Hone Ecology
Ecological & Protected Species Surveys

# REPTILE PRESENCE/LIKELY ABSENCE TRANSLOCATION RECEPTOR SITE SURVEY REPORT

Plum Bank, Anvil Green, Waltham, Kent CT4 7EU

For Reptiles Located at Orchard Farm, Canterbury Road, Kennington, Kent TN25 4DU

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# Executive summary

| | |
|---|---|
| **Introduction** | Following an update reptile survey of Orchard Farm, Canterbury Road, Kennington, Kent TN25 4DU by Hone Ecology between March and May 2024, an exceptional population of slow worms *Anguis fragilis*, a good population of common lizard *Zootoca vivipara*, and low population of grass snake *Natrix helvetica* were identified on the proposed development site. Therefore, a translocation exercise was recommended to avoid recklessly harming the reptiles found on the Orchard Farm site. Therefore, as it is not possible to retain all the populations of reptiles within the site boundary a translocation exercise was recommended to avoid recklessly harming reptiles found on the Charing site. This survey report outlines the presence likely absence of reptiles on Plum Bank, Anvil Green, Waltham, Kent CT4 7EU to assess its suitability as a translocation receptor site.<br><br>This report will highlight key areas of value for reptiles, potential constraints and recommended further action in the form of ecological enhancements and mitigation where required.<br><br>The Translocation receptor site is located on Plum Bank, Anvil Green, Waltham, Kent CT4 7EU at OS Grid reference TR106499. The size of the proposed translocation receptor site is 7.3 hectares.<br><br>The Donor location is Orchard Farm, Canterbury Road, Kennington, Kent TN25 4DU located at OS Grid Ref: TR081241.The size of the proposed translocation donor site is 7.2 hectares. |
| **Results** | A maximum of three immature (previous season hatchling) slow worms were observed on the northeast boundary of the site during the survey on 8th May 2024, with single immature slowworms observed under the same felt on 18th March, 12th April, and 5th May 2024. A single sub-adult slow worm observed in an area of thatch within the northeast section of the site on 12th April 2024.<br><br>A single adult common lizard was observed on the northeast boundary on 5th May 2024. No other common lizards, or other species of reptile, were observed during the survey. |
| **Conclusion** | The survey results indicate no population of slow worm on the, but a breeding population to the northeast. A small population of common lizard was also recorded with a single common lizard also observed on the northeast boundary. The site has good habitat connectivity to rough grassland arable boundaries, scrub and woodland glades and has both northwest and southeast facing slopes. While boundary commuting habitats are good, the grassland requires improvement to support a larger population of reptiles. The adjacent populations of reptiles appear to be small, and do not pose an issue for introducing a larger population as long as the habitat is sufficiently improved before the translocation.<br><br>To ensure sufficient foraging and cover, a mosaic of bramble, blackthorn and hawthorn is to be planted the year before the translocation is planned. This will develop further over time with suitable management. Hibernation locations and refugia for reptiles will also be required before translocation and four hibernaculum should be constructed on site for overwintering reptiles part way up the slopes of the site and along boundaries to avoid risk of flooding and provide good habitat connectivity to further reptile foraging habitats. Log piles will also be placed along the length of the site to provide cover and foraging opportunities. Once the initial planting has been completed and hibernaculum and log piles are in place the site should be regarded as suitable for receiving any reptiles from the donor site from the following year. Indicative planting, pond and hibernacula positions indicated in Figure 3 in the Figures section.<br><br>Due to the limited number of ponds in the direct area of the site, it is recommended that a lined wildlife pond be created on the site to enhance that habitat for grass snake. The pond creation is to be constructed, lined and planted prior to the start of the translocation of reptiles from the donor site at Orchard Farm, Kennington.<br><br>Long term management of the site for reptiles has been agreed verbally with the owner of the translocation land at Plum Bank, Waltham, Mr Robert Maylam. Mr Maylam has no future plans to farm or develop the translocation area. He has agreed to provide this in writing once planning has been approved. |
| **Recommendations** | Translocation of the reptiles from the Kennington site should take place once the Plum Bank receptor site has been prepared, a reptile proof fence has been placed around the site and the scheme plans have been approved, and wildlife pond created on the receptor site.<br><br>The future management of the translocation area at Plum Bank, Waltham should follow the management and monitoring plan as outlined within this report |

# 1. Introduction

1.1 Following an update reptile survey of Orchard Farm, Canterbury Road, Kennington, Kent TN25 4DU by Hone Ecology between March and May 2024, an exceptional population of slow worms *Anguis fragilis*, a good population of common lizard *Zootoca vivipara*, and low population of grass snake *Natrix helvetica* were identified on the proposed development site. Therefore, a translocation exercise was recommended to avoid recklessly harming the reptiles found on the Orchard Farm site. Therefore, as it is not possible to retain all the populations of reptiles within the site boundary a translocation exercise was recommended to avoid recklessly harming reptiles found on the Charing site. This survey report outlines the presence likely absence of reptiles on Plum Bank, Anvil Green, Waltham, Kent CT4 7EU to assess its suitability as a translocation receptor site.

1.2 This report will highlight key areas of value for reptiles, potential constraints and recommended further action in the form of ecological enhancements and mitigation where required.

**Survey Location**

1.3 The Translocation receptor site is located on Plum Bank, Anvil Green, Waltham, Kent CT4 7EU at OS Grid reference TR106499. The size of the proposed translocation receptor site is 7.3 hectares.

1.4 The Donor location is Orchard Farm, Canterbury Road, Kennington, Kent TN25 4DU located at OS Grid Ref: TR081241.The size of the proposed translocation donor site is 7.2 hectares.

**Survey Objectives**

1.5 The key objectives of this survey are as follows:

- assess the presence or likely absence of reptiles within the site and its local environs.
- if reptiles are found to be present on the site, give an indication of the population size of each species present.
- recommend further reptile survey work and mitigation where assessed as necessary and suggest potential enhancements.

Further information on wildlife legislation and planning policy has been included in Appendix A.

**Survey Limitations**

1.6 It should be noted that this survey was carried out in accordance with current best practice, and was undertaken in suitable weather conditions. It is possible that on occasion, despite best effort, reptiles will be found on the donor site after works commence; if this is the case, advice should be sought immediately from a suitably qualified ecologist on the best course of action to take.

# 2. Methodology

## Reptile Survey

2.1 The methodology used takes due regard of the Herpetofauna Groups of Britain and Ireland (HGBI) Guidelines and Herpetofauna Workers Manual 2003 the standard recognised text for such a survey.

2.2 This survey was undertaken during March, April and May by experienced ecologists using artificial refugia in the form of roofing felt. Best practice guidelines indicate that such refugia should be laid out at a minimum density of ten per hectare in suitable habitat.

2.3 The site was dominated by previously grazed pasture with ruderal patches, areas of grass thatch, and bordered by hedges/ treelines, scrub, and woodland. Artificial refugia consisting of 0.5m by 1m squares of roofing felt were therefore laid out around the boundaries and ruderal areas, and over areas of grass thatch to a density of than ten per hectare, where suitable habitats where present on 23rd and 24th February 2024.

2.4 Felts were left for two weeks in order to 'bed in' and to allow reptiles to start using them. They were then checked on seven separate occasions on mornings and afternoons in March, April and May 2024, to establish the presence or likely absence of reptiles on the site and provide a population estimate. Numbers of each reptile species for each site visit were recorded, as well as the prevailing weather conditions including air temperature. Naturally occurring refugia such as log piles were also checked for reptiles, and any additional incidental sightings were also recorded.

2.5 Surveys were only undertaken during suitable weather, i.e. when temperatures were between 9°C and 18°C, with intermittent sunshine following a cool or rainy night, when reptiles need to bask. Surveys were not carried out during predicted wind or rain (Except when rain occurred mid survey) and very hot days were also avoided as reptiles do not generally use refugia under these conditions.

## Population Size Assessment

2.6 Froglife (1999) have provided a basic means of evaluating reptile populations as 'low', 'good' or 'exceptional' based on number of adult reptiles of each species recorded during a single survey visit (using a density of 10 refugia per hectare). An average score for the survey will provide a robust estimate for the size of the populations present on site.

Table 1 below provides the criteria used to define each population class:

| | Low Population Score 1 | Good Population Score 2 | Exceptional Population Score 3 |
|---|---|---|---|
| Adder | <5 | 5-10 | >10 |
| Grass Snake | <5 | 5-10 | >10 |
| Common Lizard | <5 | 5-10 | >20 |
| Slow Worm | <5 | 5-10 | >20 |

2.7 An average score for across all the visits provide a robust estimate of the population sizes present in suitable habitats on site.

# 3. Results

**Reptile survey**

3.1 A maximum of three immature (previous season hatchling) slow worms were observed on the northeast boundary of the site during the survey on 8th May 2024, with single immature slowworms observed under the same felt on 18th March, 12th April, and 5th May 2024. A single sub-adult slow worm observed in an area of thatch within the northeast section of the site on 12th April 2024.

3.2 A single adult common lizard was observed on the northeast boundary on 5th May 2024. No other common lizards, or other species of reptile, were observed during the survey.

3.3 Table 2. in Appendix C shows the full results of the reptile survey. The map of the site showing the positions of reptile felts and where the reptiles were observed is Figure 2 in the Figures section.

**Receptor site description**

3.4 The receptor site is situated within the Kent Downs Area of Outstanding Natural Beauty (AONB), bordered by Countryside Stewardship (Higher Tier) managed agricultural land. The site is on chalk, dominated by pasture, and until 2022 was grazed by cattle. The species observed on site included bulbous buttercup *Ranunculus bulbosus*, common ragwort *Jacobaea vularis*, cleavers *Galium aparine*, daisy *Bellis perennis*, false brome *Brachypodium sylvaticum*, annual meadow grass *Poa annua*, Yorkshire fog *Holcus lanatus,* self heal *Prunella vulgaris*, herb Robert *Geranium robertianum*, and patches of common nettle *Urtica dioica*. The south, east and west boundaries are hedge or tree lines with hawthorn *Crataegus monogyna*, hazel *Corylus avellana*, beech *Fagus sylvatica*, oak *Quercus sp.*, elder *Sambucus nigra* and bramble *Rubus fruticosus*. The northeast boundary abuts deciduous woodland. The northwest boundary is patches of blackthorn *Prunus spinosa*, hawthorn and bramble. Towards the east of the site is an old chalk pit bordered by deciduous trees, which contains an active badger sett.

3.5 The site has both northwest and southeast facing slopes. There are no ponds on the site itself, but scattered small primarily garden ponds within the wider area the closest of which is approximately 180m to the southeast and separated by the road from Anvil Green. There is a footpath which runs south to north through the site at the base of the two slopes

3.6 Figure 1 below shows the receptor site within the wider area. Photos of the site and reptiles observed during the survey are in Appendix D.



**Figure 1:** Receptor site bordered in red, within the wider area (Image: Google satellite).

## 4. Conclusions

4.1 The survey results indicate no population of slow worm on the site (no adults observed), but a breeding population to the northeast with immature slow worm reaching the site boundary and into the northeast section. A small population of common lizard was also recorded with a single common lizard also observed on the northeast boundary. The site has good habitat connectivity to rough grassland arable boundaries, scrub and woodland glades and has both northwest and southeast facing slopes. While boundary commuting habitats are good, the grassland requires improvement to support a larger population of reptiles. The adjacent populations of reptiles appear to be small, and do not pose an issue for introducing a larger population as long as the habitat is sufficiently improved before the translocation.

4.2 To ensure sufficient foraging and cover, a mosaic of bramble, blackthorn and hawthorn is to be planted the year before the translocation is planned. This will develop further over time with suitable management. Hibernation locations and refugia for reptiles will also be required before translocation and four hibernaculum (as shown in Appendix B) should be constructed on site for overwintering reptiles part way up the slopes of the site and along boundaries to avoid risk of flooding and provide good habitat connectivity to further reptile foraging habitats. Log piles will also be placed along the length of the site to provide cover and foraging opportunities. Once the initial planting has been completed and the hibernaculum and log piles are in place the site should be regarded as suitable for receiving any reptiles from the

donor site from the following year (i.e. March 2025, if preparations completed in 2024). Indicative planting and hibernacula positions are indicated in Figure 3 in the Figures section.

4.3 Due to the limited number of ponds in the direct area of the site, it is recommended that a lined wildlife pond be created on the site to enhance that habitat for grass snake. The pond creation is to be constructed, lined and planted prior to the start of the translocation of reptiles from the donor site at Orchard Farm, Kennington. The exact position of the pond on site is to be agreed with a landscaper to ensure suitable positioning.

4.4 Long term management of the site for reptiles has been agreed verbally with the owner of the translocation land at Plum Bank, Waltham, Mr Robert Maylam. As the site is difficult to farm due to the slopes, and the surrounds are on within Stewardship agreements, Mr Maylam has no future plans to farm or develop the translocation area. He has agreed to provide this in writing once planning has been approved.

### Reptile Trapping at Orchard Farm, Canterbury Road, Kennington

4.5 Trapping and translocation should begin by first erecting a reptile proof fence around the development site to prevent further reptiles from gaining access to the site.

4.7 After planning has been approved, and the following year from the planting in the receptor site, the capture-translocation programme should then start with a planned 90 maximum visits with a minimum of 5 days with no capture resulting in a absence of reptiles on site, carried out between March and October, by placing artificial refugia (i.e. roofing felt, of 1 x 0.5 m) at a density as recommended by the HGBI guidelines (1998).

4.8 Personnel to carrying out the translocation will be experienced herpetologists. All reptiles will be identified sexed and numbers translocated recorded. The reptiles on site will be translocated to the Plum Bank receptor site. Reptile felts will be checked during all days with suitable weather conditions. Reptiles will be caught by hand and placed in high sided buckets with lids with some grass placed inside for cover and transferred the same day of trapping to the translocation site.

4.9 Where a minimum of 5 consecutive visits over 5 separate days, during suitable weather conditions elapse without observing any reptiles then the translocation scheme will be considered to be complete. Morning trapping visits will be made in optimal weather conditions for observing reptiles.

4.10 Long term management of the site for reptiles as been agreed verbally with the owner of the translocation land at Plum Bank, Waltham Mr Robert Maylam.

## 5. Recommendations

5.1 The following recommendations are based on the principles of established survey techniques and are comply with relevant best practice guidelines set out by the Chartered Institute for Ecology and Environmental Management (CIEEM).

5.2 Translocation of the reptiles from the Kennington site should take place once the Plum Bank receptor site has been prepared, a reptile proof fence has been placed around the Orchard Farm site, and the scheme plans have been approved.

5.3 For the wildlife pond to be created on the site, native species are recommended as they are generally non-invasive and are better suited to the local climate. These would include:

**Larger marginal plants**

- Common Valerian
- Great Burnet
- Hemp Agrimony

- Meadowsweet
- Water Mint
- Yellow Iris

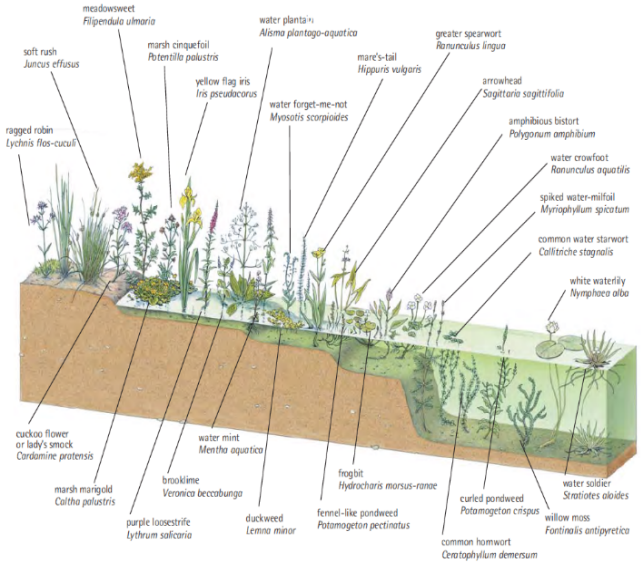
**Smaller marshy marginal plants**

- Lesser Spearwort
- Marsh Marigold
- Water Avens
- Water Forget-me-not
- Jointed Rush
- Ragged Robin

**To plant submerged**

- Water Plantain
- Broad-leaved Plantain
- Spiked Water-milfoil
- Water-Starwort

The picture below shows a representation of a planting scheme within a species rich native pond showing a good diversity of plants at different depths.




5.3 The future management of the translocation area at Plum Bank, Waltham should follow the management and monitoring plan as outlined in Section 6 below.

## 6. Post Construction Reptile Area Management Plan

6.1 The following recommendations are based on the principles of established survey techniques and are comply with relevant best practice guidelines set out by the Chartered Institute for Ecology and Environmental Management (CIEEM). See Figure3 in the Figures section for the locations of the management activities.

**Grassland Management**

6.2 Due to the presence of common lizards and slow worms, the grass cutting must be undertaken on warm dry days and flayed to a to a height of no lower than ankle height of 10cm. This will prevent any animals from being harmed and allow movement on their accord. Grass cutting will also be timed to allow native flowering plants to set seed.

**Scrub**

6.3 Once established, this will be managed by the systematic removal of newly established bramble, blackthorn and hawthorn saplings within the grassland area. Also, a biannual cut of excessive new growth to prevent the scrub areas from spreading, and maintain the mosaic of scrub within the grassland. Partial scrub clearance annually, leaving other half unimpacted for wildlife.

**Wildlife Pond**

6.4 The main issues with ponds are to prevent them becoming stagnant and silted up/drying out. The stagnation is often the result of dead vegetation decaying in the pond leading to de-oxygenation. This build-up also leads to the silting up and subsequent drying out.

6.5 To prevent this occurring periodic dredging or digging out will be necessary. Every year the dead leaf litter should be removed in the late summer/early autumn using rakes and left on the bank side to dry for at least 48 hours to allow any wildlife to move back into the water. If windblown reedmace has established it should be controlled at the same time by hand pulling to prevent it spreading. Every 5 years approximately 1/ 3 of the area of the pond area should be dredged during late summer/early autumn. Timing the dredging during late summer/early autumn will ensure no amphibians will be present in the ponds during their aquatic phases.

6.6 If trees and bushes are over hanging the ponds they should be cut back in the autumn/winter to increase the light reaching the water.

6.7 Invasive aquatic plants may be in water bodies locally and birds can easily transfer them from pond to pond. It is therefore important that the pond is monitored regularly for the presence of any invasive species and appropriate control measure taken if required. Appendix B contains details on common aquatic invasive species and how to control them. Advise on stopping the spread of non-native invasive plant species is also available from https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native-plants

6.8 Fencing is required around the pond, this should either be made up of slatted picket or similar open style to provide easy access for terrestrial wildlife locally to the pond.

**Hibernacula**

6.9 Hibernacula should be checked once a year to ensure they are fit for purpose. Any damage should be repaired.

**Log piles**

6.10 Log piles should be checked once a year, and rebuild if they have collapsed. Additional logs to be added if required.

**Formulation of management plan for next five years**

6.11 The management plan for the reptile translocation area must be reviewed in year 5. At that time the site should be assessed to determine if changes in the nature and timing of management techniques are required to ensure optimal habitat for reptiles is maintained. The management plan covering the following 5 years must then be formulated.

6.12 The tasks have been programmed to ensure the conservation of the protected species present on the site and also to minimise the number of visits to the site required.

Table 3: Management plan

| Task | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Grass** | Grass cut once per year August-September, cutting with a flail. Cutting should be undertaken on warm dry days to a height of no less than 10cm to prevent harming any reptiles. Cuttings should be raked into piles and taken off site. | Grass cut once per year August-September, cutting with a flail. Cutting should be undertaken on warm dry days to a height of no less than 10cm to prevent harming any reptiles. Cuttings should be raked into piles and taken off site. | Grass cut once per year August-September, cutting with a flail. Cutting should be undertaken on warm dry days to a height of no less than 10cm to prevent harming any reptiles. Cuttings should be raked into piles and taken off site. | Grass cut once per year August-September, cutting with a flail. Cutting should be undertaken on warm dry days to a height of no less than 10cm to prevent harming any reptiles. Cuttings should be raked into piles and taken off site. | Grass cut once per year August-September, cutting with a flail. Cutting should be undertaken on warm dry days to a height of no less than 10cm to prevent harming any reptiles. Cuttings should be raked into piles and taken off site. |
| **Scrub** | Leave scrub to establish on the site in areas planted. | Leave scrub to establish on the site in areas planted. | Hand cutting and removal of excess scrub growth and removal from the site. Cutting once a year during early February or October to avoid the breeding bird season and flowering season. | Leave scrub to regenerate. | Hand cutting and removal of excess scrub growth and removal from the site. Cutting once a year during early February or October to avoid the breeding bird season and flowering season. |
| **Wildlife pond** | Removing leaf litter from pond with rake onto bank side to be removed after 48 hours in late summer/ autumn. Removal of any invasive species from the pond. | Removing leaf litter from pond with rake onto bank side to be removed after 48 hours in late summer/ autumn. Removal of any invasive species from the pond. | Removing leaf litter from pond with rake onto bank side to be removed after 48 hours in late summer/ autumn. Removal of any invasive species from the pond. | Removing leaf litter from pond with rake onto bank side to be removed after 48 hours in late summer/ autumn. Removal of any invasive species from the pond. | Removing leaf litter from pond with rake onto bank side to be removed after 48 hours in late summer/ autumn. 1/3 of pond dredged at same time. Removal of any invasive species from the pond. |
| **Hibernacula** | Repair if required, Avoid disturbance. | Repair if required, Avoid disturbance. | Repair if required, Avoid disturbance. | Repair if required, Avoid disturbance. | Repair if required, Avoid disturbance. |
| **Log piles** | Repair if required, avoid disturbance. Ideally use branches/logs sourced from site. | Repair if required, avoid disturbance. Ideally use branches/logs sourced from site. | Repair if required, avoid disturbance. Ideally use branches/logs sourced from site. | Repair if required, avoid disturbance. Ideally use branches/logs sourced from site. | Repair if required, avoid disturbance. Ideally use branches/logs sourced from site. |

## 7. Monitoring Plan

7.1 A reptile survey should be undertaken one year after the translocation has been undertaken to confirm the status of the population reptiles within the translocation area once works have been completed. A methodology for a reptile survey is outlined below.

### Reptile Survey

7.2 The methodology used takes due regard of the Herpetofauna Groups of Britain and Ireland (HGBI) Guidelines and Herpetofauna Workers Manual 2003 the standard recognised text for such a survey.

7.3 A detailed reptile survey should be undertaken during reptile active period by experienced ecologists using artificial refugia in the form of roofing felt. Best practice guidelines indicate that such refugia should be laid out at a minimum density of ten per hectare in suitable habitat.

7.4 The scrub mosaic being developed represents the optimum reptile habitat. Artificial refugia consisting of 1 x 0.5m squares of roofing felt should be laid out around these features, at approximately 10 m intervals to a density greater than ten per hectare, where suitable edge habitats are present.

7.5 Felts should be left for a period of fourteen days in order to 'bed in' and to allow reptiles to start using them. They then should be checked on seven separate occasions on mornings in or afternoons, to establish the presence or likely absence of reptiles on the site and provide a population estimate. Numbers of each reptile species for each site visit must then be recorded, as well as the prevailing weather conditions including air temperature. Naturally occurring refugia such as log piles should also be checked for reptiles, and any additional incidental sightings also recorded.

7.6 Surveys should only be undertaken during suitable weather, i.e. when temperatures are between 9°C and 18°C, with intermittent sunshine following a cool or rainy night, when reptiles need to bask. Surveys should not be carried out during predicted wind or rain (Except when rain occurred mid survey) and very hot days should also avoided as reptiles do not generally use refugia under these conditions.

### Population Size Assessment

7.7 Froglife (1999) have provided a basic means of evaluating reptile populations as 'low', 'good' or 'exceptional' based on number of adult reptiles of each species recorded during a single survey visit (using a density of 10 refugia per hectare). An average score for the survey will provide a robust estimate for the size of the populations present on site.

Table 1 below provides the criteria used to define each population class:

| | Low Population Score 1 | Good Population Score 2 | Exceptional Population Score 3 |
|---|---|---|---|
| Adder | <5 | 5-10 | >10 |
| Grass Snake | <5 | 5-10 | >10 |
| Common Lizard | <5 | 5-10 | >20 |
| Slow Worm | <5 | 5-10 | >20 |

7.8 An average score for across all the visits provide a robust estimate of the population sizes present in suitable habitats on site.

7.9 In the unlikely event the reptile survey identifies a drop in the population from that measured and it cannot be explained by extreme weather events such as prolonged drought or freezing temperatures or fire then measures should be implemented to improve the site further for

native reptiles. The management plan should be reviewed by a suitably qualified ecologist to ascertain the reasoning for the drop in the population and put in place measures to prevent potential future population declines. A further reptile survey in the following season would be required if the initial survey identifies a decline in the population, to ensure measures to increase the population have worked.

## References and Bibliography

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## Figures




**Figure 2:** Map showing the positions of the reptile mats during the survey, and locations that slow worm and common lizard were observed (Image: Google satellite).




**Figure 3**: Indicative plan of habitat enhancements for receptor site prior to the start of translocation works. Includes a mosaic of grass and scrub, hibernacula and log piles. Un-coded area is tree covered chalk pit which is not impacted by the management (Image: Google satellite).

## Appendix A Legislation

The following is a summary of wildlife legislation and planning policy relevant to protected plant and animals species in the UK.

The sections on legislation have been extracted from the Joint Nature Conservation Committee's website and the Department of the Environment, Food and Rural Affairs website.

### The Conservation of Habitats and Species Regulations 2010

The Conservation of Habitats and Species Regulations 2010 consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed 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 came into force on 30 October 1994. In Scotland the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (in relation to reserved matters) and the 1994 Regulations. The Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) transpose the Habitats Directive in relation to Northern Ireland.

Amendments to the Habitats Regulations for England and Wales and the new Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 came into force on the 21st August 2007.

The amendments relate to the protection status of European protected species covered by the Habitats regulations. Taken together it is an offence to undertake the following acts with regard to European Protected Species:

*(a) deliberately capture, injure or kill any wild animal of a European Protected Species;*

*(b) deliberately disturb animals of any such species in such a way as to be likely to significantly affect:*

> *(i) the ability of any significant group of animals of that species to survive, breed, or rear or nurture their young, or*
>
> *(ii) the local distribution or abundance of that species;*

*(c) deliberately take or destroy the eggs of such an animal; or*

*(d) damage or destroy a breeding site or resting place of such an animal.*

An offence will only be committed if the deliberate disturbance is likely to **significantly affect** a **significant group** of animals of that species' ability to survive, breed, or rear or nurture its young or **significantly affect** the local distribution or abundance of that species.

Any biological definition of what constitutes a significant group of animals should take into account the local abundance of the species, its behaviour and the circumstances in which the disturbance takes place. Species that tend to be solitary, **such as dormice**, probably never form significant groups of adults, but a family group with dependent young could constitute such a group, particularly if the species is rare in the area.
The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb or trade in the animals listed in **Schedule 2** or damage or destroy a breeding site or resting place of such an animal; or pick, collect, cut, uproot, destroy, or trade in the plants listed in **Schedule 4**. However, these actions can be made lawful through the granting of licences (European Protected Species Licence) by the appropriate authorities (Natural England in England and Countryside Council for Wales). Licences may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that:

- **Regulation 44 (2)(e)** the development is 'in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a

social or economic nature and beneficial consequences of primary importance for the environment'.

- **Regulation 44 (3)(a**) there is 'no satisfactory alternative'.
- **Regulation 44 (3)(b)** the action 'will not be detrimental to the maintenance of the population of the species at favourable conservation status in their natural range'.

To apply for a licence, the following information is required:

- The species concerned.
- The size of the population at the site (note this may require a survey to be carried out at a particular time of the year).
- The impact(s) (if any) that the development is likely to have upon the populations.
- What measures can be conducted to mitigate for the impact(s).

Amendments to the Habitats Regulations for England and Wales and the new Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 came into force on the 21st August 2007. Both Regulations revised the definition of deliberate disturbance of European Protected Species.

**The Wildlife & Countryside Act (as amended) 1981**

The Wildlife & Countryside Act 1981 (as amended) is the principal piece of UK legislation relating to the protection of wildlife. It 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.

The Act makes it an offence (with exception to species listed in Schedule 2) to intentionally kill, injure, or take any wild bird or their eggs or nests. Special penalties are available for offences related to birds listed on **Schedule 1**, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

The Act makes it an offence (subject to exceptions) to intentionally kill, injure, or take, possess, or trade in any wild animal listed in **Schedule 5**, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals listed in **Schedule 6**.

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in **Schedule 8**, and prohibits the unauthorised intentional uprooting of such plants.

The Act contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in **Schedule 9**. It also provides a mechanism making any of the above offences legal through the granting of licences by the appropriate authorities.

**The Countryside & Rights of Way Act 2000**

The Countryside and Rights of Way Act 2000 (CRoW) was passed to provide additional levels of protection for wildlife whilst also strengthening the protection afforded to Sites of Special Scientific Interest. The CRoW act now makes it an offence to 'recklessly' harm the majority of species listed on the Schedules of the Wildlife and Countryside Act.

The Act places a duty on Government Departments and the National Assembly for Wales 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 **(Section 74)**.

Schedule 12 of the Act amends the Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable', create a new offence of reckless disturbance, confer greater powers to police and wildlife inspectors for entering premises and obtaining wildlife tissue samples for DNA analysis, and enable heavier penalties on conviction of wildlife offences.

**Natural England & Rural Communities Act 2006**

The Natural England & Rural Communities Act 2006 (NERC) is designed to help achieve a rich and diverse natural environment and thriving rural communities through modernised and simplified arrangements for delivering Government policy.

It was created to make provision in connection with wildlife, sites of special scientific interest, National Parks and the Broads; to amend the law relating to rights of way; to make provision as to the Inland Waterways Amenity Advisory Council; to provide for flexible administrative arrangements in connection with functions relating to the environment and rural affairs and certain other functions; and for connected purposes.

NERC carries an extension of the CRoW Act biodiversity duty to public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity.

**The Badger Act 1992**

In the UK, badgers are primarily afforded protection under the Protection of Badgers Act 1992. This makes it illegal to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so and to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it.

Badgers also receive limited protection under Schedule 6 of the Wildlife & Countryside Act 1981 (as amended). This outlaws certain methods of taking or killing animals.

Under Section 10 (1)(d) of the Protection of Badgers Act 1992, a licence may be granted by Natural England to interfere with a badger sett for the purpose of development, as defined by Section 55(1) of the Town & Country Planning Act 1990.

Section 3 of the Protection of Badgers Act 1992 defines interference as:

a) Damaging a badger sett;
b) Destroying a badger sett;
c) Obstructing access to, or any entrance of, a badger sett;
d) Causing a dog to enter a sett; or
e) Disturbing a badger when it is occupying a badger sett.

**The Wild Mammals Act 1996**

The Wild Mammals (Protection) Act (1996) makes it an offence for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

**The Abandonment of Animals Act 1960**

The Abandonment of Animals Act comes into force when an animal is abandoned, whether permanently or not, in circumstances likely to cause unnecessary suffering. With regards to development, this has implications when translocations of animals are proposed. As such, care must be taken to ensure that any receptor sites are suitable for the species in terms of habitat and carrying capacity in order that minimal stress and suffering is imposed upon the animal(s) concerned.

**The Hedgerows Regulations**

The Hedgerows Regulations 1997 were introduced to protect hedgerows of importance from destruction. The Regulations define a hedgerow as, ‘a row of bushes forming a hedge with the trees growing in it’. The law however does not clarify the difference between a line of trees and a hedgerow.

However the legislation does not apply to any hedgerow (even if it is within the list above) which is ‘within or marking the boundary of the curtilage of a dwelling cottage’.

For the Regulations to be applicable, the hedgerow must be at least 20 metres in length and less than 5 metres wide. A hedgerow is deemed to be important if it is more than thirty years old and meets at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

If a hedgerow that qualifies under the Regulations is to be removed, the landowner must contact the Local Planning Authority (LPA) in writing by submitting a hedgerow removal notice. The LPA then has a period of 42 days to decide whether or not the hedgerow meets the importance criteria of the regulations.

**National Planning Policy Framework**

The National Planning Policy Framework (NPPF) sets out the view of central Government on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regard to the operation of the planning system. It is a key objective of NPPF to:

"promote the preservation, restoration and re-creation of priority habitats, ecological networks and the recovery of priority species, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.

NPPF states that development plan policies and planning decisions should be based upon up-to-date information about the environmental characteristics of their areas, including biodiversity. It also states that the aim of planning decisions should be to prevent harm to biodiversity conservation interests and to “promote opportunities for the incorporation of beneficial biodiversity and geological features within the design of development.

Where granting planning permission would result in significant harm to those interests, local planning authorities will need to be satisfied that the development cannot be reasonably be located on any alternative sites that would result in less or no harm. In the absence of any such alternatives, local planning authorities should ensure that, before planning permission is granted, adequate mitigation measures are put in place. Where a planning decision would result in significant harm to biodiversity interests, which cannot be prevented or adequately mitigated against, appropriate compensation measures should be sought. If that significant harm cannot be prevented, adequately mitigated against, or compensated for, then planning permission should be refused.

This means that full ecological surveys should be carried out and suitable mitigation measures proposed prior to any planning application being submitted. It is common practice for planning officers to consult Natural England or other conservation bodies for advice regarding the suitability of proposals in relation to biodiversity conservation.

**Biodiversity Action Plans**

Biodiversity Action Plans (BAPS) set out actions for the conservation and enhancement of biological diversity at various spatial scales. They consist of both Habitat Action Plans (HAPs) and Species Action Plans (SAPs).

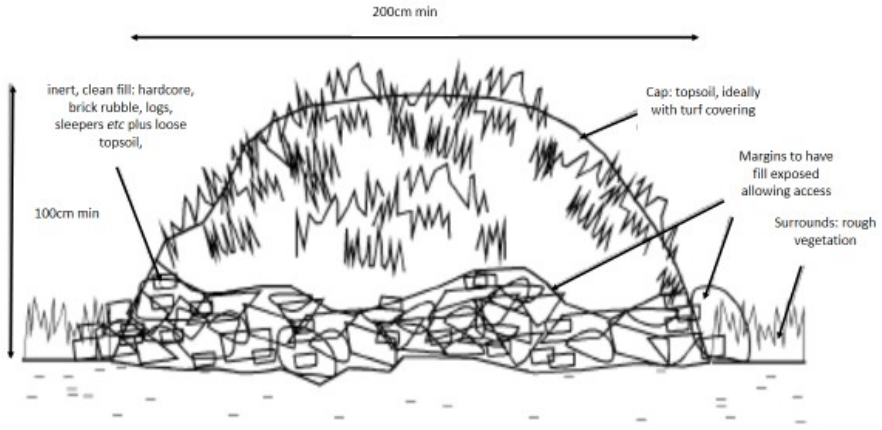
The UK BAP was the UK's response to the 1992 Convention on Biological Diversity in Rio de Janeiro. Following a review in 2007 a list of 1149 priority species and 65 priority habitats has been adopted, which are given a statutory basis for planning consideration under Section 74 of the CRoW Act 2000.

**Red Data Books**

Red Data Books (RDB) is an additional method for determining rarity of species and is often seen as a natural progression from Biodiversity Action Plans.

RDB species have no automatic legal protection (unless they are protected under any of the legislation previously mentioned). Instead they provide a means of assessing rarity and highlight areas where resources may be targeted. Various categories of RDB species are recorded ranging from RDB 1 (endangered) through to RDBX (extinct). As with Biodiversity Action Plans, where possible, steps should be taken to conserve RDB species, which are to be affected by development.

## Appendix B – Recommended Hibernacula Design



## Appendix C – Reptile Survey Visit Results

**Table 2:** Results of the seven reptile surveys undertaken at Plum Bank, Waltham. Highest survey count is for adult reptiles only, immature/sub-adult individuals are not included in population estimate.

| | | | | Slow Worm | | | | Common Lizard | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date** | **Time** | **Temp / °C** | **Weather** | **Adult Male (>230mm)** | **Adult Female (>230mm)** | **Imm** | **Unknown** | **Male** | **Female** | **Imm** | **Unknown** | **Other Notes** |
| 09/03/2024 | 14:00 | 12 | 80% cloud, light wind. | | | | | | | | | No reptiles observed |
| 14/03/2024 | 16:00 | 13 | 20% cloud, light wind | | | | | | | | | No reptiles observed |
| 18/03/2024 | 10:00 | 13 | 75% cloud, light wind | | | 1 | | | | | | Previous season juvenile |
| 12/04/2024 | 09:45 | 14.5 | 60% thin cloud, light wind | | | 2 | | | | | | Previous season juvenile and sub-adult |
| 29/04/2024 | 16:00 | 14 | 5% cloud, light wind | | | | | | | | | No reptiles observed |
| 05/05/2025 | 09:30 | 14 | 15% cloud, light breeze | | | 1 | | | 1 | | | Previous season juvenile slow worm |
| 08/05/2024 | 09:30 | 12 | 90% cloud - clearing, light wind | | | 3 | | | | | | Previous season juveniles |
| | | | **Highest survey count** | 0 | | | | 1 | | | | |

## Appendix D – Photos of site and reptiles observed during survey



**Plate 1**: Immature slow worm observed on 14/03/24.



**Plate 2:** Three immature slow worm observed on 12/04/24.



**Plate 3:** Common lizard observed on 15/05/24.



**Plate 4:** View to northeast corner showing both slopes on the site..



**Plate 5:** View to southeast across site, with tree line and hedge boundaries, and chalk pit surrounded by trees.



**Plate 6:** Ruderal patches in southeast corner of site.



**Plate 7:** View towards northwest and adjacent field.



**Plate 8:** Bramble scrub and hedge on southeast boundary.