

CPH APPENDIX 12

SPECIES PROTECTION PLANS (SPPs)

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SPECIES PROTECTION PLAN 1:

BATS

1 INTRODUCTION

This plan is designed to comply with relevant committed mitigation measures¹ and S.37 Consent Condition 11.

All bat species (*Chiroptera*) are European Protected Species (EPS), protected under Annex II and IV of EC Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive). The Habitats Directive is transposed in Scottish law by the Conservation (Natural Habitats &c.) Regulations 1994, as amended by The Conservation (Natural Habitats &c.) Amendment (Scottish) Regulations 2007 and others. Bats are listed on Schedule 2 of the Conservation Regulations 1994. The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007 enhanced this protection. As EPS, it is an offence to deliberately or recklessly² kill, injure or take (capture) bats, deliberately or recklessly disturb or harass bats, and damage, destroy or obstruct access to a breeding site or resting place of any bat.

This legislation means that bats are fully protected in Scotland, and that any planned activity which may affect them requires prior consultation with the appropriate statutory nature conservation organisation (Scottish Natural Heritage-SNH). Licences may be granted for certain purposes that would otherwise be illegal; such licences for development work must be applied for from SNH. Under Regulation 44 (2e) of the Conservation (Natural Habitats, &c.) Regulations 1994, licences may be granted for, among other purposes, 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. A licence will not be granted unless, under Regulation 44 (3), the appropriate licensing authority is satisfied there is no satisfactory alternative and that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range.

An EPS Derogation Licence for bats is required from SNH to enable construction activities of the Beaully to Denny Project which would otherwise contravene the law. This licence must remain valid at all times during the construction period. Under the secured licence, Method Statements for Project Works will be produced and, where required, submitted for agreement to SNH for specific licensable instances, e.g. disturbance to a particular bat roost. Best Practice procedures will be adhered to at all times in the production of mitigation.

Situations where SNH are unlikely to grant approval for works are where bats are at risk of death or injury and where the third test of maintaining FCS may not pass. This is likely to include works which will see the loss of roosts of rarer species or species at the edge of their natural range.

¹ E25, E26, E27, E29, E30, E31, E32, E33, E59, E86, E87, E120, F37.

² Reckless acts would include not having or disregarding a mitigation plan aimed at protecting Bats resulting in killing, injury, and/or disturbance of any Bat or Bat Roost, or carrying out an activity which would result in an offence where the presence of Bats was foreknown.

2 PROTECTION PLAN

In advance of construction at any location where there is the potential for bats to be present, it is **essential** that:

1. Pre-construction surveys for bats are completed on a rolling programme (maximum of 12 months prior to start of proposed works, including Site Investigation, in a particular area but always at an appropriate time of year; works will need to be planned in advance to allow surveys to be undertaken at an appropriate time of year, e.g. a site to be worked in April-June may need to be surveyed in the preceding August/September at the latest) to ensure availability of up-to-date information on place of shelter locations.
2. Pre-construction bat surveys should extend to a minimum of 30 m beyond Limits of Deviation (LODs³) for construction areas and access tracks. Pre-construction surveys are to be undertaken for all potential roosting features to be affected (*i.e.* structures and trees) and may include climbing and endoscope surveys of trees with potential for roosting bats. If evidence of roosting bats is encountered further survey may be required to confirm species, roost type and usage.
3. The findings of the pre-construction bat surveys will be made available to SNH and the relevant Councils as required and included on the Project Geo-database.
4. Review whether project works are likely to affect bats. If necessary, modify works (*e.g.* micro-site access tracks, tower locations) to ensure all works are beyond 30m from each respective roost site.
5. Method Statements for all works within bat buffers will be produced and communicated to site staff. This SPP is designed to provide the Contractor and Ecological Clerk of Works with an approved methodology for carrying out certain bat mitigation activities. Method Statements for specific activities (outlined below) will also require approval from SNH prior to the works being carried out.
6. Method Statements will provide all specific mitigation necessary to ensure the minimisation of impacts on bats. Working methods and mitigation will be as agreed with SNH through this SPP and issued Method Statements and amended as necessary, in the light of the findings of the surveys and legal and best practice requirements.
7. An exceptional circumstance procedure will be implemented should mitigation options (as detailed below) not prove satisfactory in a particular case. In such a scenario, mitigation will be determined on a case specific basis under extensive consultation with SNH. No Project Works would be undertaken until such a time that a satisfactory outcome (*i.e.* not detrimental to the FCS of bats) can be successfully achieved.
8. Relevant plans and documentation will be updated with new and amended information as it is produced, with changes communicated to appropriate staff as required.
9. The Ecological Clerk of Works will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to bats is delivered, and ensure compliance with the SNH EPS licence.

3 MITIGATION MEASURES

The following provides details of mitigation measures to cover all situations that may affect bats during the delivery of the project:

3.1 GENERAL

1. A hierarchical approach to mitigation will be applied to any roost site that may be affected under the Project works. Avoidance of impacts through micro-siting will always be considered first. Method statements detailing mitigation under the derogation licence will be provided for situations where disturbance to a roost site is unavoidable. Destruction of roost sites will only

³ Agreed with SNH

be undertaken as a last resort and may not be permitted, depending on the rarity of the roost type and species involved.

2. The Ecological Clerk of Works will maintain a watching brief during construction, specifically to check for bat roosts.
3. An emergency procedure must be implemented by site workers if signs of bat (e.g. urine staining, droppings or animals) are encountered. All work within 30 m to cease, and the Ecological Clerk of Works (who holds a valid SNH Roost Visitor Licence) to inspect the site and define mitigation (if required) in consultation with SNH.

3.2 SPECIFIC MITIGATION

1. Micro-siting of works should ensure a minimum separation distance of 30 m from any bat roost. Where this is not possible, appropriate mitigation will be required prior to any works taking place in accordance with this SPP and under the SNH Project Bat licence.
2. For all roosts within 30 m of works, a buffer area will be marked on the ground using blue rope to prevent work access and all workers will be briefed of its purpose.
3. If the proposed works could result in the disturbance of a bat roost site a detailed mitigation plan will be required. This must be agreed with SNH (either through compliance with this SPP or through approval of a specific method statement) and only completed under licence. The roost will not be destroyed, but protected from disturbance and/or potential damage by the erection of a buffer marked on the ground with blue rope, which is to be maintained until the works are finished.
4. If the proposed works could result in the destruction of a roost site a detailed mitigation plan will be required. This must be agreed with SNH (either through compliance with this SPP or through approval of a specific method statement) and only completed under licence. Proportionate mitigation will be provided on a case by case basis. under consultation with SNH
5. Compensation for the loss of any roost will be on a like-for-like basis in type and number, as a minimum. However, due to lower uptakes for man-made roosts, it may be necessary to provide greater numbers in some cases, in agreement with SNH.
6. Roosts will be destroyed at a time of year when bats are not present (assessed via a conclusive check), or avoiding most sensitive seasons for that type of roost. The roost would be subject to a controlled exclusion. No breeding roosts would be subject to any destruction within the breeding season (April – August inclusive for most species⁴). No hibernation roosts would be subject to any destruction within the hibernation season (November - March inclusive). The roost will then be destroyed using controlled methods, *either* by hand where possible or appropriate machinery, under the supervision of the Ecological Clerk of Works.
7. Where disturbance or destruction of a mating roost is required (August – October), consultation with SNH is required.
8. Any bat roost subject to works under licence will be monitored during and after the works, in agreement with SNH. A quarterly report will be sent to SNH detailing all licensable works under this SPP and the results of such monitoring.
9. Maintenance Plans will be produced for bat sensitive areas to ensure habitat management within the working corridor, and in areas where there is commitment to future management in the ES, is undertaken in accordance with appropriate best practice.

⁴ *Brown Long-eared bats can breed to the end of September and all sensitive seasons are dependent on weather conditions.*

4 LICENSED WORKS

4.1 GENERAL PRESUMPTIONS

Under the Project Licence there is a general presumption against works being carried out which could disturb bats in their roosts (this SPP covers all types of roosts including trees, buildings or caves) or to exclude any roost being used for breeding, unless it can be clearly demonstrated that either it is inactive, or that there is no alternative solution against Project timescales and requirements. In these exceptional circumstances consultation will be required with SNH and will species dependent. All works are subject to appropriate methods to minimise impacts including techniques to exclude and timing.

4.2 WORKS REQUIRING SNH APPROVED METHOD STATEMENTS

The following works require a Method Statement to be approved by SNH:

1. Disturbance of breeding or hibernation roosts of any species during those seasons;
2. Disturbance of non-breeding and non-hibernation roosts for all non-common bat species (*i.e.* Natterer's, Leisler's, Whiskered, Noctule, Nathusius's, and any other species not normally found in Scotland);
3. Destruction of breeding or hibernation roosts for all non-common bat species (as above); and
4. Any other exceptional circumstance.

4.3 WORKS NOT REQUIRING SNH APPROVED METHOD STATEMENTS

The following works may be carried out under this SPP and / or specific Method Statements without the prior approval of SNH:

1. Disturbance to non-breeding (note according to European guidance⁵ mating roosts are considered to be breeding roosts) and non-hibernation roosts for the more common species (*i.e.* common and soprano pipistrelle, brown long-eared, Daubenton's, and Natterer's bats) at any time of year;
2. Destruction of any common or soprano pipistrelle roosts (including breeding and hibernation) as long as it is at an appropriate time of year for the type of roost, when bats are not present or at least avoiding sensitive seasons; and
3. Destruction of non-breeding and non-hibernation roosts for brown long-eared and Daubenton's bats, as long as it is at an appropriate time of year for the type of roost when bats are not present, or at least avoiding sensitive seasons;

The following methodology for the above scenarios will be incorporated into a Site Specific Method Statement and issued to the Project team as part of the works package prior to work commencing.

Disturbance to non-breeding and non-hibernation roosts at any time of year

Prior to the commencement of Project works within 30 m of non-breeding and non-hibernation roosts of common and soprano pipistrelle, brown long-eared and Daubenton's bat roosts, a works exclusion zone will be set so as to retain the maximum possible buffer distance between Project works and the roost in order to prevent inadvertent damage to the roost/roost feature. In most cases this exclusion buffer will be no less than 5 m. The works exclusion zone will be demarcated on the ground by the ECoW using an appropriate material (*e.g.* blue-tipped canes and/or blue rope) with appropriate signage. No works will be completed within this exclusion zone.

All relevant construction staff will be made aware of the presence of the roost and the requirement to remain outwith the works exclusion zone at all times. This information will be provided in the Environmental Management Plan for the works.

⁵ "Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC" February 2007 Section II.3.4.b) (58)

A watching brief would be undertaken by the ECoW as required to ensure that the works exclusion zone has not been breached and that the roost/roost feature has not been inadvertently damaged.

If works are to be completed when bats are present the following measures will be adopted within 30 m of the roost in order to minimise potential disturbance to the roost:

- a) Works will be completed in a manner to reduce and ensure minimal disturbance;
- b) No use of directional lighting;
- c) No lighting of fires; and
- d) No site compounds and/or vehicle parking areas will be permitted within 30m of the roost.

No roost specific ecological mitigation is considered to be required for the disturbance to non-breeding and non-hibernation sites.

Destruction of Roosts at an Appropriate time of year

Destruction of roosts of common and soprano pipistrelle and non-breeding and non-hibernation roosts of brown long-eared and Daubenton's will only be completed at an appropriate time of year (dependent on roost status, avoiding sensitive seasons and if presence/absence of bats can be confirmed).

Prior to the commencement of Project works within 30 m of non-breeding and non-hibernation roosts, a works exclusion zone will be demarcated on the ground by the ECoW using blue-tipped canes and/or blue rope with appropriate signage. No works will be completed within this exclusion zone until the roost has been destroyed in a controlled manner, in order to prevent inadvertent damage to the roost/roost feature and potential injury and/or killing of bats.

All relevant construction staff will be made aware of the presence of the roost and the requirement to remain outwith the works exclusion zone at all times. This information will be provided in the Environmental Management Plan for the works.

Prior to the licensed destruction of the roost, appropriate mitigation/compensation shall be provided on a like-for-like replacement basis (e.g. provision of roost features that would match the roost to be destroyed). Replacement roost features would be sited as close as possible to the roost to be destroyed but outwith any potential disturbance distances. Roost provision would be provided using appropriate bat box types (e.g. Schwegler 2F-DFP woodcrete), retaining and erecting felled trees or providing integrated building roosts. These would be installed at appropriate locations that will be retained and not affected by the works.

The destruction of the roost will be completed in a controlled manner under the supervision of a licensed bat worker, in order to ensure that no bats are injured and/or killed. The following measures will be adopted during the controlled destruction of the roost:

- a) Prior to any works being completed that will result in the destruction of non-breeding and non-hibernation roosts a survey will be completed to determine whether bats are present/absent from the roost and the status of the roost. Appropriate surveys⁶ (e.g. dawn return, endoscopic inspection) will be undertaken immediately prior to Project works that will destroy the roost. All survey will be undertaken by suitably experienced ecologists and licensed SNH Roost Visitors as necessary;
- b) All roost destruction works will be supervised by a licensed SNH Roost Visitor;
- c) For a roost being destroyed during the active period, and if the presence of bats is confirmed or cannot be discounted, bats will be excluded from the roost using an appropriate exclusion device. (e.g. a cotton sleeve) which will be fitted to the observed entrance/exit point by a SNH

⁶ Such surveys will be dependent on time of year.

Licensed Bat Worker. This device will remain in place for 7 days, unless this corresponds to a period of cold weather (where the temperature at dusk is $< 8^{\circ}\text{C}$), then the excluder must stay in place for a further 7 days.

- d) A dawn survey will then be undertaken on the day of the works to confirm the absence of bats exiting the roost. These surveys will be undertaken when the dawn temperature is $> 8^{\circ}\text{C}$. Should bats be seen entering the roost the exclusion will be continued for an additional 3 days and the process repeated; and
- e) On completion of the roost exclusion, the roost will be destroyed in a controlled manner.. In the event of bats being identified within the roost during destruction the SNH licensed Roost Visitor would be responsible for determining the best course of action with respect to the welfare of the animals concerned.

Figure 4.1: Bat Mitigation Decision Tree

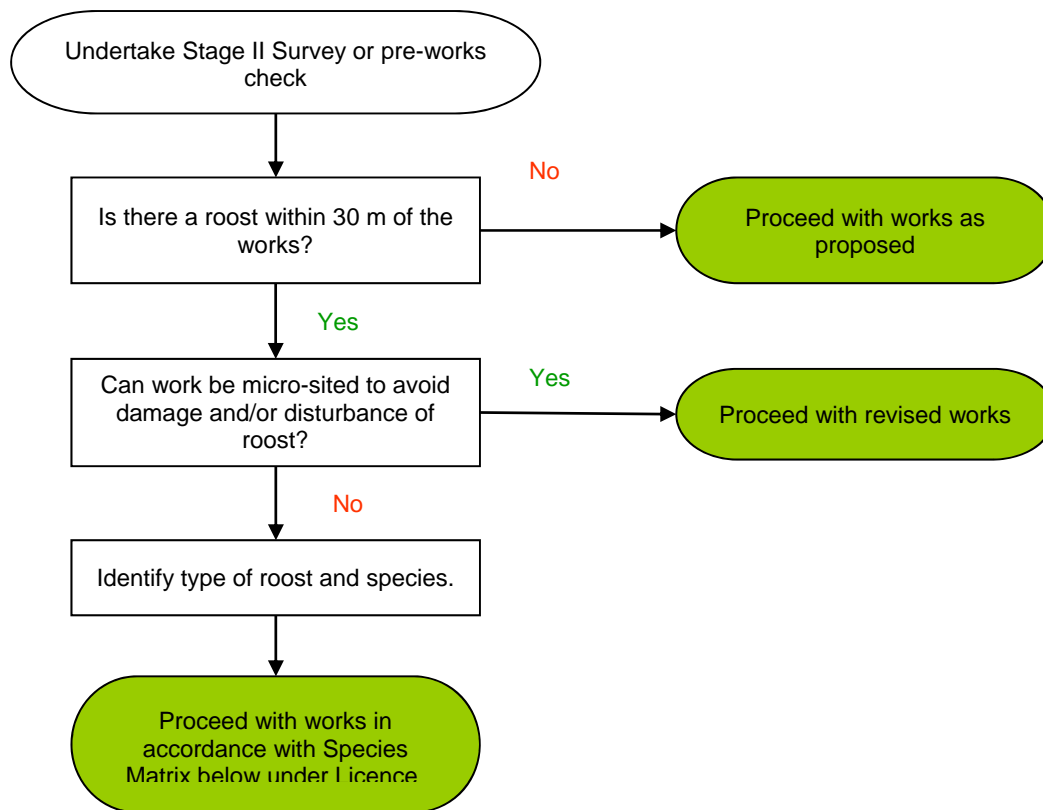


Table 4.1: Species Matrix

Species	Breeding / Hibernation Roosts		Non-breeding / non-hibernation Roosts	
	Disturbance	Destruction	Disturbance	Destruction
Common Pipistrelle	SPP (outwith those seasons)	SPP (outwith those seasons)	SPP	SPP
Soprano Pipistrelle	SPP (outwith those seasons)	SPP (outwith those seasons)	SPP	SPP
Brown Long Eared	SNH approved MS	SNH approved MS	SPP	SPP
Daubenton's	SNH approved MS	SNH approved MS	SPP	SPP
Natterer's	SNH approved MS	SNH approved MS	SNH approved MS	SNH approved MS
Nathusius's Pipistrelle	SNH approved MS	SNH approved MS	SNH approved MS	SNH approved MS
Leisler's	SNH approved MS	SNH approved MS	SNH approved MS	SNH approved MS
Whiskered	SNH approved MS	SNH approved MS	SNH approved MS	SNH approved MS
Noctule	SNH approved MS	SNH approved MS	SNH approved MS	SNH approved MS
Other species not normally found in Scotland	SNH approved MS	SNH approved MS	SNH approved MS	SNH approved MS

PROTECTION PLAN 2: RED SQUIRRELS

1 INTRODUCTION

A comprehensive assessment of impacts on red squirrel (*Sciurus vulgaris*) as a result of the Beauly to Denny 400kV Overhead Transmission Line has been fully considered within the Environmental Assessment and Addenda for the Project. This plan is designed to comply with relevant legislation and committed mitigation measures⁷ and S.37 Consent Conditions 16 and 17.

Red squirrel is afforded full protection under Schedule 5 of the Wildlife and Countryside Act 1981, as amended by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (WANE) [Scotland] Act 2011). This makes it an offence to kill, injure or take a Red Squirrel or to intentionally or recklessly⁸ damage, destroy or obstruct access to any place used for shelter or for breeding. Disturbance to this species in its place of shelter also constitutes an offence.

Red squirrels are fully protected in Scotland. The WANE Act permits derogation of disturbance and/or destruction of red squirrel places of shelter by the appropriate authority for development purposes, subject to the following: a) that undertaking the conduct authorised by the licence will give rise to, or contribute towards the achievement of, a significant social, economic or environmental benefit; and b) that there is no other satisfactory solution.

2 PROTECTION PLAN

In advance of construction at any location where there is the potential for red squirrel to be present, it is **essential** that:

1. Stage 2 surveys for red squirrel are completed on a rolling programme (maximum of 12 months prior to start of proposed works in a particular area, including Site Investigation) to ensure availability of up-to-date information on red squirrel dreys and dens.
2. Pre-construction / pre-felling red squirrel surveys to be carried out by the Ecological Clerk of Works to include a minimum of 50m⁹ beyond Limits of Deviation (LODs) for felling areas, construction areas and access tracks.
3. Buffer protection zones will be set out on site by the ECoW and any works within the buffer will be done in accordance with the Project Licence.
4. The findings of Stage 2 and pre-construction / pre-felling red squirrel surveys will be made available to the Scottish Government, SNH and the relevant Councils for information.
5. Relevant plans and site documentation (eg Environmental Management Plans [EMP's]) will be updated with new and amended information as it is produced, with changes communicated to appropriate staff as required.
6. Review whether Project Works are likely to affect red squirrel in light of updated plans. If necessary modify works (e.g. micro-site access tracks, tower locations, etc.) to ensure all works are at least one tree beyond any non-breeding dreys/dens and 50m for breeding dreys/dens.
7. The Ecological Clerk of Works will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to red squirrel is delivered.

⁷ E25, E26, E27, E28, E29, E34, E87, E114, E120.

⁸ Reckless acts would include disregard of mitigation aimed at protecting Red Squirrels, resulting in killing, injury, and/or disturbance of any Red Squirrel or Red Squirrel resting place.

⁹ Agreed with SNH.

3 MITIGATION MEASURES

The following provides details of mitigation options to cover all situations that may affect red squirrels during the delivery of the project:

3.1. GENERAL PRINCIPLES

1. The Ecological Clerk of Works to maintain a watching brief during construction and felling operations, specifically to check for red squirrel dreys/dens.
2. An emergency procedure will be communicated to site workers detailing what to do if signs of red squirrel (e.g. dreys or animals) are encountered. All work within 50m must cease, and the Ecological Clerk of Works will inspect the site and define mitigation (if required).

3.2. SPECIFIC MITIGATION

Access tracks

1. Woodlands with red squirrel interests identified from the Stage 2 surveys will be considered during walkovers and micro-siting of temporary new access tracks and tower compounds. If any trees are identified with red squirrel dreys/dens every effort to avoid these will be made through micro-siting of the works (to ensure a minimum separation distance of one tree for non-breeding dreys/dens and 50m for breeding dreys/dens) within the LODs. Where micro-siting of works beyond that stated above is not possible, works to either disturb and/or destroy red squirrel places of shelter will be undertaken under licence, as specified in the Licensed Works sections below.

Tree-Felling Surveys

1. Pre-felling surveys will be completed in order to update the current Stage 2 information held for each felling area. This will require all woodland due to be felled to be searched / assessed and a further 50m survey buffer beyond, to account for the potential for felling operations to cause disturbance to squirrel populations in the wider area.
2. Signs of squirrel activity (foraging evidence, such as squirreled cones, and drey/den structures) will be recorded using hand-held GPS. Any potential dreys/dens found will be assessed by an experienced ecologist for their likely level of use by squirrels and the trees identified with a numbered high visibility tape to permit easy identification at a later date for further study/monitoring purposes. All dreys/dens found will be assumed to be red squirrel, unless definitive evidence exists that they are grey squirrel only.
3. The results of each pre-felling survey will be transferred to GIS for the production of accurate OS-based mapping to assist the development of a scheme felling plan.
4. Where potentially occupied places of shelter are identified, the relevant protection zone (a minimum of one tree beyond non-breeding dreys/dens or 50m for breeding dreys/dens during February to September inclusive) will be clearly marked by the ECoW. Where micro-siting of tree felling works beyond these buffers are not possible, works to either disturb and/or destroy red squirrel places of shelter will be undertaken under licence, as specified in Licensed Works below. Tree felling outside of any protection zones will be undertaken to ensure that, where possible, a corridor of trees are retained to allow free movement away from any potentially active drey/den, so that any animals present will not be isolated.

4 LICENSED WORKS

The following provides details of works that will be completed under licence, and the mitigation process to cover all situations that may affect red squirrels during the delivery of the project where works can not be micro-sited beyond 1 tree for non-breeding dreys/dens and 50m for breeding dreys/dens. A decision tree is provided below to clarify the mitigation process.

A place of shelter would be considered to be no longer in use if the structure had collapsed. All places of shelter considered to be defunct / abandoned will not be subject to restrictions on working in terms of disturbance and/or destruction.

4.1. LICENSED SURVEY

A hierarchy of methods is proposed to be employed to ascertain whether a drey/den is being used as a breeding site. The least disturbing methods will be used as the default where practical, but other methods requiring a survey licence, will be adopted where poor visibility precludes their use.

The default methods are using visual observations and video surveillance from the ground for a period of 3 days of daytime observations to establish if the drey/den is in regular use during the breeding season.

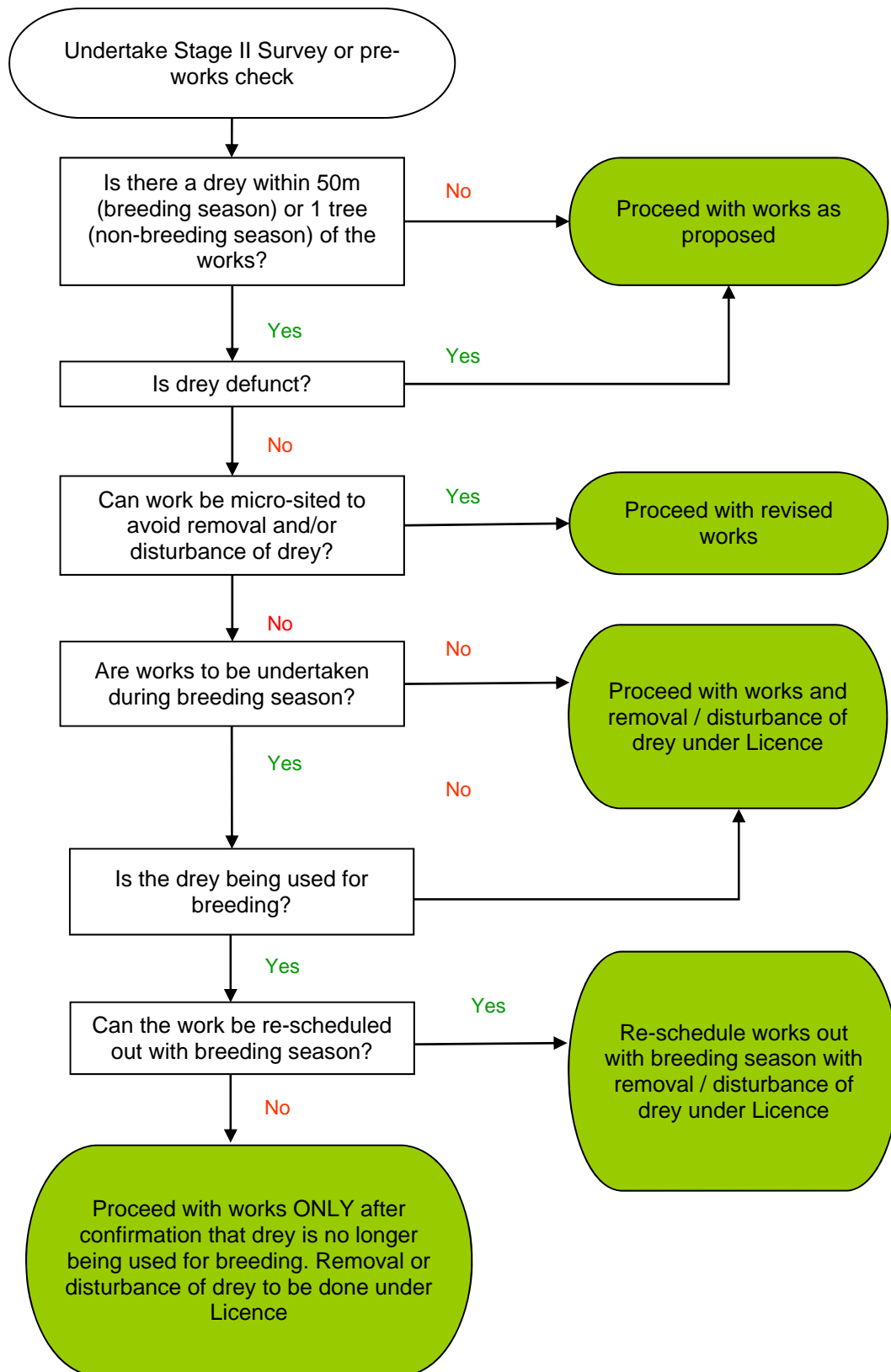
Where dreys are not clearly visible from the ground, camera traps mounted on adjacent trees could be employed (under survey licence) as a second alternative in suitable weather conditions [n.b. could be triggered by other animal and tree movements] again for a period of 3 days. The ECoW would need to be confident that these methods were appropriate for detecting use at that location.

Where neither of the above methods are appropriate, inspection of the drey will be undertaken by tree climbing or cherry picker and endoscopic inspection (under licence) to confirm the presence/absence of young squirrels.

4.2. DESTRUCTION OR DISTURBANCE OF PLACES OF SHELTER

1. Monitoring of all red squirrel places of shelter that may be disturbed or destroyed by works will be undertaken by the ECoW prior to start of works (and no more than 3 weeks before start of works) using the least disturbing of the above survey methods where possible.
2. All platforms and non-breeding drey/dens will be destroyed under licence at the time of inspection to ensure no potential use of these places of shelter for breeding purposes prior to start of works. All places of shelter will be destroyed in a controlled manner to ensure no injury and/or killing of red squirrels.
3. Dreys/ dens being used as breeding sites will not be destroyed and no works would be completed within 50m of breeding dreys / dens until the ECoW has confirmed that dependent young are not present. This breeding period when young may be present in dreys is February to September inclusive. The young begin leaving the drey/den at c. 7 weeks, and are weaned at 8-10 weeks old. On completion of breeding, the place of shelter will be destroyed in a controlled manner to ensure no injury and/or killing of red squirrels.

Figure 4.1: Red Squirrel Mitigation Decision Tree



SPECIES PROTECTION PLAN 3: WATER VOLES

1 INTRODUCTION

This plan is designed to comply with relevant committed mitigation measures¹⁰ and S.37 Consent Conditions 16 and 17.

Water vole (*Arvicola amphibius*) is afforded full protection under Schedule 5 of the Wildlife and Countryside Act 1981, as amended by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (WANE) [Scotland] Act 2011). This makes it an offence to kill, injure or take a water vole or to intentionally or recklessly¹¹ damage, destroy or obstruct access to any place used for shelter or for breeding. Disturbance to this species in its place of shelter also constitutes an offence under the act.

This legislation means that water vol are fully protected in Scotland, and that any planned activity, which may affect them, requires prior consultation with the appropriate authority, Scottish Natural Heritage (SNH). The WANE Act permits derogation of disturbance and/or destruction of water vole places of shelter by the appropriate authority for development purposes, subject to the following:

- a) that undertaking the conduct authorised by the licence will give rise to, or contribute towards the achievement of, a significant social, economic or environmental benefit; and
- b) that there is no other satisfactory solution.

2 PROTECTION PLAN

In advance of construction at any location where there is the potential for water voles to be present, it is **essential** that:

1. Pre-construction (Stage II) surveys for water vole is completed between April and October on a rolling programme (maximum of 12 months prior to start of proposed works in a particular area, including Site Investigation) to ensure availability of up-to-date information on resting up site locations.
2. Pre-construction water vole surveys to include minimum of 30m beyond LOD's for construction areas and access tracks.
3. Review whether Project Works are likely to affect water vole or their habitat. If necessary modify works (e.g. micro-site access tracks, tower locations, etc.) to ensure all works are beyond 30m from any occupied water vole habitat wherever practicable.
4. Where works are required within 30m of occupied water vole habitat, specific mitigation measures (outlined in Specific Mitigation below) must be followed with respect to water vole habitat disturbance and mitigation issues.
5. The findings of the pre-construction water vole surveys to be submitted to the Scottish Government, SNH and the relevant Councils.
6. Relevant plans and documentation will be updated with new and amended information as it is produced, with changes communicated to appropriate staff as required.
7. The Ecological Clerk of Works (EcOW) will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to water vole is delivered, and ensure compliance with any SNH agreements.

¹⁰ E25, E26, E27, E28, E29, E35, E36, E86, E115.

¹¹ Reckless acts would include disregard of mitigation aimed at protecting water vole, resulting in killing, injury, and/or disturbance of any water vole or water vole place of shelter.

3 MITIGATION MEASURES

The following provides details of mitigation options to cover all situations that may affect water voles during the delivery of the project:

3.1 GENERAL

1. The Ecological Clerk of Works to maintain a watching brief during construction, specifically to check for evidence of water vole.
2. An emergency procedure must be implemented by site workers if signs of water vole (e.g. latrines or animals) are encountered. All work within 30m must cease, and the Ecological Clerk of Works will inspect site and define mitigation (if required) in consultation with SNH.
3. All works in proximity to waterbodies / watercourses must follow measures outlined in the CPH to ensure their complete protection against pollution, silting and erosion.
4. Micro-siting of works should be done to ensure a minimum separation distance of 30m from any water vole habitat.
5. Water vole habitat would be considered not to be in use if monitoring shows the area not to be used during one active season. If after this period no use by water vole is shown the findings should be discussed with SNH and the area may not be subject to any works restrictions.

3.2 LICENSED WORKS

The following outlines the approach for situations that all situations that may affect water vole during the delivery of the project where works can not be micro-sited beyond 30m and a license is required for works to proceed. A water vole mitigation decision tree is also provided to clarify the mitigation process.

1. Where it is not possible to maintain a 30m buffer, and if the proposed works could result in the destruction of occupied water vole habitat and/or disturbance of water vole (excluding use of existing tracks), the following outlines a proposed water vole exclusion method prepared in recognition of Best Practice guidelines (e.g. Water Vole Conservation Handbook, Strachan & Moorhouse, 2006) and using professional judgement which will be completed prior to start of works under licence. For each location where works can not be micro-sited and would therefore affect water vole a licence method statement application will be made to SNH.
2. It is proposed to complete an exclusion technique (as opposed to a displacement technique) prior to construction of watercourse crossings (or where works are within 30 m), whereby it is ensured that water voles are not present within the area of works or will be subject to potential disturbance. This technique will allow temporary exclusion of water vole from the working area to allow construction of access tracks/ watercourse crossings and use of the track thereafter. Although involving a loss of water vole habitat, this will only be of a very limited extent (maximum 16 m linear length of occupied watercourse habitat per watercourse crossing) and usually of a temporary nature as the tracks will mainly be removed and the habitat will be subject to full restoration. In some cases tracks and watercourse crossing will not be restored;
3. The exclusion of water vole from the working area will be completed using the following phased approach in the active water vole period between April and September (inclusive). It is not proposed that water vole be excluded during the period October to March, as this is considered to be the inactive period when animals may not be present above ground for significant periods. The exclusion methodology includes:
 - a) Marking out and survey of burrows;
 - b) Vegetation management – involving short strimming of the vegetation;
 - c) Monitoring;
 - d) Erection of water vole exclusion fencing; and
 - e) Water vole trapping.

3.3 EXCLUSION METHOD STATEMENT

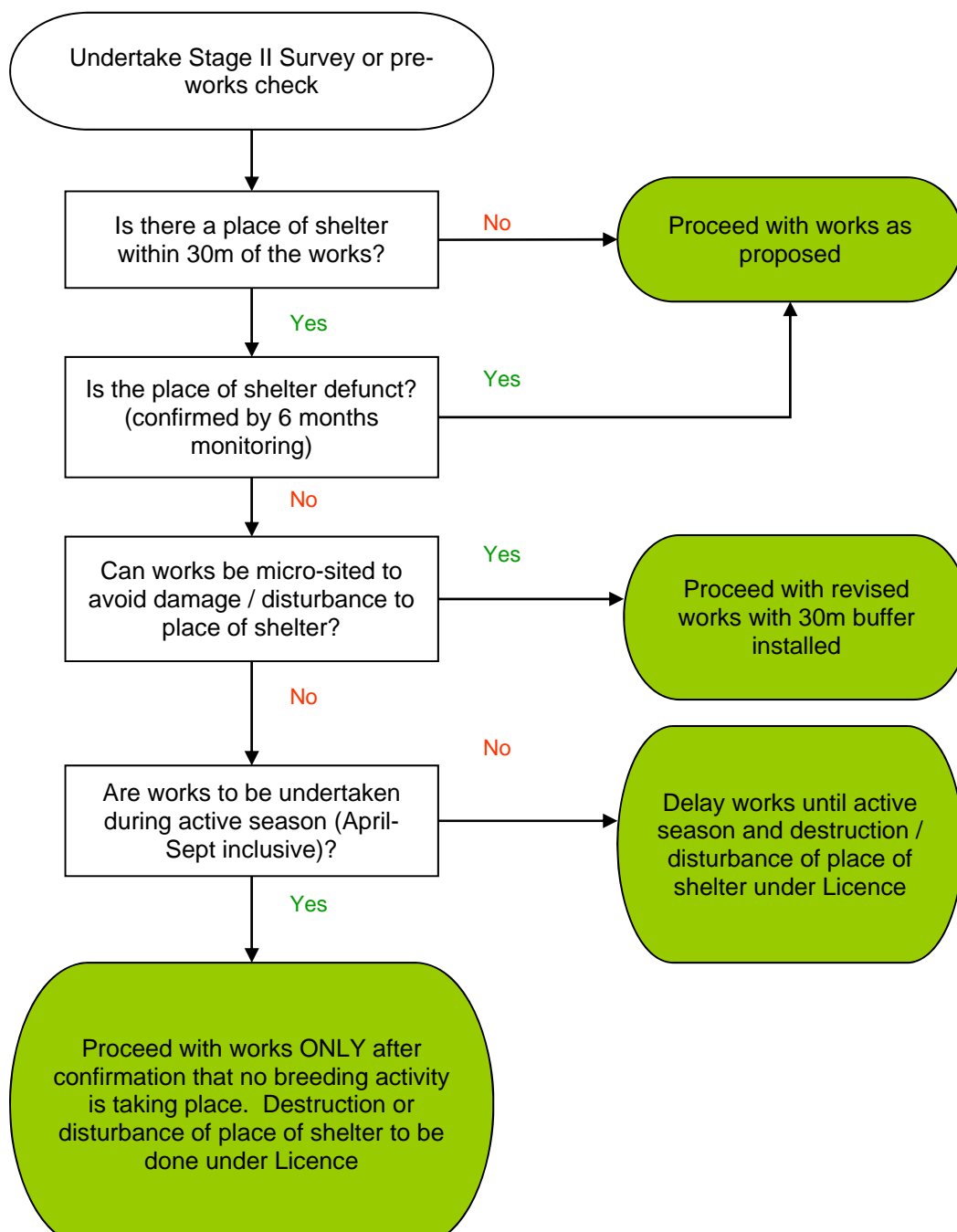
The exclusion process will involve the following to ensure that the area to be effected by construction works are not occupied water vole habitat:

1. The contractor will mark out the locations of the watercourse crossings using white canes.
2. The Project Ecological Clerk of Works (ECoW) will mark out the exclusion area using canes and blue rope, defined as 8m either side of the crossing point and extending 3m either side from the edge of the watercourse to include all suitable riparian vegetation.
3. The ECoW will conduct an exhaustive survey of the exclusion area, identifying all burrows which will be marked using blue-tipped canes.
4. The vegetation will be carefully strimmed using a metal bladed strimmer, removing vegetation so that only low vegetation and/or bare earth remains but ensuring that no burrows are damaged and/or destroyed. The ECoW will be on site during this procedure.
5. The exclusion area will then be left for 3 full days to allow any water voles the opportunity to vacate. At end of 3 days the exclusion area will be checked by the ECoW to check whether latrines and burrows are still active. Evidence of water vole activity will be used to focus trapping effort. It should be noted that the exclusion process will still be continued if no signs of water vole are encountered after this period, as some burrow entrances in subterranean sections of watercourses are difficult to confirm if they have been vacated. Moreover, some water voles show a high degree of site fidelity despite efforts to make their habitat unsuitable;
6. The exclusion area will be fenced around the entire perimeter using proprietary water vole fencing installed to a minimum above ground height of 1.2m and buried to a minimum depth of 0.5m where soil conditions allow. Whilst the majority of the exclusion fence will be outwith potentially occupied water vole habitat (being beyond the immediate riparian vegetation), particular care will be taken to avoid any damage to burrows and tunnels during the installation process. No in-stream digging will be undertaken, with the fencing being installed using a rubber mallet to drive the fence through the soil/peat, thereby minimising potential increased sedimentation loading. The fence will be supported by posts measuring c.2.5 x 2.5 cm which will be located on the inside to prevent excluded animals from returning by climbing.
7. Where water movement is likely through the exclusion fencing, 1 cm holes will be drilled in the water vole fence to facilitate drainage, with rabbit wire and pegs used in sections across the watercourse. Fencing will be checked daily for any signs of voles digging into the exclusion area, with any digging being immediately infilled.
8. Trapping will take place within the exclusion area using proprietary water vole traps at a density of 10 traps per exclusion. Traps will be pre-baited without being set for 3 days prior to the trapping period, to allow water vole to become accustomed to the traps. Trapping will only be carried out during appropriate conditions, i.e. when air temperatures are above 5 °C. Trapping will then be undertaken and will cease when no animals are caught for 3 consecutive days. All traps will be sited at water burrow entrances and/or at latrines. Traps will be provisioned with hay and food (including Russel rabbit food or similar and half an apple for sugar and moisture), and checked every 4 hours when opened as there is a risk of catching females with young. Bedding and food will be replenished as required on each check of the traps.
9. Trapping will take place between 06:00 and 20:00, although it will only be completed for a maximum of 8 hours in any one day. Any lactating females (with dependent young at the nest) captured will be released and the trapping ceased and restarted after a period of 10 days.
10. All captured animals will be released immediately out with the exclusion area on the same watercourse, allowing the animals to either disperse or continue to hold territory. Animals will be released into a "soft" release pen with no bottom to allow animals to burrow out. The release pens will measure c. 100 x 60 cm with the bottom buried to a depth of c.15-20cm, and

be constructed of ply-wood with a chicken wire top and no base to facilitate animals digging out. The release pens will be provisioned with sufficient cover and food until the animals have burrowed out.

11. Following the exclusion process the areas will be monitored regularly for the presence of water vole prior to start of construction works. If water vole are re-confirmed within an exclusion area a further trapping period will be completed as per steps 7-9.
12. On the day of construction of the access track and water course crossing within the exclusion area (scheduled to take usually <8 hours), the exclusion fence will be removed to allow works to proceed.
13. Prior to restoration of the track following construction of the overhead transmission line, the watercourses will be subject to further survey to confirm presence/absence of water vole. The above mitigation will be completed prior to start of restoration works if water vole are present.

Figure 3.1: Water Vole Mitigation Decision Tree



SPECIES PROTECTION PLAN 4: BADGERS

1 INTRODUCTION

This plan is designed to comply with relevant committed mitigation measures¹² and S.37 Consent Conditions 16 and 17.

Badger (*Meles meles*) is protected under The Protection of Badgers Act 1992. Under this Act it is illegal to intentionally or recklessly¹³ damage a badger sett or cause a dog to enter a sett, to obstruct access to a sett and to disturb a badger while occupying a sett, or for any person to kill, injure or take a badger. It is also an offence to cruelly ill-treat a badger, to dig for or to snare a badger.

This legislation means that badgers are fully protected in Scotland, and that any planned activity, which may affect them, requires prior consultation with the appropriate statutory nature conservation organisation (SNH). Licences may be granted for certain purposes that would otherwise be illegal from SNH.

Under Section 10 (1) of The Protection of Badgers Act 1992, licences may be granted to interfere with a badger sett within an area specified in the licence by any means so specified.

A licence under The Protection of Badgers Act 1992 is required from SNH in specific areas to enable construction of the Beaulay to Denny Project that would otherwise contravene the law. This licence must remain valid at all times during the construction period¹⁴.

2 PROTECTION PLAN

In advance of construction at any location where there is the potential for badgers to be present, it is **essential** that:

1. Pre-construction survey for badger is completed on a rolling programme (maximum of 12 months prior to start of proposed works in a particular area, including Site Investigation) to ensure availability of up-to-date information on sett locations.
2. Pre-construction badger surveys to include minimum of 30 m beyond LODs for construction areas and access tracks increasing to 100 m in areas of potential high noise and vibration (piling, blasting etc.).
3. The preconstruction surveys will identify whether the setts are active, inactive or defunct.

Active setts are defined by a number of characteristics such as:

- tunnels having smoothly brushed sides (lack of cobwebs etc);
- obviously used paths to the entrance (characterised by a lack of vegetation);
- a lack of vegetation/leaves in the entrance;
- footprints; and
- sometimes snuffle holes, latrines and tree scratchings in the immediate vicinity.

Inactive setts are characterised by tunnels looking disused (e.g. cobwebs) and vegetation/leaves in the entrance and no other evidence of badger.

¹² E25, E26, E27, E29, E86, E87.

¹³ Reckless acts would include not having or disregarding a mitigation plan aimed at protecting Badgers resulting in killing, injury, and/or disturbance of any Badger or Badger resting place, or carrying out an activity which would result in an offence where the presence of badger was foreknown.

¹⁴ SNH generally would grant a licence for one year which may then require to be renewed if necessary. Licences are not normally issued between December 1st and June 31st inclusive

Defunct setts are characterised by a loss of the structural integrity of the tunnel entrance (such as when they have been trampled by cattle) and/or roots growing through the tunnel, and no other evidence of badger, (*i.e.* the hole could not be used for shelter by a badger in its current state).

4. The findings of pre-construction badger surveys to be made available to SNH and relevant Councils as required.
5. A review is undertaken to check whether Project Works are likely to affect badgers. If necessary works will be modified (*e.g.* micro-site access tracks, tower/compound locations) to ensure all ground works are a minimum of 30 m from any sett, or a minimum of 100 m for high noise or vibration (*e.g.* percussive / vibration piling, blasting).
6. Method Statements for all works within badger buffers will be produced and communicated to site staff. This SPP is designed to provide the Contractor and Ecological Clerk of Works with an approved methodology for carrying out certain badger mitigation activities. Method Statements for specific activities (outlined below) will also require approval from SNH prior to the works being carried out.
7. Method Statements will provide all specific mitigation necessary to ensure the minimisation of impacts on the badger resource. Working methods and mitigation will be as agreed with SNH through this SPP and issued Method Statements and amended as necessary, in the light of the findings of the surveys and legal and best practice requirements.
8. An exceptional circumstance procedure will be implemented should mitigation options (as detailed below) not prove satisfactory in a particular case. In such a scenario mitigation will be determined on a case specific basis under extensive consultation with the statutory authorities. No Project Works would be undertaken until such a time that a satisfactory outcome can be successfully achieved.
9. Relevant plans and documentation will be updated with new and amended information as it is produced, with changes communicated to appropriate staff as required.
10. The Ecological Clerk of Works will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to badger is delivered, and ensure compliance with SNH badger licence.

3 MITIGATION MEASURES

The following provides details of mitigation options to cover all situations that may affect badgers during the Project:

3.1 GENERAL

1. The Ecological Clerk of Works to maintain a watching brief during construction, specifically to check for badger setts.
2. Destruction of setts will only be undertaken as a last resort (again method statements detailing mitigation under the licence will be provided).
3. Any temporarily exposed pipe system to be capped when contractors are off site to prevent badger from gaining access. Similarly, all exposed trenches and holes must be provided with mammal exit ramps when contractors are off site (*i.e.* at night time).
4. An emergency procedure must be implemented by site workers if signs of badger (*e.g.* setts, latrines or animals) are encountered. All work within 30 m to cease, and the Ecological Clerk of Works to inspect site and define mitigation (if required).

3.2 SPECIFIC MITIGATION

1. Micro-siting of works to ensure a minimum separation distance of 30 m from any badger sett (or 100 m for high noise / vibration activities). Where this is not possible appropriate mitigation will be required prior to any works taking place in accordance with this SPP and under the SNH Project Badger licence.

2. For all setts within 30 m of works (or 100 m for high noise / vibration activities) a buffer area will be marked on the ground using blue rope to prevent work access and all workers will be briefed of its purpose.
3. If the proposed works could result in the disturbance of a badger sett a detailed mitigation plan will be required. This must be agreed with SNH (either through compliance with this SPP or through approval of a specific method statement) and only completed under licence. The badger sett will not be destroyed, but protected from disturbance and/or potential damage by the erection of a buffer marked on the ground with blue rope, which is to be maintained until the works are finished. Where appropriate any setts subject to disturbance under licence may be temporarily excluded (as described above) until the works are completed.
4. Additional measures to avoid undue disturbance to badgers would be agreed and may include timing restrictions on works (*i.e.* no works to be undertaken during hours of darkness).
5. If the proposed works could result in the destruction of a sett, a detailed mitigation strategy and programme will be required. This must be agreed with SNH and only completed under licence. Where an artificial sett is required to be constructed, the type and location will be agreed with SNH. The construction of an artificial sett must be completed at least 6 months prior to start of works. Badgers will then be excluded from the affected sett using an appropriate method (such as exclusion gates) agreed with SNH. In order to protect potential natal sites, exclusions will not be completed during the period December – June (inclusive). The sett must then be destroyed using controlled methods, either by hand or appropriate machinery, under the supervision of the Ecological Clerk of Works.
6. Any badger setts subject to works under licence must be monitored during and after the works.

4 LICENSED WORKS

4.1 GENERAL PRESUMPTIONS

Under the Project Licence there is a general presumption against works being carried out which could disturb badgers in their setts or to exclude any sett within the breeding season, unless it can be clearly demonstrated that either it is inactive, (*i.e.* through monitoring such as sticks, sand pads, camera traps) or that there is no alternative solution against Project timescales and requirements. In these exceptional circumstances consultation will be required with SNH.

4.2 WORKS REQUIRING SNH APPROVED METHOD STATEMENTS

The following works require a Method Statement to be approved by SNH:

1. Any works within 30 m of (or 100 m for high noise / vibration activities) or to a main sett, or a sett which cannot be discounted as a main sett, at any time of year. This includes felling operations.
2. Any works within 30 m (or 100 m for high noise / vibration activities) of an active sett within the breeding season (December to June inclusive).
3. Where it is proposed to exclude (even temporarily) such a proportion of setts in a given clan's territory as to cause a significant impact on the clan.
4. Any exceptional circumstances not covered in this SPP or Points 1 to 3 above.

4.3 WORKS NOT REQUIRING SNH APPROVED METHOD STATEMENTS

The following works may be carried out under this SPP and / or specific Method Statements without the prior approval of SNH:

1. Works around (within 20 m) or to (including felling, exclusion and destruction) an inactive sett at any time of year.
2. Works around (within 20 m) or to a non-main sett (including disturbance, exclusion and destruction) within the open season (July – November inclusive).

3. Felling operations within 20 m of a non-main sett within the open season or inactive sett at any time of year.

Exclusion / Destruction of Inactive and Non-Main Setts

The following methodology will be incorporated into a Site Specific Method Statement and issued prior to work commencing:

1. Pre-works assessment

- a. In advance of any ground-breaking or use of construction machinery within 30 m of a sett entrance (or 100 m for blasting operations) an Agent on the Project badger licence will consider in detail the scope of the proposed works, type of sett and topographical location to determine if exclusions can be avoided without placing badgers at risk.

2. Exclusion

- a. As agreed with SNH, badger gates and appropriate materials will be used for the exclusion of setts, unless in rare circumstances, in which case SNH will be consulted beforehand. Exclusions must be overseen by a named agent on the Project badger licence.
- b. The specification of the gate and materials would be as described in the Natural England Technical Information Note 25 (Appendix 2). The badger mesh fence specification is as described in SNH's "Scotland's Wildlife: Badgers and Development (2001)".
- c. The gate would be set to the two-way position for at least 5 days and then set to one-way for 14 days.

3. Monitoring Exclusion

- a. To monitor use of the sett the following methods may be used.
 - i. Small pencil-sized sticks placed in the floor of the tunnel just inside the entrance, pointing upright.
 - ii. Threads pinned to the gate and gate frame to confirm if the gate has been opened.
 - iii. Sand placed at the sett entrance (inside and outside the gate).
 - iv. An appropriately positioned camera trap to monitor badger activity at the sett.
- b. The sett will be regularly visited through the exclusion process (e.g. once every three days) to also check on the integrity of the exclusion materials and make good any damage. If it is apparent that badger(s) have breached the exclusion the necessary repairs will be made and exclusion period will be restarted.

4. Destruction of the Sett

- a. Following successful exclusion the destruction of the sett will be undertaken under the supervision of the Agent / ECoW and carried out using either hand tools or a mini-digger (any digger/excavator will not have jacks which might breach the ground above a tunnel).
- b. Excavation will start at least 1 m in front of the entrance spoil heap, possibly 4-5 m in front of the entrance, and excavating a trench at least 1 m deep. No more than half a metre depth of soil will be taken at a time. The digger will stop after each excavation to allow the Agent / ECoW to look for any signs of the tunnels and chambers. In the unlikely event that badgers are found during this process all excavation will cease and the badger(s) will be allowed to freely move away from the area. The Agent / ECoW will decide on when the excavation can re-commence.
- c. The excavation will continue slowly, working forwards into the tunnels and chambers until the Agent / ECoW is satisfied the entire sett has been excavated. Once fully excavated the soil will then be backfilled and compressed to deter animals from excavating further holes.
- d. Construction works will be programmed to commence as soon after this process as possible to reduce the probability of animals returning to the area

Following closure of a sett within or adjacent to a tower compound the provision of 'badger-proof' fencing will be considered around the compound to prevent future digging within the construction area. The compound access will be secured with a badger resistant gate which will be closed at all times except to provide works access during the day. One-way badger gates will be installed at the corners of the compounds to enable any animals to escape in the event they gain access to the compound. Badger fencing and gates will be installed as per the DMRB specification/Natural England Technical Information Note 25 (see Appendix 2).

Felling Operations within 20 m of Inactive and Non-main Setts

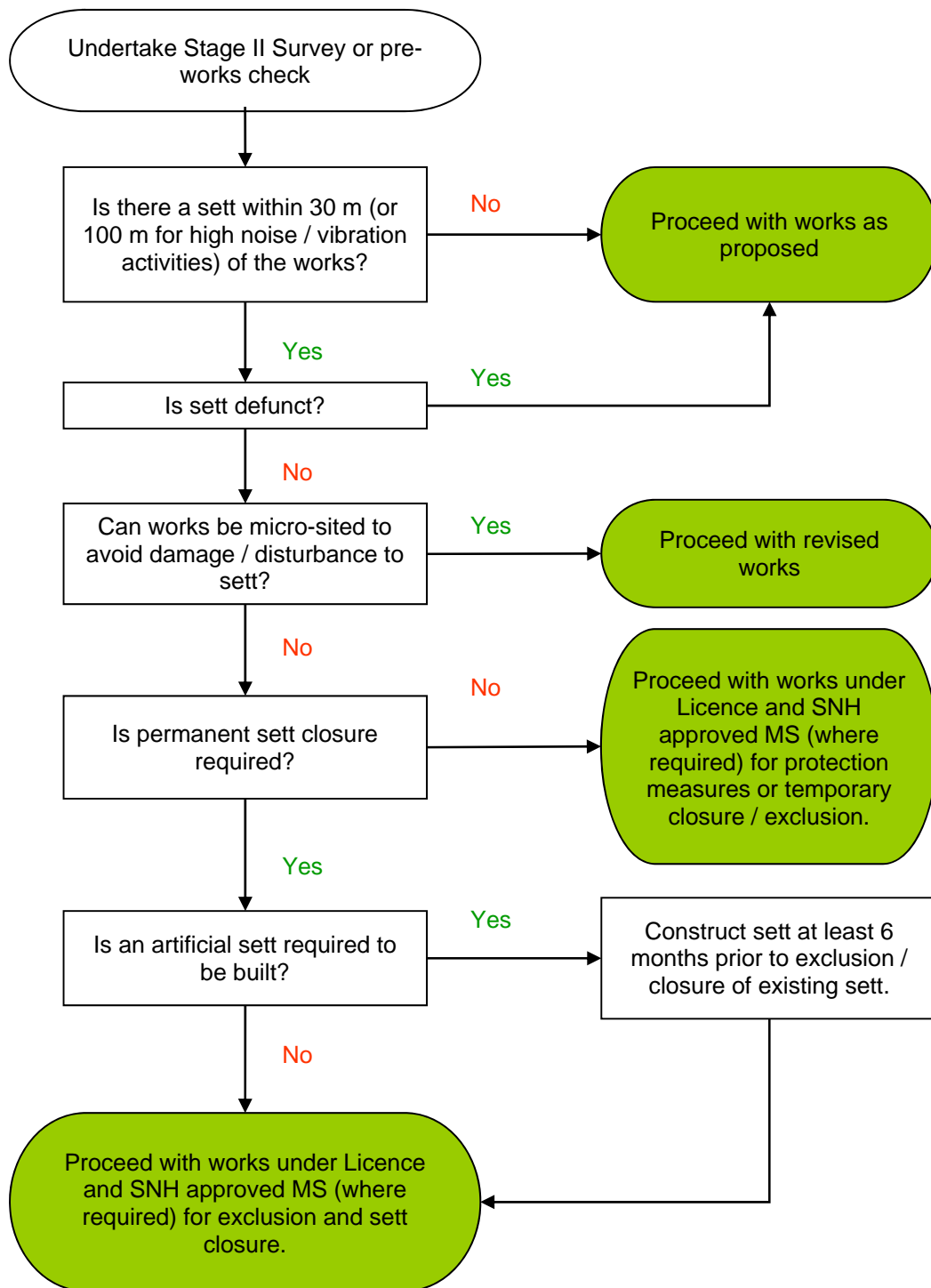
The following methodology will be incorporated into a Site Specific Method Statement and issued prior to work commencing:

1. Tree felling allowed under this SPP is within 20 m of a non-main sett within the open season (July to November inclusive) only, and within 20 m of an inactive sett at any time of year.
2. An Agent / ECoW on the Project badger licence will be present before felling to re-check all the vegetation to be removed for any ecological constraints including newly dug badger setts. Details of any ecological constraints, and associated mitigation, not related to badger will be communicated separately to this plan to all site workers.
3. All personnel, including contractors and subcontractors, will be briefed by the Agent / ECoW before works commence on the Method Statement to be followed, the presence of the badger setts, their protected status and the conditions of the Licence.
4. A 20 m buffer area from the sett entrance will be marked on the ground using blue rope to prevent work access and all workers will be briefed of its purpose.
5. All tree felling within the 20 m buffer zone will be undertaken either by a harvester located out with the buffer and reaching in or by hand, both under ECoW supervision. Felling will be carried out in accordance with the SNH Publication "*Badgers and Forestry – Licensing Guidance 2011*" (Draft).
6. All trees will be felled away from the sett with a 'soft-felling' method appropriate to the type of woodland followed in order to avoid impact damage to sett entrances, tunnels and chambers (see below). No forestry plant (e.g. harvester, forwarder) would be operated within the 20 m buffer zone of the sett entrance.
7. In mature plantation or semi-natural conifer and broadleaved woodland, where there is a greater risk of damage to tunnels and chambers from the impact of butts and larger branches heavily impacting and/or piercing the ground, sectional felling (*i.e.* controlled lowering of branch and trunk sections to the ground) will be carried out within 20 m of the sett entrance. In addition, brash or other suitable impact protection will be placed on the ground below where the tree sections are being lowered. Where this approach is required it would only be undertaken by a suitably experienced and qualified arborist (*i.e.* with NPTC training CS41 'Section Felling') working under the supervision of the Agent / ECoW.
8. Within thicket and pole stage commercial conifer plantations a 'bench felling' approach will be followed. Typically, two trees would be felled, more than 20 m from the nearest sett entrance, to provide an elevated 'bench' cushioned by the branches of the felled trees, for trees closer to the sett entrance to be felled on top of. This provides ground-protection (*i.e.* preventing larger branches piercing the ground) and a much reduced impact (*i.e.* reduction in vibration and risk of damage to tunnels and chambers within the protection zone). Additional impact protection (e.g. brash mat) would also be placed on the ground below where the butt of the tree would land. Bench felling is a standard felling protocol employed in forestry operations.
9. All timber and brash from the felling process would be removed immediately (*i.e.* not left overnight). Timber and brash will be removed from the 20 m buffer zone by the forwarder reaching in, by hand or using cables and winches ensuring that the butt of the felled tree is elevated and not dragged through the buffer zone. There would be no de-stumping within the

20 m buffer zone, all tree stumps would be left in place. No material that could obstruct the sett entrances, obvious badger paths or latrine areas would be left

10. Where shrubs exist within the exclusion zone, these will be left *in situ* in order to maintain some degree of cover around the setts.
11. The Agent / ECoW will check the sett entrances every morning and at the end of the day to ensure no damage has occurred.
12. Work will be restricted to daylight hours (varying throughout the year) so as to avoid disturbing the natural behaviour of badgers.
13. All felled timber and brash will be neatly stacked external to the 20 m buffer zone within a day or two of felling.
14. No fires will be allowed within 100 m of the badger setts.

Figure 4.1: Badger Mitigation Decision Tree



SPECIES PROTECTION PLAN 5: BIRDS

1 INTRODUCTION

This plan is designed to comply with relevant committed mitigation measures¹⁵ and S.37 Consent Conditions 12, 13 and 14.

The Wildlife and Countryside Act 1981 (WCA) provides enhanced statutory protection to rare breeding birds listed under Schedule 1. In addition, all wild birds are protected by law under the WCA. Recent and significant changes have been made to the protection of wild birds in Scotland by The Nature Conservation (Scotland) Act 2004.

It is an offence to intentionally or recklessly¹⁶ disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

It is an offence to:

- kill or injure any wild bird;
- capture or keep [alive or dead] any wild bird;
- destroy or take the egg of any wild bird;
- sell or advertise for sale any wild bird or its eggs;
- destroy, damage, interfere with, take or obstruct the use of the nest of any wild bird while it is in use or being built.

This legislation means that birds are fully protected in Scotland, and that any planned activity, which may affect them, requires prior consultation with the appropriate statutory nature conservation organisation (SNH).

2 PROTECTION PLAN

In advance of construction at any location where there is the potential for protected birds to be present, it is **essential** that:

1. A breeding bird survey must be carried out by suitably experienced ecologists/ornithologists at an appropriate time of year and using methods agreed with SNH to inform construction and dismantling (e.g. the micro-siting and dismantling of access tracks and towers) in locations where breeding birds could be affected.
2. Sensitive areas of overhead transmission line which have been assessed to be associated with a potentially high risk of bird collision either identified at the ES stage or during subsequent monitoring must be marked with earth wire with bird diverters.
3. A post construction/dismantling project to monitor sample sections of diverter-marked and unmarked overhead transmission line is to be planned to assess the effectiveness of the bird diverters.
4. A pre-construction/dismantling survey for birds is completed on a rolling programme (maximum of 12 months prior to start of proposed works in a particular area) to ensure availability of up-to-date information.
5. Pre-construction/dismantling bird surveys (both for breeding and non-breeding birds of protected species – eg White-tailed Eagle, Red Kite and Hen Harrier) should include up to

¹⁵ E15, E16, E18, E19, E20, E21, E22, E23, E24, E60, E61, E62, E74, E77, E78, E79, E80, E81, E82, E83, E84, E85, E105, E128, E137, E144, E145, E146, E147, E149, E150, E154, E156.

¹⁶ Reckless acts would include disregard of mitigation aimed at protecting Birds, resulting in killing, injury, and/or disturbance of any Bird or Bird resting place.

1000m either side of LOD's for construction areas and access tracks and be conducted in accordance with agreed Method Statements.

6. The findings of the pre-construction/dismantling bird surveys must be submitted to the Scottish Government, SNH and the relevant Councils.
7. Relevant plans and documentation will be updated with new and amended information as it is produced, with changes communicated to appropriate staff as required.
8. A review must be undertaken to identify whether project works are likely to affect birds. If necessary works should be modified to reduce the impact on protected bird species.
9. The site working methods and detailed mitigation will be amended as necessary to take account of the findings of the surveys and legal and best practice requirements.
10. The Ecological Clerk of Works will attend site when required throughout the construction/dismantling period to ensure all environmental mitigation relevant to birds is delivered, and ensure compliance with the mitigation.
11. All site staff will be briefed on procedures to be implemented if any nesting birds are found within the construction/dismantling area. Work would stop in the area until specialist advice is sought and implemented.

3 MITIGATION MEASURES

The following provides details of mitigation options to cover all situations that may affect birds during the delivery of the project. It should be noted that for Natura site Firth of Forth SPA, additional specific mitigation measures are provided in the relevant Special Study Area Plans.

3.1 GENERAL

1. No permanent access tracks are to be constructed within sensitive ecological areas defined as European sites (SACs or SPAs) or other statutory designated nature conservation sites, Important Habitat Areas (IHAs), Important Bird Areas (IBAs) and Important Mammal Areas (IMAs), where these could affect important bird species and all temporary tracks used for construction of the new line and dismantling of the old line will be fully restored. Existing access tracks will be used wherever possible to transport equipment and materials to tower construction/dismantling locations. New accesses will be routed where possible through land of low ecological sensitivity, defined as Low Local or Negligible Value in the ecological assessment.
2. Along the proposed 400kV line and during the dismantling of the existing 132kV line no construction or dismantling (including bridge works and existing substation building alteration) would take place during the breeding bird season (species dependent – refer to Table 1) apart from where it has been possible to discourage birds nesting (for example by pre-felling of woodland) and/or where pre-construction surveys have indicated that no birds are nesting. Should any nesting birds be identified in the pre-construction surveys or after construction has begun, the area around the nest site should be protected from disturbance with a suitable fence that would include an appropriate buffer zone, as determined by the Ecological Clerk of Works and work avoided in this area until the birds have left the nest.
3. Appropriate exclusion zones for any breeding nest sites and non-breeding roost sites confirmed during pre-construction/dismantling surveys will be established on a site specific basis, and depend on the species, local topography, existing woodland screening and levels of human activity (and will be agreed in consultation with SNH). As a guide, exclusion zones will be from 100m to 1000m (refer to Table 3.1 below).
4. The Ecological Clerk of Works attending site in liaison with the Contractor's Environmental Advisor will ensure that due regard is given to the statutory protection of all breeding birds under the WCA and take into account early nesting species.

3.2 TIMING OF CONSTRUCTION AND FORESTRY ACTIVITIES

1. Forestry works (removal of habitat) will be undertaken outside the breeding season in areas where breeding bird restrictions have been identified.
2. Access track construction (removal of habitat) will be undertaken outside the breeding season in areas where breeding bird restrictions have been identified.
3. Access track construction in areas previously cleared by forestry operations can be undertaken in the bird breeding season but will be subject to proximity checks and sign off by an ecological clerk of works.
4. Travel along access tracks during the breeding bird season will be kept to the minimum necessary to carry out required work.
5. Tower construction compound site clearance and fencing (removal of habitat) will be undertaken outside the breeding season in areas where breeding bird restrictions have been identified.
6. Foundation construction / installation (within tower construction areas) can be undertaken in the bird breeding season but will be subject to proximity checks and sign off by an ecological clerk of works.
7. Tower erection (within tower construction areas) can be undertaken in the bird breeding season but will be subject to proximity checks and sign off by an ecological clerk of works.
8. Stringing of towers can be undertaken in the bird breeding season but will be subject to proximity checks and sign off by an ecological clerk of works.
9. Dismantling and removal of the 132kV line (potential for removal of habitat) - requirements to be confirmed in some areas (surveys still to be completed), generally to be undertaken outside the breeding season in areas where breeding bird restrictions have been identified.
10. Removal of tower construction areas, access tracks and associated infrastructure - can be undertaken in the bird breeding season but will be subject to proximity checks and sign off by an ecological clerk of works.

Specific SPA and SAC requirements, as detailed within the CPH, will be adhered to where relevant and will override these general mitigation measures at all times.

3.3 SPECIFIC

1. Bird flight diverters shall be fitted to the earth wire along stretches of line¹⁷ in consultation with SNH and in accordance with S.37 Consent Condition 12.
2. A post construction monitoring programme for sensitive areas outwith SPA's will be implemented in consultation with SNH and in accordance with Condition 14.

¹⁷ Included in Appendix 18 of the Construction Procedures Handbook.

Table 3.1: Specific Bird Species Disturbance Distances

Species	Buffer (m) (agreed with SNH) (3,10,14)	Exclusion zone to be maintained	Notes
Barn owl	100	Mid Feb - June (1) (see notes)	The period of mid Feb-June has been given to emphasise the fact that Barn Owls can begin nesting earlier than many other species and if eggs were laid in mid to late March the young would have left the nest by the end of June, assuming an incubation period of 29-34 days and a fledging period of 60 days (4). Potentially however the nesting period can extend well beyond this, even into November (1). Shawyer (1998) gives the average laying date as 1 May in Britain but states that in young conifer plantations, clutches are often laid in late March or early April and that the whole breeding cycle from early courtship to independence of young lasts five and a half to six months, giving the incubation period for each egg as 30-31 days with the clutch taking 8-20 days to complete and the fledging period for each owlet as 67 days. Where barn owls are nesting in sites with a relatively high current level of human disturbance it may be possible to reduce the offset distance further.
Golden Plover	400	April - July (1)	In Northern Scotland the first eggs are laid from mid-April but up to 2-3 weeks later at 900m. Incubation is 28-31 days and the fledging period is 25-33 days, the young being independent soon after (1).
Hen Harrier	750	All year round (1), (8) (see notes)	The species is not fully migratory in Scotland and birds can be seen on breeding grounds in almost any month, although generally the return is in March. The first egg is usually laid between late April and mid May but sometimes earlier. Early failures can see the replacement clutch not complete until mid-June. Incubation takes about 30 days for each egg (normal clutch size is 5 with 48 hour interval between laying) and chicks fledge at between 30 and 35 days old. This means that occasionally chicks may not fledge until August (8). Non-breeding roosts are important in pair formation and the 750m buffer should be maintained as a minimum 2 hours before and 2 hours after sunset and sunrise respectively to avoid disturbance.
Merlin	500	April - July (1)	Adults return to breeding sites in April (but sometimes earlier) with peak egg laying late May to early June in Scotland. Incubation is 28-32 days and fledging period 25-27 days, becoming independent two to four weeks later. This means young birds will often still be dependent on their parents for food in August (1, 10)

Species	Buffer (m) (agreed with SNH) (3,10,14)	Exclusion zone to be maintained	Notes
Red Kite	300	All year round (1) (2) (9) See notes	Most British birds return to their breeding sites in March and lay during the first three weeks of April (Scottish birds on average towards the end of this period) but there is considerable variation with laying possible between late March and early May. Incubation is 31-32 days and fledging period is around eight weeks. Newly fledged young are dependent on their parents for several weeks and remain close to the nest. This means that late attempts could see young fledged in early August and not become dependent until early September (9). For non-breeding roosts the 300m buffer should be maintained as a minimum 2 hours before and 2 hours after sunset and sunrise respectively to avoid disturbance.
Redwing	150	Late April - August (1) (2) (4)	This species has a long nesting season due to the fact that it commonly has two broods in a year. Eggs are laid from early May to mid July (occasionally earlier). Incubation is for 12-13 days and fledging takes around ten days with young dependent for a further two weeks. Young are usually fledged by early August (1, 4).
Short-eared owl	500	March - July (1) (2)	Eggs are laid from mid- to late-March to July with incubation taking 24-29 days and fledging 24-27 days with a period of post fledging dependence lasting several weeks. Late broods would therefore not fledge until August and early nesters could have chicks in the nest by mid-April (1,2).

References:

- (1) Birds of the Western Palearctic Vols I-V, VII, VIII (1977-1994)
- (2) Gilbert et al. (1998)
- (3) Currie & Elliott (1997)
- (4) Batten et al. (1990)
- (5) Shawyer (1998)
- (6) Perrins (1979)
- (7) Nethersole-Thompson & Nethersole-Thompson (1979)
- (8) Watson (1977)
- (9) Carter (2001)
- (10) Petty (1998)
- (11) Dennis et al. (2004)
- (12) Poole (1989)
- (13) Watson (1997)
- (14) Ruddock & Whitfield (2007)

SPECIES PROTECTION PLAN 6: OTTERS

Introduction

This plan is designed to comply with relevant committed mitigation measures¹ and S.37 Consent Conditions 10 and 27(7).

Otter *Lutra lutra* is a European Protected Species (EPS) protected under Annex II and IV of EC Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive). The Habitats Directive is transposed in Scottish law by the Conservation (Natural Habitats &c.) Regulations 1994. Otter is listed on Schedule 2 of the Conservation Regulations 1994. The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007 enhanced this protection. It is now illegal to:

- deliberately or recklessly² kill, injure or take (capture) an otter;
- deliberately or recklessly disturb or harass an otter;
- damage, destroy or obstruct access to a breeding site or resting place of an otter (i.e an otter shelter) .

This legislation means that otters and their shelters are fully protected in Scotland, and that any planned activity, which may affect them requires consultation with SNH. A project-wide EPS Licence will be obtained from SNH to cover works likely to impact on otter. A licence will not be granted unless, under Regulation 44 (3), SNH is satisfied there is no satisfactory alternative and that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

An EPS Derogation Licence for otter is required from SNH to enable construction of the Beaully to Denny Project that would otherwise contravene the law. This licence must remain valid at all times during the construction period. Under the licence Method Statements will be produced and submitted to SNH for each specific licensable instance, e.g. disturbance to otter, or damage, destruction or obstruction of a place of shelter. Best Practice procedures will be adhered to at all times in the production of mitigation; the advice provided in the Scottish Wildlife Series 2008 publication 'Otters and Development' will be utilised.

¹ E25, E26, E27, E29, E35, E36, E39, E87.

² Reckless acts would include disregard of mitigation aimed at protecting otters, resulting in killing, injury, and/or disturbance of any otter or otter resting place.

Protection Plan

In advance of construction at any location where there is the potential for otters to be present, it is **essential** that:

1. Stage II surveys for otters to be completed on a rolling programme (maximum of 12 months prior to start of proposed works, including Site Investigation, in a particular area) to ensure availability of up-to-date information on place of shelter locations.
2. Pre-construction otter surveys to include a maximum of 200m beyond Limits of Deviation (LOD's) for construction areas and access tracks.
3. The findings of the pre-construction otter surveys to be made available to SNH and the relevant Councils as required.
4. A review is undertaken to check whether Project Works are likely to affect otters. Works will be micro-sited where possible to ensure all works are beyond 30m from any non-breeding places of shelter, or up to 200m for high noise or vibration activities from breeding sites (dependent on topography, type of works etc).
5. Works Method Statements will provide all specific mitigation necessary to minimise impacts on the otter resource. Working methods and detailed mitigation will be amended as necessary in the light of the findings of the surveys and legal and best practice requirements.
6. Method Statements for works under the Project Licence (ie disturbance to an otter or destruction, damage or obstruction of a place of shelter) will be produced and agreed with SNH for each instance within 30m of proposed works, unless the holt is used for breeding, in which case a much larger 200m exclusion zone will be required.
7. Relevant plans and documentation will be updated with new and amended information as it is produced, with changes communicated to appropriate staff as required.
8. The Ecological Clerk of Works will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to otter is delivered, and ensure compliance with the Project EPS licence.

Mitigation Measures

The following provides details of mitigation measures to cover all situations that may affect otters during the delivery of the project:

General

1. In accordance with best practice principles all works will be avoided, where possible, where disturbance may be caused to active breeding sites until cubs are fully mobile (determined by the Ecological Clerk of Works). Where it is not possible to avoid works during such situations a detailed Method Statement providing an appropriate mitigation strategy and programme will be required. This must be agreed with SNH and completed under the Project licence.
2. All works in proximity to waterbodies/watercourses must follow measures outlined in the CPH to ensure their complete protection against pollution, silting and erosion.
3. All works in relation to working near watercourses and within designated sites (e.g. SACs) must adhere to committed mitigation.
4. Works in the vicinity of waterbodies or watercourses showing signs of regular use by otters should NOT normally take place at night or within 2 hours of sunset/sunrise, although on some occasions this may need to be relaxed in agreement with SNH.
5. Any temporarily exposed pipe system to be capped when contractors are off site to prevent otters from gaining access. Similarly, all exposed trenches and holes must be provided with mammal exit ramps when contractors are off site (i.e. at night time).
6. The Ecological Clerk of Works will maintain a watching brief during construction, specifically to check for otter places of shelter.

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7. An emergency procedure must be implemented by site workers if signs of otter (e.g. prints, spraints or animals) are encountered. All work within 30m must cease, and the Ecological Clerk of Works will inspect the site and define mitigation with appropriate consultation (if required).

Specific Mitigation

1. For places of shelter within 30m of long term works (or 200m for breeding sites) a suitable fence (e.g. chestnut paling) will be erected to prevent work access and all workers briefed of its purpose.
2. An assessment of whether a holt is in use as a natal site will be required. If the site is used as a natal site no works will be completed within 200m (in agreement with SNH) until the cubs are fully mobile (based on juvenile prints outwith the holt or using a camera trap). However, consideration of local circumstances (e.g. levels of screening by vegetation or topography) will be included in the assessment and setting of a buffer zone, in agreement with SNH. The holt will be protected from inadvertent disturbance by appropriate fencing (e.g. chestnut paling) at an appropriate distance, (agreed under the Method Statement) and maintained until the works are finished.
3. If the proposed works will result in the destruction of a non-breeding holt a detailed Method Statement providing an appropriate mitigation strategy and programme will be required under the Project Licence. An artificial holt (at least 200m from works) will be constructed using either log pile or pipe and chamber holts, depending on the local circumstances (it should be noted that a replacement artificial holt will also be provided for couches or temporary resting up sites where alternative places of shelter within the otters home range are limited in number - to be determined by the Ecological Clerk of Works). The construction of an artificial holt must be completed for an agreed period prior to start of works to allow otters to familiarise themselves with the alternative resting place. Otters will then be excluded from their holt using one-way gates over a period of 10 days. The holt will then be destroyed using controlled methods, i.e. using appropriate machinery or by hand where possible, under the supervision of the Ecological Clerk of Works.
4. For any couches or temporary places of shelter that will be destroyed by the works, no exclusion will be required prior to their destruction. However, the Ecological Clerk of Works must ensure that these resting places are not being used immediately prior to their destruction.
5. For short term works required to be carried out within a 30m buffer of a couch or temporary place of shelter, that will not result in damage, destruction or obstruction of access to the shelter, or disturbance to an otter, no Method Statement will be required. This includes tree felling and access track construction lasting no more than 1 week. The Ecological Clerk of Works will check prior to works each morning that no otter is present. All works within the buffer will be subject to the General Mitigation Measures listed above and carried out under the supervision of the Ecological Clerk of Works.

Species Protection Plan: Common Reptiles

Beaully Denny Overhead Line Works

Wharry Burn to Denny Sub Station

Introduction

This plan is designed to comply with relevant committed mitigation measures 1 and s.37 Consent Condition 11.

Common reptiles are afforded partial protection under Schedule 5 of the Wildlife and Countryside Act 1981, as amended by the Nature Conservation (Scotland) Act 2004. This makes it an offence to “intentionally or recklessly kill or injure” (but not ‘take’) and also sell, transport for sale and advertise for sale.

Three of the UK’s four common reptile species, i.e. Slow worm (*Anguis fragilis*) common or viviparous lizard (*Lacerta vivipara*) and adder (*Vipera berus*) are the only native reptile species likely to be found in relation to the project.

No licensing procedure under UK legislation exists for permitting derogation of Section 9(5) (and parts of Section 9(1)) for development purposes. However, provision is made within the WCA whereby a person shall be not guilty of an offence if it can be shown that the act was the incidental result of a lawful operation, and could not reasonably have been avoided. Therefore, a Species Protection Plan (SPP) for reptiles is required to ensure the protection of these animals throughout the duration of the Project.

No guidance is provided by SNH on the necessary measures required to ensure that any works completed under the Project are considered lawful operations. English Nature (now Natural England) published in 2004 – “Reptiles: guidelines for developers” which set out statutory expectations of reasonable avoidance of killing and/or injury of reptiles. The guidance identifies two aims that need to be achieved where reptiles are present on development sites:

- To protect reptiles from any harm that might arise during the development work; and
- To ensure that sufficient quality, quantity and connectivity of habitat is provided to accommodate the reptile population, either on-site or at an alternative site, with no net loss of local reptile conservation status.

This SPP for reptiles includes mitigation to achieve the above aims.

Protection Plan

In advance of or during construction at any location where there is the potential for reptiles to be present, it is **essential** that this plan is followed.

Surveys

1. Pre-construction surveys for reptiles are completed in suitable habitat on a rolling programme (maximum of 12 months prior to start of proposed works in a particular area, including Site Investigation) from April – September inclusive (with the peak survey months being April, May and September) to ensure availability of up-to-date information on local reptile populations.
2. Pre-construction surveys will be carried out by placing artificial refugia and carrying out 15 visits in suitable weather conditions (low ambient air temperature but with the sun shining, and little or no wind) as recommended by the Herpetofauna Worker’s Manual (2003) and Froglife (1999). Population estimates will be made based upon the number of animals identified over the 15 visits and categorised as follows:

Species	Low	Medium	High
Common Lizard	<20/ha	>40/ha	>80/ha
Slow-worm	<50/ha	50-100/ha	>100/ha
Adder	<2/ha	2-4/ha	>4/ha

3. Pre-construction reptile surveys will include survey of all potentially suitable habitats, involving consideration of the following study areas:
 - All tower locations (and working areas, including winching locations and de-stringing locations, etc.) and 10m beyond for the overhead transmission line; and
 - The route of any access tracks (and working areas, including laydown areas, etc.) and 10m beyond the existing overhead transmission lines.
4. The findings of the preconstruction surveys will be made available to SNH and the client as required and included on the Project Geo-database (should one exist).
5. Pre-construction surveys for potential hibernation sites will be undertaken in the preceding active period for areas previously identified as having reptiles where construction works are scheduled within the hibernation period. These surveys will concentrate on areas which will be directly disturbed over the winter period such as routes of access tracks, tower compounds and felling areas.

Review of works and impact assessment

6. The Ecological Clerk of Works (ECoW) will review whether construction activities are likely to affect reptiles and, if so, what mitigation options are available. A hierarchical approach to mitigation will be applied to any occupied reptile habitat that may be affected under the Project works, as detailed in the “General mitigation” section below.
7. Construction teams will be advised of existing / new constraints together with mitigation options by the ECoW.
8. The Project Geo-database and relevant site documentation, *e.g.* CPH or Environmental Management Plans (EMP’s), will be updated with new and amended information as it is produced, with changes communicated to appropriate staff as required.

General mitigation

9. This SPP is designed to provide the Contractor and the Ecological Clerk of Works (ECoW) with an approved methodology for carrying out certain reptile disturbance and mitigation activities.
10. A suitably qualified and experienced ECoW will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to reptiles is delivered, and ensure compliance.
11. A hierarchical approach to mitigation of avoid / protect and destroy will be applied to any reptiles that may be affected under the Project works.
 - For occupied reptile habitat identified within 30m of works an initial protection zone of 30m will be marked on the ground using blue rope (or blue tipped canes and signs) to restrict work access. Site staff will be briefed of its purpose through a Toolbox Talk.
 - Works will be micro-sited where possible out with the protection zone where practicable.
 - If the works cannot be micro-sited a reasonable mitigation effort will be performed to clear construction areas using one or more of the following options as appropriate:
 - **Strimming and fingertip searches** – the legislation effectively requires the displacement of individual reptiles from the working width to alternative habitat. Mechanical strimming / mowing will be completed during the reptile active period of April to September inclusive.
 - **Capture and Release programme** -completed prior to works during the active reptile period of April to September inclusive in accordance with the methodology detailed below.
 - **Fencing** – where suitable, temporary and permanent exclusion fencing will be used to protect the animals and to remove them from the affected areas. A solid barrier will be required around the areas which will remain in place during the works to stop animals recolonizing the habitat.
12. An emergency procedure will be implemented by site workers if reptiles are encountered. All work within 30 m will cease, and the ECoW will inspect the site and define mitigation (if required) in line with this SPP.
13. For works in the active period, where a reptile mitigation programme has been completed, such as in tower compounds, the ECoW will conduct a walkover and fingertip search immediately before ground breaking works commence to reasonably check that no reptiles are present.

14. Where construction works are scheduled within the hibernation period (indicatively October to March inclusive) mitigation works will be completed in September (extending into early October only where weather conditions do not result in reptiles becoming inactive). Mitigation works may involve habitat manipulation and capture release programmes as suitable to allow construction to proceed during the inactive reptile period.
15. Where works will impact on suitable hibernation sites they will be dismantled before the hibernation period and re-built nearby once the location of works has been finalised. If it is not possible to rebuild them exactly such as where underground holes are found then alternative hibernation sites will be created as appropriate, using large stones, small boulders, timber and brash. The design will follow best practice laid out in current guidelines.
16. An exceptional circumstance procedure will be implemented should mitigation options (as detailed below) not prove satisfactory in a particular case. In such a scenario, mitigation will be determined on a case specific basis under consultation with SNH. No Project Works would be undertaken until such a time that a satisfactory outcome can be successfully achieved.

Specific Mitigation Options

Strimming and Fingertip Searches

17. Mechanical strimming/ mowing will be completed during the reptile active period of April to September in suitable habitat and can be carried out prior to works starting. In suitable habitat with slow growing vegetation strimming or mechanical mowing can be carried out in advance of works.
18. Strimming is considered appropriate in areas of extensive reptile habitat such as moorland where the proposed works would entail the removal of reptile habitat along a very narrow corridor which is located in a large area of contiguous suitable habitat such that the proportional loss is very low.
19. This method involves cutting the vegetation by mechanical means, under supervision of the ECoW, to remove cover, and decrease the attractiveness of the area for reptiles.
20. This method would apply to suitable reptile habitat within 30 m of proposed works. The area to be strimmed would be determined by the ECoW taking into consideration the extent of suitable habitat and the proximity to reptile records.
21. The approach is summarised as follows:
 - Vegetation removal would be completed over the area to be affected by the proposed construction works, with an additional 5m either side to account for any variance in earthworks (e.g. a c. 30-35m corridor in most cases for access tracks). This corridor would be marked out by the ECoW using canes and blue rope either side, which would be left in place for the duration of the clearance and track construction process;
 - The ECoW would check any dense areas of vegetation immediately before any strimming by carrying out a fingertip search, capturing and removing any reptiles found to prevent any injury to any animal seeking refuge within it;
 - Where reptile populations are identified as being low a mechanical flail can be used. The vegetation will be cut in strips, moving slowly from one side of the corridor to the other;
 - Where adder are known to be present the vegetation will be cut over two days, The first cut would remove about half the height of the existing vegetation and the cut material would be collected and heaped-up beyond the blue ropes to either side of the area affected by the works. The vegetation would then be left for the next 24 hours;
 - The following day, the second cut would remove the remaining vegetation, ensuring that not more than 2 cm height of vegetation is left. The cut vegetation would be cleared from the area and added to the heaps from the first strimming pass;
 - A 24 hour period would then be left between the final cut and track construction operations. This is to allow time for any reptiles present to react to the removal of cover and move away from the area;
 - A detailed fingertip search would then be completed by the ECoW walking slowly across the area immediately in advance of the soil strip (i.e. where there is no peat >1 m deep) or laying of track material (i.e. for floating track construction on peat >1m deep). Any reptiles found would be captured or the area where the reptile went to ground subject to careful destructive search by the ECoW and the reptile removed to a previously defined suitable release site; and

- The soil strip / laying of track material would proceed slowly, and under the direct supervision of the ECoW, through the reptile buffer zone. If reptiles are seen within the works zone then works would be halted immediately and the ECoW will advise on when they can restart.

Capture and Release Programme

22. A capture and release programme can be undertaken by an appropriately qualified and experienced ECoW within 2 weeks of works starting. Reptiles collected will be moved to suitable habitat adjacent to the route approximately 200m away (this may vary depending upon the nature of the area).
23. For works in the active period, where a capture and release programme has been completed, the ECoW will conduct a walkover immediately before ground breaking works commence to reasonably check that no reptiles are present.
24. The following methodology will be used:
 - The following levels of capture effort defined as reasonable is based on information provided in the advisory note provided by the Herpetofauna Groups of Britain and Ireland (HGBI, 1998), entitled *Evaluation of local mitigation/translocation programmes: Maintaining best practice and lawful standards* – should be adopted. To take account of the very low populations encountered in many Scottish sites (e.g. moorland with very low densities of common lizard) an additional category has been included termed Very Low Population.

Species	Population Size	Tin Density (tins/ha)	Number of trapping visits
Slow-worm	High >100/ha	100	90
	Medium 50-100/ha	100	70
	Low <50/ha	50	60
	Very Low <25/ha	50	30
Common Lizard	High >80/ha	100	90
	Medium >40/ha	100	70
	Low <20/ha	50	60
	Very Low <10/ha	50	30
Adder	High >4/ha	100	120
	Medium 2-4/ha	100	100
	Low <2/ha	50	60
	Very Low <1/ha	50	30

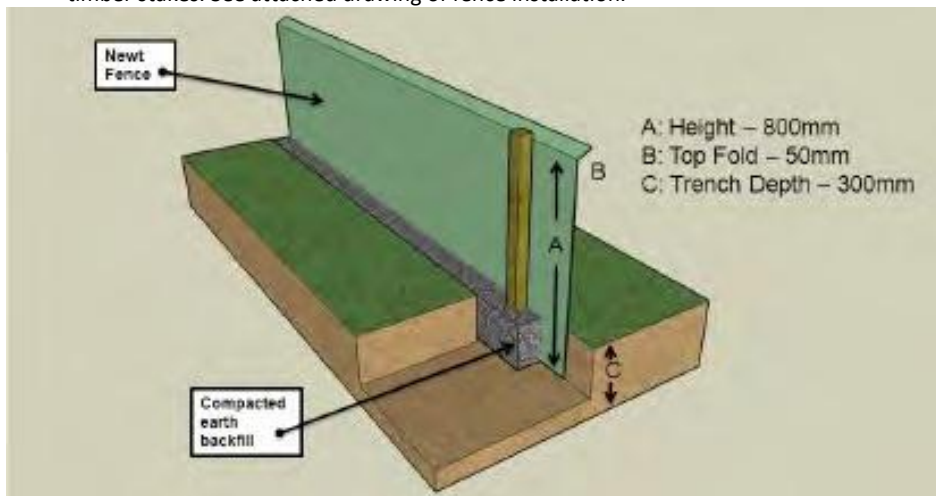
- The capture programme should be based on general searches for reptiles throughout occupied habitat, and use of tins (50cmx50cm square roof felt) to concentrate animals basking and seeking refuge. The density of tins defined as reasonable is based on information provided by HGBI (1998) and detailed in the table above. Tins will be placed in locations attractive to reptiles (e.g. sun traps). All tins should be removed following the capture programme.
- A “reasonable effort” must be expended in order for the project to be able to comply with the statutory obligations and planning conditions with respect to protecting common reptile species. An open-ended approach to trapping effort is considered reasonable as it favours the variable conditions that will be encountered on site. A minimum of 5 trapping days will be made with 2 visits per day and then as many trapping days as are necessary to achieve 5 clear days where no animals are captured.
- Capture of reptiles should be completed during the day in suitable weather conditions. Standard recording forms should be used to keep detailed records of all data collected throughout the survey. Information recorded will include: site name/number, grid reference, date and time, weather (temperature, cloud and precipitation), species and age/gender.
- Common lizard and slow-worm should be carefully hand caught and placed into suitable container (e.g. 15 litre plastic containers with snap-on lid) containing adequate vegetation. To avoid injury, common lizard and slow-worm should be held in separate containers. Adder should be handled using a restraining stick and appropriate bite proof gloves/gauntlets, and placed singly in a lockable ventilated box containing adequate vegetation. All reptiles should be handled with extreme care and released as soon as possible into the release area (see below).
- For each release area an assessment should be completed of the suitability of the site, compared to the habitats present in the donor area (assessed during the Stage II reptile surveys). Where necessary

habitat management (e.g. scrub clearance) and/or habitat creation works (e.g. provision of refugia and/or hibernacula) may be required at the release area. Any habitat works will be completed prior to the capture and release programme and will be subject to the same restrictions as works areas should machinery be required.

25. The completion of each capture and release programme will be recorded and the findings will be made available to SNH and the client as required and included on the Project Geo-database (should one exist).

Reptile Fencing

26. Reptile fencing should be used in areas where reptile populations have been identified in suitable habitat that is isolated from surrounding suitable habitat, This method is considered to be appropriate for locations where reptile habitat is going to be removed / lost (e.g. borrow pits, compounds etc. located in pockets of suitable habitat).
27. A solid barrier will be required around the areas where animals are to be translocated from. Depending upon the requirements temporary or semi-permanent exclusion fencing can be used.
- **Temporary Fencing** - This is to be a free standing structure supported by wooden uprights. UPVC cladding material will be fixed to the uprights and pulled tight to avoid flapping in the wind. Above the ground the fence will be a minimum of 500mm with a minimum of 100mm of material folded over twice at the top to form a curl facing into the area where animals are to be excluded from. The below ground depth will be 300mm before being turned out in a 90° direction towards the animals for a minimum of 100mm giving an overall material width of 1m. Temporary fencing will receive a daily inspection and minor repair will be carried out a necessary by the ECoW.
 - **Semi-permanent Fence** - The semi-permanent reptile fence consists of HDPE plastic sheets. The plastic is buried to a depth of 200mm. The plastic sheet is semi rigid so requires support provided tanalised timber stakes. See attached drawing of fence installation.



- **Pitfall traps** will be constructed from 10 litre plastic containers/buckets with snap-on lids sunk into the ground along the inner perimeter of the translocation areas. The containers will be sunk flush to the ground level and with their outer edge flush against the fencing. The traps will be set at 1 trap per 10m length of fence where it is possible to do so and checked daily during the translocation.
 - **Artificial refugia 'tins'** will be used and checked during suitable weather conditions.
 - A "reasonable effort" must be expended to be able to comply with the statutory obligations and planning conditions with respect to protecting common reptile and amphibian species upon the site.
28. For access tracks, any lengths of corridor requiring reptile exclusion fencing will be determined by the EnvCoW on the basis of the species present (and their likely dispersal distance from hibernation sites and home range sizes) and habitat suitability. In areas of suitable habitat, the following lengths of exclusion fencing are proposed either side from each record or groups of records: slow-worm and common lizard – 50m; adder – 1,000m. All exclusion fencing will be removed upon completion of the works.

Protection of hibernating reptiles

Construction Activities

29. The following steps will be followed by the ECoW in order to protect reptiles where construction works are required during the inactive period (October to March inclusive) in areas where reptiles are known to be present:

- Establish the presence of reptile population in surrounding area.
- Assess and map potentially suitable winter habitats / features.
- Micro-site location of access tracks / tower compounds to avoid disturbing suitable hibernation sites where practicable (e.g. look for existing gaps in walls). Where it is not possible to avoid features (e.g. dry stone dykes, mortared walls and boulder fields) a non-destructive search using suitable endoscopic equipment will be completed to reasonably identify if reptiles present.
- Where there is any uncertainty as to the potential presence of reptiles within the feature, works will be re-scheduled to the active period.
- If the ECoW is confident that no reptiles are present then the feature can be carefully dismantled by hand (where possible) or plant under the supervision of the ECoW, until all potentially suitable voids have been removed.
- If any voids are found during dismantling which were not previously checked, dismantling will cease and the void will be inspected by the ECoW before works re-commence.
- Should inactive reptiles be found, the works will be stopped and the ECoW will carefully replace materials to minimise any disturbance to the reptile and changes in the microclimate of the void. Where this is not possible (e.g. a stone cannot be replaced without risk of injuring or killing the reptile) the ECoW will consult with SNH.

Tree Felling and Forestry Operations

30. The following steps will be followed by the ECoW in order to protect reptiles where felling operations are required during the inactive period (October to March inclusive) in areas where reptiles are known to be present:

- The ECoW will attend site prior to works to mark out buffer zones for areas identified as having reptiles present during the previous summer's surveys.
- A hierarchy of felling options will be employed within the buffer zones to prevent damage or disturbance to the ground and any potential reptile hibernacula. This hierarchy is as follows:
 1. Hand felling.
 2. Commercial felling from an existing access track within the buffer zone.
 3. Commercial felling with the harvester located outside the buffer zone and reaching in.
 4. Commercial felling from brush mats within buffer zone to prevent ground breakage.
 5. Commercial felling from plastic mats within buffer zone to prevent ground breakage.

Appendix A – Protected Species Risk Assessment

OHL Name		Location and NGR	
Species name and numbers			
Reason for working within buffer zone			
Alternative Options Considered and why not suitable			
Impact on reptile species			
Method			
Mitigation			
Name of ecologist		Names of Additional agents	

Species Protection Plan: Pine Marten

Beaully Denny Overhead Line Works

Wharry Burn to Denny Sub Station

Introduction

Pine marten is afforded full protection under Schedule 5 of the Wildlife and Countryside Act 1981, as amended, mostly recently by the Wildlife and Natural Environment (WANE) [Scotland] Act 2011. This makes it an offence to kill, injure or take a pine marten or to intentionally or recklessly¹ damage, destroy or obstruct access to any place used for shelter or for breeding. Disturbance to this species in its place of shelter also constitutes an offence.

Pine marten are fully protected in Scotland. The WANE Act permits derogation of disturbance and/or destruction of pine marten places of shelter by SNH for development purposes, subject to the following:

- a) That undertaking the conduct authorised by the licence will give rise to, or contribute towards the achievement of, a significant social, economic or environmental benefit; and
- b) That there is no other satisfactory solution.

This SPP for pine marten includes mitigation to achieve the above aims.

Protection Plan

In advance of construction at any location where there is the potential for pine martens to be present, the following protection plan must be followed:

Surveys

- 1 Pre-construction surveys for pine marten will be completed on a rolling programme (maximum of 12 months prior to start of proposed works in a particular area, including Site Investigation) at an appropriate time of year to ensure availability of up-to-date information on places of shelter and breeding dens.
- 2 The pre-construction pine marten survey will include a minimum of 100 m beyond the works areas and access tracks.
- 3 The pre-works surveys will be carried out by a suitably experienced ecologist and will identify whether any active places of shelter/dens are likely to be affected by the works.

Review of works and impact assessment

- 4 The ECoW will review whether construction activities are likely to affect pine marten and, if so, what mitigation options are available. A hierarchical approach to mitigation will be applied to any places of shelter/dens that may be affected under the works, as detailed in the General Mitigation section below.
- 5 The works teams will be advised of existing / new constraints together with mitigation options by the ECoW.
- 6 The Project Geo-database (if applicable) and relevant site documentation, e.g. Environmental Management Plans (EMP's), will be updated with new and amended information as it is produced, with changes communicated to appropriate staff as required.

General Mitigation

- 7 This SPP is designed to provide the Contractor and ECoW with an approved methodology for protecting pine marten.

¹ Reckless acts would include disregard of mitigation aimed at protecting pine marten, resulting in killing, injury, and/or disturbance of any pine marten or pine marten resting place

- 8 The ECoW will attend site on a regular basis throughout the works period to ensure all environmental mitigation relevant to pine marten is delivered.
- 9 A hierarchical approach to mitigation of avoid / protect and disturb / destroy will be applied to any places of shelter/dens that may be affected under the works:
 - For active places of shelter/dens identified within 30m or works (or 100m for breeding sites), an initial protection zone of 30m(or 100m) will be marked on the ground using blue rope (or blue tipped canes and signs) to restrict work access. Site staff will be briefed of its purpose through a Toolbox Talk.
 - Works will be micro-sited, where possible outwith the protection zone, unless works are required to be closer and it can be demonstrated, through the submission of a Protected Species Risk Assessment (Appendix A), that a smaller distance is sufficient to prevent damage / disturbance. Consideration of the type of works and local circumstances (*e.g.* levels of screening by vegetation or topography) will be included in the assessment.
 - The protection zone may be modified by ECoW following the risk assessment in order to protect the places of shelter/dens and allow works to proceed.
- 10 An emergency procedure will be implemented by site workers if pine marten are encountered. All work within 30m (non-breeding season) or 100m (breeding season) will cease, and the ECoW will inspect the site and define mitigation (if required) in line with this SPP.
- 11 Any temporarily exposed pipe system to be capped when contractors are off site to prevent pine marten from gaining access. Similarly, all exposed trenches and holes must be provided with mammal exit ramps when contractors are off site (*i.e.* at night time). All temporary buildings and waste control areas should be secured to stop access by pine martens.
- 12 In the event of mitigation options not proving satisfactory in a particular case, further mitigation will be determined under consultation with SNH. No works would be undertaken within the protection zone until mitigation has been agreed.

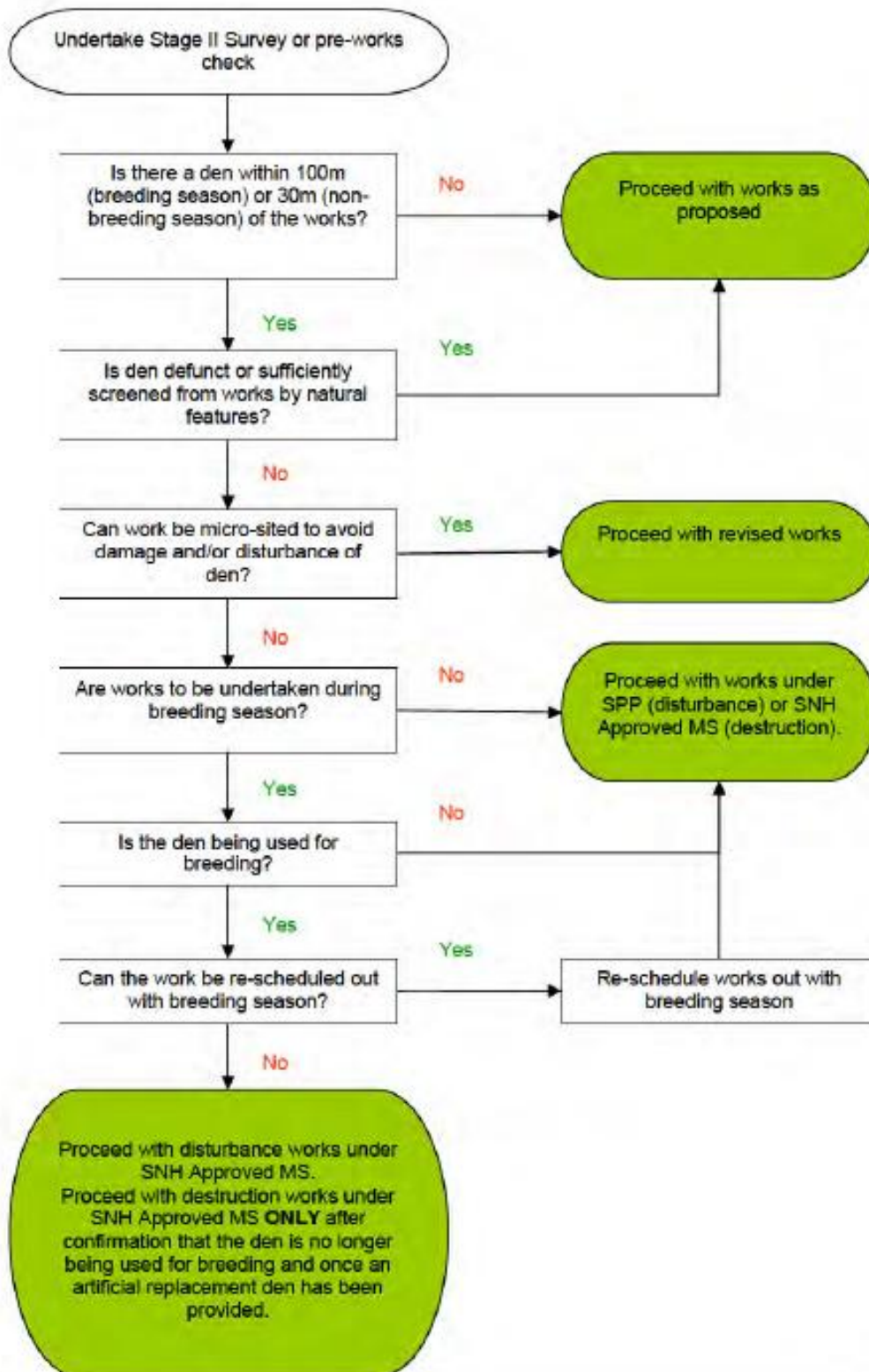
Monitoring

- 13 Any destruction of den sites or disturbance of potential breeding den sites (*e.g.* rock cavities or small holes in trees stumps/ground) where there is evidence of pine marten usage, or destruction of potential den sites, would be monitored to determine their use using infra-red cameras, deployed at a reasonable distance to ensure no disturbance occurs during placement or operation (a survey licence is required for intrusive camera usage).
- 14 A minimum of 14 days of continuous camera monitoring would be completed, but this period of monitoring could be extended by the ECoW depending on the site-specific circumstances and the time of year. If no activity is detected, and only if the den is required to be destroyed, it would be blocked to minimise the risk of the site becoming occupied between the survey and the works starting. A careful inspection of the den is required before blocking.
- 15 A careful search of the surrounding area for pine marten sign will also be undertaken.
- 16 The monitoring will define whether the place of shelter is:
 - A non-occupied den within a pine marten area;
 - A non-breeding, occupied den; or
 - An active breeding site (natal or maternal).
- 17 Where dens are occupied, camera monitoring will continue until works have been completed in the adjacent area. The camera monitoring must be sufficient to enable a decision on whether the site is a non-breeding place of shelter or an active breeding den to be made.

Disturbance to pine marten or destruction of places of shelter

- 18 If the proposed works could result in the **disturbance** of a non-breeding pine marten places of shelter/dens rather than damage, a mitigation plan and licence will be required. This will be agreed with SNH. The places of shelter/dens will not be destroyed, but protected from damage by the creation of a suitable protection zone with blue rope, which will be maintained, until the works are finished.
- 19 If the proposed works could result in the **destruction** of a den / place of shelter a detailed mitigation plan will be and licence will be required. This will be agreed with SNH. Destruction of places of shelter will only be undertaken as a last resort with provision for the creation of an artificial den. If it is a breeding site no works will be completed within the protection zone for the initial 10 week period until the kits are fully mobile (based on juvenile prints out with the den or using a camera trap).
- 20 Any den subject to disturbance under the licence will be monitored during and after the works.

Pine marten Mitigation Decision Tree



Appendix A: Pine marten Risk Assessment

OHL Name		Location and NGR	
Species name and numbers			
Reason for working within buffer zone			
Alternative Options Considered and why not suitable			
Impact on species			
Method			
Mitigation			
Name of ecologist		Names of Additional agents	