

**TERMS OF THE
THREATENED SPECIES LICENCE FOR
THE TUMUT SUB-REGION OF THE
SOUTHERN REGION**

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Preamble

Authorisation

This licence is issued to the Forestry Commission of New South Wales and any person carrying out forestry operations defined in the Integrated Forestry Operation Approval (IFOA) under Part 4 of the *Forestry and National Parks Estate Act 1998* of which this licence is Annexure B.

This licence commences on the day on which the IFOA is granted by the Ministers in accordance with Part 4 of the *Forestry and National Parks Estate Act 1998* and is to apply to the conduct of the forestry operations covered by the IFOA within the **Tumut Sub-region**.

This licence authorises the conduct of forestry operations on SFNSW estate within the **Tumut Sub-region of the Southern Region** (as shown on Map 2 of the NSW Southern Region Forest Agreement) that are likely to result in:

AMENDMENT 2
7 November 2011
Authorisation
added

1. Harm to a threatened species (being an animal) or protected fauna;
2. Harm to the Endangered Yellow-bellied Glider of the Bago Plateau (being an endangered population of animal);
3. The picking of a threatened species (being a plant) or a protected plant; or
4. Damage to the habitat of a threatened species.
5. Damage the habitat of the Endangered Yellow-bellied Glider of the Bago Plateau (being an endangered population of animal).

This licence does not authorise the carrying out of an activity that is likely to:

AMENDMENT 2
7 November 2011
Authorisation
clarified

1. Harm an endangered population or an endangered ecological community (as far as animals are concerned), other than the Endangered Yellow-bellied Glider of the Bago Plateau;
2. Result in the picking of a plant that is part of an endangered population or endangered community;
3. Damage critical habitat; or
4. Damage to the habitat of an endangered population or endangered community, other than the habitat of the Endangered Yellow-Bellied Glider of the Bago Plateau.

This licence is issued subject to the licence holder complying with the conditions and requirements set out in the licence. A contravention of the terms of this licence makes the person carrying out the forestry operations liable for an offence under the *National Parks and Wildlife Act 1974* for e.g. harming a threatened species under Section 118A of the *National Parks and Wildlife Act 1974*.

Intent

The objectives of this licence are to set out the minimum measures to protect threatened species and protect the habitat of threatened species from activities associated with timber harvesting.

The licence sets out habitat protection measures that are to apply across the forest estate in the form of general conditions. Protection of features such as: habitat trees and riparian habitats make substantial contribution to the conservation of a range of threatened species, protected fauna and protected native plants.

For those species that have been assessed as not being adequately protected by the general conditions of this licence, a series of species-specific conditions are required to ensure significant habitat features are protected around known occurrences of these species.

For those species which are particularly rare or poorly known such that it could not be determined if the general conditions were adequate for the conservation of the species and appropriate species-specific conditions could not be developed, appropriate protective measures will be developed on a case by case basis where these species occur on SFNSW estate.

An integral part of the licence is the requirement for SFNSW to conduct operational and pre-logging and pre-roading surveys to assess presence of species requiring species-specific or site-specific conditions.

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Qualifying notes

Notes provided in this licence are in italicised text within parentheses. These notes are provided to assist in the interpretation of the condition. They do not constitute a condition of the licence and, as such, are not enforceable.

Definitions and Abbreviations

Words and abbreviations used in this licence have the meaning provided below, unless otherwise stated in a particular Condition of the licence.

“AMG” means Australian Map Grid co-ordinates. This definition continues to apply to any future updated system of geographical coordinates.

“Boundary to area ratio” means the length of the boundary of an area relative to the size of the area, expressed as a proportion.

“Bumper trees” means trees used as pivot points for logs being snigged during timber extraction.

“Buffer zone” means a protective area where specified harvesting activities may only be conducted if in accordance with the relevant Condition.

“Cliff” means a rocky slope greater than 70 degrees steep and greater than three metres in height.

“Commencement date” means the date on which the IFOA is granted by the relevant Ministers in accordance with Part 4 of the FNPE Act.

“Compartment” means an area of forest designated for forestry management purposes, principally for the cutting and removal of timber. In the case of Crown-timbered Land, compartment means an area to which SFNSW conducts, permits or authorises specified forestry activities. A compartment is an area of forest identified by a compartment number and a State Forest name. Compartment boundaries are delineated on SFNSW Geographic Information System (GIS). The term may be used to describe a group of compartments or a part of a compartment covered by a single Harvesting Plan.

“CRAFTI” refers to aerial photograph interpretation undertaken as part of the regional forest assessment for the areas covered by the Forest Agreements for the Tumut Sub-region.

“Critical habitat” means critical habitat as defined by the TSC Act.

“Critical weight range” or “CWR” means the following species: Eastern Bristlebird, Brush-tailed Phascogale, Spotted-tailed Quoll, Eastern Quoll, Southern Brown Bandicoot, Long-footed Potoroo, Long-nosed Potoroo, Brush-tailed Rock Wallaby, Smoky Mouse and White-footed Dunnart.

“Dam” means a body of water held by a barrier constructed to hold back water, forming a reservoir.

“Daytime” means the time of day between sunrise and sunset.

“Den” (other than a den of a Spotted-tailed Quoll), means tree hollows and other holes, crevices or fissures in trees into or out of which the subject species is seen entering or leaving. Dens are used by mammals for roosting, sleeping, resting, breeding, raising young and communal congregations.

“Diameter at breast height over bark” or “dbhob” means the measurement of the diameter of a tree, made at a height of 1.3 metres above the ground on the uphill side of the tree, at right angles to the axis of the tree. Where the tree is branched or deformed at 1.3 metres above the ground, the measurement must be taken above or below this point where the stem becomes more cylindrical.

“Drainage line” means a channel down which surface water naturally concentrates and flows. Drainage lines exhibit one or a combination of the following features which distinguish them from drainage depressions:

- i. evidence of active erosion or deposition - e.g., gravel, pebble, rock, sand bed, scour hole, nick points; or
- ii. an incised channel of more than 30 centimetres depth with defined bed and banks;

“Dusk” means that time of the afternoon when the sun is below the horizon however there is still soft light in the sky.

“Early morning” means the time of day between sunrise and up to three hours after sunrise.

“EPA” means the Environment Protection Agency.

AMENDMENT 4
1 March 2013
Definition of 'EPA'
added

APPENDIX C - TUMUT

“Eucalypt feed tree” means mature individuals of any of the following eucalypt species: Alpine Ash *E. delegatensis*; Mountain Gum *E. dalrympleana*; Manna Gum *E. viminalis*; Black Sallee *E. stellulata*; Snow Gum *E. pauciflora*; Eurabbie *E. bicostata*.

“Exclusion zone” means a protective area where specified forestry activities, unless excepted, are prohibited under the terms of this licence.

AMENDMENT 4
1 March 2013
Definition of
'FCNSW' added

“FCNSW” means Forestry Corporation of New South Wales.

“First order stream”: Refer to Schedule 1 of this licence for definition and determination of stream order.

“Flying-fox camp” means an area where more than a hundred flying foxes congregate to roost on tree branches. These camps may contain a single species or more than one species of flying-fox.

“FNPE Act” means the *Forestry and National Park Estate Act 1998*.

“Forest Agreement” means an agreement made under Part 3 of the *Forestry and National Park Estate Act 1998*.

“Forest types” or “FT” means forest type as defined and described in “*Research Note No. 17 Forest types in New South Wales*” *Forestry Commission of New South Wales, Sydney 1989*, and/or mapped on Forestry Commission of New South Wales forest type maps.

“Fourth order stream”: Refer to Schedule 1 of this licence for definition and determination of stream order.

AMENDMENT 4
1 March 2013
Definition of
'Gliding possum'
added

“Gliding possum” means a possum of a species belonging to the genus *Petaurus*, such as a squirrel glider (*Petaurus norfolcensis*), yellow-bellied glider (*Petaurus australis*) and sugar glider (*Petaurus brevicepes*).

“Gross area” means the total area of land within a compartment (in hectares).

“Harvesting machinery” means all self propelled mechanical equipment used in the forest for harvesting operations.

“Harvesting operations” means timber felling (except miscellaneous forestry operations), construction and operation of log dumps, construction and operation of snig tracks, road construction and road re-opening.

“Hazard reduction work” has the same meaning as “bush fire hazard reduction work” as defined in the *Rural Fires Act 1997*.

“Heath and scrub” means areas dominated (greater than 50% crown cover, where crown cover is the area of ground covered by projecting the outline of the crown vertically to the ground) by woody shrubs and graminoids generally less than two metres tall at maturity, but up to seven metres tall. Heath and scrub include, but are not limited to, all areas of FT “heath” (FT no. 223) and “scrub” (FT no. 224).

AMENDMENT 4
1 March 2013
Definition of
'Hollow-bearing
tree' replaced

“Hollow-bearing tree” means a live tree in the net logging area where the base, trunk or limbs contain hollows, holes and cavities that have formed as a result of decay, injury or other damage. Such hollows may not be visible from the ground; but may be apparent from the presence of deformities such as burls, protuberances or broken limbs, or where it is apparent the head of the tree has been lost or broken off.

(Note: “Hollow-bearing tree” is also defined in Condition 5.3 (a)).

“Integrated Forestry Operations Approval” or “IFOA” means an approval granted under Part 4 the *Forestry and National Park Estate Act 1998* for the Tumut Sub-region to which this licence forms a part.

“Known or potential habitat” where it relates to flora means:

- i. a compartment with a record of the species; OR
- ii. areas consistent with “likely habitat” within the species’ “distribution”, as described in Schedule 2 of this licence.

“Known habitat” where it relates to fauna means:

- i. the area within a two kilometre radius of a record (except for Spotted-tailed Quoll and microchiropteran bats where the area within a five kilometre radius of a record constitutes known habitat);

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- ii. a record referred to in i. above includes, in addition to other types of records, a record of a species in a scat.

“Late afternoon” means the time of day between three hours before sunset and sunset.

“Late mature” means, using the modified Jacobs growth stage classification system, a tree which exhibits the following structural characteristics: crown shape irregular; a proportion of limbs dead or dying, but not fallen; branch hollows may be common, but are small to medium size. Refer to Schedule 3 of this licence.

“Log dump” means an area within a compartment where timber and other forest products are collected for processing and sorting prior to loading onto a truck.

“Mature” means, using the modified Jacobs growth stage classification system, a tree which exhibits the following structural characteristics: crown opening up with crown limbs healthy; dead branches are few throughout the crown, and when present are small; few branch hollows, and when present are very small. Refer to Schedule 3 of this licence.

AMENDMENT 4
1 March 2013
Definition of
'Mechanised
harvesting
operation added

“Mechanised harvesting operation” is an operation that involves felling trees using mechanised harvesting machinery rather than an operation that relies on felling trees using a chainsaw.

“Miscellaneous forestry operations” means the felling of timber for the construction of causeways and bridges for the purposes of forest management; OR cutting of posts for internal or boundary fencing.

“Modelled habitat” means an appropriate habitat model as agreed jointly by NPWS and SFNSW.

AMENDMENT 4
1 March 2013
Definition of
'Monthly Advice'
added

“Monthly advice” means the written advice prepared, or required to be prepared, each month by FCNSW, on forestry operations, as referred to in clause 9A of the IFOA (including Condition 3 (a) of Appendix B of this IFOA)

“NPW Act” means the *National Parks and Wildlife Act 1974*.

“NPWS” means the New South Wales National Parks and Wildlife Service.

“Nest”: A nest includes, but is not limited to, a structure built by birds, or a tree-hollow, or a site on the ground or in a cave used by birds for the purposes of the incubation and/or rearing of young. A nest also includes a site where the actual nest can not be seen or found, however there is clear evidence of breeding nearby and it is considered likely that a nest occurs nearby (i.e. within 50 metres).

“Net logging area” means, unless specified, the gross area of a compartment less Preferred Management Priority or subsequent Forest Management Zones where timber harvesting is prohibited, Stream Exclusion Zones and Ridge and Headwater Habitat exclusion zones.

“Net survey area” means the net logging area less areas of the following mapped features: inherent hazard level 4 and mapped drainage filter strips (as defined in the relevant Environment Protection Licence), and physically inaccessible areas.

“Nighttime” means the time between sunset and sunrise when it is dark.

“Non-regrowth zone” means those areas outside of the regrowth zone within the Tumut Subregion:

- (i) depicted in the Geographic Information System theme in ESRI shapefile format called “tu_regr_zne”, in the subdirectory called “Tumut_Regrowth” on the CD-Rom lodged with DOP and having the volume label “020129_1305”, and
- (ii) further described in the corresponding metadata on the CD-Rom.

(Note: The CD-Rom referred to in the above definition is available for public inspection and may also be copied for a charge, at the head office of DoP. Also under clause 63 of the non-licence terms, it is available for public inspection (but not copying) at the regional offices of SFNSW in the Southern Region).

“Outcropping rock cover” means escarpments, scree slopes (i.e. slopes covered with small loose stones), and rock outcrops (i.e. areas where rocks or exposed boulders cover more than 70% in any 0.1 hectare area).

AMENDMENT 4
1 March 2013
Definition of
'Permanent
stream' omitted

“Pick” a native plant (including a threatened species, population or ecological community) means gather, pluck, cut, pull up, destroy, poison, take, dig up, remove or injure the plant or any part of the plant.

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“Post-logging burning” means burning associated with the cutting and removal of timber which is carried out within 18 months of the timber being cut and removed.

“Potential habitat” where it relates to fauna means:

- i. modeled habitat; or
- ii. “macrohabitat” and “microhabitat” within the species “distribution”, as defined in Schedule 4 of this licence.

“Protected fauna” means those species defined as protected fauna under the *National Parks and Wildlife Act 1974*.

“Protected native plants” means those species listed on Schedule 13 of the *National Parks and Wildlife Act 1974*.

“Record”:

- Where the record pertains to fauna, includes an observation of a live or dead individual of a species, or any part of an individual (hair, feathers, skin, bone, teeth or eggs), or a sign that indicates the species’ presence (species’ call heard, tracks, diggings, incisions, species’ scat, raptor pellet, owl pellet, nest, roost or den); that is:
 - i. recorded on the NPWS Atlas of NSW Wildlife with a record reliability of 1 - 5 (1 = specimen in a public museum; 2 = specimen in other collection; 3 = voucher specimen; 4 = specialist reliability; 5 = standard reliability) and collected in the period 20 years prior to the approval of the Harvesting Plan by the relevant SFNSW Regional Manager; or
 - ii. recorded by SFNSW during pre-logging and pre-roading surveys (as required in Condition 8 of this licence), during compartment mark-up surveys (as required in Condition 5.2 of this licence), during harvesting operations; or
 - iii. any other reliable record held on SFNSW files.
- Where the record pertains to flora, any part of a plant including, but not limited to, roots, stems, branches, leaves, fruits, seeds and flowers; that is:
 - iv. recorded on the NPWS Atlas of NSW Wildlife with a record reliability of 1 - 5 (1 = specimen in a public museum; 2 = specimen in other collection; 3 = voucher specimen; 4 = specialist reliability; 5 = standard reliability) and collected in the period 20 years prior to the approval of the Harvesting Plan by the relevant SFNSW Regional Manager; or
 - v. recorded by SFNSW during pre-logging and pre-roading surveys (as required in Condition 8 of this licence), during compartment mark-up surveys (as required in Condition 5.2 of this licence), during harvesting operations; or
 - vi. any other reliable record held on SFNSW files.

A record remains valid until NPWS and SFNSW jointly agree that that record is invalid or, in the case of flora records surveys are carried out to the satisfaction of the NPWS that demonstrate the plant is no longer at the location or cannot be located.

Where a species requiring the application of a species-specific prescription is identified from within a predator scat or pellet, SFNSW may consult with the NPWS to determine where the prescription shall be applied.

A record can relate to a single individual or a number of individuals. The definition of a record relates to all previously existing and new records.

- Where the presence of a fauna species is determined from analysis of hair or scat samples conducted by a suitably experienced person, a result of 'definite' or 'probable' must be counted as a record where it refers to a threatened species listed on Schedule 1 of the TSC Act. A result of 'definite' must be counted as a record where it refers to a threatened species listed on Schedule 2 of the TSC Act.

“Recovery Plan” means a recovery plan as defined under the TSC Act or the *Endangered Species Protection Act 1992*.

AMENDMENT 4
1 March 2013
Definition of
'Record' modified

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AMENDMENT 4
1 March 2013
Definition of
'Recruitment tree'
replaced

“Recruitment tree” means a live tree of a mature or late mature growth stage (using the modified Jacobs growth stage assessment as depicted in Schedule 3) within the net logging area that is not suppressed prior to harvesting and has good potential for hollow development and long term survival.

(Note: “Recruitment tree” is also defined in Condition 5.3 (a)).

“Regrowth zone” means those areas outside of the non-regrowth zone within the Tumut Subregion:

- (i) depicted in the Geographic Information System theme in ESRI shapefile format called “tu_regr_zne”, in the subdirectory called “Tumut_Regrowth” on the CD-Rom lodged with DOP and having the volume label “020129_1305”, and
- (ii) further described in the corresponding metadata on the CD-Rom.

(Note: The CD-Rom referred to in the above definition is available for public inspection and may also be copied for a charge, at the head office of DoP. Also under clause 63 of the non-licence terms, it is available for public inspection (but not copying) at the regional offices of SFNSW in the Southern Region).

“Relevant Act” means an act of Parliament referred to in Section 33 of the *Forestry and National Parks Estate Act 1998*.

“Relevant Licence” means a licence referred to in Section 33 of the *Forestry and National Park Estate Act 1998*.

“RN 17” or “Research Note 17” means the publication: “*Research Note No. 17 Forest types in New South Wales*” *Forestry Commission of New South Wales, Sydney 1989*.

(Note: RN 17 is available for public inspection and may also be copied at regional offices of SFNSW in the Southern Region under clause 63 of the non-licence terms of the *Integrated Forestry Operations Approval for the Southern Region*.)

AMENDMENT 4
1 March 2013
Definition of
'Ridge and
Headwater
Habitat' added

“Ridge and Headwater Habitat” means the land identified in maps provided to EPA for the purpose of condition 4.1 (d) subject to any variations or exceptions noted from time to time as approved by EPA. The latest version of the map, at any given time, will be held by EPA.

“Road” means any route used for vehicular access to, and the transport of logs from, a log dump within a compartment.

“Road construction” means the construction of a road where no road previously existed.

“Road re-opening” means the clearing, scraping or treating of an existing revegetated road where any of the trees on the road have a dbhob of 20 centimetres or more.

“Rocky outcrop” means an area where rocks or exposed boulders cover more than 70% of any 0.1 hectare area (30 metres by 30 metres); OR areas with skeletal soils (areas with shallow soils where rocks are exposed), supporting heath or scrub (sometimes with occasional emergent trees); OR a combination of both. These sites may occur where the geology varies from the surrounding area (e.g. rhyolite outcrops). Rocky outcrops include, but are not limited to, all areas of FT “rock” (FT no. 234).

“Roost”: Where the roost relates to a microchiropteran bat tree roost, “roost” includes: a tree or stag where there is clear evidence that a microchiropteran bat has roosted, such as a tree with a hollow at its base within which there is an accumulation of bat excreta; OR a tree where a microchiropteran bat has been seen flying into or out of a hollow, crevice or other hole in the tree. (This definition does not relate to ‘subterranean roost sites’.)

Where the roost relates to a threatened owl roost, “roost” includes a site where an owl has been observed roosting (that is sheltering or resting during the day); OR a site where there is clear evidence that an owl has roosted such as where there are owl pellets, remains of prey, or owl excreta; OR both.

“ROTAP” means Rare or Threatened Australian plant as listed and defined in “*Rare or Threatened Australian Plants*” by J.D. Briggs and J.H. Leigh, CSIRO Australia, 1995.

“Routine road maintenance” means the clearing or treating of an existing revegetated road where the trees on the road are less than 20 centimetres dbobb.

APPENDIX C - TUMUT

AMENDMENT 4
1 March 2013
Definition of 'Sap
feed tree' replaced

"Sap feed tree" means a living tree that exhibits incisions, including V-notch incisions, made by a gliding possum for the purpose of feeding on exuding sap, which have not been fully occluded by bark or scar tissue at the time of compartment mark-up.

"Second order stream": Refer to Schedule 1 of this licence for definition and determination of stream order.

"SEPP 14" means State Environment Planning Policy No. 14 - Wetlands.

"SEPP 26" means State Environment Planning Policy No. 26 - Littoral Rainforest.

"SFNSW" means State Forests of New South Wales which is the trading name of the Forestry Commission of New South Wales.

"SFNSW estate" means land vested in the control of SFNSW.

"Snig track" means a route along which logs are hauled or dragged from the location of felling to a log dump, landing or stockpile.

"Soaks, seepages and bogs" means a depression in the ground in which water collects, on or below the surface; a place where water oozes slowly out of the ground; or a place where the ground is usually wet and spongy.

"Species new to science" means a species, sub-species or variety of plant or animal that is uniquely distinct from any other species, sub-species or variety and has not been previously described.

"Specified forestry activities" means:

- i. Timber felling (excluding miscellaneous forestry operations);
- ii. Construction and operation of log dumps;
- iii. Construction and operation of snig tracks;
- iv. Road construction (NB. routine road maintenance is not a specified forestry activity);
- v. Road re-opening;
- vi. Commercial collection of firewood;
- vii. Bush fire hazard reduction work; and
- viii. Grazing activities
- ix. Thinning.

AMENDMENT 4
1 March 2013
Definition of
'Specified forestry
activities' modified

"Spotted-tailed Quoll latrine site" means any site where three or more Spotted-tailed Quoll scats are detected within a five metre radius, or a site where a Spotted-tailed Quoll scat has been noted on more than one occasion within a five metre radius. For the purposes of this licence Spotted-tailed Quoll scats detected on roads will not constitute a latrine site. Once a latrine site has been identified it will be considered as such for the duration of this licence.

"Spotted-tailed Quoll maternal den" means any den which is used by a female Spotted-tailed Quoll with young which the juvenile Spotted-tailed Quoll occupy after becoming free from the teat until independence. For the purposes of this licence any Spotted-tailed Quoll den is considered a maternal den if it is being used during the period June to November, unless it can be demonstrated to the satisfaction of the NPWS that the individual using the den is male or that the female using the den does not have young. Once a maternal den has been identified it will be considered as such for the duration of this licence.

"Spotted-tailed Quoll permanent den" means any den site that is used by Spotted-tailed Quoll on more than one occasion. For the purposes of this licence any Spotted-tailed Quoll den is considered a permanent den unless there is documented evidence that the individual that used the den was a transient animal. Once a permanent den has been identified it will be considered as such for the duration of this licence.

AMENDMENT 4
1 March 2013
Definition of 'Stag'
omitted

AMENDMENT 4
1 March 2013
Definition of
'Statutory
reserves' modified

"Statutory reserves" means lands reserved (orgazetted) under the *National Parks and Wildlife Act 1974* as National Parks, Nature Reserves, Karst Conservation Reserves, Wilderness Areas, Wild and Scenic Rivers and State Conservation Areas and Regional Parks; and lands reserved (or gazetted) as Flora Reserves under the *Forestry Act 1916*.

APPENDIX C - TUMUT

“Stream” means any stream or watercourse shown on the relevant topographic map(s) for the compartment, from a 1:25,000 map sheet produced by the Land Information Centre (formerly the Central Mapping Authority). Where a 1:25,000 map sheet is not available for the compartment, then the best available scale map sheet produced by the Land Information Centre must be used. Determination of stream order is provided in Schedule 1 of this licence.

AMENDMENT 4
1 March 2013
Definition of
'Suitable habitat
for Broad-toothed
Rat' added

“Suitable habitat for Broad-toothed Rat” means land of greater than 0.1 hectares in area with vegetation comprised of heath and sedge/rush communities associated with saturated soil conditions. Typical ground cover is dense and is dominated by *Epacris microphylla*, *Epacris breviflora*, *Gonocarpus micranthus*, *Hakea microcarpa*, *Carex gaudichaudiana*, *Baloskion stenocoleum* (northern forests), *Baloskion australe* (southern forests) and *Deyeuxia gunnian* or any combination of these species (though not exclusively). These areas are frequently associated with but may not be confined to drainage lines, drainage depressions, wetlands and soaks, seepages and bogs.

“Third order stream”: Refer to Schedule 1 of this licence for definition and determination of stream order.

“Threatened species” means any species of plant or animal listed in Schedule 1 Part 1 (endangered species), Part 4 (presumed extinct) and Schedule 2 (vulnerable species) of the *Threatened Species Conservation Act 1995*.

“TSC Act” means the *Threatened Species Conservation Act 1995*.

“Wetland” means a vegetated depression with a seasonal, permanent or intermittent water table at or slightly above the floor of the depression. The vegetation type in a wetland typically indicates a wetter micro-environment than the surrounding country. Wetlands include, but are not limited to, all areas of SEPP 14 wetlands and all areas of FT “swamp mahogany” (FT no. 30), “paperbark” (FT no. 31), “swamp oak” (FT no. 32), “mangrove” (FT no. 33), “swamp” (FT no. 231), and “water surfaces” (FT no. 235).

1. Species Considered

1.1. Species requiring ameliorative prescriptions

- a) The Conditions of this licence apply to the threatened species of fauna and flora listed in Schedule 5 of this licence, Condition 1.2 a) i. of this licence and Condition 6.11 of this licence, and those species listed in Schedule 1 Part 4 of the TSC Act as presumed extinct.
- b) The Conditions of this licence also cover Protected Fauna and Protected Native Plants.

(Note: Schedule 5 of this licence includes tables detailing threatened fauna species that are considered adequately covered by the General Conditions and threatened fauna species that require Species-specific Conditions.)

1.2. Species requiring Site-specific Conditions

- a) The following species require the development of Site-specific Conditions in accordance with Conditions 1.2 b) and c) of this licence:

- i. *Litoria booroolongensis*, *Litoria spenceri*, *Litoria raniformis*, Eastern Quoll, Rosenberg's Monitor, Eastern Pygmy Possum and maternity roosts of *Miniopterus schreibersii*.
- ii. Species to which condition 1.3 a) applies;
- iii. Species listed on the TSC Act Schedule 1 Part 4 as presumed extinct; and
- iv. Threatened species other than those listed in Schedule 5 of this licence, and in addition to those species listed in Conditions 1.2 a) i. and 1.2 a) ii. of this licence recorded within the compartment, or within five kilometres outside the boundary of the compartment, which are likely to be affected by forestry activities.

- b) If, while compiling data pursuant to Condition 8.5, SFNSW become aware of a record of a species listed in Condition 1.2 a) of this licence within the compartment or within 100 metres outside of the boundary of the compartment (or in the case of Eastern Quoll within five kilometres outside of the boundary of the compartment), the following must apply:

- i. The NPWS must be notified by SFNSW within two working days of the record being made in order to develop an appropriate Site-specific Condition.
- ii. Specified forestry activities must not commence in the compartment until a Site-specific Condition has been developed by the NPWS and agreed to by SFNSW.
- iii. SFNSW must consult with the NPWS to consider: if the record is valid; if the record is indicative of a permanent territory or regular habitat use; appropriate management actions; and any other relevant matters.

(Note: the NPWS will consult with SFNSW in the development of a site-specific prescription. This prescription must be agreed to within 30 working days of notification, or longer if agreed.)

- c) If a species listed in Condition 1.2 a) of this licence is recorded during the carrying out of specified forestry activities in a compartment, or within 100 metres outside of the boundary of the compartment (or in the case of Eastern Quoll within five kilometres outside of the boundary of the compartment), the following must apply:

- i. Specified forestry activities must immediately cease within the compartment and within 100 metres outside the boundary of the compartment.
- ii. The NPWS must be notified by SFNSW within two working days of the record being made in order to develop an appropriate Site-specific Condition.
- iii. Within one week of the NPWS being notified of the record, the NPWS must consult with SFNSW in preparing a preliminary determination on whether specified forestry activities may re-commence in the compartment.

AMENDMENT 4
1 March 2013
Condition 1.2 a) i.
modified

AMENDMENT 4
1 March 2013
Condition 1.2 a) ii.
replaced

- iv. Unless otherwise agreed in writing by the NPWS, specified forestry activities must not recommence in the compartment until a Site-specific Condition has been developed by the NPWS and agreed to by SFNSW.
- v. SFNSW must consult with NPWS to consider: if the record is valid; if the record is indicative of a permanent territory or regular habitat use; appropriate management actions; and any other relevant matters.

AMENDMENT 4
1 March 2013
Condition 1.2 d)
and e) added and
following numbers
renumbered

- d) A Site-specific condition developed under this condition may specify that it applies to either a single record of the species concerned, or that it applies to all relevant records of the species concerned within a particular geographic area, such as the compartment or the IFOA Region.
- e) Where a Site-specific condition is issued for the IFOA Region it may include requirements for FCNSW to survey for that species.
- f) Any Site-specific Condition developed under this section must be implemented.

(Note: NPWS will consult with SFNSW in the development of a site-specific prescription. This prescription must be agreed to within 30 working days of notification, or longer if agreed.)

AMENDMENT 4
1 March 2013
Condition 1.3
replaced

1.3. TSC Act – New Listings

- a) FCNSW must comply with sub-conditions 1.3 (b) and (c) in respect of a species which is present or likely to be present in the Tumut Sub-region or in any area likely to be affected by the carrying out of Forestry Operations if:
 - i. the Scientific Committee has made a determination for the provisional listing of the species as endangered or critically endangered on an emergency basis as provided for by Division 4 of the *TSC Act*; or
 - ii. the Scientific Committee has made a preliminary determination that a proposal to insert the species into Schedule 1, 1A or 2 of the *TSC Act* should be supported; or
 - iii. a final determination listing the species as endangered, critically endangered or vulnerable under Schedule 1, 1A or 2 of the *TSC Act* has been published in the NSW Government Gazette; or
 - iv. FCNSW receives a written notification from EPA that a species is new to science and conditions 1.3 (b)-(e) must apply until further notice.
- b) FCNSW must, as far as is reasonably practicable, mitigate any adverse effect of forestry operation on animals or plants of the species and develop Site-Specific Conditions for the species in accordance with condition 1.2;
- c) In determining, for the purposes of condition 1.3 (b), how to mitigate or minimise any adverse effect of forestry operations on animals or plants of the species concerned, FCNSW must be guided by any relevant advice provided by EPA.
- d) In this condition “adverse effect” in relation to a species (or an animal or plant of a species): includes:
 - i. harm to;
 - ii. the picking of; or
 - iii. damage to any habitat of;
 the species concerned (or an animal or plant of the species concerned).

- e) Condition 1.3 (b) continues to apply until:
 - i. with respect to a species to which condition 1.3 (a) i. applies - a notice is published in the NSW Gazette to the effect that the Scientific Committee has made a final determination that the species should not be listed in Schedule 1, 1A or 2 of the *TSC Act* or 12 months has passed since the provisional listing, whichever occurs first;
 - ii. with respect to a species to which condition 1.3 (a) ii. applies - a notice is published in the NSW Gazette to the effect that the Scientific Committee has made a final determination not to insert the species in Schedule 1, 1A or 2 of the *TSC Act*;
 - iii. with respect to a species to which condition 1.3 (a) iii. applies – a determination is published in the NSW Gazette to omit the species from Schedule 1, 1A or 2 of the *TSC Act*;
 - iv. with respect to a species to which condition 1.3 (a) iv. applies - FCNSW receives a notice from EPA indicating that the notice given under condition 1.3 (a) iv. no longer applies.
- f) For the sake of clarity, in the event that a species to which condition 1.3 (a) i. or ii. later becomes a species to which condition 1.3 (a) iii. applies, condition 1.3 (b) will continue to apply despite condition 1.3 (e) i. and iii.

2. General and Transitional Provisions

2.1. General

- a) This licence has effect from 13 May 2002 to 31 December 2020.
- b) Where the application of these conditions results in twenty percent or more of the area of net logging area of a compartment being made unavailable because of exclusion zones, SFNSW may request that NPWS review the conditions applying to that compartment. Areas retained in lieu of conducting pre-logging and pre-roading surveys as described in Condition 7 b) of this licence must not be counted towards the twenty percent. In compartments where exclusion zones have been retained under Condition 6.1.2 of this licence (Large Forest Owl Landscape Approach), a maximum of 3% of the area specifically retained in the compartment as owl exclusion zones can be counted towards the twenty percent.
- c) All specified forestry activities and miscellaneous forestry operations must be conducted in accordance with the conditions of this licence.
- d) All specified forestry activities and miscellaneous forestry operations to which this licence applies must be carried out in a competent and reasonable manner.
- e) SFNSW must ensure that all employees, contractors, sub-contractors, agents or SFNSW licensees engaged in any aspect of specified forestry activities or miscellaneous forestry operations covered by this licence understand the conditions applying to the specified forestry activities or miscellaneous forestry operations prior to their involvement in those activities.
- f) SFNSW must ensure that a SFNSW employee is present at each compartment while harvesting operations are occurring under this licence for the purposes of ensuring compliance with this licence, for at least the equivalent of one full working day per week per harvesting operation.
- g) Where there is a conflict between the conditions of this licence and the documents with which this licence requires compliance, the conditions of this licence prevail.
- h) Where there is a conflict between the conditions set out in this licence and the conditions set in any other relevant licence issued to SFNSW under the *Forestry and National Parks Estate Act 1998*, SFNSW must consult with the NPWS and the agency responsible for the administration of the relevant legislation to resolve the conflict. Specified forest activities in the compartment where the conflict has occurred must cease until the conflict has been resolved.

(Note: Condition 2.1 h) refers to conflict between conditions set out in this licence and conditions of Pollution Control Licence administered by the Environmental Protection Authority and Threatened Fish Species Conservation Protocols administered by New South Wales Fisheries.)

- i) Where a record has been on the NPWS Atlas of NSW Wildlife for greater than ten years, it may be reviewed by SFNSW as to whether it can be omitted from triggering requirements for protective measures. SFNSW must consult with NPWS in conducting this review. This review must consider:
 - i. Original collection information;
 - ii. Subsequent surveys or records;
 - iii. Species Life History;
 - iv. Relevant research; and
 - v. Distribution.
- j) Where a review of a NPWS Wildlife of NSW Atlas record greater than ten years old is undertaken by SFNSW in accordance with Condition 2.1 i) above, the NPWS must approve in writing the review conducted by SFNSW prior to the rejection or acceptance of the record.

(Note: Where a condition of this licence requires a matter to be notified to the NPWS, approved by the NPWS, or some other action by the NPWS, then NPWS means the Manager, Conservation Programs and Planning Division, Southern or their delegate, unless stated otherwise.)

2.2. Transitional provisions

- a) The following definition applies for the purpose of this condition:

“Amendment” means any amendment made to this licence under *Forestry and National Park Estate Act 1998* s. 31.
- b) Transitional provisions taking effect following an Amendment are contained in schedule 8 of this licence.

3. Planning Documentation

- a) SFNSW must prepare planning documentation that demonstrates that operational planning has taken account of the requirements of the Conditions of this licence. This must include showing all exclusion zones and buffer zones on the relevant harvesting plan operational map, except where the scale of the map does not allow small area features to be adequately represented; in which case the location of the zone should be adequately indicated. The harvesting plan operational map legend must, to the greatest extent practicable, indicate to which feature or species the exclusion or buffer zones relate.
- b) The Harvesting or Operational Plan must state which Species-specific Conditions will be applied in the area of operations.
- c) The Harvesting or Operational Plan must contain the Site-specific Conditions relevant to the area of operations as approved by and provided in writing by NPWS (as per Condition 1.2 of this licence).
- d) The Harvesting or Operational Plan and any relevant planning documentation must be kept on file at the relevant SFNSW Regional Office or relevant Forest Centre.
- e) All the requirements of Conditions 3 a), b), c) and d) of this licence, including any variations approved by the NPWS, must be met prior to specified forestry activities commencing in the compartment.
- f) All records, documentation and registers required by this licence must be kept for at least three years after the action or event took place in respect of which the record has been created.
- g) All records, documentation and registers must be kept in a legible form.
- h) Copies of records, documentation and registers requested in writing by NPWS must be received by the nominated NPWS office within ten working days of the request, unless otherwise agreed.

AMENDMENT 4
1 March 2013
Condition 2.2 (a)
replaced

4. Reporting and Information Requirements

4.1. Provision of Data to the NPWS

SFNSW must provide the NPWS with:

- AMENDMENT 4**
1 March 2013
Condition 4.1 a),
b), c) and d)
replaced
- a) Harvesting Plans or Operational Plans, approved by the relevant FCNSW Regional Manager or Planning Manager, Pre-logging and Pre-reading Survey Reports, registers and maps (including electronic Geographic Information System themes and metadata) showing exclusion zones and protection zones, as requested by EPA within ten working days of the request. These can be provided as hard copy or electronically.
 - b) FCNSW must provide a colour copy of the operational and location map in accordance with Clause 9A (14 – 16) of the non licence terms of the IFOA.
 - c) FCNSW must give the monthly advice to EPA in accordance with the requirements set out in clause 9A of the non-licence provisions of the IFOA and must undertake operations in compliance with the obligations in clause 9A of the non licence provisions..
 - (i) For the avoidance of doubt, full compliance with the obligations in clause 9A of the non-licence provisions of the IFOA is an essential condition of this licence.
 - (ii) FCNSW is only required to, and may only, submit one monthly return in satisfaction of this clause and any other requirements to submit a monthly return under any other clause in the IFOA. Any monthly advice received by EPA for any given month will be taken to be the monthly advice for the purpose of this clause and any other clause under the IFOA requiring the submission of a monthly return.
 - d) Maps at an appropriate scale showing the location of Ridge and Headwater Habitat (as per Condition 5.5 of this licence) within the Tumut Sub-region within six months of the commencement date. Where this mapping has been subsequently amended with the approval of EPA (in accordance with condition 5.5 (g), amended Geographic Information System themes and metadata must be provided to EPA within 21 days of the amendment.
 - e) Records suitable for the NPWS Atlas of NSW Wildlife for all threatened species recorded on SFNSW estate. These must be forwarded by agreed electronic means to NPWS Head Office GIS Unit at three monthly intervals.
 - f) Information held within a register of non-compliance. Each SFNSW Regional Manager responsible for the land to which this licence applies must keep a register of every incident of non-compliance with the conditions of this licence. The register must contain the following information known to SFNSW:
 - i. the date, time and duration of the non-compliance;
 - ii. the date upon which SFNSW became aware of the non-compliance;
 - iii. the exact location of the non-compliance, either marked on the operational map or in the form of Australian Map Grid co-ordinates;
 - iv. the name of the person who caused the non-compliance;
 - v. the nature of the non-compliance;
 - vi. the reasons for the non-compliance;
 - vii. whether the non-compliance resulted in any environmental harm;
 - viii. any remedial action taken by SFNSW or any other person in relation to the non-compliance and the dates upon which it was taken;
 - ix. any disciplinary action taken by SFNSW against any of its contractors, employees, licensees or agents and the dates upon which it was taken; and
 - x. any measures taken or proposed to be taken to prevent or mitigate the recurrence of such a non-compliance.

AMENDMENT 4
1 March 2013
Condition 4.1 f)
modified

- xi. the name of the Supervising Forestry Officer that was responsible for the supervision of SFNSW staff and other people involved in the forestry operation that caused the non-compliance;
- xii. a full report from the officer causing the non-compliance; and
- xiii. what pre harvesting audit and post harvesting audit checks were carried out to check compliance.

4.2. Availability of Data

- a) Copies of the following documents must be made available for inspection by any person at the SFNSW Regional Office or relevant Forest Centre responsible for land to which this licence applies:
 - i. this licence; and
 - ii. all planning documentation and registers relating to harvesting operations, including Harvesting and Operational Plans and Site-specific Conditions.
- b) Copies of all planning documentation for harvesting operations which are the responsibility of the SFNSW Regional Office or relevant Forest Centre must be made available to any person for photocopying at a reasonable cost.
- c) Condition 4.2 a) does not apply where SFNSW have received a direction in writing from NPWS that certain specified documents that reveal the location of a threatened species are not to be disclosed.
- d) SFNSW shall not disclose or provide any person not directly involved in the planning or the conduct of the specified forest activities with any documentation or information for which a notice under Condition 4.2 c) has been issued.

5. General Conditions

5.1. Operational Requirements

- a) For all exclusion zones implemented under the Conditions of this licence the following must apply (except where otherwise indicated in this licence):
 - i. All specified forestry activities are prohibited in exclusion zones.
 - ii. Trees must not be felled into exclusion zones. If a tree falls into an exclusion zone, then no part of that tree can be removed from the exclusion zone.

(Note: the NPWS does not intend to take proceedings where SFNSW can demonstrate that the tree was accidentally felled into the exclusion zone. The tree will not be considered to have been accidentally felled if the felling is a result of poor judgement on the part of the faller.)

- iii. Harvesting machinery is prohibited from operating in exclusion zones, except for
 - 1. road re-opening and road maintenance;
 - 2. the construction and operation of roads and snig tracks in accordance with conditions 5.1 b) and 5.4 i); and
 - 3. the traversing of exclusion zones on existing roads.
- b) The construction and operation of tracks used for the purpose of snigging and the construction of roads in exclusion zones implemented under Conditions 5.10 Bird Nest and Roost Site Protection, 5.11 Bat Roost Protection, 6.1 Masked Owl, Barking Owl and Powerful Owl, 6.3 Smoky Mouse, 6.4 Brush-tailed Phascogale, 6.5 Spotted-tailed Quoll, 6.6 Koala, 6.7 Squirrel Glider, 6.8 Yellow-bellied Glider, 6.9 Northern Corroboree Frog, 6.10 Littlejohn's Tree Frog, 6.11 Threatened, Poorly Reserved ROTAP and Regionally Rare Flora, is only permitted with the prior written approval of the NPWS. Matters that SFNSW must address in order to seek NPWS approval are detailed in Schedule 6 of this licence.

- c) An approval granted under condition 5.1 (b) may be issued subject to conditions. The conditions that form part of that approval also form part of the conditions of this licence. NPWS may apply conditions for the mitigation or amelioration of impacts as it determines appropriate.
- d) Buffer zones must be managed in accordance with the relevant Conditions in this licence.
- e) All distances must be measured on the ground independent of slope.
- f) All exclusion zone and buffer zone boundaries must be marked in the field, except where specified forestry activities will not come within 50 metres of such boundaries and for hazard reduction work. The outer edge of lines shown on the map is considered to represent the boundary of the mapped feature when marking the feature in the field.
- g) Subject to the statutory requirements under the *Rural Fires Act 1997*, hazard reduction work must not be conducted in exclusion zones and buffer zones.
- h) Marking-up must be conducted at least 100 metres in advance of harvesting operations, road construction and road re-opening operations (unless otherwise specified in this licence) so relevant exclusion and buffer zones can be implemented prior to harvesting, road construction and road re-opening occurring.
- i) SFNSW must develop a standard tree marking-up code to apply to all operations, unless specifically excluded, within six months of the commencement date. The code must include, but not be limited to, tree marking criteria for the following: exclusion zone boundaries, buffer zone boundaries, hollow-bearing trees, recruitment trees, eucalypt feed trees, Yellow-bellied Glider and Squirrel Glider sap feed trees.
- j) Where a provision in this licence allows the re-opening or the construction of a road or snig track that provision is also taken to authorise the use of the road or use of the track for the purpose of snigging unless that use is specifically prohibited or restricted.

5.2. Compartment Mark-up Surveys

- a) An adequately trained person must conduct a thorough search for, record and appropriately mark the following threatened and protected species features during or before the marking-up of a compartment.
 - i. Nests and roosts for those species listed in Condition 5.10 of this licence;
 - ii. Dens of the following species: Yellow-bellied Glider, Squirrel Glider and Brush-tailed Phascogale;
 - iii. Koalas and Koala scats;
 - iv. Flying-fox camps;
 - v. Latrine and den sites of the Spotted-tailed Quoll;
 - vi. Distinctive scats (e.g. Spotted-tailed Quoll, Koala);
 - vii. Northern Corroboree Frog habitat (bogs, soaks and seepages)
 - viii. Yellow-bellied Glider and Squirrel Glider sap feed trees;
 - ix. Microchiropteran bat tree roosts;
 - x. Microchiropteran bat subterranean roosts (caves, tunnels and disused mineshafts);
 - xi. Swift Parrot, Turquoise Parrot and Regent Honeyeater feed or nest trees;
 - xii. Threatened flora species and protected native plants likely to occur in the compartment requiring protection under Condition 6.11 of this licence;
 - xiii. Rocky outcrops and cliffs;
 - xiv. Heath and scrub;
 - xv. Wetlands; and
 - xvi. Suitable habitat for Broad-toothed Rat..

- b) Searches for threatened species features must be conducted within that portion of the net logging area where harvesting will occur, and within 50 metres outside this area.
- c) Harvesting operations are prohibited in areas which have not been subject to compartment mark-up surveys.
- d) Where any of these features are found, the feature must be recorded, the Harvesting Plan (including the Operational Map) must be amended accordingly and the appropriate Condition applied.

AMENDMENT 4
 1 March 2013
 Condition 5.3 a)-e)
 replaced and
 following numbers
 renumbered

5.3. Tree Retention

- a) The following definitions apply for the purpose of this condition:
 - i. “Hollow-bearing tree” means a live tree in the net logging area where the base, trunk or limbs contain hollows, holes and cavities that have formed as a result of decay, injury or other damage. Such hollows may not be visible from the ground; but may be apparent from the presence of deformities such as burls, protuberances or broken limbs, or where it is apparent the head of the tree has been lost or broken off.
 - ii. “Recruitment tree” means a live tree of a mature or late mature growth stage (using the modified Jacobs growth stage assessment as depicted in schedule 3) within the net logging area that is not suppressed prior to harvesting and appears to have good potential for hollow development and long term survival.
- b) Within the Non-regrowth Zone the following requirements for retention of Hollow-bearing trees apply:
 - i. A minimum of five hollow-bearing trees must be retained per hectare of net logging area. Where this density is not available, the existing hollow-bearing trees must be retained plus additional trees must be retained as hollow-bearing trees to meet the required rate.
 - ii. In selecting hollow-bearing trees for retention, priority must be given to any hollow-bearing trees which exhibit evidence of occupancy by hollow dependent fauna and trees which contain multiple hollows or hollows of various sizes.
 - iii. The remaining hollow bearing trees and any additional trees required to be retained to meet the retention rate under this condition must be selected with the objective of retaining trees having as many of the following characteristics as possible:
 - belonging to a cohort of trees with the largest dbhob,
 - good crown development,
 - *(Note: this does not restrict the selection of trees with broken limbs consistent with the hollow-bearing tree definition).*
 - minimal butt damage,
 - represent the range of hollow-bearing species that occur in the area,
 - located such that they result in retained trees being evenly scattered throughout the net logging area.
- c) Within the Non-regrowth Zone the following requirements for retention of Recruitment trees apply:
 - i. A minimum of five recruitment trees must be retained per hectare of net logging area.
 - ii. Recruitment trees must be selected with the objective of retaining trees having as many of the following characteristics as possible:
 - belong to a cohort of trees with the largest dbhob,
 - located such that they result in retained trees being evenly scattered throughout the net logging area

- good crown development,
 - minimal butt damage,
 - represent the range of hollow-bearing species that occur in the area.
- d) Within the Regrowth Zone the following requirements for retention of Hollow-bearing trees apply:
- i. A minimum of five hollow-bearing trees must be retained per hectare of net logging area. Where this density of hollow-bearing trees is not available all hollow-bearing trees within the net logging area must be retained.
 - ii. In selecting hollow-bearing trees for retention, priority must be given to any hollow-bearing trees which exhibit evidence of occupancy by hollow dependent fauna and trees which contain multiple hollows or hollows of various sizes.
 - iii. Hollow-bearing trees must be selected with the objective of retaining trees having as many of the following characteristics as possible:
 - belonging to a cohort of trees with the largest dbhob,
 - good crown development,
(Note: this does not restrict the selection of trees with broken limbs consistent with the hollow-bearing tree definition).
 - minimal butt damage,
 - represent the range of hollow-bearing species that occur in the area,
 - located such that they result in retained trees being evenly scattered throughout the net logging area.
- e) Within the Regrowth Zone, for each hollow-bearing tree retained in (d) above a recruitment tree must be retained. Recruitment trees must be selected with the objective of retaining trees having as many of the following characteristics as possible:
- i. belong to a cohort of trees with the largest dbhob,
 - ii. located such that they result in retained trees being evenly scattered throughout the net logging area
 - iii. good crown development,
 - iv. minimal butt damage,
 - v. represent the range of hollow-bearing species that occur in the area.
- f) In this condition “dead standing tree” means a dead standing tree which is greater than 300mm diameter at breast height and greater than 3 metres in height.
- i. Where five or more dead standing trees per hectare occur in the net logging area, a minimum of five dead standing trees must be retained per hectare of net logging area where it is safe to do so. If there are less than five dead standing trees per hectare, then all dead standing trees should be retained where it is safe to do so.
 - ii. In a mechanised harvesting operation (being an operation that involves felling trees using mechanised harvesting machinery rather than an operation that relies on felling trees using a chainsaw) where a dead standing tree required to be retained under this condition is removed because it was unsafe, FCNSW must ensure that the following information is recorded:
 - a description of the hazard posed by the dead standing tree in the context of the operation such as proximity to roads or log dumps,

- the location of the dead standing tree (by reference to its grid co-ordinates),
- the date on which the dead standing tree was removed,
- an estimate of the diameter at breast height of the dead standing tree.:

g) Significant Food Resources

- At least four eucalypt feed trees must be retained in every two hectares of net logging area where they occur. Where a retained eucalypt feed tree also meets the requirements of a hollow-bearing or recruitment tree, the eucalypt feed tree can be counted as a hollow-bearing or recruitment tree.
- All Yellow-bellied Glider and Squirrel Glider sap feed trees must be retained. Where a retained sap feed tree also meets the requirements of a hollow-bearing or recruitment tree, the sap feed tree can be counted as a hollow-bearing or recruitment tree.
- Damage to flowering or fruiting banksias and *Xanthorrhoea* spp. should be avoided during forestry operations.

h) Protection of retained trees

- When conducting specified forestry activities and post-logging burning, damage to trees retained under conditions 5.3 a), 5.3 b), 5.3 c), 5.3 d), 5.3 e) and 5.3 f) of this licence must be minimised to the greatest extent practicable. During harvesting operations, the potential for damage to these trees must be minimised by utilising techniques of directional felling.
- In the course of conducting specified forestry activities, logging debris must not, to the greatest extent practicable, be allowed to accumulate within five metres of a retained hollow-bearing tree, recruitment tree, stag, eucalypt feed tree, or Yellow-bellied Glider or Squirrel Glider sap feed tree. Logging debris within a five metres radius of retained trees must be removed or flattened to a height of less than one metre. Mechanical disturbance to ground and understorey must be minimised to the greatest extent practicable within this five metre radius. Habitat and recruitment trees must not be used as bumper trees during harvesting operations.
- Retained trees referred to in conditions 5.3 a) i., 5.3 b) i., 5.3 c) i., 5.3 d) i., 5.3 e) i., 5.3 f) i. and 5.3 f) ii. of this licence must be marked for retention. The only exception to the marking of the retained trees can occur where the understorey is thick and impenetrable. SFNSW must clearly document and justify such situations in harvest planning documentation either during pre-planning or as it becomes apparent during compartment mark-up.

5.4. Stream Exclusion Zones

- Exclusion zones of at least ten metres wide must be implemented on both sides of all first order streams.
- Exclusion zones of at least 20 metres wide must be implemented on both sides of all second order streams.
- Exclusion zones of at least 30 metres wide must be implemented on both sides of all third order streams.
- Exclusion zones of at least 50 metres wide must be implemented on both sides of all fourth and higher order streams.
- The width of stream exclusion zones must be measured from the top of the bank of the incised channel or, where there is no defined bank, from the edge of the channel.
- Specified forestry activities, except road and snig track construction in accordance with condition 5.4 i) and road re-opening, are prohibited within Stream Exclusion Zones implemented under conditions 5.4 a), b), c) and d) above.
- Trees must not be felled into Stream Exclusion Zones. If a tree falls into an area of Stream Exclusion Zone, then no part of that tree can be removed from that area.

(Note: NPWS does not intend to take proceedings where SFNSW can demonstrate that the tree was accidentally felled into the Stream Exclusion Zone. The tree will not be considered to have been accidentally felled in the felling is a result of poor judgement on the part of the faller.)

- h) Harvesting machinery is prohibited within Stream Exclusion Zones, except for the purpose of road and snig track construction in accordance with condition 5.4 i) and road re-opening.
- i) A road and snig track may be constructed, and snigging may be carried out, in any area that is, or is within, Stream Exclusion Zones, but only where:
 - i. there is no practical alternative site available for the purposes of the road or snigging;
 - ii. prior to the construction or snigging, the SFNSW Regional Manager that is responsible for managing the land on which the construction or snigging is proposed to be carried out (or a more senior officer), has prepared a report addressing the matters in Schedule 6 of this licence and has authorised the construction or snigging in writing;
 - iii. all practicable measures are taken to minimise any adverse impacts of the construction or snigging on the environment; and
 - iv. such areas are not in exclusion zones relating to threatened species referred to in condition 5.1 b) unless carried out in accordance with condition 5.1 b).
- j) A copy of the written approval of the SFNSW Regional Manager must be faxed to NPWS, which address the matters raised in Schedule 6 of this licence, as soon as possible after the approval has been issued.
- k) In the construction and the operation of snig tracks in Stream exclusion zones in accordance with condition 5.4 i), hollow-bearing trees must not be used as pivot or bumper trees for moving logs.
- l) Where an exclusion zone referred to in condition 5.1 b) as it relates to a threatened species is located either wholly or partially within a Stream exclusion zone, then SFNSW is only permitted to construct roads and snig tracks in accordance with condition 5.1 b).

AMENDMENT 4
1 March 2013
Condition 5.4 i)-ii.
omitted and
following numbers
renumbered

5.5. Location of Ridge and Headwater Habitat

- i) For every 500 hectares of areas within the Tumut Sub-region as identified in Clause 4 of this approval, FCNSW must implement:
 - i. a minimum of two exclusion zones at least 40 metres wide which connect second order streams; or
 - ii. a minimum of one exclusion zone at least 80 metres wide which connects third order streams.
- b) Stream order is to be determined in accordance with Schedule 1 of this licence for the purpose of this condition.
- c) Exclusion zones implemented under condition 5.5 (a) must, wherever possible, establish links between third order streams of different catchments.
- d) Where the Ridge and Headwater Habitat exclusion zones do not link third order streams of different catchments, a minimum length of 250 metres must be established for each exclusion zone in condition 5.5 (a) i. (eg. total length 500 metres), or a 500 metres minimum length established for the exclusion zone in condition 5.5 (a) ii.
- e) Exclusion zones implemented under condition 5.5 (a) above should connect the relevant second or third order stream via the associated lower order stream(s).
- f) Ridge and Headwater Habitat exclusion zones must not, to the greatest extent practicable, cross existing roads.

AMENDMENT 4
1 March 2013
Condition 5.5
replaced

- g) Amendment to the location of Ridge and Headwater Habitat exclusion zones may not be made unless approved by EPA. When applying for an amendment, FCNSW must provide reasons for the proposed amendment and options considered and must address the following matters:
 - i. the continuity with exclusion zones applied in any preceding logging operations;
 - ii. the habitat values and forest types of areas linked by the proposed exclusion zones compared to those previously in place;
 - iii. the tenure of the land linked by the proposed exclusion zones compared to those previously in place; and
 - iv. the land use of areas linked by the proposed exclusion zones compared to those previously in place.
- h) Except as provided by conditions 5.1 and 5.5, specified forestry activities other than road construction and road re-opening where there is no other practical means of access, are prohibited in these exclusion zones.

5.6. Wetlands

- a) Specified forestry activities are prohibited in all wetlands, irrespective of the size of the wetland and their surrounding exclusion zones.
- b) Exclusion zones of at least ten metres wide must be implemented around all wetlands less than 0.5 hectare (approx. 70 metres x 70 metres) surface area.
- c) Exclusion zones of at least 20 metres wide must be implemented around all wetlands between 0.5 hectare (approx. 70 metres x 70 metres) and 2.0 hectares (approx. 150 metres x 150 metres) surface area.
- d) Exclusion zones of at least 40 metres wide must be implemented around all SEPP 14 wetlands irrespective of size, and other wetlands greater than 2.0 hectares surface area.
- e) The area of wetlands and their surrounding exclusion zones must be measured from the edge of the current saturated zone or from the outer edge of where the vegetation type indicates a wetter micro-environment than the surrounding country, whichever is larger.
- f) Wetlands less than 0.5 hectare surface area must be marked in the field for protection and recorded as accurately as possible on harvest plan operational maps.
- g) Grazing and associated burning should be excluded from wetlands.

5.7. Heath and Scrub

- a) Specified forestry activities are prohibited from all areas of heath and scrub greater than 0.2 hectares (approx. 45 metres x 45 metres) surface area.
- b) Exclusion zones of at least 10 metres wide must be implemented around all heath and scrub of more than 0.2 hectares surface area.
- c) The area of heath and scrub, and exclusion zones around heath and scrub, must be measured from the outer edge of areas of heath and scrub.

5.8. Rocky Outcrops and Cliffs

- a) Specified forestry activities are prohibited within areas of rocky outcrops and cliffs.
- b) In addition, exclusion zones of at least 20 metres wide must be implemented around all rocky outcrops more than 0.1 hectare (approx. 30m x 30m), and all cliffs.

(Note: it is not intended to exclude SFNSW from all areas that have a scattered or stony or rocky ground cover, only those areas where rocks and exposed boulders cover greater than 70% of at least a 0.1 hectare area. Those areas that fall within the definition of Rocky Outcrops and Cliffs are considered to contain likely habitat for threatened flora and fauna.)

5.9. Threatened Frog General Protection Measures

- a) A buffer zone of at least ten metres wide must be implemented around all dams. Trees must not be felled within the buffer zone. Trees should not be felled into the buffer zone. Harvesting machinery must not enter the buffer zone.
- b) Where a group of more than ten male frogs of a threatened species are detected per hectare, any new stream crossings within 500 metres of that group must, to the greatest extent practicable, be constructed using methods which do not significantly alter stream flow (e.g. bridge or box culvert).

5.10. Bird Nest and Roost Site Protection

- a) The following exclusion zones must be applied around nest and roost sites:
 - i. Powerful Owl nest 50 metre radius
 - ii. Powerful Owl roost 30 metre radius
 - iii. Masked Owl nest 50 metre radius
 - iv. Masked Owl roost 30 metre radius
 - v. Barking Owl nest 50 metre radius
 - vi. Barking Owl roost 30 metre radius
 - vii. Turquoise Parrot nest 30 metre radius
 - viii. Square-tailed Kite nest 100 metre radius
 - ix. Regent Honeyeater nest 20 metre radius
 - x. Varied Sittella nest 20 metres radius
 - xi. Little Lorikeet nest 30 metre radius
 - xii. Little Eagle nest 100 metre radius
 - xiii. Flame Robin nest 50 metres radius
 - xiv. Scarlet Robin nest 50 metres radius
 - xv. Gang-gang Cockatoo nest 20 metres radius
 - xvi. Speckled Warbler nest 5 metres radius
 - xvii. Black-chinned Honeyeater 20 metres radius
(eastern sub-species) nest
 - xviii. Hooded Robin nest 50 metres radius
 - xix. Brown Treecreeper nest 20 metres radius
- b) Where nests and roosts of Powerful Owl, Masked Owl and Barking Owl are recorded after the development of a landscape approach for an area, and they occur outside areas retained as part of that landscape approach, exclusions zones in a) above must be implemented around the roost or nest.
- c) Nest exclusion zones for the following species must be implemented for the duration of this licence: Powerful Owl, Masked Owl and Barking Owl.
- d) Nest exclusion zones for the following species may be removed where surveys conducted during two consecutive breeding seasons establish to the satisfaction of the EPA that the nest or nest site is not being used: Square-tailed Kite, Regent Honeyeater, Turquoise Parrot, Varied Sittella, Little Lorikeet, Flame Robin, Scarlet Robin, Little Eagle, Gang-gang Cockatoo, Speckled Warbler, Black-chinned Honey-eater (eastern sub-species), Hooded Robin and Brown Treecreeper.

AMENDMENT 4
1 March 2013
Condition 5.10 a) x
to -xix. added

AMENDMENT 4
1 March 2013
Condition 5.10 d)
replaced

AMENDMENT 4
1 March 2013
Condition 5.10 e)
modified

- e) Trees that contain raptor nests, other than those referred to in a) above, or Grey-crowned Babbler or Diamond Firetail nests must be retained and marked for retention. During harvesting operations, the potential for damage to these trees must be minimised by utilising techniques of directional felling.
- f) When ten Gang-gang Cockatoo nests are recorded on FCNSW estate over a two year period separated by at least two kilometres within a 15 kilometres radius, FCNSW may apply to the EPA for a review of this condition.

AMENDMENT 4
1 March 2013
Condition 5.10 f)
added

5.11. Bat Roost Protection

5.11.1. Tree Roost Protection

- a) Likely microchiropteran bat roost trees must be inspected prior to harvesting operations commencing within 100 metres of such trees. Likely roost trees are stags greater than 30 centimetres dbhob, large trees with accessible base hollows, or hollow-bearing trees.
- b) If a bat roost tree is located an exclusion zone of at least 30 metres radius must be implemented around the tree roost.

AMENDMENT 4
1 March 2013
Condition 5.11.2-4
replaced

5.11.2. Subterranean Roost Protection

Exclusion zones for bats

- a) The following are **exclusion** zones for bats:
- i. a potential subterranean bat roost,
 - ii. if the potential subterranean bat roost is a disused mine shaft, any area within 40 metres of each entrance to the shaft,
 - iii. in the case of a potential subterranean bat roost other than a disused mine shaft, any area within 100 metres of each entrance of the roost.
- b) A potential subterranean bat roost that consists of a disused mine shaft or rock overhang, and the area surrounding it, cease to be bat **exclusion** zones if:
- i. an absence of evidence of bats within the roost is established in at least one inspection survey, and
 - ii. there is no record associated with the roost of a bat of a species that uses roosts of that kind.
- c) The bat **exclusion** zone around each entrance of a potential subterranean bat roost that consists of a cave, mine or tunnel is reduced from any area within 100 metres of the entrance to any area within 50 metres of the entrance if:
- i. an absence of evidence of bats within the roost is established in:
 - at least one inspection survey, if the roost is a mine, and
 - at least two inspection surveys, if the roost is a cave or tunnel, and
 - ii. there is no record associated with the roost of a bat of a species that uses roosts of that kind.
- d) If there is a record of bats in a subterranean site (being a cave, disused mine shaft, mine, tunnel or rock overhang) that is not a potential subterranean bat roost, that site, and any area within 100 metres of each entrance to the site, are bat **exclusion** zones.

Inspection survey

- e) It is not enough that no evidence of bats is found within a roost during an inspection survey for an absence of evidence of bats within the roost to have been established for the purposes of condition 5.11.2 (b) i. or (c) ii. If, for example, the person carrying out the survey was unable to inspect the entire roost, an absence of evidence of bats within the roost is not established for the purposes of condition 5.11.2 (b) i. or (c) ii. (as the case may be).

- f) For the purpose of this condition:
- i. an inspection survey is a survey that is carried out by a person with experience in surveying subterranean bat roosts for evidence of bats, and
 - ii. an inspection survey ceases to be an inspection survey 10 years after being carried out (but may have been carried out before the commencement of this approval), and
 - iii. the two inspection surveys referred to in condition 5.11.2 (c) i. (if the roost is a cave or tunnel) are two inspection surveys carried out in different survey seasons, being:
 - October – March,
 - April – September.

Definitions

- g) In this condition:

“disused mine shaft” means a vertical tunnel constructed for the purpose of mining, but no longer used for that purpose;

“evidence of bats” includes, not only a sighting of a bat or bats, but also guano (either whole or powdered) and the distinctive odour of guano;

“mine or tunnel” means an underground cavity that has been created or constructed by people and that is enclosed except for one or more entrances (or exits);

“potential subterranean bat roost” means any of the following:

- i. a cave that meets the following description:
 - at least one entrance has a diameter of 0.5 metres or more, and
 - the diameter of the cave chamber (that is, the longest distance between any two points on the perimeter of the cave’s base) is at least 0.5 metres, and
 - the length of the cave (from entrance to furthest point from the entrance) is at least 3 metres, and
 - the height of a dome of the cave is at least 1 metre higher than the top of an entrance;
- ii. a disused mine shaft that is at least 4 metres deep and that has one or more of the following features:
 - not all faces of the shaft are visible from the surface,
 - it has ledges that are suitable for bats to roost under,
 - it links to a horizontal shaft that is at least 1 metre long;
- iii. a mine or tunnel that meets the following description:
 - at least one entrance has a diameter of 0.5 metres or more, and
 - the length of the mine or tunnel running horizontally is at least 3 metres, and
 - the cavity is at least 1 metre high at some point;

- iv. a rock overhang with holes or crevices (or both) in the roof or wall protected by the overhang where the overhang protrudes at least 3 metres from the wall of the rock face below it and is at least 3 metres wide; and
- v. “rock overhang” is a rock that projects outward from the rock face below it, protruding at least 3 metres from the wall of the rock face and is at least three metres wide.

5.11.3. Protection of Flying-fox camps

- a) If there is a record of a flying-fox camp in a compartment, or a flying-fox camp is detected during pre-harvest inspections or during harvesting operations, specified forestry activities must be excluded from the full extent of the camp. An exclusion zone of at least 50 metres wide must be implemented around the camp. FCNSW must also consider implementing an exclusion zone of up to 200 metres wide to allow for expansion or movement of the camp.
- b) The geographical boundaries of the camp must be recorded by FCNSW using a Geographic Positioning System. Where the camp is unoccupied at the time of the forestry activity, the boundaries of the camp must be taken from the EPA Flying-fox Camp Database. FCNSW must check the EPA Flying-fox Camp Database when preparing harvest plans.

5.12. Grazing

- a) The areal extent of grazing authorities issued by SFNSW must not be extended except where they fulfil SFNSW responsibilities under the *Rural Fires Act 1997*.
- b) Grazing Management Plans for all SFNSW estate subject to domestic grazing must be prepared by the first five yearly review of the Integrated Forestry Operations Approval. Grazing Management Plans must consider the habitat requirements of threatened species and include management actions to protect threatened species and their habitats. SFNSW should consult with NPWS during the preparation of these Plans.

5.13. Burning

When fulfilling its responsibilities under the *Rural Fires Act 1997*, SFNSW must take account of the following principles:

- a) Hazard reduction work must take account of wildfire history, intensity, frequency and seasonality, and reflect the ecological requirements of any threatened species, or their habitat, known or likely to occur in the area.
- b) Hazard reduction work must be conducted in a manner that promotes and maintains an understorey mosaic that includes significant areas of dense understorey vegetation.
- c) Hazard reduction work must be conducted in a manner that minimises the impact on large fallen logs (greater than 40 centimetres diameter and greater than five metres in length).

(Note: It is acknowledged that hazard reduction work will be covered by a Bush Fire Risk Management Plan and that this plan is required to take into account the impact of burning activities on threatened species including areas where fire intervals are less than five years.)

AMENDMENT 4
1 March 2013
Condition 5.14 b)
modified

5.14. Ground Habitat Protection

- a) SFNSW must, to the greatest extent practicable, protect ground habitat from specified forestry activities. Ground habitat includes, but is not limited to, understorey vegetation, ground cover vegetation, thick leaf litter and fallen timber.
- b) Commercial firewood collection must not be permitted in compartments with records of the following species: Rosenberg’s Monitor, Brush-tailed Phascogale, Spotted-tailed Quoll, Eastern Pygmy Possum, Varied Sittella, Flame Robin, Scarlet Robin, Speckled Warbler, Grey-crowned Babbler, Diamond Firetail, Hooded Robin and Brown Treecreeper.

- c) In compartments with records of CWR species (other than those listed in 5.14 b)), commercial firewood licences must specify that fallen hollow logs greater than 40 centimetres diameter must not be collected or damaged during the course of the collection of firewood.
- d) When issuing domestic firewood collection permits, SFNSW must direct domestic firewood collection to areas that have been recently logged (within the last five years).
- e) Domestic firewood collection permits issued by SFNSW must state:
 - i. timber can only be collected from areas that have been recently logged (as per condition 5.14 d);
 - ii. standing trees, either living or dead, must not be felled;
 - iii. timber greater than 40 centimetres diameter must not be collected or damaged; and
 - iv. logs with hollows, irrespective of the diameter of the log, must not be collected or damaged.

5.15. Feral and Introduced Predator Control

- a) SFNSW, in consultation with the NPWS, must finalise the Draft Feral and Introduced Predator Control Plan (see Schedule 7 of this licence) within six months of the commencement date.
- b) SFNSW must implement the final Feral and Introduced Predator Control Plan within the first five years of the Integrated Forestry Operations Approval.

5.16. Miscellaneous Forestry Operations

- a) Cutting of posts for internal and boundary fencing and the felling of timber for the construction of causeways and bridges for the purposes of forest management must only involve the felling of 50 trees of a maximum 80 centimetres dbhob, at a maximum density of five trees per hectare up to a maximum area of 50 hectares of the compartment.
- b) When conducting and / or supervising miscellaneous forestry operations, SFNSW must implement Conditions 5.1 Operational Requirements, 5.4 Stream Exclusion Zones, 5.5 Ridge and Headwater Habitat, 5.6 Wetlands, 5.7 Heath and Scrub, 5.8 Rocky Outcrops and Cliffs, 5.9 Threatened Frog General Protection Measures, 5.10 Bird Nest and Roost Site Protection and 5.11 Bat Roost Protection of this licence in areas where these operations are conducted.
- c) Miscellaneous forestry operations are prohibited in exclusions zones established under the requirements of conditions 5.4 Stream Exclusion Zones, 5.5 Ridge and Headwater Habitat, 5.6 Wetlands, 5.7 Heath and Scrub, 5.8 Rocky Outcrops and Cliffs, 5.10 Bird Nest and Roost Site Protection, 5.11 Bat Roost Protection, 6.1 Masked Owl, Barking Owl and Powerful Owl, 6.3 Smoky Mouse, 6.4 Brush-tailed Phascogale, 6.6 Koala, 6.7 Squirrel Glider and 6.9 Northern Corroboree Frog, of this licence.
- d) Miscellaneous forestry operations are prohibited in Wetlands referred to in Condition 5.6, Heath and Scrub referred to in Condition 5.7, Rocky Outcrops and Cliffs referred to in Condition 5.8 and Flying Fox Camps referred to in Condition 5.11.4.
- e) SFNSW is exempted from the other conditions in this licence when conducting miscellaneous forestry operations other than those conditions mentioned above and those necessary to comply with the above.

5.17 Destruction of plants for the purpose of beekeeping

(Note: Clause 46 of the integrated forestry operations approval for the Southern Region (of which this licence is a part) is similar to the following condition).

Trees having a dbhob of 20cm or more not to be destroyed, cut or lopped

- a) Despite anything in condition 5.17 b) – i), trees (that are plants within the meaning of this condition) in the Tumut Subregion that have a diameter at breast height over bark of 20 cm or more may not be destroyed, cut or lopped for the sole purpose of beekeeping.

Destruction, cutting or lopping of plants for beekeeping purposes

- b) Plants may not be destroyed, cut or lopped in the Tumut Subregion for the sole purpose of beekeeping unless this is necessary to enable:
- i. a beehive to be set down on a site;
 - ii. access to a beehive set down site; or
 - iii. a beehive to be protected from the possibility of bushfire (but only where authorised by a permit, granted under the *Forestry Act 1916*, to occupy land for the purposes of bee-farming).

However, a person must not knowingly pick a plant that is an individual of a threatened species in the course of destroying, cutting or lopping plants for the sole purpose of beekeeping, even where this is necessary to enable any of the activities referred to in paragraphs i to iii.

(Note: The term “pick” has the following broad meaning (*Threatened Species Conservation Act 1995, National Parks and Wildlife Act 1974*):

“**pick** a native plant (including a threatened species, population or ecological community) means gather, pluck, cut, pull up, destroy, poison, take, dig up, remove or injure the plant or any part of the plant.”

Destruction, cutting or lopping of plants for the purposes of enabling beehives to be set down – Land other than environmentally sensitive land

- c) Destroying, cutting or lopping plants for the purposes of enabling a beehive to be set down on a site within the Tumut Subregion (other than within environmentally sensitive land) is authorised by paragraph i of condition 5.17 b) only if:
- i. the relevant regional manager is satisfied that the site has been used as a beehive set down site at least once since 1 January 1990; or
 - ii. the site is within an area that has been logged in a harvesting operation carried out since 1 January 1995.

Note: The above condition 5.17 c) does not apply to “environmentally sensitive land”, which is defined by this clause to include buffer zones or exclusion zones around records of certain threatened species. Such records may be made during surveys carried out prior to logging. The significance of the reference to 1 January 1995 in the above subclause is that since that date licences under the *Threatened Species Conservation Act 1995* applying to the Southern Region have required surveying for threatened species to be carried out prior to logging. .

See conditions 5.17 (d) to (g) for controls on destroying, cutting or lopping plants within “environmentally sensitive land.”

Destruction, cutting or lopping of plants for the purpose of enabling beehives to be set down – Land that is environmentally sensitive land at 13 May 2002

- d) This condition (5.17 d)) applies to land that is environmentally sensitive land at 13 May 2002 (being the day on which this approval commences). From 1 September 2002 onwards, destroying, cutting or lopping plants for the purpose of enabling a beehive to be set down within such land is authorised by paragraph i of condition 5.17 b) only if the following have been carried out prior to 1 September 2002:
- i. a map has been prepared which identifies any site within such land on which a beehive may be set down; and
 - ii. the relevant regional manager has endorsed the map.
- e) The relevant regional manager may endorse the map under paragraph ii of condition 5.17 d) only if satisfied that any site identified by the map as a beehive set down site has been used as such prior to 13 May 2002.

Destruction, cutting or lopping of plants for the purpose of enabling beehives to be set down – Land that becomes environmentally sensitive land after 13 May 2002

- f) This condition (condition 5.17 f)) applies to land that becomes environmentally sensitive land after 13 May 2002. From 12 months after becoming environmentally sensitive land, destroying, cutting or lopping plants for the purpose of enabling a beehive to be set down within such land, is authorised by paragraph i of condition 5.17 b) only if the following have been carried out prior to that date:
- i. a map has been prepared which identifies any site within such land on which a beehive may be set down; and
 - ii. the relevant regional manager has endorsed the map.
- g) The relevant regional manager may endorse the map under paragraph ii of condition 5.17 f) only if satisfied that any site identified by the map as a beehive set down site has been used as such prior to the date on which the land became environmentally sensitive land.

Note: Maps prepared under this condition (5.17) are available for inspection and copying under clause 63 of the Integrated Forestry Operations Approval for the Southern Region of which this licence forms a part.

- h) Nothing in this condition (5.17) prevents a beehive being set down on any site in the Tumut Subregion in circumstances where it is not necessary to destroy, cut or lop plants to enable this to occur.

Definitions

- i) In this condition (5.17):

“environmentally sensitive land” means any area of land in the Tumut Subregion:

- that is, or is within, an area of State forest declared to be a special management zone under the *Forestry Act 1916*;
- that is, or is within, an area classified as Forest Management Zone 2 or 3A in accordance with the Forest Management Zoning System;
- that is, or is within, a High Conservation Value Old Growth Forest;
- that is, or is within, a Rainforest;
- that is, or is within, a Rare Non-Commercial Forest Ecosystem;

- that is, or is within, a wetland;
- that is, or is within, heath and scrub, having a surface area of more than 0.2 hectares;
- that is, or is within, an area in relation to which there is a record of a flying-fox camp; or
- that is, or is within, an exclusion zone or a buffer zone referred to in the following conditions of this licence:
 - condition 5.4 (“Stream Exclusion Zones”),
 - condition 5.5 (“Ridge and Headwater Habitat”),
 - condition 5.6 (“Wetlands”),
 - condition 5.7 (“Heath and Scrub”),
 - condition 5.8 (“Rocky Outcrops and Cliffs”),
 - condition 5.9 (“Threatened Frog General Protection Measures”),
 - condition 5.10 (“Bird Nest and Roost Site Protection”),
 - condition 5.11.1 (“Tree Roost Protection”),
 - condition 5.11.2 (“Subterranean Roost Protection”),
 - condition 5.11.3 (“Significant Subterranean Roost Protection”),
 - condition 5.11.4 (“Protection of Flying-fox camps”),
 - condition 6.1.1 (“Large Forest Owls: Site Based Approach”),
 - condition 6.1.2 (“Large Forest Owls: Landscape Approach”),
 - condition 6.3 (“Smoky Mouse *Pseudomys fumeus*”),
 - condition 6.4 (“Brush-tailed Phascogale *Phascogale tapoatafa*”),
 - condition 6.5 (“Spotted-tailed Quoll *Dasyurus maculatus*”),
 - condition 6.6 (“Koala *Phascolarctos cinereus*”),
 - condition 6.7 (“Squirrel Glider *Petaurus norfolcensis*”),
 - condition 6.8 (“Yellow-bellied Glider *Petaurus australis*”),
 - condition 6.9 (“Northern Corroboree Frog *Pseudophryne pengilleyi*”), or
 - condition 6.11.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”); and

| |
|--|
| <p>AMENDMENT 4 1 March 2013 Condition 5.17 i) modified</p> |
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“plant” means any plant within the meaning of the *Threatened Species Conservation Act 1995*; and

(Note: The above definition of “plant” is not confined to plants that are threatened species. The Threatened Species Conservation Act 1995 defines “Plant” as follows:

“Plant” means any plant-life that is indigenous to New South Wales, whether vascular or non-vascular and in any stage of biological development, and includes fungi and lichens, but does not include marine vegetation within the meaning of the Fisheries Management Act 1994”).

“relevant regional manager” means the manager of the regional office of SFNSW that is responsible for managing the relevant land or a more senior officer.

6. Species-specific Conditions

6.1. Masked Owl *Tyto novaehollandiae*, Barking Owl *Ninox connivens*, and Powerful Owl *Ninox strenua*

SFNSW has two options for protecting large forest owls in SFNSW estate. SFNSW must apply either the “Site Based Approach” or the “Landscape Approach”.

- a) SFNSW must notify NPWS in writing within six months after the date of this licence which approach will be applied in each State Forest.
- b) In general, SFNSW can choose to change from the Site Based Approach to the Landscape Approach after that date; however, SFNSW cannot change from the Landscape Approach to the Site Based Approach. SFNSW must notify NPWS of a change from the Site-based Approach to the Landscape Approach within ten working days of the change of approaches.
- c) Where a change from the Site Based Approach to the Landscape Approach has occurred, SFNSW should retain habitat previously retained in the Site Based Approach, where it is suitable habitat as defined in the Landscape Approach.
- d) Where information indicates that Greater Gliders occur at densities of more than one per hectare within any individual compartment (that is, a compartment identified by a compartment number and not a group of compartments) being planned for harvesting, and the compartment is within two kilometres of a Powerful Owl record, eight hollow-bearing trees per hectare must be retained within the net logging area of that compartment.

AMENDMENT 4
1 March 2013
Condition 6.1 d)
replaced

6.1.1. Large Forest Owls: Site Based Approach

(Note: The site based approach attempts to ensure that sufficient habitat suitable for large forest owls is protected in the vicinity of a record of the species. Habitat protection aims to protect roost and nest sites and sufficient habitat in suitable condition to support populations of prey species and in suitable condition for the foraging behaviour of the owl species. Habitat models are to be used to determine what is suitable habitat. The site based approach is most appropriate for single records or small scattered patches of forest or both.)

Where there is a record of Powerful Owl, Masked Owl or Barking Owl within a compartment or within two kilometres outside the boundary of the compartment, the following must apply:

- a) A two kilometres radius planning area must be identified. This planning area must be centred on the record or records of the same species of owl. The radius of the planning area must be measured from the record. Where there is more than one record of the same species of owl, the radius of the planning area must be measured from a point located equidistant from the majority of records, where possible.
- b) Within this planning area an exclusion zone, or exclusion zones, of a total of 300 hectares must be implemented.
- c) Where there are records of nests or roosts of one or more of these species, these must be contained within exclusion zones. Planning and placement of exclusion zones should maximise the inclusion of other types of owl records within exclusion zones.
- d) The exclusion zone must encompass Category 1 habitat available in the planning area. In the event that there is not sufficient area of Category 1 habitat to meet the requirements of condition 6.1.1 b) above, Category 2 habitat must be utilised. In the event that there is not sufficient area of Category 1 and 2 habitat to meet the requirements of condition 6.1.1 b) above, Category 3 habitat must be utilised. In the event that there is not sufficient area of Category 1, Category 2 and Category 3 habitat to meet the requirement of condition 6.1.1 b) above, Category 4 habitat must be utilised.
- e) Habitat categories are ranked as follows, from highest to lowest:
 - i. Category 1: Core modelled habitat;

- ii. Category 2: Intermediate modelled habitat;
 - iii. Category 3: Marginal modelled habitat; and then
 - iv. Category 4: any other areas of suitable habitat.
- f) Modelled habitat occurring in statutory reserves within the two kilometres radius may be used to meet the exclusion zone requirements, where it is consistent with the requirements of condition 6.1.1 c) and d) above.
- g) The shape of exclusion zones should minimise the boundary to area ratio. Where appropriate, exclusion zones should be circular in shape. Long and linear strips should be avoided where possible.
- (Note: Circular or compact areas have the lowest boundary to area ratio, while linear or fragmented ones the highest. Areas that generally conform to a circular or square shape have a low boundary to area ratio. As a guide, “low” could be considered to be an area where the longer axis of the area is less than twice as long as the shorter axis.)*
- h) Where there are records of more than one species of owl within the two kilometres planning area, exclusion zones totalling 300 hectares for each species must be implemented. These exclusion zones must be consistent with the requirements of this condition. Areas retained for different owl species may overlap.
- i) Where there are two or more records of one species of owl consecutively less than two kilometres apart but collectively spreading over an area greater than two kilometres in any direction then advice on the location of the planning area must be sought from the NPWS.
- j) If a record of one of these species is on private property within two kilometres of SFNSW estate, then the 1,200 hectare (equivalent to two kilometres radius) planning area must be positioned on public land as close as possible to the record.

6.1.2. Large Forest Owls: Landscape Approach

(Note: The landscape approach attempts to ensure that a network of habitat is maintained within the area being planned. The landscape approach is most suitable for large forested areas, especially with numerous records of large forest owls. As part of this approach large areas of habitat are to be protected. Habitat to be retained is to be identified using habitat models. The condition provides a mechanism for apportioning habitat to be retained between the existing reserves and the production forest.)

- a) The planning area should be between 5,000 to 15,000 hectares in size. Smaller or larger planning areas should be avoided, but may be appropriate in particular circumstances. Where SFNSW uses smaller or larger planning areas, the justification for this must be clearly documented. This documentation must be kept on the relevant file and be made available on request by NPWS.
- b) The planning area can only contain public lands, private land must not be included.
- c) A minimum of 25% of the planning area must be retained as exclusion zones. Areas of statutory reserves can be used to meet the requirements of exclusion zones, where consistent with the requirements of condition 6.1.2 d), e) and f) below. Other exclusion zones within SFNSW estate outside of statutory reserves (e.g. stream exclusion zones) can be used to meet the exclusion zone requirements, where consistent with the requirements of condition 6.1.2 d), e) and f) below.
- d) Of the areas to be retained in condition 6.1.2 c) above, a minimum of 30% must be retained as exclusion zones in SFNSW estate outside of statutory reserves. Where existing statutory reserves comprise 25% or more of the planning area, then the minimum area to be retained in SFNSW estate outside of statutory reserves must be 10% of SFNSW estate outside of statutory reserves within the planning area.
- e) Of the areas to be retained in SFNSW estate outside of statutory reserves, referred to condition 6.1.2 d) above, a minimum of 30% must be retained in patches at least 50 hectares in size. The shape of exclusion zones should minimise the boundary to area ratio. Long, linear strips must not be counted towards meeting the requirement to retain these patches.

(Note: Circular or compact areas have the lowest boundary to area ratio, while linear or fragmented ones the highest. Areas which generally conform to a circular or square shape have a low boundary to area ratio. As a guide, “low” could be considered to be an area where the longer axis of the area is less than twice as long as the shorter axis.)

- f) In selecting areas to be retained as exclusion zones within the planning area the following design rules must be followed:
- i. Both the Powerful Owl and Masked Owl must be catered for. Where these two species are being planned for, the retained habitat must comprise 50% Masked Owl and 50% Powerful Owl habitat. Where there is either a record of a Barking Owl; OR Barking Owl modelled habitat within the planning area; OR both, then the Barking Owl must be catered for in addition to Powerful Owl and Masked Owl. In these cases the retained habitat must comprise 45% Powerful Owl habitat, 45% Masked Owl habitat and 10% Barking Owl habitat.
 - ii. The area of retained habitat for each of the species must be based on the proportion of each modelled habitat class that is present within the planning area.
 - iii. Where there are records of nests or roosts of one or more of these species, these must be contained within exclusion zones. Planning and placement of exclusion zones should maximise the inclusion of other types of owl records within exclusion zones.

6.2. Swift Parrot *Lathamus discolor*, Regent Honeyeater *Xanthomyza phrygia*, and Black-chinned Honeyeater (eastern sub-species) *Melithreptus gularis gularis*

Where there is a record of Swift Parrot, Regent Honeyeater or Black-chinned Honeyeater (eastern sub-species) in a compartment, the following must apply:

- a) At least ten eucalypt feed trees must be retained within every two hectares of net logging area.
- b) Where a Swift Parrot, Regent Honeyeater or Black-chinned Honeyeater (eastern sub-species) is observed feeding, the tree in which it is feeding must be retained.
- c) The trees referred to in condition 6.2 (a) and (b) above must be marked for retention. Where retained eucalypt feed trees also meet the requirements of hollow-bearing or recruitment trees, the retained eucalypt feed tree may be counted as a hollow-bearing or recruitment tree.

6.3. Smoky Mouse *Pseudomys fumeus*

- a) An exclusion zone of at least 100 hectares must be implemented around each record of the species.
- b) Records within 200 metres of each other and within the same sub-catchment may be considered to be from the same population and can be protected by one 100 hectare exclusion zone.
- c) Exclusion zones are to comply with the following design criteria:
 - i. must be centred on the record;
 - ii. must minimise boundary to area ratio;
 - iii. must maximise the inclusion of suitable habitat;
 - iv. must only comprise NPWS and SFNSW tenure (including statutory reserves); and,
 - v. where condition 6.3 b) applies, the exclusion zone must encompass all records within 200 metres of each other that are considered to be from the same population.

(Note: in some instances adjacent temporary management zones may overlap.)

- d) SFNSW must consult with the NPWS regarding hazard reduction burning within exclusion zones established for the Smoky Mouse.
- e) When 10 Smoky Mouse exclusion zones are implemented within the Tumut Sub-region, SFNSW may apply to NPWS for a review of this Condition.

AMENDMENT 4
1 March 2013
Condition 6.2
replaced

(Note: the NPWS will advise SFNSW of the recommendation made by the NPWS to the relevant Ministers in relation to the review of Condition 6.3 e), prior to consideration by the relevant Ministers.)

6.4. Brush-tailed Phascogale *Phascogale tapoatafa*

Where there is a Brush-tailed Phascogale record in a compartment or within 800 metres outside the boundary of the compartment (unless otherwise specified in this Condition), the following must apply:

- a) A 800 metre radius planning area must be identified. This planning area must be centred on the record or records of Brush-tailed Phascogale. The radius of the planning area must be measured from the record. Where there is more than one record the radius of the planning area must be measured from a point located equidistant from the majority of the records, where possible.
- b) Within this planning area an exclusion zone, or exclusion zones, totalling 50 hectares must be implemented.
- c) Where there are records of Brush-tailed Phascogale dens, these must be contained within exclusion zones. Planning and placement of exclusion zones should maximise the inclusion of other types of Brush-tailed Phascogale records within exclusion zones.
- d) The retained habitat must encompass mid-slope and ridge habitat.
- e) This area must not encompass areas classified by the CRAFTI as Regrowth forest.
- f) The shape of exclusion zones should minimise the boundary to area ratio. Where appropriate, exclusion zones should be circular in shape. Long and linear strips should be avoided where possible.

(Note: Circular or compact areas have the lowest boundary to area ratio, while linear or fragmented ones the highest. Areas which generally conform to a circular or square shape have a low boundary to area ratio. As a guide, "low" could be considered to be an area where the longer axis of the area is less than twice as long as the shorter axis.)

- g) Where there is a number of Brush-tailed Phascogale records consecutively less than 800 metres apart but collectively spreading over an area greater than 800 metres in any direction then advice on the application of the Condition must be sought from the NPWS.
- h) If a record of Brush-tailed Phascogale is on private property within 200 metres of SFNSW estate, then the equivalent of a 800 metre radius planning area must be located on public land as close as possible to the record.
- i) When ten of these sites are recorded on SFNSW estate in the Tumut Sub-region over a two year period separated by at least two kilometres within a 15 kilometres radius, SFNSW may apply to NPWS for a review of this Condition.

(Note: the NPWS will advise SFNSW of the recommendation made by the NPWS to the relevant Ministers in relation to the review of Condition 6.4 i), prior to consideration by the relevant Ministers.)

6.5. Spotted-tailed Quoll *Dasyurus maculatus*

Where there is a record of Spotted-tailed Quoll in the compartment or within five kilometres outside of the boundary of the compartment, the following must apply:

- a) An exclusion zone of at least 12 hectares must be implemented around Spotted-tailed Quoll maternal den sites. This exclusion zone must be linked to Stream Exclusion Zones implemented in Condition 5.4.
- b) An exclusion zone of at least 3.5 hectares must be implemented around Spotted-tailed Quoll permanent den sites. This exclusion zone must be linked to Stream Exclusion Zones implemented in Condition 5.4.
- c) An exclusion zone of at least 12 hectares must be implemented around Spotted-tailed Quoll latrine sites.

- d) In addition to exclusion zones established under conditions 6.5 a), b) and c), each den or latrine must be protected by a 50 metre radius buffer zone. Specified forestry activities, with the exception of the construction and operation of snig tracks, road construction and road re-opening, are prohibited within the buffer zone.

(Note: the intent of conditions 6.5 a), b) and c) is to locate the den or latrine centrally in the exclusion zone while also providing a connection to Stream Exclusion Zones. Where local topography or the location of existing roads precludes this, a 50 metre radius buffer zone is required when the den or latrine is located near the edge of the relevant exclusion zone or is close to an existing road. Wherever possible, roads or snig tracks should not be constructed directly adjacent to Spotted-tailed Quoll dens or latrines.)

- e) Planning and placement of exclusion zones referred to in parts 6.5 a), b) and c) above must maximise the inclusion of Spotted-tailed Quoll records.
- f) Where information indicates that an abundance of more than one Greater Glider per hectare exists within the compartment and the compartment is within five kilometres of a Spotted-tailed Quoll record, eight hollow-bearing trees per hectare must be retained within the parts of the net logging area supporting the high Greater Glider density.
- g) Stream Exclusion Zones must not be counted towards exclusion zones referred to in condition 6.5 a) and b) above.

6.6. Koala *Phascolarctos cinereus*

For all specified forestry activities:

- a) When koalas or evidence of koalas are detected in a compartment, habitat will be retained according to this Condition. Habitat retained under this condition must be mapped in the Harvesting Plan.
- b) Where one or two trees with evidence of the presence of a Koala are found during an asterisk survey, specified forestry activities must be excluded from within a 50 metre radius exclusion zone around of each of these trees.
- c) Where three or more trees with evidence of the presence of a Koala are found during an asterisk survey, the area which falls in between these trees and a 50 metre wide exclusion zone outside this area shall be implemented from which specified forestry activities must be excluded.
- d) Areas retained under condition 6.6 b) and c) must be connected to other retained areas within the compartment (e.g. areas retained for other species, Ridge and Headwater habitat, other non-harvest areas) by a corridor which meets the following specifications:
- i. links Koala use areas with the nearest second or higher order stream exclusion zone;
 - ii. crosses the topographic sequence linking adjacent catchments incorporating representative samples of mid-slope and ridge-top habitats;
 - iii. incorporates one or more of the identified Koala browse tree species; and
 - iv. is a minimum width of 40 metres.
- e) Trees retained in Koala exclusion zones or corridors must not be counted towards the habitat tree retention requirements for the remainder of the compartment.
- f) As far as practicable post-logging burning is to be kept out of the areas retained under b), c) and d) above.

- g) 150 hectares of suitable habitat for Koalas must be retained within 1.5 kilometres of the trees identified with evidence of the presence of a Koala in the asterix survey. No harvesting operations are to be undertaken within this retained area. Suitable habitat is defined as forest types floristically and structurally similar to the retained areas in the compartment and preferably containing a substantial quantity of one or more of the following Koala browse tree species in sizes greater than 30 centimetres dbh; Ribbon Gum *E. viminalis*, Eurabbie *E. bicostata*, Broad-leaved Sally *E. camphora*, Swamp Gum *E. ovata*, Snow Gum *E. pauciflora*, Mountain Gum *E. dalrympleana* and Red Stringybark *E. macrorhyncha*. If these tree species or forest types floristically and structurally similar to those in the retained area are not present, the NPWS must be consulted regarding the retention of alternative stands.
- h) Browse Tree Retention
- i. In all compartments where Koala evidence has been found, 10 browse trees shall be retained per hectare within the net logging area of the compartment. Koala browse trees must be greater than 30 centimetres dbh and be of the following species: Ribbon Gum *E. viminalis*, Eurabbie *E. bicostata*, Broad-leaved Sally *E. camphora*, Swamp Gum *E. ovata*, Snow Gum *E. pauciflora*, Mountain Gum *E. dalrympleana* and Red Stringybark *E. macrorhyncha*. If these tree species are not present, the NPWS must be consulted regarding the retention of alternative trees.
 - ii. Trees retained to meet other prescriptions (hollow bearing trees, recruitment trees or feed trees) may be counted as Koala browse trees if they have leafy, broad crowns in a range of size classes with a minimum of 30 centimetres dbh and are one of the identified Koala browse species.
 - iii. Specified forestry activities and post-logging burning must minimise damage to retained Koala browse trees. The potential for damage should be minimised by techniques of directional felling. Felled heads must be flattened or removed from five metres of stems retained to meet this prescription.

6.7. Squirrel Glider *Petaurus norfolcensis*

Where there is a Squirrel Glider record in a compartment or within 250 metres outside of the compartment boundary (unless specified otherwise in this Condition), the following must apply:

- a) A 250 metre radius planning area must be identified. This planning area must be centred on the record, or records, of Squirrel Glider. The radius of the planning area must be measured from the record. Where there is more than one record the radius of the planning area must be measured from a point located equidistant from the majority of records, where possible.
- b) Within this planning area an exclusion zone, or exclusion zones, totalling eight hectares must be implemented.
- c) Where there are records of Squirrel Glider dens, these must be contained within exclusion zones. Planning and placement of exclusion zones should maximise the inclusion of other types of Squirrel Glider records within exclusion zones.
- d) Modelled habitat may be used to meet the exclusion zone requirements.
- e) The shape of exclusion zones must minimise the boundary to area ratio. Where appropriate, exclusion zones should be circular in shape. Long and linear strips should be avoided where possible.
(Note: Circular or compact areas have the lowest boundary to area ratio, while linear or fragmented ones the highest. Areas which generally conform to a circular or square shape have a low boundary to area ratio. As a guide, "low" could be considered to be an area where the longer axis of the area is less than twice as long as the shorter axis.)
- f) Where there is a number of Squirrel Glider records consecutively less than 250 metres apart but collectively spreading over an area greater than 250 metres in any direction then advice on the application of the Condition must be sought from the NPWS.

- g) If a Squirrel Glider record is on private property within 100 metres of SFNSW estate, then the equivalent of a 250 metre radius planning area must be located on public land.
- h) When ten of these sites are recorded on SFNSW estate over a two year period separated by at least two kilometres within a 15 kilometres radius, SFNSW may apply to NPWS for a review of this Condition. The NPWS will advise SFNSW of the recommendation to the relevant Ministers, prior to consideration by the relevant Ministers.

(Note: the NPWS will advise SFNSW of the recommendation made by the NPWS to the relevant Ministers in relation to the review of Condition 6.7 h), prior to consideration by the relevant Ministers.)

6.8. Yellow-bellied Glider *Petaurus australis*

- a) During the period from 1 September 2011 to 31 August 2013, forest types identified as High or Moderate Quality Habitat as per Table 'Stratification of Yellow-bellied Glider habitat' are exclusion zones.

Table: Stratification of Yellow-bellied Glider habitat

| Habitat Strata | Forest Type (RN 17) | Tree Associations |
|----------------|-----------------------------------|---|
| High | 140, 159, 143, 138, 137 | <i>E. dalrympleana</i> , <i>E. viminalis</i> , <i>E. camphora</i> , <i>E. pauciflora</i> ssp. <i>pauciflora</i> & ssp. <i>niphophila</i> , <i>E. stellulata</i> |
| Moderate | 131, 160, 148, 155, 164, 111, 124 | <i>E. dalrympleana</i> , <i>E. viminalis</i> , <i>E. robertsonii</i> , <i>E. radiata</i> , <i>E. fastigata</i> , <i>E. bicostata</i> , <i>E. delegatensis</i> , <i>E. rubida</i> , <i>E. macrorhyncha</i> |

- b) During the period from 1 September 2011 to 31 August 2013, Forest Types as mapped on the RN17 Forest Type GIS layer and as described in Research Note 17 (FCNSW 1989) are exclusion zones.
- c) During the period from 1 September 2011 to 31 August 2013, Forest NSW in consultation with the Office of Environment and Heritage must develop modified harvesting prescriptions to apply in the Moderate and High Quality Habitat Forest Types from the conclusion of that period. .
- d) In the period 1 September 2013 until 31 December 2020 the modified harvesting prescriptions developed under subclause (c) apply.
- e) A 50 metre radius exclusion zone must be implemented around Yellow-bellied Glider dens.
- f) All Yellow-bellied Glider sap feed trees must be retained. All Yellow-bellied Glider sap feed trees must be marked for retention.
- g) Within a 100 metre radius of each retained Yellow-bellied Glider sap feed tree, 15 feed trees must be retained. Yellow-bellied Glider sap feed trees must not be counted towards these 15 feed trees. Retained feed trees must have good crown development, should have minimal butt damage and should not be suppressed. Retained feed trees must have a dbhob greater than 30 centimetres.
- h) The feed trees retained in condition 6.8 c) should be of the same species as the identified sap feed tree, or be a tree species recognised as a sap feed tree in the area (*E. viminalis*, *E. fastigata*, *E. ovata*, *E. dalrympleana*).
- i) Forests NSW is to give effect to its Population Management Plan for the Yellow-bellied Glider (*Petaurus australis*) ("YBG PMP") as current from time to time. However, to the extent of any inconsistency between this approval and the YBG PMP, this approval prevails.
- j) Forests NSW is to develop, in consultation with Office of Environment and Heritage, the Monitoring Program in accordance with section 3) Monitoring Programme of the YBG PMP.
- k) Forests NSW will commence the Monitoring Program on or prior to 1 September 2013.

AMENDMENT 2
7 November 2011
Yellow-bellied Glider
clauses a) to d) added.
Ref Appendix E

AMENDMENT 3
Clauses re-numbered
and dates extended

- l) Forests NSW is to prepare, at the end of each calendar year (commencing 2013), a written annual progress report detailing the results and findings of the monitoring program for that year. Each annual progress report must include:
- a. detail results from all monitoring and any surveys undertaken;
 - b. conclusions and recommendations, giving consideration to program aims; and
 - c. any suggestions for possible review of management activities or the YBG PMP.
- Forests NSW must provide the Office of Environment and Heritage with a copy of each annual progress report by February of the following year.
- m) Forests NSW is to participate in a review of the YBG PMP and the application of the terms of this licence to the YBG:
- a. if the Office of Environment and Heritage, at any time, seeks such a review (for example, because the monitoring or survey methodology as described in the YBG PMP is not yielding sufficient data), and
 - b. after the third year of the monitoring program (to be completed by the end of the calendar year of the fourth year of the program).
- n) Forests NSW may, at any time, request the Office of Environment and Heritage to undertake, with Forests NSW, a review of the YBG PMP or the application of the terms of this licence to the YBG (or both).
- o) A review undertaken under subclause (m) or (n) shall take into account:
- a. the results and findings of the survey and monitoring program;
 - b. any other relevant actions taken by Forests NSW;
 - c. the content of the YBG PMP.

Note: If the PMP for the YBG is amended or replaced as a result of a review, it is intended that the above condition will also be amended to reflect the changes in the content of the Plan.

AMENDMENT 4
1 March 2013
Condition 6.8 A
added

6.8 A Broad-toothed Rat *Mastacomys fuscus*

- a) Where Suitable habitat for Broad-toothed Rat extends beyond the boundary of a wetland, soak, bog, seepage or riparian exclusion zone, the boundary of the suitable habitat must be identified and an additional 20m exclusion zone must be applied to it.
- b) Any area of Suitable habitat for Broad-toothed Rat and exclusion zone that is greater than 0.1 ha must be marked in the field and mapped on the operational map.

AMENDMENT 4
1 March 2013
Condition 6.9
replaced

6.9. Northern Corroboree Frog *Pseudophryne pengilleyi*

- a) A 30m radius exclusion zone must be established around all Northern Corroboree Frog records.
- b) A 30m exclusion zone must be established around records and around bogs, soaks and seepages that have not been subject to Northern Corroboree Frog survey. The exclusion zone must be measured from the outer edge of the bog, soak or seepage. Where the bog, soak or seepage is fringed by tea-tree the exclusion zone must be measured from the outer edge of the tea-tree.
- c) All bogs, soaks and seepages that are protected by this prescription must be clearly recorded on a compartment map and archived by FCNSW. A copy of this map must be provided to the EPA at the completion of the operation.
- d) Where bogs, soaks, seepages and drainage lines have been surveyed according to the Northern Corroboree Frog survey the 30m exclusion zone (condition 6.9 (b) above) is not required where no Northern Corroboree Frogs were detected.
- e) Protection zones specified in this prescription apply only to Bondo and Micalong State forests.

AMENDMENT 4
1 March 2013
Condition 6.10
replaced

6.10. Littlejohn's Tree Frog *Litoria littlejohni*

Where there is a record of the Littlejohn's Tree Frog *Litoria littlejohni* within the compartment or within 50 metres outside the boundary of the compartment, the following must apply:

- a) an exclusion zone of at least 50 metres radius must be implemented around the record; or
- b) where the record is associated with a wetland or dam, a 50 metres wide exclusion zone must be implemented around the wetland or dam.
- c) The exclusion zone around wetlands must be measured from the edge of the current saturated zone or from the outer edge the vegetation type that indicates a wetter micro-environment than the surrounding country, whichever is larger.
- d) The exclusion zone around dams must be measured from the highest point of the dam wall or barrier.

6.11. Threatened, Poorly Reserved ROTAP and Regionally Rare Flora

6.11.1. Exclusion of specified forestry activities from 100% of individuals and no buffer.

Individuals of the threatened species that is listed in Table 1 must not be picked in the course of carrying out specified forestry activities.

(Note: The term "pick" has the following broad meaning (Threatened Species Conservation Act 1995, National Parks and Wildlife Act 1974):

"pick a native plant (including a threatened species, population or ecological community) means gather, pluck, cut, pull up, destroy, poison, take, dig up, remove or injure the plant or any part of the plant)."

AMENDMENT 4
1 March 2013
Condition 6.11.1.
Table 1 – species
modified

Table 1 Flora species protected by condition 6.11.1

| Family | Species |
|------------|------------------------------|
| Myrtaceae | <i>Eucalyptus aggregata</i> |
| Proteaceae | <i>Persoonia glaucescens</i> |

6.11.2. Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer.

Where there is a record of a species listed in Table 2 within the compartment or within 20 metres outside the boundary of the compartment, the following must apply:

- a) A 10 metres radius exclusion zone must be implemented around all individuals.
- b) An additional 10 metre width buffer zone must be implemented around all exclusion zones established under Condition 6.11.2 a) above. Limited operations (snigging and selective tree removal) may be conducted within the buffer zone. Hazard reduction burning must be excluded from the buffer zone to the greatest extent practicable.

Table 2 Flora species protected by condition 6.11.2

| Family | Species |
|------------------------|---|
| Fabaceae (Mimosoideae) | <i>Acacia phasmoides</i> |
| Asteraceae | <i>Ammobium craspediodes</i> |
| Orchidaceae | <i>Caladenia concolor</i> |
| Asteraceae | <i>Calotis glandulosa</i> |
| Orchidaceae | <i>Cryptostylis hunteriana</i> |
| Rhamnaceae | <i>Discaria nitida</i> |
| Orchidaceae | <i>Diuris pedunculata</i> |
| Myrtaceae | <i>Eucalyptus pulverulenta</i> |
| Myrtaceae | <i>Eucalyptus saxatilis</i> |
| Proteaceae | <i>Grevillea iaspicula</i> |
| Proteaceae | <i>Grevillea wilkinsonii</i> |
| Myrtaceae | <i>Kunzea cambagei</i> |
| Fabaceae (Faboideae) | <i>Phyllota humifusa</i> |
| Rhamnaceae | <i>Pomaderris cotoneaster</i> |
| Rhamnaceae | <i>Pomaderris pallida</i> |
| Orchidaceae | <i>Prasophyllum bagoensis</i> |
| Orchidaceae | <i>Prasophyllum innubum</i> |
| Orchidaceae | <i>Prasophyllum keltonii</i> |
| Orchidaceae | <i>Prasophyllum petilum</i> |
| Orchidaceae | <i>Pterostylis oreophila</i> |
| Fabaceae | <i>Pultenaea humilis</i> |
| Asteraceae | <i>Rutidosis leiolepis</i> |
| Asteraceae | <i>Rutidosis leptorrhynchoides</i> |
| Orchidaceae | <i>Thelymitra atronitida</i> |
| Santalaceae | <i>Thesium australe</i> |
| Poaceae | <i>Amphibromus fluitans</i> |
| Marsileaceae | <i>Pilularia novaehollandiae</i> |
| Gentianaceae | <i>Chionogentias sylvicola</i> |
| Proteaceae | <i>Grevillea oxyantha ssp ecarinata</i> |

6.11.3. Species Specific Management Plan.

- a) Where SFNSW can demonstrate to the satisfaction of the NPWS that the application of Conditions 6.11.1 or 6.11.2 for a particular species will significantly reduce the net harvest area then SFNSW may develop a Species Specific Management Plan as an alternative management approach.
- b) A Species Specific Management Plan must be developed in consultation with the NPWS and relevant independent experts and must consider:
 - i. the species distribution and ecology;
 - ii. the conservation status of the species and extent of formal reservation
 - iii. any relevant Recovery Plans or Threat Abatement Plans;
 - iv. alternative measures for amelioration of impact.

- c) Species Specific Management Plans must be approved in writing by the NPWS.

6.11.4. Site Specific Management Plan.

- a) Where SFNSW can demonstrate to the satisfaction of the NPWS that due to exceptional circumstances impacts on a flora species listed in Tables 1 or 2 or their exclusion/buffer zones (as required by Conditions 6.11.1 and 6.11.2) within a compartment are unavoidable, SFNSW may develop a Site Specific Management Plan as an alternative management approach.
- b) A Site Specific Management Plan must be developed in consultation with the NPWS and relevant independent experts and must consider:
- i. the population size both at the site and across the species range;
 - ii. the conservation status of the species and extent of formal reservation;
 - iii. any relevant Recovery Plans or Threat Abatement Plans;
 - iv. the distributional significance of the site;
 - v. the viability of the population at the site;
 - vi. the extent of proposed impact;
 - vii. alternative measures for amelioration of impact.
- c) Site Specific Management Plans must be approved in writing by the NPWS.

(Note: the relationship between Conditions 6.11.1 and 6.11.2 and Conditions 6.11.3 and 6.11.4 is as follows. Conditions 6.11.1 and 6.11.2 are to be implemented in the majority of circumstances. Where the application of Conditions 6.11.1 and 6.11.2 significantly affects the Net Harvest Area an appropriate alternative Management Plan may be implemented whenever an approved plan can be developed. The Species Specific and Site Specific Management Plans are to be developed by SFNSW and the NPWS in consultation with mutually agreed independent experts. Recovery Plans and Threat Abatement Plans should be taken into account where appropriate.)

7. General survey requirements

- a) Subject to Condition 7 b), harvesting operations must not be undertaken in any compartment unless pre-logging and pre-roading surveys have been conducted in accordance with Condition 8 Pre-logging and Pre-roading Surveys of this licence.
- b) Pre-logging and pre-roading surveys are not required for the following species where SFNSW choose to implement the species' prescription, as detailed below.

(Note: SFNSW may choose to implement one or more of the following prescriptions in lieu of survey.)

- i. **Masked Owl, Barking Owl and Powerful Owl:** Implement the Landscape Approach as per Condition 6.3 of this licence.
- ii. **Swift Parrot and Regent Honeyeater:** Where a Swift Parrot or Regent Honeyeater is observed feeding, the tree in which it is feeding must be retained. These trees must be marked for retention.
- iii. **Yellow-bellied Glider:** All Yellow-bellied Glider sap feed trees must be retained. Within a 100 metre radius of each retained Yellow-bellied Glider sap feed tree 15 feed trees must be retained. Yellow-bellied Glider sap feed trees must not be counted towards these 15 feed trees. Retained feed trees must have good crown development and should have minimal butt damage and should not be suppressed. Retained feed trees must have a dbhob greater than 30 centimetres. These retained trees should be the same species as the identified sap feed tree, or be a tree species recognised as a sap feed tree in the area (*E. viminalis*, *E. fastigata*, *E. ovata*, *E. dalrympleana*).

- c) Where SFNSW chooses to apply a species' condition in accordance with Condition 7 b) in lieu of pre-logging and pre-roading surveys, that condition must be implemented for the duration of the harvesting operation.

8. Pre-logging and pre-roading Surveys

8.1. Survey requirements

- a) Pre-logging and pre-roading surveys must consist of the following:
 - i. Compartment traverse as per Condition 8.7 of this licence;
 - ii. Targeted fauna surveys as per Condition 8.8 of this licence; and
 - iii. The recording of incidental threatened flora and fauna records as per Condition 8.6 of this licence.
- b) Pre-logging and pre-roading surveys must be conducted within the net survey area, and in areas within 50 metres outside the boundary of the net survey area, in compartments where known or potential habitat occurs.

- c) Pre-logging and pre-roading surveys must be carried out in accordance with the following Conditions.

(Note: any variations to the requirements set out in this Condition must be approved in writing by NPWS prior to surveys being conducted.)

- d) Pre-logging and pre-roading surveys must be conducted for those species that require the implementation of species-specific and site-specific surveys as per Condition 1.2 and Condition 6 unless Condition 7 is implemented for those species.
- e) During pre-logging and pre-roading surveys, all practical steps must be taken to direct survey effort in areas of the highest quality class modelled habitat, where modeled habitat occurs in the compartment.
- f) The pre-logging and pre-roading survey requirements are based on a minimum survey effort for a standard 200 hectares of net logging area. (200 hectares equates to an average compartment size.)

8.2. Survey timing

- a) SFNSW must plan and conduct surveys in the most appropriate "Survey season" (where specified in Schedule 2 of this licence for flora species, and as specified in Condition 8.8 below for fauna species).
- b) SFNSW must not conduct or permit the conduct of harvesting operations in compartments where seasonally appropriate surveys have not been carried out unless SFNSW choose to apply condition 7 b) where the subject species is listed in that condition.

(Note: Different fauna groups require survey during different seasons, with most groups best surveyed during spring-summer. As well as this, different weather conditions are more appropriate for certain groups, for instance it is most appropriate to survey for frogs after rain.)

8.3. Surveyor experience

- a) SFNSW must ensure that persons conducting pre-logging and pre-roading surveys are suitably experienced and trained. Suitable experience and training includes, but is not limited to:
 - i. Extensive experience with flora and / or fauna survey work.
 - ii. Extensive experience in the field identification of flora and / or fauna. Surveyors must be able to identify the threatened species and habitats of threatened species relevant to the region that require species-specific or site-specific conditions, as well as similar species that may be confused with these. Surveyors must be able to identify features referred to in Condition 8.7.3 b).
 - iii. Familiarisation with herbarium or museum specimens of threatened species requiring species-specific or site-specific conditions, if not already familiar.
 - iv. Relevant tertiary qualifications are preferable but not essential if the above criteria, Condition 8.3 a) i., ii. and iii. are met.

- b) SFNSW must maintain a register of surveyors which details the way in which each surveyor meets the experience criteria specified in 8.3 a) above. The entry in the register relevant to the surveyor must be received by NPWS within 10 days of NPWS requesting the entry.

8.4. Survey documentation and reporting

- a) SFNSW must prepare a pre-logging and pre-reading survey report that must include the following:
- i. Information relating to all of the "Data to Record" sections referred to in this Condition.
 - ii. All raw data sheets.
 - iii. Details of previous reliable surveys including, but not limited to, survey methodology, sampling intensity, sample placement and distribution, season of survey and weather conditions.
- b) The Survey Report must be received by NPWS Conservation Planning and Programs office within ten days of NPWS requesting the report.
- c) All survey durations are to be interpreted as time worked in the field, not inclusive of travel time to and from the survey area.

8.5. Data compilation

- a) The following data must be compiled prior to pre-logging and pre-reading surveys:
- i. All records of threatened species requiring species-specific or site-specific prescription and all records of the protected species Greater Glider held by, or available to, FCNSW. This must include, but is not limited to, searching the Office of Environment and Heritage Atlas of NSW Wildlife and FCNSW documents, records and other sources of information; and
 - ii. Maps of modeled habitat (with different Classes of habitat indicated) of those species requiring survey.
 - iii. The information required to be collated in 8.5 b) below must be provided to persons conducting pre-logging and pre-reading surveys and harvest planning.
- b) **Data to Record:**
- i. Date(s) of review.
 - ii. Name of Management Area, State Forest name, compartment number.
 - iii. Name of person(s) conducting review.
 - iv. Results of a database search for threatened flora and fauna records within two kilometres or five kilometres, as appropriate, of the compartment boundary. Records with a reliability of 1 to 5, inclusive, must be searched for.
 - v. Results of a check of SFNSW records for threatened species recorded within two kilometres or five kilometres, as appropriate, of the compartment boundary and any other records readily available.
 - vi. A summary of those threatened species records collated under Condition 8.5 b) iv. and v. above, including species name, Australian Map Grid co-ordinates, date of record, type of record (e.g. observed, heard, road kill, hair analysis), observer's name, and source of record where this information is available.
 - vii. Maps of modeled habitat (where available) of those species requiring survey. These maps are to assist the surveyor in locating potential habitat.
 - viii. Habitat descriptions from Schedule 4 of this licence.

AMENDMENT 4
1 March 2013
Condition 8.5 a) i.
replaced

8.6. Incidental Threatened Flora and Fauna Records

- a) All SFNSW employees and contractors must identify and record all indications that a threatened species is present, or has been present, within a compartment. Indications include, but are not limited to, an observation of a live or dead individual of a species, or any part of an individual (hair, feathers, skin, bone, teeth or eggs), or a sign that indicates the species' presence (species' call heard, tracks, definite Koala scratchings, potoroo and bandicoot digs, incisions, species in scat, species' scat, species in raptor or owl pellet, nest, roost or den).
- b) Particular emphasis must be placed on identifying and recording the following species: Rosenberg's Monitor and Eastern Quoll.
- c) **Data to Record:**
 - i. Species name.
 - ii. Number of individuals.
 - iii. AMG (to within a 100m accuracy).
 - iv. Name of State Forest and compartment number that species recorded in.
 - v. Type of record (e.g. observed, heard, road kill).
 - vi. Date(s) recorded.
 - vii. Recorder's name.

8.7. Pre-logging and Pre-roading Compartment Traverse

8.7.1. General

- a) A Compartment Traverse must be conducted to search for threatened and protected flora species and certain threatened and protected fauna features.
- b) Samples of flora species that are unfamiliar to the surveyor must be collected and identified or verified by a relevant herbarium.
- c) The threatened and protected flora component and threatened and protected fauna features component can both be conducted at the same time if the surveyor is suitably experienced. Where the two components are conducted at the same time, the minimum survey effort required is ten person hours per 200 hectares of net survey area except where Conditions 8.7.1. d) and e) have been applied.
- d) Where there is open ground cover with good visibility on the forest floor (as determined by Condition 8.7.2 and/or field inspection) and data compiled under Condition 8.5 indicates that three or less threatened or protected plant species are likely to occur in the compartment, flora and fauna compartment traverses may be undertaken concurrently. A minimum of six person hours per 200 hectares of net survey area must be conducted when concurrent flora and fauna traverses are undertaken.
- e) When concurrent flora and fauna compartment traverses are conducted and the total time spent searching is less than 10 person hours per 200 hectares of net survey area, groundcover conditions must be documented by recording the dominant vegetation associations and their distribution across the compartment in the pre-logging and pre-roading survey report.

8.7.2. Desktop component

- a) For each 200 hectares of net survey area, a traverse at least four kilometres in distance must be planned within which targeted sampling must be conducted as specified below in Condition 8.7.3 below.
- b) Air photographs and/or forest type maps of a suitable scale (minimum of 1:25,000) must be examined when planning the traverse to identify the full range of forest types and environmental gradients within the compartment. The traverse must cover the full range of forest types and environmental gradients within the compartment.
- c) The traverse route must be mapped on a 1:15,000 or 1:25,000 forest type map.

8.7.3. Field Methodology:

- a) *Threatened and protected flora component*
- i. For the threatened and protected flora component of the Compartment Traverse, the surveyors(s) must conduct a search in a random meander along the traverse identified in part 8.7.1 above, searching for and recording those threatened and protected flora species that require species-specific or site-specific conditions. The search should be conducted within the net survey area and in areas 50 metres outside of the boundary of the net survey area.
 - ii. A minimum of six person hours of flora survey per 200 hectares of net survey area must be conducted along the traverse. Threatened and protected flora species requiring species-specific conditions must be searched for continuously along the traverse.
 - iii. If habitats not previously identified in the desktop component are encountered while sampling along the traverse, a proportion of the sampling time should be used to survey these habitats.
 - iv. The timing of the threatened and protected flora component of the compartment traverse should take into account flowering periods of the threatened flora species being surveyed (this is particularly relevant to orchids and annual species). Data on known flowering periods of cryptic species is included in Schedule 2 of this licence where this information is available.
 - v. Where individuals or groups of individuals of threatened and protected plants requiring Conditions are found, the individual or the extent of the group of individuals must be flagged (e.g. with flagging tape) by the person conducting the flora survey. The location of the individual or group of individuals must also be marked on the Harvesting Plan map to assist the Supervising Forest Officer in finding the flagged plant(s) during compartment mark up.
- b) *Threatened and protected fauna features component*
- i. For the threatened and protected fauna features component of the Compartment Traverse, a minimum of four person hours per 200 hectares of net survey area must be spent continuously searching for the following features along the traverse identified in 8.7.1 above:
 - Nests and roosts for those species listed in Condition 5.10 of this licence;
 - Dens of the following species: Yellow-bellied Glider, Squirrel Glider and Brush-tailed Phascogale;
 - Flying-fox camps;
 - Latrine and den sites of the Spotted-tailed Quoll;
 - Distinctive scats (e.g. Spotted-tailed Quoll, Koala);
 - Predator scats (these must be collected for analysis);
 - Yellow-bellied Glider and Squirrel Glider sap feed trees;
 - Microchiropteran bat tree roosts;
 - Microchiropteran bat subterranean roosts (caves, tunnels and disused mineshafts);
 - Swift Parrot and Regent Honeyeater feed or nest trees; and
 - Suitable habitat for Broad-toothed Rat.
 - ii. If habitats not previously identified in the desktop component are encountered while sampling along the pre-determined traverse, a proportion of the sampling time should be used to sample these habitats.
 - iii. Where threatened and protected fauna features are found, these features are to be appropriately flagged or marked in the field by the person conducting the survey. The location of the feature must also be marked on the Harvesting Plan map to assist the Supervising Forest Officer in finding the flagged feature(s) during compartment mark up.
- c) **Data to Record:**
- i. Name of Management Area, State Forest name, compartment number(s).

- ii. Date(s) of survey.
- iii. Surveyor(s) name.
- iv. The traverse route clearly marked on 1:15,000 or 1:25,000 forest type map.
- v. Length of compartment traverse.
- vi. Time spent conducting each component of the field methodology, i.e. flora and fauna.
- vii. Threatened flora and protected taxa recorded and the number of individuals of each (indicate whether count or estimate).
- viii. Threatened and protected fauna features recorded.
- ix. AMG (to within a 100m accuracy) of threatened and protected flora records and threatened and protected fauna features recorded.
- x. Locality description (name and distance from nearest road, track, creek, etc.) of threatened flora and protected records.
- xi. Locality of threatened and protected flora and threatened and protected fauna features clearly marked on a 1:15,000 or 1:25,000 forest type map.
- xii. List of additional surveys required.

8.8. Targeted Fauna Surveys

8.8.1. General

- a) The purpose of targeted fauna surveys is to search within compartments that contain known or potential habitat for those fauna species that require site-specific or species-specific conditions as listed in Table 3.
- b) The following methodologies must be used to survey for the relevant species within known habitat and potential habitat.

(Note: any variations to the requirements set in this Condition must be approved in writing by NPWS prior to surveys being conducted.)

Table 3. Species requiring pre-logging and pre-roading targeted surveys

| Fauna group / Common name | Scientific name | Comments |
|--|-------------------------------------|--|
| Frogs | | |
| Northern Corroboree Frog | <i>Pseudophryne pengilleyi</i> | Targeted |
| Reptiles | | |
| Rosenberg's Monitor | <i>Varanus rosenbergi</i> | Incidental, targeted |
| Birds | | |
| Barking Owl | <i>Ninox connivens</i> | Nocturnal call playback and spotlight ¹ |
| Black-chinned Honeyeater (eastern sub-species) | <i>Melithreptus gularis gularis</i> | Other diurnal birds |
| Masked Owl | <i>Tyto novaehollandiae</i> | Nocturnal call playback and spotlight ¹ |
| Powerful Owl | <i>Ninox strenua</i> | Nocturnal call playback and spotlight ¹ |
| Regent Honeyeater | <i>Xanthomyza phrygia</i> | Other diurnal birds |
| Swift Parrot | <i>Lathamus discolor</i> | Other diurnal birds |
| Turquoise Parrot | <i>Neophema pulchella</i> | Other diurnal birds |
| Non-flying mammals | | |
| Brush-tailed Phascogale | <i>Phascogale tapoatafa</i> | Spotlight, Remote Camera Survey |

AMENDMENT 4
1 March 2013
Condition 8.8.1,
Table 3 – title
modified

AMENDMENT 4
1 March 2013
Condition 8.8.1,
Table 3 –
references to
"hairtube" and
"scat and track"
omitted

AMENDMENT 4
1 March 2013
Condition 8.8.1,
Table 3 – species
modified

AMENDMENT 4
1 March 2013
Condition 8.8.1,
Table 3 –
explanation added

| | | |
|--------------------------------|-----------------------------------|---------------------------------------|
| Eastern Quoll | <i>Dasyurus viverrinus</i> | Incidental |
| *Greater Glider | <i>Petauroides volans</i> | Spotlight |
| Koala | <i>Phascolarctos cinereus</i> | Call playback, targeted |
| Long-nosed Potoroo | <i>Potorous tridactylus</i> | Remote Camera Survey |
| Smoky Mouse | <i>Pseudomys fumeus</i> | Remote Camera Survey |
| Squirrel Glider | <i>Petaurus norfolcensis</i> | Spotlight |
| Yellow-bellied Glider | <i>Petaurus australis</i> | Nocturnal call playback and spotlight |
| Flying mammals | | |
| Common Bent-wing Bat | <i>Miniopterus schreibersii</i> | Subterranean roost |
| Yellow-bellied Sheath-tail-bat | <i>Saccolaimus flaviventris</i> | Targeted |
| Great Pipistrelle | <i>Falsistrellus tasmaniensis</i> | Subterranean roost |

* Protected fauna species under NPW Act.

- c) For those fauna species requiring targeted fauna surveys, the following applies:
- i. If no previous reliable survey has been conducted, then pre-logging and pre-roading surveys in accordance with Condition 8 of this licence are required for that species.
 - ii. If a previous reliable survey recorded the species, then pre-logging and pre-roading surveys in accordance with Condition 8 of this licence within the compartment are required for that species.
 - iii. If a previous reliable survey did not record the species, surveys are not required for that species.
- d) A previous reliable survey is defined as a survey conducted in the compartment, or within two kilometres in similar habitat to the compartment, in the previous ten years that was a survey equal to or better than the survey requirements set out in this Condition with respect to survey methodology, sampling intensity, sample placement and distribution, survey season and weather conditions.
- e) Surveys for particular species are not required where SFNSW has chosen to apply Condition 7 b) above in relation to that species.

AMENDMENT 4
1 March 2013
Condition 8.8.1 d)
modified

8.8.2. Data to Record

For each targeted fauna survey method used the following information must be recorded:

- a) Name of Management Area, State Forest name, compartment number;
- b) Type of survey (including details of methodology used);
- c) Date(s) of survey;
- d) Surveyor(s) name;
- e) Survey location AMG (to within a 100m accuracy);
- f) Description of locality description (i.e. name and distance from nearest road, track, creek, etc.);
- g) Survey point or transect clearly marked on 1:15,000 or 1:25,000 forest type map;
- h) Survey start time and finish time;
- i) Threatened species being targeted;
- j) Threatened species recorded;
- k) Record observation type, e.g. species heard, observed, scat record, track, hair, ultrasonic detection etc. Where bat ultrasonic detection, scat record, the reliability of the record is to be provided also. Name of person conducting bat ultrasonic analysis;
- l) For playback surveys: list species played;
- m) For trapping surveys: describe baits used in any traps; and
- n) For each day or night of survey, on arriving at the survey location the following is to be recorded:

AMENDMENT 4
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Condition 8.8.2 n)
omitted and
following numbers
renumbered

- i. Temperature (degrees Celsius).
- ii. Wind: 0 = calm; 1 = light, leaves rustle; 2 = moderate, moves branches; 3 = strong, impedes progress.
- iii. Rain: 0 = rain during survey; 1 = evidence of rain in last 24 hours; 2 = no evidence of rain in last 24 hours.
- iv. Night light: 1 - very dark, no moon + cloud; 2 = dark; quarter moon or moon with heavy cloud; 3 - detail seen, moon and clear sky; 4 = bright, half moon or more and no cloud.
- v. Date and time these measurements were made.

8.8.3. Frog and reptile surveys

(Note: It would be most effective to undertake a local to regional scale frog survey at the most appropriate time of year and under the best weather conditions. Such a survey could cover breeding sites within or immediately adjacent to compartments scheduled to be logged over the following year.)

AMENDMENT 4
1 March 2013
Condition 8.8.3 A
omitted

8.8.3.A. Condition omitted (Amendment 4)

8.8.3.B. Rosenberg's Monitor *Varanus rosenbergi* survey

Additional to the measures required in the threatened fauna features component of the transect survey, the principles to be followed to optimise detection of this species are:

- a) SFNSW staff conducting harvest planning and general operations within the geographic distribution of *Varanus rosenbergi* must be familiar with the species key identification features.
- b) SFNSW staff should examine road kill goannas within the distribution of this species.

AMENDMENT 4
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Condition 8.8.3 C
added

8.8.3.C. Northern Corroboree Frog *Pseudophryne pengilleyi* survey

- a) Surveys must be conducted using the shout-response technique which consists of a loud shout directed toward the ground followed by a listening period of 30 seconds to count or estimate the number of male frogs responding. Northern Corroboree Frogs will generally respond within a 3-5 metre radius of a shout. Therefore, the area to be surveyed must be traversed with a series of shouts 3-5 metres apart.
- b) Areas surveyed and the approximate traverse route (or GPS tracklog if available) must be mapped in the prelogging survey report.
- c) Surveys must be conducted during the day under fine conditions.
- d) Survey season: February (note: on the day of survey, calling must be confirmed at a known site prior to surveying new areas).

8.8.4. Diurnal bird surveys

Surveys for other threatened diurnal birds requiring species-specific or site-specific conditions must be conducted as follows:

- a) Surveys must be conducted for a minimum of one person hour duration for areas up to 200 hectares of net survey area, plus an additional 15 minutes per 50 hectares above 200 hectares.
- b) Surveys must be conducted in the early morning.
- c) The following species must be searched for: Black-chinned Honeyeater (eastern sub-species), Regent Honeyeater, Swift Parrot and Turquoise Parrot.
- d) Surveys should focus on the following features of these species:

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Condition 8.8.4 c)
modified and d) iii.
added

- i. Regent Honeyeater: Surveys must be conducted where recent records (i.e. within the previous five years) exist within five kilometres of the compartment boundary. Surveys must focus on any permanent water bodies, dams, flowering eucalypts.
Survey Season: winter to mid summer.

- ii. Swift Parrot and Turquoise Parrot: Surveys should concentrate on searching winter flowering eucalypts and other species. Particular attention must be paid to searching for nests of the Turquoise Parrot which are seldom more than a metre above the ground in hollows in small trees, dead eucalypts or in holes or stumps, or logs lying on the ground.
Survey season: Swift Parrot surveys are best conducted from March to October; Turquoise Parrot surveys are best conducted during the breeding season (August to December).
- iii. Black-chinned Honeyeater (eastern sub-species): Survey should focus on upper levels of eucalypt canopy in drier forest types in proximity to streams. Call must be listened for.
Survey Season: anytime of the year.

8.8.5. Nocturnal Call Playback

Nocturnal call playback must target the following species: Masked Owl, Barking Owl, Powerful Owl and Yellow-bellied Glider. Nocturnal call playback surveys must be conducted as follows:

- a) Call playbacks must be conducted at two sites for every 200 hectare of net survey area, plus an additional site per 100 hectares above 200 hectares.
- b) Playback sites must be more than 1 kilometre apart. The location of the playback sites should optimise response.
- c) At each call playback site, an initial listening period of 10 minutes should be undertaken, then each target species call must be played for five minutes followed by at least a two minute listening period. After the last call at least 10 minutes must be spent listening. Calls must be played from a good quality portable tape cassette or CD player and amplified through a nine volt megaphone, or equivalent or better.
- d) The playback session must be conducted twice, on different nights. Where a species is recorded at a site on the first night of survey, it is not a requirement of this Condition that the call of this species be played at that site on the second night of survey.
- e) Windy and rainy conditions are to be avoided.
- f) Where one transect of two kilometres length is established for spotlighting, call playback can be conducted at the beginning and end of each two kilometre transect. Where two transects of 1 kilometre length are implemented for spotlighting, call playback can be conducted at the beginning or end of each 1 kilometre transect.
- g) Survey season: Anytime of the year, preferably in Spring, Summer and Autumn.

8.8.6. Spotlight survey

Spotlight surveys must target the following species: Brush-tailed Phascogale, Squirrel Glider, Yellow-bellied Glider, Greater Glider, Masked Owl, Barking Owl and Powerful Owl.

Spotlight surveys must be conducted as follows:

- a) For areas up to 200 hectares of net logging area, a spotlight transect totalling two kilometres distance, plus an additional 500 metres for each 50 hectares of net logging area above 200 hectares, must be conducted.
- b) Transects must be a minimum 500 metres in length, and should be one kilometre in length.
- c) This / these transects must be spotlighted twice on two separate nights. On one night, the transect(s) must be spotlighted while walking. On the other night, the spotlighting transect(s) may be conducted from a vehicle. Preferably both transects should be done on foot.
- d) In areas of Brush-tailed Phascogale known habitat or potential habitat, both nights' surveys must be conducted while walking.
- e) During vehicle spotlighting, vehicle speed must not exceed five kilometres per hour. Vehicle spotlight must be a minimum 1 hour duration per 200ha.
- f) During walking spotlighting, observers must walk at approximately 1 kilometre per hour. Walk spotlight must be a minimum 1 hour duration per 200ha.

- g) Survey must involve two observers using 100 watt spotlights for vehicle spotlighting and 50 watt spotlights for walking spotlighting.
- h) Windy, cold and rainy conditions should be avoided.
- i) Survey Season: any time of year, preferably in Spring, Summer and Autumn.

(Note: Walking spotlight survey transects can be established along roads. If potential habitat exists away from roads, SFNSW can opt to establish an off-road survey. Spotlight surveys can be conducted prior to call playback.)

AMENDMENT 3
[] 2012
Conditions 8.8.7
replaced and -
8.8.8 omitted

8.8.7. Remote Camera Survey

- a) Remote camera surveys are used to target the following species: Brush-tailed Phascogale, Long-nosed Potoroo and Smoky Mouse.
- b) Remote camera surveys must be conducted as follows:
 - i. Two cameras must be set per 200 ha net harvestable area for a minimum of seven consecutive nights.
 - ii. Each camera must be placed in an area of the net harvestable area representing the most likely habitat for the target species.
 - iii. A lure (bait) suitable to attract the target species must be placed in the centre of the view of each camera.

8.8.8. Condition Omitted (Amendment 4)

8.8.9. Condition Omitted (Amendment 4)

8.8.10. Koala survey

Where there is a Koala record within two kilometres of a compartment boundary, or local knowledge indicates that koalas are likely to be present, the following surveys must be implemented.

- a) **Survey Method**
 - i. Where habitat within the compartment has been identified as core Koala habitat by the Modelled Areas of Habitat Significance for Vertebrate Fauna in the Southern CRA, Condition 8.8.10 b) **Transect Survey with Quadrats** must be carried out in the modelled habitat.
 - ii. Where habitat within the compartment has been identified as intermediate Koala habitat by the Modelled Areas of Habitat Significance for Vertebrate Fauna in the Southern CRA, Condition 8.8.10 c) **Transect Survey** must be carried out in the modelled habitat.
 - iii. Where habitat within the compartment has been identified as marginal habitat by the Modelled Areas of Habitat Significance for Vertebrate Fauna in the Southern CRA, Condition 8.8.10 d) **Traverse Survey with Quadrats** must be carried out in the modelled habitat.
 - iv. Where there is no modelled habitat within the compartment a call playback survey for koalas must be incorporated into the General Targeted Fauna Surveys as part of the Nocturnal Call playback survey. Where a koala is detected by nocturnal call playback Condition 8.8.10 b) Transect survey with quadrats, must be carried out in the compartment.
- b) **Transect Survey with Quadrats**
 - i. The survey must involve transects in areas to be logged. Non-logged areas (such as wildlife corridors) need not be surveyed.
 - ii. The transects must uniformly cover the harvesting area with transects between 50 to 100 metres apart (subject to local conditions).

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omitted

- iii. At approximately 25 to 50 metre intervals (depending on the distance between transects) quadrat searches are to be conducted. At each search site, four quadrats (quadrat size = 50 cm x 50 cm) are to be randomly placed within 10 metres of the transect, beneath tree crowns. The quadrats are to be searched for Koala scats
 - iv. Trees at the quadrats and between quadrats are to be examined for koala scratches, koala scats, koalas or predator scats.
 - v. While surveying the transect line, all trees between quadrat sites are to be similarly searched (without using quadrats) for scratches, scats, koalas and predator scats. Possible scratch marks are to be confirmed by quadrat searches for scats.
 - vi. When a koala or evidence of a koala is detected Condition 8.8.10 d) asterisk survey must be carried out.
- c) **Transect Survey**
- i. The survey must involve transects in areas to be logged. Non-logged areas (such as wildlife corridors) need not be surveyed.
 - ii. The transects must uniformly cover the harvesting area with transects between 50 to 100 metres apart (subject to local conditions).
 - iii. All trees along the transect are to be examined for koala scratches, koala scats, koalas or predator scats. Possible Koala scratch marks are to be confirmed by quadrat searches for scats (as per b) iii. above).
 - iv. When a koala or evidence of a koala is detected Condition 8.8.10 e) asterisk survey must be carried out.
- d) **Traverse Survey with Quadrats**
- i. The survey must involve a traverse of areas to be logged. Non-logged areas (such as wildlife corridors) need not be surveyed.
 - ii. The survey must involve a random traverse consisting of a minimum length of six kilometres and 4 person hours per 200 hectares of modelled habitat within the proposed logging area. The traverse must sample all of the forest ecosystems within the modelled habitat area in the compartment.
 - iii. Along this traverse, at approximately 50 metre intervals quadrat searches are to be conducted. At each search site, four quadrats (quadrat size = 50 cm x 50 cm) are to be randomly placed within 10 metres of the transect, beneath tree crowns. The quadrats are to be searched for Koala scats.
 - iv. Trees at the quadrats and between quadrats are to be examined for koala scratches, koala scats, koalas or predator scats.
 - v. While surveying the transect line, all trees between quadrat sites are to be similarly searched (without using quadrats) for scratches, scats, koalas and predator scats. Possible scratch marks are to be confirmed by quadrat searches for scats.
 - vi. Where a koala or evidence of a koala is detected Condition 8.8.10 e) asterisk survey must be carried out.
- e) **Asterisk Survey**
- i. This method is to be applied when a koala or evidence of a koala is detected. The method allows an assessment to be made of the level of use of a particular area and in some cases will enable the delineation of an area of regular use.
 - ii. The tree where a koala or evidence of a koala was detected is designated as Centre Tree 1. Transects are run on the four cardinal compass points from the centre tree. The transects are 100 m long. All trees within 15 m of the transect line are inspected for signs of koala use, i.e. scratches, scats, koalas.
 - iii. Trees having scratches but, on first inspection, no scats, are searched using 0.25 m² quadrats placed on the ground under the crown. A minimum of four to eight quadrats are searched depending on the size of the crown. Any tree under which scats are found is designated as a centre tree and numbered sequentially if it is more than 20 m from the previous centre tree.

Further transects are then established around the new centre tree on those cardinal points which do not coincide with a transect from a previous centre tree. The process continues until no further centre trees are identified.

- iv. Additional transects are then established from each of the peripheral centre trees on any of the four intermediate compass points (NE, SE, SW, NW) which do not overlap previous transects.
- v. Once all transects are completed and no further evidence of Koalas is found a koala use area is delineated by connecting the outermost points from which Koala evidence has been recorded.
- vi. Additional information is to be recorded from each centre tree according to the following method:
 - Plots are established around each centre tree consisting of the centre tree and its nine nearest neighbours in each of two size categories (above and below 30 cm dbhob). There is a search limit of 25 m radius for each size category and if no trees occur within this limit, only one tree in the category is recorded.
 - In the plots tree species, dbhob or diameter class and Keady Crown Class are recorded for each tree greater than or equal to 10 cm dbhob. Where diameters are estimated, they are allocated to the following classes: 10-29 cm; 30-59 cm; 60-89 cm; 90-109 cm; 110 cm or greater.
 - The height of the centre tree and the tallest tree in each of the two categories is also recorded. Where the tallest tree on the site is judged not to represent the site potential, site height is estimated
 - The distance to the furthest tree in each of the two categories is recorded as is the distance to the next tree further out in each category.
 - Aspect slope and topographic position are recorded and the floristic, structural and historical attributes of the site are described.
 - Scats of koala or other species are noted and koala scats are examined for freshness and uniformity of appearance.

f) **Survey Results**

- i. The results of all Koala surveys must be recorded on the standard data forms.
- ii. The approximate location of all transects and quadrats, transects, traverses and quadrats, and all asterisk survey centre trees are to be recorded on a map and included in the pre-logging survey report.

g) **Reporting**

- i. All survey results must be archived by SFNSW on the compartment history and included in the Pre-logging and Pre-roading survey report.
- ii. All Koala records must be incorporated into the SFNSW database with subsequent transfer to the NPWS.

8.8.11. Microchiropteran bat surveys

8.8.11.A. CONDITION OMITTED (Amendment 4)

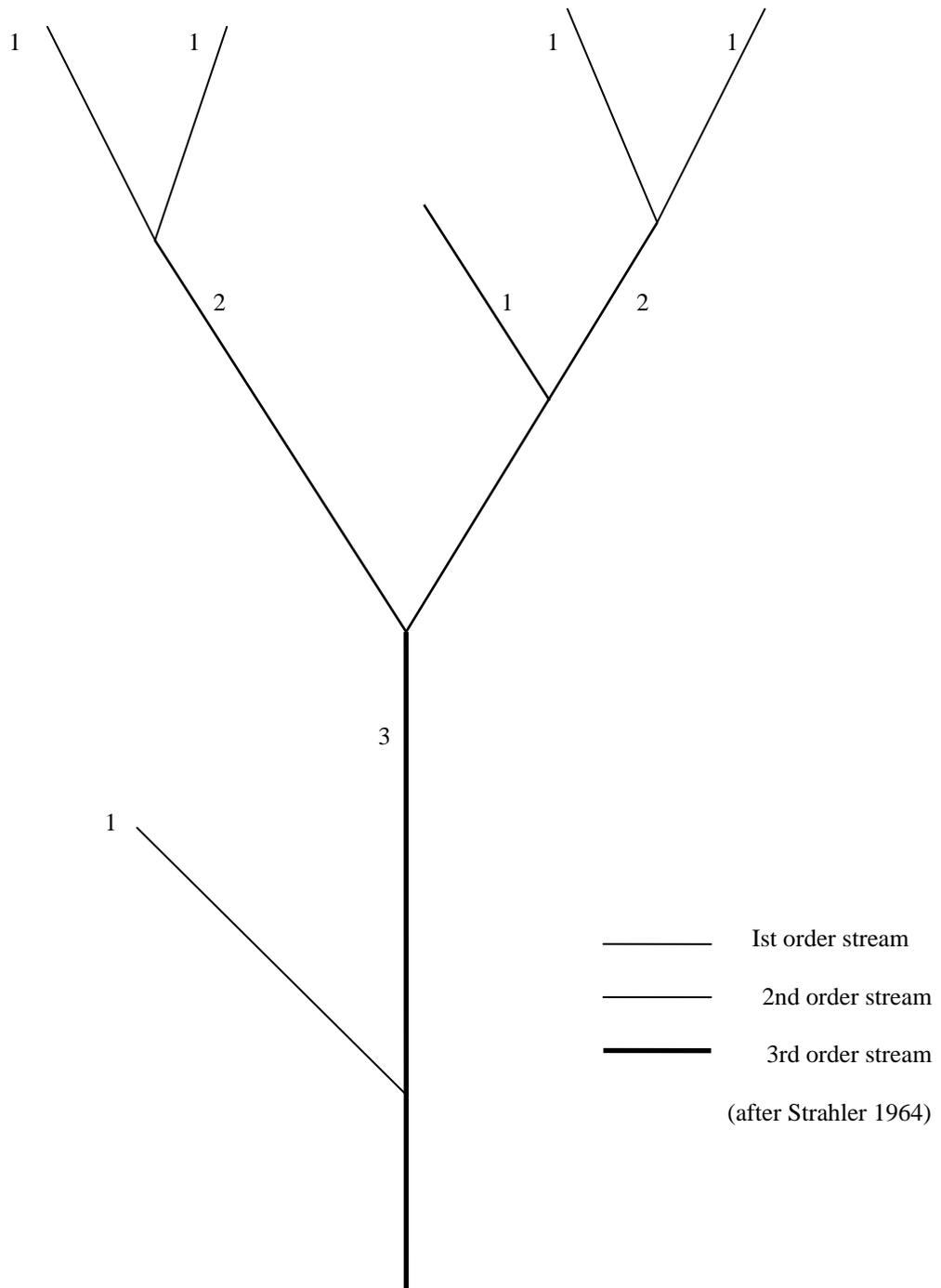
8.8.11.B. CONDITION OMITTED (Amendment 4)

Schedule 1. Determination of stream order

Stream order must be determined according to the methodology outlined below.

1. A first order stream is defined as that part of a drainage system between its point of origin and the first junction with another stream. A second order stream commences at the junction of two first order streams. A third order stream commences at the junction of two second order streams. A fourth order stream commences at the junction of two third order streams. A schematic diagram of stream order is provided in Figure 1 below.
2. Downstream from the junction of two streams of different stream order, the higher stream order is maintained.
3. The determination of stream order must commence from the catchment boundary, even if that is outside the compartment.
4. Stream order must be derived from the drainage network provided on the relevant topographic map(s) for the compartment, from a 1:25,000 map sheet produced by the Land Information Centre (formerly the Central Mapping Authority). Where a 1:25,000 map sheet is not available for the compartment, then the best available scale map sheet produced by the Land Information Centre must be used.

Figure 1. Schematic diagram of stream order



Schedule 2. Threatened, ROTAP or regionally rare flora potential habitat descriptions

| Species | Schedule Prescription | |
|---|--------------------------|----------|
| <i>Acacia phasmoides</i> | 2 | B |
| <u>Distribution</u> : Known only from Woomargama (formerly Dora Dora) State Forest (Holbrook Shire) | | |
| <u>High probability habitat</u> : Open shrubland to low woodland on creek banks and rocky crevices in sandy granitic soil. | | |
| <u>Additional known habitat details</u> : | | |
| <i>Ammobium craspediodes</i> | 2 | B |
| <u>Distribution</u> : Mainly in Yass area (Lake Burrinjuck - Bookham - Rye Park - Dalton - Yass), with outliers in Bigga (north of Crookwell), Tumut and Wagga areas. | | |
| <u>High probability habitat</u> : Grassland and grassy woodland. (Tumut record is woodland with a shrub understorey). | | |
| <u>Additional known habitat details</u> : Generally flat to gently undulating country; broad valley bottoms and slopes and ridges. On a range of substrates. | | |
| <i>Caledonia concolor</i> | 1 | B |
| <u>Distribution</u> : Disjunct populations in dry sclerophyll forest in Albury, Burrinjuck and Bethungra (SW of Cootamundra) areas with old records for Tumut and Tumberumba. | | |
| <u>High probability habitat</u> : | | |
| <u>Additional known habitat details</u> : | | |
| <i>Eucalyptus pulverulenta</i> | 2 | B |
| <u>Distribution</u> : Bredbo - Cooma - Bombala areas | | |
| <u>High probability habitat</u> : An understorey species in forest or woodland | | |
| <u>Additional known habitat details</u> : In generally steep, hilly country (sometimes near hill crests). Gravelly – (sandy or clayey), loamy soils over shale. | | |
| <i>Persoonia glaucescens</i> | 2 | A |
| <u>Distribution</u> : Mittagong - Hill Top - Bargo areas with an early record for Fitzroy Falls | | |
| <u>High probability habitat</u> : In open forest with a heathy understorey (sometimes on roadside remnants) | | |
| <u>Additional known habitat details</u> : | | |
| <i>Phyllota humifusa</i> | 2 | B |
| <u>Distribution</u> : From Jellor (west of Mittagong) to Penrose (Bundanoon area). e.g. Penrose SF. | | |
| <u>High probability habitat</u> : Dry sclerophyll forest & woodland with heathy understorey. | | |

Additional known habitat details: Deep sandy soil. Associated species include *Eucalyptus mannifera*, *E. sclerophylla*, *E. radiata*

Pomaderris cotoneaster 1 **B**

Distribution: - Ettrema Gorge, Tallong, Candelo and Tumut areas

High probability habitat: Small shrub that grows in dry sclerophyll forest near river banks

Additional known habitat details:

Pomderris pallida 2 **B**

Distribution: - ACT / Queanbeyan area, Kydra Reefs, Tinderry NR, Umarella, Byadbo Wilderness (Kosciusko NP).

High probability habitat: Widely distributed shrub found in woodland of rocky gullies.

Additional known habitat details:

Amphibromus fluitans 2 **B**

Distribution: Only recorded for certain in Albury area.

High probability habitat: Occurs in permanent swamp on alluvial soils.

Additional known habitat details:

Thesium australe 2 **B**

Distribution: From Cabramurra to Queensland border. e.g. Crowdy Bay NP, Hat Head NP, Kattang NR, Michelago & Cabramurra.

High probability habitat: Grassland or woodland.

Additional known habitat details: Wide range of substrates. Associated species include *Themeda triandra*, *Poa sieberiana*, *E. rossii*, *E. blakelyi*, *E. mannifera*, *E. pauciflora*. Often in damp sites. Flowers spring - summer.

Pilularia novehollandiae 1 **B**

Distribution: in Henty and Balldale areas (SW slopes) with an old (1962) collection from near Khancoban

High probability habitat: This fern-like plant is an aquatic or semi-aquatic perennial that grows in seasonally dry depressions and margins of marshes.

Additional known habitat details:

Chionogentias sylvicola **B**

Distribution:

High probability habitat:

Additional known habitat details:

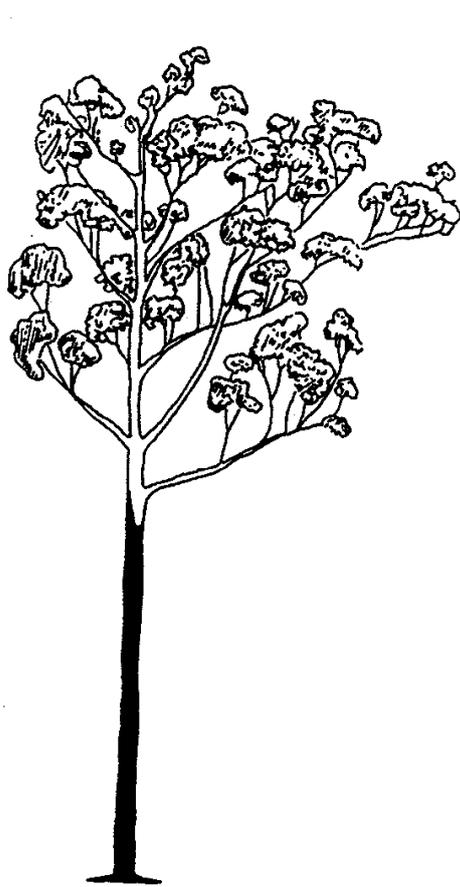
Grevillea oxyantha ssp ecarinata **B**

Distribution:

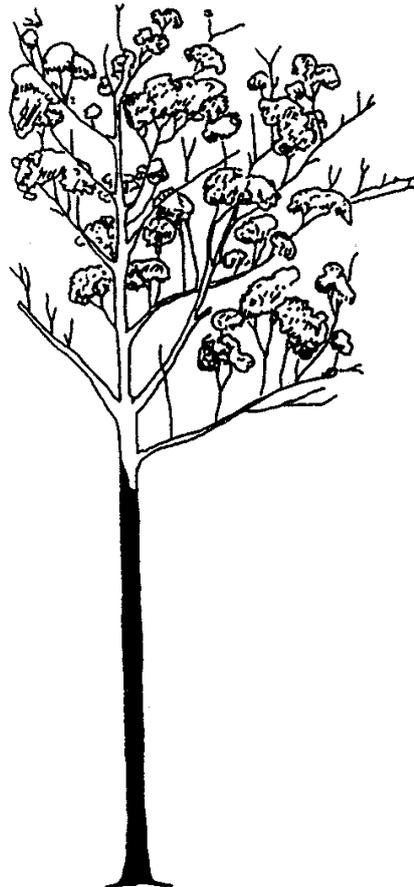
High probability habitat:

Additional known habitat details:

Schedule 3. Diagrammatic representation of mature and late mature growth stages



Mature



Late Mature

Schedule 4. Threatened fauna potential habitat descriptions

| Common Name | Species | Schedule |
|---|--------------------------------|----------|
| Booroolong Frog | <i>Litoria booroolongensis</i> | 1 |
| <u>Distribution</u> : Down the Great Dividing Range from the Queensland border to far southern NSW and into Victoria. | | |
| <u>Macrohabitat</u> : Flowing rocky streams generally on the western slopes of the Divide. | | |
| <u>Microhabitat</u> : Basks during daytime on pebble banks and rocks near the waters edge. | | |
| Southern Bell Frog | <i>Litoria raniformis</i> | 1 |
| <u>Distribution</u> : South-west NSW west of the Great Dividing Range, through Victoria and Tasmania. | | |
| <u>Macrohabitat</u> : Found in shallow, still or slow moving water (both ephemeral and permanent), with a sand substrate and emergent vegetation, especially bullrushes. Often found in situations with a sunny aspect. | | |
| <u>Microhabitat</u> : Shelters under ground debris. Basks during daytime near the edge of water and is also active at night. | | |
| Spotted Tree Frog | <i>Litoria spenceri</i> | 1 |
| <u>Distribution</u> : Fragmented distribution confined to streams on the north-west side of the Great Dividing Range, from the Central Highlands of Victoria to Mount Kosciuszko in NSW. | | |
| <u>Macrohabitat</u> : Flowing rocky streams. | | |
| <u>Microhabitat</u> : Basks during daytime on pebble banks and rocks near the waters edge | | |
| Heath Monitor | <i>Varanus rosenbergi</i> | 2 |
| <u>Distribution</u> : Disjunct populations in the Sydney, Shoalhaven, Canberra, Monaro and Khancoban regions. | | |
| <u>Macrohabitat</u> : Coastal heaths, humid woodlands, wet and dry sclerophyll forest, usually with a sandy substrate. | | |
| <u>Microhabitat</u> : Often lives under logs, in rock outcrops, or in burrows. Termite mounds may be important as breeding sites. Terrestrial and diurnal. | | |
| Masked Owl | <i>Tyto novaehollandiae</i> | 2 |
| <u>Distribution</u> : Found south from Cooktown, Queensland to the Pilbara region in Western Australia. Found sporadically along the coast and tablelands of NSW. | | |
| <u>Macrohabitat</u> : Found in a wide range of forest types, including wet and dry sclerophyll and rainforest. Thought to prefer drier forests and woodlands in flat or undulating country, however, may favour inclusion of moist forested areas within. Prefers a mosaic of sparse and dense ground cover. Often roosts in rainforest gullies. Found across the range of topographic sequences. | | |
| <u>Microhabitat</u> : Forages in areas with an open understorey, feeding mainly on small and medium-sized terrestrial mammals, and occasionally small arboreal mammals. Roost and nest trees are typically mature eucalypts bearing large hollows, although there are a number of records of the species roosting in dense vegetation. Nests have been located in both live and dead eucalypts. | | |

Powerful Owl*Ninox strenua* 2

Distribution: Found in the coastal areas and adjacent ranges of eastern Australia from the Victoria/South Australia border to Eungella in south-east Queensland. In NSW it is distributed throughout the length of the Great Dividing Range and also occurs on the western slopes.

Macrohabitat: Occurs in a range of vegetation types from woodland and open forest to rainforest. In NSW most commonly occurs in tall, wet or dry sclerophyll forests.

Microhabitat: Often found roosting in *Exocarpus* and rainforest gullies, or *Allocasuarina* groves, in stands with a dense canopy. It may utilise the drier portions of its home range for foraging. In forests, nest trees have been most commonly located at the head or sides of gullies. A large proportion of the diet is comprised of arboreal mammals.

Regent Honeyeater*Xanthomyza phrygia* 1

Distribution: Mainly in dry open-forest and woodland in areas of low to moderate relief on the inland slopes of the Great Dividing Range. The species also visits coastal southern areas and the north coast and tablelands.

Macrohabitat: Woodland to open forests <= 1000m asl. Box ironbark open forest and woodland communities.

Microhabitat: Important tree species are: in Mugga Ironbark *Eucalyptus sideroxylon*, White Box *E. albens*, Yellow Box *E. melliodora*, Yellow Gum *E. leucoxylon* and Blakely's Red Gum *E. blakelyi*, they are also known to feed on the flowers of mistletoe growing on River She-Oak *Allocasuarina cunninghamiana*. On the central coast NSW they are known to feed on Swamp Mahogany *E. robusta* and Coastal Banksia *Banksia integrifolia*. In north-east NSW they are known to feed on Grey and Silverleaved Ironbarks *E. siderophloia* and *melanophloia*, and Spotted Gum *Corymbia maculata*.

Swift Parrot*Lathamus discolor* 2

Distribution: Tasmania, Victoria, New South Wales and south-east Queensland. In NSW it occurs along the Victorian border and extends up the coast and ranges to the Queensland border. It is found at elevations from sea level to 1000m asl near Tenterfield.

Macrohabitat: Dry sclerophyll lowland forests.

Microhabitat: Areas containing winter flowering species, particularly Boxes, Ironbarks and *Banksia integrifolia*. Relies on mature, hollow-bearing trees for nesting (Tasmania only).

Turquoise Parrot*Neophema pulchella* 2

Distribution: Principally in NSW, with the southern part of its range intruding into north-east Victoria and into the granite belt of south-east Queensland. In NSW, mainly found west of the escarpment in the tablelands and western slopes, extending to coastal districts through the dry forest corridor of the Hunter Valley, although it occurs widely through most of eastern NSW

Macrohabitat: Open woodlands and dry sclerophyll forests and adjacent grasslands, often in rocky, broken country. Also found along watercourses.

Microhabitat: Feeds on the ground, typically in small groups, primarily on grass and herb seeds. May favour ecotonal areas. Nests are seldom more than a metre or so above the ground and are in hollows in small trees, often dead eucalypts or in holes or stumps, fence posts, or even logs lying on the ground.

Broad-toothed Rat*Mastacomys fuscus* 2

Distribution: Disjunct distribution throughout south-east Australia from northern NSW to western Tasmania. In NSW, known from the Barrington Tops area on the southern edge of the northern Tablelands. From this patchily through southern NSW, north-east and south Victoria.

Macrohabitat: Cool, moist areas, such as wet sclerophyll forests, woodlands, alpine and sub-alpine swamps, grasslands, sedgeland and heathlands. Appears to prefer high altitudes, although has been recorded at sea level (although not in NSW).

Microhabitat: A dense ground cover of grasses, sedges and shrubs appears to be critical, also a high level of ground moisture, mainly near creeks.

Brush-tailed Phascogale*Phascogale tapoatafa* 2

Distribution: From north of Rockhampton, south through NSW and Victoria, to the Mt Lofty Ranges in south-east South Australia, from near sea-level up to 1500m. North-east NSW appears to represent a stronghold.

Macrohabitat: Utilises a range of habitat types. Dry sclerophyll forest and woodlands <= 600m asl are preferred, usually with shrub understorey. The species has been found in coastal swamps, woodlands and heathlands, wet sclerophyll forest and cool temperate rainforest.

Microhabitat: Rough-barked dominated forests provide more suitable substrates for climbing than smooth-barked dominated forests. Nests and dens in tree hollows.

Smoky Mouse*Pseudomys fumeus* 1

Distribution: From a relatively small number of sites in western, southern and eastern Victoria, south-east NSW and the ACT, with a very disjunct distribution which includes both coastal and montane sites.

Macrohabitat: Dry sclerophyll or heathland with diverse understorey. Associated primarily with ridge-top sites.

Microhabitat: Areas containing a high diversity of seed-bearing legumes and fruiting epacrids and a high number of rocks or fallen logs.

Squirrel Glider*Petaurus norfolcensis* 2

Distribution: Restricted to mainland eastern Australia. In NSW, it occurs on either side of the Great Divide, with coastal records from south of Sydney to the Queensland border, and extends as far west as the Coonabarabran area.

Macrohabitat: Dry, open forest and woodland with high nutrient soils, where high nectar-producing eucalypts and flowering shrubs are present. Inhabits open, xeric forests and woodlands and is generally absent from mesic, closed forests, however, in north-east NSW and south-east Queensland it occurs in some wet forest areas bordering on rainforest.

Microhabitat: The genera *Banksia*, *Xanthorrhoea* and *Acacia* provide important food resources. Nests and dens in tree hollows.

Spotted-tailed Quoll*Dasyurus maculatus* 2

Distribution: From the Bundaberg area in south-east Queensland, south through NSW to western Victoria and Tasmania. In NSW, it occurs on both sides of the Great Dividing Range and north-east NSW represents a national stronghold.

Macrohabitat: Wide range of forest types, although appears to prefer moist forest types and riparian habitat. Most common in large unfragmented patches of forest. It has been recorded from dry sclerophyll forest, open woodland and coastal heathland, and despite its occurrence in riparian areas, it also ranges over dry ridges. Generally nocturnal, although it may sometimes hunt during daylight

Microhabitat: Potential den sites include small caves, rocky crevasses, boulder fields, stags, hollow tree bases and hollow logs. Latrine sites are often areas of exposed rock with a sparse ground cover which show evidence of regular use, however large fallen logs are also used occasionally.

Yellow-bellied Glider*Petaurus australis* 2

Distribution: From east of Melbourne in Victoria, to Sarina near Mackay in central-northern Queensland, occupying coastal forests and adjacent subcoastal forests of mid-to-high elevations and the dry and moist escarpment forests in north-east NSW.

Macrohabitat: Moist and dry sclerophyll forest where suitable floriferous and sap providing eucalypt species are present. Often commonly associated with the ecotones between wet and dry sclerophyll forests where there is a high diversity of tree species.

Microhabitat: Forests containing winter flowering species and smooth-barked species with decortivating bark. Feeds on sap from incisions made in the bark of suitable trees, leaving distinctive V-shaped (and other shaped) marks on bark. Often such trees are heavily marked. Large, mature hollow-bearing trees are required for denning and breeding.

Common Bent-wing Bat***Miniopterus schreibersii* 2**

Distribution: Eastern Australia, from north Queensland to far south-east South Australia. Isolated subspecies occur in northern Northern Territory and northern Western Australia. Widely distributed throughout north-east and south-east NSW, where it is widespread and common, although less abundant at low elevations in far north-eastern NSW

Macrohabitat: Rainforest, wet and dry sclerophyll forest, and woodland.

Microhabitat: This species roosts in high humidity caves, and roost selection varies in response to seasonal and yearly climatic variations. The species forages for flying invertebrates, possibly above the tree canopy.

Greater Broad-nosed Bat***Scoteanax rueppellii* 2**

Distribution: From southern NSW through to south-east Queensland in the Atherton Tablelands region and has a sparse, but wide, distribution in north-east NSW. Most records in NSW are east of the Great Dividing Range.

Macrohabitat: Records exist from sclerophyll forests, woodlands (more commonly) and also rainforests.

Microhabitat: Known to roost in tree hollows.

Great Pipistrelle***Falsistrellus tasmaniensis* 2**

Distribution: Extends from south-east Queensland to western Victoria and Tasmania. In north-east NSW it is mainly restricted to higher elevation forests.

Macrohabitat: Known from rainforest, wet and dry sclerophyll forests.

Microhabitat: It roosts in tree hollows with a few records of this species roosting in caves. The species forages on moths, beetles and ants, around or just below the tree canopy.

Large-footed Mouse-eared Bat***Myotis adversus* 2**

Distribution: Represents a species complex ranging eastern Australia from far south-east South Australia, Victoria, New South Wales, Queensland, northern parts of the Northern Territory and northern Western Australia. It is widespread in north-east NSW where 3 species may occur.

Macrohabitat: Riparian and coastal forests from low to mid elevation.

Microhabitat: Foraging is associated with streams, reservoirs and estuarine environments either over the water surface and possibly over adjacent riparian vegetation. Roosts in caves, disused mine tunnels, culverts and under bridges, but is also known to roost in tree hollows.

Yellow-bellied Sheath-tail-Bat***Saccolaimus flaviventris* 2**

Distribution: Across northern Australia north of the Tropic of Capricorn, extending south through western NSW to Victoria and eastern South Australia. In NSW it is known from relatively few dispersed localities, distributed over most of the State from coastal to far western districts, extending further west in the north of the state, and has also been recorded in south-east NSW near Queanbeyan.

Macrohabitat: Forages over a wide range of forest types including rainforest, moist hardwood forest and dry sclerophyll forest, and also occurs in mallee, woodland and open country.

Microhabitat: Roosts in tree hollows and is thought to forage widely above the forest canopy for flying insects.

Schedule 5. Fauna species' consideration

AMENDMENT 4
1 March 2013
Schedule 5, Table
4 – Species
modified

Table 4. Threatened fauna species considered adequately protected by the General Conditions.

| Fauna group / Common name | Scientific name |
|----------------------------------|-----------------------------------|
| Birds | |
| Australasian Bittern | <i>Botaurus poiciloptilus</i> |
| Black Bittern | <i>Ixobrychus flavicollis</i> |
| Olive Whistler | <i>Pachycephala olivacea</i> |
| Pink Robin | <i>Petroica rodinogaster</i> |
| Square-tailed Kite | <i>Lophoictinia isura</i> |
| Turquoise Parrot | <i>Neophema pulchella</i> |
| Flying mammals | |
| Common Bentwing-bat ¹ | <i>Miniopterus schreibersii</i> |
| Eastern False Pipistrelle | <i>Falsistrellus tasmaniensis</i> |
| Large-footed Myotis | <i>Myotis adversus</i> |
| Yellow-bellied Sheath-tail-bat | <i>Saccolaimus flaviventris</i> |

¹ Maternity caves of these species are dealt with under Condition 5.14 of this licence variation

Table 5. Threatened fauna species which require the implementation of Species-specific Conditions

| Fauna group / Common name | Scientific name |
|--|-------------------------------------|
| Birds | |
| Barking Owl | <i>Ninox connivens</i> |
| Masked Owl | <i>Tyto novaehollandiae</i> |
| Black-chinned Honeyeater (eastern sub-species) | <i>Melithreptus gularis gularis</i> |
| Powerful Owl | <i>Ninox strenua</i> |
| Regent Honeyeater | <i>Xanthomyza phrygia</i> |
| Swift Parrot | <i>Lathamus discolor</i> |
| Frogs | |
| Littlejohn's Tree Frog | <i>Litoria littlejohni</i> |
| Northern Corroboree Frog | <i>Pseudophryne pengilleyi</i> |
| Non-flying mammals | |
| Broad-toothed Rat | <i>Mastacomys fuscus</i> |
| Brush-tailed Phascogale | <i>Phascogale tapoatafa</i> |
| Koala | <i>Phascolarctos cinereus</i> |
| Smoky Mouse | <i>Pseudomys fumeus</i> |
| Squirrel Glider | <i>Petaurus norfolcensis</i> |
| Spotted-tailed Quoll | <i>Dasyurus maculatus</i> |
| Yellow-bellied Glider | <i>Petaurus australis</i> |

Table 6. Threatened fauna species which require Site-specific Conditions

| Fauna group / Common name | Scientific name |
|---|---------------------------------|
| Frogs | |
| Booroolong Frog | <i>Litoria booroolongensis</i> |
| Southern Bell Frog | <i>Litoria raniformis</i> |
| Spotted Tree Frog | <i>Litoria spenceri</i> |
| Reptiles | |
| Rosenberg's Monitor | <i>Varanus rosenbergi</i> |
| Non-flying mammals | |
| Eastern Pygmy Possum | <i>Cercartetus nanus</i> |
| Eastern Quoll | <i>Dasyurus viverrinus</i> |
| Flying mammals | |
| Common Bent-wing Bat (maternity roosts) | <i>Miniopterus schreibersii</i> |

Schedule 6. Matters to be addressed in assessment of proposals for new roading through Stream Exclusion Zones

When applying to construct new roads or snig tracks through Stream Exclusion Zones, SFNSW must provide NPWS with a report addressing the following:

- a) All options that were considered, the cost of all options, the reasons why the selected route was chosen and why the other routes were not considered feasible;
- b) The specific reasons why the road or snig track must be established;
- c) The mitigative and ameliorative measures to be applied; and
- d) Results of the field assessment which must be undertaken and must include:
 - i. A description of the proposed road or snig track, including dimensions of area to be affected (road footprint, run-offs etc), method of construction including any cutting and filling that may be involved, and construction of any stream crossings.
 - ii. An assessment and description of any threatened flora that will or is likely to be directly or indirectly affected by construction, or occurs within 50 metres of the construction area.
 - iii. An assessment and description of any threatened fauna that
 - will be or is likely to be directly or indirectly affected by construction, OR
 - occurs within 100 metres of the construction area.
 - iv. An assessment and description of the likelihood of the road to create a barrier to movement of threatened fauna, or is otherwise likely to increase the threats to threatened fauna.
 - v. An assessment of any habitat features that will or are likely to be directly or indirectly affected by the construction, including but not confined to: wetlands or other waterbodies; and threatened species habitat.
 - vi. An assessment and description of the area affected including, but not confined to:
 - the type of Stream Exclusion Zone;
 - a brief description of the floristics and structure of the Stream Exclusion Zone;
 - a description of the total area of the Stream Exclusion Zone to be directly and indirectly affected;
 - the likelihood of the road to fragment the Stream Exclusion Zone; and
 - vii. An assessment of the likelihood of the construction increasing the presence or abundance of weeds or feral animals.
 - viii. An assessment of past disturbance in the proposed construction area.

Schedule 7. Draft feral and introduced predator control plan

Background and Summary

Feral and introduced animal management is a major issue for all Land Managers. Feral animals cause damage to the environment in a variety of ways. Fox predation has been formally listed as a Key Threatening Process under both Commonwealth and State legislation. There are legislative requirements to control noxious animals under State regulations. There is a wide perception in the scientific and general community that feral animals are a major threat to native wildlife.

This plan was developed in consultation with CSIRO (Peter Catling) and an expert in management of fauna at potential risk from control activity (Chris Belcher). Practicality, economics, transparency and accountability were considered in the process of developing a two-stage approach to feral animal management.

The first stage involves monitoring and control of feral animals in the context of harvest operations and the Wildlife Management Code of Practice. It makes use of a cost-effective method (using soil plots to record tracks) to monitor feral animals. When unacceptably high levels of ferals are recorded, control measures will be put in place. The second stage will be the development of a landscape approach to feral management, in conjunction with other agencies and landholders. This is used to great effect in some areas and is the preferable most practical and effective means of managing vertebrate pests.

State-wide Strategic Approach

Methods

Monitoring Predators

Soil plots, as described by Catling and Burt (1996) will be used to detect the presence of feral predators. These are strips of soft soil or sand placed across minor roads. The strips are one metre wide and run from road edge to road edge. Soil plots detect the presence of feral predators (and other animals, notably Critical Weight Range Vertebrates) through the footprints left when animals cross them. Each soil plot is visited in the early morning to achieve best results when the sun is low on the horizon and emphasises the shape of footprints with clear shadows.

At least 20 soil plots will be established in each Landscape Management Unit targeted and these will be checked daily for three days.

Controlling Predators

Bait mounding will be the primary control method used. Earth mounds approximately 40 centimetres in height are constructed and meat baits placed approximately 20 centimetres below the surface of the mounds. Mounds are monitored for take, and those visited by target species (Cats, Foxes and Dogs) are activated with 1080 poison baits.

Where the presence of native carnivores is indicated at the mounds, alternative methods of control will be employed. Soft jawed spring traps are a preferred alternative. In some instances, "Call-up and Shoot" techniques can be utilised effectively.

Landscape Stratification

Each management area will be stratified into Landscapes Management Units (LMU). There is precedent for this in the South-east Region feral management program, and in the management of Owl Habitat under the Wildlife Management Code of Practice. The development of landscape management units is described in Part B Section 3.1.2 of the Survey Design. The location of soil plots for monitoring will be determined by the plan of operations, to target recent logging, and by the results of wildlife survey and database searches, to target key threatened species locations.

Action Sequence:

a) Yearly Plan on State Forests

- i. Winter-Spring Year 1
 - Review Threatened Species Surveys, Data base, and Plan of Operation
 - Nominate Landscape Management Units for action
 - Place Soil Plots
 - Record Predator levels, CWR levels
- ii. Winter-Spring Year 2
 - Place Soil Plots
 - Record Predator levels, CWR levels
- iii. Analyse data for Predator Abundance.
 - If no increase or decrease, stop.
 - If increased levels of PA, go to iv.
- iv. Check Threatened Species locations and Private Property interface
 - If no Threatened Species, justify stop or go to v.
 - If the Private Property interface is the epicentre of increase abundance, go to section b).
- v. If there are threatened species present, check which Predator Species have increased.
 - If the predators are dogs, justify actions according to dog/dingo relationship – that is, if the predators are natural populations of wild dingoes, stop. If there are “unnaturally high levels” of dingoes, or the predators are feral dogs.
- vi. Institute mound baiting.
 - If takes are target predators, go to vii.
 - If takes are quolls, go to viii.
- vii. Arm mounds with 1080. Follow monitoring plan in subsequent years for both predators and CWR target species to determine efficacy.
- viii. If takes are quolls, determine alternative strategy – traps, shooting, stop action to maintain quolls.

b) Yearly Plan: All tenures.

- i. Contact Neighbouring Agencies and Property Owners
- ii. Determine actions already underway.
- iii. Set up inter-agency working body according to Regional needs
- iv. Report results of SFNSW monitoring and control actions.
- v. Negotiate, support and monitor control actions outside SFNSW tenure.

By following these decision rules for action, an effective monitor and control program can be put in place. If it is not effective, the reasons (including no action by other agencies and neighbours) for this are transparent.

Schedule 8. Transitional provisions

8.1 The following definitions apply for the purpose of this provision:

AMENDMENT 4
1 March 2013
Schedule 8
replaced

“Commencement date” means the date on which the authorised Ministers sign the amendment to Integrated Forestry Operations Approval for the Upper North East, Lower North East, South Coast and Tumut Sub-regions and Eden Regions.

“Existing Conditions” means the Terms of Licence Under The Threatened Species Conservation Act 1995 in force from 18 December 2012 to the commencement date.

“New conditions” means the Terms of Licence Under The Threatened Species Conservation Act 1995 in force from the commencement date.

“Transition period” means the period of six months after the commencement date.

8.2 Current and proposed forestry operations

- a) Where plans for forestry operations have been signed by a regional manager before the commencement date, during the transition period these operations shall be carried out either:
 - i. in accordance with the existing conditions; or
 - ii. in accordance with the new conditions.The choice of i. or ii. is at the discretion of the Forestry Corporation of NSW.
- b) After the expiry of the transition period all forestry operations shall be carried out in accordance with the new conditions.
- c) After the commencement date all plans shall be developed in accordance with the new conditions.