Ilex aquifolium</i>		O							
Sheep's-bit	<i>Jasione montana</i>						R			
Jasmine sp	<i>Jasminum sp</i>								R	
Chilean wine palm	<i>Jubaea chilensis</i>		R							
A moss	<i>Kindbergia praelonga</i>					LF				
Perennial rye-grass	<i>Lolium perenne</i>					F				
Chilean Myrtle	<i>Luma apiculata</i>		O							
Daffodils	<i>Narcissus sp.</i>					O				
Southern beech	<i>Nothofagus sp.</i>		R							
Evening primrose	<i>Oenothera sp</i>					R				
Olive	<i>Olea europaea</i>		R							
Olearia solandri	<i>Olearia solandri</i>		R							
New Zealand holly	<i>Osmanthus sp</i>		R							
Pellitory of the wall	<i>Parietaria judaica</i>								O	
Winter heliotrope	<i>Petasites fragrans</i>						LA			
New Zealand flax	<i>Phormium sp.</i>		R							
White spruce	<i>Picea glauca</i>			R						
Scots pine	<i>Pinus sylvestris</i>			O			O			
Pittosporum	<i>Pittosporum tenuifolium</i>		LF				LF			
Ribwort plantain	<i>Plantago lanceolata</i>					F				
Annual meadow grass	<i>Poa annua</i>									F
Podocarp species	<i>Podocarpus sp</i>		R							
Common polypody	<i>Polypodium vulgare</i>						O			
Soft shield fern	<i>Polystichum setiferum</i>		F				O			

Common Name	Latin Name	Barn	Garden	Trees	Scrub	Amenity grassland	Hedge	Granary	Piggery	Polytunnel
Primrose	<i>Primula vulgaris</i>		R							
Cherry	<i>Prunus sp.</i>			R						
Blackthorn	<i>Prunus spinosa</i>						LA			
Ribbon fern species	<i>Pteris sp</i>								O	
Creeping buttercup	<i>Ranunculus repens</i>					F				
Rhododendron	<i>Rhododendron species</i>		O							
Blackberry/bramble	<i>Rubus fruticosus agg.</i>	LF	LF		F/LD		LA	F		
Sheep's sorrel	<i>Rumex acetosella</i>					O				
Broad-leaved dock	<i>Rumex obtusifolius</i>				R					
Elder	<i>Sambucus nigra</i>						O			
Krauss's clubmoss	<i>Selaginella kraussiana</i>		R						O	
Red campion	<i>Silene dioica</i>		O		O		O			
Alexanders	<i>Smyrnium olusatrum</i>		O							
Mind-your-own-business	<i>Soleirolia soleirolii</i>		LA							
Smooth sow-thistle	<i>Sonchus oleraceus</i>	R								
Dandelion	<i>Taraxacum officinale agg.</i>					R				
Yew	<i>Taxus baccata</i>		R							
Chinese windmill palm	<i>Trachycarpus fortunei</i>		R							
White clover	<i>Trifolium repens</i>					F				
European gorse	<i>Ulex europaeus</i>						R			
Elm species	<i>Ulmus sp.</i>		O				O			
Navelwort	<i>Umbilicus rupestris</i>						O			
Common nettle	<i>Urtica dioica</i>	O	O		LF					
Germander speedwell	<i>Veronica chamaedrys</i>		O			O				
Chain fern	<i>Woodwardia radicans</i>		O							

DAFOR is a nominative scale where:

D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare. L = Locally, e = Edge v = Very

Appendix 3: Summary of Key Wildlife Legislation and Relevant Planning Policy

Legislation

- **Wildlife and Countryside Act 1981** consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the conservation of wild birds (Birds Directive) in Great Britain. This Act gives legal protection to birds, other animals and plants, Sites of Special Scientific Interest (SSSI's) and other protected areas and contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife
- **Conservation of Habitats and Species Regulations 2017.** The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites. Under the Regulations, competent authorities i.e. any Minister, government department, public body, or person holding public office, have a general duty, in the exercise of any of their functions, to have regard to the EC Habitats Directive and Wild Birds Directive.
- **Countryside and Rights of Way (CROW) Act 2000.** This Act increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation. The Act places a duty on Government Departments to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity
- **Natural Environment and Rural Communities (NERC) Act 2006.** This legislation requires the Secretary of State to publish a list of species of flora and fauna and habitats considered to be of principal importance for the purpose of conserving biodiversity. It is the duty of Local Authorities to further the conservation of NERC / Section 41 (S41) habitats and species under section 40. S41 habitats and species were previously referred to as Biodiversity Action Plan (BAP) habitats and species.
- **Environment Act (HM Government, 2021)** This legislation requires that all development requiring planning permission delivers at least a 10% Biodiversity Net Gain (BNG).
- **Protection of Badgers Act 1992** This Act gives legal protection to badgers and their setts. Making it

an offence to disturb a badger when it is occupying a sett.

Planning Policy

- **National Planning Policy Framework 2021.** The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. Chapter 11 is entitled: *Conserving and enhancing the natural environment*.

Relevant policies include:

- Protecting and enhancing valued landscapes, geological conservation interests and soils
- Recognising the wider benefits of ecosystem services
- Minimising impacts on biodiversity and providing net gains in biodiversity where possible
- If significant harm resulting from a development cannot be avoided, adequately mitigated or compensated for, then planning permission should be refused
- Proposed development on land within or outside a SSSI likely to have an adverse effect on a SSSI should not normally be permitted
- Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted
- Opportunities to incorporate biodiversity in and around developments should be encouraged
- Planning permission should be refused for development resulting in the loss of deterioration of irreplaceable habitats
- By encouraging good design, planning decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation (HM Government, 2012).
- **Cornwall Local Plan 2016.** This document provides an overarching planning policy framework for Cornwall covering the period up to 2030. Policy 23, section 3 relate to biodiversity. Key points are as follows:
 - Developments should conserve, protect, and where possible, enhance biodiversity and geodiversity interests and soils commensurate with their status and giving appropriate weight to their level of 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.
 - Adverse impacts on designated sites, priority habitats or species must be avoided and suitable mitigation/compensation be provided subject to the relevant legislation.
 - 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 (Cornwall Council, 2016).