

REPTILE MITIGATION STRATEGY

**LAND AT KINGSTON LANE,
EAST PRESTON**

SEPTEMBER 2026

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1.0 INTRODUCTION

- 1.1 Aluco Ecology was commissioned to carry out an update reptile survey and mitigation strategy of land at Kingston Lane, East Preston by Seaward Properties Ltd, where planning permission has been granted for the erection of 47 No residential dwellings (including affordable homes) (resubmission following K/56/22/PL).
- 1.2 All reptile species, including the widespread species (Grass Snake *Natrix (n) helvetica*, Adder *Viper berus*, Common Lizard *Zootoca vivipara* and Slow Worm *Anguis fragilis*) native to Britain are protected by the 1981 Wildlife & Countryside Act 1981 (as amended) under Sections 9(1) and 9(5). This legislation makes it illegal to intentionally kill or injure a common reptile and also, to sell, barter, exchange or transport for sale these animals or parts of them.
- 1.3 Suitable habitats exist on site for presence of reptiles, so a detailed reptile survey was undertaken during April-June 2022 and updated August-September 2026. As part of the planning application, a reptile mitigations strategy was outlined for the development (see Aluco Ecology, 2023). This report provides updated survey information and a detailed mitigation strategy for the development. In this regard it considers the planning condition relating to reptiles:

“21 No development shall take place until a Reptile Mitigation Strategy addressing the mitigation and translocation of reptiles has been submitted to and approved in writing by the Local Planning Authority. The Reptile Mitigation Strategy shall include the following.

- a) Purpose and conservation objectives for the proposed works.*
- b) Review of site potential and constraints.*
- c) Detailed design(s) and/or working method(s) to achieve stated objectives.*
- d) Extent and location/area of proposed works on appropriate scale maps and plans.*
- e) Type and source of materials to be used where appropriate, e.g. native species of local*
- f) Timetable for implementation demonstrating that works are aligned with the proposed phasing of development.*
- g) Persons responsible for implementing the works.*
- h) Details of initial aftercare and long-term maintenance of the Receptor area(s).*
- i) Details for monitoring and remedial measures.*
- j) Details for disposal of any wastes arising from works.*

The Reptile Mitigation Strategy shall be implemented in accordance with the approved details and all features shall be retained in that manner thereafter.

Reason: To allow the Local Planning Authority to discharge its duties under the Wildlife & Countryside Act 1981 (as amended) and s40 of the NERC Act 2006 (Priority habitats & species)."

2.0 SURVEY METHODOLOGY

Methodology

- 2.1 Survey work involves the placing of cut up roofing felt or other suitable materials such as corrugated iron sheeting, wood or plastic and checking any existing suitable refugia that reptiles hide under. Reptiles use these artificial refugia as they warm faster than the surrounding environment and are attractive to shelter beneath. In order to be effective, refugia need to be placed in the most suitable habitat and in the best locations within those habitats for reptiles. Survey refugia are placed at a minimum of 10/ha in potentially suitable habitat. Refugia survey is always complemented by visual searching for reptiles which are not utilising refugia.
- 2.2 Reptiles can be surveyed using this technique, with optimum survey periods being between spring and early autumn (ie April to late June, and August to the end of September).
- 2.3 Survey work is undertaken during suitable weather conditions (i.e. between 9 and c18°C with light or no wind and no rain). High temperatures in late June to late August mean that suitable weather conditions occur in the early morning/late afternoon, after and even during rain in warm weather, and on overcast days.
- 2.4 The 2026 survey was subject to some disturbance from members of the public moving and removing a small number of the felts (mostly along the western boundary). This disturbance has been taken into account in the strategy.

Populations

- 2.4 In order to assess the importance of a population the population size is assessed. This uses standard numbers from the Herpetofauna Groups of the British Isles (HGBI, 1999) advisory notes for Amphibian and Reptile Groups (ARGs) at **Table 1** below. Populations may be localised on a site with different densities in different habitats.

Table 1: Assessing Reptile Populations

Species	Population size (adult density)		
	High	Medium	Low
Slow Worm	(> 100 / ha)	(> 50 / ha)	(< 50 / ha)
Common lizard	(> 80 / ha)	(> 40 / ha)	(< 20 / ha)
Adder	(> 4 / ha)	(2 - 4 / ha)	(< 2 / ha)
Grass snake	(> 4 / ha)	(2 - 4 / ha)	(< 2 / ha)

3.0 SURVEY RESULTS & EVALUATION

Habitats for Reptiles

- 3.1 The site comprises the western half of an arable field. The field boundaries contain non-native dominated woody vegetation, with a thin strip of tall grassland along the margins with the field. This represents the main reptile habitats on site.
- 3.3 Habitats on site are shown at **Photos 1-3** below.

Reptile Survey Results

- 3.4 A total of c40 reptile refugia were placed in suitable habitat on site in 2022 and updated in 2026, which for the site area and suitable habitats present represents a high survey density. The survey results are shown at **Figure 1** and **Table 2** below.
- 3.5 The survey recorded a single species of reptile, Slow Worm *Anguis fragilis*. Slow Worm were recorded on the northern, western, and southern boundaries. The numbers recorded suggest that a low to medium-size population is present.
- 3.6 No other reptiles were recorded. The 2022 survey recorded small numbers of Common Frog *Rana temporaria* and Common Toad *Bufo bufo*.

Table 2: Reptile Survey Results

Date	Time	Results
2022		
07-04-2022		Set up
29-04-2022	am	AF = 3M, 2F, 2sub; BB = 2
06-05-2022	am	AF = 2M, 3F, 1sub
17-05-2022	am	AF = 3M, 3F, 2sub
26-05-2022	am	AF = 2M, 5F, 3sub
09-06-2022	pm	AF = 2M, 4F, 3sub
17-06-2022	am	AF = 3M, 4F, 4sub
20-06-2022	pm	AF = 1M, 5F, 6sub
2026		
07-08-2026		Set up
26-08-2026	am	AF = 1M, 2F, 3sub
30-08-2026	am	AF = 3F, 3sub
05/09/2026	am	AF = 1M, 4F, 2sub, 1juv
10-09-2026	am	AF = 1M, 3F, 3sub, 3juv
14/09/2026	am	AF = 1M, 4F, 1sub, 4juv
17/09/2026	pm	AF = 4F, 2sub, 3juv

Key: AF = Slow Worm, BB = Common Toad, Juv = Juvenile, sub = sub adult, F = Female, M = Male

Evaluation

- 3.7 The survey work has recorded a population of a single reptile species of reptile, Slow Worm. There is suitable reptile habitat on site, mostly restricted to the boundaries. This habitat contains suitable edge habitat and structure of value to herptofauna. The habitats on site are considered to be of **local value** to reptiles.



Photo 1: Northern Boundary – main suitable habitat restricted c1m to left side of path – right hand side is main field, former arable



Photo 2: Western Boundary – suitable habitat again within c1m edge to scrub



Photo 3: Southern Boundary – suitable habitat on left of path



Photo 4: Main field extent – former arable with no structure for reptiles to developing vegetation



Figure 1: Reptile Survey Results 2022 (Image copyright: Google Earth)



Figure 2: Reptile Survey Results 2026 (Image copyright: Google Earth)

4.0 MITIGATION

Introduction

- 4.1 With a population of Slow Worm present on site a reptile mitigation strategy is recommended to ensure that no reptiles are harmed as a result of site construction for the proposed scheme. This considers the following:

- Size of population on site and impacts from the proposals;
- Potential for translocation of reptiles to a suitable receptor site; and location and suitability of the site;
- Timing of translocation and agreement with relevant local authority through planning. Reptiles hibernate during the winter period and translocation should be undertaken outside the hibernation period;
- Sensitive management of habitats within the construction zone.
- A suitably qualified ecologist should be present for some of the sensitive works, including any translocation, destructive search and initial soil stripping of potential reptile habitat.

- 4.2 All reptiles are protected under the Wildlife & Countryside Act 1981 (as amended) (see Technical Appendix 1). The following strategy has been devised in order to follow best practice guidance (HGBI, 1998, Froglife, 1999).

- 4.3 Survey work has recorded a low to medium population of Slow Worm on site, primarily around the northern and western boundaries, with some suitable habitat and a low use of the southern boundary.

Potential Risks

- 4.4 The construction has the potential to provide the following risks to reptiles:

- Direct damage to reptiles through construction activities such as tracking of machines and damage to habitat;
- Damage to habitats associated with retained hedges and trees, including rough grassland edges and ditches within hedgerows through construction activities such as tracking of machines and damage to habitat;
- Potential Indirect Impacts on retained habitats.

- 4.5 The following sections below provide detailed mitigation for ensuring that reptiles on site are protected during the construction phase and that risks outlined above are addressed through the process to provide suitable avoidance, reduction and offsetting measures and safe biodiversity protection zones.

Mitigation Strategy

- 4.6 A local translocation strategy is required within the proposed construction zone of the development to ensure that the development does not harm reptiles. The following strategy is developed in detail here to ensure that reptiles are protected in the long term. The development Masterplan is shown at **Figure 3** below.

- The main aim is to retain reptile populations within the local area and on site;
- In the short term this will require a local translocation of reptiles from the construction area to retained suitable receptor areas of the site;
- Suitable receptor sites were considered and have been identified on **Figure 4** below as retained habitat around the site boundaries, and these will be subject to some enhancement and ongoing suitable habitat management;
- Prior to construction commencing, the construction zone will be subject to vegetation manipulation, translocation and a destructive search to the methods set out below and in **Technical Appendix 1**, to ensure that reptiles are not harmed;

Translocation Methodology

4.8 The translocation will be undertaken according to the following strategy. Two approaches are considered likely to be adopted. The first where there is only marginal supporting habitat along the northern/north-western boundary, where the main habitat can be retained within the protection zone, and the second where there are more extensive but still localised impacts around the site entrance:

- The construction areas on site will be sensitively strimmed in areas where reptiles may be present (i.e. the boundaries) to c10-15cm using hand tools, careful not to harm reptiles potentially present.
- All cut areas should be left undisturbed for 24-48 hours.
- Undertake a destructive search, which involves a directional vegetation clearance (remaining vegetation) and soil stripping (avoiding very wet or cold weather).
- Destructive searches should only take place during the active herpetofauna season between April – Oct, and in appropriate weather conditions, to avoid killing/injuring reptiles and newts.
- The direction of work will be towards the retained boundary habitat;
- Hand searches, destructive searches (see also below) will be undertaken ahead of site works, to reduce the risk of newts and reptiles being on the site during construction;
- Hand searches, destructive searches and initial site stripping should be supervised by a suitably qualified ecologist;
- Destructive searches and initial soil stripping should be undertaken using a machine with a ‘toothed’ bucket. The machine should avoid tracking on potential habitat;
- Any reptile or amphibian that is found during the process should be relocated to the retained boundary habitat;
- At present it is assumed that with appropriate timing and management of construction zones to ensure reptile habitats are removed and do not re-develop, reptile protective fencing is not considered to be effective/needed along the majority of retained boundary areas. Fencing to demarcate the retained and construction areas is required. This can be Heras fencing along the tree protection fencing line (see **Figure 5**) for the western and northern boundaries, and provision of similar fencing along the southern boundary strip.
- Where the tree protection fencing also protects a c0.5-1m of edge habitat to the adjacent woody vegetation, this will retain the majority of reptile habitat on site (see

also **Photos 5-8** below for guidance). Therefore, Heras fencing should be placed along this line to retain the c1m of edge habitat to the woody vegetation. Advice should be sought from the suitably qualified ecologist when installing to ensure this habitat is protected.

- A small area around the site entrance is to be removed. This area should be subject to an enhanced strategy.
- Refugia will be placed in potentially suitable habitat along the construction works area and a translocation will be made based on the methodology outlined in **Technical Appendix 3**.
- Any reptiles will be translocated to the retained western boundary. A short section of reptile fencing will be required to ensure reptiles do not venture back into the construction area.
- Following 3-5 negative visits in suitable conditions a destructive search will be undertaken of the works area by a suitably qualified ecologist.
- Site Heras/reptile fencing will continue to provide protection of the retained habitat outside of the development area, from construction intrusion.
- Long term management proposals for the retained habitat and receptor site areas are set out below.
- The reptile strategy will be undertaken outside of the hibernation period and during April-October, depending upon weather conditions and other factors. Where potential reptile habitat is present within the works area outside this period, no construction works will be undertaken in this habitat during this period. A timetable is set out in **Table 3** below.
- The construction zone should remain as open ground and not be allowed to develop any grassland habitats.
- The reptile strategy will be detailed to conform to any mitigation requirements for other protected species.

Habitat Enhancement and Creation

- 4.9 Recommendations are provided to enhance maintain and enhance reptile habitat within the receptor site and in the wider open space and landscaped parts of the scheme (see **Figure 6** below). These are set out below and should be included in the detailed management plan for the site:

- ***Reptile Hibernacula***. Provision of new reptile hibernacula to diversify the southern boundary and western boundary. Additional guidance for hibernacula creation was issued by ARC in 2026 – focussed on Adder *Viper berus* and conservation management, but a number of the measures are of value to other species and as part of the enhancement of construction sites in development. Reptile hibernacula design should include: (1) location in a sunny position not subject to excessive flooding in winter, in favourable habitat with lower disturbance, (2) shape c4m x 2m by c1m high, with some south facing aspect. Turf should be removed to cover the mound. (3) Dig in dry sites and partially bury wood or other materials (bricks/gravel/rubble), in wetter sites build on ground level to raise the hibernacula. Avoid use of pipes for access or drainage (4) Put largest/heaviest materials at bottom, looser material at top.

Do not put decomposable items under heavy items. Ensure gaps are varied – reptiles can find small gaps and will avoid predation from e.g. rats. Some protruding material is useful. (5) Cover mound of the hibernacula with soil/turf to provide a layer of insulation and base for vegetation to grow. (6) allow tall grassland and vegetation to grow around hibernacula to protect it and provide habitat for reptiles. (7) Wood piles in bays of vegetation can also provide hibernacula for reptiles where of sufficient size and variety and sensitively created. Proposed location of hibernacula is shown at **Figure 4**.

- **Woody Vegetation.** Existing boundary hedgerow/tree line habitats are to be retained but will be managed to provide a wavy inside edge to the site, with cutting of bays c3-5m wide and up to c1m deep to provide a mix of successional stages and varied edge habitat (see **Figure 6**): Retained hedgerow and woody vegetation should be managed to allow flowering and fruiting of shrubs/trees through lower intensity cutting. The scalloped bays cut into the vegetation should be provided without compromising the overall integrity/screening of the woody vegetation.

Target = To manage all woody habitat to flower/fruit with cutting to take place outside the bird nesting season and in late winter, with limits of cutting below taken into account.. Upper Limit = Cutting a number of bays into the northern and western site boundary in year 1, 3-5m wide and c1m deep during Sept-Feb. Lower Limit = No cutting of any tall grassland edge. Machinery should not track through the tall grassland habitat. Repeat or manage open bays in future years – with repeat cutting of woody regrowth every 2 years depending upon growth.

- **Tall (uncut) Grassland Edge Habitat** Tall uncut grassland habitats are proposed as edge habitat to hedges and woody vegetation and are present along the site boundaries. This habitat will be maintained according to the following strategy:. Management will include annual or every second year cutting of encroaching woody vegetation (eg Bramble/woody scrub) to maintain an area of grasslands that are left uncut to form tussocky grassland edges. This will allow existing rough grassland habitats to develop into more complete habitats around the site.

Target = To retain and enhance tall grassland edge habitat to woody and other features, to provide important suitable habitats for reptiles. Upper Limit = Cutting of encroaching scrub either annually or every second year in winter without using heavy machinery on the tall grassland, to ensure a grassland edge is retained at the edges of the boundaries/woody habitat. Scrub encroachment (eg Brambles) can feature in this habitat type, but should not be more than 15% of area. Lower Limit = No cutting of grasslands within designated tall grassland areas.

- Management will be funded as part of the existing management proposals for the site for a minimum of 30 years as part of the Biodiversity Net Gain strategy.

Responsible Persons

- 4.10 The land owner and project managers are responsible for implementing the mitigation and management measures. The site **project manager** will be responsible for construction mitigation measures and initial habitat creation and any actions set out in the plan related to initial habitat creation in the first 5 years to ensure habitats are created as recommended and to specification. The **landowner/management company** will be responsible for longer term management and maintenance set out in management planning. This includes ensuring

habitats continue to be managed, monitored and management plan prescriptions revised to ensure that the objectives are achieved. The habitats will need to be upkept for a minimum of 30 years from commencement of the project for BNG purposes. Monitoring will be required by suitably qualified ecologists. Any remedial action recommended from monitoring should also be undertaken by the landowner during this period. The **suitably qualified ecologist(s)** are responsible to providing ecological clerk of works during construction where necessary, consultation services to the project manager and/or landowner on ecological processes, advice when updating a management plan and site monitoring as required and requested.

5.0 SUMMARY

- 5.1 A detailed reptile mitigation strategy has been devised to ensure that reptiles are protected during construction of the approved scheme and that there are long term measures to maintain and enhance the population of Slow Worms.

6.0 REFERENCES

Aluco Ecology (2023) Land at Kingston Lane, East Preston, Ecological Assessment, October 2023.

ARG (2026) Creating Hibernation Sites for Reptiles. Amphibian and Reptile Conservation, 2026

Gov.UK (2026) Standing Advice for Protected Species from www.gov.uk

Herptofauna Groups of the British Isles (HGBI) Guidelines (1998) “Evaluating Local Mitigation/Translocation Programmes: Maintaining Best Practice and Lawful Standards.” HGBI Advisory notes for Amphibian and Reptile Groups (ARGs). HGBI, c/o Froglife, Halesworth, personal collection.

Froglife, 1999. Froglife Advice Sheet 10. Reptile Survey. An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife, Halesworth, Suffolk.

Mark Welby (2023) Arboricultural Assessment & Method Statement for proposed development at Land to the West of Kingston Lane East Preston, West Sussex, BN16. Revision B issued 2023.10.10



Figure 3: Site Masterplan (Thrive Architects, 2023)



Figure 4: Reptile Mitigation Strategy on site

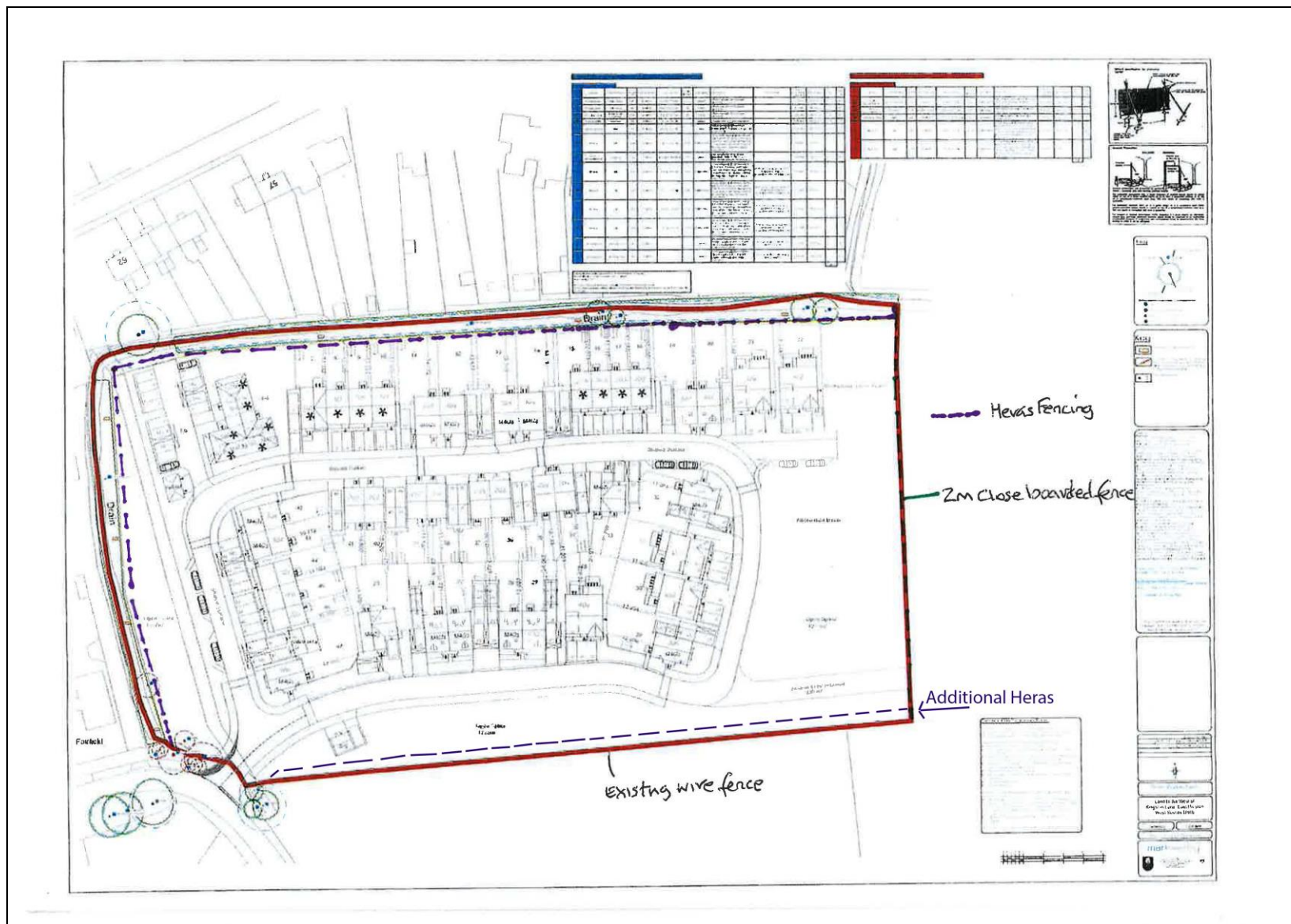


Figure 5: Tree Protection fencing Plan (Mark Welby, 2023), with additional annotations



Figure 6: Landscape Strategy (Terra Firma, 2023)

Table 3: Summary of Potential Mitigation Timescales During Construction

Months 2026-27 =	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Reptiles																
Grass cutting/manipulation in construction zone																
Monitor reptiles																
Translocation																
Destructive Search																
Creation of habitat bays and artificial refugia																

Key = Action points: dark blue = key periods, pale blue = secondary periods



Photo 5: Southern boundary



Photo 6: Northern boundary



Photo 7: Western boundary



Photo 8: Western boundary

Technical Appendix 1

Reptile Translocation Methodology

Translocation of Reptiles

In summary, translocation is the movement of animals, usually deliberately, from one location to another (Gent *et al*, 1998). The receptor site is the site to which reptiles are moved, the donor site (or in this case development site/construction zone) is where they are moved from.

The aim of the mitigation strategy is to ensure that an ‘equivalent population’ is maintained to that which existed before (Gent *et al*, 1998). Reptile mitigation strategies usually involve translocations and habitat management which is implemented between end March/April and Sept/October once any reptiles on site have emerged from hibernation.

Receptor sites must be assessed prior to the translocation of any reptiles, against criteria provided as good practice guidance. This ascertains the existing population of reptiles on the receptor site and identifies any habitat management needs in order to provide the optimum habitat for translocated reptiles.

HGBI (1998) and Gent *et al* (1998) recommend that ‘reasonable effort’ should be undertaken to clear a site of reptiles prior to any works being carried out. Interpretation of what ‘reasonable effort’ translates as in minimum trapping days and capture methodologies is provided in **Table A1** below.

Monitoring is necessary in the medium and long term in order to assess the success or otherwise of the translocation programme.

Capture Areas Assessment

The areas of the site within the construction zone needs to be assessed as to potential to support reptiles and likely populations present.

Receptor Area Assessment

A receptor site for reptiles needs to meet certain criteria to ensure that the conservation status of the populations of reptiles on the capture site and any on the receptor site are maintained. In order that a receptor site is sustainable in the long term the following assessment criteria recommended by HGBI (1998) have been used to find a site:

- A receptor site should be local to the donor site, and as close as possible to it (at least within the same county or similar administrative area, with similar geology/habitat);
- Not currently supporting a viable breeding population of the species to be translocated, for known reasons, or be capable of supporting them given suitable habitat management and creation;
- Not be subject to planning or other threats in the foreseeable future;
- Subject to a written, agreed and funded pre- and post-translocation management agreement;

- Subject to a written, agreed and funded pre- and post-translocation monitoring programme.

There have been various translocation programmes which have assessed the populations and carrying capacities of a range of different reptile habitats particularly in relation to slow-worms. It is widely recognised that slow-worms can, in their ideal habitat, regularly occur at 1000+ per hectare but are usually present at lower densities. However it should always be carefully considered that few sites have large areas of continuous good slow-worm habitat capable of supporting such high populations although smaller, localised areas of a site may do so. When estimating the carrying capacity of a release site and considering the number of reptiles to be translocated, a precautionary approach will be used. The mitigation strategy will provide a larger area of suitable habitat at the receptor site than at the capture site.

Translocation Methodology

In order to fulfil a translocation of reptiles from the development site to the receptor sites, the animals must be caught, or in the case of a very low population discouraged from the areas of the site to be lost. The most effective method for capture involves the placing of cut up roofing felt or other materials such as corrugated iron sheeting, wood or plastic that snakes and lizards hide under. Refugia/Tins are best placed in locations which will be attractive to reptiles (e.g. 'sun-traps').

The most profitable time for capturing reptiles is generally between late April - June, and again between late August and late September, depending on weather conditions. The suggested number of days required to catch reptiles for a reasonable effort to remove the population is described in **Table A1** above.

Capture Site Preparation

The development site must be prepared in order to facilitate the successful removal of reptiles. Sheets of roofing felt and tin will be placed across the site to act as refugia for the reptiles. They will be placed at a high density in suitable habitat. Areas of suitable reptile habitat with a high reptile density may have a tin density of up to 5 refugia per 10m², in line with the guidance in **Table A1**. The placement of a higher number of refugia on site will increase the efficiency of capture and can reduce the number of trapping days required to clear the site of reptiles.

Capture Effort

Table A1 provides the suggested capture effort for reptile species for translocation from a site, based on good practice guidance (HGBI, 1998). Reptile translocation can in some circumstances require at least one season (spring to autumn), and sometimes longer, to ensure that all reptiles are removed from the development site.

The purpose of this type of translocation is to make reasonable effort to remove all reptiles from a site prior to a development. Where reptile populations are low or on small sites, Natural England often provide additional guidance that reasonable effort has been made and translocation to be considered complete in any area. The capture rate needs to have declined to zero over at least three to five consecutive trapping visits in suitable weather conditions.

Table A1: Potential Capture Effort for Common Reptiles

Species	Population size (adult density)	Tin density (tins/ha)	Trapping days in good weather for larger sites
Slow-worm	High (> 100 / ha)	100	All suitable days between March & September or a full year (min. 90 suitable days)
	Medium (> 50 / ha)	100	All suitable days between March & September or a full year (min. 70 suitable days)
	Low (< 50 / ha)	50	60 suitable days
Common lizard	High (> 80 / ha)	100	All suitable days between March & September or a full year (min. 90 suitable days)
	Medium (> 40 / ha)	100	All suitable days between March & September or a full year (min. 70 suitable days)
	Low (< 20 / ha)	50	60 suitable days
Grass snake	High (> 4 / ha)	100	All suitable days between March & September or for two years (min. 90 suitable days)
	Medium (2 - 4 / ha)	100	All suitable days between March & September or two years (min. 70 suitable days)
	Low (< 2 / ha)	50	60 suitable days

The guidelines above are likely to change according to the habitats on a site and populations of reptiles, and manipulation of habitats prior to construction can reduce the number of trapping days, allowing for more efficient capture of reptiles on a translocation site.

Habitat Manipulation

The areas of habitat affected by the development will be carefully modified to reduce their suitability for reptiles where necessary. This will encourage reptile movement within the site to increase capture in key areas around refugia and may also encourage some dispersal to suitable retained habitats. The grass height will be reduced by cutting to no less than 10cm on the first cut and will be phased in bands and habitat areas across the site. The location and timing of this process will be guided by capture rates in the different areas of the site. Habitat manipulation can be used to increase catch efficiency.

Translocation programme

The translocation is inspected regularly and any reptiles are captured and moved, using the methods described above to the receptor site. For the translocation to be considered complete in any area, the capture rate needs to have declined to zero over at least three to five consecutive trapping visits in suitable weather conditions.

Close monitoring of the capture rate will allow a judgement to be made of the number of visits considered to be necessary (in relation to guidelines in **Table A1**). The site will be walked very

slowly in order to search for basking reptiles and by carefully lifting each refugia, an attempt will be made to catch any reptiles basking beneath.

All reptiles will be transported to the receptor site in a secure ventilated container. At the end of each visit all reptiles caught will be released in suitable conditions at the receptor site. Details of all captures and releases will be recorded.

Exclusion Fencing

Reptile fencing will be used where required to prevent reptiles returning to cleared areas, and where populations are considered sufficient to warrant it (it is often in-effective with low populations).

Supervised site clearance

Following the completion of the translocation in any areas of the site, a supervised site clearance will be carried out. This will take place outside of the hibernation season usually between April- early October (November – February is the main hibernation period dependent on weather conditions). The technique is a last method used and requires very careful specialist supervision. Normal destructive search rates are between 0.1 and 1.0 ha per day depending on machine size and habitat type.

The search will begin by dismantling rubble piles and other debris by hand. Reptiles may be found sheltering in these structures. Following this, the vegetation will be stripped using an excavator and bucket. Firstly, the top few centimetres of the ground or first layer of rubble should be removed, to expose reptiles sheltering in crevices just below the surface. At least one experienced reptile handler should be positioned to catch any remaining reptiles as they are disturbed. Following this, larger and deeper excavations can be made, concentrating on areas which afford shelter to reptiles, such as tree stumps and buried rubble. Particular care should be taken when emptying the bucket in case any reptiles are dug up with the spoil. It is not anticipated that many reptiles (if any) are discovered as the reptile populations will have almost completely been moved by this stage.

Prior to starting works, the contractors will be alerted to the presence of protected species on the site and provided with the method statement and plans. The contractors will be shown reptiles, so that they are familiar with their identification, should they come across them during vegetation works.

Monitoring

Following completion of the work, monitoring of the reptile population at the receptor site is recommended during the following two years, in order to determine the success of the translocation project.

Natural England (English Nature, 1998) suggests the following guidance which may determine the ‘success’ of a mitigation strategy:

- Removal of a ‘reasonable proportion’ of animals from a development site or no significant impact from development where in situ conservation is involved;
- Establishment and maintenance of a range of suitable habitats: with the presence of ‘good’ features and absence of ‘negative’ features;
- Breeding and successful recruitment;

- Re-establishment of animals in a range of habitat or spread of the animals throughout a site or to adjacent sites;
- Establishment of an appropriate age structure in the population;
- Survival of a large proportion of the animals that were moved;
- Establishment of:
 - A viable population
 - An expanding population
 - An ‘equivalent’ population to that which previously occurred
 - A population that is fluctuating in size within acceptable limits;
- Persistence of individual animals over a number of years.

References

Herpetofauna Groups of the British Isles (HGBI) Guidelines (1998) “Evaluating Local Mitigation/Translocation Programmes: Maintaining Best Practice and Lawful Standards.” HGBI Advisory notes for Amphibian and Reptile Groups (ARGs). HGBI, c/o Froglife, Halesworth, personal collection.

Froglife, 1999. Froglife Advice Sheet 10. Reptile Survey. An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife, Halesworth, Suffolk.