APPENDIX 3.4: SSEN TRANSMISSION SPECIES PROTECTION PLANS (SPPS)

Scottish & Southern Electricity Networks
TRANSMISSION

TG-NET-ENV-500

Safety, Health and Environment

Freshwater Pearl Mussel Species Protection Plan

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1 Introduction

Freshwater pearl mussel (FWPM) is one of the most endangered molluscs in the world. Scotland holds some of the largest remaining populations in the world. This Species Protection Plan (SPP) provides guidance and agreed procedures for the protection of FWPM and their habitat during construction works on Scottish & Southern Electricity Networks Transmission (SSEN Transmission) projects. It applies to all projects where FWPM may be present and is issued to *Contractors* as part of the Works Information. It outlines the responsibilities of SSEN Transmission (the *Employer*) and the *Contractor* regarding protection of FWPM. It also details relevant legislation, survey requirements and mitigation measures to protect the species and its environment.

2 References

The documents detailed in Table 2.1 - Scottish and Southern Electricity Networks Documents and Table 2.2 - Miscellaneous Documents should be used in conjunction with this document.

Table 2.1 - Scottish and Southern Electricity Networks Documents

Reference	Title
TG-NET-ENV-511	General Environmental Management Plan (GEMP) - Soil Management
TG-NET-ENV-512	General Environmental Management Plan (GEMP) - Working in or Near Water
TG-NET-ENV-514	General Environmental Management Plan (GEMP) - Working with Concrete
TG-NET-ENV-515	General Environmental Management Plan (GEMP) - Watercourse Crossings
TG-NET-ENV-519	General Environmental Management Plan (GEMP) - Forestry
TG-NET-ENV-523	General Environmental Management Plan (GEMP) - Bad Weather

Table 2.2 - Miscellaneous Documents

Title
Wildlife and Countryside Act 1981 (as amended in Scotland)
NatureScot - Freshwater pearl mussel
NatureScot - SiteLink
NatureScot Licensing
NetRegs - Guidance for Pollution Prevention (GPP) documents
SEPA - The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended): A Practical Guide

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3 Background

3.1 Freshwater pearl mussels (*Margaritifera margaritifera*) are freshwater bivalves (a type of mollusc) which filter feed in clean, fast flowing waters.

3.2 Fertilised adult females eject millions of tiny larvae in the summer which must successfully attach to the gills of young salmon or trout, which they live on harmlessly, before dropping off onto the riverbed substrate the following spring. The juveniles usually establish themselves in coarse sand or fine gravel, though they are known to be found in finer substrates. It takes around 10-12 years for the young mussels to reach sexual maturity. Adults can live to over 100 years and grow to over 15 cm in length.

3.3 They are extremely vulnerable to changes in their environment, such as water pollution (including silt and sediment) and engineering works affecting mussel beds. Populations in Scotland are still illegally fished for pearls; therefore the precise locations of known populations are kept confidential.

3.4 Due to the dependency of its larval stages on fish hosts, activities which impact on local salmon and trout populations can potentially also have an impact on FWPM populations.

4 Responsibilities

4.1 It is the *Contractor's* responsibility to comply with all the requirements of this Protection Plan where FWPM may be present, and it is both the *Contractor's* and SSEN Transmission's responsibility to monitor compliance with the Protection Plan.

4.2 It is **essential** that this plan is followed in advance of any works which could impact on FWPM or their habitat. Any river within the SSEN Transmission licence area that is not ephemeral (short duration after precipitation or flooding), and which is not entirely bedrock should be treated as having potential for FWPM, unless this has been discounted through other assessments which may include FWPM surveys. Rivers without the presence of salmonids (salmon and trout), due to barriers obstructing the movement of the fish, will not have recruitment of juvenile FWPM due to the dependency the larval stage on attaching to the gills of the fish. This may not rule out the potential for adults which may have established before barriers became established.

5 Legislation

5.1 FWPM is afforded full protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended in Scotland). This makes it an offence to intentionally or recklessly kill, injure, take or disturb FWMP when it is occupying a structure or place used for shelter or protection, or to damage, destroy or obstruct access to any structure or place it uses for shelter or protection. Reckless acts would include disregard of mitigation aimed at protecting FWPM, resulting in killing or injuring FWPM. Knowingly causing or permitting any of the above acts to be carried out is also an offence. The protection of FWPM is a priority in the fight against wildlife crime.

5.2 NatureScot can grant licences to enable certain activities that would otherwise be an offence, to be carried out in relation to FWPM and their places of shelter, subject to the following:

a) the activity authorised by the licence will contribute to significant social, economic or environmental benefit; and,

b) there is no other satisfactory solution

5.3 The critically endangered status of FWPM in Europe means that robust justifications and high burdens of proof should be expected to be provided by the applicant for both tests and that there should be no presumption that a licence would be forthcoming. Licences for this purpose will only be issued in *exceptional* circumstance *and* where the activities will not compromise the local population viability.

5.4 This Plan outlines the planning, assessments and mitigation expected to avoid the need for an application for a licence to undertake development activities.

6 Planning Works Close to or Crossing Freshwater

6.1 Activities which have the potential to affect FWPM where they are found include, but are not limited to, crossing watercourses, in watercourse engineering and bank works. The potential for harmful pollutants (including silt from site run off) to travel long distances downstream along water courses means that FWPM populations may be impacted far downstream from the sources of those pollutants.

6.2 The approach to FWPM protection will always be based on the 'avoidance' of impacts. Unlike other species covered in this SPP series, **'disturbance' is not a legal option** due to the sedentary lifestyle of adults and juveniles as this could result in them being killed or injured.

6.3 Avoidance of potential impacts on FWMP may be achieved through consideration of location, timing, methods or technology of the proposed works which could avoid impacts on FWPM completely, or at least minimise the likelihood of an offence occurring. Please note that this document presumes that the 'do nothing' option has already been eliminated from valid options through the Governance processes and that the need for undertaking works can be robustly defended and withstand scrutiny if required.

7 General Mitigation

7.1 All Works

- Strict adherence to SEPA's 'The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended): A Practical Guide' (which is mandatory to ensure legal compliance), the Guidance for Pollution Prevention documents and any additional best practice in SSEN Transmission's General Environmental Management Plans should ensure that pollution pathways are eliminated.

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- It should be remembered that water pollution incidents, whether they arise on land (such as site run off) or from works in the water or from directional drill frac-out, can have severe consequences long distances downstream in receiving waters which may contain FWPM.

7.2 Works Within Watercourses

- Any activities proposed in the water course (e.g. vehicular crossings and isolated open-cut trenches) must not be undertaken without an assessment being completed by the *Ecologist / Ecological Clerk of Works* of the potential of that watercourse to support FWPM. If this assessment determines that there is a potential for FWPM to be present at the location of works or within 0.1 km upstream or 0.5 km downstream then a survey must be undertaken which meets the requirements set out in this SPP. The *Ecologist / Ecological Clerk of Works* should also consider activities which may reduce water flow in suitable water courses.

7.3 Works Outwith Watercourses

- Where there are no pathways for pollution or works affecting the beds of watercourses and/or no reductions to water flow and/or no reductions in tree shading of watercourses there is need no need for further assessments.

8 Freshwater Pearl Mussel Surveys

8.1 Field surveys will be required in the following circumstances:

- When working within a watercourse within a designated site for FWPM (Special Area of Conservation or Site of Special Scientific Interest) or otherwise identified as having FWPM populations (candidate Special Area of Conservation or Site of Community Importance) or the catchment of such sites. Such sites can be identified using the NatureScot SiteLink service (https://sitelink.nature.scot/)
- Where FWPM have previously identified through desk study or from prior surveys as being 0.1 km upstream or 0.5 km downstream and there is still a potential for a water pollution event even after adhering to the Pollution Prevention Guidelines and any additional best practice in SSEN Transmission's General Environmental Management Plans.
- Where works will take place within a watercourse that is - i) not ephemeral (of short duration after precipitation or flooding), ii) which is not entirely bedrock and iii) where an assessment by an *Ecologist / Ecological Clerk of Works* cannot robustly discount the possibility of their presence. Assessment of suitability may be undertaken as part of the surveys and assessments undertaken for Environmental Impact Assessment or other relevant environmental assessments.

8.2 Detailed guidance on a survey methods to inform development and deep water survey methods can be found on the NatureScot website and require a licensed FWPM surveyor to undertake them, so are not repeated.

1) Survey work must be undertaken in periods of low water flow. **This generally limits the survey season to between April and September.** Planning of works should allow sufficient time for a FWPM survey to be carried out and a report prepared.

2) The length of watercourse requiring to be surveyed will be dependent on the nature of the works and their potential impacts. The surveyor will adhere to the published survey guidance on the NatureScot website to identify extent of river to be surveyed and the techniques used.

9 Review of Survey

9.1 The locations of any FWPM detected should be treated with the strictest confidentiality and only be released to the relevant competent authorities (SEPA, NatureScot and local planning authority) in reports or annexes clearly marked as sensitive.

9.2 The *Ecologist / Ecological Clerk of Works* will review the survey report to determine whether the proposed activities are likely to have a significant impact on any FWPM identified through the assessments.

9.3 If it is determined that there is a potential for negative impacts on FWPM then the *Contractor* should work with the *Ecologist / Ecological Clerk of Works* to identify any changes which can be made to the proposed works which will mitigate the risks to FWPM.

9.4 The approach to resolving any potential conflicts with FWPM protection identified will always begin with identifying options for 'avoidance'. Avoidance solutions may be identified through consideration of alternatives with regards to location of the activity, timing (which may relate to water levels), materials, methods or technology used. This SPP presumes that detailed consideration will already have been given to the necessity of delivering a particular outcome and that the 'do nothing' option will no longer be available.

9.5 If the *Ecologist / Ecological Clerk of Works* is not able to agree sufficient mitigation with the *Contractor*, or there is reasonable doubt about the sufficiency of the proposed mitigation, then the *Employer* should be informed before the *Ecologist / Ecological Clerk of Works* contacts NatureScot Licensing Team for further guidance.

10 Emergency Procedure

10.1 The following procedure will be followed if FWPM are encountered unexpectedly:

1) An emergency procedure will be implemented by site workers if FWPM are encountered. All work within 0.1 km upstream and 0.5 km downstream on the water course will cease, and the *Ecologist / Ecological Clerk of Works* will inspect the site and define mitigation (if required) in line with this SPP.

2) Works within the area halted will not recommence until the *Ecologist / Ecological Clerk of Works* has agreed the mitigation with the *Contractor* and provided written approval.

3) An exceptional circumstance procedure will be implemented should mitigation not prove satisfactory in a particular case. Works will be halted whilst an appropriate course of action is determined (under consultation with NatureScot Licensing Team if required). If the *Ecologist / Ecological Clerk of Works* determine that FWPM are at risk then the *Contractor* and the *Employer* should be informed immediately and this should be prior to SEPA and the local wildlife crime officer being contacted.

11 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	New document created	n/a	1.00	R Baldwin
02	1.1: Replaced reference to CEMD with 'Works Information'. 9: Shortened title to 'Emergency Procedure'. Footnotes 3 and 5: Update of Scottish Natural Heritage hyperlinks.	TG-NET-ENV-500 (Rev 1.00)	1.01	R Baldwin
03	Rev 1.01 migrated into TEM-NET-GOV-505, which inserted new section 2 References, Footnote text from 1.01 has now be integrated into the main text following the sentence which contained the footnote in 1.01. References to SNH have been replaced by references to NatureScot 'Generic Environmental Management Plan' corrected to 'General Environmental Management Plan'. References to SHE Transmission have been replaced by Scottish & Southern Electricity Networks Transmission/ SSEN Transmission. 1 Introduction: SSEN Transmission defined as the *Employer*. 2 References: New references added which were not otherwise contained in text of 1.01, relating to specific GEMP documents, Guidance for Pollution Prevention, Wildlife & Countryside Act 1981 and NatureScot Licensing.7.1 reference to *Pollution Prevention Guidelines (which are currently under review)* has been replaced with *Guidance for Pollution Prevention*	TG-NET-ENV-500 (Rev 1.01)	2.00	R Baldwin

Appendix A Freshwater Pearl Mussel Decision Flowchart

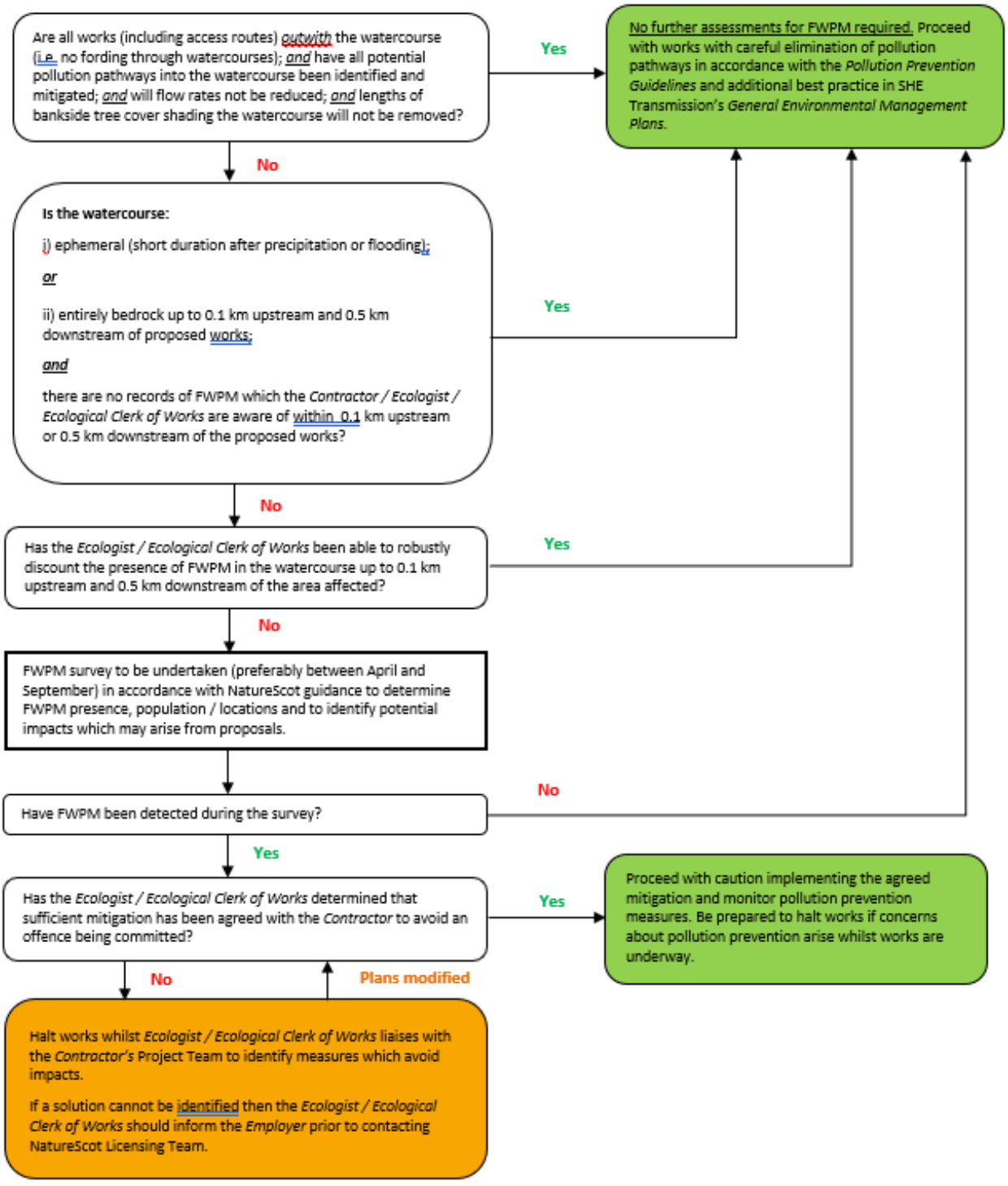

Figure A-1

Scottish & Southern Electricity Networks
TRANSMISSION

TG-NET-ENV-501

Safety, Health and Environment

Badger Species Protection Plan

TG-NET-ENV-501	Badger Species Protection Plan		Applies to Transmission ✓
Revision: 2.00	**Classification:** Internal	**Issue Date:** March 2025	**Review Date:** March 2033

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1 Introduction

The European / Eurasian badger *Meles meles* is a native protected species under the Badger Protection Act and is afforded a high level of protection in Scotland. This Protection Plan provides guidance and procedures for the protection of badgers and their shelters during works on SSEN Transmission projects. The Plan comprises two parts and details the procedures that must be followed where there is potential for badger to be present (Part 1), and where a Project Licence for badger has been issued by NatureScot to cover the project (Part 2):

1.1 Part 1: General Protection Plan

This Part applies to all projects where badger may be present. Part 1 outlines the responsibilities of SSEN Transmission and *Contractors* regarding protection of badger. It also details relevant legislation, survey requirements, general mitigation measures and the requirement for licensing and mitigation.

1.2 Part 2: Project Licence Protection Plan

This is provided to *Contractors* in addition to Part 1 for large projects where a Project Licence has been issued by NatureScot to cover the work and identifies those activities and protection / mitigation measures which are permitted under the Project Licence and those activities which require a Method Statement to be submitted to NatureScot for written approval before works can commence. This Part should be followed in conjunction with Part 1 and the relevant Project Licence to provide approved guidance and methodologies for carrying out work.

2 References

The documents detailed in Table 2.1 – Miscellaneous Documents, should be used in conjunction with this document.

Table 2.1 – Miscellaneous Documents

Title
The Protection of Badgers Act 1992
Badger | NatureScot
NatureScot Guidance Licensing – Badgers – What is a Badger sett?
NatureScot Standing Advice For Planning Consultations Protected Species: Badger
NatureScot Badgers and Licensing
Forestry Practice Guide 9 Forest Operations and Badger Setts
Licence – Badgers – Standard forestry operations
Scottish Badgers Surveying for Badgers Good Practice Guidelines Version 1: 2018
The Mammal Society Surveying Badgers 1989
The Highland Council General planning guidance Badger Policy Guidance Note, March 2007
NatureScot Species Protection Plan
CIEEM Guidelines for Ecological Report Writing
CIEEM Advice Note On the Lifespan of Ecological Reports & Surveys

3 Part 1: General Protection Plan

3.1 Ecology

Badgers are members of the weasel family *Mustelidae* with a very widespread distribution in Scotland. They normally live in small family / social groups (clans) comprising a dominant pair and their offspring. Easily identified by their black and white face and grey body; males (boars) are slightly longer and heavier, with a thicker head to females (sows). Badgers are generally nocturnal, emerging early evening but are known to be occasionally active during day. While they consume large numbers of earthworms, badgers are omnivorous, foraging for a variety of foods including grains and carrion. They do not hibernate but may spend longer underground during winter / poor weather. Average lifespan is five to eight years but may live up to 16 years in the wild.

Badgers typically live in underground structures / burrows called setts, which vary in size and formed through badgers digging using their long powerful claws. Setts are often associated with woodland and sloping ground, but badgers can exploit a range of habitats including agricultural land and upland moorland. Any structure or place displaying signs indicating current use by a badger is a sett which can include rock piles, spaces beneath buildings, abandoned vehicles etc. The distance from the sett which they travel varies widely, depending on food and habitat availability as well as population density and territory size, with those in upland areas often exploiting larger areas. Sett occupancy and purpose is interchangeable with four types recognised: main, annexe, subsidiary and outlier. Badgers are also known to use above ground nests (day beds) and rock crevices. A description of sett types is displayed in Table 3.1 and habitats in Table 3.2.

Table 3.1 - Sett Type Descriptions

Sett Type	Description
Main	Normally each group / clan has a single main sett, typically consisting of several entrances / holes with large spoil heaps and appears well used. Obvious paths lead to and from the sett and between entrances / holes. Number of entrances may vary. Often used for breeding but some may have disused or dormant entrances / areas.
Annexe	Often close to a main sett (normally <150 m) and connected by well-worn path(s). Usually there are several entrances but may vary and the sett may not be in consistent use, even where the main sett is highly active.
Subsidiary	Difficult to determine. Usually at least 50 m from a main sett and do not have obvious path(s) connecting with another sett. They are not continuously active (often seasonally), and entrance numbers may vary. To confidently identify a subsidiary, surveyors should know the location and correctly identified a nearby main sett and be confident that the main sett is within the same territory. Until territory analysis can be conducted through survey (e.g. bait marking) then the classification of 'subsidiary' may only be tentative at best[1].
Outlier	Often have little spoil outside the entrances, no obvious path(s) connecting to another sett, and only used sporadically. Can be inhabited by foxes or even rabbits; however, they can still be recognised as badger setts by the shape of the tunnel (not the actual entrance hole), at least 25 cm in diameter, and rounded or a flattened oval 'rotated D' shape (i.e. broader / wider than high). Fox and rabbit tunnels are smaller and often taller than they are broad.
Other	Sett identification is open to interpretation. Where unsure and difficult to assess the classification of a sett, 'Other' has been used to describe. Smaller setts may still be used for breeding. NatureScot do not include this category on their licensing applications; therefore, this classification should be avoided as far as reasonably possible.

**Adapted from Scottish Badgers sett descriptions*

Table 3.2 - Badger Habitat Classifications

Primary	• Short grazed or mown grassland i.e. improved grassland • Golf Course • Broadleaved woodland
Secondary	• Arable • Rough grassland (ungrazed by domestic stock) • Scrub • Mixed woodland
Other	• Coniferous woodland etc.

**Adapted from The Highland Council Best Practice Guidance – Managing Land As A Foraging Resource For Badgers*

While mating can take place year-round with delayed implantation, the badger breeding season is acknowledged to run between 1st December and 30th June with one to five cubs born furless and blind in February. Cubs gradually become active above ground and are independent at around five months, and capable of breeding after one-two years.

[1] Classification of badger setts Meles meles in the UK: A Review and Guidance for Surveyors, Richard Andrews CEnv MCIEEM. Available at: https://cieem.net/resource/in-practice-issue-82-countryside-management-dec-2013/

Badger activity can be identified through the following field signs:

- Dung heaps or latrines – small pits are dug, and large faeces of variable consistency are deposited. Dung tends to have an inoffensive odour. Can be used as territorial markers, often found along paths, field edges, close to or between sett entrances.
- Paths - often well-worn and lead from setts to and along boundaries such as fences. They may be marked at strategic points with dung heaps where they constitute the edge of a home range. Connect setts to foraging habitats.
- Footprints–about 4.5 – 6.5 cm wide and have five toes with very prominent claws. Front and hind paws differ slightly with the front leaving longer claw marks and hind appearing shorter with inner toes further forward.
- Guard hairs – stiff, long, elliptical, hairs with black and white bands.
- Setts – typically large, 'rotated D-shaped' burrows with large spoil heaps of excavated soil often inclusive of discarded bedding.
- Day beds - above ground resting areas characterised by flattened vegetation or bundles of grass, bracken/ferns and may contain straw. Material may also be dragged inside the sett.
- Snuffle holes – indentations in the ground where badgers have been rooting for food such as bulbs and invertebrates.
- Scratch posts – claw marks on tree stems, fenceposts or similar.

3.2 Responsibilities

It is the responsibility of all *Contractors* to comply with all the requirements of this Protection Plan where works will / may affect badger, including when they may be present, and it is both the *Contractor*'s and SSEN Transmission's responsibility to monitor compliance with the Protection Plan. The responsibility for applying for any licence, including a Project Licence, may change from project to project, but all applications and mitigation works will adhere to this plan.

3.3 Legislation

Both badgers and their setts are protected under the Protection of Badgers Act 1992 (as amended in Scotland). Unless permitted under this Act, it is an offence to

- wilfully take, injure or kill a badger;
- be cruel to a badger;
- mark or ring a badger; and
- intentionally or recklessly interfere with a badger sett.

Interference with a badger sett includes the following whether intentionally or recklessly[2]:

[2] Reckless acts would include not having or disregarding a mitigation plan aimed at protecting badgers, resulting in interference by carrying out an activity which would result in an offence where the presence of badger was foreknown.

- damage a badger sett or any part of it;
- destroy a badger sett;
- obstruct access to, or any entrance of, a badger sett;
- cause (or allow) a dog to enter a badger sett; and
- disturb a badger when it is occupying a badger sett

It is also an offence to knowingly cause or permit these unlawful actions, where not permitted under the act. Furthermore, it is illegal to sell or possess a badger including any part of the animal, and to dig for or to snare a badger.

The 1992 Act defines a badger sett as "any structure or place which displays signs indicating current use by a badger".

This legislation means that badgers are fully protected in Scotland. 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.

Note that legal survey method 'bait marking' should not be confused with the illegal activity 'badger baiting.'

3.4 Surveying for Badger

Badger surveys must be undertaken by suitably competent and experienced ecologists. A desk study should be completed before visiting site and seasonality considered with any limitations recorded.

Surveys must be undertaken in all work areas containing suitable badger habitat, a maximum of 12 months prior to the works commencing, including site investigations, to ensure the availability of up-to-date information on shelter locations. A preconstruction check should also be made of all work areas preferably within a week but no later than three weeks prior to commencing works, to check for any changes to sett location / status.

Surveys must extend for a minimum of 30 m beyond working areas, including access tracks increasing to 100 m in areas of potential high noise and vibration (piling, blasting etc.) for high noise activities. In some cases, particularly where sett destruction / exclusion is anticipated, ecologists may advise further assessment is required.

Preconstruction surveys must also be carried out by suitably qualified and experienced ecologists who will identify whether the setts are Active, Inactive or Defunct.

- Active – the structure displays signs of current use such presence of field signs such as bedding, fresh spoil heaps, signs of recent digging, hair, latrines, or footprints in or around the structure or evidence of badgers entering or exiting the structure through appropriate monitoring.
- Inactive - these can be characterised by tunnels looking disused (e.g. cobwebs and overgrown vegetation / leaves in the entrance) and no presence of signs of current use by badger (e.g. hairs, footprints, snuffle holes etc.). Appropriate monitoring is required to provide absolute certainty that the sett is not in current use by badger.

- Defunct - these 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, (i.e. the hole could not be used for shelter by a badger in its current state), and no other signs of current use by badger being present.

There may also be collapses where a tunnel has fallen in on itself, or air holes where badgers have made a small hole in a tunnel roof from below.

Appropriate monitoring (e.g. the use of suitable camera traps) should be undertaken where required to determine whether any sett is being used for breeding. Camera trap monitoring may also require a licence from NatureScot. Photographic evidence of inactive / defunct setts must also be retained. Setts should be monitored for the Project duration and following completion / into the operational phase where appropriate. Confirmed sett locations and sensitive information should be kept confidential, to be shared only with parties associated with the Project and NatureScot. Any record submissions to Scottish Badgers, other conservation groups or record centres should be agreed prior.

3.5 Review of Badger Survey

Once a badger survey has been conducted, the ecologist / ECoW must review the survey results, apply the mitigation hierarchy outlined below and decide whether a licence is required (either Individual or Project) for the works. A specific badger protection plan may be required in support of a licence application, applying the mitigation hierarchy with reference to this plan. NatureScot state that a species protection plan should:

- build on the results of surveys to look at the potential impacts of the development on protected species;
- describe how those impacts will be mitigated or compensated;
- identify whether a licence is necessary; and
- include a good method statement – i.e. a description of how all work in relation to protected species (including licensed work) will be done.

A species protection plan will also allow the planning authority to state that adherence to the plan is a condition of any consent.

Site teams must be advised of existing / new constraints, together with mitigation and licensing requirements by the ecologist / ECoW.

Relevant site documentation and Project information sources must be updated with new and amended information on badger constraints as it is produced, with changes communicated to appropriate staff / parties immediately.

3.6 Mitigation Hierarchy

There is a general presumption against works being carried out which could disturb badgers in their setts or to destroy / exclude any sett, particularly during the breeding season. A hierarchical approach to mitigation of Avoidance - Disturbance - Destruction will be applied to any sett that may be affected (See Figure 3.1)

Avoidance

This is the preferred option and to be prioritised for active / inactive setts identified within:

- 30 m of works;
- 100 m of high noise / vibration activities; and

An initial protection zone of either (30 m, or 100 m for high noise / vibration activities) will be clearly demarcated and appropriately signed to restrict work access. Protection zones are to be maintained until works are completed. Site staff shall be briefed of their purpose through a Toolbox Talk and works micro-sited outside the protection zone. If badger disturbance can be avoided in this way, there is no need to obtain a licence from NatureScot for the works.

All works within the vicinity of a badger sett will avoid the badger breeding season (1st December – 30th June) where possible.

Forestry Operations

Forestry works are often required to facilitate construction or prolong resilience of existing SSEN Transmission assets. A 20 m exclusion zone can be implemented where appropriate **outside** the breeding season for forestry activities (30 m during the breeding season). A Standard Forestry Operations (SFO) or more complex licence may be required for activities including vehicle access, or within 20 m of a sett entrance **outside** of the breeding season. This is not applicable to any construction activities.

Disturbance

For any works required within 30 m of **active** setts, and for high noise / vibration activities such as pile driving or blasting within 100 m of setts, a licence from NatureScot will be required (either Individual or Project).

For forestry works, NatureScot can grant a SFO licence to permit felling and harvesting operations within 20 m of badger setts **outside** of the breeding season. Operations must be conducted using standard mitigation measures, including those outlined within this plan, which involve a protection zone extending 20 m from all sett entrances and where no heavy machinery or vehicles are permitted. The individual in charge of carrying out or overseeing the operations must apply for the licence[3] and works are only legally covered once email confirmation from NatureScot is received. Where works are required during the breeding season, vehicles are required to enter, or other SFO conditions cannot be met, a more complex licence is required. The SFO criteria is not applicable to any construction related activities at any time.

[3] NatureScot Badgers: licences for land management, available at: https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/species-licensing-z-guide/badgers/badgers-licences-land-management#:~:text=We%20can%20grant%20standard%20forestry%20operations%20licences%20to,must%20be%20carried%20out%20using%20standard%20mitigation%20measures.

NatureScot licences and applications should be supported by a Species Protection Plan outlining how disturbance will be minimised, and setts protected (e.g. through screening of works and modifying protection zones). Reports and maps must clearly show sett location(s), number of entrances and protection / exclusion zones. These should be kept confidential and only shared with relevant Project parties.

If a Project Licence is in place, and a breeding sett will be disturbed during the breeding season (1st December to 30th June), a Method Statement must be submitted to the NatureScot Licensing Team for written approval in accordance with Part 2 of this document, prior to any works commencing. Note that licences are not usually granted during the breeding season.

NatureScot can issue badger ecologist licences to permit works with low conservation impacts to proceed (where certain criteria is met) for the purposes of development, preventing serious damage, forestry and agricultural operations. Use of these licences can be considered where held by the ECoW or a project associated ecologist.

Destruction

Destruction of setts must only be undertaken as a last resort. For destruction of **active setts** a licence will be required from NatureScot (either Individual or Project). Individual Licence applications to NatureScot must be accompanied by a Survey Report and Species Protection Plan inclusive of maps outlining how disturbance will be minimised, and individuals protected.

The plan must include appropriate monitoring to ensure breeding is not taking place and provision for the creation of an artificial sett where required. Confidential reports and maps must clearly show sett location(s), including number of entrances with photographs and protection / exclusion zones in addition to the location and design of artificial sett(s) accordingly. Any sett subject to works under licence will be monitored during and after those works. If a Project Licence is in place, a Method Statement must be submitted to the NatureScot Licensing Team in accordance with Part 2 of this document for written approval prior to any works commencing.

NatureScot can issue badger ecologist licences to permit works with low conservation impacts to proceed (where certain criteria is met) for the purposes of development, preventing serious damage, forestry and agricultural operations. Use of these licences can be considered where held by the ECoW or a project associated ecologist[4].

[4] Badger ecologist licence - an ecologists guide, available at: https://www.nature.scot/doc/guidance-badger-ecologist-licence-ecologists-guide

3.7 Mitigation Measures

3.7.1 General Mitigation

- The following mitigation is to be incorporated but not necessarily limited to:
- Any temporarily exposed pipe system to be capped when staff are off site to prevent badgers from gaining access.
- All exposed trenches and holes to be provided with a cover and / or mammal exit ramps e.g. wooden planks or earth ramps when *Contractors* are off site. These are to be checked daily before commencing activities.
- Any artificial lighting to be directed away from known shelters/suitable habitat as far as reasonably practical.
- Tree felling to be directed away from setts and entrances. Remnants such as branching must not block / obstruct entrances or paths. Retain vegetation cover around sett(s) where possible.
- Habitat connectivity to be maintained with obstruction and fragmentation avoided.
- Any considerably noisy static machinery to be stored outside of sensitive areas/exclusion zones and switched off overnight where practical.
- Avoid activity between dusk and dawn when badgers are most active as far as reasonably practical.
- Ensure sound pollution prevention measures are implemented.
- Emergency procedures must be implemented inclusive of the following:
    - Where a badger / badger setts are unexpectedly encountered by site personnel, all work within 30 m (100 m for high noise / vibration activities, or 20 m of forestry activities outside the breeding season) must cease until the ECoW / suitably qualified and experienced ecologist has been consulted, inspected the site where required, and determined the appropriate course of action.
    - Any trapped badgers should be released immediately where safe to do so.
    - Suspected sick or injured badgers to be reported to the ECoW / ecologist and the Scottish Society for the Prevention of Cruelty to Animals (SSPCA) contacted as appropriate. The SSPCA will only attend site if the animal has been contained (within a box or cover placed over) and / or someone is monitoring consistently-frequently. In the case of badger, monitoring is considered appropriate and preferably by the ECoW / ecologist. SSPCA require what 3 words of location, contact number and postcode. Incidents can be reported to the SSPCA[5] on **03000 999 999**.
    - Site personnel safety must never be compromised in attempt to rescue wildlife. Any animal can be unpredictable, particularly when they are in pain or feel

[5] The SSPCA is the animal welfare charity operating in Scotland and should not be confused with the RSPCA operating only in England and Wales.

threatened by humans. Always maintain a safe distance, wear gloves, and wash hands after.

- Where injury or death to a badger is a result of site activities and / or **licensing conditions have been breached**, activities in the area must cease and the site made safe immediately. The ECoW is to be contacted and attend site. The incident must be reported to SSEN on **0800 107 2307** within 30 minutes and reported to the NatureScot Licensing Team as soon as possible. SSEN Transmission should ensure details are recorded on EcoOnline.
- Where injury or death to a badger is **not** a result of site activities and **no licensing conditions have been breached**, activities in the area must cease and the site made safe immediately. The ECoW is to be contacted and should attend site. The incident should be recorded within weekly-monthly reports and on EcoOnline as an observation by the *contractor* or SSEN Transmission (e.g. badger road accidents from **non-site traffic** but within vicinity of the site).
- Any pollution incidents to follow the relevant site emergency procedure, including reporting to SSEN on **0800 107 2307** within 30 minutes. SSEN Transmission should ensure details are recorded on EcoOnline.

- An exceptional circumstance procedure will be implemented should mitigation options not prove satisfactory in a particular case. Works will be halted whilst mitigation is determined (under consultation with NatureScot Licensing Team where required).

3.7.2 Monitoring and Reporting

- The Environmental Representative will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to badger is delivered.
- Any *Contractor* badger SPPs should refer to this SPP with updates on any licensable works provided to the relevant Project SSEN Transmission Consents & Environment Manager. *Contractors* should share a copy of their badger SPP for SSEN Transmission review where deviations or specific mitigation not covered by this SPP are required.
- Reports and SPPs inclusive of maps will be submitted to NatureScot as required by the relevant licence. These will be kept confidential accordingly.
- Licence returns must be submitted within one month of the expiry date. These can be submitted earlier where works are complete. This is the responsibility of the licence holder and / or named ecologist. Licences are not renewed automatically, and any extensions must be requested.
- Emergency reporting procedures are detailed within 3.7.1 General Mitigation.

3.7.3 Exclusion / Destruction of Inactive Setts at Any Time of Year

Where a structure possibly in use by badger requires exclusion or destruction, survey(s) are necessary to determine whether active and licensing requirements. For guidance see the NatureScot Badgers - Licence forms and guidance documents.

Should the structure be deemed **inactive**, the following methodology will be incorporated into a Site-Specific Method Statement and issued prior to work commencing. A licence from NatureScot is not required.

Monitoring

a) Any potentially inactive sett must be monitored for a minimum of 14 days where weather conditions are favourable (up to 28 days if unfavourable) to check for current use by badger.

b) A combination of the following methods will be used, as appropriate:

- Appropriately positioned camera trap(s) to monitor badger activity at the sett(s). Cameras that produce a flash and/or a 'Low Glow' red light in the dark should be avoided. Remote monitoring to reduce human presence and potential disturbance is encouraged where appropriate, otherwise periodic (weekly) checks should be made.
- Small pencil-sized sticks placed in the floor of the tunnel just inside the entrance(s), pointing upright.
- Sand placed at the sett entrance(s) to capture footprints and/or other evidence.
- Checks for other badger sign (e.g. hair, snuffle holes, latrines, and fresh scuff marks).

Exclusion

c) Following adequate monitoring, and where the named Agent is confident that there is no sign of use by badger, the sett will be excluded for seven days using a gate[6] set in the one-way position.

d) Exclusions must be overseen by a named Agent on the Project Licence.

Monitoring Exclusion

e) The sett will be visited regularly through the exclusion process to check activity and to check on the integrity of the exclusion materials and make good any damage. If it is apparent that badger(s), or other animals, have breached the exclusion any necessary repairs will be made and exclusion period will restart.

Exclusion / Destruction of the Sett

f) Following exclusion, temporary blocking by wiring the gate shut, or destruction of the sett will be undertaken, where required, under the supervision of the Agent.

g) Where the sett is not required to be destroyed the exclusion gate / sheeting may remain whilst works proceed around the sett and removed once works have finished.

[6] The specification of gates, fencing and materials would be in accordance with DMRB, and as described in NatureScot's "Scotland's Wildlife: Badgers and Development (2001)" and The NHBS Guide to Badger Gates or equivalent.

h) Where the inactive sett is required to be destroyed, this will be carried out using appropriate plant and / or hand tools.

i) For setts on distinct slopes, the excavation will start at least 1 m away from the entrance spoil heap on the down-slope side (up to 4-5 m in front of the entrance itself). For setts on flat ground the excavation will start in front of the entrance hole and hand digging will be utilised to assess the direction and number of tunnels in all directions. Once this has been established, appropriate plant can be used to further progress the excavation. A trench will be dug under direction of the Agent. In the unlikely event that badgers are found during this process, all excavation will cease, the badger(s) will be allowed to freely move away from the area and the site made safe if required. The Agent / ECoW will decide on when the excavation can resume. The NatureScot Licensing Team will be consulted accordingly.

j) The excavation will continue slowly, working forwards into the tunnels and chambers until the Agent 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.

k) Construction works will be programmed to commence as soon as possible following sett exclusion / destruction to reduce the probability of animals returning to the area.

3.8 Licensing Requirements

Licence applications must be submitted to the NatureScot Licensing Team (licensing@nature.scot) sufficiently in advance of the Project / works start date to ensure the licence is in place prior to any works commencing. Timescale for processing applications may vary and is often shown on the automatic reply upon submission or on NatureScot licensing news[7]; however, it may be worth contacting Licensing on **01463 725 364** ahead of submission and / or enquiring where indication is not provided.

3.9 Project Licence

An NatureScot Project Licence is likely to be the most appropriate form of licence for any large scale and / or long running Project, which may result in a large number of minor unavoidable badger offences (e.g. multiple instances of disturbance to a number of badger setts over several years). A Project Licence can be used to standardise protected species mitigation / compensation, creating consistency across the project area and throughout the Project's lifespan. Project Licences do not negate the need for thorough pre-development surveys within 12 months of the planned project start date, and pre-construction surveys within three weeks of works commencing. Any Project Licence application will need to be accompanied by the Mitigation Plan and procedures for badger included in Parts 1 and 2 of this SPP.

[7] NatureScot Licensing News available at: https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/licensing-news

3.10 Individual Licence

For small scale Projects expected to be completed over relatively short timescales, which will result in a low number of unavoidable badger offences, an Individual Licence is likely to be more appropriate. Licence applications should be accompanied by a Method Statement and should be sent sufficiently in advance of the Project start date to ensure the licence is in place prior to work commencing.

Further guidance and details of how to apply for a badger Licence can be found on the NatureScot website[8].

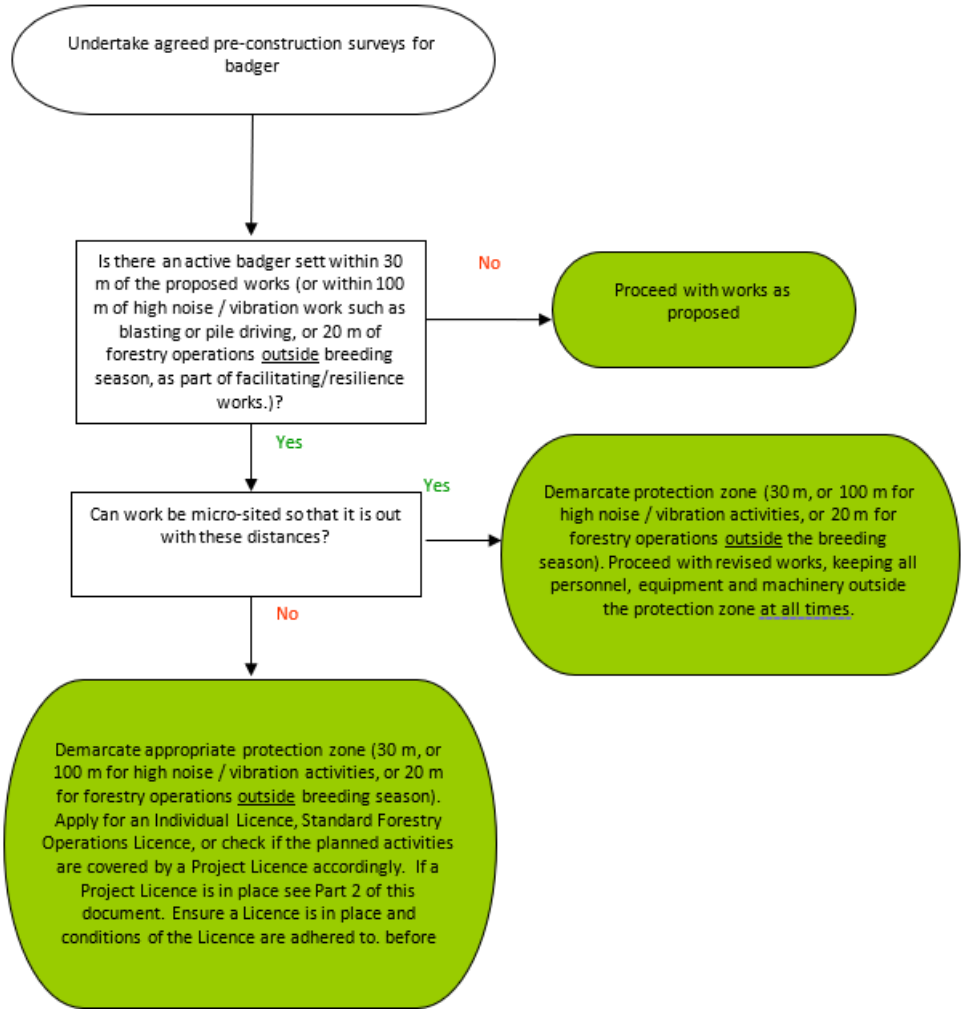

Figure 3.1 - Badger Mitigation Decision Tree

[8] NatureScot Licensing Professional Advice: https://www.nature.scot/professional-advice/protected-areas-and-species/licensing

4 Part 2: Project Licence Protection Plan

The following sections of this plan are to be read in conjunction with the Project Licence (insert Licence number) and its conditions.

As stated in the Project Licence, methodologies for certain mitigation activities permitted under the Licence are included in this Part of the SPP. More disruptive activities, listed in Section 1 below, will also require a specific Method Statement to be submitted to the NatureScot Licensing Team for written approval (see Appendix A). It is the *Contractor*'s responsibility to submit these Method Statements to both SSEN Transmission and the NatureScot Licensing Team for written approval. No works shall proceed without this written approval.

Sufficient time must be allowed for in the programme to carry out any consultation work and obtain necessary approvals.

The Project Licence will specify reporting requirements detailing all disturbance and destruction works carried out.

4.1 Works Allowed Under the Project Licence

Under the Project Licence there is a general presumption against works being carried out which could disturb badgers in their setts, or to destroy / exclude any sett unless it can clearly be demonstrated that either it is inactive (i.e. through monitoring) or that there is no alternative solution against Project timescales and requirements.

4.2 Activities Requiring a NatureScot Approved Method Statement

The following activities require a formal Method Statement to be submitted and approved by NatureScot prior to any works commencing:

a) Destruction of any active setts within the breeding season (1st December – 30th June).

b) Destruction of a breeding sett, or a sett which cannot be discounted as a breeding sett, at any time of year.

c) Disturbance (i.e. works within 30 m, or 100 m for high noise / vibration works) to a breeding sett, or a sett which cannot be discounted as a breeding sett, during the breeding season, or for non-standard forestry operations.

d) Where it is proposed to exclude (even temporarily) such a proportion of setts in a given clan's territory resulting in a significant impact on the clan.

e) Any exceptional circumstances not covered in this SPP.

The Method Statement template in Appendix A has been developed in conjunction with NatureScot and should be used by the *Contractor / Named Agent* for all submissions.

Proposed mitigation works should be agreed with NatureScot.

4.3 Activities not Requiring Additional NatureScot Approval

The following works may be carried out under this SPP and / or specific Method Statements without the prior approval of NatureScot when a Project Licence is in place, using the prescribed methodologies:

4.3.1 Exclusion / Destruction of a non-breeding active sett from July – November inclusive

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

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 or 20 m for forestry works outside breeding season as part of facilitating or resilience works) 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.

Exclusion

b) As agreed with NatureScot, badger gates and appropriate materials4 will be used for the exclusion of setts, unless in rare circumstances, in which case the NatureScot Licensing Team will be consulted beforehand. Exclusions must be overseen by a named agent on the Project Licence.

c) The gate would be set to the two-way position for at least seven days and then set to one-way for 14 days.

Monitoring Exclusion

d) To monitor use of the sett a combination of the following methods may be used.

- Appropriately positioned camera trap(s) to monitor badger activity at the sett.
- Small pencil-sized sticks placed in the floor of the tunnel just inside the entrance, pointing upright.
- Threads pinned to the gate and gate frame to confirm whether the gate has been opened.
- Sand placed at the sett entrance (inside and outside the gate).

e) The sett will be visited regularly through the exclusion process to check activity and to check on the integrity of the exclusion materials and make good any damage. Where apparent that badger(s) have breached the exclusion, any necessary repairs will be made, and exclusion period will be restarted.

Destruction of the Sett

f) Destruction will proceed as per the method outlined for destruction of inactive setts.

4.3.2 Disturbance to a non-breeding active sett from July – November inclusive

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

Tree Felling and Scrub Clearance

All tree and scrub clearance will be undertaken in accordance with the conditions of a Standard Forestry Operations Licence, which is considered part of facilitating or resilience works.

Track Construction

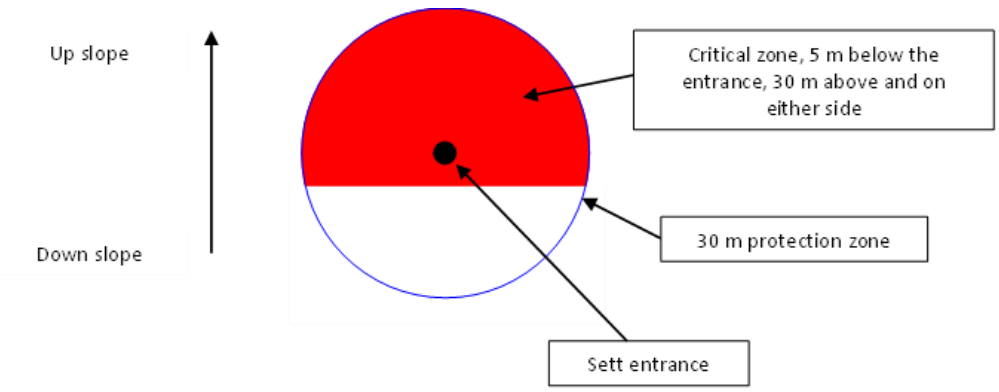

Figure 4.1 - Track Construction

a) Track construction can be carried out within the 30 m protection zone under the Project Licence providing it does not impact on the "Critical Zone", as shown in the diagram above, and lie within 5 m of the sett entrance. An Agent / ECoW on the Project badger licence will carry out a risk assessment and mark out the maximum protection zone to ensure the integrity of the sett is protected. If works are proposed in the critical zone between 20 and 30 m from an entrance, careful hand-digging of a cross trench at the edge of proposed access track route or tower compound will be performed to confirm the tunnels do not extend under the works.

b) The Agent / ECoW will be present immediately **before** construction starts to re-check 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.

Tower Compound Establishment

c) A tower compound can intrude within the 30 m protection zone under the Project Licence, where there is no alternative, providing it does not impact on the "Critical Zone" and the sett entrance is a minimum of 5 m out with the compound boundary. The An Agent / ECoW on the Project Licence will carry out a risk assessment and mark out the maximum protection zone to ensure the integrity of the sett is protected.

d) Badger proof fencing / gates will be used for the compound to reduce the risk of badgers entering the works area. One-way badger gates will be installed at the nearest corner of the compounds to allow animals to escape.

e) The Agent / ECoW will be present immediately before construction starts to re-check 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.

5 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	Transfer to new template and Nomenclature	TG-PS-LT-707 (Rev 1.00)	1.00	Richard Baldwin
02	Hyperlink to "Current use" guidance 'What is a badger sett?' has been added under newly created paragraph 3.8.3. 4.3.1 'Exclusion / Destruction of Inactive Setts at any time of year' (Rev 1.00) has been moved under 3.8.3 to represent Licensing Team changes in accordance with legislation.	TG-NET-ENV-501 (Rev 1.00)	1.01	Richard Baldwin
03	2024 review and update of the badger SPP.	TG-NET-ENV-501 (Rev 1.01)	2.00	Richard Baldwin
04				

Appendix A Project Licence Method Statement Template

<PROJECT TITLE>

METHOD STATEMENT FOR WORKS UNDER *(insert licence details)*

<insert species record reference>

<insert date>

Introduction

This document, prepared on behalf of SSEN Transmission provides a Method Statement for *<insert details of works>* to be completed under *<insert licence details>.* These works are required in order to facilitate the delivery of the *<insert Project details>* (the Project).

Condition *<insert No.>* of the above Licence states that a Badger Protection Method Statement be submitted to NatureScot Licensing Team for written approval, under specific circumstances, prior to commencement of works which could affect badgers. Therefore, no works which would *<insert licensed activity>* badger shall take place without written confirmation of NatureScot approval of this method statement.

This Method Statement makes reference to the following documents:

- *<insert licence details>*, NatureScot
- Species Protection Plan (SPP): *<insert SPP No. and title>* Rev. X *<insert date>*

Further information is provided in Table 1: Summary of Data.

Licensable Works

Introduction

<Insert details>

Baseline Description

<Insert description, including photographs / location plan>

Table 1: Summary of Data

Reference	Easting	Northing	Date recorded	Description	Date works exclusion zone demarcated & distance

Survey Summary

<Insert details>

Description of the Proposed Licensable Works

<Insert details>

Works Duration

<Insert details>

Consideration of Alternatives

<Insert details>

Impact Assessment

<Insert details>

Method Statement Site Briefing (to be delivered to relevant staff prior to works)

Site: *<insert description>*

Reference number: *<insert species record reference>*

Client: SSEN Transmission

Task: *<insert description of works>*

Prepared by: *<insert individual or Company name>*

Licensed Agent: *<insert name>*

Method statement for *<insert works description>*

Before works commence:

All relevant personnel will be made aware of the presence and location of the constraint and mitigation.

<insert details of methodology>

During works:

<insert details of methodology>

<Insert Contractor's name>

I, the undersigned, confirm receipt of this method statement and fully understand and agree to work to the conditions therein.

Signature of Contractor's Representative:..... Date ..../ /

Print name in full: .....

Scottish & Southern Electricity Networks
TRANSMISSION

Scottish & Southern Electricity Networks
TRANSMISSION

TG-NET-ENV-502

Safety, Health and Environment

Bat Species Protection Plan

TG-NET-ENV-502	Bat Species Protection Plan		Applies to Transmission ✓
Revision: 2.00	**Classification:** Internal	**Issue Date:** March 2025	**Review Date:** March 2030

	Name	Title
Author	Dan Thomas	Consents and Environment Manager
Checked by	Alistair Watson	Biodiversity Enhancement Implementation Manager
Approved by	Richard Baldwin	Head of Environment

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1 Introduction

All bat species occurring in Britain 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) and are afforded a high level of protection in Scotland. Licences from NatureScot can be acquired for disturbance of a roost, or destruction / exclusion of a bat roost, assuming specific list of conditions are met. Licensed bat workers may be required to implement these licences. Some licensed bat workers may also hold a BLIMP licence (Bat Low Impact licensing) which will, providing the situation meets clear criteria, enable them to deal directly with mainland Scotland roosts which are not used for breeding or hibernation for two of the more common species without the need to submit individual licence applications to NatureScot for each development site (as BLIMP licence is held by bat worker and required to be reflected in an update licence return schedule submitted to NatureScot).

Bats in need of rescue or assistance can be aided without the need for Species Licensing as the bat's welfare is prioritised, exempting these activities from the legislation. This is covered in further detail in Section 3.5.

This Protection Plan provides guidance and agreed procedures for the protection of bats and their shelters (roosts) during construction works on SSEN Transmission projects. The Plan contains two parts and details the procedures that must be followed where there is potential for bats to be present (Part 1), and where a Project Licence for bats has been issued by NatureScot to cover the project (Part 2):

1.1 Part 1: General Protection Plan

This section applies to all projects where bats may be present and is issued to Contractors. Part 1 outlines the responsibilities of SSEN Transmission and Contractors regarding protection of bats. It also details relevant legislation, survey requirements, general mitigation measures, guidance on compensation / enhancement and the requirement for licensing and mitigation.

1.2 Part 2: Project Licence Protection Plan

This section is provided to Contractors, in addition to Part 1, for large projects where a Project Licence has been issued by NatureScot to cover the work and identifies those activities and protection / mitigation measures which are permitted under the Project Licence and those activities which require a Method Statement to be submitted to NatureScot for written approval before works can commence. Part 2 should be followed in conjunction with Part 1 and the relevant Project Licence to provide approved guidance and methodologies for carrying out work.

2 References

The documents detailed in Table 2.1 – Miscellaneous Documents, should be used in conjunction with this document.

Table 2.1 – Miscellaneous Documents

Title
EC Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive)
The Conservation (Natural Habitats &c.) Regulations 1994 (as amended in Scotland)
The Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019
https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/licensing
https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/species-licensing-z-guide/bats-and-licensing
https://www.nature.scot/guidance-bat-low-impact-licensing-blimp-ecologists-guide
https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-4th-edition
https://www.bats.org.uk/advice/help-ive-found-a-bat/bats-in-need-of-rescue/assess-the-situation

3 Part 1: General Protection Plan

3.1 Ecology

Bats are a diverse group of mostly nocturnal flying mammals of which there are generally recognised to be 10 different species in Scotland. There are four more common or widespread species; common pipistrelle (Pipistrellus pipistrellus), soprano pipestrelle (Pipistellus pygmaeus), Daubenton's bat (Myotis daubentonii), and brown long-eared bat (Plectotus auritus). The two pipistrelle species mentioned above are most likely to be encountered.

The other less common species are Natterer's bat (Myotis nattereri), Nathusius' pipistrelle (Pipistellus nathusii), Leisler's bat (Nyctalus leisleri), Noctule bat (Nyctalus noctula) and whiskered bat (Myotis mystacinus). The Brandt's bat (Myotis brandtii) is considered rarest and suspected to have a small range in southern Scotland, if at all.

Identification can be made by using bat detectors and recording devices to differentiate the characteristic echolocation signals (used to navigate and catch prey) as well as flight patterns, morphology and DNA analysis of droppings. The use of night vision aids (NVAs) including night vision/ infrared / thermal imaging cameras, can be used to record roosting or emerging bats, including the use of further infrared illumination.

Bats exploit a wide variety of natural and semi-natural habitats such as woodlands, pasture, water and hedges in pursuit of insect prey such moths and midges. They use a variety of strategies to catch their prey. For example, brown long-eared bats glean insects from foliage, whereas Daubenton's bats gaffe insects from near the surface of water.

Bats rest during the day in roosts within sheltered voids or cavities. Although all bat species in Scotland rely heavily on man-made structures, roosts can be found in; buildings and ruins, trees (woodpecker holes, cracks, flaky bark and callused flush cuts), bridges, caves and tunnels. Signs of an active roost may include urine staining, scratch marks, sound (rustling or high pitch squeaking/ chattering, especially near twilight), strong odour and droppings, however not all roosts have such features. Many roosts can be particularly difficult to identify, and usually require dusk and/ or dawn activity surveys at appropriate time of year to confirm.

Roosts are often communal structures which are in use at different times and many different types of roosts exist varying from temporary day roosts to more permanent maternity and hibernation roosts. The most sensitive periods for maternity roosts are from early May to September and hibernation roosts can in use from October until March. Bats are particularly vulnerable to disturbance during hibernation which could result in mortality due to cold temperatures and lack of food resource, or during maternity period when disturbance could result in the newly born bats being abandoned. Bats have a slow reproductive rate, usually with one pup per female each year which makes their colonies susceptible to disturbance and direct impacts, such as habitat loss. Males can sometimes be found singular, in small 'bachelor' groups, or within maternity roosts.

3.2 Responsibilities

It is the Contractor's responsibility to comply with all the requirements of this Protection Plan where bats are or may be present, and it is both the Contractor's and SSEN Transmission's responsibility to monitor compliance with the Protection Plan. The Contractor is required to appoint a suitably qualified and competent Ecologist, where licensable activities need to be overseen, and in some cases, undertaken by a licensed bat worker (e.g. roost exclusion). Not all bat surveys require the ecologist to be licensed, but they should be suitably trained and competent in the bat survey type being used. Independent ECoWs may be appointed on a project to undertake compliance monitoring. The responsibility for applying for any Licence, including a Project Licence, usually sits with the Contractor, but may vary from project to project, but all applications and mitigation works must adhere to this plan.

3.3 Legislation

All bat species (Chiroptera) in Britain 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 in Scotland). The protection has remained operable in Scotland following amendments of the Regulations by the Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019.

As EPS, it is an offence to deliberately or recklessly[1] 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. It is important to note that bat roosts are protected even at times of year when not in use.

To summarise, for any wild bat species it is an offence to deliberately or recklessly:

- capture, injure or kill a bat;
- harass a bat or group of bats;
- disturb a bat in a roost (any structure or place it uses for shelter or protection);
- disturb a bat while it is rearing or otherwise caring for its young;
- obstruct access to a bat roost or otherwise deny an animal use of a roost;
- disturb a bat in a manner or in circumstances likely to significantly affect the local distribution or abundance of the species;
- disturb a bat in a manner or in circumstances likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young; and
- disturb a bat while it is migrating or hibernating.

[1] 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.

It is also an offence to:

- damage or destroy a breeding site or resting place of such an animal (whether or not deliberately or recklessly); and
- keep, transport, sell or exchange, or offer for sale or exchange any wild bat (or any part or derivative of one) obtained after 10 June 1994.

3.4 Bat Care (Rescue)

Occasionally bats find themselves in situations or locations where they become trapped in buildings. If bats are mobile and flying around, opening the door and windows may be sufficient for the bat to make an escape unharmed. However, if they have been trapped for a period or are otherwise in need of care (exhaustion / injury etc.), they should be taken into care. Often bats in need of care are found grounded and unable to sustain flight. Sometimes bats can appear to be dead, therefore should be carefully assessed, and advice sought from a trained and competent person (e.g. the Environmental Advisor or ecologist).

Whilst handling bats is usually an offence without a licence, injured or grounded bats can be legally handled or dispatched where severe injury is clearly evident (e.g. broken wing) for the purposes of care. Although bats are protected by law, handling a bat in trouble in order to assist it is permitted. Ideally this would be undertaken by a suitably trained and rabies vaccinated individual, or ecologist. There is a small risk of rabies transmission from bat bites and scratches in the UK, but you can protect yourself by limited handling (required to contain the bat to take into rehabilitation) and wearing long sleeves and gloves. An FFP2 face mask should also be worn to prevent any potential infection of the bat from human born viruses such as COVID (SARS-CoV-2). Please refer to referenced Bat Conservation Trust (BCT) guidance on containment of a grounded bat and precure beneath.

https://www.bats.org.uk/advice/help-ive-found-a-bat/bats-in-need-of-rescue/assess-the-situation

The finding of the bat must be reported to site management and an SSEN Transmission environmental representative. Further investigations maybe required to establish the entry point of the bat and check for any nearby roosts. Should a dead bat or bats be found, this should also be reported. Always wear gloves when handling a bat, alive or dead, and seek medical advise immediately if bitten, licked, or scratched, even if you have been vaccinated for rabies.

3.5 Surveying for Bats

Surveys should be undertaken in line with the BCT Bat Surveys for Professional Ecologists: Good Practice Guidelines (current edition).

Bat surveys (or consideration of their requirement) are often undertaken during the development stage of a project, such as during EIA or Environmental Appraisal. The assessment and findings of these reports must be reviewed by the Contractor engaged for delivery to ensure adequate time for further bat surveys where required. Should proposals change, then the Contractor must reassess the potential to impact on bats and their roost, including requirement for further surveys as appropriate. Consideration for bats should also be considered for any changes, or additional development not included in the main application, such as enabling works, public road improvements or the formation of construction compounds. Other factors such as lighting, or noise from generators, including temporary elements, must also be considered, and follow best practice guidance.

1. Bat surveys must be undertaken in all works areas containing suitable habitat, at a suitable time of year a maximum of 12 months[2] prior to the works commencing, (this includes site investigations), to ensure the availability of up-to-date information on shelter locations.
2. Surveys must extend for a minimum of 30 m beyond working areas.
3. Pre-construction surveys will be undertaken for all potential roosting features likely to be affected (i.e. built structures and trees). If evidence of roosting bats is encountered, further surveys may be required to confirm species, roost type and usage, which are required to support any licence application.

3.6 Review of Bat Survey

Once survey(s) have been completed, the ecologist must review the survey results, apply the mitigation hierarchy outlined below and decide whether a Licence is required (either Individual or Project) for the works. A specific bat protection plan may be required in support of a licence application, applying the mitigation hierarchy with reference to this plan.

NatureScot state that a species protection plan should:

- build on the results of surveys to look at the potential impacts of the development on protected species;
- describe how those impacts will be mitigated or compensated;
- identify whether or not a licence is necessary; and
- include a good method statement – i.e. a description of how all work in relation to protected species (including licensed work) will be done.

[2] Note: Information from any previous surveys (e.g. surveys carried out to provide data for EIA or other Assessments) can be a useful guide to bats activity in an area, particularly if roosts were recorded. However, surveys will always require to be updated if carried out more than 12 months prior to works commencing.

A species protection plan will also allow the planning authority to state that adherence to the plan is a condition of any consent.

Construction teams must be advised of existing / new constraints, together with mitigation and licensing requirements by the ecologist.

Relevant site documentation and project information sources must be updated with new and amended information on bat constraints as it is produced, with changes communicated to appropriate staff immediately.

3.7 Mitigation Hierarchy

There is a general presumption against works being carried out which could disturb bats or to destroy / exclude or obstruct access to any bat roost. A hierarchical approach to mitigation of Avoidance - Disturbance - Destruction will be applied to any roost that may be affected:

Avoidance

This is the preferred option for roosts identified within 30 m of works, an initial protection zone of 30 m will be demarcated and appropriately signed to restrict work access.

Protection zones must be maintained until works are completed. Site staff must be briefed of their purpose through a Toolbox Talk and works micro-sited out with the protection zone. If bat disturbance can be avoided in this way, there is no need to obtain a Licence from NatureScot.

Disturbance

Works required within 30 m of an active roost may constitute disturbance and therefore may require a Licence from NatureScot, to be assessed case-by-case. In these circumstances the ecologist must be tasked to determine the likelihood of disturbance to bats and need for a licence (in consultation with the NatureScot licensing team if required). Individual Licence applications to NatureScot are to be accompanied by a Protection Plan outlining how disturbance will be minimised and roosts protected; for example, through timing works for when bats are least likely to be present, screening of works and modifying protection zones. In some circumstances works may be allowed under a Bat Low Impact Licence (BLIMP).

Some disturbance licensing requirements may include compensation, such as installation of bat box(es) away from the proposed works. Installation of boxes should be within 100 m of the roost or as close as reasonably practicable, where they are less likely to become a future constraint, whether this is during operation of the asset or another development. Placement must therefore be agreed with SSEN Transmission and landowner(s) in addition to NatureScot as appropriate.

If a Project Licence is in place, part 2 of this document should be used to ascertain whether a formal Method Statement is required to be submitted for approval to NatureScot prior to works commencing which could disturb bats.

Roost Destruction

Destruction of roosts should only be undertaken as a last resort. For destruction of roosts a Licence will be required from NatureScot. Destruction of maternity roosts and hibernation roosts will only be licensed outside of the seasons when they are in use.

Individual Licence applications to NatureScot should be accompanied by a Protection Plan which outlines how disturbance of bats will be minimised, roosts compensated for, and individual bats protected. Roost destruction may not always be permitted; this will depend on roost type and rarity of species (see species matrix in part 2 of this document). In some circumstances works may be allowed under a Bat Low Impact Licence (BLIMP).

If a Project Licence is in place the following activities require a formal Method Statement to be submitted and approved by NatureScot in accordance with Part 2 of this document, prior to any works commencing:

- Destruction of a breeding / hibernation roost of a brown long-eared or Daubenton's bat.
- Destruction of any roost of an uncommon species (Natterer's, Leisler's, Whiskered, Noctule, Nathusius' pipistrelle, and Brandt's bat) at any time of year.

For all other scenarios (such a destruction of a non-breeding roost of a more common species outside of the active season) works should be carried out in accordance with part 2 of this document. Any roost subject to works under Licence will be monitored during and after those works.

Similarly to disturbance, some destruction licensing requirements may include compensation, such as installation of bat box(es) away from the proposed works. Installation of boxes should be within 100 m of the roost or as close as reasonably practicable, where they are less likely to become a future constraint, whether this is during operation of the asset or another development. Placement must therefore be agreed with SSEN Transmission and landowner(s) in addition to NatureScot as appropriate.

3.8 Mitigation Measures

3.8.1 General Mitigation

The following mitigation is to be incorporated, but not necessarily limited to:

1. Where possible, timing or works which have the potential to impact bats and / or their roosts should be avoided during the most sensitive times of year. Maternity roosts and hibernation roosts are particularly sensitive to disturbance. Weather conditions should also be considered (e.g. warmer winters may lead to bats hibernating later). Advice from the ecologist should be sought.
2. Where works are in areas where bat roosts may be encountered, toolbox talks should be used to brief workers on bats and their protected status, including findings of surveys undertaken, and exclusion buffers, and emergency measures to be undertaken on bat encounter or identification of a suspected roost.
3. Any artificial lighting to be directed away from known shelters/suitable habitat as far as reasonably practical.
4. Tree felling to be directed away from known roosts. Remnants such as branching must not block / obstruct roosts. Retain surrounding vegetation as far as possible.
5. Habitat connectivity to be maintained with obstruction and fragmentation avoided.
6. Any considerably noisy static machinery to be stored outside of sensitive areas / exclusion zones and switched off overnight where practical.
7. Avoid activity between dusk and dawn when bats are most active as far as reasonably practical.

8. Emergency procedures must be implemented inclusive of the following:

- Should bats or field signs be identified unexpectedly and measures not already in place, all work within 30 m must cease until the ecologist and SSEN Transmission environmental representative has been consulted, the site inspected where required, and determined the appropriate course of action.
- Any suspected sick or injured bats to be reported to the ecologist and taken into care as appropriate, following the procedure outlined by the Bat Conservation Trust[3]. Further guidance is provided in Section 3.5. Ensure the bat is contained within a secure box with breathable holes, a towel / similar, and **shallow** dish of water (milk lid appropriate). Where there is not a bat carer associated with the project, contact the National Bat Helpline on **0345 1300 228**.
- The Scottish Society for the Prevention of Cruelty to Animals (SSPCA) can be contacted where bat carers are not available. The SSPCA will only attend site if the animal has been contained (within a box or cover placed over) and / or someone is monitoring consistently-frequently. The SSPCA require 'What 3 Words' of location, contact number and postcode. Incidents can be reported to the SSPCA[4] on **03000 999 999**.
- Site personnel safety must never be compromised in attempt to rescue wildlife. Any animal can be unpredictable, particularly when they are in pain or feel threatened by humans. There is a small risk that bats can carry rabies, a fatal virus. Avoid direct handling if you can, always wear gloves and long sleeves, and wash hands after. An FFP2 mask should be worn to protect bats from potential virus transmission.
- Where injury or death to a bat is a result of site activities and / **or licensing conditions have been breached**, activities in the area must cease and the site made safe immediately. SSEN Transmission Environmental representative must be notified and a suitably qualified ecologist contacted and arrangement made for to attend site. The incident must be reported to SSEN on **0800 107 2307** within 30 minutes and reported to the NatureScot licensing team as soon as possible. Details must also be recorded on EcoOnline.

9. Where injury or death to a bat is not a result of site activities and no licensing conditions have been breached, activities in the area must cease and the site made safe immediately. The SSEN Transmission Environmental representative is to be contacted and should attend site. The incident should be recorded on EcoOnline and within weekly-monthly reports (e.g. dead bat found in building and suspected to be a 'one off' incident).
10. An exceptional circumstance procedure will be implemented should mitigation options not prove satisfactory in a particular case. Works will be halted whilst mitigation is determined (under consultation with NatureScot if required).

[3] Help! I've found a bat - Advice - Bat Conservation Trust

[4] The SSPCA is the animal welfare charity operating in Scotland and should not be confused with the RSPCA operating only in England and Wales.

3.8.2 Monitoring and Reporting

1. The Ecologist will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to bats is delivered.
2. Reports to follow guidance within the BCT Bat Surveys for Professional Ecologists: Good Practice Guidelines (current edition).
3. Reports will be submitted to NatureScot as required by the relevant Licence. These should also be shared with SSEN Transmission.
4. Any commitments to monitor effectiveness of compensation measures must be followed, and findings reported back to SSEN Transmission.

3.9 Compensation

Some activities that impact on bat roosts may require compensation to offset remaining impacts, for example after destruction / exclusion of a roost. Compensation measures may be included within licence applications made to NatureScot. These compensation measures are usually in the form of installation of a suitable bat roost box(es) with following points adhered to/ considered:

- They should be installed as close to the affected roost as possible (usually within 100 m).
- Of suitable type for the roost being compensated. Woodcrete boxes such as Schwegler are preferred as known to be successful.
- Consideration of the fixing of the proposed bat roost box type to location should be considered, with flat backed boxes being easier to hang on walls, and cylindrical types easily affixed to trees.
- Bat boxes should be placed at a suitable height to encourage uptake by bats, and to limit the potential of predation (3-5 m).
- Preferred orientation is south facing; however, offset from south may allow bats to move to warmer / cooler temperatures as required.
- Consideration as to the location of the proposed installation of bat roost compensation measures must be made to ensure they are installed in a suitable location for likely uptake by bats, but also an area which would not be disturbed or constrain future works, and
- Location(s) of proposed boxes or other mitigation must be agreed with the Land Assembly/ SSEN Transmission Operations (ensure land agreements are in place for placement on any area not under SSEN Transmission's control).

Larger more bespoke mitigation measures may be required for destruction / exclusion or more significant roosts; however, consideration of such can become complex, especially if heating elements are deemed required. Formation of bat roosting features within trees to be retained may also be considered, including cutting of new features or retention of roost feature, secured to a retained tree in suitable location.

Monitoring success of the compensation measures may be included within licence applications, but would form part of the conditions of the licence and therefore must be met where commitment is made. Once a bat box becomes occupied it is considered a roost and offered the same legal protection as any other roost.

3.10 Enhancement

Enhancement refers to providing net benefits for biodiversity, over and above the requirements for avoidance, mitigation or compensation, for example, placement of bat roost box associated with licensable roost disturbance. While SSEN Transmission seeks and welcomes opportunities for enhancement on projects / assets, measures installed for enhancement must follow the same principles as Compensation, set out above.

3.11 Licensing Requirements

Licence applications must be sent into NatureScot species licensing team sufficiently in advance of the project start date (approximately 30 days) to ensure the licence is in place prior to any work commencing.

3.12 Bat Low Impact Licence

In certain circumstances works on mainland Scotland affecting soprano pipistrelle or common pipistrelle bat roosts, which are not used for breeding or as hibernacula, can be undertaken utilising a BLIMP licence. BLIMPs may only be used by Licenced BLIMP holder and works must be undertaken following the most up to date NatureScot guidance; Guidance - Bat Low Impact Licensing (BLIMP) - An ecologist's guide | NatureScot.

For the avoidance of doubt the BLIMP licence will not cover activities affecting other bat species or other types of roost. However, this will not preclude working under the BLIMP licence at a site where other species or roost types are present providing that the works will not affect them.

3.13 Project Licence

A NatureScot Project Licence is likely to be the most appropriate form of Licence for any large scale and / or long running Project, which may result in a large number of minor unavoidable bat offences.

For example, multiple instances of disturbance to a number of bat roosts over several years. A Project Licence can be used to standardise protected species mitigation / compensation, creating consistency across the project area and throughout the Project's lifespan. Project Licences do not negate the need for thorough pre-development surveys within 12 months of the planned project start date, and pre-construction surveys within 3 weeks of works commencing. Any Project Licence application will need to be accompanied by the Mitigation Plan and procedures for bats included in Parts 1 and 2 of this SPP.

3.14 Individual Licence

For small scale Projects expected to be completed over relatively short timescales, which will result in a low number of unavoidable bats offences, an Individual NatureScot Licence is most likely to be appropriate. Licence applications should be accompanied by a Method Statement and should be sent sufficiently in advance of the Project start date to ensure the licence is in place prior to work commencing.

Further guidance and details of how to apply for a bat Licence can be found on the NatureScot website (https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/licensing).

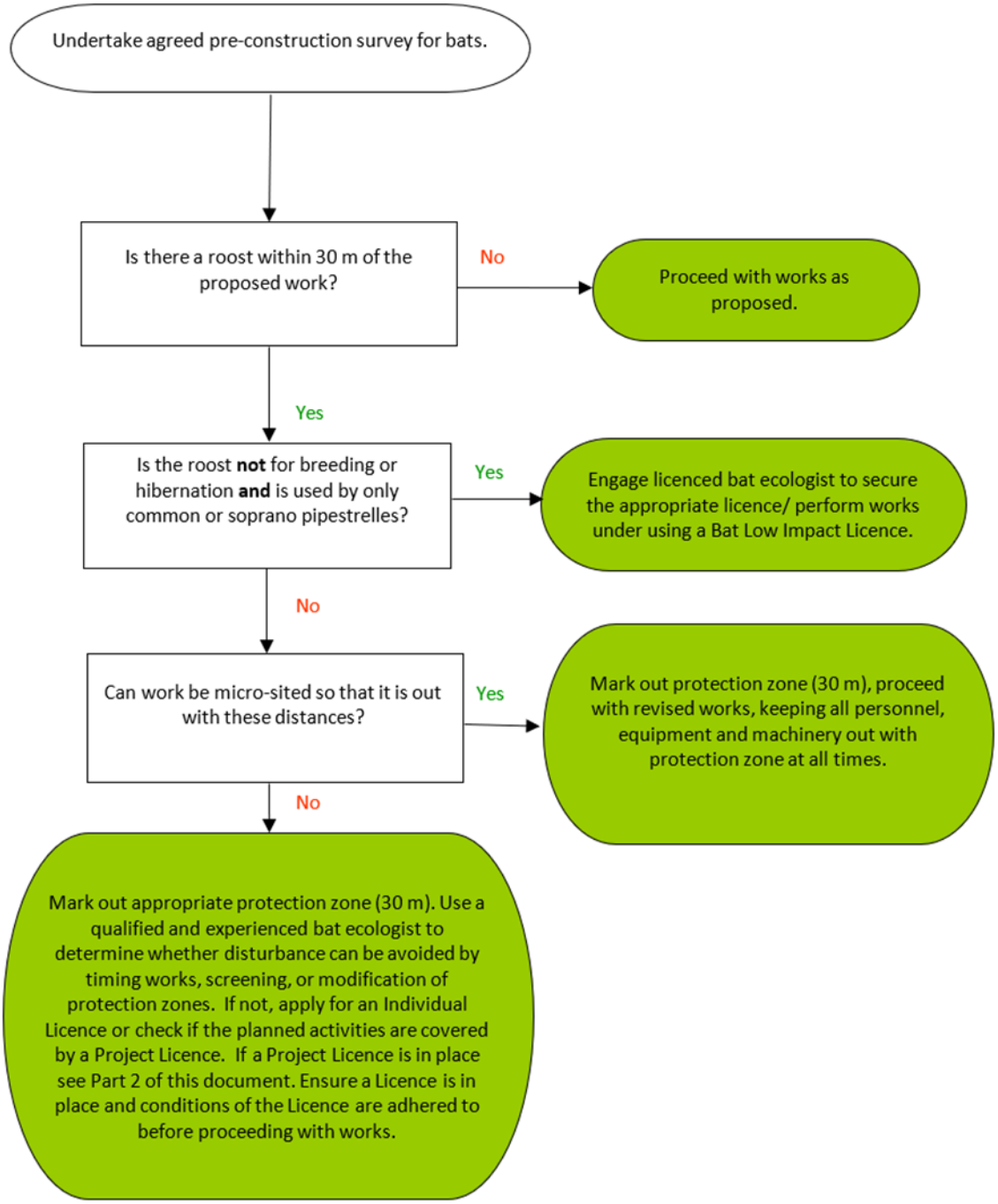

Figure 3.1 - Bat Mitigation Decision Tree

4 Part 2: Project Licence Protection Plan

The following sections of this plan are to be read in conjunction with the Project Licence (insert Licence number) and its conditions.

As stated in the Project Licence, methodologies for certain mitigation activities permitted under the Licence are included in this Part of the SPP. More disruptive activities, listed in Section 1 below, will also require a specific Method Statement to be submitted to NatureScot licensing team for written approval (see Appendix A). It is the Contractor's responsibility to submit these Method Statements to both SHE Transmission and NatureScot for written approval. No works shall proceed without this written approval.

Sufficient time should be allowed for in the programme to carry out any consultation work and obtain necessary approvals.

The Project Licence will specify reporting requirements detailing all disturbance and destruction works carried out.

4.1 Works Allowed under the Project Licence

Under the Project Licence there is a general presumption against works being carried out which could disturb bats, or to destroy / exclude or obstruct access to any bat roost unless it can clearly be demonstrated that either it is inactive (i.e. through monitoring) or that there is no alternative solution against Project timescales and requirements.

4.2 Activities requiring a NatureScot Approved Method Statement

The following activities require a formal Method Statement to be submitted and approved by NatureScot prior to any works commencing:

a. Disturbance of breeding or hibernation roosts of Common Pipistrelle, Soprano pipistrelle, Brown long-eared, and Daubenton's bat during the seasons when they are likely to be in use;

b. Disturbance of breeding or hibernation roosts of all non-common bat species (i.e. Natterer's, Leisler's, Whiskered, Noctule, Nathusius', and any other species not normally found in Scotland) at any time;

c. Disturbance of non-breeding and non-hibernation roosts for all non-common bat species (i.e. Natterer's, Leisler's, Whiskered, Noctule, Nathusius', and any other species not normally found in Scotland);

d. Destruction of a Brown Long-eared or Daubenton's breeding or hibernation roost;

e. Destruction of any roosts for all non-common bat species (i.e. Natterer's, Leisler's, Whiskered, Noctule, Nathusius', and any other species not normally found in Scotland)); and

f. Any exceptional circumstances not covered in this SPP or Points a to e above.

The Method Statement template in Appendix A has been developed in conjunction with NatureScot and should be used by the *Contractor / Named Agent* for all submissions.

Proposed mitigation works should be agreed with NatureScot.

Species Matrix

This matrix summarises which activities at which time of year can be carried out under this SPP or require an approved method statement. For explanation see text of this SPP.

Table 4.1 - Species Matrix

	Breeding / Hibernation Roosts		Non-breeding / non-hibernation Roosts	
Species	**Disturbance**	**Destruction**	**Disturbance**	**Destruction**
Common Pipistrelle	SPP (outwith seasons)	SPP (outwith seasons)	BLIMP	BLIMP
Soprano Pipistrelle	SPP (outwith seasons)	SPP (outwith seasons)	BLIMP	BLIMP
Brown Long Eared	SPP (outwith seasons)	Approved MS	SPP	SPP
Daubenton's	SPP (outwith seasons)	Approved MS	SPP	SPP
Natterer's	Approved MS	Approved MS	Approved MS	Approved MS
Nathusius' Pipistrelle	Approved MS	Unlikely to be allowed	Approved MS	Approved MS
Leisler's	Approved MS	Approved MS	Approved MS	Approved MS
Whiskered	Approved MS	Unlikely to be allowed	Approved MS	Approved MS
Noctule	Approved MS	Approved MS	Approved MS	Approved MS
Other species not normally found in Scotland	Approved MS	Approved MS	Approved MS	Approved MS

4.3 Activities not requiring additional NatureScot approval

The following works may be carried out under this SPP and / or specific Method Statements without the prior approval of NatureScot, using the prescribed methodologies:

a. Disturbance to non-breeding (note according to European guidance mating roosts are considered to be breeding roosts) and non-hibernation roosts, and disturbance to maternity / hibernation roosts (outwith the seasons they are in use), for the more common species (i.e. brown long-eared, and Daubenton's bats). Destruction of any common or soprano pipistrelle breeding and hibernation roosts at an appropriate time of year for the type of roost (i.e. when bats are not likely to be present and avoiding sensitive seasons).

b. Destruction of non-breeding and non-hibernation roosts for brown long-eared and Daubenton's bats, at an appropriate time of year for the type of roost when bats are not present, or avoiding sensitive seasons.

4.3.1 Disturbance to non-breeding and non-hibernation roosts at any time of year, and disturbance to maternity and hibernation roosts outwith the seasons they are in use.

a. This methodology applies to the following:

- Disturbance to non-breeding and non-hibernation roosts of common pipistrelle, soprano pipistrelle, brown long-eared and Daubenton's bats.

b. If works are to be completed within the protection zone when bats are present the following measures will be adopted in order to minimise potential disturbance to the roost:

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

c. Prior to the commencement of Project works, a protection zone will be established to retain the maximum possible distance between Project works and the roost in order to prevent damage. In most cases this protection zone will be no less than 1 m from the drip line of the tree or 5 m for buildings or cave entrances, and will be set up by the Ecologist / ECoW who is an Agent on the Project bat Licence, or a suitably qualified bat worker under their supervision. No construction works will be completed within this zone.

d. All site construction staff will be made aware of the presence of the roost and the requirement to remain outwith the protection zone at all times through a Toolbox Talk and the site EMP.

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

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

4.3.2 Destruction of roosts at an appropriate time of year.

a. This methodology applies to the following:

- Destruction of roosts of common and soprano pipistrelle bats; and
- Destruction of non-breeding and non-hibernation roosts of common pipistrelle, soprano pipistrelle, brown long-eared and Daubenton's bats.

b. Destruction of these roosts 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).

c. Prior to the commencement of Project works within 30 m of non-breeding and non-hibernation roosts, a protection zone will be set up by the ECoW. No works will be completed within this area until the roost has been destroyed in a controlled manner.

d. All site construction staff will be made aware of the presence of the roost and the requirement to remain out with the protection zone at all times through a Toolbox Talk and the site EMP.

e. Prior to 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 out with any potential disturbance distances. Compensatory roost provision would be agreed with NatureScot.

f. The destruction of the roost will be completed in a controlled manner under the supervision of the ECoW (who is an Agent on the Project Licence, or a suitably qualified bat worker under their supervision), 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:

- 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 or absent, the status of the roost and the species involved (through visual or lab analysis of droppings).
- Where a roost is to be destroyed during the active period, and 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 the ECoW.
- A dawn survey will be undertaken on the day of the exclusion to confirm the absence of bats returning to the roost. These surveys will be undertaken when the dawn temperature is > 8o C. Should bats be seen entering the roost the exclusion will be postponed for 3 days and the process repeated.
- The exclusion device will remain in place for 7 days, unless this corresponds to a period of cold or adverse weather (where the temperature at dusk is < 8o C or heavy rain), then the excluder must stay in place for a further 7 days.
- In the event of bats being identified within the roost during destruction, the ECoW is responsible for determining the best course of action with respect to the welfare of the animals.

5 Revision History

No	Overview of Amendment and Text affected	Previous Document	Revision	Authorisation
01	Transfer to new template and Nomenclature	TG-PS-LT-708 (Rev 1.00)	1.00	Richard Baldwin
02	Sentence 3.8.2 (1) has been replaced by the equivalent sentence of precursor TG-PS-LT-708. Paragraph 3.10 has been replaced by the equivalent paragraph of precursor TG-PS-LT-708. Paragraph 3.11 has been replaced by the equivalent paragraph of precursor TG-PS-LT-708 (with exception of update to SNH hyperlink).	TG-NET-ENV-502 (Rev 1.00)	1.01	Richard Baldwin
03	SPP updated to incorporate introduction of Bat Low Impact Licence.	TG-NET-ENV-502 (Rev 1.01)	1.02	Richard Baldwin
04	Updated in line with DMS requirement. Clarification on bat care added. SNH references updated to NatureScot. Survey requirements updated to align with current BCT guidance.	TG-NET-ENV-502 (Rev 1.02)	2.00	Richard Baldwin

Appendix A Project Licence Method Statement Template

<PROJECT TITLE>

METHOD STATEMENT FOR WORKS UNDER (insert licence details)

<insert species record reference>

<insert date>

Introduction

This document, prepared on behalf of SHE Transmission provides a Method Statement for <insert details of works> to be completed under <insert licence details>. These works are required in order to facilitate the delivery of the <insert Project details> (the Project).

Condition <insert No.> of the above Licence states that a <insert species> Protection Method Statement be submitted to NatureScot licensing team for written approval, under specific circumstances, prior to commencement of works which could affect <insert species>. Therefore, no works which would <insert licensed activity> <insert species> shall take place without written confirmation of NatureScot approval of this method statement.

This Method Statement makes reference to the following documents:

- <insert licence details>, NatureScot
- Species Protection Plan (SPP): <insert SPP No. and title> Rev. X <insert date>

Further information is provided in Table A.1 - Summary of Data.

Licensable Works

Introduction

<Insert details>

Baseline Description

<Insert description, including photographs / location plan>

Table A.1 - Summary of Data

Reference	Easting	Northing	Date recorded	Description	Date works exclusion zone demarcated & distance

Survey Summary

<Insert details>

Description of the Proposed Licensable Works

<Insert details>

Works Duration

<Insert details>

Consideration of Alternatives

<Insert details>

Impact Assessment

<Insert details>

Method Statement Site Briefing (to be delivered to relevant staff prior to works)

Site: <insert description>

Reference number: <insert species record reference>

Client: SHE Transmission

Task: <insert description of works>

Prepared by: <insert individual or Company name>

Licensed Agent: <insert name>

Method statement for <insert works description>

Before works commence:

All relevant personnel will be made aware of the presence and location of the constraint and mitigation.

<insert details of methodology>

During works:

<insert details of methodology>

<Insert Contractor's name>

I, the undersigned, confirm receipt of this method statement and fully understand and agree to work to the conditions therein.

Signature of Contractor's Representative:..... Date / /

Print name in full: .....

Scottish & Southern Electricity Networks
TRANSMISSION

Scottish & Southern Electricity Networks
TRANSMISSION

TG-NET-ENV-503

Safety, Health and Environment

Otter Species Protection Plan

	Name	Title
Author	Francis Williams	Environmental Net Gain Manager
Checked by	Alistair Watson	Consents & Environment Manager
Approved by	Richard Baldwin	Head of Consents & Environment

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1 Introduction

Otter is a European Protected Species and is afforded a high level of protection in Scotland. This Protection Plan provides guidance and agreed procedures for the protection of otters and their shelters during construction works on Scottish Hydro Electric (SHE) Transmission projects. The Plan contains two parts and details the procedures that must be followed where there is potential for otter to be present (Part 1), and where a Project Licence for otter has been issued by NatureScot to cover the project (Part 2).

Part 1: General Protection Plan

This Part applies to all projects where otter may be present. Part 1 outlines the responsibilities of SHE Transmission and the Contractor regarding protection of otter. It also details relevant legislation, survey requirements, general mitigation measures and the requirement for licensing and mitigation.

Part 2: Project Licence Protection Plan

This is provided to Contractors in addition to Part 1 for large projects where a Project Licence has been issued by NatureScot to cover the work and identifies those activities and protection / mitigation measures which are permitted under the Project Licence and those activities which require a Method Statement to be submitted to NatureScot for written approval before works can commence. This Part should be followed in conjunction with Part 1 and the relevant Project Licence to provide approved guidance and methodologies for carrying out work.

2 References

The documents detailed in Table 2.1 - Miscellaneous Documents, should be used in conjunction with this document.

Table 2.1 - Miscellaneous Documents

Title
The Conservation (Natural Habitats &c.) Regulations 1994 (as amended in Scotland)
EC Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive)
The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007
The Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019
NatureScot Licensing

3 Part 1: General Protection Plan

3.1 Background

Otters (*Lutra lutra*) are members of the weasel family with a widespread distribution in Scotland. They are largely solitary, semi-aquatic and obtain most of their food from rivers or the sea. Otters living on rivers may travel distances of 16 km or more at night. They use two kinds of shelter – underground holts and above ground couches. Otters may dig their own holts but they often enlarge existing structures such as rabbit holes so identification can be difficult. Couches may be nest-like structures or simply a depression in a stick pile or under a windblown tree. Each individual will use multiple shelters and holts can be located up to 500 m from watercourses. Otters may have cubs at any time of year.

Breeding sites are generally found in areas with the following characteristics:

- Relatively undisturbed by humans / ungrazed by stock
- Close (<50 m) to water but rarely flooded or just above the floodplain level
- Containing patches of dense cover (e.g., scrub thickets, deciduous woodland, young conifer plantation, heather, log piles, tree roots, rock piles, stands of tussocky tall fen vegetation, or reed beds)

Signs of Otter:

- Spraints (droppings) which have a high mucus content and are often formless, generally black or greenish–black in colour and may contain obvious fish bones or scales
- Otter prints and tracks – otter paths are 12-15 cm wide and normally connect with water and holts they are marked with spraints. Otter prints are about 6 cm wide and have five toes
- Feeding remains – hard parts of crustaceans, unpalatable bits of amphibians and bony parts of fish
- Otter shelters - holts or couches

3.2 Responsibilities

It is the *Contractor's* responsibility to comply with all the requirements of this Protection Plan where otter may be present, and it is both the *Contractor's* and SHE Transmission's responsibility to monitor compliance with the Protection Plan. The responsibility for applying for any Licence, including a Project Licence, may vary from project to project, but all applications and mitigation works will adhere to this plan.

3.3 Legislation

Otter 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 (as amended in Scotland). The protection has remained operable in Scotland following amendments of the Regulations by the Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019.

Otter is listed on Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994. The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007 enhanced this protection. Current Legislation means that otters and their shelters are fully protected in Scotland. In summary it is illegal to:

- Deliberately or recklessly 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

3.4 Surveying for Otter

- Surveys for otter must be undertaken in all works areas containing suitable otter habitat, a maximum of 12 months[1] prior to the works commencing, (this includes site investigations), to ensure the availability of up-to-date information on shelter locations
- Surveys must extend for a minimum of 200 m beyond working areas, including access tracks
- Surveys must be carried out by suitably qualified and experienced ecologists and will identify whether any active holts or places of shelter are likely to be affected by the works. Normally work within 30 m of a non-breeding shelter is regarded as likely to cause otter disturbance and will therefore require to be covered by a licence from NatureScot. However, works generating high noise / vibration levels (such as pile driving or blasting) can cause disturbance to non-breeding sites up to 100 m. Any work within 200 m of a breeding otter holt / shelter should also be regarded as capable of causing disturbance
- Appropriate monitoring (e.g., the use of suitable camera traps) should be undertaken where required to determine if any holt / place of shelter is being used for breeding. Camera trap monitoring may also require a Licence from NatureScot
- Active shelters will be classified as:
- Holt: Underground or other fully enclosed structure (can range from enlarged rabbit holes and cavities amongst tree roots to rock piles and man-made structures)
- Place of Shelter: Can be either a Couch / Lie-up - an above ground semi-enclosed resting place (e.g., under overhanging river banks / tree root plates); or Hover – a

1.1

[1] Note: Information from any previous surveys (e.g., surveys carried out to provide data for Environmental Impact Assessment (EIA) or other Assessments) can be a useful guide to otter activity in an area, particularly if holts were recorded. However, surveys will always require to be updated if carried out more than 12 months prior to works commencing.

nest-like structures (0.3 -1 m in diameter) constructed from nearby vegetation or a depression in a stick pile or under a windblown tree

3.5 Review of Otter Survey

Once an otter survey has been carried out, the ecologist /Ecological Clerk of Works (EcoW) should review the survey results, apply the mitigation hierarchy outlined below and decide if a Licence is required (either Individual or Project) for the works.

Construction teams should be advised of existing / new constraints, together with mitigation and licensing requirements by the ecologist / ECoW.

Relevant site documentation and project information sources should be updated with new and amended information on otter constraints as it is produced, with changes communicated to appropriate staff immediately.

3.6 Mitigation Hierarchy

There is a general presumption against works being carried out which could disturb otters in their place of shelter or to destroy / exclude any holt. A hierarchical approach to mitigation of Avoidance - Disturbance - Destruction will be applied to any holt / place of shelter that may be affected (See Figure 3.1):

Avoidance

This is the preferred option for active holts / places of shelter identified within 30 m of works (100 m for high noise / vibration activities) or 200 m for confirmed breeding sites or. Protection zones of either 30 m, 100 m or 200 m should be marked and signed on the ground with appropriate material to restrict work access.

Protection zones must be maintained until works are completed. Site staff should be briefed of their purpose through a Toolbox Talk and works micro-sited outwith the protection zone. If otter disturbance can be avoided in this way, there is no need to obtain a Licence from NatureScot for the works.

Disturbance

For any works required within 30 m of active holts / places of shelter (or 200 m for confirmed breeding sites), and for high noise / vibration activities such as pile driving or blasting within 100 m of holts / places of shelter, a Licence from NatureScot will be required (either Individual or Project).

Individual Licence applications to NatureScot should be accompanied by a Protection Plan which outlines how disturbance will be minimised and holts protected, for example through screening of works and modifying protection zones.

If a Project Licence is in place, and a breeding holt will be disturbed, a Method Statement must be submitted to NatureScot for written approval in accordance with Part 2 of this document, prior to any works commencing.

Destruction

Destruction of holts / other places of shelter should only be undertaken as a last resort. For destruction of active holts / places of shelter a Licence will be required from NatureScot (either Individual or Project) Individual Licence applications to NatureScot should be accompanied by a Protection Plan which outlines how disturbance will be minimised and individuals protected.

The plan should include monitoring to ensure breeding is not taking place and provision for the creation of an artificial holt if required. Any holt / place of shelter subject to works under Licence will be monitored during and after those works. If a Project Licence is in place, a Method Statement must be submitted to NatureScot in accordance with Part 2 of this document for written approval prior to any works commencing.

3.7 Mitigation Measures

3.7.1 General Mitigation

1. All works close to waterbodies and watercourses showing signs of regular use by otters should not take place at night or within 2 hours of sunset / sunrise, if possible.
2. Where works close to waterbodies and watercourses are required at night, lighting should be directed away from riparian areas.
3. All works close to water courses and waterbodies must follow best practice measures to ensure their protection against pollution, silting and erosion.
4. Any temporarily exposed pipe system should be capped when staff are off site to prevent otters from gaining access.
5. All exposed trenches and holes should be provided with mammal exit ramps e.g., wooden planks or earth ramps when Contractors are off site.
6. An emergency procedure should be implemented by site workers if otter / otter shelters are unexpectedly encountered. All work within 30 m (100 m for high noise/vibration activities) or 200 m for breeding sites should cease until a suitably qualified and experienced ecologist has inspected the site and determined the appropriate course of action.
7. An exceptional circumstance procedure will be implemented should mitigation options not prove satisfactory in a particular case. Works will be halted whilst mitigation is determined (under consultation with NatureScot if required).

3.7.2 Monitoring and Reporting

1. The Environmental Representative will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to otter is delivered.
2. Reports will be submitted to NatureScot as required by the relevant Licence.

3.8 Licensing Requirements

Licence applications must be sent into NatureScot Licensing Team sufficiently in advance of the project start date (approximately 40 days) to ensure the licence is in place prior to any work commencing.

3.9 Project Licence

A NatureScot Project Licence is likely to be the most appropriate form of Licence for any large scale and / or long running Project, which may result in a large number of minor unavoidable otter offences. For example, multiple instances of disturbance to a number of otter places of shelter over several years.

A Project Licence can be used to standardise protected species mitigation / compensation, creating consistency across the project area and throughout the Project's lifespan. Project Licences do not negate the need for thorough pre-development surveys within 12 months of the planned project start date, and pre-construction surveys within 3 weeks of works commencing. Any Project Licence application will need to be accompanied by the Mitigation Plan and procedures for otter included in Parts 1 and 2 of this SPP

3.10 Individual Licence

For small scale Projects expected to be completed over relatively short timescales, which will result in a low number of unavoidable otter offences an Individual NatureScot Licence is most likely to be appropriate. Licence applications should be accompanied by a Method Statement and should be sent sufficiently in advance of the Project start date to ensure the licence is in place prior to work commencing.

Further guidance and details of how to apply for an otter Licence can be found on the NatureScot website https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/species-licensing-z-guide/otters-and-licensing

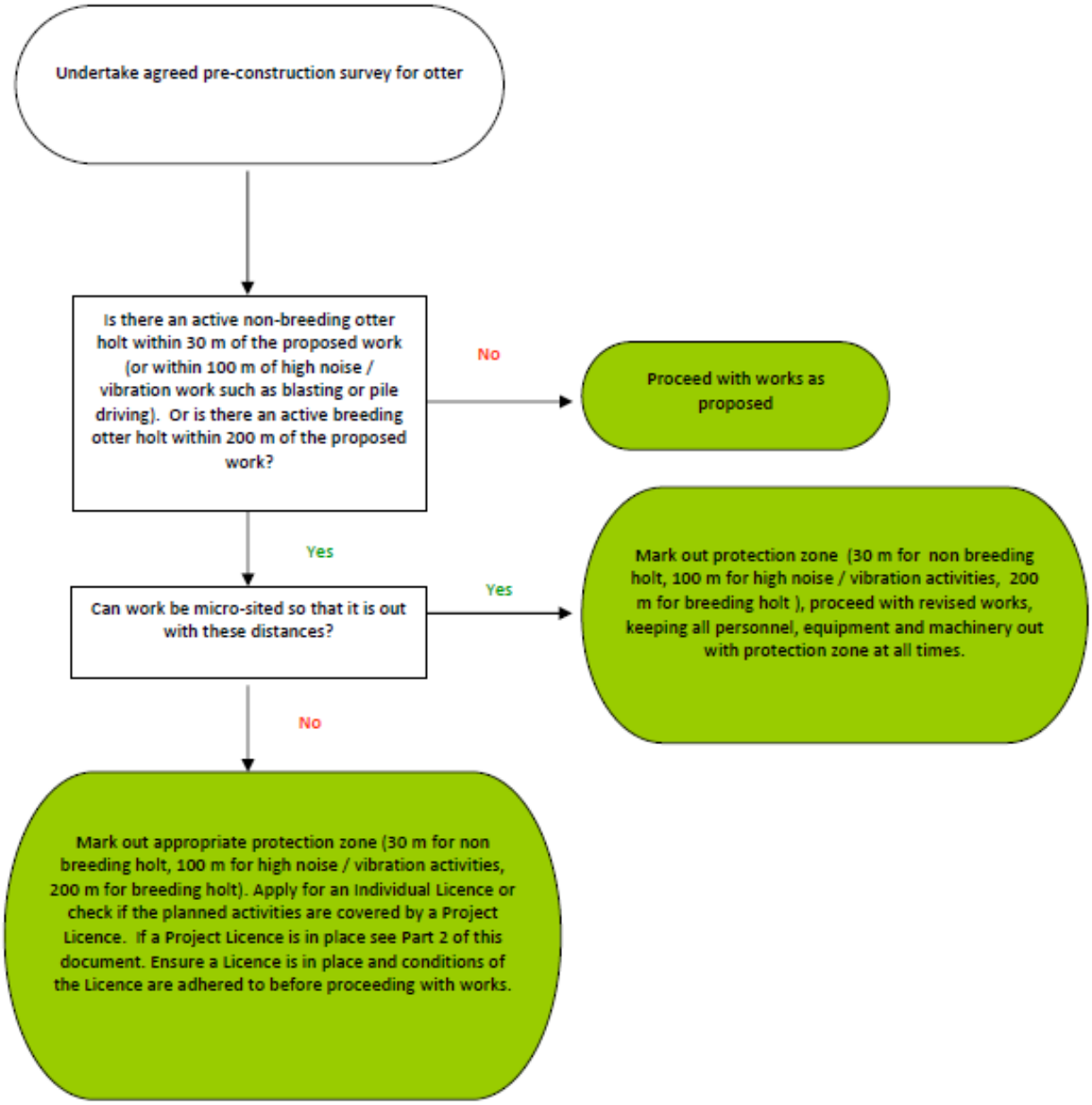

Figure 3.1 - Otter Migration Decision Tree

4 Part 2: Project Licence Protection Plan

The following sections of this plan are to be read in conjunction with the Project Licence (insert Licence number) and its conditions.

As stated in the Project Licence, methodologies for certain mitigation activities permitted under the Licence are included in this Part of the SPP. More disruptive activities, listed in Section 1 below, will also require a specific Method Statement to be submitted to NatureScot Licensing Team for written approval (see Appendix A). It is the *Contractor's* responsibility to submit these Method Statements to both SHE Transmission and NatureScot for written approval. No works shall proceed without this written approval.

Sufficient time should be allowed for in the programme to carry out any consultation work and obtain necessary approvals.

The Project Licence will specify reporting requirements detailing all disturbance and destruction works carried out.

4.1 Works allowed under the Project Licence

Under the Project Licence there is a general presumption against works being carried out which could disturb otters in their place of shelter, or to destroy / exclude any holt unless it can clearly be demonstrated that either it is inactive (i.e., through monitoring) or that there is no alternative solution against Project timescales and requirements.

4.2 Activities requiring a NatureScot approved Method Statement

The following activities require a formal Method Statement to be submitted and approved by NatureScot prior to any works commencing:

a. Destruction of a holt at any time of year

b. Disturbance to a breeding holt at any time of year

c. Any exceptional circumstances not covered in this SPP

The Method Statement template in Appendix A has been developed in conjunction with NatureScot and should be used by the Contractor / Named Agent for all submissions.

Proposed mitigation works should be agreed with NatureScot.

4.3 Activities not requiring additional NatureScot approval

The following works may be carried out under this SPP and / or specific Method Statements without the prior approval of NatureScot, using the prescribed methodologies:

4.3.1 Disturbance / Destruction of places of shelter at any time of year

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

Disturbance to a non-breeding holt / place of shelter at any time of year

i. Appropriate monitoring will be undertaken to ensure the place of shelter is not being used for breeding.

ii. The Agent or their representative will check, prior to works each morning, that suitable access / egress between the holt / place of shelter and a watercourse is maintained. A check will also be made of the works area to check no otter is present within construction plant / materials.

iii. Works can commence once the Agent or their representative is satisfied that no otter is present within the works area.

iv. The Agent or their representative will set up a suitable protection zone as far from the holt/place of shelter as is reasonably practicable to prevent damage and minimise disturbance.

v. The Agent or their representative will monitor the works to ensure compliance with the licence conditions.

vi. The emergency procedure detailed will be implemented if an otter is found during works.

Destruction of a place of shelter at any time of year

i. Appropriate monitoring will be undertaken to ensure the place of shelter is not being used for breeding.

ii. The Agent or their representative will check to ensure that the place of shelter is not being used immediately prior to its destruction.

iii. If it can be determined that the place of shelter has not been used recently, no exclusion will be required prior to destruction.

iv. The Agent or their representative will monitor the destruction works to ensure compliance with the licence.

v. The emergency procedure will be implemented if an otter is found during the works.

vi. A report will be sent to NatureScot detailing the destruction works undertaken (in line with the reporting process outlined above).

5 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	Transfer to New Template and Nomenclature	TG-PS-LT-709 (Rev.1.00)	1.00	Richard Baldwin

No	Overview of Amendments	Previous Document	Revision	Authorisation
02	Updated links and replaced references to badger with otter, Other minor formatting issues corrected	TG-NET-ENV-503 (Rev 1.00)	1.01	Richard Baldwin
03	Transfer to New Template. Updates relating to NatureScot and simplification of legislation.	TG-NET-ENV-503 (Rev 1.01)	1.02	Richard Baldwin
04				

Appendix A Project Licence Method Statement Template

<PROJECT TITLE>

METHOD STATEMENT FOR WORKS UNDER (insert licence details)

<insert species record reference>

<insert date>

Introduction

This document, prepared on behalf of SHE Transmission provides a Method Statement for <insert details of works> to be completed under <insert licence details>. These works are required in order to facilitate the delivery of the <insert Project details> (the Project).

Condition <insert No.> of the above Licence states that a <insert species> Protection Method Statement be submitted to NatureScot Licensing Team for written approval, under specific circumstances, prior to commencement of works which could affect <insert species>. Therefore, no works which would <insert licensed activity> <insert species> shall take place without written confirmation of NatureScot approval of this method statement.

This Method Statement makes reference to the following documents:

<insert licence details>, NatureScot

Species Protection Plan (SPP): <insert SPP No. and title> Rev. X <insert date>

Further information is provided in Table 1: Summary of Data.

Licensable Works

Introduction

<Insert details>

Baseline Description

<Insert description, including photographs / location plan>

Table 1: Summary of Data

Appendix A, Table 1

Reference	Easting	Northing	Date recorded	Description	Date works exclusion zone demarcated & distance

Survey Summary

<Insert details>

Description of the Proposed Licensable Works

<Insert details>

Works Duration

<Insert details>

Consideration of Alternatives

<Insert details>

Impact Assessment

<Insert details>

Method Statement Site Briefing (to be delivered to relevant staff prior to works)

Site: <insert description>

Reference number: <insert species record reference>

Client: SHE Transmission

Task: <insert description of works>

Prepared by: <insert individual or Company name>

Licensed Agent: <insert name>

Method statement for <insert works description>

Before works commence:

All relevant personnel will be made aware of the presence and location of the constraint and mitigation.

<insert details of methodology>

During works:

<insert details of methodology>

<Insert Contractor's name>

I, the undersigned, confirm receipt of this method statement and fully understand and agree to work to the conditions therein.

Signature of Contractor's Representative:..... Date / /

Print name in full: .....

Scottish & Southern Electricity Networks
TRANSMISSION

Scottish & Southern Electricity Networks
TRANSMISSION

TG-NET-ENV-504

Safety, Health and Environment

Red Squirrel Species Protection Plan

	Name	Title
Author	Francis Williams	Environmental Net Gain Manager
Checked by	Alistair Watson	Consents and Environment Manager
Approved by	Richard Baldwin	Head of Environment

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1 Introduction

Red squirrel (*Scirius vulgaris*) is afforded a high level of protection in Scotland. This Protection Plan provides guidance and agreed procedures, for the protection of red squirrels and their shelters, during construction works on Scottish Hydro Electric Transmission (SHE Transmission) projects. The Plan contains two parts and details the procedures that must be followed where there is potential for red squirrel to be present (Part 1), and where a Project Licence for red squirrel has been issued by NatureScot Licensing Team to cover the project (Part 2).

1.1 Part 1: General Protection Plan

This Part applies to all projects where red squirrel may be present. Part 1 outlines the responsibilities of SHE Transmission and the Contractor regarding protection of red squirrel. It also details relevant legislation, survey requirements, general mitigation measures and the requirement for licensing.

1.2 Part 2: Project Licence Protection Plan

This Part applies to all projects where red squirrel may be present. Part 1 outlines the responsibilities of SHE Transmission and the Contractor regarding protection of red squirrel. It also details relevant legislation, survey requirements, general mitigation measures and the requirement for licensing.

2 References

The documents detailed in Table 2.1 – Miscellaneous Documents, should be used in conjunction with this document.

Table 2.1 – Miscellaneous Documents

Title
Wildlife and Countryside Act 1981 (legislation.gov.uk)
NatureScot Licensing

3 Part 1: General Protection Plan

3.1 Background

Red squirrels are rodents with a widespread distribution in Scotland, although as they are predominately woodland animals they are largely absent from the Scottish islands (with the exception of Arran) and the far North West. They are currently under pressure, particularly in southern areas, due to a number of factors including competition from the non-native grey squirrel (*Scirius carolinensis*), disease (squirrel pox virus – SQPV), and habitat loss and fragmentation. Grey squirrels are not protected by law, and it is an offence to release them into the wild if caught.

Red squirrels are largely solitary, not strictly territorial, and generally arboreal, spending up to 70% of the time in the tree canopy. Densities generally vary from 1 per hectare, to 1 per 10 hectares of suitable habitat. They obtain most of their food from seeds or fruits from trees, although they are opportunistic. They build dense spherical nest structures called dreys, which are generally about 30cm in diameter and consist of an outer layer of twigs often with leaves still attached with an inner layer of softer materials such as moss and/or leaves. Dreys tend to be in the forks or against the trunks of trees such as spruce (*Picea abies*), Scots pine (*Pinus sylvestris*) or oak (*Quercus* spp.). Squirrels can also use holes in trees, nest boxes and other cavities as dreys. Several dreys may be in used at the same time, and it can take less than a day for a new drey to be built.

Red squirrels have two peak breeding seasons, the first litters being born between February and April with a second litter from May to August. The exact timing is however dependent on food availability and weather. In winter red squirrels do not hibernate, but are less active particularly in bad weather (high winds, heavy rain and cold). In summer they have two periods of peak activity; one in the early morning and one in the evening, whereas in winter this shifts to one main activity peak earlier in the day.

Signs of red squirrel:

- Feeding signs – stripped cones or cleanly split nuts often in piles on tree stumps
- Squirrel prints and tracks – characteristic squirrel tracks show the hind feet (with five toes) in front of the forefeet (four toes), in hops of less than 1 meter. Hind feet are 35mm wide and 40mm long
- Squirrel shelters - dreys

It is not possible to distinguish between field signs of red and grey squirrels in the field therefore visual surveys, cameras and/or hair tubes (with appropriate biosecurity measures in place), may be required in areas where the two species are present. Red squirrels can vary in colour and there can be confusion with grey squirrels; adult grey squirrels are much larger and lack ear tufts.

3.2 Responsibilities

It is the *Contractor's* responsibility to comply with all the requirements of this Species Protection Plan where red squirrel may be present, and it is both the *Contractor's* and SHE Transmission's responsibility to monitor compliance with this Species Protection Plan. The responsibility for applying for any licence, including a project wide licence, may vary from project to project, but all applications and mitigation works will adhere to this plan.

3.3 Legislation

Red squirrel is afforded full protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended in Scotland). This makes it an offence to kill, injure or take a red squirrel or to intentionally

or recklessly[1] damage, destroy or obstruct access to any place used for shelter or for breeding. Disturbance to this species in its drey also constitutes an offence.

NatureScot can grant licences to enable certain activities that would otherwise be an offence, to be carried out in relation to red squirrels and their dreys, 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.

In granting a licence NatureScot has to take into account the consequences for red squirrels at a local population level, to assist this assessment NatureScot will need to see maps of the area of operations and also surrounding areas of suitable red squirrel habitat.

3.4 Surveying for Red Squirrel

1. Surveys for red squirrel must be undertaken in all works areas containing suitable red squirrel habitat, a maximum of 12 months[2] prior to works commencing, (this includes site investigations). As squirrels can rapidly build new dreys, pre-felling surveys a maximum of 3 weeks prior to works commencing, must also be undertaken to ensure the availability of up-to-date information on squirrel drey locations.
2. Surveys must extend for a minimum of 50 m beyond working areas, including access tracks.
3. All drey trees must be marked to permit easy identification.
4. All dreys found must be assumed to be red squirrel, unless definitive evidence exists that they are grey squirrel only.
5. Surveys must be carried out by suitably qualified and experienced Ecologists and must identify whether any squirrel dreys are likely to be affected by the works.

If works during the breeding season (February to September inclusive) cannot be avoided, and dreys may be disturbed by works, it may also be important to establish if dreys are being used for breeding. The non- invasive method must be used in the first instance: Visual observation and camera surveillance from the ground, for a period of three days used to establish if the drey is in regular use. If regular use is established the drey must be assumed to be being used for breeding purposes. Where this type of drey monitoring is not practical for example in situations of poor visibility it is recognised that more invasive methods may be required, if this situation arises NatureScot Licensing Team must be contacted for advice on whether a survey licence will be required: licensing@naturescot.gov.uk.

1.1

[1] Reckless acts would include disregard of mitigation aimed at protecting red squirrels, resulting in killing, injuring and/or disturbance of any red squirrel or red squirrel resting place.
[2] Note: Information from any previous surveys (e.g., surveys carried out to provide data for EIA or other Assessments) can be a useful guide to red squirrel activity in an area, particularly if dreys were recorded. However, surveys will always require to be updated if carried out more than 12 months prior to works commencing. Pre-felling surveys a maximum of 3 weeks prior to works are recommended.

3.5 Review of Red Squirrel Survey

Once a red squirrel survey has been carried out, the Ecologist / ECoW must review the survey results, apply the mitigation hierarchy outlined below and decide if a licence is required from NatureScot (either Individual or Project) for the works.

If required, licences (individual or project), must be obtained by NatureScot prior to any works commencing.

Construction teams should be advised of existing / new constraints, together with mitigation / compensation, and licensing requirements by the Ecologist / ECoW.

Relevant site documentation and project information sources should be updated with new and amended information on red squirrel constraints as it is produced, with changes communicated to appropriate staff immediately.

3.6 Mitigation Hierarchy

There should be a general presumption against works being carried out which will disturb red squirrels in their drey, or which will require the destruction of any red squirrel drey. A hierarchical approach to minimise the works impact on red squirrel should be established as follows:

Avoidance

This is the preferred option. Appropriately sized protection zones must be marked and signed on the ground by the Ecologist / ECoW, with appropriate material, around all squirrel dreys identified during the pre-works surveys. The breeding season (February to September inclusive) is the most sensitive time for disturbance, during this time a 50m radius protection zone must be established around all squirrel dreys. Out with the breeding season, a protection zone of one tree from the drey tree (or 5 metres radius - whichever is lesser) must be established. For high noise / vibration activities (pile driving or blasting) a 100m radius protection zone around drey trees must be established at any time of year.

All works personnel, machinery, vehicles and storage of materials must be restricted from entering protection zones. Protection zones must be maintained until all works are completed. Site staff must be briefed of their purpose through a Toolbox Talk by the Ecologist / ECoW. If red squirrel disturbance can be avoided in this way, there is no need to obtain a licence from NatureScot for the works.

Disturbance

If works within protection zones boundaries cannot be avoided, a licence for disturbance from NatureScot will be required. For small scale projects the licence may be specific to the site, for larger scale works a Project Licence may be appropriate.

Individual licence applications for disturbance must be accompanied by a Mitigation Plan which outlines how the disturbance will be minimised, and dreys protected from damage, for example through screening of works and modifying protection zones.

If a Project Licence is in place, and a drey being used in the breeding season will be disturbed, a Method Statement must be submitted to NatureScot for written approval in accordance with Part 2

of this document, prior to any works commencing. The Method Statement must state how works will be carried out in a way which ensures no abandonment of young.

Destruction

Destruction of dreys must only be undertaken as a last resort and requires a Licence from NatureScot. Individual Licence applications to NatureScot must be accompanied by a Mitigation / Compensation Plan which outlines how disturbance will be minimised and individual squirrels protected from injury, and may include provision for the creation of an artificial drey if appropriate. If destruction of a drey during the breeding season is required, the plan should include details of non-invasive monitoring which will take place to ensure breeding is not taking place prior to any drey destruction.

Any drey subject to works under Licence must be monitored during and after those works.

3.7 Mitigation Measures

3.7.1 General Mitigation

1. An emergency procedure will be implemented by site workers if squirrel dreys are encountered. All work within 5 m (non-breeding season) or 50 m (breeding season) will cease, and the ECoW will inspect the site and define mitigation (if required) in line with this SPP.
2. An exceptional circumstance procedure will be implemented should mitigation options not prove satisfactory in a particular case. Works will be halted whilst mitigation is determined (under consultation with NatureScot Licensing Team if required).

3.7.2 Monitoring and Reporting

1. The Ecologist / ECoW will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to red squirrel is delivered.
2. Reports will be submitted to NatureScot as required by the relevant Licence

3.8 Licensing requirements

Licence applications must be sent into NatureScot Licensing Team sufficiently in advance of the project start date (approximately 40 days) to ensure the licence is in place prior to any work commencing.

3.9 Project Licence

A NatureScot Project Licence is likely to be the most appropriate form of licence for any large scale and / or long running project, in red squirrel areas. For example, where multiple instances of disturbance to a number of red squirrel dreys is anticipated over several months / years. A Project Licence can be used to standardise protected species mitigation / compensation, creating consistency across the project area and throughout the Project's lifespan. Project Licences do not negate the need for thorough pre-construction survey within 12 months and three weeks of the planned project start date.

Any Project Licence application will need to be accompanied by a red squirrel survey carried out within 12 months of the proposed works start date, and procedures for red squirrel included in Parts 1 and 2 of this SPP.

3.10 Individual Licence

For small scale projects expected to be completed over relatively short timescales, which will result in a low number of unavoidable red squirrel offences an Individual NatureScot Licence is most likely to be appropriate. All licence applications must be accompanied by a red squirrel survey carried out within 12 months of the proposed works start date, and a mitigation / compensation plan.

Further guidance and details of how to apply for a red squirrel Licence can be found on the NatureScot website https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/licensing/species-licensing-z-guide/red-squirrels-and-licensing.

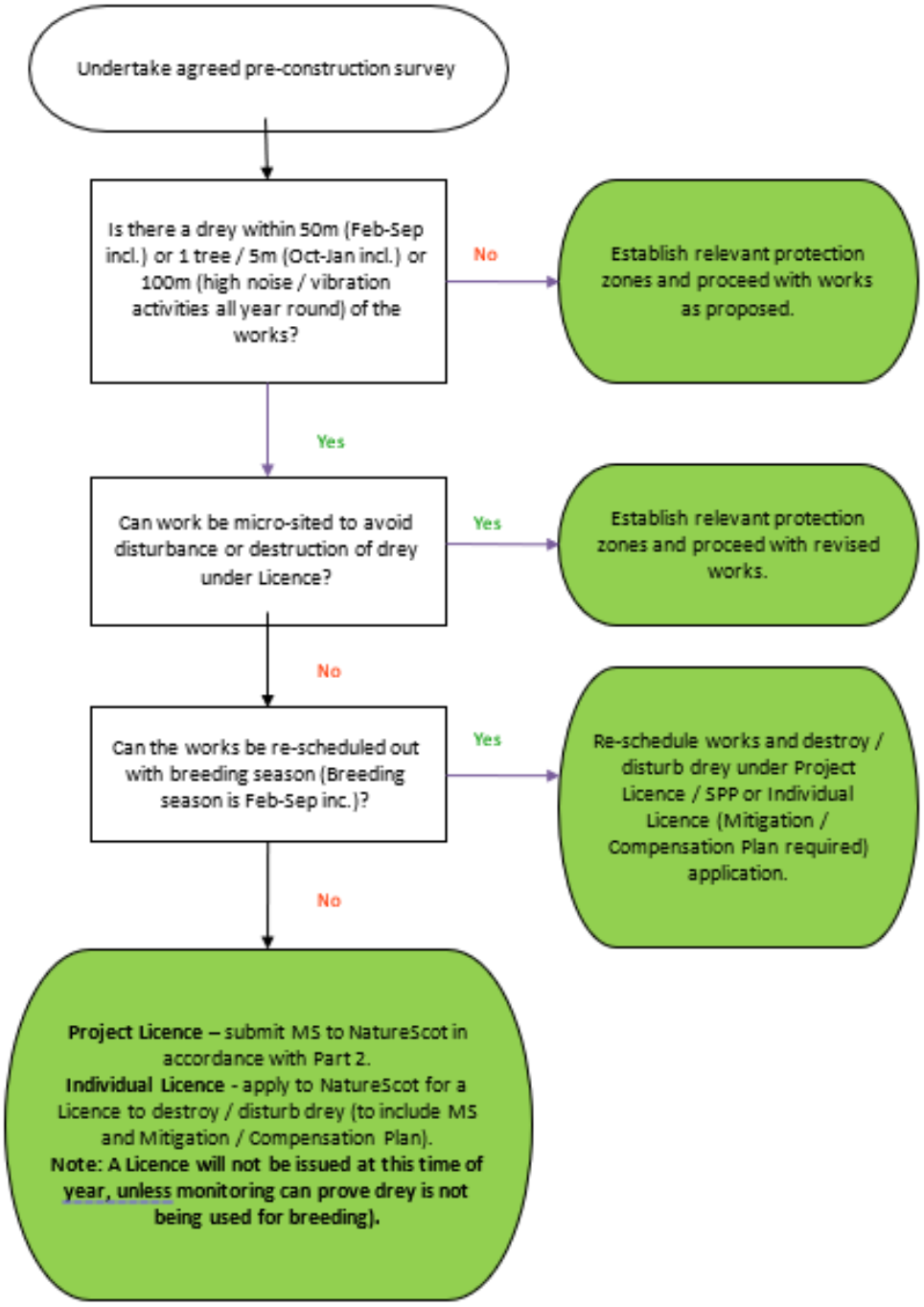

Figure 3.1 - Project Licence

4 Part 2 Project Licence Protection Plan

The following sections of this plan are to be read in conjunction with the Project Licence (insert Licence number) and its conditions.

Mitigation activities permitted under Project Licence are included in this Part of the SPP (section A). More disruptive activities, listed in Section B below, will require a specific Method Statement to be submitted to NatureScot Licensing Team for approval, prior to works commencing (see Appendix A). It is the *Contractor*'s responsibility to submit these Method Statements to both SHE Transmission and NatureScot for written approval. No works shall proceed without this written approval.

Sufficient time should be allowed for in the programme to carry out any consultation work and obtain necessary approvals.

The Project Licence will specify reporting requirements detailing all disturbance and destruction works carried out.

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

4.1 Works Allowed under this SSP

The following works may be carried out under this SPP without further approval from NatureScot, using the prescribed methodologies:

1. Disturbance to red squirrel dreys out with the breeding season (October to January inclusive)

   Red squirrel dreys must not be damaged or destroyed, but protected from potential damage by setting up a modified protection zone (size determined by the site Ecologist / ECoW). Protection zones must be clearly marked on the ground and signed, and must exclude all works personnel, machinery, vehicle and storage. The protection zone must be maintained until all works are finished.

   A licence return must be sent to NatureScot Licensing Team detailing all disturbance works under the Project Licence.

2. Destruction of red squirrel dreys out with the breeding season (October to January inclusive

   Destruction of squirrel dreys must only be undertaken as a last resort. Prior to a drey being destroyed, the Ecologist / ECoW must satisfy themselves that no squirrel is present within the structure. Dreys must be destroyed in a controlled manner to ensure no injury or killing of animals. All works must be overseen by an experienced Ecologist / ECoW.

   A licence return must be sent to NatureScot Licensing team detailing all drey destruction works carried out under the Survey Licence.

4.2 Activities requiring a NatureScot approved Method Statement

The following activities require a formal Method Statement to be submitted and approved in writing by NatureScot Licensing Team prior to any works commencing:

a. Disturbance or destruction of a drey during the breeding season.

b. Any exceptional circumstances not covered in this SPP.

The Method Statement template in Appendix A has been developed in conjunction with NatureScot and should be used by the *Contractor / Named Agent* for all submissions. The methodology used should be based on the following:

A. Destruction or disturbance to a drey within the breeding season (February to September inclusive)

A. There must be a presumption against disturbance or destruction of a squirrel drey during the breeding season, if unavoidable this work requires that a detailed Method Statement is agreed in writing with NatureScot Licensing Team prior to works commencing.

B. Non-invasive survey methods must be used to establish if the drey is in regular use. An experienced and qualified Ecologist / ECoW must use visual observation and video surveillance from the ground for a period of three days of daytime observations, to establish if the squirrel drey is in regular use. If the drey is in regular use it must be assumed that it is being used for breeding purposes.

C. If the survey establishes that there is no regular use by squirrel, destruction of the shelter can be carried out as for during the non-breeding season.

D. Dreys being used for breeding must not be destroyed or disturbed and no works carried out within 50 m of the structure, until the site Ecologist / ECoW has confirmed that dependent young are no longer present. The young begin leaving the drey at *c*. 7 weeks and are weaned at 8-10 weeks old.

E. Once completion of breeding has been confirmed through monitoring, and the site Ecologist / ECoW has satisfied themselves that no squirrel are present within the structure, the drey can be destroyed in a controlled manner to ensure no injury or killing of animals.

F. A licence return must be sent to NatureScot Licensing Team detailing all drey destruction works carried out under the Project Licence.

4.3 NatureScot Survey Licence

The Ecologist / ECoW must obtain a survey licence from NatureScot Licensing Team prior to using the following invasive survey methods:

a. Where squirrel dreys are not clearly visible from the ground, and the Ecologist / ECoW needs to establish whether they are being used for breeding (i.e., non-invasive methods as described above cannot be used), camera traps mounted on adjacent trees may be employed (under survey licence from NatureScot) as an alternative in suitable weather conditions. Camera survey must be carried out for at least three consecutive days. The ECoW / Ecologist must be confident that this method is appropriate for detecting use at the given location.

b. Where the above survey methods are inappropriate, inspection of squirrel dreys may be undertaken by tree climbing or cherry picker and endoscopic inspection (under survey Licence from NatureScot) to confirm the presence/absence of young squirrels.

5 Revision History

No	Overview of Amendment	Previous Document	Revision	Authorisation
01	Transfer to new template and Nomenclature	TG-PS-LT-710 (Rev1.00)	1.00	Richard Baldwin
02	Author change, typos corrected, and web links updated	TG-PS-LT-710 (Rev1.00)	1.01	Richard Baldwin
03	Links checked author details updated. Transfer to New Template. Updates relating to NatureScot and simplification of legislation.	TG-NET-ENV-504 (Rev1.01)	2.00	Richard Baldwin
04				

Appendix A Project Licence Method Statement Template

<PROJECT TITLE>

METHOD STATEMENT FOR WORKS UNDER (insert licence details)

<insert species record reference>

<insert date>

Introduction

This document, prepared on behalf of SHE Transmission provides a Method Statement for <insert details of works> to be completed under <insert licence details>. These works are required in order to facilitate the delivery of the <insert Project details> (the Project).

Condition <insert No.> of the above Licence states that a <insert species> Protection Method Statement be submitted to NatureScot Licensing Team for written approval, under specific circumstances, prior to commencement of works which could affect <insert species>. Therefore, no works which would <insert licensed activity> <insert species> shall take place without written confirmation of NatureScot approval of this method statement.

This Method Statement makes reference to the following documents:

<insert licence details>, NatureScot

Species Protection Plan (SPP): <insert SPP No. and title> Rev. X <insert date>

Further information is provided in Table 1: Summary of Data.

Licensable Works

Introduction

<Insert details>

Baseline Description

<Insert description, including photographs / location plan>

Table 1: Summary of Data

Reference	Easting	Northing	Date recorded	Description	Date works exclusion zone demarcated & distance

Survey Summary

<Insert details>

Description of the Proposed Licensable Works

<Insert details>

Works Duration

<Insert details>

Consideration of Alternatives

<Insert details>

Impact Assessment

<Insert details>

Method Statement Site Briefing (to be delivered to relevant staff prior to works)

Site: <insert description>

Reference number: <insert species record reference>

Client: SHE Transmission

Task: <insert description of works>

Prepared by: <insert individual or Company name>

Licensed Agent: <insert name>

Method statement for <insert works description>

Before works commence:

All relevant personnel will be made aware of the presence and location of the constraint and mitigation.

<insert details of methodology>

During works:

<insert details of methodology>

<Insert Contractor's name>

I, the undersigned, confirm receipt of this method statement and fully understand and agree to work to the conditions therein.

Signature of Contractor's Representative:..... Date ..../ /

Print name in full: .....

Scottish & Southern Electricity Networks
TRANSMISSION

Scottish & Southern Electricity Networks
TRANSMISSION

TG-NET-ENV-505

Safety, Health and Environment

Bird Species Protection Plan

TG-NET-ENV-505	Bird Species Protection Plan		Applies to Transmission ✓
Revision: 3.00	**Classification:** Internal	**Issue Date:** November 2024	**Review Date:** November 2032

	Name	Title
Author	James Elliott	Consents and Environment Manager
Checked by	Callum Petrie	Senior Consents and Environment Manager
Approved by	Simon Hall	Lead Consents and Environment Manager

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1 Introduction

Construction works have the potential to negatively impact on breeding birds as a result of either direct destruction of nests or disturbance which may result in breeding failure and/ or a reduction in the bird's physiological condition. In addition, it is an offence to disturb some particularly sensitive species both within *and* outwith the breeding season. These species are discussed in Section 4. The bird breeding season runs from March to August (primarily), though the precise timing within this period varies from species to species, and some species start breeding earlier or finish later than this.

This SPP outlines the procedures that must be followed where there is a potential for breeding birds to be affected. It explains the responsibilities of Scottish Hydro Electric Transmission (SHE Transmission) and its *Contractors*, the legislative protection for birds, and the measures required to minimise impacts on birds and thereby the risk of criminal offences being committed.

2 References

The documents detailed in Table 2.1 – Miscellaneous Documents, should be used in conjunction with this document.

Table 2.1 – Miscellaneous Documents

Title
Wildlife and Countryside Act 1981 (as amended in Scotland)
NatureScot Licencing https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/licensing/species-licensing-z-guide/
NatureScot (2022) Disturbance Distances in selected Scottish Bird Species

3 Responsibilities

It is the *Contractor*'s responsibility to comply with all the requirements of this plan and it is both the *Contractor*'s and SHE Transmission's responsibility to monitor compliance with the plan.

4 Legislation

4.1 All Wild Birds

All wild birds are protected by law under the Wildlife and Countryside Act 1981 (as amended).

It is an offence to intentionally or recklessly[1]:

- kill, injure or take a bird
- take, damage, destroy or interfere with a nest of any bird while it is in use or being built
- obstruct or prevent any bird from using its nest
- take or destroy an egg of any bird

4.2 Schedule 1 birds

Additional protection is given to rare breeding birds listed under Schedule 1 of the WCA. It is an offence to disturb;

- any bird while it is building a nest
- any bird while is in, on, or near a nest containing eggs or young
- any bird while lekking
- the dependent young of any bird

4.3 Schedule 1A and A1 birds

Further protection is given to birds listed on Schedule 1A and A1 of the Act, making it an offence at **any time of year** to:

- Intentionally or recklessly harass a white-tailed eagle, golden eagle, hen harrier orred kite(1A); and
- Damage, destroy or interfere a nest habitually used by a white-tailed eagle or golden eagle (A1).

At present, it is not possible to obtain a derogation to disturb Schedule 1 breeding birds or destroy nests of any wild breeding birds for the purposes of development. However, the control of certain species is licensable in a restricted number of circumstances, such as for reasons of public health and safety. A licensing system is also in place for surveying protected species if a disturbance offence is possible.

Further advice is available on the NatureScot website: https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/licensing/species-licensing-z-guide/birds-and-licensing.

[1] Reckless acts would include disregard of mitigation aimed at protecting birds, resulting in killing, injury, and/or disturbance of birds or their nests.

5 Protection Plan

In advance of construction at any location where breeding birds may be present, it is **essential** that this plan is followed.

5.1 Pre-construction Surveys and Data Collation

1. Pre-construction surveys for breeding birds will be completed a maximum of 3 months prior to start of any works in a particular area, and at an appropriate time of year, to ensure availability of up-to-date information to inform any mitigation measures required.
2. Surveys will be carried out by suitably experienced ecologists / ornithologists using methods agreed with NatureScot under Survey Licences where required.
3. Pre-construction surveys will:
   - include up to 1000 m either side of Limits of Deviation (LOD's) / boundaries for substation construction areas and access tracks; and
   - where appropriate, be undertaken in accordance with NatureScot's Guidance on Assessing the Impact of Overhead Power Line Proposals on Birds for overhead lines.
4. Relevant local recorders/monitoring organisations, e.g. local Raptor Study Groups, will be contacted at the pre-construction phase for recent records of sensitive species that might be affected[2].

5.2 Review of Works and Impact Assessment

1. The Ecological Clerk of Works (ECoW)/Environmental Adviser will review whether construction activities are likely to affect breeding birds and, if so, what mitigation options are available. A hierarchical approach to mitigation will be applied to any occupied bird habitat that may be affected under the Project works, as detailed in the "General mitigation" section below. Priority will be given to assessing and mitigating impacts to species listed on Schedule 1.
2. Construction teams will be advised by the ECoW/ Environmental Adviser of existing / new constraints together with mitigation options.
3. Project Geo-databases and / or relevant site documentation, e.g. Construction Environmental Management Plans (CEMP's), will be updated with new and amended information as it is produced, with changes communicated to appropriate staff as required.

[2] The Scottish Raptor Study Group is a network of experts who monitor and record raptor species across Scotland. For a fee, they will provide data on breeding raptors within a particular area. Visit www.scottishraptorstudygroup.org/contact/

5.3 General Mitigation

1. This SPP is designed to provide the Contractor and Ecological Clerk of Works (ECoW) with an approved methodology for protecting breeding birds.
2. The ECoW will attend site and check for signs of nesting on a regular basis throughout the construction period to ensure all environmental mitigation relevant to breeding birds is delivered. Note that new nests can quickly become established, so regular inspection of the working areas is crucial during the bird breeding season (within 48 hrs prior to construction works due to occur).
3. A hierarchical approach to mitigation following Programme / Avoid / Risk Assess, will be applied to any birds that may be affected under the Project works.
    - Where practicable, works will be programmed outwith breeding season - see https://www.nature.scot/bird-breeding-season-dates-scotland for information on breeding seasons for areas likely to contain breeding sites .
    - For specially protected or sensitive species, appropriate buffer zones (see table in Appendix A) will be established upon confirmation of nest building / breeding taking place[3]. Buffer zones will be set out by a suitably qualified ECoW for all breeding birds and those species whose roost sites are also protected i.e. red kite and hen harrier. No works will be carried out within these zones whilst birds are:
        - building or using their nest,
        - still dependent on the nest site, or
        - present at roost sites. The ECoW will advise when it is safe for works to be carried out.
4. Where programme critical works must be carried out within the buffer zones, the ECoW will carry out a Protected Species Risk Assessment (Appendix B) to assess whether disturbance can be avoided during the works. Considerations will include the species involved, local topography, natural screening, type of works, time of year, time of day and existing levels of human activity, e.g. farming, forestry and habitation. NatureScot should be contacted to determine whether a formal consultation is required.

[3] NatureScot guidance provides a suggested buffer zone range for specially protected or sensitive species (see table in Appendix A). The upper limit of the disturbance buffer should be used unless it can be demonstrated that a lower buffer is sufficient. This is intended to provide a precautionary approach, however it is noted that in certain circumstances lower buffers will be appropriate. Factors influencing whether a lower buffer would be considered sufficient include, but are not limited to; type of disturbing activity, duration, topography and known levels of habituation. NatureScot also recognise the importance of incorporating site-specific factors into consideration when applying buffers. The disturbance buffer may then be reduced if it can be demonstrated and agreed (in writing) by a Specialist Adviser and / or NatureScot as required, that works will not cause disturbance.

5. Monitoring will be undertaken by the ECoW or Specialist Adviser, where appropriate, to ensure no disturbance is caused[4]. An emergency procedure will be implemented by site workers if breeding birds are unexpectantly encountered within the footprint of construction works. All work within 50 m (non-scheduled species) or the relevant maximum protection distance for species listed in Appendix A will immediately cease, and the ECoW will inspect the site and ensure that works do not affect any nest, bird, eggs or young at this location, through micro-siting or re-programming of works as per the general mitigation outlined in this SPP.
6. In exceptional cases, standard mitigation measures (as outlined above) may be insufficient. In such scenarios, mitigation will be determined on a case-specific basis. No construction works shall be undertaken within the buffer zone until mitigation has been agreed (in consultation with NatureScot if required).

5.4 Specific Mitigation

5.4.1 Dissuasion Techniques

Dissuasion techniques may be used to make areas less attractive to nesting birds or birds returning back to a previous nesting location (dissuasion will not be carried out where there is potential to harass Schedule 1A species, or interfere with / damage a Schedule A1 nest). Dissuasion may include Scrub clearance / felling / strimming prior to the breeding season commencing . The placement of bird scarers / frightening devices may also be used as a dissuasion technique where appropriate. See details below:

- **Habitat management**

  a) Scrub clearance / felling / strimming may be used to discourage birds nesting prior to the start of the breeding season in suitable areas. This method has a dual purpose in also dissuading reptiles / small mammals. For strimming, a sward is cut to a height of 2-5cm depending upon vegetation type and ground conditions and this can be achieved by hand strimmers or mechanical means depending upon the ground conditions. The advantage of this method is that the vegetation can be cleared in advance of the works and in slow growing areas, i.e. heath, there is a potential for the site to remain free of constraints for a longer period of time. The ECoW will advise on the potential for other ground nesting species to occupy these areas; in such instances, bird scarers may be appropriate in conjunction with the management of sward height.

  b) Clearance of habitat will be undertaken outwith the breeding season Weekly walkover checks by a suitably licenced and experienced ecologist shall then be undertaken to ensure that the mitigation measures are being effective. If clearance of habitat needs to be undertaken within the bird breeding season, a pre-works check should be undertaken by a suitably qualified ecologist within 48hrs of the clearance works.

[4] It is important to note that bird heart rate may be increased by exposure to human disturbance before alert behaviour or flight initiation responses are evident. Increased heart rate and increased levels of stress hormones have physiological costs and so disturbance may have subtle impacts even on birds that are not clearly showing behavioural responses to disturbance.

- **Active dissuasion / disturbance**

  a) At sites where there will be a high level of human activity, the noise and possible vibration from construction activities should dissuade some nesting activities.

  b) Areas identified to be at risk of nesting birds will be identified and disturbance levels at these locations will be increased. Sites will be visited regularly to dissuade birds from nesting (this may include tower climbing on overhead line projects).

  c) Several types of bird scarer/ frightening device can be used, and are detailed below. The use of each should be determined by the ECoW.

  d) Hawkeyes are probably the most effective of the bird scarers that have been used on the previous projects. A small number of these have been effective in deterring birds from nesting within construction areas. These will be deployed prior to the start of the breeding season and moved around the compound to stop the birds becoming accustomed to them.

  e) Ticker tape can be used in more sheltered areas and can work well, however they can be difficult to attach to poles/canes and work best on fencing such as that for the compounds.

  f) Scarecrows can be constructed using old PPE and are a cheap way to supplement the Hawkeyes.

  g) Scarers will be placed no later than 10 days before construction commences. Once deployed, scarers will be kept on site for a period sufficient to minimize the risk of birds settling on site during the works.

  h) As construction commences, suitable nesting sites within the construction footprint will normally be reduced. The frequency of ongoing checks will then be decided by the ECoW on a site-by-site basis.

5.4.2 Removing Disused Bird Nests

The objective of this mitigation is to provide specific guidelines for the protection of birds and their nesting places before and during construction works, but also to facilitate the removal of old or disused nests where required for construction or maintenance works, such as:

  a) in substations where birds have nested on equipment causing a fire risk;

  b) in order to allow dismantling of redundant towers; or

  c) where the presence of a disused nest interferes with construction, maintenance or upgrading of overhead transmission lines.

- **Not specially protected birds**

  a) It is an offence to remove a bird nest while it is being built or in use and it is an offence to take, destroy or possess the egg of a wild bird.

  b) If a bird nest is to be removed, then it must be shown to be disused. It is therefore recommended that the nest is removed outwith the bird breeding season.

c) Before a nest of any species is removed, where there is any doubt as to whether the nest is in use or not, it will be monitored by the ECoW over a period of a week. Direct observations of nests will be made on the 1st, 3rd and 5th days as well as monitoring from suitable vantage points and where necessary with camera traps. The nest will be removed only when there is clear evidence that the nest is disused and no eggs are present.

d) Should eggs be found, the nest will not be moved until a licence has been obtained from NatureScot for the taking of the eggs.

- **Schedule 1 species**

a) For white-tailed eagle and golden eagle (Schedule A1) it is an offence to remove or damage a nest at any time, regardless of whether it is currently in use.

b) The disused nests of any other Schedule 1 species needing to be removed will be subject to an assessment and agreed in writing with NatureScot. The assessment will detail the needs case for removal, bird species involved, monitoring, information about the nest and clarification of whether it is in habitual use, habitat and any further nests within the area associated with that bird. Nest monitoring will be undertaken by a suitably licensed and experienced ecologist and / or Specialist Adviser.

5.4.3 Drone and Aerial Surveys

NatureScot's guidance on disturbance distances are not differentiated in terms of the source of the disturbance, meaning that the same suggested buffer zones apply to drones as to any other source of disturbance. The following actions must be taken to satisfy compliance with the Wildlife and Countryside Act 1981 and specifically - Schedule 1 protected species:

a) Any surveys involving the use of drones to be discussed with SSEN Consents & Environment Manager (CEM) in advance of any surveys to ensure relevant data sharing and pertinent information can be provided regarding potential environmental constraints/considerations, to inform the drone survey method.

b) Drone Survey RAMS are to be provided to the SSEN CEM for review and approval at least one week before the survey is due to be undertaken.

6 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	Transfer to new template and Nomenclature	TG-PS-LT-718 (Rev 1.00)	1.00	Richard Baldwin
02	Weblinks updated	TG-NET-ENV-505 (Rev 1.00)	1.01	Richard Baldwin
03	Weblinks checked and updated where required.	TG-NET-ENV-505 (Rev 1.01)	2.00	Richard Baldwin
04	Changed SNH Name to new operating name NatureScot Updated to incorporate NatureScot Guidance - Disturbance Distances in selected Scottish Bird Species	TG-NET-ENV-505 (Rev 2.00)	3.00	Simon Hall
05				

Appendix A Summary Guidance on Species Specific Disturbance Distances

Note: the protection zone distances given here are indicative - specific distances will vary depending on individual sites and will require expert advice informed by information provided in Ruddock & Whitfield (2007).

Table A.1

Species	Buffer zone (m) suggestions during the breeding (BR) and non-breeding (NBR) seasons	Overall likely sensitivity to disturbance
Whooper swan, Cygnus cygnus	NBR = 200-600m	Medium
White-fronted goose, Anser albifrons	NBR = 200-600m	Medium
Bean goose, Anser fabalis	NBR = 200-600m	Medium
Pink-footed goose, Anser brachyrhynchus	BR ≤1000m NBR = 200-600m	Medium
Greylag goose, Anser anser	BR and NBR = 200-600m	Medium
Barnacle goose, Branta leucopsis	BR = 50-200m NBR = 200-600m	Medium
Common shelduck, Tadorna tadorna	BR and NBR = 100-400m	High
Mallard, Anas platyrhynchos	BR = 50-100m NBR ≥ 100m	Low/Medium
Gadwall, Anas strepera	BR and NBR = 100-200m	Medium
Pintail, Anas acuta	BR and NBR = 100-200m	Medium
Shoveler, Anas clypeata	BR and NBR = 100-200m	Medium
Eurasian wigeon, Anas penelope	BR = 100-200m NBR = 200-500m	High
Greater scaup, Aythya marila	NBR = 150-450m	High
Common eider, Somateria mollissima	BR = 100-200m NBR = 200-500m	Medium/High
Common scoter, Melanitta nigra	BR = 300-500m	High
Common goldeneye, Bucephala clangula §	BR = 100-150m NBR = 150-800m	High
Capercaillie, Tetrao urogallus †, §	BR (nesting females) and NBR = 100-150m BR (lekking males) = 1000m NBR = 100m	Medium/High
Black grouse, Tetrao tetrix	BR (nesting females) and NBR = 100-150m BR (lekking males) = 500- 750m NBR = 100m	Medium
Red-throated diver, Gavia stellata	BR = 500-750m NBR = ≤1000m	High
Black-throated diver, Gavia arctica	BR = 500-750m NBR = ≤1000m	High
Great northern diver, Gavia immer	NBR = 100-350m	Medium/High
Slavonian grebe, Podiceps auritus §	BR and NBR = 150-350m	Medium
White-tailed eagle, Haliaeetus albicilla *, †, §	BR and NBR = 250-500m	High
Osprey, Pandion haliaetus §	BR = 350-750m	Medium/High

Species	Buffer zone (m) suggestions during the breeding (BR) and non-breeding (NBR) seasons	Overall likely sensitivity to disturbance
Golden eagle, Aquila chrysaetos *	BR = 750-1000m NBR = 250-500m	High
Red kite, Milvus milvus *	BR and NBR = 150-300m	Medium
Marsh harrier, Circus aeruginosus	BR and NBR = 300-500m	Medium
Hen harrier, Circus cyaneus *, §	BR and NBR = 300-750m	Medium
Common buzzard, Buteo Buteo	BR and NBR = 100-200m	Low/Medium
Honey buzzard, Pernis apivorus	BR = 100-200m	Medium
Northern goshawk, Accipiter gentilis	BR = 300-500m	Medium
Kestrel, Falco tinnunculus	BR = 100-200m NBR = ≤50m	Low/Medium
Eurasian hobby, Falco subbuteo	BR = 200-450m	Medium
Peregrine falcon, Falco peregrinus	BR = 500-750m NBR = ≤200m	Medium
Merlin, Falco columbarius	BR = 300-500m NBR = ≤200m	Medium
Eurasian oystercatcher, Haematopus ostralegus	BR = 50-100m NBR = 150-300m	Medium
Ringed plover, Charadrius hiaticula	BR = 100-200m NBR = 100-300m	High
Grey plover, Pluvialis squatarola	NBR = 150-300m	Medium
Golden plover, Pluvialis apricaria	BR and NBR = 200-500m	Medium
Dunlin, Calidris alpina	BR = 100-200m NBR = 150-300m	Medium
Red knot, Calidris canutus	NBR = 100-300m	Medium
Purple sandpiper, Calidris maritima	BR and NBR <300m	Low/Medium
Wood sandpiper, Tringa glareola	BR = 150-300m	Medium
Common redshank, Tringa totanus	BR = 100-200m NBR = 200-300m	Medium
Greenshank, Tringa nebularia	BR and NBR = 300-500m	Medium/High
Black-tailed godwit, Limosa limosa	BR and NBR = 100-200m	Medium
Bar-tailed godwit, Limosa lapponica	NBR = 200-300m	Medium
Eurasian curlew, Numenius arquata	BR = 200-300m NBR = 200-650m	High
Whimbrel, Numenius phaeopus	BR and NBR = 100-300m	Medium
Red-necked phalarope, Phalaropus lobatus	BR <50m	Low
Little tern, Sternula albifrons	BR = 100-300m	Medium
Sandwich tern, Thalasseus sandvicensis	BR ≥200m	High
Common tern, Sterna hirundo	BR = 200-400m	Medium/High
Arctic tern, Sterna paradisaea	BR ≥200m	Medium
Roseate tern, Sterna dougallii	BR ≥200m	High
Snowy owl, Bubo scandiacus	NBR = 150-500m	Medium
Long-eared owl, Asio otus §	BR and NBR = 100-300m	Medium
Short-eared owl, Asio flammeus	BR and NBR = 300-500m	Medium/High
Tawny owl, Strix aluco	BR = 50-200m NBR ≥50m	Low/Medium

Species	Buffer zone (m) suggestions during the breeding (BR) and non-breeding (NBR) seasons	Overall likely sensitivity to disturbance
Barn owl, Tyto alba	BR = 50-100m NBR ≥50m	Low
Corncrake, Crex Crex	BR ≥100m	Medium
European nightjar, Caprimulgus europaeus §	BR = 150-500m	Medium/High
Kingfisher, Alcedo atthis	BR and NBR = 50-100m	Low/Medium
Crested tit, Lophophanes cristatus §	BR and NBR = 10-50m	Low
Crossbill species, Loxia spp §	BR and NBR = 50-200m	Low

Appendix B Protected Species Risk Assessment Template

<*Project name*> : Protected Species Risk Assessment

<Title including record ID and location>

Scope of Work

This method statement is applicable for <insert details of works to be undertaken>. The work comprises of:

Location and Access/Egress

<Insert details including map / plan>

Description of species, distance from planned works and ground conditions

Reference Number	BNGR letters	OS Grid reference	Place	Description	Distance from project works	Predicted project impact

<Insert details>

Programme of Works

The following works are planned within the buffer distance:

<Insert details including timing and duration>

Planned Equipment and Manpower

The operation will be carried out by the following personnel and using the following equipment:

<Insert details>

Risk Assessment/ Supervision of Work

<Insert details of baseline conditions including topography, proximity to works, existing disturbance levels, mitigation measures and operational controls, likely levels of disturbance from works and summary of risk rating (Low / Medium / High)>

Scottish & Southern Electricity Networks
TRANSMISSION

TG-NET-ENV-506

Safety, Health and Environment

Water Vole Species Protection Plan

TG-NET-ENV-506	Water Vole Species Protection Plan		Applies to Transmission ✓
Revision: 1.02	**Classification:** Internal	**Issue Date:** December 2022	**Review Date:** December 2030

	Name	Title
Author	Francis Williams	Environmental Net Gain Manager
Checked by	Alistair Watson	Consents and Environment Manager
Approved by	Richard Baldwin	Head Of Environment

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1 Introduction

This Protection Plan provides guidance and agreed procedures for the protection of water voles and their shelters during construction works on Scottish Hydro Electric Transmission (SHE Transmission) projects. The Plan contains two parts and details the procedures that must be followed where there is potential for water vole to be present (Part 1), and where a Project Licence for water vole has been issued by NatureScot to cover the project (Part 2):

Part 1 : General Protection Plan

This Part applies to all projects where water vole may be present. Part 1 outlines the responsibilities of SHE Transmission and the *Contractor* regarding protection of water vole. It also details relevant legislation, survey requirements, general mitigation measures and the requirement for licensing and mitigation.

Part 2: Project Licence Protection Plan

This is provided to *Contractors* in addition to Part 1 for large projects where a Project Licence has been issued by NatureScot to cover the work and identifies those activities and mitigation measures which are permitted under the Project Licence and those activities which require a Method Statement to be submitted to NatureScot for written approval before works can commence. This Part should be followed in conjunction with Part 1 and the relevant Project Licence to provide approved guidance and the relevant Project Licence to provide approved guidance and methodologies for carrying out work.

2 References

The documents detailed in Table 2.1 – Miscellaneous Documents, below should be used in conjunction with this document

Table 2.1 – Miscellaneous Documents

Title
Wildlife and Countryside Act 1981 (as amended in Scotland)
NatureScot Licensing

3 Part 1: General Protection Plan

3.1 Background

Water voles (*Arvicola amphibius*) are rat sized members of the rodent family which are found in habitats closely associated with waterways such as rivers and canals as well as upland areas of bog. In Scotland, they are absent from most of the islands and are under serious predation pressure from American mink (*Neovison vison*), which together with habitat loss have resulted in massive losses.

They usually have black fur in Scotland as opposed to the brown form found in England and Wales and have a short hairy tail, small eyes, a stout body with a chubby face. As suggested by the name they swim frequently and are often first noticed as they noisily 'plop' into water. Water voles predominately eat sedges and rushes although they have been known to predate on fish and invertebrates. Tormentil (*Potentilla erecta*) is a favoured plant in upland areas.

Water voles do not hibernate, but are less active during the period October to Mid-March. Females actively defend exclusive territories particularly during the May – August breeding season, during which they have up to 5 litters. Males have not been shown to defend territories and have larger home ranges. In upland areas colonies are small and discrete with high levels of colony extinction and colonisation within a widely dispersed metapopulation.

Water vole colonies are generally found in habitats with the following characteristics:

- Watercourses with banks covered in tall grass or sedge vegetation and scrub tends to be avoided
- Wet areas in uplands (up to 1000 m asl) often some distance away from 'typical' riparian habitats

Wet areas in uplands (up to 1000 m asl) often some distance away from 'typical' riparian habitats.

Signs of Water Vole:

1. Latrines – home ranges are marked by latrines near nests, burrows and where they enter or leave water. Faeces are characteristically 'tic-tac' shaped about 12mm long and 4mm wide.
2. Prints and tracks – water vole footprints are star shaped with four toes on the forefeet and five on the hindfeet. 4 – 9 cm broad paths though vegetation near water can also be an indication of water vole activity.
3. Feeding remains / feeding stations – although these can be confused with other species, neat piles of grasses, sedges or reeds about 10 cm long cut cleanly at a 45° angle can be evidence of water voles.
4. Water vole burrows – normally entrances have a diameter of between 4 and 8 cm and can be either above or below the water level along banks of watercourses. They are generally found within 2 – 5 m of the water's edge. but may be in places relatively far away from running water particularly in upland areas.

3.2 Responsibilities

It is the *Contractor's* responsibility to comply with all the requirements of this Protection Plan where water vole may be present, and it is both the *Contractor's* and SHE Transmission's responsibility to monitor compliance with the Protection Plan. The responsibility for applying for any Licence, including a Project Licence, may vary from project to project, but all applications and mitigation works will adhere to this plan.

3.3 Legislation

Water vole is afforded partial protection under Schedule 5 of the Wildlife and Countryside Act 1981, (as amended in Scotland), This legislation makes it an offence to recklessly[1]:

- Damage or destroy or obstruct access to, any structure or place which any water vole uses for shelter or protection
- Disturb a water vole while it is occupying a structure or place which it uses for shelter or protection

This legislation means that water vole habitat is fully protected in Scotland.

NatureScot can grant licences to enable certain activities that would otherwise be an offence, to be carried out in relation to water voles and their burrows, 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 that there is no other satisfactory solution.

In granting a licence NatureScot has to take into account the consequences for water vole at a local population level, to assist this assessment NatureScot will need to see maps of the area of operations and also surrounding areas of suitable water vole habitat.

3.4 Surveying for Water Vole

1. Initial survey for water vole must be undertaken in all works areas containing suitable water vole habitat, a maximum of 12 months[2] prior to the works commencing (this includes site investigations) to allow for pre planning. In areas where water vole are identified additional pre-works survey must be carried out a maximum of 2 months prior to works commencing to ensure the availability of up-to-date information.
2. Survey must be carried out during the active season - between 1 April and 31 October (lowlands) and 1 May and 30 September (uplands) and ideally during the months of June, July or August.
3. Surveys must extend for a minimum of 10 m beyond working areas, including access tracks.
4. Surveys must be carried out by suitably qualified and experienced ecologists and will identify whether any water voles or places of shelter are likely to be affected by the works.

1.1

[1] Reckless acts would include not having or disregarding a mitigation plan aimed at protecting water vole resulting in damage, destruction or disturbance of any water vole place of shelter, or carrying out an activity which would result in an offence where the presence of water vole was foreknown.

[2] Note: Information from any previous surveys (e.g., surveys carried out to provide data for EIA or other Assessments) can be a useful guide to water vole activity in an area, particularly if burrows were recorded. However, surveys will always require to be updated if carried out more than 12 months prior to works commencing.

5. Appropriate monitoring (e.g., the use of suitable camera traps) should be undertaken where required to determine if any place of shelter is being occupied.

3.5 Review of Water Vole Survey

Once a water vole survey has been carried out, the ecologist / ECoW should review the survey results, apply the mitigation hierarchy outlined below and decide if a Licence is required (either Individual or Project) for the works.

Construction teams should be advised of existing / new constraints, together with mitigation and licensing requirements by the ecologist / ECoW.

Relevant site documentation and project information sources should be updated with new and amended information on water vole constraints as it is produced, with changes communicated to appropriate staff immediately.

3.6 Mitigation Hierarchy

There is a general presumption against works being carried out which could disturb water voles in their burrows or to destroy an occupied burrow. A hierarchical approach to mitigation of Avoidance - Disturbance - Destruction will be applied to any burrow that may be affected by works (See Figure 3.1).

Avoidance

This is the preferred option for occupied burrows identified within 10 metres of works. A protection zone of 10 metres should be marked and signed on the ground around each burrow or group or burrows with appropriate material to restrict work access.

All works personnel, machinery, vehicles and storage of materials must be restricted from entering.

Protection zones must be maintained until works are completed. Site staff should be briefed of their purpose through a Toolbox Talk and works micro-sited outwith the protection zone. If water vole disturbance can be avoided in this way, there is no need to obtain a Licence from NatureScot for the works.

Disturbance

For works within 10 metres of occupied burrows which cannot be avoided, a Licence for disturbance from NatureScot will be required (either Individual or Project).

Individual Licence applications to NatureScot should be accompanied by a Species Protection Plan which outlines how disturbance will be minimised and burrows protected, for example through screening of works and modifying protection zones.

If a Project Licence is in place, the methodology detailed in Part 2 of this document must be followed.

Displacement of water vole and destruction of burrows

In some instances, displacement of water vole for example by close strimming around burrows, followed by destruction of burrows may be necessary to allow works to go ahead. This work will always require a licence for disturbance and burrow destruction from NatureScot (either individual or project). These actions must only be undertaken as a last resort and when there is no alternative. This methodology is only likely to be effective if proposed displacement distances are less than 50 metres, and only acceptable where an experienced ecologist has confirmed that there is suitable alternative habitat for water vole burrows within 50 meters of the original burrow location. Displacement work and destruction of burrows will not be licensed during the inactive or breeding periods. Suitable times for displacement work to be carried out is as follows: late February to early April (lowlands) and late March and April (uplands). Individual Licence applications to NatureScot must be accompanied by a Species Protection Plan which outlines timings of works, how impacts to water vole will be minimised, individuals protected, and loss of burrows compensated for.

If a Project Licence is in place, a Method Statement must be submitted to NatureScot in accordance with Part 2 of this document for written approval prior to any works commencing.

Any water vole place of shelter subject to works under a Licence must be monitored during and after those works.

Live trapping and translocation of water vole, and destruction of burrows

This is a last resort action, and a justification will be required as to why there is no alternative to translocation. This work will need significant pre-planning, and the identification of a receptor site for displaced animals. If this situation is likely to arise NatureScot Licensing Team should be contacted at the earliest opportunity to discuss timings, methodologies and licensing. This work will require an individual licence from NatureScot.

3.7 Mitigation Measures

3.7.1 General Mitigation

1. The ECoW will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to water vole is delivered.
2. All works in proximity to waterbodies / watercourses must follow measures outlined in the project environmental information and Contractors Environmental Management Plan (EMP) to ensure their protection against pollution, silting and erosion.
3. An emergency procedure will be implemented by site workers if signs of water vole (e.g., latrines or animals) are encountered. All work within 10 metres will cease, and the ECoW will inspect the site and define mitigation (if required) in line with this SPP.
4. An exceptional circumstance procedure will be implemented should mitigation options not prove satisfactory in a particular case. In such a scenario, works will be halted whilst mitigation is determined on a case specific basis under consultation with NatureScot.

3.7.2 Monitoring and Reporting

1. The Environmental Representative will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to water vole is delivered.
2. Reports will be submitted to NatureScot as required by the relevant Licence.

3.8 Project Licence

A NatureScot Project Licence is likely to be the most appropriate form of Licence for any large scale and / or long running Project, which may result in a large number of minor unavoidable water vole offences. For example, multiple instances of disturbance to a number of water vole shelters over several years. A Project Licence can be used to standardise protected species mitigation / compensation, creating consistency across the project area and throughout the Project's lifespan. Project Licences do not negate the need for thorough pre-construction survey within 12 months of the planned project start date, and additional pre-construction survey within 2 months of works commencing, in areas where water voles have been found to be present. Any Project Licence application will need to be accompanied by a Mitigation / Compensation Plan and procedures for water vole included in Parts 1 and 2 of this SPP.

3.9 Individual Licence

For small scale Projects expected to be completed over relatively short timescales, which will result in a low number of unavoidable water vole offences an Individual NatureScot Licence is most likely to be appropriate. Licence applications should be accompanied by a Method Statement / Mitigation Plan and should be sent sufficiently in advance of the Project start date to ensure the licence is in place prior to work commencing. Further guidance and details of how to apply for a water vole licence can be found on the NatureScot website www.nature.scot/professional-advice/protected-areas-and-species/licensing/species-licensing-z-guide/water-voles-and-licensing

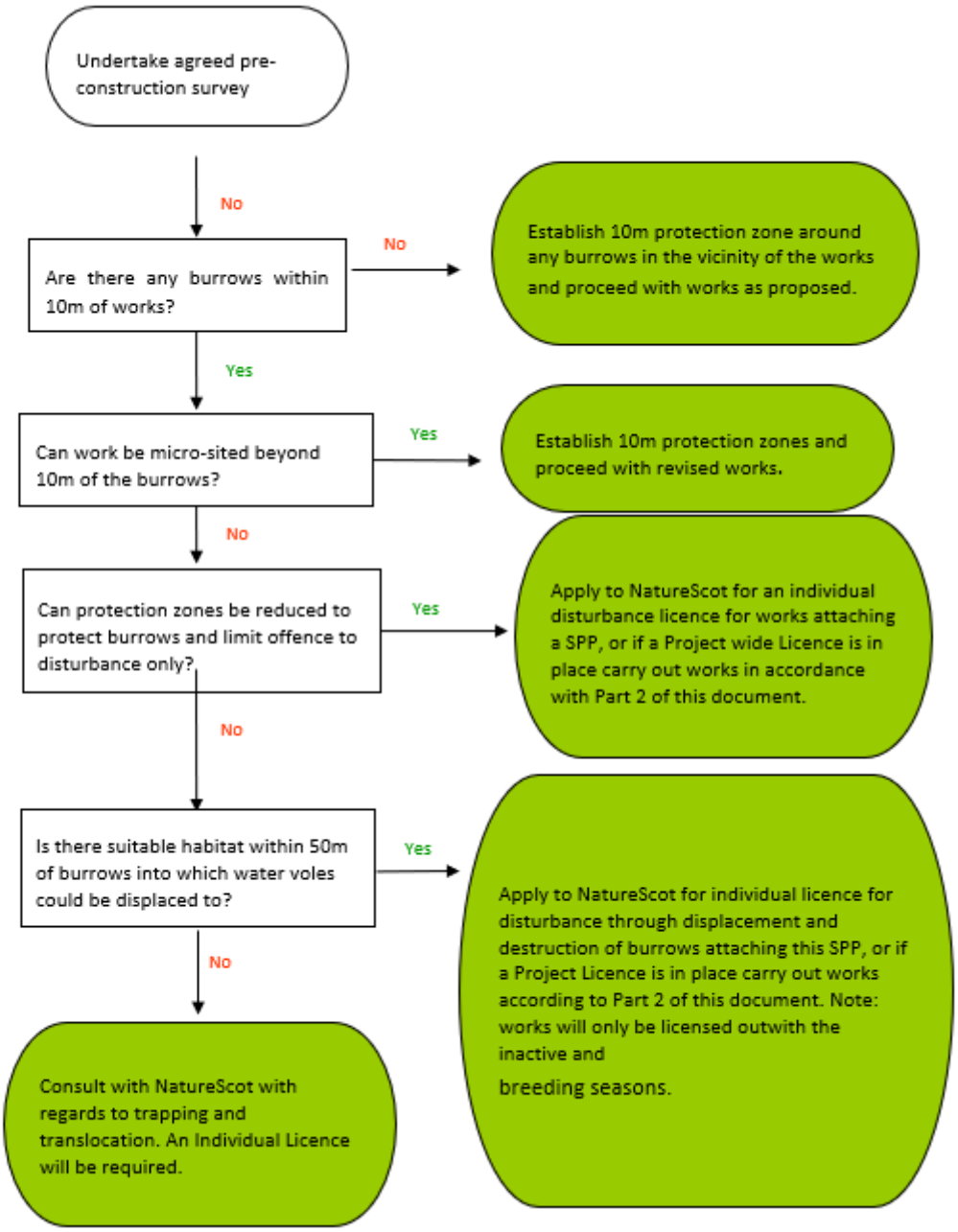

Figure 3.1 - Water Vole Decision Tree

4 Part 2: Project Licence Protection Plan

The following sections of this plan are to be read in conjunction with the Project Licence (insert Licence number) and its conditions.

As stated in the Project Licence, methodologies for certain mitigation activities permitted under the Licence are included in this Part of the SPP. More disruptive activities, listed in Section 1 below, will also require a specific Method Statement to be submitted to NatureScot Licensing Team for written approval (see Appendix A). It is the *Contractor's* responsibility to submit these Method Statements to both SHE Transmission and NatureScot for written approval. No works shall proceed without this written approval.

Sufficient time should be allowed for in the programme to carry out any consultation work and obtain necessary approvals.

The Project Licence will specify reporting requirements detailing all disturbance and destruction works carried out.

In advance of, and during construction at any location where there is the potential for a water vole to be present, it is **essential** that this plan is followed:

4.1 Works Allowed under the Project Licence

The following works may be carried out under this SPP without further approval from NatureScot, using the prescribed methodologies:

Disturbance to water voles in their places of shelter

a. In situations where it is not possible to maintain a 10 metres protection zone around a water vole burrow / place of shelter to avoid disturbance (*e.g.*, upgrade of an existing track or watercourse crossing; or construction of temporary track or watercourse crossing), but it is possible to establish a smaller protection zone (no less than 5 metres in radius) which will prevent damage or destruction of the burrows. The ECoW must mark out the reduced protection zone on the ground using appropriate marking materials and signage and ensure that it remains in place for the duration of the adjacent works.

b. The ECoW must undertake a Toolbox Talk with all contractors before the start of works to raise awareness of the presence of water vole, locations of, and restrictions posed by protection zones and any required mitigation.

c. During the construction works the ECoW must ensure that no plant and/or work personnel enter the protection zone.

d. All construction works within a 10 metres radius of water vole places of shelter must usually be completed within 1 day. Working methods must be adopted to reduce any unnecessary disturbance including the following:

- No parking of any plant or other vehicles
- No site compounds or welfare facilities

- No use of static plant and/or generators
- Artificial lighting, if required, is to be directed away from water vole habitat and riparian habitats in general
- No potential activities that may result in pollution, *e.g.*, re-fuelling, will be allowed within the protection zone. Silt control measures will be agreed prior to works with the ECoW to ensure no adverse impact on water vole habitat.

e. Use of any constructed tracks will not be subject to any subsequent restrictions on use.

4.2 Activities requiring a NatureScot Approved Method Statement

The following works require a Method Statement to be approved in writing by NatureScot Licensing Team before works can commence:

1. Displacement of water vole and destruction of burrows. Please note these activities will only be licensed to take place at the following times: late February to early April (lowlands) or late March and April (uplands) to avoid inactive and breeding periods.
2. Translocation, live trapping and destruction of burrows. Please note these activities will only be licensed to take place during March and April to avoid inactive and breeding periods.

The Method Statement template in Appendix A has been developed in conjunction with NatureScot and should be used by the Contractor / Named Agent for all submissions.

Proposed mitigation works should be agreed with NatureScot.

5 Revision History

No	Overview of Amendment	Previous Document	Revision	Authorisation
01	Transfer to new template and Nomenclature	TG-PS-LT-719 (Rev 1.00)	1.00	Richard Baldwin
02	Weblinks updated, typos corrected, and decision tree corrected	TG-PS-LT-719 (Rev 1.00)	1.01	Richard Baldwin
03	Transfer to New Template. Updates relating to NatureScot and simplification of legislation.	TG-NET-ENV-506 (Rev 1.01)	1.02	Richard Baldwin
04				

Appendix A Project Licence Method Statement Template

<PROJECT TITLE>

METHOD STATEMENT FOR WORKS UNDER *(insert licence details)*

<insert species record reference>

<insert date>

Introduction

This document, prepared on behalf of SHE Transmission provides a Method Statement for ***<insert details of works>*** to be completed under ***<insert licence details>***. These works are required in order to facilitate the delivery of the *<insert Project details>* (the Project).

Condition ***<insert No.>*** of the above Licence states that a ***<insert species>*** Protection Method Statement be submitted to (NatureScot) Licensing Team for written approval, under specific circumstances, prior to commencement of works which could affect ***<insert species>***. Therefore, no works which would *<insert licensed activity>* ***<insert species>*** shall take place without written confirmation of NatureScot approval of this method statement.

This Method Statement makes reference to the following documents:

<insert licence details>, NatureScot

Species Protection Plan (SPP): ***<insert SPP No. and title>*** Rev. X *<insert date>*

Further information is provided in Table 1: Summary of Data.

Licensable Works

Introduction

<Insert details>

Baseline Description

<Insert description, including photographs / location plan>

Table 1: Summary of Data

Reference	Easting	Northing	Date recorded	Description	Date works exclusion zone demarcated & distance

Survey Summary

<Insert details>

Description of the Proposed Licensable Works

<Insert details>

Works Duration

<Insert details>

Consideration of Alternatives

<Insert details>

Impact Assessment

<Insert details>

Method Statement Site Briefing (to be delivered to relevant staff prior to works)

Site: *<insert description>*

Reference number: *<insert species record reference>*

Client: SHE Transmission

Task: *<insert description of works>*

Prepared by: *<insert individual or Company name>*

Licensed Agent: *<insert name>*

Method statement for *<insert works description>*

Before works commence:

All relevant personnel will be made aware of the presence and location of the constraint and mitigation.

<insert details of methodology>

During works:

<insert details of methodology>

<Insert Contractor's name>

I, the undersigned, confirm receipt of this method statement and fully understand and agree to work to the conditions therein.

Signature of *Contractor's* Representative:..... Date ..../ /

Print name in full: .....

Scottish & Southern Electricity Networks
TRANSMISSION

Scottish & Southern Electricity Networks
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TG-NET-ENV-507

Safety, Health and Environment

Wildcat Species Protection Plan

TG-NET-ENV-507	Wildcat Species Protection Plan		Applies to Transmission ✓
Revision: 1.03	**Classification:** Internal	**Issue Date:** December 2022	**Review Date:** December 2030

	Name	Title
Author	Francis Williams	Environmental Net Gain Manager
Checked by	Alistair Watson	Consents & Environment Manager
Approved by	Richard Baldwin	Head Of Environment

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1 Introduction

Wildcat is a European Protected Species and is afforded a high level of protection in Scotland. This Protection Plan provides guidance and agreed procedures for the protection of wildcats and their shelters during construction works on Scottish Hydro Electric (SHE) Transmission projects.

2 References

The documents detailed in Table 2.1 - Miscellaneous Documents, should be used in conjunction with this document

Table 2.1 - Miscellaneous Documents

Title
The Conservation (Natural Habitats &c.) Regulations 1994 (as amended in Scotland)
EC Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive)
The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007
The Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019
NatureScot Licensing

3 General Protection Plan

3.1 Introduction

This Species Protection Plan applies to all projects where wildcat may be present. It outlines the responsibilities of SHE Transmission and the Contractor regarding protection of wildcat. It also details relevant legislation, survey requirements, general mitigation measures and the requirement for licensing and mitigation.

3.2 Background

Wildcats are a member of the Felidae family with a population restricted to marginal areas predominantly in northern Scotland, in essence north of the Highland Boundary Fault. In the 19th century wildcats were heavily hunted and persecuted, this combined with habitat loss reduced their numbers dramatically. It is now estimated that approximately 400 wildcats remain in Scotland, although estimates do vary.

Domestic tabby cat strongly resemble wildcat; however, they are smaller and less robust. Wildcats can easily hybridise with feral and domestic cats making it difficult to confidently identify wildcats. One diagnostic feature of a wildcat is the thick, bushy tail with black rings and a black blunt tip.

Wildcats also have distinct stripes on their flanks that are less broken or spotty than on tabby cats and hybrid cats (see Kitchener *et al.* 2005 for details[1]). They also do not have white paws.

Wildcats are solitary animals that occupy their own exclusive home range, however the exclusive home range of a male wildcat my overlap with the territories of one or a number of female wildcats. These home ranges can be very large, up to 18 km^2, but can also be much smaller depending on the density of their prey - primarily rabbits and other small mammals. Male home ranges are usually larger than female home ranges.

Wildcats are an exclusively carnivorous species. They usually inhabit woodland areas but due to the lack of suitable habitat in the UK can also be found using more open habitats such as moorland or rough grazing. Wildcats have a number of dens throughout their home range that they have access to. These dens are usually among rocks and boulders and rocky cairns on hillsides and can also be in abandoned fox earths, badger setts and rabbit burrows as well as among tree roots. Females use different dens to give birth and rear kittens than they do to shelter in.

Wildcats breed predominantly between January and March and give birth to their young between April and May, however they can breed at any time during the year. The female is the sole provider for the kittens bringing live prey to the den from when they are 3 weeks old, and she will stop producing milk at 6-7 weeks. The young usually leave their mothers and become independent at around 5-6 months old. Signs of wildcat include (although these can be indistinguishable from feral and hybrid cats);

- Feeding signs – prey remains may be left inside or outside of dens
- Wildcat tracks and scats – wildcats may mark their home range on prominent features such as trees and boulders on tracks by spraying urine or leaving scats
- Claw marks – wildcats scratch the bark of trees to mark their home range
- Places of shelter – dens are usually marked my urine sprays or scats

Due to their nocturnal activity, it can be difficult to confirm the presence of wildcats at suspected dens, and to be sure that the individual is a pure wildcat, therefore camera traps may be required to positively identify a wildcat and confirm its presence in the area.

3.3 Responsibilities

It is the *Contractor's* responsibility to comply with all the requirements of this Species Protection Plan where wildcat may be present, and it is both the *Contractor's* and SHE Transmission's responsibility to monitor compliance with this Species Protection Plan. The responsibility for applying for any licence, may vary from project to project, but all applications and mitigation works will adhere to this plan.

1.1

[1] Kitchener AC, Yamaguchi N, Ward J and Macdonald DW. 2005. A diagnosis for the Scottish wildcat (Felis silvestris): a tool for conservation for a critically endangered felid. Animal Conservation (8): 223-237.

3.4 Legislation

Wildcat 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 into Scottish law by The Conservation (Natural Habitats &c.) Regulations 1994 (as amended in Scotland). The protection has remained operable in Scotland following amendments of the Regulations by The Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019. Wildcat is listed on Schedule 2 of The Conservation (Natural Habitats &c.) Regulations 1994. The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007 enhanced this protection. Current Legislation means that wildcat and their shelters are fully protected in Scotland. Guidance on the protection given to wildcat and their shelters is available on the NatureScot website

https://www.nature.scot/plants-animals-and-fungi/mammals/land-mammals/wildcats

In summary, it is illegal to:

- Deliberately or recklessly1 kill, injure or take (capture) a wildcat;
- Deliberately or recklessly disturb or harass a wildcat; and
- Damage, destroy or obstruct access to a breeding site or resting place of a wildcat (i.e., a wildcat shelter).

Licences may be granted for certain purposes that would otherwise be illegal / cause an offence; such licences for development work must be applied for from NatureScot, licences may be granted for imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment. Further information on licensing and wildcats can be found on the NatureScot website https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/species-licensing-z-guide/wildcats-and-licensing.

3.5 Surveying for Wildcat

1. Surveys for wildcat must be undertaken in all works areas containing suitable wildcat habitat, a maximum of 12 months[2] prior to works commencing, (this includes site investigations).
2. Surveys must extend for a minimum of 200 m beyond working areas, including access tracks.

1.1

[1] Reckless acts would include not having or disregarding a mitigation plan aimed at protecting wildcat resulting in killing, injury, and/or disturbance of any wildcat or wildcat place of shelter, or carrying out an activity which would result in an offence where the presence of wildcat was foreknown.

[2] Note: Information from any previous surveys (e.g., surveys carried out to provide data for Environmental Impact Assessment (EIA) or other Assessments) can be a useful guide to wildcat activity in an area, particularly if dens were recorded. However, surveys will always require to be updated if carried out more than 12 months prior to works commencing. surveys a maximum of 3 weeks prior to works are recommended.

3. Surveys must be carried out by suitably qualified and experienced ecologists and must identify whether any wildcat and/or their places of shelter are likely to be affected by the works.
4. If wildcats are known to be in the area or evidence of wildcat is found during the initial survey this should alert surveyors and staff to the need for general mitigation measures. Where mammal dens or places of shelter are found during protected mammal surveys, unless the area can be avoided more detailed survey will likely be required to identify which species are using the den. This will usually involve the use of trail cameras at possible dens for a minimum of 1 month and / or DNA testing of scat or hairs found at the possible den site. If evidence of use by wildcat is established the structure must be assumed to be a den. Paired camera traps are normally required to adequately capture images of the pelage, which are crucial for correct identification of wildcats. The ecologist or EcoW should consult NatureScot Licensing Team regarding appropriate camera trapping methodology and a licence for disturbance will be required for any camera trapping. If possible wildcat scats or tracks are found away from possible den sites, use of trail camera could be useful to establish which species left them, but the priority should be on identification of potential wildcat dens.
5. It is important to note that some intrusive surveys may require a Licence from NatureScot.

3.6 Review of Wildcat Survey

Once a wildcat survey has been carried out, the ecologist / ECoW must review the survey results, apply the mitigation hierarchy outlined below and decide if a licence is required from NatureScot for the works. If required, a licence must be obtained from NatureScot prior to any works commencing. Construction teams should be advised of existing / new constraints, together with mitigation / compensation, and licensing requirements by the ecologist / ECoW. Relevant site documentation and project information sources should be updated with new and amended information on wildcat constraints as it is produced, with changes communicated to appropriate staff immediately.

3.7 Mitigation Hierarchy

There should be a general presumption against works being carried out which will disturb wildcat in their den, or which will require the destruction of any wildcat den. A hierarchical approach to minimise the impact on wildcat should be established as follows:

Avoidance

This is the preferred option. Appropriately sized protection zones must be marked and signed on the ground by the ecologist / EcoW, with appropriate material, around all wildcat dens identified during the pre-works surveys. A 200 m radius protection zone must be established around all wildcat dens at any time of year.

All works personnel, machinery, vehicles and storage of materials must be restricted from entering

protection zones. Protection zones must be maintained until all works are completed. Site staff must be briefed of their purpose through a Toolbox Talk by the ecologist / EcoW. If wildcat disturbance can be avoided in this way, there is no need to obtain a licence from NatureScot for the works.

Disturbance

If works within protection zones cannot be avoided, a Licence for disturbance from NatureScot will always be required.

Individual licence applications for disturbance must be accompanied by a Mitigation Plan which outlines how the disturbance will be minimised, and dens protected from damage, for example through screening of works and modifying protection zones.

Wildcat are currently in unfavourable conservation status in Scotland therefore it is unlikely that a licence will be issued by NatureScot for wildcat den destruction.

3.8 Mitigation Measures

3.8.1 General Mitigation – in all wildcat areas (i.e., where no specific signs found during surveys but known to be locally present).

1. Any temporarily exposed pipe system should be capped when staff are off site to prevent wildcats from gaining access and becoming trapped.
2. All exposed trenches and holes should be provided with mammal exit ramps e.g., wooden planks or earth ramps when Contractors are off site.
3. An emergency procedure will be implemented by site workers if wildcat dens are encountered. All work within 200 m will cease, and the ECoW will inspect the site and define mitigation (if required) in line with this SPP.
4. An exceptional circumstance procedure will be implemented should mitigation options not prove satisfactory in a particular case. Works will be halted whilst mitigation is determined (with consultation with NatureScot Licensing Team if required).

3.8.2 Mitigation where a wildcat den is subject to disturbance (under license)

Site specific conditions will be required but may include, protection zones, timing, limits on hours of operation, lighting, noise.

Monitoring and Reporting

1. The Ecologist / Ecological Clerk of Works (EcoW) will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to wildcats is delivered.
2. Reports will be submitted to NatureScot as required by the relevant Licence.

3.9 Licensing Requirements

Licence applications must be sent into NatureScot Licensing Team sufficiently in advance of the project start date (approximately 30 days) to ensure the licence is in place prior to any work commencing.

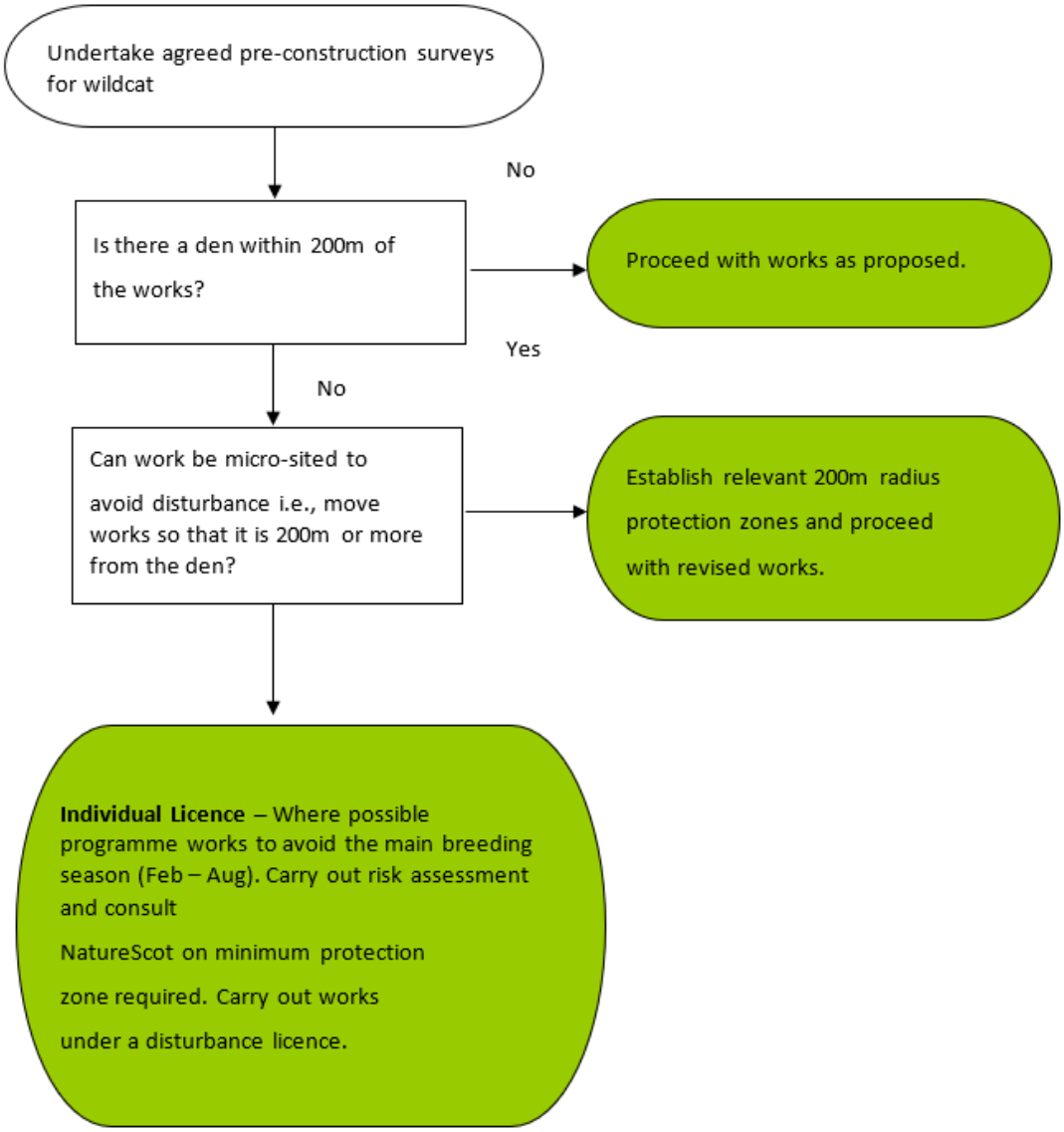

Figure 3.1 - Wildcat Mitigation Decision Tree

4 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	Transfer to new template and Nomenclature	TG-PS-LT-720 (Rev 1.00)	1.00	Richard Baldwin
02	Update to wildcat signs section	TG-NET-ENV-507 (Rev 1.00)	1.01	Richard Baldwin
03	Reworded introduction. Update to weblinks and typo changes. Changes to decision tree.	TG-NET-ENV-507 (Rev 1.01)	1.02	Richard Baldwin

No	Overview of Amendments	Previous Document	Revision	Authorisation
04	Transfer to New Template. Updates relating to NatureScot and simplification of legislation.	TG-NET-ENV-507 (REV 1.02)	1.03	Richard Baldwin
05				

Scottish & Southern Electricity Networks
TRANSMISSION

TG-NET-ENV-508

Safety Health and Environment

Pine Marten Species Protection Plan

	Name	Title
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1 Introduction

Pine marten (Martes martes) is listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded a high level of protection in Scotland. This Species Protection Plan provides guidance and agreed procedures, for the protection of pine marten and their shelters, during construction works on Scottish Hydro Electric (SHE) Transmission projects. The Plan contains two parts and details the procedures that must be followed where there is potential for pine marten to be present (Part 1), and where a Project Licence for pine marten has been issued by NatureScot Licensing Team to cover the project (Part 2).

1.1 Part 1: General Protection Plan

This Part applies to all projects where pine marten may be present. Part 1 outlines the responsibilities of SHE Transmission and the Contractor regarding protection of pine marten. It also details relevant legislation, survey requirements, general mitigation measures and the requirement for licensing and mitigation.

1.2 Part 2: Project Licence Protection Plan

This Part is provided to Contractors in addition to Part 1, for large projects where a Project Licence has been issued by NatureScot to cover the work, and identifies those activities and protection / mitigation measures which are permitted under the Project Licence and those activities which require an additional Method Statement to be submitted to NatureScot Licensing Team for written approval before works can commence. This Part should be followed in conjunction with Part 1 and the relevant Project Licence, to provide approved guidance and methodologies for carrying out work.

2 References

The documents detailed in Table 2.1 below, should be used in conjunction with this document.

Table 2.1 - Miscellaneous Documents

Title
Wildlife and Countryside Act 1981 (as amended in Scotland)
NatureScot Licensing

3 Part 1: General Protection Plan

3.1 Background

Pine martens are a member of the mustelid family with a population distributed throughout northern Scotland extending down to the northern boundary of the central belt and including a number of the islands including Mull and Skye. There is also a population in Dumfries and Galloway. Following the dramatic reduction in numbers of pine martens in the 19th century they are currently undergoing resurgence due in part to the legal protection they are afforded under the Wildlife and Countryside Act 1981.

Pine martens are solitary territorial animals. Although the edges of territories may overlap slightly, separate individuals are rarely found in close proximity to each other. They generally inhabit woodland or scrubby areas as they require a large amount of cover, and spend much of their time in the canopy. Pine martens are omnivorous, consuming a diet consisting of a wide variety of animals (predominantly small mammals) as well as berries and nuts allowing them to be active all year round. Both male and female pine martens have large territories of up to 8 km2 for females and 20 km2 for males. Due to the size of their territories pine martens have a number of dens (resting places) throughout their territory. They also make breeding nests, which can either be within rocks, in hollowed out trees or in bird nests / squirrel dreys. Increasing pine martens use human habitation such as attics, sheds and other farm buildings for both places of shelter and breeding dens.

Pine marten have two stages to their breeding behaviour with mating taking place in July – August but with the implantation of the fertilised egg delayed until February - March. The young are then born 1 month later and remain with the mother for approximately 12 weeks. Pine martens are mainly active at night and dawn/dusk times, although can also be seen during the day.

Signs of Pine marten:

- Pine marten prints and tracks – five toed slightly cat like footprints only of significant use in areas with snow cover. Tracks on the edge of territories are often marked with scat which can vary considerably in size and shape depending on contents
- Pine marten shelters or dens can be either on the ground in rocky crevices or in elevated tree cavities, abandoned bird nests or owl boxes
- Pine marten scat – is 4 – 12 cm long and 0.8 – 1.8 cm in diameter with often a narrow and twisted appearance. The scats may have a musky smell likened to Parma Violets, although this can vary, and DNA analysis can be required to confirm identification

Due to their nocturnal activity, it can be difficult to confirm the presence of pine martens at suspected dens, therefore camera traps may be required to positively identify a pine marten and confirm its presence in the area.

3.2 Responsibilities

It is the *Contractor's* responsibility to comply with all the requirements of this Species Protection Plan where Pine marten may be present, and it is both the *Contractor's* and SHE Transmission's responsibility to monitor compliance with this Species Protection Plan. The responsibility for applying for any licence, may vary from project to project, but all applications and mitigation works will adhere to this plan.

3.3 Legislation

Pine marten is afforded full protection under Schedule 5 of the Wildlife and Countryside Act 1981,(as amended in Scotland). This makes it an offence to kill, injure or take a pine marten or to intentionally or recklessly[1] damage, destroy or obstruct access to any place used for shelter or for breeding. Disturbance to this species in any place used for shelter or breeding also constitutes an offence.

NatureScot can grant licences to enable certain activities that would otherwise be an offence, to be carried out in relation to pine martens and their places of shelter, subject to the following:

- 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
- That there is no other satisfactory solution.

In granting a licence NatureScot has to take into account the consequences for pine martens at a local population level, to assist this assessment NatureScot will need to see maps of the area of operations and also surrounding areas of suitable pine marten habitat.

3.4 Surveying for Pine Marten

- Surveys for pine marten must be undertaken in all works areas containing suitable pine marten habitat, a maximum of 12 months[2] prior to works commencing, (this includes site investigations), to ensure availability of up to date information on place of shelter locations
- Surveys must extend for a minimum of 100 m beyond working areas, including access tracks

1.1

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

[2] Note: Information from any previous surveys (e.g., surveys carried out to provide data for Environmental Impact Assessment (EIA or other Assessments) can be a useful guide to pine marten activity in an area, particularly if dens were recorded. However, surveys will always require to be updated if carried out more than 12 months prior to works commencing. Pre-felling surveys a maximum of 3 weeks prior to works are recommended.

- All dens must be marked to permit easy identification.
- Surveys must be carried out by suitably qualified and experienced ecologists and must identify whether any pine martens and/or their places of shelter are likely to be affected by the works.

If works during the breeding season (March to August inclusive) cannot be avoided, and breeding dens may be disturbed by works, it may also be important to establish if these dens are being used for breeding. The non- invasive method as follows must be used in the first instance: Visual observation and camera surveillance from the ground, for a period of a minimum of 14 consecutive days prior to works commencing, used to establish if the breeding den is in regular use. If regular use is established the den must be assumed to be being used for breeding purposes.

3.5 Review of Pine Marten Survey

Once a pine marten survey has been carried out, the ecologist / Ecological Clerk of Works (EcoW) must review the survey results, apply the mitigation hierarchy outlined below and decide if a licence is required from NatureScot (either Individual or Project) for the works.

If required, licences (individual or project), must be obtained by NatureScot prior to any works commencing.

Construction teams should be advised of existing / new constraints, together with mitigation / compensation, and licensing requirements by the ecologist / ECoW.

Relevant site documentation and project information sources should be updated with new and amended information on pine marten constraints as it is produced, with changes communicated to appropriate staff immediately.

3.6 Mitigation Hierarchy

There should be a general presumption against works being carried out which will disturb pine martens in their den, or which will require the destruction of any pine marten den. A hierarchical approach to minimise the works impact on pine marten should be established as follows:

Avoidance

This is the preferred option. Appropriately sized protection zones must be marked and signed on the ground by the ecologist / EcoW, with appropriate material, around all pine marten dens identified during the pre-works surveys. The breeding season (March to June inclusive) is the most sensitive time for disturbance, during this time a 100m radius protection zone must be established around all pine marten dens. Out with the breeding season, a protection zone of 30 metres radius must be established. For high noise / vibration activities (pile driving or blasting) a 100m radius protection zone around pine marten dens must be established at any time of year.

All works personnel, machinery, vehicles and storage of materials must be restricted from entering protection zones. Protection zones must be maintained until all works are completed. Site staff must be briefed of their purpose through a Toolbox Talk by the ecologist / EcoW. If pine marten disturbance can be avoided in this way, there is no need to obtain a licence from NatureScot for the works.

Disturbance

If works within protection zones boundaries cannot be avoided, a Licence for disturbance from NatureScot will be required. For small scale projects the licence may be specific to the site, for larger scale works a Project Licence may be appropriate.

Individual licence applications for disturbance must be accompanied by a Mitigation Plan which outlines how the disturbance will be minimised, and dens protected from damage, for example through screening of works and modifying protection zones.

If a Project Licence is in place, and a den being used in the breeding season will be disturbed, a Method Statement must be submitted to NatureScot for written approval in accordance with Part 2 of this document, prior to any works commencing. The Method Statement must state how works will be carried out in a way which ensures no abandonment of young.

Destruction

Destruction of dens must only be undertaken as a last resort and requires a Licence from NatureScot. Individual Licence applications to NatureScot must be accompanied by a Mitigation / Compensation Plan which outlines how disturbance will be minimised and individual pine martens protected from injury, and may include provision for the creation of an artificial den if appropriate. If destruction of a den during the breeding season is required, the plan should include details of non-invasive monitoring which will take place to ensure breeding is not taking place prior to any den destruction. Any den subject to works under Licence must be monitored during and after those works.

3.7 Mitigation Measures

3.7.1 General Mitigation

- An emergency procedure will be implemented by site workers if pine marten dens are encountered. All work within 30 m (non-breeding season) or 100 m (breeding season) will cease, and the ECoW will inspect the site and define mitigation (if required) in line with this SPP
- 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)
- An exceptional circumstance procedure will be implemented should mitigation options not prove satisfactory in a particular case. Works will be halted whilst mitigation is determined (under consultation with NatureScot Licensing Team if required)

3.7.2 Monitoring and Reporting

- The Ecologist / ECoW will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to Pine martens is delivered
- Reports will be submitted to NatureScot as required by the relevant Licence

3.8 Licensing Requirements

Licence applications must be sent into NatureScot Licensing Team sufficiently in advance of the project start date (approximately 30 days) to ensure the licence is in place prior to any work commencing.

3.9 Project Licence

A NatureScot Project Licence is likely to be the most appropriate form of licence for any large scale and / or long running project, in pine marten areas. For example, where multiple instances of disturbance to a number of pine marten resting places is anticipated over several months / years. A Project Licence can be used to standardise protected species mitigation / compensation, creating consistency across the project area and throughout the Project's lifespan. Project Licences do not negate the need for thorough pre-construction survey within 12 months and three weeks of the planned project start date.

Any Project Licence application will need to be accompanied by a Mitigation / Compensation Plan, and procedures for pine marten included in Parts 1 and 2 of this SPP.

3.10 Individual Licence

For small scale projects expected to be completed over relatively short timescales, which will result in a low number of unavoidable pine marten offences an Individual NatureScot Licence is most likely to be appropriate. Licence applications should be accompanied by a Mitigation Plan and should be sent sufficiently in advance of the project start date to ensure the licence is in place prior to work commencing. Further guidance and details of how to apply for a pine marten Licence can be found on the NatureScot website https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/species-licensing-z-guide/pine-martens-and-licensing

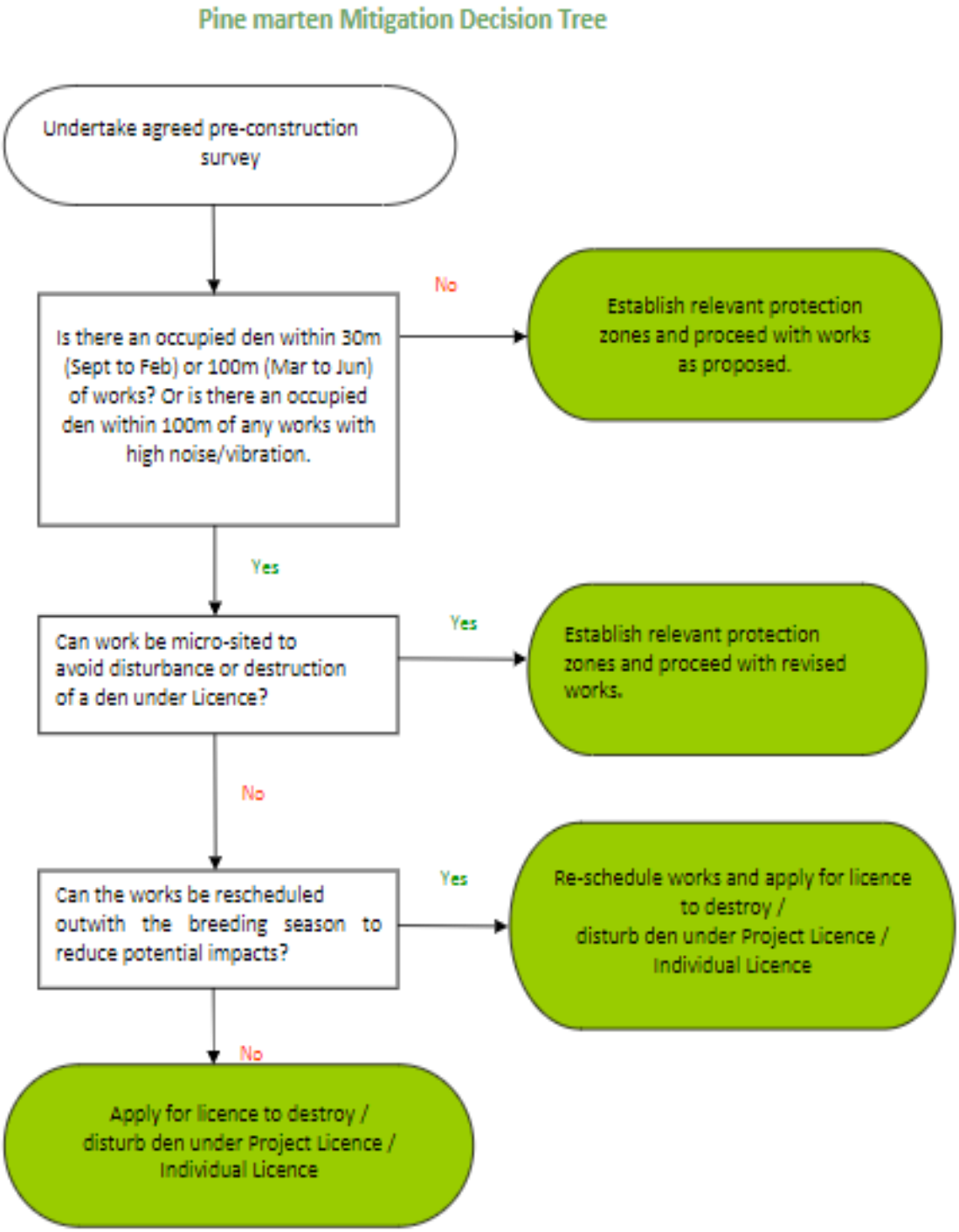

Figure 3.1 - Pine Marten Mitigation Decision Tree

4 Part 2: Project Licence Protection Plan

The following sections of this plan are to be read in conjunction with Part 1 of this document, the Project Licence (insert Licence number) and its conditions.

Mitigation activities permitted under Project Licence are included in this Part of the SPP (section A). More disruptive activities, listed in Section B below, will require a specific Method Statement to be submitted to NatureScot Licensing Team for approval, prior to works commencing (see Appendix A). It is the *Contractor*'s responsibility to submit these Method Statements to both SHE Transmission and NatureScot for written approval. No works shall proceed without this written approval.

Sufficient time should be allowed for in the programme to carry out any consultation work and obtain necessary approvals.

The Project Licence will specify reporting requirements detailing all disturbance and destruction works carried out.

In advance of, and during construction at any location where there is the potential for pine marten to be present, it is **essential** that this plan is followed:

A. Works allowed under the project licence without further approval from NatureScot Licensing Team

The following works may be carried out under this SPP without further approval from NatureScot, using the prescribed methodologies:

1. Disturbance to a den or place of shelter out with the breeding season. This includes ground and aerial dens, whether occupied, or unoccupied and located within known pine marten territory.

Methodology:

Pine marten dens must not be damaged or destroyed, but protected from potential damage by setting up a modified protection zone (size determined by the site ecologist / EcoW). Protection zones must be clearly marked on the ground and signed, and must exclude all works personnel, machinery, vehicle and storage. The protection zone must be maintained until all works are finished. Works will be undertaken in as short a period as possible to minimise the level of disturbance. A project licence return must be sent to NatureScot Licensing Team detailing all disturbance works under the Project Licence.

a. Before works commence, the ECoW will:

- Attend the site in order to check whether pine marten is present or not. If pine marten is present, then works may need to be delayed until the ECoW is satisfied suitable access / egress away from the place of shelter is safeguarded. If no pine marten is present, works can proceed
- Brief the site personnel, including contractors and subcontractors, regarding the presence of the pine marten dens and the protected status of pine marten, their dens and the conditions of this Species Protection Plan, which allows for felling and construction within 30 m of the den

- Describe the actual den and state that no machinery must drive over it or if it is in a tree the den tree must not be cut down

b. The den should be clearly marked with a blue tipped stick adjacent to the hole. For an aerial den the tree will be marked with a thick band of blue tape around the trunk.
c. For felling operations, the whole area within the 30 m protection zone, excepting the den tree itself, may be felled using a harvester.
d. Works within 30 m of the den will be undertaken within 1 day wherever possible. Where works take longer, the ECoW will carry out a pre-works check each morning for pine marten presence.

B. Activities requiring an NatureScot Approved Method Statement Prior to Works Commencing

The following activities require a formal Method Statement to be submitted and approved in writing by NatureScot Licensing Team prior to any works commencing:

a. Temporary or permanent exclusion or destruction of a den.

b. Any works within 100m of a breeding den during the breeding season.

c. Any exceptional circumstances not covered in this SPP.

The Method Statement template in Appendix A has been developed in conjunction with NatureScot and should be used by the *Contractor / Named Agent* for all submissions.

5 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	Transfer to New Template and Nomenclature	TG-PS-LT-721 (Rev 1.00)	1.00	Richard Baldwin
02	Typos, formatting and reference to other species removed.	TG-NET-ENV-508 (Rev1.00)	1.01	Richard Baldwin
03	Transfer to New Template. Updates relating to NatureScot and simplification of legislation.	TG-NET-ENG-508 (Rev1.01)	2.00	Richard Baldwin
04				

Appendix A Project Licence Method Statement Template

<PROJECT TITLE>

METHOD STATEMENT FOR WORKS UNDER (insert licence details)

<insert species record reference>

<insert date>

Introduction

This document, prepared on behalf of SHE Transmission provides a Method Statement for **<**insert details of works**>** to be completed under **<**insert licence details**>.** These works are required in order to facilitate the delivery of the <insert Project details> (the Project).

Condition **<**insert No.**>** of the above Licence states that a **<**insert species**>** Protection Method Statement be submitted to NatureScot Licensing Team for written approval, under specific circumstances, prior to commencement of works which could affect **<**insert species**>.** Therefore, no works which would <insert licensed activity> **<**insert species**>** shall take place without written confirmation of NatureScot approval of this method statement.

This Method Statement makes reference to the following documents:

<insert licence details**>,** NatureScot

Species Protection Plan (SPP): **<**insert SPP No. and title**>** Rev. X **<**insert date**>**

Further information is provided in Table 1: Summary of Data.

Licensable Works

Introduction

<Insert details**>**

Baseline Description

<Insert description, including photographs / location plan>

Appendix A, Table 1

Reference	Easting	Northing	Date recorded	Description	Date works exclusion zone demarcated & distance

Survey Summary

<Insert details>

Description of the Proposed Licensable Works

<Insert details>

Works Duration

<Insert details>

Consideration of Alternatives

<Insert details>

Impact Assessment

<Insert details>

Method Statement Site Briefing (to be delivered to relevant staff prior to works)

Site: <insert description>

Reference number: <insert species record reference>

Client: SHE Transmission

Task: <insert description of works>

Prepared by: <insert individual or Company name>

Licensed Agent: <insert name>

Method statement for <insert works description>

Before works commence:

All relevant personnel will be made aware of the presence and location of the constraint and mitigation.

<insert details of methodology>

During works:

<insert details of methodology>

<Insert Contractor's name>

I, the undersigned, confirm receipt of this method statement and fully understand and agree to work to the conditions therein.

Signature of Contractor's Representative:…… Date ..../ /

Print name in full: ……

Scottish & Southern Electricity Networks
TRANSMISSION

Scottish & Southern Electricity Networks
TRANSMISSION

TG-NET-ENV-527

Safety, Health and Environment

Wood Ant Species Protection Plan

TG-NET-ENV-527	Wood Ant Species Protection Plan		Applies to Transmission ✓
Revision: 1.00	**Classification:** Internal	**Issue Date:** March 2022	**Review Date:** March 2030

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1 General Protection Plan Introduction

This Protection Plan provides guidance and agreed procedures for the protection of wood ants during construction works on SSEN Transmission projects. The plan details the procedures that must be followed where wood ants have been observed within the construction area.

2 Background

2.1 There are three key species of wood ant, which are as follows:

Formica aquilonia (Scottish wood ant) This species has a fringe of hairs at the rear of the head which does not extend down to the compound eyes. Viewed from the side, it does not appear hairy. It builds very large mound nests, up to two metres in diameter and up to 1.5 m high. These nests are rarely isolated and are often linked by long trails to neighbouring mounds, effectively forming one huge colony.	 ©Gabor Pozsgai	 ©Jenni Stockan
Formica lugubris (Hairy or Northern wood ant) In *F. lugubris* the fringe of hairs at the rear of the head extends down to the compound eyes. There are also long hairs on the thorax and when viewed from the side, the top of the thorax looks very hairy. They build large mound nests about two metres in diameter and one metre high. Some nests exist in isolation, but large groups of interconnecting nests often occur, and may contain many hundreds of queens.	 ©Hayley Wiswell	 ©Hayley Wiswell
Formica exsecta (Narrow-headed ant)[1] The distinctive feature of this ant is the notch in the top of the head and the narrow appearance of the head. It is smaller in size compared to the other wood ants, with workers around seven millimetres long. Their nests are dome-shaped mounds, smaller in size than the other two species, about 30 cm in diameter. Note: Narrow-headed ant has a very restricted distribution: Abernethy, Glenmore, Carrbridge, Mar Lodge (all in the Cairngorms National Park), and Camghouran alongside Loch Rannoch. It's not known elsewhere in Scotland.	 © Alex Hyde	 ©Jenni Stockan

[1]*Formica exsecta is not strictly speaking a wood ant however they share a common ancestor. Therefore, F. exsecta is being considered as a wood ant for the purposes of this plan.*

2.2 The nests of all three species offer opportunities for shining guest ant (Formicoxenus nitidulus) which is about 2.8 to 3.6 mm long and lives in the colonies of the much larger species. It is difficult to detect; therefore, all wood ant nests should be considered to be potential habitat.

2.3 Further information on wood ants can be found in a 'Guide to the Wood Ants of the UK and related species', published by the Cairngorms National Park Authority in 2021. A digital copy of this guide and further guidance on relocation of wood ant nests can be found at www.woodants.org.uk.

3 Responsibilities

It is the Contractor's responsibility to comply with all the requirements of this Protection Plan where wood ants may be present, and it is both the Contractor's and SHE Transmission's responsibility to monitor compliance with the Protection Plan.

4 Legislation

4.1 Narrow-headed ant and shining guest ant are both included on the Scottish Biodiversity List.

4.2 Section 1(2)(a) of the Nature Conservation (Scotland) Act 2004 requires every public body and office-holder to have regard to the Scottish Biodiversity List as a requirement of their biodiversity duty under section 1(1) of the Act. This requirement includes SSEN Transmission as the holder of a licence under section 6(1) of the Electricity Act 1989.

5 Surveying for Wood Ants

5.1 In advance of construction a walkover will be undertaken by a qualified and experienced ecologist to check construction areas for wood ants. Once the survey has been carried out, the ecologist / Environmental Clerk of Works (ECoW) shall review the survey results and apply the mitigation hierarchy outlined below.

5.2 Ongoing checks will be undertaken throughout construction by the project ecologist. Construction teams should be advised of existing / new constraints, together with mitigation requirements by the ecologist / ECoW.

5.3 Relevant site documentation and project information sources should be updated with new and amended information on constraints as it is produced, with changes communicated to appropriate staff immediately.

6 Mitigation Hierarchy

There is a general presumption against works being carried out which could destroy wood ants. A hierarchical approach to mitigation of Avoidance – Relocation will be applied nest that may be affected (See Figure 2.1):

6.1 Avoidance

6.1.1 This is the preferred option for nests identified within construction areas. A protection zone of at least five metres around the nest should be marked and signed on the ground with appropriate material to restrict work access. This protection zone may need to be larger depending on size of nest and activity of workers around the nest. The protection zone should ideally take into consideration significant foraging routes, and 'foraged' trees if these are present to avoid a large number of workers being harmed.

6.1.2 Protection zones must be maintained until works are completed. Site staff should be briefed of their purpose through a Toolbox Talk and works micro-sited out with the protection zone.

6.2 Relocation

6.2.1 Where avoidance is not possible, the following wood ant relocation protocol shall be followed.

6.2.2 Wood ant species have different habitat requirements. The microhabitat of the affected site must be surveyed to include aspect, slope, elevation, hill-shading, canopy, location and size of trees etc. Potential receptor sites that match these requirements must be identified.

6.2.3 Wood ants are territorial and will compete with the same and other ant species. Territory differs between species but may be up to 100m from the nest. As such a survey for other ant nests within 100m of potential receptor sites will also be undertaken.

6.2.4 Wood ants are active throughout the summer, while queens hibernate during winter. These are sensitive times for the colony and relocation should not be undertaken at these times.

6.2.5 The relocation of narrow-headed ants should be avoided where at all possible as current evidence suggests a high risk or probability the nest will fail if it is relocated. Relocation should only be considered as an emergency last resort when a nest is threatened with likely imminent extinction if there is no intervention.

6.2.6 The optimum time for relocation of F. aquilonia and F. lugrubis is Spring, however it is possible in Autumn. The optimum time for relocation of F. exsecta is late summer (after August) to late autumn. The optimum temperature for relocations is between 5 to 10ºC.

6.2.7 Relocation must be carried out in fine weather and be followed by at least several days of similar weather, so that the ants can organise themselves and set about nest building. It is crucial therefore to watch for weather forecasts during the relocation season, so that optimum conditions prevail.

6.2.8 All relocations must be supervised by the ecologist / ECoW to tackle any issues arising.

6.2.9 Prior to relocation preparations are essential and include:

- The ecologist / ECoW undertaking a site survey to identify a suitable resettlement location away from construction activities. The potential resettlement site(s) should be visited in advance at different times of the year. A site which appears suitable in winter may have a completely unsuitable state in summer, and vice versa. Unsuitable factors principally include excessive shading and/or potential water-logging due to poor drainage, lack of food-source trees etc
- When deciding on a new location the following factors should be considered:
  - It should preferably have an open southerly aspect, free from shading overgrowth and with good drainage. If necessary, any shading vegetation should be cleared or thinned. A focal point for nest building, such as an old stump or decaying tree trunk or boughs, should be present, or artificially added if not. Twiggy 'brash' added over the stump or boughs will serve to provide a framework for nest building
  - It should be as similar as possible to the source site
  - It should be in a location that facilitates monitoring for as long as possible
  - Suitable tree and shrub species must be present to provide enough food in the form of honeydew from aphids and other plant-lice
  - Prepare the resettlement site by excavating a hole to at least the same size (nests can extend one metre below ground depending on the size of the nest, and underground components usually mirror those above ground)
- The ecologist / ECoW undertaking a detailed Toolbox Talk in advance of the relocation works to all personnel involved

6.2.10 When planning for relocation there are two possible methods, as outlined in Table 6.1 and below.

Table 6.1 - Planning for Relocation Methods

Method	Strengths	Weaknesses
Hand Tool Method	Less reliance on retaining nest architecture. Can allow nests to be moved in a vehicle to a distance resettlement site. Can work for any size of nest and particularly useful for large nests where digging whole nest is not feasible. Can be done using hand tools and at sites when access for machinery is not possible	Results in total loss of nest architecture, though the "layers" of material are still retained. Relies on the ability of the ants to rebuild the nest structure and thatch which they can do surprisingly quickly depending on size of colony and time of year. Best timed to seasons when the ants are active and able to recover (i.e., not immediately before hibernation and cold spells of weather).

Method	Strengths	Weaknesses
Excavator Method	Can retain nest architecture if done carefully Can make use of machinery that may already be on site.	Should only be used when nests are being moved very short distances, to avoid loss and damage to nest whilst being carried in excavator bucket. Best suited to small-medium sized nests.

6.3 Hand Tool Method

6.3.1 Tools to be used include spades, shovels, and possibly saws or axes (if roots etc are a problem). Nest transfer into the sack should preferably be done using wide, flat coal-type shovels, which are less potentially damaging than sharp digging spades. Organic Hessian-type potato sacks make the best containers, and the use of plastic sacks must be avoided. String or similar cord is necessary to tie up each sack as it is filled. Sixty litre plastic barrels with lids have also proven successful, and could be considered for this method.

6.3.2 When using hand tools shovel up as much of the massed ants and material as possible, in as few scoops as possible, in order to minimise the time taken and the disturbance to the ants. Work down as far as the soil structure will allow. Do not over-fill each hessian sack, which could lead to some crushing at the bottom, and try to include some small branches etc to alleviate pressure. Tie up each sack as quickly as possible after filling.

6.3.3 Keep the time between removal of the ants from the old location and their release at the new location as short as possible.

6.3.4 Untie the sack(s) and carefully tip the ants and nest material over the prepared nest site. After the bulk material is emptied, there will still be many ants clinging to the inside (and outside) surfaces of the sack, which should be shaken vigorously to dislodge as many as possible. The sack should be turned inside out, and then cut into two or three sections which can be placed and left on and around the nest heap. This will enable all the ants to keep together, and also ensure that any other small creatures, such as myrmecophilous beetles etc, which might be clinging to the sack, will be able to remain with the ants. The Hessian sack material will add to the overall nest framework and will eventually rot away.

6.4 Excavator Method

6.4.1 Prepare the route between the old location and resettlement site. A trial run should be undertaken to identify and remove hazards when not using existing roads or tracks prior to relocation.

6.4.2 Ensure the excavator slowly moves to the ant nest and excavates the entire nest using the bucket (ensuring minimal damage to the nests architecture occurs).

6.4.3 Care needs to be taken to ensure the nest is kept as intact as possible and where possible move the nest as one complete unit to maintain nest architecture.

6.4.4 Once the nest has been excavated ensure the bucket is covered in thermal breathable fabric coverings to help retain heat within the nest, should the transport take longer than 30 minutes. This covering will assist in preventing any ant's falling out of the bucket during transit. The excavator shall move the nest as slowly and steadily as possible (around 2.5 miles per hour).

6.4.5 Ensure the excavator places the bucket containing the ant nest into the resettlement site, ensuring retention of the nest aspect. The bucket is to be retracted slowly, ensuring the nest is gently placed into the resettlement site and limits damage of the internal structure of the nest.

6.5 Post Excavation (either method)

6.5.1 After the nest has been excavated, the excavation site should be checked by the ecologist / ECoW for any significant number of ants, ant queens or signs of nest architecture (nests can extend one metre below ground depending on the size of the nest, and underground components of the nest usually mirror those above ground). These should be gathered and taken to the resettlement site.

6.5.2 If the relocation site is in proximity to construction activities a protection zone of at least five metres around the nest should be marked and signed on the ground with appropriate material to restrict work access. This protection zone may need to be larger depending on size of nest and activity of workers around the nest. The protection zone should ideally take into consideration significant foraging routes, and 'foraged' trees if these are present to avoid a large number of workers being harmed.. If the nest is out with the construction area it should be clearly marked so it can easily be located for monitoring.

6.5.3 Where badgers are known to be present physical barriers may be required for the first year after relocation to prevent the nest being damaged or destroyed.

6.5.4 Provide supplementary sugary food (e.g. bee food dough, honey-breadwater mash, or jam) at the receptor site daily for first two weeks post-move to ensure long term success in the new site.

6.5.5 During the initial days after the relocation the old location should be checked if possible, and if necessary, remaining ants should be collected and moved to the resettlement site.

7 Monitoring

The ecologist / ECoW will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to wood ants are delivered, including:

- food supply – have the ants set up foraging routes to a foraged tree(s), which may harbour an aphid colony?
- If not, then further supplementary feeding may be required
- are the ants active and remained where they were relocated with evidence of thatch repair and/or growth in the size of the nest?

- have the ants moved to a new site of their own choosing? This often happens, sometimes after an initial period (lasting a few days to perhaps a week or so) of stability and is not a problem unless the uncertainty becomes prolonged
- where protection measures around the relocated nest have been installed, as described above, does this require to be modified and/or repaired?
- It is not unusual for the population to appear to be significantly reduced in the next season after relocation. This is due to losses during the previous year and over the winter, caused by physical injury, predators and/or 'shock' – older workers in particular may not adjust to their new surroundings. If all is well, however, losses are made up during the succeeding months and years. To ascertain success / failure, the nest shall be monitored through the first season and in the April of the following season. For the purposes of monitoring the following process is recommended as a minimum:
    - following relocation supplementary feeding should be undertaken daily for the first two weeks
    - in the third week following relocation check whether the ants have established foraging routes and decide whether to continue supplementary feeding or not
    - a month later check whether the nest has been damaged or had major disturbances
        - If so, protection measures to prevent further damage or disturbance should be considered
    - where protection measures to prevent damage by badgers are installed they can be removed after one year
    - in April of the season following relocation determine short-term success / failure to ascertain if there is any learning that can be used to update / amend the relocation process. If so, this should be reported to the SSEN Transmission Consents and Environmental Manager for the project

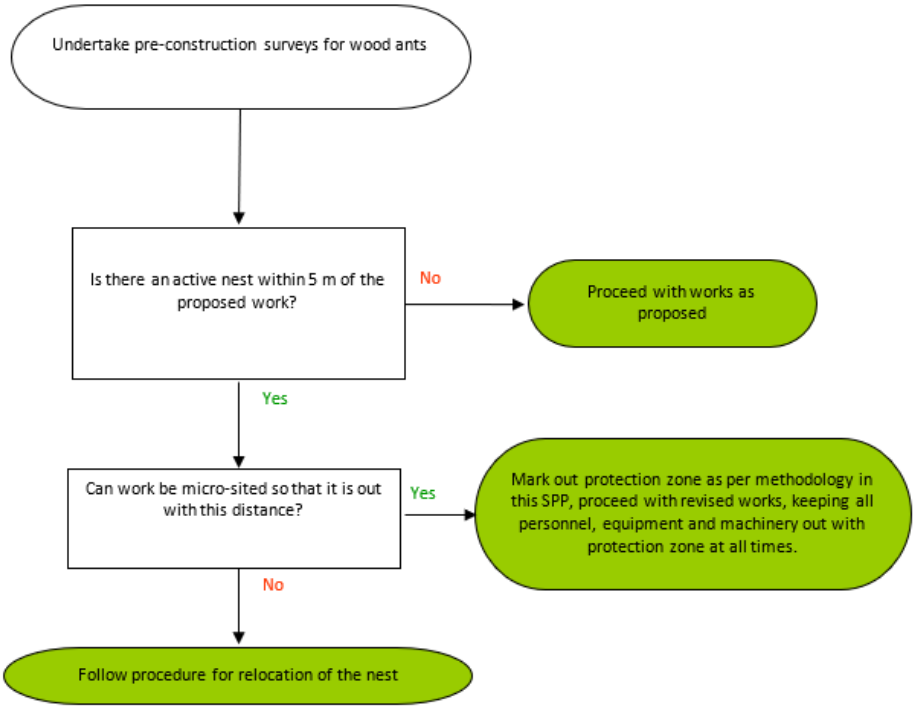

Figure 7.1 - Wood Ant Mitigation Decision Tree

8 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	Created after review by Hayley Wiswell (Cairngorms National Park), Athayde Tonhasca (NatureScot) and Jenni Stockan (James Hutton Institute)	n/a	1.00	Richard Baldwin
02				

Scottish & Southern Electricity Networks
TRANSMISSION

TG-NET-ENV-529

Environmental

Beaver Species Protection Plan

Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk

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1 Introduction

Beaver (Eurasian or European) is a European Protected Species and is afforded a high level of protection in Scotland. This Species Protection Plan (SPP) provides guidance and agreed procedures for the protection of beavers and their shelters during construction works on SSEN Transmission projects.

This SPP applies to all projects where beaver may be present. It outlines the responsibilities of SSEN Transmission and the *Contractor* regarding protection of beaver. It also details relevant legislation, survey requirements, general mitigation measures and the requirement for licensing and mitigation.

2 References

The documents detailed in

Table 2.1 - Scottish and Southern Electricity Networks Documents and Table 2.2 - Miscellaneous Documents, should be used in conjunction with this document.

Table 2.1 - Scottish and Southern Electricity Networks Documents

Reference	Title
TG-NET-ENV-512	General Environmental Management Plan (GEMP) - Working in or Near Water
TG-NET-ENV-515	General Environmental Management Plan (GEMP) - Watercourse Crossings
TG-NET-ENV-519	General Environmental Management Plan (GEMP) - Forestry

Table 2.2 - Miscellaneous Documents

Title
Campbell-Palmer, R. et al. (2016) The Eurasian Beaver Handbook: Ecology and Management of *Castor fiber*. Exeter: Pelagic Publishing, UK
The Conservation (Natural Habitats &c.) Regulations 1994 (as amended in Scotland)
The Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019
Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora
NatureScot Standing advice for planning consultations - Beavers
NatureScot Management Framework for Beavers in Scotland
NatureScot Ecological and practical interpretation of legal definitions: disturbance, breeding sites and resting places of beavers (Updated: 7 March 2019)
NatureScot Managing the impacts of beavers in Scotland. Guidance for land, property and infrastructure managers
NatureScot Beaver Mitigation Practical Guides: Protecting trees using wire mesh
NatureScot Licensing
SEPA WAT-PS-14-01: (The Controlled Activities Regulations) CAR and the Management of Beaver Structures
SEPA Water levels

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3 General Protection Plan

3.1 Background

Beaver (*Castor fiber*) are mainly nocturnal, large, semi-aquatic rodents with a characteristic large, flattened, scale-covered tail. Although they occurred across Scotland in the past before being hunted to extinction, they now have a limited distribution in Scotland with known populations primarily in Tayside, as a result of probable escapes or unofficial releases and through a Scottish Government approved trial reintroduction project in Knapdale. Other populations may exist outwith these areas.

The most sensitive period for beavers is during the kit dependency period normally between the 1st April and 16th August. They form territorial family groups (typically a monogamous pair with a number of yearlings and kits) and are largely restricted to freshwater and associated riparian broadleaved woodland habitats. Territories are related to food resources and will change over time in relation to availability of suitable food sources. They are considered to be 'ecosystem engineers' - altering their environment to create ponds and wetlands, altering sediment transport, importing woody debris into aquatic environments, creating standing dead wood and coppiced stands. Whilst overall beavers may have a positive impact on biodiversity, there can be negative impacts on certain species and habitats. It can also lead to conflicts with other land uses such as forestry, agriculture and infrastructure. Beavers form lodge and chambered burrow structures for breeding and will also form simple burrow structures for shelter and protection. The majority of beaver activity is found within 20 m of the water's edge. Aspen and willow appear to be preferred food choice for beaver, whilst conifers are generally avoided. In Scotland ash, rowan and birch are also browsed or felled. Additionally, a wide variety of herbaceous materials are also foraged including arable crops and bracken.

Beaver activity has been recorded across large parts of Tayside, spreading from the catchments of the River Tay and the River Earn. More recently, beavers have expanded their range naturally from Tayside into the Forth catchment and the Loch Lomond / Leven catchment. Further expansion is likely, with a single animal known to be in the Clyde catchment. The Scottish Government announced on the 24th November 2021 that it will actively support the expansion of the beaver population, promoting translocation, helping beavers to establish beyond where natural expansion would be expected to reach in the short term

Signs of beaver:

- Feeding remains – chiselled stumps of felled/gnawed trees which may include relatively large trees (sometimes in excess of 1 m diameter), ring barked trees and wood chips are often the most obvious signs of beaver activity. Other feeding signs include closely 'grazed lawn' areas of vascular plants, cleared areas of root or cereal crops adjacent to watercourses and feeding stations where beavers return repeatedly, evidenced by piles of peeled sticks or other feeding remains
- Beaver shelters – burrows are preferred to 'true' free-standing lodges. Burrows may extend up to 20 m from the water's edge (usually starting with an underwater entrance); however, most burrows only extend to within 10 m of a watercourse. Each beaver family will have several shelters within their territory:

- Free-standing lodges have the majority of their chambers within a woody stick pile, with below ground burrowing limited due to unsuitable ground conditions for digging or water level. A free-standing lodge will have underwater entrance(s). Free-standing lodges can be breeding sites or resting places
- Bank lodges are formed where beavers pile branches and other material on top of the bank where the depth of the bank is not great enough. The majority of chambers are within the chambered burrow below ground. Bank lodges will have underwater entrance(s). Bank lodges can be breeding sites or resting places
- Chambered burrows have multiple entrances (below the waterline) with multiple chambers dug into the riverbank. Those with a woody material roof or branches and other material piled on to top of the bank where the depth of the bank is not deep enough are bank lodges (see description above). Chambered burrows can be breeding sites or resting places
- Simple burrows are usually short (less than 5 m in length) and lack multiple chambers. They can have multiple entrances above or below the waterline (typically 2-3). NatureScot's published interpretation does not consider simple burrows to be breeding sites or resting places. However, beavers are protected from disturbance when using simple burrows for shelter and protection. In practical terms, a non-intrusive survey of a burrow that appears to have an end chamber is unlikely to be able to distinguish between burrows with a single end chamber (simple burrow) or multiple end chambers (chambered burrow). Furthermore, a burrow with a single end chamber could feasibly be used as a resting place. This Species Protection Plan proposes a precautionary approach of initially classifying any burrow that appears to have an end chamber as a chambered burrow and, where necessary, monitoring to establish if the burrow is being used a breeding site or resting place
- Short burrows with no end chamber are a type of simple burrow which may be identified if the whole burrow can be viewed (there are no bends) or if the top of the burrow collapses and the burrow can be viewed down to the water line. Short burrows with no end chamber are not considered to be breeding sites or resting places but beavers are protected from disturbance when using them for shelter and protection. They do not require a licence to destroy if monitoring establishes that a beaver is not in occupation so would not be disturbed
- Temporary nest (or couch) - temporary loose structure consisting of a small area of gathered vegetation and shredded woody material on land, used as a 'day rest' or bed or used by family group or individuals when lodge or permanent burrow is temporarily uninhabitable (e.g., as a result of flooding). Temporary nests or couches are not considered to be breeding sites or resting places but beavers are protected from disturbance when using them for shelter and protection. They do not require a licence to destroy if monitoring establishes that a beaver is not in occupation so would not be disturbed

- Dams – built from logs, branches, grass mud and stones. These are built in mainly narrow or shallow watercourses to raise water levels to protect lodges or burrows.

Dams are largely unknown on larger watercourses (>10 m wide). They are often built at pinch-points in the flow, such as at culverts or where the channel narrows around an obstruction such as a boulder or tree. *Dams over two weeks old are considered part of a breeding site or resting place where they regulate the water level*

- Beaver prints and trails – beaver paws have five clawed toes and are of a typical rodent shape although the hind feet are webbed. Tracks can appear to be three or four toed and hind paw prints are often obscured by the dragging tail
- Foraging trails (sometimes referred to as slides) – well-worn trails and pathways connecting to areas where beavers repeatedly forage on land. These have a semi-excavated appearance and can develop into canals from digging
- Canals – actively excavated channels of around 30 – 60 cm width, radiating from a waterbody, used as navigation channels for food and materials for construction. These can also form from foraging trails filling with water
- Scent-mounds or marks – used to delineate territories and communicate within territories but may not always be present if unrelated beavers are not encountered regularly. These mounds are constructed of mud, sticks and stones can be detected from a camphor-like smell. Lots of scent marking at the borders of a territory will only be found if there is another beaver territory adjacent
- Food caches – winter food stores associated with overwintering resting places, collected in the autumn. Cut branches are secured in the substrate, often just outside the entrance of the main lodge or chambered burrow in a territory being used for overwintering, and may have other branches woven through or piled on to them. Not all beaver families will make caches every winter, therefore absence of this field sign is not evidence that a lodge/burrow is not active. *A food cache is considered to be an integral part of the overwintering resting place so interference with or prevention of access to a food cache during winter months (from November to March) is likely to cause disturbance and require a licence*

3.2 Responsibilities

It is the *Contractor's* responsibility to comply with all the requirements of this Protection Plan where beaver may be present, and it is both the *Contractor's* and SSEN Transmission's responsibility to monitor compliance with the Protection Plan.

3.3 Legislation

Beaver is a European Protected Species (EPS) protected under Annexes 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 into Scottish law by the Conservation (Natural Habitats &c.) Regulations 1994 (as amended in Scotland). The protection has remained operable in Scotland following amendments of the Regulations by the Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019.

Beaver, Eurasian or European, is listed on Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994 (as amended in Scotland). Current legislation means that beaver and their breeding sites and resting places are fully protected in Scotland.

In summary it is illegal to:

- Deliberately or recklessly kill, injure, take (capture) a beaver
- Deliberately or recklessly harass a beaver or a group of beavers
- Deliberately or recklessly disturb a beaver whilst it is occupying a lodge, burrow or other place it uses for shelter or protection
- Deliberately or recklessly disturb a beaver while it is rearing or otherwise caring for its young
- Deliberately or recklessly obstruct access to a beaver breeding site or resting place, or otherwise prevent their use
- Deliberately or recklessly disturb a beaver in a manner or in circumstances likely to significantly affect the local distribution or abundance of the species
- Deliberately or recklessly disturb a beaver in a manner or in circumstances likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young

It is also an offence (of strict liability) to:

- Damage or destroy a breeding site or resting place of a beaver

NatureScot considers the breeding sites and resting places of beavers to be lodges, and chambered burrows and they are protected whilst a territory is active, regardless of whether or not they are physically occupied at that point in time.

Reckless acts would include not having or disregarding a mitigation plan aimed at protecting beaver resulting in killing, injury, and/or disturbance of any beaver, or protection of a beaver shelter; or carrying out an activity which would result in an offence where the potential to cause damage or disturbance could have reasonably been expected to have been foreseen but no action was taken to assess the risk.

Removing, notching or installing flow devices to established dams (more than two weeks old at the time that the action is taken) should be presumed to require a licence from NatureScot. This is due to the difficulty in ascertaining whether those dams protect breeding sites or resting places, particularly as burrow entrances may be concealed below water level.

NatureScot's Management Framework for Beavers in Scotland guidance on 'Managing the impacts of beavers in Scotland Guidance for land, property and infrastructure managers' lists actions that do not require a licence (subject to the protections above) which includes:

- Destroying short burrows with no end chamber
- Bank protection from burrowing activity
- Filling in canals created by beavers
- Fencing off areas to keep beavers out and use of protectors for vulnerable trees

- Removing, notching, or installing flow-devices to new dams less than two weeks old (at the time that the action affecting the dam is undertaken)

NatureScot advises that in most cases of development works a licence is unlikely to be required provided that the works will not damage lodges, breeding burrows or affect beaver dams; affect their access or access to associated foraging habitats, or otherwise interrupt normal ecological behaviour beyond a short-term temporary period.

3.4 Surveying for Beaver

1. Surveys for beaver must be undertaken in all works areas containing suitable beaver habitat within or with connectivity to recorded ranges. Initial surveys will be considered valid for a maximum of 12 months prior to the works commencing (this includes site investigations). Information from any previous surveys (e.g., surveys carried out to provide data for Environmental Impact Assessment (EIA) or other assessments) can be a useful guide to beaver activity in an area, particularly if lodges were recorded. Where beavers are a consideration, a preconstruction check must also be made of work areas a maximum of two weeks prior to the start of works, to check for new lodges, burrows or associated dams or changes in occupation of previously recorded shelters.
2. Surveys must include all suitable habitat within 50 m of working areas, including access tracks. This is increased to all suitable habitat within 100 m of when works have potential for high noise and/or vibration (piling, blasting etc.). If the works involve significant changes to hydrology (water levels or flow rates) then the survey should be extended to suitable habitat across all affected areas.
3. Surveys must be carried out by suitably qualified and experienced ecologists and will identify whether any beaver shelters or dams are likely to be affected by the works.
4. Where evidence of beavers is detected, the ecologist will provide a map showing beaver habitat and the location of beaver shelters, dams, food caches, feeding signs, beaver prints and trails, foraging trails (slides), canals and scent-mounds or marks in relation to the works.
5. Shelters will be classified as the following and will note the number of entrances identified, evidence of activity and any food caches:
    - **Lodge (free-standing / bank)**
    - **Chambered burrow**
    - **Short burrow with no end chamber**
    - **Temporary nest (or couch)**
6. Dams will each be classified as one of the following:
    - **Newly built dam:** This classification may only be used if the dam was not reported during a survey of the same extent less than two weeks before it was first detected. The survey report must specify the date and survey details of the prior survey which did not detect the dam for the avoidance of doubt and to

inform implications of delays to any works impacting that dam. Newly built dams are not considered likely to protect water levels at associated natal lodges or chambered burrows. *This will need to be reassessed if works will commence more than two weeks after any survey has classified the dam as newly built.*

- **Established dam:** Interpreted as more than two weeks old or where no prior survey has taken place in the two weeks prior to demonstrate that the dam is less than two weeks old. The record can be supported by a surveyor opinion on the potential for maintaining water levels at a lodge or chambered burrow used either for birth and rearing kits (a 'natal dam') or as a resting place outside of the kit dependency period (such as an overwintering resting place).

7. Appropriate monitoring should be undertaken where required to determine if any beaver shelter is being used for breeding or otherwise in use. Camera trap monitoring may require a licence from NatureScot. In certain circumstances an evening watch of the entrance location(s) may be more effective. The potential that a well-insulated beaver may not trigger a Passive Infrared (PIR) sensor camera trap immediately after emerging from water should be considered if relying solely on camera trap monitoring.

- **Camera trap monitoring of lodge or burrow with underwater entrances:** movement in and out of the lodges and burrows will be very difficult to establish where the entrance is underwater, therefore use should be presumed if a beaver is detected nearby. Beavers may not be active on the banks close to these structures, therefore a bait (e.g., carrots or castoreum) will be required to attract beavers to the camera over a deployment which should be no less than 2 weeks.
- Camera trap monitoring of lodge or burrow with entrances above water or temporary nest (or couch): camera trap deployment should take place over 2 weeks.
- **Evening watch of the entrance location(s):** Watches should take place over at least two nights, each for four hours beginning in the evening and ending at nightfall (the start time in Scotland can vary from 18:30 to 21:00 depending on the time of year). The two visits should be spaced sufficiently far apart so that factors arising from river or weather conditions are negated. A one-week gap should be reasonable in most circumstances but should be extended to two weeks if river or weather conditions are unfavourable. Lodge/burrow watches should not be undertaken when:
- water levels are high relative to normal levels (because the beavers may have temporarily moved)
- during heavy rain (which may mask the view of beavers in the water)
- when visibility is restricted (e.g., fog, heavy rain or snow)
- when the water in front of the lodge/burrow is iced over
- when the air temperature is below about -5°C (due to the potential that beavers will not be very active)

If a lodge or burrow shows signs of recent maintenance (fresh sticks placed on top, or mud plaster on it) then an evening watch will not be necessary to establish use since the shelter is clearly in-use. A food-cache located in front of a lodge or burrow during the winter is also evidence that the shelter is in-use.

3.5 Review of Beaver Survey

Once a beaver survey has been carried out, the ecologist / Ecological Clerk of Works (ECoW) should review the survey results, apply the mitigation hierarchy outlined below and decide if a licence is required for the works.

Construction teams should be advised of existing / new constraints, together with mitigation and licensing requirements by the ecologist / ECoW.

Relevant site documentation and project information sources should be updated with new and amended information on beaver constraints as it is produced, with changes communicated to appropriate staff immediately.

All records of beaver activity are required to be submitted to SSEN Transmission in a format compatible with SSEN Transmission's GIS and must comply with the current data standard.

3.6 Mitigation Hierarchy

There is a general presumption against works being carried out which could disturb beavers in their place of shelter or requiring the destruction or exclusion of any lodge or chambered burrow. A hierarchical approach to mitigation of Avoidance - Disturbance - Destruction will be applied to any lodge / place of shelter that may be affected (see Appendix A Beaver Mitigation Decision Tree).

Beavers demonstrate a particular tolerance to human activities and appear to be undisturbed by the presence of people, road traffic or land management activities. NatureScot are of the opinion that land-use practices and other activities that avoid damage to lodges and chambered burrows, or dams that protect them, are unlikely to result in an offence and that specifying disturbance-free protection zones is not necessary. This SPP considers high noise and vibration activities and other construction activities that may impact on the integrity of structures and shelters used by beavers so proposes the use of protection zones which are subject to Risk Assessment.

Avoidance

This is the preferred option for all lodges, burrows and temporary nest (or couch) identified. The default protection zone will be 50 m from the closest part of a lodge, the nearest detected entrance of a burrow or nearest part of a temporary nest (or couch); or 100 m from the closest part to high noise and vibration (piling, blasting etc.) activities. This larger protection zone considers not only the potential for disturbance, but also burrow collapse from vibration.

The default protection zones may be reduced if in the opinion of a suitably qualified ecologist it can be demonstrated that it will not result in damage or destruction of lodges or chambered burrows or dams protecting them; will not obstruct or otherwise deny access to the lodge or chambered burrow; and will not result in disturbance of a beaver occupying a lodge, burrow or temporary nest (or couch) or a beaver while it is rearing or otherwise caring for its young.

- Default protection zones will not be reduced around lodges or chambered burrows during the young dependency period which is normally between 1st April and 16th August without monitoring in accordance with this Species Protection Plan (for no less than two weeks) prior to the works to demonstrate that the structure is not relied upon for breeding or dependent young and those findings being considered as part of the Risk Assessment. Monitoring will continue until works within the protection zone have been completed
- Default protection zones should not be reduced overnight or within two hours of sunset / sunrise
- Free-standing lodges and bank lodges are more likely to be resilient to collapse from high vibration activities due to their woody structure

If a reduction in the protection zone is proposed, the ecologist / ECoW must complete a Risk Assessment using the form in Appendix B 'Beaver Protection Zone Reduction Risk Assessment' to support the reduction and detail why it is considered that offences will be avoided and will specify any mitigations (which could include the consideration of low ground pressure vehicles, ground protection panels, bog mats etc.) to minimise the risk to structures. Although disturbance is unlikely, care should be taken if operating near the water's edge at night where beavers are active. Although beavers are quite resilient to disturbance, changes in noise and activity levels may solicit a change in behaviour (i.e., urban beavers are used to human disturbance but other groups may not be). They are also likely to be intolerant of people at close-proximity when outside of the lodge or burrow.

The Risk Assessment must be made available for inspection by SSEN Transmission if requested.

Protection zones should be visibly marked and signed on the ground with appropriate material to restrict work access and must be maintained until works are completed. Site staff should be briefed of the purpose of the protection zone via a Toolbox Talk. Works will be micro-sited outwith the protection zone.

Activities impacting on any beaver dams shall be avoided in the first instance. Where impacts on, or manipulation, of a dam (whether newly built or established) cannot be avoided then Appendix C 'Beaver Dam Risk Assessment' must be completed to assess the risks of works to the ecological functionality of lodges or chambered burrows. Work on any established dam i.e., those older than two weeks old at the time that the action will be taken or cannot otherwise be demonstrated to be less than two weeks old at that time, will be presumed to require a licence from NatureScot unless it can be demonstrated beyond reasonable doubt that the dam does not protect a breeding site or resting place. Where surveys have identified the beaver dam is less than two weeks old it will be important to understand the programme of works. A licence will be required if there are any delays to this programme resulting in manipulation of a dam which is more than two weeks old.

There is no need to obtain a licence from NatureScot if the following can be **avoided**:

- damage to or destruction of lodges or chambered burrows and dams protecting them;
- disturbance of beavers occupying a lodge, burrow or temporary nest (or couch);
- disturbance of beavers rearing or otherwise caring for young;
- obstruction or otherwise denial of use of lodges or chambered burrows

Destruction, removal or preventing access to food caches should be avoided generally and **must be avoided** during the winter months (from November to March) when they are integral to an overwintering resting place as this could impair beaver ability to survive, breed or reproduce, or rear or otherwise care for its young.

Disturbance

If, following the advice of a suitably qualified ecologist, it is not possible to establish a protection zone which eliminates the potential for disturbance then a licence application to NatureScot will be required.

Manipulation of established dams (more than two weeks old when works commence) will be considered as capable of damaging the ecological integrity of lodges and chambered burrows (this extends to negative impacts on any food cache which is integral to an overwintering resting place between November and March inclusive) and therefore could disturb beavers so will be presumed to require a licence application to NatureScot, unless it can be demonstrated beyond reasonable doubt that the dam does not protect a breeding site or resting place (also see comments under Destruction about impacts on dams capable of resulting in the destruction of the ecological integrity of these sites in case that is also applicable).

There is a presumption against licensing disturbance to beaver lodges, natal burrows and associated dams while beavers have dependent young. The young dependency period is normally between 1st April and 16th August. Licensed activity in this situation would have to wait until the beavers had finished breeding and the young are fully mobile.

Licence applications to NatureScot should be accompanied by a Protection Plan which outlines how disturbance will be minimised and how lodges and chambered burrows and associated dams regulating their water levels will be protected. This could include screening of works and modifying protection zones.

Destruction

Destruction of lodges and chambered burrows or destruction of dams associated with these structures should only be undertaken as a last resort.

- A licence will be required from NatureScot for destruction of lodges or chambered burrows or for manipulation of a dam which is capable in resulting in the destruction of the ecological integrity of lodges or chambered burrows
- A short burrow with no end chamber or a temporary nest (or couch) will not require a licence to destroy, if monitoring demonstrates that the structure is not currently occupied by a beaver (or another protected species such as otter)

There is a presumption against licensing damage to beaver lodges, natal burrows and associated dams while beavers have dependent young. The young dependency period is normally between 1st April and 16th August. Licensed activity in this situation would have to wait until the beavers had finished breeding and the young are fully mobile.

Licence applications to NatureScot should be accompanied by a Protection Plan which outlines how impacts will be minimised and individuals protected (see NatureScot Standing advice for planning consultations – Beavers).

The plan should include monitoring to ensure breeding is not taking place in the feature and that the group has more than one lodge/chambered burrow in the immediate vicinity to switch to. It is unlikely that surveys will be able to establish the extent of a beaver territory. Seek advice from NatureScot if no alternative lodge/chambered burrow is identified or if more than one lodge/chambered burrow would need to be destroyed. Any lodge or chambered burrow subject to works under licence will be monitored during and after those works. Techniques for exclusion of lodges/chambered burrows or the provision of artificial lodges have not yet been established.

3.7 Mitigation Measures

3.7.1 General mitigation

1. All works close to waterbodies and watercourses showing signs of regular use by beavers should not take place at night or within two hours of sunset / sunrise, if possible.
2. Where works close to waterbodies and watercourses are required at night, lighting should be directed away from riparian areas. Works of a prolonged nature should consider visual screening such as a solid ply fence around 2 m tall.
3. All works close to watercourses and waterbodies must follow best practice measures outlined in the GEMPs, Scottish Environment Protection Agency (SEPA) guidance and *Contractor's* EMP to ensure their protection against pollution, silt and erosion.
4. Any temporarily exposed pipes or ducts should be capped when staff are off site to prevent beavers from gaining access.
5. All exposed trenches and holes should be provided with mammal exit ramps e.g., wooden planks or earth ramps when *Contractor*s are off site.
6. An emergency procedure should be implemented by site workers if a beaver, beaver shelter or beaver dam is unexpectedly encountered. All work within 50 m (100 m for high noise/vibration activities) should cease until a suitably qualified and experienced ecologist has inspected the site and determined the appropriate course of action. *Burrows are easy to miss because the entrances are usually underwater. Therefore, vigilance is needed by all workers.*
7. An exceptional circumstance procedure will be implemented should mitigation options not prove satisfactory in a particular case. Works will be halted whilst mitigation is determined (under consultation with NatureScot if required).
8. Beavers can be excluded from stands of trees using specification C.8 Permanent exclusion fencing described in Campbell-Palmer *et al.* (2016) using galvanised high-tensile mesh (locked-joint or weldmesh) with mesh dimension of 10 cm or less, erecting a fence of a minimum of 120 cm above ground, pegging out a skirt of around 40 cm into the ground from the direction that beavers are likely to approach from and burying a section of fence vertically. Fences within 5 m of a watercourses with steep sides underwater may be burrowed under from the bank so would need the fencing to extend vertically 0.5-1 m below normal water level and not as a horizontal skirt (so not rocky channels or those with shallow margins). NatureScot has published 'Beaver

Mitigation Practical Guides: Protecting trees using wire mesh' concerning protection of individual trees as part of their Management Framework for Beavers in Scotland.

9. Where dams are required to be removed, notched or a flow control device installed the Appendix C 'Beaver Dam Risk Assessment' must be completed and a record kept with site documents. Reducing water levels to depths of less than 70 cm at burrow or lodge entrances is likely to make the feature unsuitable for beavers. It should be presumed that this should be done in compliance with the relevant CAR guidance and strict adherence to GBRs. SEPA has published the position statement WAT-PS-14-01: (The Controlled Activities Regulations) CAR and the Management of Beaver Structures.
10. Hard bank reinforcement options may be suitable where flood defences have been compromised by burrowing. Discussion with SEPA would be required.
11. Design and locate culverts for future beaver resilience. This could include using square profiles, widths greater than 5.5 m and consideration of siting to avoid pooling of water at the inlet. Culverts should be of a specification which allows safe passage by beavers. These must also comply with CAR requirements.

3.7.2 Monitoring and Reporting

1. The Ecologist / ECoW will attend site on a regular basis throughout the construction period to ensure all environmental mitigation relevant to beaver is delivered.
2. Reports will be submitted to NatureScot as required by the relevant licence.

3.8 Licensing Requirements

Licence applications must be sent into NatureScot Licensing Team sufficiently in advance of the works start date (approximately 6 weeks) to ensure that the licence is in place prior to any work commencing. There is a presumption against licensing during the kit dependency period between 1st April and 16th August. Licensed activity in this situation would have to wait until the beavers had finished breeding and the young are fully mobile.

Licence applications should be accompanied by a Method Statement.

Further guidance and details of how to apply for a beaver licence can be found on the NatureScot website (https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/species-licensing-z-guide/beavers-and-licensing).

4 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	New document created	N/A	1.00	Richard Baldwin
02				

Appendix A Beaver Mitigation Decision Tree

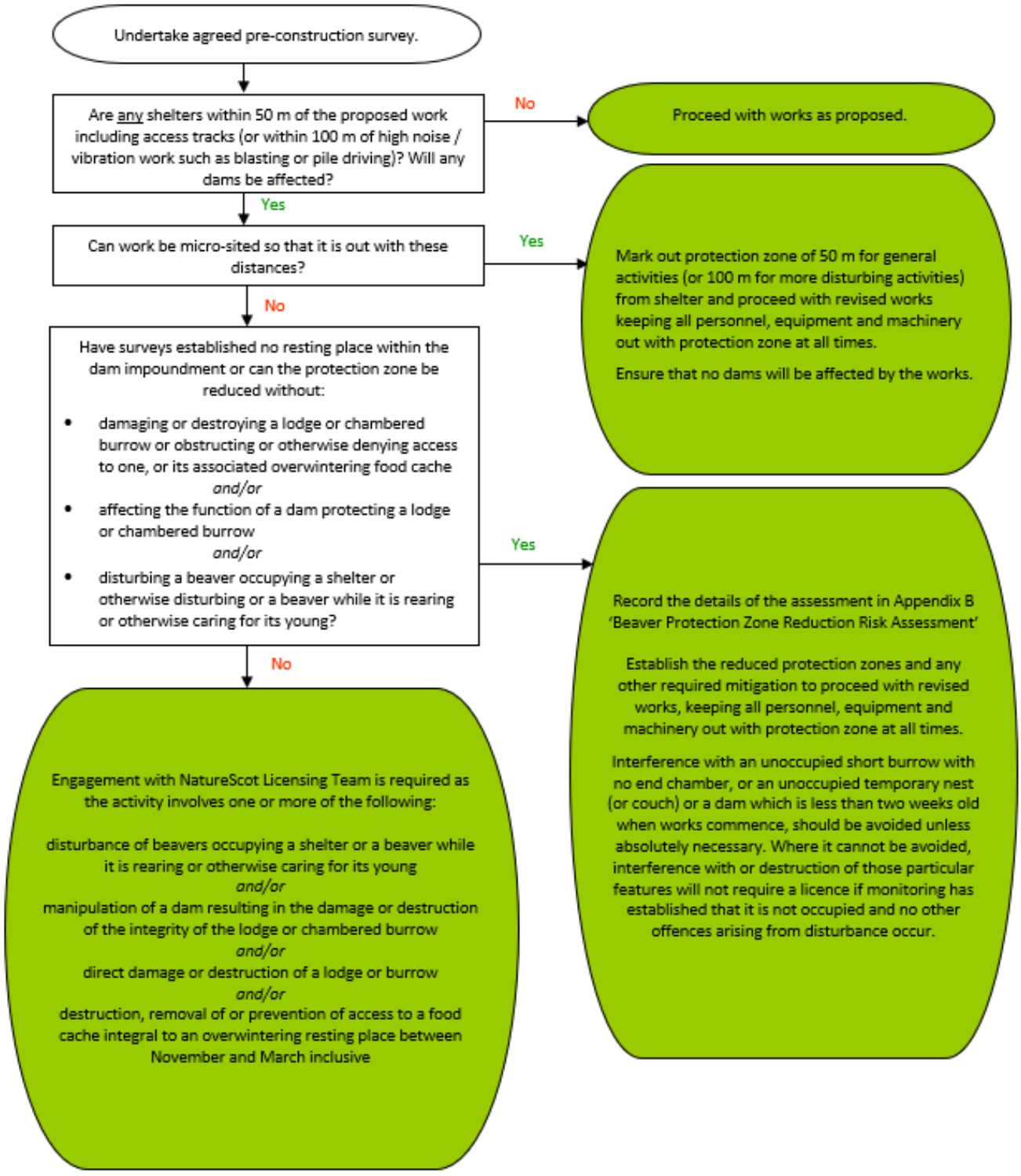

Figure A.1

Appendix B Beaver Protection Zone Reduction Risk Assessment

<*Project name*>: Beaver Protection Zone Reduction Risk Assessment

<Title including record ID and location>

Scope of Work

This method statement is applicable for <*insert details of works to be undertaken*>. The work comprises of:

Location and Access/Egress

<*Insert details including map / plan showing beaver habitat and the location of signs, shelters and dams in relation to the works and access*>

Description of beaver shelter and relationship to works (including access routes)

Table B.1

Beaver shelter name	Type of shelter *Free-standing lodge / Bank lodge / Chambered burrow / Short burrow with no end chamber / Temporary nest (or couch)*	Photo reference	Shelter location and grid reference	Description of beaver shelter and justification for category assigned	Relationship with project works *Provide the distance in metres from works (including access routes) to closest visible part of beaver shelter (this may for example be an entrance on a bank)*

Programme of Works

The following works are planned within <*50 m, or 100 m for areas of potential high noise and vibration (piling, blasting etc.)*> of the beaver shelter:

<*Insert details including timing and duration*>

Planned Equipment and Labour

The operation will be carried out by the following personnel and using the following equipment

<*Insert details*>

Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk

Risk Assessment / Mitigation / Supervision of Work

<Include:

- the details of the assessment (including the qualifications and experience of the Ecologist/ECoW undertaking the Risk Assessment);
- existing disturbance of the features (such as agricultural or forestry traffic, including any correspondence of their typical access routes with the proposed working area);
- detail the reduced protection zone extent (including distance from the nearest visible part of the beaver shelter);
- state why it has been assessed that damage to a lodge or chambered burrow will be avoided when the protection zone is reduced;
- state why it has been assessed that disturbance to a beaver occupying a shelter will be avoided when the protection zone is reduced (consideration should be given to avoiding activities with the potential to cause disturbance within a reduced protection zone overnight or within two hours of sunset / sunrise);
- state why it has been assessed that disturbance of a beaver rearing or otherwise caring for its young will be avoided when the protection zone is reduced (this should reference timing of potential disturbances with regards to any increased sensitivity to the proposed activities during the kit dependency period of 1st April to 16th August);
- explain why it has been assessed that the works will not obstruct or otherwise deny use of a lodge or chambered burrow;
- if the works are proposed to take place between November and March inclusive if a food cache is integral to the overwintering resting place and how it has been taken into account; and
- detail mitigation required to avoid offences.>

Summary of reduced protection zone distance and controls relating to beaver shelter

Table B.2

Beaver shelter name	Shelter location and grid reference	Proposed reduced protection zone distance (metres)	Mitigation measures	Proposed monitoring of shelter and controls

Appendix C Beaver Dam Risk Assessment

<*Project name*>: Beaver Dam Risk Assessment

<Title including record ID and location>

Scope of Work

This method statement is applicable for <*insert details of works to be undertaken*>. The work comprises of:

Location and Access/Egress

<*Insert details including map / plan showing beaver habitat and the location of signs, lodges or burrows and dams in relation to the works and access*>

Description of beaver dam

Table C.1

Beaver dam name	Photo reference	Feature location and grid reference	Details of any beaver shelters with the potential of having water levels maintained by the dam	Dam manipulation works proposed and anticipated implications on water levels at associated beaver lodge or chambered burrow

Evidence that dam is newly built

Date that dam was first detected and details of surveyor: <*Include details of the surveyor*>

Description of dam and approximate water depth at any associated beaver lodge or chambered burrow: <*Include details of any associated overwintering food cache if the works are proposed to take place between November and March inclusive* >

Date and details any recent prior survey during which the dam had not been detected: <*Include details of the surveyor*>

Programme of Works

The following works are planned which will impact on the dam:

<*Insert details including timing and duration*>

Planned Equipment and Labour

The operation will be carried out by the following personnel and using the following equipment

<*Insert details*>

Risk Assessment / Mitigation / Supervision of Work

Removing, notching or installing flow devices to established dams (those more than two weeks old) is presumed to require a licence from NatureScot unless it can be demonstrated beyond reasonable doubt that the dam does not protect a breeding site or resting place. This is due to the

difficulty in ascertaining whether those dams protect breeding sites or resting places particularly as burrow entrances may be concealed below water level.

<Include:

- the details of the assessment (including the qualifications and experience of the Ecologist/ECoW undertaking the Risk Assessment);
- an assessment of the relationship of the dam to any beaver lodge or chambered burrow (and any food cache integral to an overwintering resting place if the works are proposed to take place between November and March inclusive);
- if it has been assessed that manipulation of the dam will not affect water levels at an associated lodge or chambered burrow and damage or destroy the ecological functionality of the site then detail why, making reference to previous survey details if it is classified as a 'newly built dam' less than two weeks old;
- if a dam is more than two weeks old then the risk assessment should detail the assessment undertaken under appropriate field conditions (which avoids periods following prolonged heavy rainfall and/or high water levels) which detected no evidence of recent field signs and/or camera trap monitoring over a minimum of two weeks demonstrating that there is no occupancy of associated lodges or chambered burrows (taking into account that although beavers are active all year that they may be confined to lodges and burrows under ice during extreme winter conditions);
- reference to SEPA water level data (*www.sepa.org.uk/environment/water/water-levels*); and
- mitigation required to ensure that water levels at associated lodges and chambered burrows are not compromised.