

HOUSING APPLICATION PHASE 4 & 5

SCHEME AMENDMENTS

ECOLOGY STATEMENT

ADDENDUM

FEBRUARY 2015

Aluco Ecology Ltd Registered in England No. 5598341
www.alucoecology.co.uk

Registered Office: Pencairn, Penmenner Road, The Lizard, Cornwall TR12 7NR

HOUSING APPLICATION PHASE 4 & 5 SCHEME AMENDMENTS
ECOLOGY STATEMENT ADDENDUM
FEBRUARY 2015

1.0 BACKGROUND

Introduction

- 1.1 This addendum addresses further information on ecology with regard to changes to Phase 4 & 5 of Felpham Site 6, which was given reserved matters permission in 2008, and further amended in 2010 (D18/5493/P5.SL/01 Rev. B, and D18/5493/P4.SL/01 Rev. B (Dalton Crawley, 2010)). It outlines the ecological mitigation proposed in documents that accompanied the reserved matters Application, and then addresses whether the changes to the scheme proposed by the latest amendments, drawing PLAN-LAY/PH4-5/130912/16, are significant in terms of this ecological mitigation and ecology on site.
- 1.2 As well as ongoing monitoring during the development the site was re-visited on 12 February 2015 to ensure that the survey data is up to date for relevant ecological features. The findings are outlined below.

Existing Ecological Mitigation and Enhancement

- 1.3 The Masterplan for all Phases, and the Relief Road, provides for open landscaped areas and retention of mature boundary features in line with the original Environmental Assessment. Where boundary features have been lost (mainly as a result of the relief road) mitigation in the form of landscape planting and planting along the relief road is proposed, as well as creation of wetland areas with a native species mix. The relief road planting and wetland areas are detailed in Fabrik Landscape plans (Fabrik 2008) and these plans provide detailed planting schemes using native species for these areas, in line with the original Environmental Statement (Fabrik 2008/09).
- 1.4 Section 5.3 of Aluco Ecology (2008a) details the mitigation for on-site retained areas and habitats to be created as part of the landscaping. This report is based on the original Environmental Impact Assessment for the development site (Bioscan 2004). The report also provides mitigation for the presence of protected species on site (Grass Snake *Natrix natrix*, nesting birds, 'low' potential bat roost features, low Badger *Meles meles* activity). Recommendations are provided for the retention and mitigation for protected species in the development and prior to construction commencing on each phase. This is provided at Aluco Ecology (2008a) and with detailed updated species survey work during 2007 and 2008, see Aluco Ecology (2008b) and (2008c). Some of this mitigation has already been undertaken for the Relief Road route and Site 6.
- 1.5 For these protected species additional mitigation has included installation of 58 bat and 30 bird boxes in the local area (undertaken in 2008). The presence of Grass Snake on site has been taken into account with a reptile methodology being proposed, where construction affects such habitats. The final construction of the relief road and open areas, along with retention of mature boundaries will provide linear features for Grass Snake to move around

the landscape and colonise new habitats, including the wetland drainage features on the relief road.

2.0 UPDATE SURVEY VISIT & ONGOING MONITORING

- 2.1 A visit was made to the Phase 4 & 5 area of the site on the 12 February 2015. This visit was to ascertain any ecological changes since the survey work of 2008, 2010 and monitoring in the interim (2012/13), and to provide updated recommendations for the adopted mitigation strategy. The survey concentrated on potential changes to protected species present or potentially present on the site. This included looking for signs of increased Badger use, changes to reptile habitat, potential additional bat roosting opportunities and bird nesting habitat.
- 2.2 No substantial changes to the 2008 survey and subsequent monitoring were noted with regard to the protected species. The land use remains as abandoned agricultural over the three fields in Phases 4 & 5 (as before). Scrub and rank grassland is becoming thicker in the abandoned fields. Measures to bring the fields into management through scrub cutting have been discussed (2012-2015) as the development reaches these final fields. The north east field already has started to become part of the active construction site with a storage area being provided in the centre of this field.
- 2.3 The mitigation proposed in the 2008 reports (Aluco Ecology, 2008a, 2008b, 2008c) is therefore still relevant with regard to the protected species interest on site.
- 2.4 The 2010 update recommended update protected species survey work on the site. This has been undertaken during regular monitoring of the wider site including the BNRR.
- 2.5 The following ecological features were recorded during monitoring and the updated site visit of 05 February 2015, and should be considered in ongoing mitigation in this part of the site.
- **Vegetation** – the vegetation in this part of the site remains as recorded for the Environmental Statement. There has been limited management of these fields;
 - **Birds** – Some potential nesting bird habitat exists within proposed construction areas
 - **Bats** – the surveys on site still remain valid. The main bat features in this section of the site are outside of the red line changes of Phases 4-5;
 - **Badgers** – during the site survey on 05 February evidence of potential use of the site by Badgers was searched for using the methodology outlined in **Technical Appendix 1**. No signs of use were noted. Some areas of the site had impenetrable thorn scrub so could only be examined by looking for mammal tracks and signs around the edges;
 - **Reptiles** - Update reptile survey was undertaken in 2012/13 and this is reported in **Technical Appendix 2**. As will be noted from this survey, the update broadly mirrors the original survey effort for reptiles. A small population is present, mostly around the boundaries of the abandoned agricultural fields in Phases 4 -5. The long standing abandonment means that the habitats within these fields are developing structure for reptiles to move away from the habitats. The survey work still found that the majority

of use was around the boundaries, with the more mobile species Grass Snake present in the wider open fields.

3.0 SCHEME AMENDMENTS

Amendments to Phase 4 & 5, 2015

- 3.1 Phase 4 & 5 of Site 6 at Felpham was given reserved matters permission in 2008. Ecological mitigation strategies have been developed (Aluco Ecology, 2008a-c) with a landscaping strategy (Fabrik (2008)). These have been reconsidered as a result of proposed changes to the layout of the scheme provided in the latest drawing by Dalton Crawley Partnership. This was updated in 2010 when the Phases 4-5 of the scheme were amended (Aluco Ecology, 2010).
- 3.2 The current changes relate to the plot areas within the development, and not to the ecological mitigation of features of interest retained or to be created as part of the scheme mitigation. The proposal is to increase the density of Phases 4-5 by 10 dwellings. This is shown at **Figure 1** below. On this basis these amendments are not considered to have additional significant adverse effects on the ecology of the site or the proposed mitigation, and will be in accordance with the Environmental Statement.

Ongoing Ecology Mitigation

- 3.3 Further mitigation monitoring is recommended to update the ecological mitigation strategies in these latter Phases. This is based on the implementation of the existing Ecological Mitigation Strategies for the following ecological features:
- **Vegetation** – All retained vegetation should be protected as per the standard tree protection fencing shown by Fabrik (2008). New seeding and planting should follow the recommendations in the landscape report;
 - **Birds** – All bird nesting habitat within the construction area should be reduced to 10-15cm from ground level outside the bird nesting season (generally considered Sept-end Feb/early march). Where large machinery such as tractor mounted flail is to be used regard should be had to potential reptile habitat, particularly around the boundaries of the fields, and to retained vegetation. It may be possible to undertake some limited vegetation clearance within the nesting bird season by hand, but only where the vegetation in question can be searched by an experienced surveyor to ensure no bird nests are affected; but is recommended that to avoid potential delays; vegetation is cleared outside of the nesting season.
 - **Bats** – Where there is potential for tree works around the boundaries of the site to affect trees highlighted with bat potential, these should be preceded by a dedicated bat survey of the tree feature affected. At present no tree works are proposed to retained trees noted as having roost potential;
 - **Badgers** – Updated survey work during winter 2015 has not recorded any evidence of recent Badger use of the site. Where vegetation works is reducing scrub and woody growth, regard should be had to potential for hidden features, and advice sought from the project ecologist if any evidence is found.

- **Reptiles** – The update monitoring work has only recorded very low numbers of reptiles, with Grass Snake widely distributed and mobile around the site, and low numbers of Slow Worm in the southern most field adjacent to existing housing development (maximum of three recorded in southern field). The reptile strategy will need to have regard to all suitable habitat within the remaining fields. The core area of the fields can be brought into suitable management to reduce potential reptile habitat through vegetation works, and in the spring, cutting the fields. There should be a couple of metres buffer around the field edges to the grasslands. Where this is retained, this should be incorporated into the tree protection fencing. Where it is within the construction zone a gradual cutting regime to push the reptile habitat back to the retained boundary vegetation should be put in place, followed by a destructive search as per the existing method statement.

4.0 CONCLUSIONS

- 4.1 The amendments to the approved scheme have been considered and an update site visit has been made to update and confirm the ecological features present on the site in Phases 4&5.
- 4.2 The changes to the approved scheme have been assessed, and it is considered that the increase in density of the scheme by 10 dwellings will not have an additional adverse impact on the ecology, nor change the original ecological assessment. The changes relate to the built zone and the landscaping and retained open space/hedgerow habitats will not be altered.
- 4.3 The approved ecological strategy remains valid and has been updated based on the latest survey data and information from the site visit.

References

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

Aluco Ecology Ltd (2008b) Ecological Survey Update Report: Felpham Site 6 and Bognor Northern Relief Road

Aluco Ecology Ltd (2008c) Bat Survey Report Felpham Site 6 and Bognor Northern Relief Road

Aluco Ecology Ltd (2010) Housing Application Phase 4 & 5 Amendments, Ecology Statement, Addendum, September 2010.

Calton Design Partnership (2015) Overall Site Layout Drg No. PLAN-LAY/PH4-5/130912/16

Dalton Crawley Partnership (2010) Overall Site Layout, Drg. No. D18/5487/OSL/01 Rev C

Fabrik (2008) Landscape Plans, Relief Road & Phase A-C D1530.L.200_Rev A – D1530.L.216_Rev A and tf 607/TS/100

Report Author:

Gareth Knass LLb (Hon) MSc MCIEEM

Report Review:

Anthony Blunden MSc MCIEEM CEnv

Aluco Ecology Ltd

Ecological Appraisal Method

Introduction

The methodology for this appraisal is based on the Guidelines for Ecological Impact Assessment (EcIA) in the United Kingdom published by the Institute of Ecology and Environmental Management (IEEM June 2006). Regardless of whether a statutory Environmental Impact Assessment is required, these guidelines provide a robust framework for ecological assessment at any scale.

Desk Study

The first stage of the appraisal is a desk study of the proposed development site and associated Zone of Influence. This provides background information on the site and local environment so as to more effectively target field survey and further desk research.

The Multi Agency Geographical Information for the Countryside (MAGIC) database and Natural England's 'Nature on the Map' are interrogated for information regarding nationally or internationally designated sites within 1km or 5km of the site respectively. The National Biodiversity Network (NBN) data base is interrogated primarily for any relevant local protected species records within the area. The NBN provides access to a substantial volume of biodiversity data for the UK. Although rarely site specific, it does provide valuable information on the local occurrence of protected species.

Where appropriate, the local environmental Record Centre is approached to provide information regarding locally identified sites and records of protected and/or notable species within and around 1km of the site and European Protected species within 5km of the site.

Site Survey Methodology

The aims of the survey are to record land-use and broad vegetation types present on the site and in the surrounding areas, and to evaluate the habitats and vegetation communities ecological value along with the potential to support protected species, species of principal importance, and any other notable species.

Where relevant, habitat immediately adjacent to the site is also assessed as this can have a bearing on the possible presence of protected species on the site and the ecology of adjacent areas can be affected by development nearby.

Habitats and Vegetation

Habitats and vegetation communities are recorded on a broad scale by visually noting contrasting land uses, vegetation zones and landscape features, such as hedgerows and trees. Dominant plant species are recorded in each of the areas identified, as are any notable plant species, such as protected species and habitats or notifiable weeds.

Protected Species

Many plant and animal species are legally protected in the UK. Some, such as bats, badger, water vole and great crested-newt are commonly encountered on development sites. Protected species law is a serious consideration for developers and land owners, as failure to confirm their presence during initial

project conception can later lead to serious programming delays and their associated costs and to prevent any infringement of the law.

Case law has established (Regina vs. The Cornwall County Council ex parte Hardy 2001) that “It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted.

For the most regularly encountered protected species, a brief summary of methods follows:

Bats

Bats use buildings and trees for roosting and breeding, and so the potential for any of these features on site to support bats was considered, as was the sites potential for providing bat foraging habitat.

External inspections of the trees and buildings on site were undertaken. The survey looked for the presence of bats as well as signs of their presence such as:

- Bat droppings, e.g. within cavities and buildings;
- Staining at potential roost access points;

Lack of bat evidence cannot be taken to mean the lack of use by bats and an assessment of potential roost sites was therefore also undertaken:

- Signs of bats can be easily washed off by wind or rain;
- Droppings are hard to see where rubble and other floor debris may obscure them;
- Low numbers of droppings can easily be missed especially where they may become damp and deteriorate;
- Evidence of bats may not be apparent where bats roost out of view, such as in tree cavities etc.

Badgers

The site and its boundaries were systematically searched for the presence of Badgers *Meles meles*, in particular badger setts, on or near (30-40m) of the site. The area was also assessed for the presence of badger foraging activity and territorial behaviour. Such signs include foraging trails, foraging scrapes in short grass, which are commonly known as 'snuffle holes' (shallow scrapes in soft ground or even turf rolling created by foraging for ground-dwelling invertebrates such as worms and grubs), footprints, hairs caught under fences, sett entrances, and latrine sites.

Dormice

The presence of Dormouse on or near the site was considered during the survey, principally through habitat suitability, combined with data on occurrence within the area. Where suitable habitat occurs, further survey for feeding signs on hazel nuts and honeysuckle where it occurs along with searches for arboreal nests. If it a site is considered suitable, further survey may be recommended.

Other Mammals

Consideration is also given to the potential for habitats to support other legally protected mammals and those of nature conservation importance. Where any water bodies occur on or near to the site species including Water Vole *Arvicola terrestris* and Otter *Lutra lutra* are considered, both are legally protected species under the Wildlife & Countryside Act 1981 (as amended) with their habitats also

being protected. Otter are also afforded protection under the Habitats Directive 92/43/EC. Depending upon the geographic location consideration is also given to species such as Red Squirrel.

Breeding Birds

Any notable bird species seen during the survey are recorded. The type and quality of breeding, foraging and roosting habitats available for birds is also considered and interpreted with particular reference to protected or more notable bird species.

Consideration is given to any features which could support nesting birds, (Buildings and other structures, and areas of vegetation) that will be cleared or disturbed as a result of the development.

Reptiles

Any areas of habitat considered suitable for supporting reptiles were noted (for example, areas of rough grassland and scrub, banks, burrows, and rubble piles, compost heaps).

Great Crested Newt

Due to declines in numbers predominantly due to habitat loss and restricted European range, Great Crested Newts *Triturus cristatus* are protected under Section 9 of the Wildlife and Countryside Act, 1981 (as amended) and Regulation 39 of the Conservation (Natural Habitats &c) Regulations 1994, which protects Great Crested Newts from harm, injury and deliberate capture, killing, disturbance, damage and destruction of eggs, breeding site or resting place. This includes deliberate or reckless damage or disturbance.

Survey was by habitat suitability (the occurrence of suitable ponds and terrestrial habitat) combined with knowledge on their distribution from biological records for the area. If a site is considered suitable, further survey is usually required if an impact is considered likely.

Invertebrates

A very small proportion of invertebrates are afforded legal protection under the Wildlife and Countryside Act 1981 (as amended), although a relatively high number of invertebrates are included within the UK and local BAPs, and many more species are identified as being Nationally Scarce. Most invertebrates require specialist knowledge in order to identify them, although some groups, including butterflies and dragonflies, can be readily identified by generalists. Therefore, apart from recording any species of these readily identifiable groups, the survey concentrated on recording the presence of any key habitats of nature conservation importance considered suitable for supporting more scarce and restricted invertebrates, for example bare ground, dead wood and botanically rich habitats.

Survey Constraints and Limitations

Walkover surveys are carried out during a brief window of time. And therefore, the survey will provide only a snapshot of the range of plants and animals that might be present. However, professional judgement is used to interpret the habitat features recorded, and their likely value for supporting protected and notable species, including species of principal importance. Where timing is likely to significantly affect the results of a survey, further survey work is often recommended. Survey can also be restricted through land access, especially land adjacent to the site.

Technical Appendix 2

Site Visit 12 February 2015
Reptile Monitoring Data from 2012/2013



Photo 1: Southern Field, showing lack of management and rough grasslands developing. Reptile Survey has shown very limited reptile populations despite suitable habitat that is developing.



Photo 2: Boundary between western field adjacent to Golf Course and fields to the east, with PROW. This boundary (as per other field boundaries) will require tree protection fencing and minor vegetation works to ensure no reptile or nesting bird habitat is present within construction area prior to construction starting.



Photo 3: Westernmost field adjacent to the Golf Course. Potential bird nesting habitat is present in the woody vegetation. This will need to be removed as per the agreed methodology



Photo 4: Works area in north east field of Phase 4&5. This area is part fenced. The remaining proposed construction area should be cut per the vegetation method statement and potential reptile and bird habitat mitigation implemented. Any remaining tree protection fencing should also be installed.

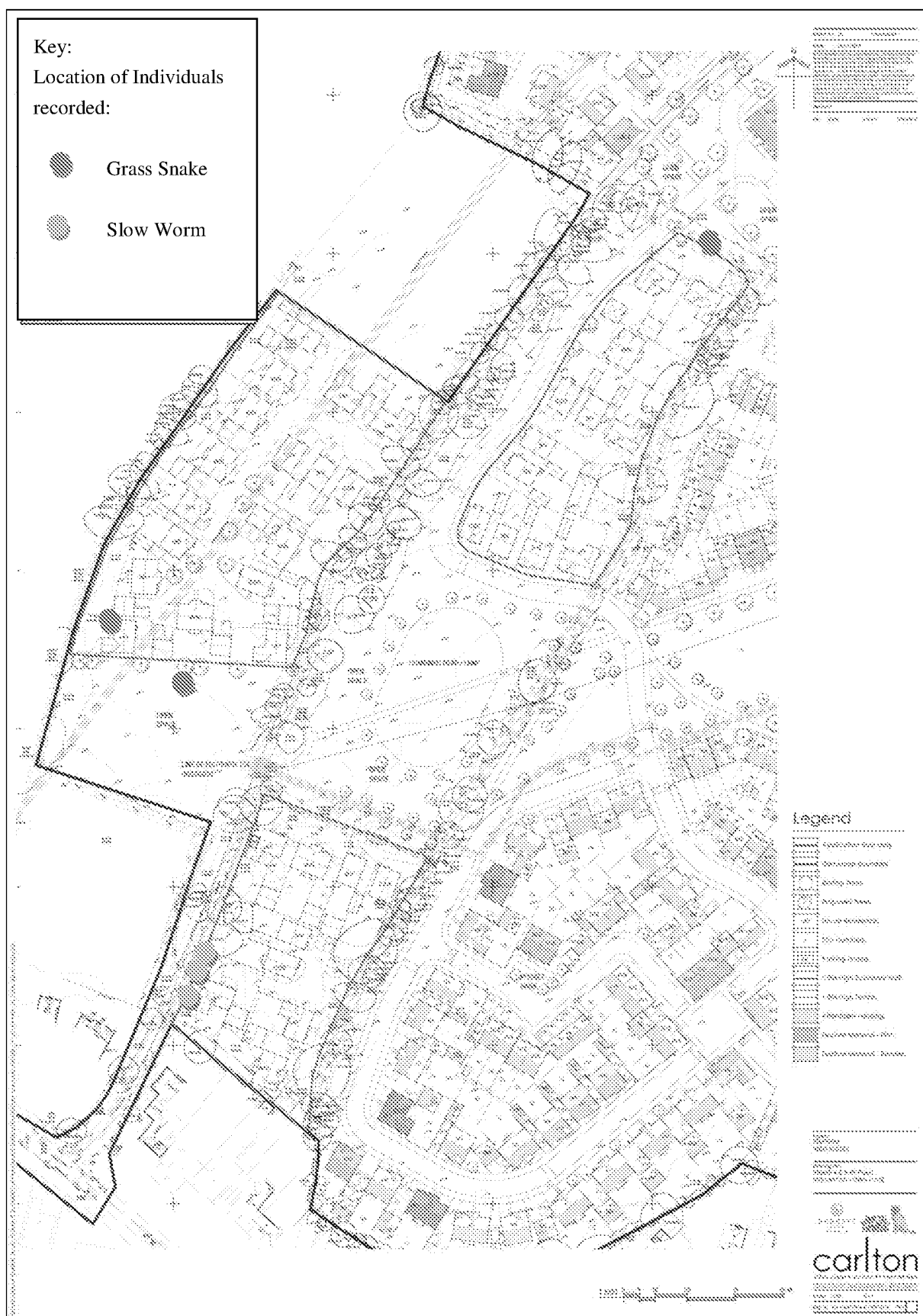
Table 1: Additional Reptile Monitoring on Phases 4 & 5 during site work 2012/13

Date	Time	results
13/07/2012	pm	Reptile Set Up
25/07/2012	pm	NN = 1sub
29/07/2012	am	AF = 1sub
03/08/2012	am	AF= 1sub, 1F
07/08/2012	am	-
15/08/2012	pm	AF = 1 Sub, NN = 1sub
29/08/2012	am	AF = 1sub, 1F
05/09/2012	am	AF 1 sub, 1F, NN = 1F
15/08/2013	am	Set up 1NN = sub
22/08/2013	pm	AF= 2sub
29/08/2013	am	AF2sub, 1F
04/09/2013	am	AF2sub, NN = 1sub
05/09/2013	pm	AF 2sub, 1F
09/09/2013	am	AF=2sub, NN=1sub

Surveys were undertaken during suitable weather conditions, where felts were warmer than surrounding vegetation

Key: AF=Slow Worm,

M=Male, F=Female, Sub=SubAdult, Juv=Juvenile



Proposed Timetable Windows for Ecology Mitigation Works prior to/during Construction

	2015												2016											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Badgers																								
Update Surveys on site																								
Minimize secondary impacts																								
Site induction to workers																								
Nesting Birds and Vegetation																								
Cutting of woody vegetation (to early march)																								
Cutting of Bramble and grasslands																								
Protect retained vegetation																								
Reptiles																								
Destructive search of edge habitats																								
Bats																								
Monitor boundaries and respond to any alteration or potential loss of trees identified as bat roost potential.																								