

**REPTILE SURVEY OF LAND AT
TREGODDICK MANOR FARM,
MADRON, CORNWALL**

August / September 2018



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REPTILE SURVEY OF LAND AT TREGODDICK MANOR FARM, MADRON, CORNWALL

OS Grid Ref: SW 454 319

Survey dates: 28th August to 24th September 2018

Surveyor: Amy Horn-Norris BSc (Hons) MSc GradCIEEM

Time spent on site: 7 survey visits of ½ hour
+ 1 hour to set out felts

Taxonomic group: Reptiles

Report authors: Amy Horn-Norris BSc (Hons) MSc GradCIEEM

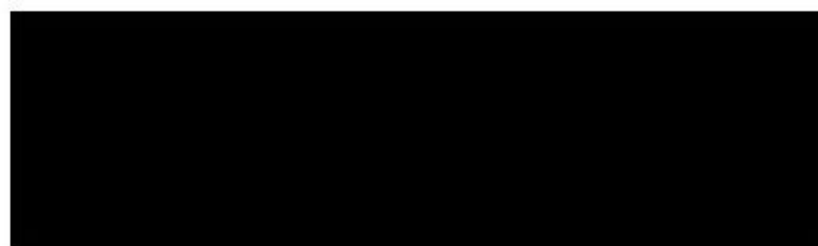
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Report for: Mark Clyndes

Document approved by: Adrian Spalding PhD Director

Signature:



Date: 6th October 2018

1. SUMMARY

Spalding Associates (Environmental) Ltd was instructed by Mark Clyndes to carry out a reptile survey of an area of land adjacent to Tregoddick Farm, Madron, Cornwall. The site is proposed for the development of new residences. The area surveyed was within the study area indicated on Map 1.

The aim of the survey was to investigate if reptiles were present on site and if so which species of reptile were present within the proposed development site and the status of the study area with respect to reptile populations according to standard national guidance. Artificial refugia were placed on the study area on the 14th August before seven field surveys were carried out between 28th August and 24th September 2018; during which each survey refugium was examined and observations of natural basking points were undertaken.

All UK reptile species are protected under the Wildlife and Countryside Act 1981 (as amended) from intentional killing or injury and also from sale or attempted sale.

No reptiles were recorded on site during any of the survey visits. From the results of this survey the site would not be considered a key reptile site as it does not meet any of the standard criteria that are used in assessing reptile sites.

During surveys, sightings of amphibians were also recorded. Three species of amphibians were recorded at this site; Common Toad, Common Frog and Palmate Newt.

As there is no direct evidence that reptiles are present on the site Reasonable Avoidance Measures would not be necessary as the risk of killing or injuring individual animals at the construction stage is likely to be negligible.

Enhancement of habitat for species of amphibian and reptile could be considered as part of the design proposal. This would include creating ponds and ditches and retaining open areas of long tussocky grassland around their boundaries and adjacent to the Cornish hedgebanks. The creation of log and brash piles arising from the woody vegetation clearance to create cover and enhance prey availability around the edges of the proposed development could also be considered.

2. BACKGROUND

Spalding Associates (Environmental) Ltd was instructed by Mark Clyndes to carry out a reptile survey of an area of land adjacent to Tregoddick Farm, Madron, Cornwall. The site is proposed for the development of new residences.

A reptile survey was undertaken due to recommendations made by Amy Horn-Norris of Spalding Associates (Environmental) Ltd in an Extended Phase 1 Habitat survey report dated July 2018 which identified the possible use of the land by reptiles.

3. SURVEY METHOD

3.1. Survey aim

The aim of the survey was to investigate:

- which species of reptile were present within the proposed development site
- the status of the study area with respect to reptile populations according to standard national guidance.

3.2. Survey design and methodology

3.2.1. Overview

The method used to survey the reptile populations within the study area followed the methodology described by Froglife (Froglife 1999), the Herpetofauna Worker's Manual (Gent and Gibson, 2003) and, as far as possible, the best practice guidelines from the Herpetofauna Groups of Britain and Ireland (HGBI, 1998).

The use of artificial refugia for surveying reptiles on a site is a widely used and relatively benign method; although it has limitations it is the standard method of assessing a site for a range of reptile species. Reptiles will use suitable materials (such as roofing felt and tins made of corrugated roofing metal) for shelter and sun-basking. Refugia made of these materials are therefore used to increase the likelihood of making direct observations of species that are otherwise difficult to find. Slow Worms and Grass Snakes in particular will use artificial refugia. Viviparous Lizards and Adders have been known to bask on the top and are occasionally found sheltering underneath. The results from using artificial refugia improve the longer they are in place through a season and the less they are disturbed during that time.

3.2.2. Refugia materials

The artificial refugia were heavy gauge mineralised roofing felt cut to approximately 50cm x 50cm and corrugated metal sheets cut to approximately 1m x 1m.

3.2.3. Siting of the refugia

Refugia were placed on the 14th August 2018 after a walkover of the study area was undertaken to identify optimum positions for attracting a range of reptile species. The

refugia were placed in accordance with the recommendations from Gent and Gibson (2003) and Froglife (1999) and over as many habitat types as possible since each species has its own particular habitat requirements.

The refugia were placed in partially sunny areas across the site which supported a range of habitats including areas of semi-improved neutral grassland, scrub, tall ruderals, ephemerals and Cornish hedgebank. Refugia were in areas that reptiles would be more likely to utilise for thermo-regulation.

A total of 40 refugia were placed across the site (Map 1).

3.2.4 Field method

Refugia were placed across the site on 14th August 2018 and allowed to ‘bed-in’ for two weeks. Surveys commenced on the 28th August 2018. Each survey visit consisted of a walkover of the study area examining each artificial refugium, and making direct observations of natural basking points such as scrub edges, bare ground and exposed rocks adjacent to long vegetation. When reptiles were observed on or under the refugia, or on nearby features, the number of individuals, the species, the sex (where possible) and maturity of each individual was recorded for the nearest refugia. Records of no reptiles or missing refugia were also kept.

All results from visits were recorded, compiled and analysed.

3.2.5 Number and conditions for field survey visits

The first field survey visit was carried out on 28th August 2018; surveys then continued throughout August and September, in suitable weather conditions, until the last survey on 24th September 2018. In total seven survey transects were undertaken within the study site. The weather conditions and dates for each survey are included in Table 1. The survey season was warm and mostly dry which allowed survey visits to be conducted with ease in weather conditions that were as good as possible (i.e. avoiding windy days and rain).

Table 1. Dates and weather conditions of each survey

Date	Cloud (%)	Temp (°C)	Weather
28/08/2018	100	17	Calm and dry
30/08/2018	80	16	Calm and dry
11/09/2018	100	17	Moderate SW breeze, fine drizzle
13/09/2018	65	15	Dry but recent rain, partly sunny, 4 mph NW breeze
17/09/2018	80	17	Light SW breeze
19/09/2018	75	18	Fresh SW breeze
24/09/2018	20	14	Sunny and calm

3.3 Limitations of the survey

Surveys were carried out towards the end of the active period with the majority of surveys being completed during the month of September. Having surveys more spread out over

the course of the active period may have resulted in higher numbers of reptiles being recorded. However the weather in September was mild and surveys were generally completed in optimal weather conditions and a high density of refugia were used; these surveys are therefore considered to represent a good picture of the reptile activity at this site.

4. SURVEY RESULTS

4.1. Description of potential reptile habitats within the study area

The study area is a hardstanding entrance track surrounded by introduced shrub leading to an area of rough grassland enclosed on three sides by Cornish hedgebanks. The study area lies at the eastern edge of the village of Madron near Penzance in Cornwall. There is a diversity of habitats on site with a combination of semi-improved neutral grassland, scrub, areas of shrub, bracken/scrub matrix, tall ruderals and Cornish hedgebanks.

Tregoddick Farmhouse is present a short distance to the north-east. Directly adjacent to the north and west can be found relatively dense residential housing and roads. To the south and east are lower density residences set within generous gardens

Within the study area it is likely that the rough grassland, scrub/ruderal fringes and Cornish hedgebank habitats are suitable for the more widespread UK reptile species, particularly Slow Worm and Viviparous Lizard and it is also likely that these areas support a good population of invertebrate prey for these species.

4.2. Results from refugia surveys

No reptiles were recorded during the survey period. The weather conditions of the surveys are summarised in Table 1.

5. EVALUATION

5.1. Evaluation of the reptile community within the study area

The study area of the proposed development site has not been shown to support reptiles.

Froglife, the UK herpetofauna conservation organisation, has produced a set of criteria from which the importance of a site for reptiles can be assessed (Froglife, 1999). It can be used to give an objective evaluation of the importance of the reptile interest at a site, based on survey results.

The highest count for adults of each species recorded on a single survey day, and within the prescribed density of 5-10 refugia per hectare, is taken to score the population of each species found at the site (Table 2).

Table 2: Reptile Site Survey Assessment (Froglife 1999)

Species	Low population <i>Score 1</i>	Good population <i>Score 2</i>	Exceptional population <i>Score 3</i>
Adder	<5	5-10	>10
Grass Snake	<5	5-10	>10
Viviparous Lizard	<5	5-20	>20
Slow-worm	<5	5-20	>20

To qualify as a Key Reptile Site the site in question must meet at least one of the criteria listed in Table 3.

Table 3 List of criteria by which a site may qualify as a Key Reptile Site (Froglife 1999)

- the site supports three or more reptile species
- the site supports two snake species
- the site supports an exceptional population of one species of reptile
- the site supports an assemblage of species scoring at least 4 in terms of the population number (Table 3) this requires a specified minimum survey effort for scoring
- the site does not satisfy items 1 – 4 but is of particular regional importance due to presence of a local rarity.

As no reptiles were recorded the site it would not be considered as a key reptile site. There may be a number of factors affecting the lack of reptile activity detected on this site. The grass is reasonably regularly managed and areas of the site are well-shaded by surrounding vegetation reducing suitable basking areas; also connectivity to high quality reptile habitat is very limited. Another factor could be predation by domestic pets as the site is surrounded by residential housing. The hedgebanks may however be of some value for connectivity to the wider landscape.

5.2. The species of reptile in the study area

No reptiles were recorded during the survey.

5.2.1 Other species recorded

During surveys, sightings of amphibians were also recorded. Both adults and a juvenile Common Toad *Bufo bufo* were recorded during four of the seven surveys. A Common Frog *Rana temporaria* was recorded during a single survey and an adult Palmate Newt *Lissotriton helveticus* was recorded during a single survey, all sightings were recorded towards the north-west of the survey area (Map 1).

5.3. Legal and policy protection of reptiles

This section is a simplified description of the legislation with respect to widespread native reptile and amphibian species in the wild. In all cases reference should be made to the original legislation for a definitive interpretation.

5.3.1.1. The Wildlife and Countryside Act 1981

In the UK all six native species of reptile receive legal protection. These species are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Section 9(5) and part of Section 9(1). Under this Act individuals of these species are protected from intentional killing or injury and also from sale or attempted sale.

5.3.1.2. Amphibians

In the UK the four native widespread species of amphibian are protected by Section 9(5) of the Wildlife and Countryside Act 1981. This includes Common Toad, Common Frog, Palmate Newt and Smooth Newt *Lissotriton vulgaris*. Under this Act individuals of these species are protected from sale or attempted sale.

5.3.1.3. The Natural Environment and Rural Communities (NERC) Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006 now places in law a duty for every public authority to conserve biodiversity. UK reptiles are listed under Section 41 of the NERC Act 2006 which makes them of “*principal importance for conserving biodiversity in England*” and the presence of reptiles on the study area would be a “material consideration” in planning decisions.

5.3.1.4. Reptiles as species of Principle Importance under the UK-Post 2010 Biodiversity Framework.

All reptiles have been identified as conservation priorities under the UK-Post 2010 Biodiversity Framework. This derives from the NERC Act 2006.

6. RECOMMENDATIONS

As there is no direct evidence that reptiles are present on the site Reasonable Avoidance Measures would not be necessary as the risk of killing or injuring individual animals at the construction stage is likely to be negligible.

Enhancement of habitat for species of amphibian and reptile could be considered as part of the design proposal. This would include creating ponds and ditches and retaining open areas of long tussocky grassland around their boundaries and adjacent to the Cornish hedgebanks. The creation of log and brash piles arising from the woody vegetation clearance to create cover and enhance prey availability around the edges of the proposed development could also be considered.

References

Froglife, 1999. *Reptile Survey; an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*, Froglife Advice sheet 10. Froglife, Halesworth.

Gent, T., and Gibson, S. (eds). 2003. *Herpetofauna Worker's Manual*. Joint Nature Conservation Committee, Peterborough,

HGBI (Herpetofauna Groups of Britain and Ireland) 1998. *Evaluating local mitigation/translocation programmes: Maintaining Best Practice and lawful standards*. HGBI, Halesworth, Suffolk.

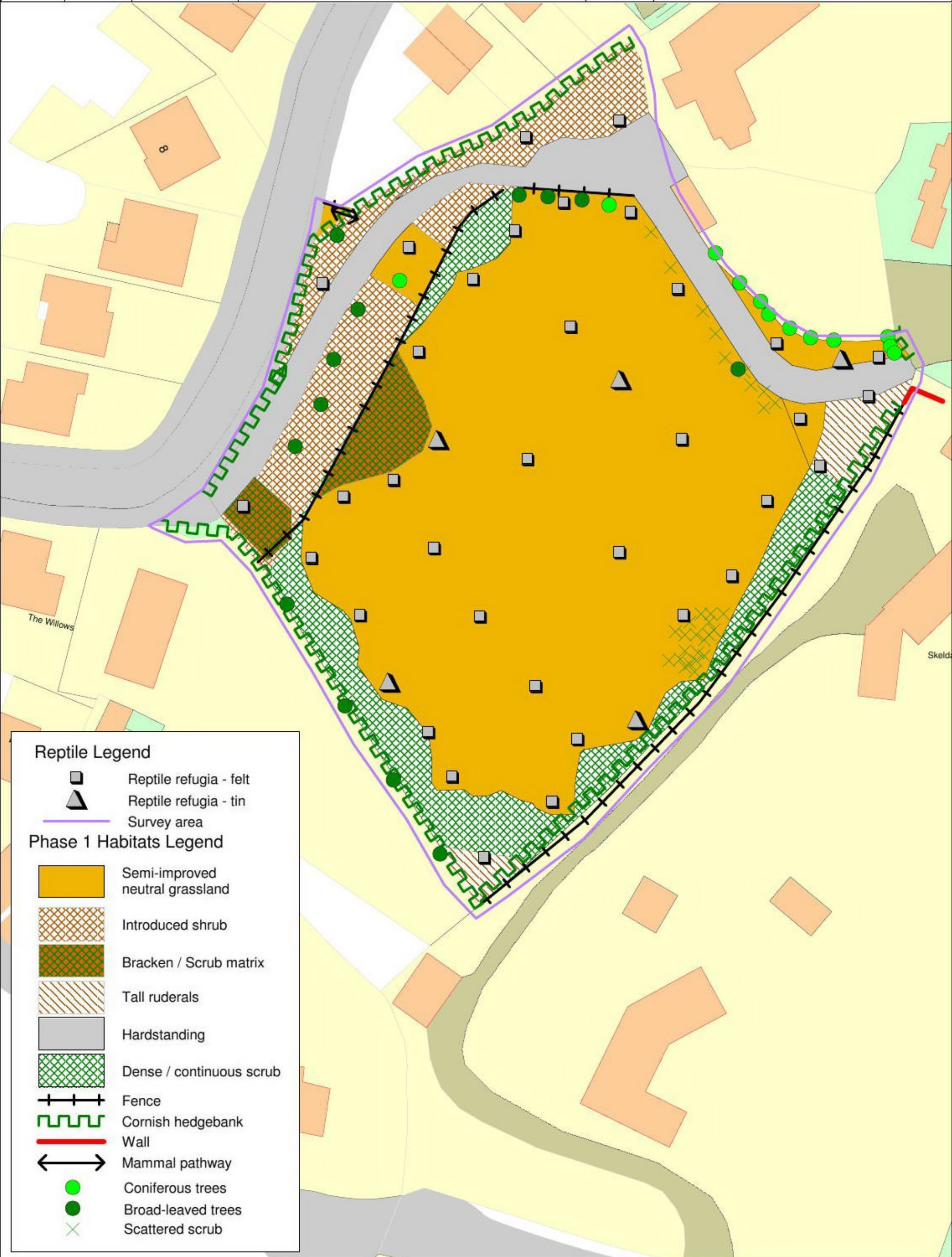
JNCC and Defra (on behalf of the Four Countries' Biodiversity Group). 2012. *UK Post-2010 Biodiversity Framework*. July 2012. Available from: <http://jncc.defra.gov.uk/page-6189>

Title: Map 1. Reptile Surveys August/September 2018



Project: Land at Tregoddick Farm, Madron, Cornwall

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Reptile Legend

- Reptile refugia - felt
- Reptile refugia - tin
- Survey area

Phase 1 Habitats Legend

- Semi-improved neutral grassland
- Introduced shrub
- Bracken / Scrub matrix
- Tall ruderals
- Hardstanding
- Dense / continuous scrub
- Fence
- Cornish hedgebank
- Wall
- Mammal pathway
- Coniferous trees
- Broad-leaved trees
- Scattered scrub