

**ADDENDUM TO THE
PROTECTED SPECIES SURVEY REPORT**

**LAND AT OLDLANDS FARM
PHASE 2
BOGNOR REGIS**

SEPTEMBER 2015

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ADDENDUM TO THE PROTECTED SPECIES SURVEY REPORT LAND AT OLDLANDS FARM PHASE 2 BOGNOR REGIS

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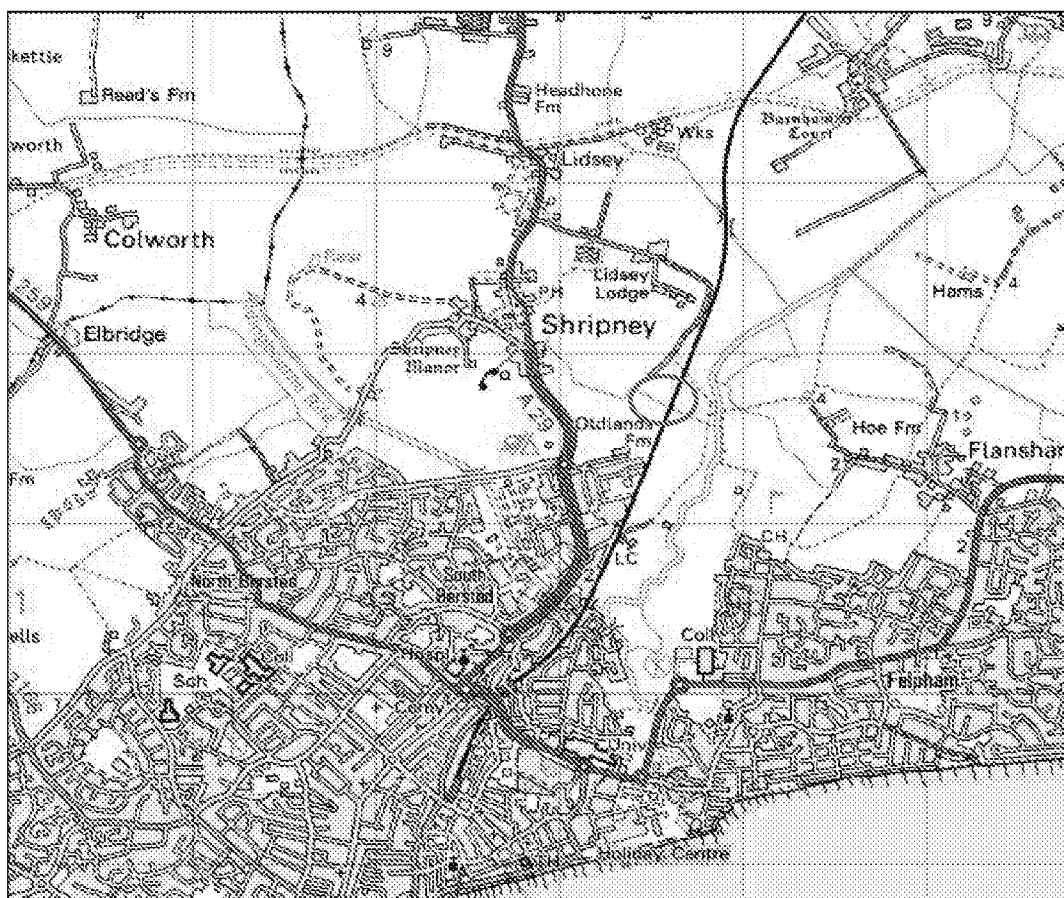
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ADDENDUM TO THE PROTECTED SPECIES REPORT**LAND AT OLDLANDS FARM PHASE 2
BOGNOR REGIS****AUGUST 2015****1.0 INTRODUCTION****1.1 Background**

- 1.1.1 Aluco Ecology Ltd was commissioned to carry out detailed additional Protected Species survey work on land at Phase 2 of Oldlands Farm by Hanbury Properties Ltd. This was reported in Aluco Ecology (2015a). As a result of this report additional information on mitigation for Badgers *Meles meles*, Water Vole *Arvicola terrestris* and Reptiles was requested by Arun District Council. This additional mitigation information is provided below.

1.2 Site Location & Boundary

- 1.2.1 The land consists of intensive arable farmland. The location of the site is shown at **Figure 1** below.



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Figure 1: Location of the Site

1.3 Relevant Legislation and Policy

UK Legislation

- 1.3.1 The Wildlife & Countryside Act 1981 is the principal mechanism for the legislative protection of wildlife in Great Britain. This legislation deals with both protected species and sites, including protected Reptiles and Bats. Badgers are provided protection through the Protection of Badgers Act 1992. Further details on legislation are provided in **Technical Appendix 1**.

European Legislation

- 1.3.2 The Conservation (Natural Habitats &c) Regulations 1994 now replaced by the Conservation of Habitats & Species Regulations 2010 (known as the Habitats Regulations) makes it an offence to deliberately kill, capture, or disturb a European Protected Species (EPS), or to damage or destroy the breeding site or resting place of such an animal. All UK Bat species are classified as a European Protected Species being listed under Annex IV of the Habitats Directive. See **Technical Appendix 2**.

National Planning Policy

- 1.3.3 The Government sets out its objectives for conserving and enhancing biodiversity in the National Planning Policy Framework. The Government's objectives for planning and biodiversity are that '...the planning system should seek not just to protect, but where possible to enhance biodiversity – making sure we don't just have isolated pockets of wildlife, but rich and connected green spaces for all kinds of species to thrive.'
- 1.3.4 The Framework goes on to state that at the heart of the planning system is a presumption in favour of sustainable development. Planning Practice Guidance on the Natural Environment provides information on taking biodiversity into account in planning (see Para. 007- onwards)

Local Planning Policy

- 1.3.5 In addition to the National Planning Policy Framework and the legislation outlined above, the strategic and local planning policies are the principal policies against which the outcomes of this ecological appraisal will be tested; the Arun District Council Local Development Framework contains policies in the pre-submission Core Strategy consultation Draft relating to ecology, these are outlined at **Technical Appendix 3**.

Biodiversity Action Plans

- 1.3.6 The UK Biodiversity Action Plan is the Government's response to the 1992 Convention on Biodiversity (The Rio Convention), with the aim of halting loss of biodiversity in the UK. Biodiversity strategy is implemented at a local level through county and district level Biodiversity Action Plan (BAPs). The site falls within the geographic area covered by the National BAP and the Sussex BAP.

2.0 ADDITIONAL MITIGATION DETAILS

2.1 Introduction

- 2.1.1 An Ecological Appraisal of the site was undertaken in 2015 (Aluco Ecology, 2015). This considered the potential for protected species presence on site, with limited habitat potential for protected species, but with hedges, watercourses and ditches around some of the site boundaries.
- 2.1.2 Protected Species survey work on site was undertaken in spring and summer 2015 (see Aluco Ecology, 2015a). This report outlined mitigation measures for all protected species groups. Arun District Council has requested further information on Badgers, Water Vole and Reptiles. The additional information is provided below, and is based on the illustrative masterplans developed for the scheme and their parameters.
- 2.1.3 **Figure 2** below shows a plan of the site with habitats and boundary numbering.

2.2 Mitigation for Badgers

Habitats on Site & Summary of Survey

- 2.2.1 There are suitable habitats around the boundaries of the site and particularly along B6 & B10 for Badger Sett creation.
- 2.2.2 A number of holes in the bank of B6/B10 have potential for Badger use, but there were no signs of activity during the survey in early spring 2015. The only evidence of presence on site was a Badger latrine that was recorded on the railway boundary at B5 during survey work in late Spring 2015.
- 2.2.3 Badgers are known from the wider area, and an Outlier Sett was closed as part of the Bognor Northern Relief Road works off site at the southern edge of B10 in 2012.

Mitigation

- 2.2.4 As a result of historical evidence of Badgers in the local area, but only low evidence of current use of the site, and no evidence of active Setts, mitigation should involve the following:
- Provision of safe working practices during construction, involving:
 - Trenches in excess of one metre in depth should be covered or secured and a means of escape provided for any animal that does fall in (a suitable escape can be provided by wooden planks placed at a 45 degree angle);
 - Any temporarily exposed open pipe system should be capped in such a way as to prevent badgers gaining access;
 - Chemicals and fuels should be stored carefully and as far away from setts and badger paths as possible, and in accordance with the Code of Construction Practice; and
 - Any security lighting (if required) should be directed away from the sites boundaries.

- An update survey of the site to inform a reserved matters Application, and prior to construction;
- Provision of linear routes through the site to maintain landscape connectivity. This is possible on the site boundaries, particularly the south east boundary B2 and the Railway boundary, where buffers of c8m and 15m are proposed. The buffers should be created and managed according to a management plan (as outlined in Aluco Ecology, 2015a).

2.3 Mitigation for Water Vole

Habitats on Site & Summary of Survey

- 2.3.1 The watercourse running along the southern boundary of the proposed development site at B2 contains low water flows (maximum noted during survey work was c20-30cm, with the eastern end of the stream mostly drying in summer 2015) and levels being dry some of the year. It is dominated by Common Reed *Phragmites australis* growth with some limited other species including Fools Watercress *Apim nodiflorum* and Yellow Flag *Iris pseudacorus*. This watercourse has habitat for Water Vole and they have been recorded in the past (for a summary see Aluco Ecology, 2015).
- 2.3.2 Ditches are present within the internal boundaries (B6-B9) of the site. The ditch at B6 (and B10 north of the BNRR) is mostly dry with some dampness towards the northern end of B6, and a ponding of stagnant water with high leaf litter at the south west end, which was dry by May 2015. The habitat is lacking aquatic vegetation and is of low value for Water Vole at present.
- 2.3.3 The ditches of boundaries B7 & B8 are mostly enclosed by woody vegetation, dense Hawthorn and Bramble, which limits aquatic marginal vegetation to a few small patches of Common Reed growing through Bramble where the Hawthorn hedge is absent, and occasional plants of Pond Sedge. The ditches contained c20cm of standing water along their length with shallow banks within the hedgerow during the late winter site visits but were dry by May 2015. A 25m section of B8 is open with damp grassy vegetation. The boundary at B9 has a damp depression at the north end of the permanent pasture, this is within the BNRR construction zone.
- 2.3.4 The ditch at B10 is a continuation of B6 north of the BNRR. This was dry during the survey period and is heavily shaded by Willows and Elder.
- 2.3.5 Water Voles are known to occur in low density in the area and will use the ditches on site for dispersal and during times of high water in the catchment. They are also periodically likely to occur, particularly along B2 whenever local population densities increase. Most of the ditches on site are poorly suitable/marginal habitat for Water Voles due to them being only wet during high water levels; and also being shaded by bramble/hedgerow and scrub growth, which results in lower quality feeding and poor suitable vegetation growth. The most suitable ditch is on the southern boundary of the site (B2) for which there is no evidence of use during the 2015 spring / summer survey. This ditch network has had extensive management works as part of redevelopment of the site to the south.

Mitigation

- 2.3.6 Mitigation is split into construction mitigation and operational measures. The construction mitigation strategy provides a basis for update monitoring of the ditches on site, and broad mitigation strategy for retention of main habitats and staged removal of Water Vole habitat, to an agreed best practice methodology. The operational measures involve creation and longer term management of new habitats on site.
- 2.3.7 The construction mitigation should be informed at reserved matters Application stage by a detailed mitigation method statement for Water Vole. This should include the following best practice measures where Water Voles or their habitats may be affected, and follow a standard mitigation process set out in the Water Vole Mitigation Handbook (Strachan, 2011), unless updated with subsequent best practice guidance:

Update Monitoring

- Update survey work prior to reserved Matters and construction commencing, with survey work at a suitable time of year for Water Voles and the habitats on site;

Works to Boundary 2, Main Access

- The main site access is over B2 which has temporary access provision for phase 1 of the scheme. This will require a road link through the ditch (see **Figure 3** below), and small connections to the ditch for Sustainable Urban Drainage mitigation;
- Measures can involve the possibility of displacement mitigation, which is available for stretches of watercourse that are less than 50m in length, and where populations of Water Vole are at a lower density, where affected habitat is less than 20% of the resource and other construction works aren't taking place on the watercourse;
- Before this mitigation is put in place new habitat creation as a minimum equivalent to that lost should be created adjacent to the watercourse. Proposed habitat creation is detailed below at 2.3.8 onwards;
- The mitigation should be undertaken during late winter/early spring (as detailed in Strachan 2011 see Chart A, at p124);
- The affected section should be examined in detail for potential Water Vole burrows, with any potential burrows marked;
- The affected section should be cut in phases to open the banks and discourage any use, cutting to as low as possible;
- Following this a destructive search should be undertaken, with marked burrows examined by hand digging;
- The works area should be defined and retained habitats and bankside to 5m fenced outside of the construction zone during the full construction period.

Works to Internal Boundaries

- Boundaries B7 & B8 are to be removed as part of the scheme. A road access is to be created at the southern end of B6. No evidence of use of any internal boundary by Water Vole has been recorded, and the habitats are considered of lower value, marginal habitat;

- Mitigation for these stretches of ditch should include initial monitoring for Water Vole evidence;
- Where no evidence is noted removal of woody vegetation can take place outside the bird nesting season without damage to the bankside using hand tools or a long arm flail with the machine set upto 5m back from the bank edge or to the edge of the current arable limit;
- Further monitoring for signs of Water Vole should be undertaken following removal of woody vegetation;
- Where no evidence of Water Vole is present then the ditches can be subject to a destructive search, moving west to east. As reptiles may potentially be present in this habitat consideration of reptile mitigation should also be factored in (see section below);
- Where monitoring records the presence of Water Voles along the ditches to be removed additional mitigation measures will be required. Depending upon the areas affected it is likely that over 50-100m of ditch line will be affected on B7 & B8 and loss of this length of ditch cannot be undertaken using the displacement methods outlined for B2 above.
- A translocation of Water Voles would be the only solution in this situation. Translocation can only take place through a licence issued by Natural England. This would only be issued where the mitigation demonstrated conservation gain through creation of new habitats to more than compensate for the loss of existing habitats. These new habitats would need to be created and suitable for receiving translocated Water Voles prior to removal of habitats in the construction zone.
- Translocation methodologies should be detailed in a method statement to inform a licence Application following reserved matters Application. This would detail fencing requirements, habitat manipulation, capture effort, destructive search and timing.

2.3.8 Operational Mitigation involves the creation and long term maintenance of new habitat. The detail of this should be provided as part of the reserved matters Application. The strategy is outlined below, and involves creation of new habitats that as minimum should recreate lost wetland habitats 1:1.

2.3.9 The creation of new wetland habitats is possible within the two main site buffers along Boundary 2, and along the boundary with the Railway. These buffers will create areas totalling roughly 0.64ha (2500m² and 3900m²). The ditches to be lost include as a worst case scenario 300m² for B8, 420m² of B7, plus c75m² for the road routes at B2 and B6. This is a total of 870m² or 0.087ha. The buffer zones therefore provide sufficient space to create new wetland habitats.

2.3.10 The creation of these habitats will be in line with hydrological mitigation for the scheme, and a Sustainable Urban Drainage scheme has been outlined (See MJA, 2015). This provides for an drainage solution that mirrors existing greenfield run off rates for the site. The run off is proposed to be split into three catchments with two discharging into a newly constructed drain along the railway, within the 15m buffer zone. This channel is proposed to run from B9 to B2, a length of approximately 260m. If it is 3m wide it will provide wetland habitat of a seasonal nature to that being removed to a surface area of 780m². The channel is shown at **Figure 3** below, reproduced from MJA (2015).

2.3.11 The proposed ditch can be enhanced for ecological purposes through the following measures:

- The ditch can be curved within the buffer zone to create a more natural looking and winding channel, that will also increase the amount of wetland habitats created;
- The ditch can be left to develop natural vegetation from the existing seed bank along the railway, where Common Reed *Phragmites australis*, Rushes *Juncus spp.*, False Fox Sedge *Carex otrubae* and other wetland plants are to be retained in situ;
- The top soil from open sections of the ditches to be removed should be placed over the newly created ditch to provide a locally native seed bank for wetland creation;
- If considered necessary additional wetland plants can be plug planted or seeded along part of the channel to aid establishment (particularly if considered necessary for Water Vole);
- Small weirs can be added to the ditch to retain run off for longer in ponds along the channel without compromising any high flow requirements for flood alleviation;
- Location of connections to the new watercourse should be looked at allow for maximum wetland contribution from temporary storage tanks into the channel.

2.3.12 In addition to the wetland creation within the buffer zone along the railway, a series of depressions should be created within the buffer zone of B2. These will then allow seasonal wetlands to develop adjacent to the watercourse at B2. These seasonal ponds can be varied in size and depth and should have relatively shallow gradients. The aim should be to create a surface area to compensate for the removal of other seasonally wet ditches lost as part of the scheme. A series of three ponds 20m x 3m for example would create sufficient additional wetland habitat to ensure that the creation of wetlands is greater than that lost. The detail of these ponds should be provided with a management plan for the buffer zone at reserved matters stage. Consideration should be given to potential for active Water Vole burrows if placed directly adjacent to B2, although provision within existing arable should be suitable.

2.4 Mitigation for Reptiles

Reptile Habitats & Survey Summary

2.4.1 The boundaries of the fields on site are the only areas where suitable habitat exists for populations of common reptiles to occur. North of the Bognor Northern Relief Road (BNRR) the banks around B10 contain some suitable habitat. Some of the boundary lengths contain very little reptile habitat as the fields are cultivated right to the margins.

2.4.2 The survey only recorded a single species of reptile on the site, Slow Worm *Anguis fragilis*. This species was recorded along boundaries B4, B6 and B8. A total of 3-5 individual Slow Worms were recorded (see **Figure 4**), suggesting that the species is only present in low numbers. Habitat exists for the more mobile Grass Snake *Natrix natrix* and as this has been recorded in the local area, it may occasionally use some of the boundary habitats on site.

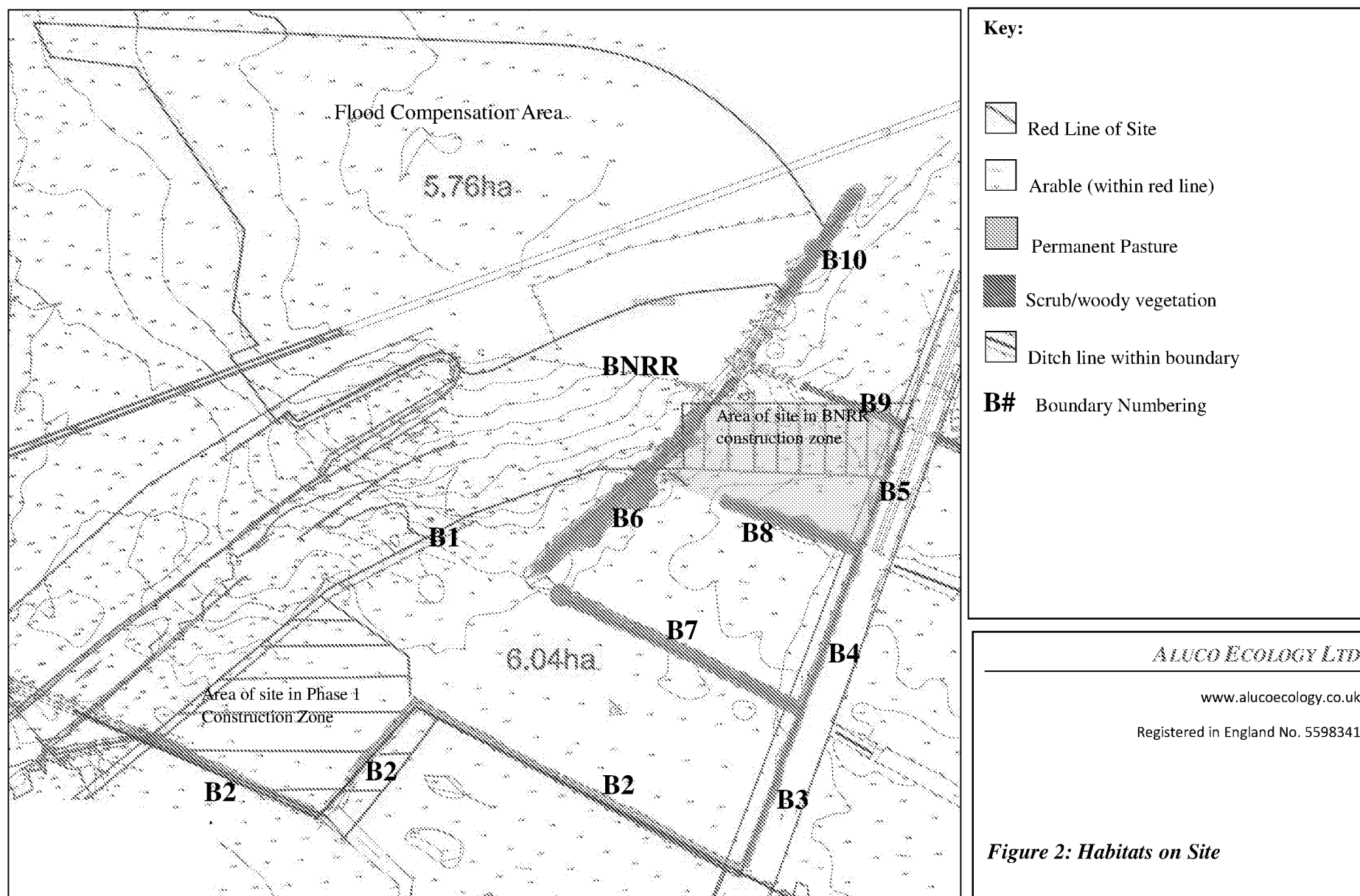
2.4.3 The majority of habitats on site for reptiles are considered of negligible value for reptiles as the habitats are unsuitable (intensive arable farmland). The field boundaries around the main

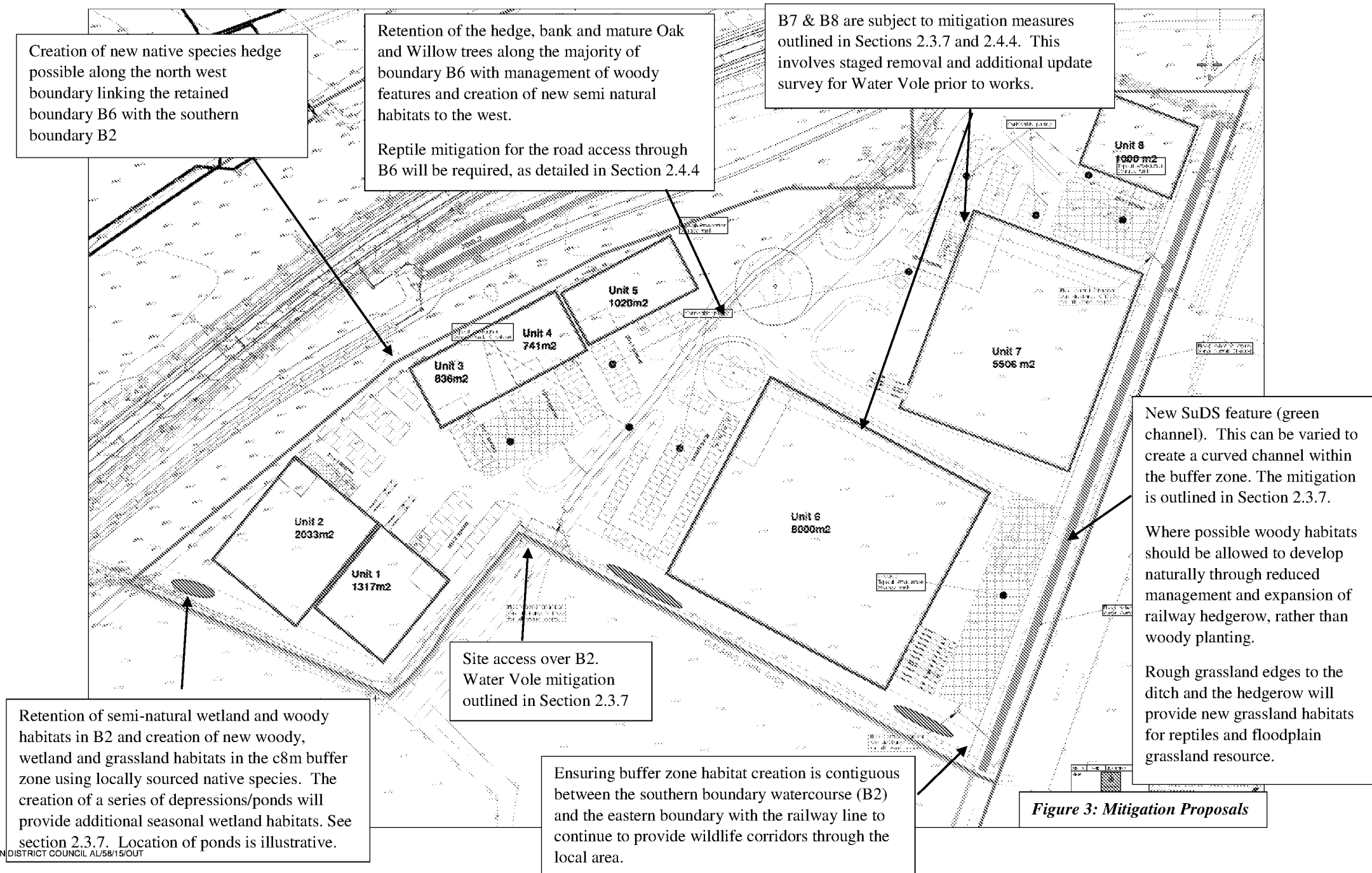
development area are considered to be of **value within the zone of influence** for reptiles on account of suitable marginal habitat that is likely to provide some suitable reptile habitat.

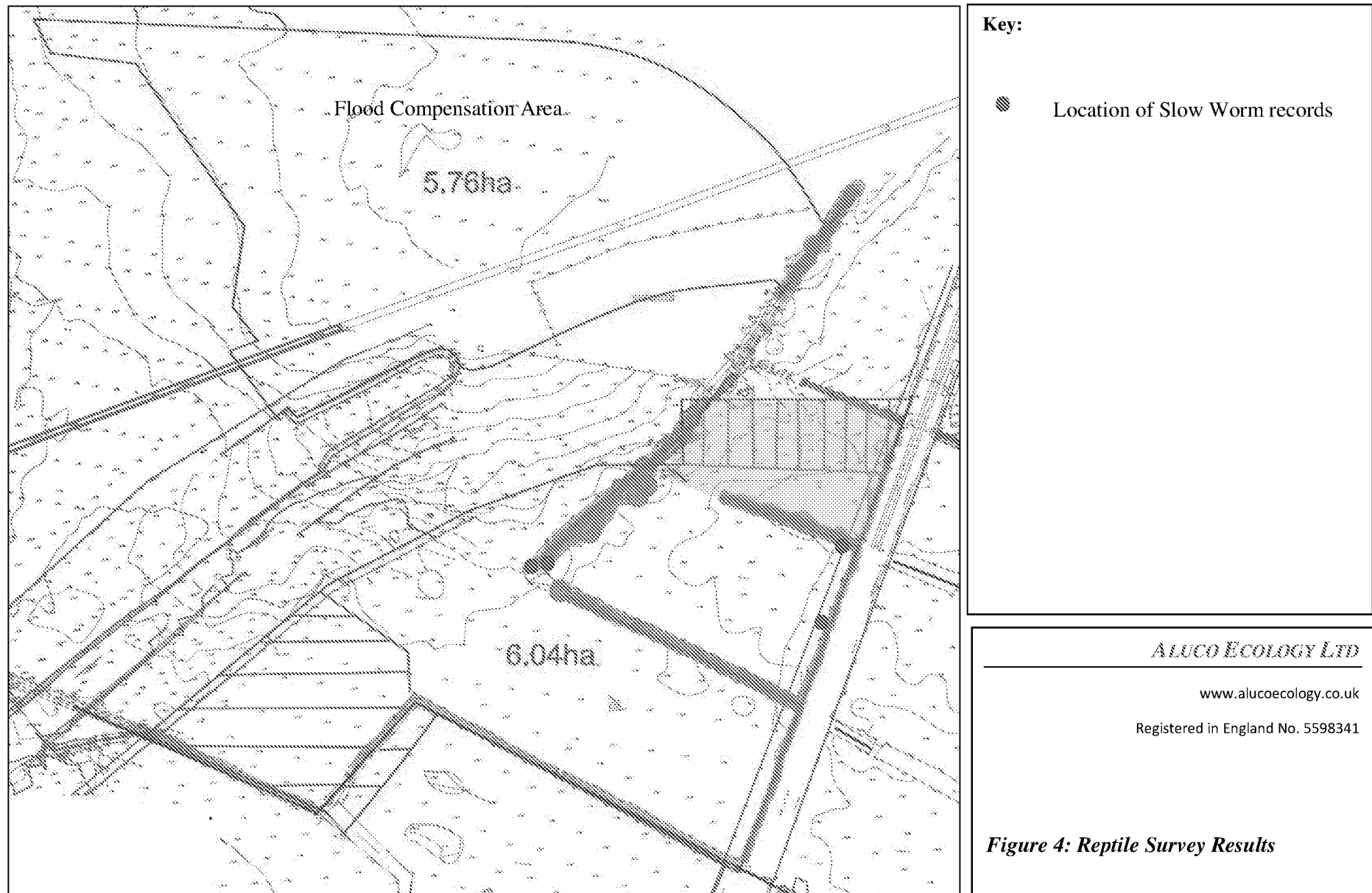
Mitigation

2.4.4 In order to ensure that reptiles are not harmed as a result of the scheme the following mitigation measures should be put in place, and a detailed mitigation method statement for reptiles produced at the reserved matters Application stage. This should include a translocation of any reptiles from the construction zone to retained habitats at the edge of the site and along the edge of B6. This translocation will require the following measures:

- The areas of reptile habitat within the construction zone of the site will be sensitively strimmed to c10cm using hand tools, careful not to harm reptiles potentially present; Where trees and bushes are also to be removed, due regard will be had to the mitigation strategy for nesting birds. The areas of affected habitat include the road routes through B2 and B6 and habitat to be lost along B7 & B8;
- Reptile protective fencing may be needed along retained boundary areas, eg B6 boundary. This fencing will be to standard guidelines;
- Refugia will be placed along the construction works area and a relocation of reptiles will be made based on the strategy outlined in **Technical Appendix 4** to the retained habitat that has been fenced from the construction zone;
- Following 3-5 negative visits in suitable conditions a destructive search will be undertaken of the works area by a suitably qualified ecologist. The construction area will be phased to allow for progressive destructive searches through the site to tie in with construction area phases;
- The fencing will continue to provide protection of the retained habitat from construction intrusion;
- Following construction, the area on the retained side of the fencing will be reconnected with the new open space areas along the buffers and reptile populations will be allowed to colonise the new habitats over time;
- Long term management proposals of retained habitat are provided in a management plan;
- A mitigation method statement is to be drawn up for detailed scheme design and agreed with the Local Authority;
- the reptile strategy will be undertaken during the period March-October. Where potential reptile habitat is contained within the works area outside this period, no construction works will be undertaken in this habitat during this period.







3.0 CONCLUSIONS

- 3.1 Additional protected species survey work has been undertaken during April – July 2015 on land at Oldlands Farm, Phase 2 area. This has recorded the presence of protected species in low numbers, including a breeding and wintering bird assemblage with declining farmland species present, low use by a number of Bat species for foraging, potential for Water Vole presence in the main watercourse particularly along the southern boundary of the site, and low populations of reptiles restricted to the field margins in a few localities.
- 3.2 The habitats on site, location and use of the site by protected species suggests that mitigation and habitat creation options are possible to provide mitigation and enhancements in retained areas to biodiversity on the site, and if necessary within the flood compensation area, through a future development scheme. This has been set out in further detail above following a further information consultation request from Arun District Council, and in the Ecological Appraisal (Aluco Ecology, 2015) and Additional Protected Species Survey Report (Aluco Ecology 2015a). A detailed reserved matters Application for the scheme should look at providing the detailed mitigation and enhancement strategies for ecological features as part of the scheme proposals.

5.0 REFERENCES

Aluco Ecology (2015) Ecological Appraisal, Land at Oldlands Farm, Phase 2 Bognor Regis

Aluco Ecology (2015a) Additional Protected Species Report, Land at Oldlands Farm Phase 2 Bognor Regis

Aluco Ecology (2012) BNRR Update Ecology Mitigation for Bognor Northern Relief Road, Lidsey Rife Temporary Crossing Works & Adjacent Watercourses

Aluco Ecology (2011) BNRR Update Ecology Strategy Bognor Northern Relief Road, A29 – Stanover Lane Section.

Aluco Ecology (2008) Felpham Site 6 and Bognor Northern Relief Road, Ecological Mitigation Strategy;

CIEEM (2015) Guidelines for Ecological Report Writing

IEEM (2006). Guidelines for Ecological Impact Assessment in the United Kingdom, Institute of Ecology and Environmental Management, Winchester.

Strachan R, ed (2012) The Watervole Conservation Handbook, third Edition Wilderu

Technical Appendix 1

Wildlife & Countryside Act 1981 & Countryside & Rights of Way Act 2000 (CRoW)

Wildlife & Countryside Act

The Wildlife and Countryside Act 1981 (as amended) (WCA) is the principle legislation in Britain for the protection and conservation of our wildlife and its habitats of national importance. The legislation adopts a habitat and species based approach to nature conservation. Habitats and some species are protected in designated Sites of Special Scientific Interest (SSSI). Other species are afforded some protection from harm or disturbance by way of inclusion in either Article 1 (birds), Schedule 1 (specially protected birds), Schedule 5 (specially protected animals) or Schedule 8 (specially protected plants).

(ii) Protection Afforded to SSSIs

The presence of an SSSI on or near to a development is a material consideration, and this is discussed further in policy (see PPS9)

(iii) Law Relating to Protected Species

The WCA provides protection to such species via Section 1 (birds) and Section 9 (animals). These sections provide protection from intentionally:

- killing, injuring or taking any wild bird or taking, damaging or destroying the nest or eggs of a wild bird
- disturbing any wild bird in Schedule 1 whilst building, on or near a nest, or disturbing dependant young of such birds
- damaging, destroying or obstructing access to any structure or place of shelter or protection of a schedule 5 animal, or disturbs any such animal whilst it is occupying a structure or place it uses for that purpose
- killing, injuring or taking any animal listed in Schedule 5
- Having in possession or control any live or dead wild bird or egg, or any wild animal in Schedule 5, or trading in any animal under Schedule 5.

As with European Protected species, there are exemptions from this legislation, and licences for development can be obtained in certain circumstances. Protected species are also a material consideration in planning applications.

Countryside & Rights of Way Act 2000 (CRoW) and Wildlife and Countryside Act 1981

(i) Protected Species & SSSIs

The Countryside and Rights of Way Act 2000 (CRoW Act 2000) adds to protected species legislation in the WCA. The lesser test of 'Recklessness' is added to the protection from disturbance in three circumstances. These are:

- disturbance to Schedule 1 birds and their nests, eggs and dependant young,
- disturbance to Schedule 5 animals in their place of shelter/protection, and
- disturbance to the places of shelter/protection of Schedule 5 animals.

This addition means that any person who deliberately takes an unacceptable risk or fails to notice an obvious risk is falls under the Section irrespective of intention.

The CRoW Act also provides greater protection to SSSIs from operations (and non operations) of owners, occupiers and third party users of an SSSI.

The CRoW Act also provides a basis for Local Authorities to consider Biodiversity within their functions and decision making.

Technical Appendix 2

Habitats Regulations and Schedule 2 Species

The Conservation (Natural Habitats & c.) Regulations SI 1994/2716 partially implement the Habitats Directive. This has recently been replaced by the Conservation of Habitats and Species Regulations 2010 (the Habitat Regulations). The Regulations contain provisions relating to the protection of European sites and European protected species. European Sites are defined within the Regulations as Special Areas of Conservation (SACs) or Special Protection Areas (SPAs) whether proposed, candidate or classified. European Protected Species are those species listed in Annex IV of the Directive that occur in the UK, and these have been listed in Schedule 2 of the Regulations.

Species listed under Schedule 2 of the Habitat Regulations were formally afforded protection by Regulation 39 (1994), this is now found under Regulation 41/42 (2010). European protected species include the great crested newt, dormice and all species of bats.

(1) The Habitats Regulations makes it an offence;

(a)deliberately to capture or kill a wild animal of a European protected species;

(b)deliberately to disturb any such animal;

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

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

(2)It is an offence to keep, transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal of a European protected species, or any part of, or anything derived from, such an animal.

(3)Paragraphs (1) and (2) apply to all stages of the life of the animals to which they apply.

(4)A person shall not be guilty of an offence under paragraph (2) if he shows-

(a)that the animal had not been taken or killed, or had been lawfully taken or killed, or

(b)that the animal or other thing in question had been lawfully sold (whether to him or any other person).

For this purpose "lawfully" means without any contravention of these Regulations or Part I of the Wildlife and Countryside Act 1981.

(5)In any proceedings for an offence under this regulation, the animal in question shall be presumed to have been a wild animal unless the contrary is shown.

(6)A person guilty of an offence under this regulation is liable on summary conviction to a fine not exceeding level 5 on the standard scale.

The Regulations go on to state exemptions and defences that apply to acts that may contravene the Regulation. Such exemptions include those listed in Regulation 40 (1994) now found at Regulation 42 of the 2010 Regulations

The granting of a licence under Regulation 44 (1994 Regulations) now Regulation 53-55 (of 2010 Regulations).

In order to carry out a lawful operation (e.g. development work which has full planning permission) that may result in any of the offences above, it is necessary to obtain a licence from Natural England to allow the operation to proceed.

However, in accordance with the requirements of the Habitats Regulations 2010, a licence can only be issued after the following conditions have been satisfied:

- *that there is no satisfactory alternative, and*
- *that the action authorized will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.*
- *that the action is required in preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;*

Full planning permission is required to apply for a Natural England licence (where such a consent is necessary for the work to be carried out). In addition, a method statement which details the survey results, methodology of work to be undertaken, mitigation and compensation measures, must be submitted to Natural England with the licence application.

For Full details of the 2010 Habitat Regulations see:

<http://www.legislation.gov.uk/ukxi/2010/490/regulation/42/made>

Technical Appendix 3

Arun District Council Policy

2013-2028 Draft Local Plan Policies

Policy DM 26

Development and Biodiversity

Development schemes shall, in the first instance, protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement.

Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species. This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be indirectly affected by the proposals. All surveys shall be carried out at an appropriate time of year and shall be undertaken by a qualified and, where appropriate, suitably licensed person.

All developments shall have regard to Natural England's standing advice for protected species.

Developments shall also be consistent with all other local plan policies.

Policy SP 23

Natural Environment

Arun District Council will encourage and promote the conservation and enhancement of biodiversity and the natural environment through policies for the protection of both designated and non-designated sites. Where possible it shall also promote the creation of new areas for habitats and species. In relation to designated sites, development will be permitted where it protects sites listed in Tables 19.1-19.6 that are recognised for the species and habitats contained within them.

Name	New Site Code ⁽³⁾
Pagham Harbour	UK 11052

Table 19.1 Ramsar Sites

Name	Site Code
Pagham Harbour	UK 9012041
Arun Valley	UK 9020281

Table 19.2 Special Protection Areas

Name	Site Code
Pagham Harbour	1000243
Bognor Reef	1000219
Felpham	1000357
Climping Beach	1000225

Table 19.3 Sites of Special Scientific Interest

Name	Site Code
Pagham Harbour	1009061
West Beach	1009233

Table 19.4 Local Nature Reserves

Name	Site Code
Ferring Rife & Meadows	Ar12
Littlehampton Golf Course and Atherington Beach, Littlehampton	Ar06
Elmer Rocks	Ar18
Fontwell Park Race Course	Ar01

Table 19.5 Sites of Nature Conservation Importance

Name	Site Code
Felpham Foreshore, Bognor Regis	1475602
Climping Sand Dune System	1475611
Bognor Foreshore	1475600
Pagham Harbour	1475608

Table 19.6 Local Geological Site

Policy DM 34

Designated Nature Sites

It is the policy of the Council to maintain, protect and where possible enhance the conservation value of International, European, National and Local designated sites as listed in Tables 19.1 - 19.6. Development not directly connected with or necessary to the management of the designated site(s) and which is likely to have an adverse effect on the site(s), will generally not be permitted however such development may be permitted where any of the following can be demonstrated:

1. there is no alternative solution (which shall be adequately demonstrated by the developer) or
2. there are reasons of public health or public safety or
3. there are benefits of primary importance to the environment or
4. there are imperative reasons of overriding public interest

Notwithstanding the above however, the presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined.

Where development is permitted, the use of conditions or planning obligations will be used in order to avoid and minimise harm to the site(s). In any event, any adverse impacts shall be minimised and mitigated or compensated in full as agreed with the planning authority.

Developments shall also be consistent with all other local plan policies.

Policy DM 35

Pagham Harbour

1. Within Zone A (<400m) as identified on the Proposals Map, development will only be permitted in exceptional circumstances which shall be demonstrated by the developer. These circumstances shall relate to the impact, type and the effects of any proposed development on Pagham Harbour, including on non-native species.

2. Within Zone B (400m – 5km) all new residential development will be required to:

(a) contribute financially towards improved access management at Pagham Harbour. Access management measures shall be undertaken and shall include wardening, access management and site protection, habitat improvements, provision for interpretation, education and signage and monitoring of wildlife and visitor numbers

and

(b) create easily accessible new green spaces for recreation within or adjacent to the development site, or to make developer contributions towards the provision of such green spaces to serve the area. New spaces shall be capable of accommodating the predicted increases in demand for local walking and dog walking. Good pedestrian links shall be provided between housing areas and new and existing green space in order to discourage car use.

3. Large scale developments taking place outside Zone B and close to its boundary will be considered on a case by case basis for potential effects on Pagham Harbour, and the need for avoidance or mitigation measures.

A tariff will be set to ensure sufficient funds are available to secure the required access management measures and the provision of alternative green space of a suitable size, design and location, where necessary, in advance of the occupation of new development and to ensure it is appropriately managed in perpetuity.

Developments shall also be consistent with all other local plan policies.

Policy DM 36

Appropriate Assessment

An Appropriate Assessment shall be carried out in respect of any plan or project likely to have a significant effect on Pagham Harbour or any other Natura 2000 sites outside the district (where appropriate), either individually or in combination with other plans or projects. If after completing an Appropriate Assessment of a plan or project the Planning Authority is unable to conclude that there will be no adverse effect on the integrity of these sites, the project will not be approved, unless otherwise in compliance with the Habitats Directive.

Projects which may give rise to significant cumulative, direct, indirect or secondary impacts on these sites will only be permitted (either individually or in combination with other plans or projects) for reasons of overriding public interest.

Developments shall also be consistent with all other local plan policies.

Policy DM 37

Non Designated Sites

Within Biodiversity Opportunity Areas (BOA's) and the Marine Conservation Zone (MCZ) (see Proposals Map), development shall

(i) retain and sympathetically incorporate locally valued and important habitats, including wildlife corridors and stepping stones

(ii) be designed in order to minimise disturbance to habitats

Where development proposals are likely to have an impact on species or habitats within either the BOA's or recommended MCZ, any application for planning permission shall include a properly conducted survey of the presence of that species and habitat and any impact that development may have on either. Development proposals that do not reasonably address opportunities for enhancing BOA's and the recommended MCZ through their design, layout and landscaping shall not be permitted. Where a development scheme would result in a habitat loss, mitigation measures shall be proposed as part of the proposed scheme and such measures agreed with the planning authority prior to the determination of any planning application.

Developments shall also be consistent with all other Local Plan policies.

Policy DM 38

Protection of Trees

Development will only be permitted where it will not damage or destroy tree(s) protected by a tree preservation order(s), (TPO) identified as ancient woodland, in a conservation area or contributing to local amenity, unless to do so:

- (i) would result in the removal of one or more trees in the interests of good arboricultural practice. This shall be demonstrated by the developer following the advice of a suitably qualified person which shall be guided by BS 5837. Details of any advice received having regard to BS 5837 shall be submitted, in writing, as part of a planning application or
- (ii) would enhance the survival and growth prospects of other protected trees
- (iii) the benefits of the proposed development in a particular location outweigh the loss of trees or woodland, especially ancient woodland

Where planning permission is granted in any of the above instances, conditions shall be used to ensure that, for any trees which are removed as part of a development, at least an equivalent number of a similar species and age (where practical) are planted on the proposed development site. Sufficient space for replacement trees to mature shall be provided. The planting of new trees shall form an integral part of the design of any development scheme.

Proper provision must be made for the protection and management of trees or areas of woodland on-site when undertaking development. A management plan shall be provided as part of a planning application in accordance with BS 5837 in order to ensure that trees are adequately protected during development. Conditions for the continued protection of trees on sites shall be included in any planning consent given.

Where there are existing trees on or adjacent to a development site, developers shall be required to provide:

- (i) land and tree surveys
- (ii) a tree constraints plan
- (iii) an arboricultural implications assessment to include a tree protection plan and arboricultural method statement

These will ensure that development is planned to take a comprehensive view of tree issues at an early stage in the design process and that development works do not have a negative impact on existing trees.

Developments shall also be consistent with all other Local Plan policies.

ARUN LOCAL PLAN POLICIES

Policies Relevant to Ecology saved from the Local Plan 2011 (Adopted 2003)

POLICY GEN3 Protection of the Countryside

Outside the Built-Up Area, as defined on the Proposals Map, the countryside will be safeguarded for its own sake. Development will not be permitted unless:

- (i) it meets the operational needs of agriculture, forestry, the extraction of minerals or the deposit of waste; or
- (ii) for quiet, informal recreation; or
- (iii) for the diversification of the rural economy; or
- (iv) for essential road schemes; or
- (v) it is in accordance with a policy in Sections 2 and 3 of the plan referring to a specific use or type of development.

Permission will not be given for the extension of isolated groups of buildings or the consolidation of linear or sporadic development unless the proposal accords with criteria (i) to (iii) or (v).

POLICY GEN23 The Water Environment

Development will not be permitted if it would have a direct or indirect unacceptable adverse impact on the water environment, notably in relation to rivers, ponds, wetlands, public access in river corridors and water related recreation.

Where appropriate, the Council will support initiatives which seek to restore or enhance the water environment.

POLICY GEN25 Water Resources

Development will only be permitted where the Local Planning Authority is satisfied that adequate water resources are available or will be provided in time to serve the development, and that provision is not considered detrimental to existing abstractions, river flows, water quality, fisheries, amenity or nature conservation.

POLICY GEN26 Water Quality

Development will only be permitted where the Local Planning Authority is satisfied that it would not lead to a deterioration in the quality or potential yield of surface and ground water resources.

POLICY GEN28 Trees and Woodlands

Development will not be permitted if it would damage or destroy one or more trees protected by a tree preservation order, identified as ancient woodland or in a conservation area unless:

- the removal of one or more trees would be in the interests of good arboricultural practice; or
- the benefits of the proposed development outweigh the amenity value of the protected trees.

Conditions may be used to ensure that, for any trees which are removed as part of a development, an equivalent number are planted on the site.

POLICY GEN29 Nature Conservation Across the District

Development will only be permitted on sites which contain semi-natural habitats, features of nature conservation interest, or within wildlife corridors, where these can be largely retained and sympathetically incorporated into the scheme. Legal agreements may be used to offset the loss of, or impact on, any nature conservation resource present on the site prior to development.

POLICY AREA13 Sites of International Importance for Nature Conservation

Proposals for development in, or likely to affect (directly or indirectly) a site of international importance for nature conservation will be subject to the most rigorous examination. Development not directly connected with or necessary to the management of the site which is likely to have an adverse effect on the site, will not be permitted unless: there is no alternative solution, there are reasons of public health or public safety, or there are benefits of primary importance to the environment.

Where such sites do not host a priority habitat or species, development will not be permitted unless there are imperative reasons of overriding public interest.

Where development is permitted, the use of conditions or planning obligations will be considered in order to avoid and minimise harm to the site, to enhance the site's nature conservation interest, and to secure any compensatory or mitigation measures and appropriate management that may be required.

POLICY AREA14 Sites of National Importance for Nature Conservation

Proposals for development in, or likely to affect (directly or indirectly) Sites of Special Scientific Interest will be subject to special scrutiny. Where such development is likely to have an adverse effect, it will not be permitted unless the reasons for the development clearly outweigh the nature conservation value of the site itself and the national policy to safeguard the national network of such sites.

Where the site concerned is a National Nature Reserve, a site identified by the Nature Conservation Review or Geological Conservation Review, particular regard will be paid to the national importance of that site.

Where development is permitted, harm to the nature conservation interest must be minimised. The use of conditions or planning agreements will be considered to ensure the protection and enhancement of the nature conservation interest, and to provide appropriate compensatory or mitigation measures and site management.

POLICY AREA15 Sites of Local Importance for Nature Conservation

Proposals for development in, or likely to have an adverse effect (directly or indirectly) on a Local Nature Reserve, Site of Nature Conservation Importance (including ancient woodlands or wildlife corridors) or Regionally Important Geological/Geomorphological Site will not be permitted unless it can be demonstrated that reasons for the proposal outweigh the need to safeguard the nature conservation value of the site/feature. Where development is permitted which would damage the nature conservation value of the site/feature, such damage should be kept to a minimum.

Conditions or planning obligations will be used to secure necessary compensatory or mitigation measures, enhancement and site management.

Where appropriate, the Authority will consider the use of legal agreements to provide appropriate compensatory measures, enhancement and site management.

Retained Ecology Policies of the West Sussex Structure Plan 2001-2016

Nature conservation

Policy ERA2

(a) Development should not be permitted unless the wide range of habitats, species and geological features of the County will be protected, conserved and, where possible, enhanced particularly through long-term management mechanisms and habitat creation schemes. A particularly high level of protection should be afforded to sites and features of national and international importance. Proposals for the extension or creation of new habitats should be permitted provided that they are consistent with wider environmental objectives.

(b) Local plans will include policies to:

(1) ensure that site evaluation is undertaken to establish the nature conservation importance of proposed development sites;

(2) protect sites or features of nature conservation importance, including those protected under legislation and prevent development unless there are no alternative solutions and there are overriding reasons which outweigh the need to safeguard the value of sites or features;

(3) ensure that where development would result in the loss of an important nature conservation resource, a new resource is provided which is of at least equivalent value, where possible;

(4) where appropriate, secure the restoration, creation and management of habitats through development proposals; and

(5) where necessary, ensure the investigation and recording of sites and features of nature conservation importance, and, where appropriate, the preservation of any finds.

Technical Appendix 4**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) 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 March and 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 1** below.

Table A1: Minimum Capture Effort for Common Reptiles

Species	Population size (adult density)	Tin density (tins/ha)	Minimum number of trapping days in good weather
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

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 to be developed have either very low or no reptile populations over most parts, and a translocation has already occurred over the main area of the site.

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.

The receptor site that is most fits the criteria above based on knowledge of populations on site, is the retained public open space woodland area on the site. The long term management of this area can be prescribed to cater for the small populations of reptiles, as well as other informal recreational activities and the other nature conservation interests.

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 and late June, and again between late August and late September. 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 above provides the suggested capture effort for Slow Worms, based on good practice guidance, whereby 60 trapping visits can be required to clear common reptiles from a site such as present, during periods of suitable weather conditions (HGBI, 1998). Reptile translocation can require at least one season (March to October), 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 consecutive trapping visits in suitable weather conditions.

Habitat Manipulation

The areas of habitat affected by the development will be modified to reduce their suitability for reptiles. 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.

Translocation programme

The development site will be inspected regularly and any reptiles will be 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 consecutive trapping visits in suitable weather conditions.

The guidance on indicative trapping effort that may be required suggests this may take 60 trapping visits (HGBI, 1998). Close monitoring of the capture rate will allow a judgement to be made of the number of visits considered to be necessary. 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.

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 will be completed by Aluco Ecology 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.