

**TERMS OF THE
THREATENED SPECIES LICENCE FOR
THE SOUTH COAST 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 **South Coast Sub-region**.

This licence authorises the conduct of forestry operations on SFNSW estate within the **South Coast Sub-region of the Southern Region** (as shown on Map 1 of the NSW Southern Region Forest Agreement) that are likely to result in:

1. Harm to a threatened species (being an animal) or protected fauna;
2. The picking of a threatened species (being a plant) or a protected plant; or
3. Damage to the habitat of a threatened species.

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

1. Harm an endangered population or an endangered ecological community (as far as animals are concerned);
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.

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: rainforest, High Conservation Value Old Growth Forest, 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.

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 coordinates. 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.

“Cool Temperate Rainforest” means any area of land within the South Coast Subregion having any of the forest type numbers 16 to 20 (set out in RN 17).

“CRAFTI” refers to aerial photograph interpretation undertaken as part of the regional forest assessment for the areas covered by the Forest Agreement for the South Coast Sub-region of the Southern Region.

“CRAFTI rainforest” means any area of land within the South Coast Subregion:

- i. depicted in the Geographic Information System theme in ESRI shapefile format called “crafti_rf”, in the subdirectory called “Rainforest” 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).

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

“Critical weight range” or “CWR” means the following species: Bush Stone-curlew, Eastern Bristlebird, Brush-tailed Phascogale, Spotted-tailed Quoll, Eastern Quoll, Southern Brown Bandicoot, 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.

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AMENDMENT 1
17 May 2004
Definition
added
Ref Appendix E

“Directional felling” means the felling of a tree at a particular angle so that it falls in a pre-determined direction.

“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.

“Endangered community” means an endangered ecological community as defined by the TSC Act.

“Endangered population” means an endangered population as defined by the TSC Act.

AMENDMENT 4
1 March 2013
Definition of ‘EPA’
added

“EPA” means the Environment Protection Agency.

“Eucalypt feed tree” means mature individuals of any of the following eucalypt species: stringybark species *Eucalyptus agglomerata*, *E. muelleriana*; ironbark species *E. paniculata*, *E. tricarpa*; River Peppermint *E. elata*; Mountain Grey Gum *E. cytellocarpa*; Maiden’s Gum *E. maidenii*; Forest Red Gum *E. tereticornis*; Mountain Gum *E. dalrympleana*; Manna Gum *E. viminalis*; Swamp Mahogany *E. robusta*; Black Sallee *E. stellulata*; Swamp Gum *E. ovata*; Red Bloodwood *Corymbia gummifera*; Spotted Gum *C. maculata*.

“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 ecosystem” means the vegetation profiles provided in the Forest Ecosystem Classification and Mapping for the Southern CRA Region (Volume I and II) 1999.

“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).

AMENDMENT 1
17 May 2004
Definition
added
Ref Appendix E

“Harvestable area” means any area within a tract of forested land that contains timber that may be harvested, and does not include any area in respect of which there is a prohibition on the felling of trees located within the area for the purpose of timber production by or under an Act, including under this approval. (For the purposes of this definition, a tree is to be treated as located within an area only if its base is located within the area).

Note: The definition of “harvestable area” was inserted by amendments to the licence made in 2004. The term appears only in the new provisions inserted by those “buffer on buffer” amendments (see, for example, conditions 5.1A, 5.1B and 5.1C). The terms “net logging area” and “net survey area” are also used in the licence.

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AMENDMENT 1
17 May 2004
Definition
replaced
Ref Appendix E

“Harvesting machine” and “harvesting machinery” mean any mechanical or other harvester, rubber-tyred skidder, bulldozer and any other wheeled or tracked machine that is built to be propelled by a motor that forms part of the machine and that is capable of being used for the cutting or removal of timber.

“Harvesting operations” means tree felling or killing (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).

“High Conservation Value Old Growth Forest” means any area of land within the South Coast Subregion:

- i. depicted in the Geographic Information System theme in ESRI shapefile format called “hcvog”, in the subdirectory called “High_Conservation_Value_Old_Growth” on the CD-Rom lodged with DUAP and having the volume label “020129_1305”, and
- ii. further described in the corresponding metadata on the CD-Rom.
- iii. land as depicted in the Geographic Information System Theme in the ESRI Feature Class Format (as current from time to time) called “Assessed_HCVOG”.

(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).

AMENDMENT 4
1 March 2013
Definition of ‘High
Conservation
Value Old Growth
Forest’ modified

AMENDMENT 1
17 May 2004
Definition
added
Ref Appendix E

“High quality timber product” means a high quality large log within the meaning of clause 5 of this approval and any other log at least 2.4 metres long that in the opinion of SFNSW is of a high quality, such as a log that may be used for veneer or as a pile, pole or girder.

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 5.6 (a)).

“Integrated Forestry Operations Approval” or “IFOA” means an approval granted under Part 4 the *Forestry and National Park Estate Act 1998* for the South Coast Sub-region of the Southern 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);
- 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.

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“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 1
17 May 2004
Definition
added
Ref Appendix E

“Mechanical harvester” means a tracked or wheeled machine equipped with an attachment containing a cutting device (for example, a hydraulically driven disc or saw) for the purpose of felling trees.

“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.

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

“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).

AMENDMENT 1
17 May 2004
Definition
modified
Ref Appendix E

“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, protection zones, Ridge and Headwater Habitat exclusion zones, Rainforest, Rainforest exclusion zones, High Conservation Value Old Growth Forest and Rare Non-Commercial Forest Ecosystems.

“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 Pollution Control 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 South Coast Subregion:

- (i) depicted in the Geographic Information System theme in ESRI shapefile format called “regr_zne”, in the subdirectory called “SC_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' deleted

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“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.

“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*.

“Protection zone” means a protection zone (hard), or a protection zone (soft), that is required to be established under condition 5.7 (riparian habitat protection)

“Rainforest” means any area of land within the South Coast Subregion having any of the forest type numbers 1 to 26 (set out in RN 17).

“Rare Non-Commercial Forest Ecosystems” means any area of land within the South Coast Subregion:

- (i) depicted in the Geographic Information System theme in ESRI shapefile format called “rare_nc_fe”, in the subdirectory called “Rare_Non-Commercial_Forest” 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).

“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

AMENDMENT 1
17 May 2004
Definition
added
Ref Appendix E

APPENDIX B - SOUTH COAST

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*.

“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 5.6 (a)).

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

- depicted in the Geographic Information System theme in ESRI shapefile format called “regr_zne”, in the subdirectory called “SC_Regrowth” on the CD-Rom lodged with DOP and having the volume label “020129_1305”, and
- 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.)

“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.

AMENDMENT 4
1 March 2013
Definition of
'Record' modified

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

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

APPENDIX B - SOUTH COAST

“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 dbhob.

“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 to a log dump, landing or stockpile, whether or not wholly on the ground or partly supported off the ground.

“Snigging” means dragging or hauling a log to a log dump, landing or stockpile, whether or not wholly on the ground or partly supported off the ground. “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. Tree felling or killing (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;
- viii. Grazing activities; and
- ix. Thinning.

“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

AMENDMENT 4
1 March 2013
Definition of ‘Sap
feed tree’ replaced

AMENDMENT 1
17 May 2004
Definition
replaced
Ref Appendix E

AMENDMENT 1
17 May 2004
Definition
added
Ref Appendix E

AMENDMENT 4
1 March 2013
Definition of
‘Specified forestry
activities’ modified

APPENDIX B - SOUTH COAST

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

“Statutory reserves” means lands reserved (or gazetted) 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*.

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

“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.

“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*.

AMENDMENT 1
17 May 2004
Definition
added
Ref Appendix E

“Walk-over” means timber extraction or snigging without removing ground cover, that is, without snig track construction or blading off being involved and with any blades, rippers and similar attachments positioned so that they do not disturb the ground.

“Warm Temperate Rainforest” means any area of land within the South Coast Subregion having any of the forest type numbers 10 to 15 (set out in RN 17).

“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 6.16 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. Protected fauna and Protected Native Plants refers to those specified in the conditions of this licence.)

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*, *Pseudophryne australis*, Broad-toothed Rat, Eastern Bristlebird, 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 three working days 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
Conditions 1.2 d)
and e) added

- 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 Threatened Species Conservation 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 South Coast 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 1.3 “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 6.4.2 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. Areas of the net logging area that are made unavailable due to the prohibition of new roads or snig tracks through High Conservation Value Old Growth Forest can be included in calculations towards the 20% threshold.
- 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.)

AMENDMENT
4
1 March 2013
Condition 2.2 (a)
replaced with
conditions 2.2 (a)
and (b)

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 9 of this licence.

2.3 Trees accidentally felled into exclusion zone or other protected area

- a) For the purposes of this licence, a tree is accidentally felled into an area, such as an exclusion zone, if it is apparent that:
 - i. techniques of directional felling were used in an attempt to fell the tree away from the area; or
 - ii. an attempt was made using some other method (such as a mechanical harvester) to fell the tree away from the area.
- b) However, a tree is not accidentally felled into an area if the person responsible for the felling knew, or could reasonably have been expected to know, that the tree would fall into the area.

AMENDMENT 1
17 May 2004
Condition 2.3-2.5
added
Ref Appendix E

2.4 References to equivalent terms in IFOA to be implied

A reference in this licence to another condition of this licence that authorises, requires or prohibits anything to be done is taken to include a reference to another provision of this approval (of which the terms of this licence form a part) to the same effect.

(Note: The Integrated Forestry Operations Approval for the Southern Region comprises the “non-licence” terms (clauses 1-64), the terms of the licence under the Protection of the Environment Operations Act 1997, the terms of this licence under the Threatened Species Conservation Act 1995 applying to the South Coast Subregion (and the terms of the licence under that Act applying to the Tumut Subregion) and the terms of the licence under Part 7A of the Fisheries Management Act 1994. Clause 10 and Part 2A of the “non-licence” terms, in so far as they apply to high conservation value old growth forest, rainforest and rainforest exclusion zones, and rare non-commercial forest ecosystems, have the same effect as conditions of this licence (see, in particular, conditions 5.3, 5.4 and 5.5). Condition 2.4 ensures that a reference in this licence to anything that may or must be done, or must not be done, under this licence is to be read as including a reference to another provision of the approval to the same effect (such as clause 10 or a provision of Part 2A).)

2.5 Base of tree located where its centre is located

For the purposes of this licence, the base of a tree is to be treated as located in an area if the centre of its base is in that area.

3 Planning Documentation

AMENDMENT 1
17 May 2004
Condition 3 a)
modified
Ref Appendix E

- 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, protection 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 relates.
- 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.
- 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.

4 Reporting and Information Requirements

AMENDMENT
1
17 May 2004
Condition 4.1 a)
modified
Ref Appendix E

4.1 Provision of Data to the NPWS

SFNSW must provide the NPWS with:

- a) Harvesting Plans or Operational Plans, approved by the relevant FCNSW Regional Manager or Planning Manager, Pre-logging and Pre-roading 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.

AMENDMENT 4
1 March 2013
Conditions 4.1 a) and
d) replaced

AMENDMENT 4
1 March 2013
Conditions 4.1 (b)
and (c) replaced

AMENDMENT 4
1 March 2013
Condition 4.1 f)
modified

- 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 5.8 of this licence) within the South Coast 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 5.8 (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 NSW 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.
- 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 Operational 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 Operational 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

AMENDMENT 1
17 May 2004
Condition 5.1 a)
replaced
Ref Appendix E

(Note: *The following condition (condition 5.1) prohibits or restricts forestry activities in exclusion zones. Separate conditions (conditions 5.3, 5.4, 5.5 and 5.7) set out what may or may not be done in areas of High Conservation Value Old Growth Forest, Rainforest and Rainforest exclusion zones, Rare Non-Commercial Forest Ecosystems and protection zones.*)

- a) A reference in this condition (being condition 5.1) to an exclusion zone is a reference to an exclusion zone referred to in any of the following conditions:
 - condition 5.8 (“Ridge and Headwater Habitat”)
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 5.13 (“Bird Nest and Roost Site Protection”)
 - condition 5.14.1 (“Tree Roost Protection”)
 - condition 5.14.2 (“Subterranean Roost Protection”)
 - condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
 - condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
 - condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
 - condition 6.3 A (“Littlejohn’s Tree Frog *Litoria littlejohni*”)
 - condition 6.4.1 (“Large Forest Owls: Site Based Approach”)
 - condition 6.4.2 (“Large Forest Owls: Landscape Approach”)
 - condition 6.6 (“Southern Brown Bandicoot *Isodon obesulus*”)
 - condition 6.8 (“Smoky Mouse *Pseudomys fumeus*”)
 - condition 6.9 (“Brush-tailed Phascogale *Phascogale tapoatafa*”)
 - condition 6.10 (“Spotted-tailed Quoll *Dasyurus maculatus*”)
 - condition 6.11 (“Koala *Phascolarctos cinereus*”)
 - condition 6.12 (“Squirrel Glider *Petaurus norfolcensis*”)
 - condition 6.13 (“Yellow-bellied Glider *Petaurus australis*”)
 - condition 6.14 (“Golden-tipped Bat *Kerivoula papuensis*”)
 - condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”)
 - condition 7 (b) (“General survey requirements”).

AMENDMENT
4
1 March 2013
Condition 5.1 a)
modified

- a1) Condition 5.1 (a2) to (a5) applies to an area protected by an exclusion zone in the same way as it applies to the exclusion zone itself. For example, the rules in condition 5.1 (a2) apply to the

wetlands, areas of heath and scrub, and rocky outcrops and cliffs that are referred to in conditions 5.9, 5.10 and 5.11, respectively, as well as to the exclusion zones surrounding these areas.

- a2) The following rules apply to an exclusion zone, except as varied by this condition (being condition 5.1) and conditions 5.1A, 5.1B, 5.1C, 5.1D and 5.20:
- i. specified forestry activities are prohibited in an exclusion zone;
 - ii. no tree is to be felled into an exclusion zone. If a tree falls into an exclusion zone, then no part of the tree can be removed;
 - iii. harvesting machinery is not to be used in an exclusion zone.

- a3) Condition 5.1 (a2) is not breached where a tree (or part of a tree) is accidentally felled into an exclusion zone.

(Note: Condition 5.1A (f) - (h) allows the removal of trees accidentally felled into exclusion zones, apart from exclusion zones around wetlands or heath and scrub respectively. Trees accidentally felled into wetlands or heath or scrub, or their surrounding exclusion zones, may not be removed (because of condition 5.1 (a2) (ii)).)

- a4) A road may be re-opened, and routine maintenance on a road may be carried out, in an exclusion zone. In the case of a ridge and headwater habitat exclusion zone referred to in condition 5.8, a road may be re-opened only in accordance with condition 5.8 (f).

- a5) Harvesting machinery may travel along roads and snig tracks (located within exclusion zones) that were in existence at the time of commencement of this approval or that have been constructed in accordance with this approval (but only if any subsequent re-opening or brushing-up has been done in accordance with this approval).

Note: See condition 5.1D for requirements relating to construction of roads, and construction, re-opening or brushing-up of snig tracks.

b) **Condition revoked (Amendment 1).**

c) **Condition revoked (Amendment 1).**

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) **Condition revoked (Amendment 1).**

g) **Condition revoked (Amendment 1).**

h) **Condition revoked (Amendment 1).**

i) **Condition revoked (Amendment 1).**

j) **Condition revoked (Amendment 1).**

- k) Where a provision in this licence allows the re-opening of a road or re-opening or brushing-up of a snig track, 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.

AMENDMENT 1
17 May 2004
Condition 5.1k)
modified
Ref Appendix E

AMENDMENT 1
17 May 2004
Condition 5.1A-E
added
Ref Appendix E

5.1A Entry of harvesting machinery into exclusion zones and removal of trees accidentally felled into those zones

- a) This condition (being condition 5.1A) applies to all exclusion zones set out in condition 5.1 (a) other than an exclusion zone referred to in condition 5.9 or condition 5.10 (being an exclusion zone around wetland or heath and scrub, respectively). In addition, the provisions of condition 5.1A (f) and (g) apply to the following areas in the same way as they apply to exclusion zones:
- i. areas of rocky outcrops and cliffs (as referred to in condition 5.11);
 - ii. buffer zones around dams for the protection of frogs (as referred to in condition 5.12).

Entry and use of harvesting machinery within exclusion zones

- b) A harvesting machine may enter, and be used within, an exclusion zone in order to fell and remove any tree whose base is in the harvestable area, in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes).
- c) However, a harvesting machine may enter and be used within an exclusion zone to fell a tree whose base is in the harvestable area only if:
 - i. the tree cannot be felled from outside the exclusion zone, using the techniques of directional felling, so that it does not fall into the exclusion zone; and
 - ii. there are reasonable grounds for believing, when the tree is selected for felling, that it will produce at least one high quality timber product.

The harvesting machine may be used only to fell the tree away from the exclusion zone (that is, into the harvestable area).

- d) A harvesting machine may be operated under this condition (being condition 5.1A) within an exclusion zone only using walkover techniques and in such a way so as:
 - i. to minimise skewing of its tracks (if any) to the greatest extent practicable; and
 - ii. to minimise disturbance to the ground (including vegetation) within the exclusion zone to the greatest extent practicable.

In particular, a harvesting machine may be operated within an exclusion zone, under this condition, only with any blades, rippers or other similar attachments positioned so that they do not disturb the ground (including vegetation).

- e) The wheels or tracks of the harvesting machine must remain wholly within 5 metres from the boundary of the zone when being used under this condition (being condition 5.1A).

Removal of trees felled into exclusion zones accidentally

- f) A tree that has been accidentally felled into an exclusion zone in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes) may be removed from the zone.
- g) However, the tree may be removed only if there are reasonable grounds for believing that the tree will produce at least one high quality timber product. For the avoidance of doubt, any part of the tree may be removed (subject to condition 5.1C (b) (i)) even though that particular part is unlikely to produce a high quality timber product.
- h) For the avoidance of doubt, nothing in condition 5.1B relating to soft exclusion zones affects the authority conferred by this condition (being condition 5.1A) to remove trees that have been accidentally felled into such a zone. Accordingly, the total number of trees that are removed from a soft exclusion zone in a particular harvesting operation may exceed the number referred to in condition 5.1B (d) (ii).

5.1B Six trees may be felled across any 200 metre length of boundary of certain exclusion zones

(Note: The following condition applies to a subclass of exclusion zones (“soft exclusion zones”) so as to allow a limited number of trees to be felled into the zones. Condition 5.1A (“Entry of harvesting machinery into exclusion zones and removal of trees accidentally felled into those zones”) also applies to these soft exclusion zones.)

- a) This condition (being condition 5.1B) applies only to the exclusion zones referred to in the following conditions:
 - condition 5.8 (“Ridge and Headwater Habitat”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
 - condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)

- condition 6.4.1 (“Large Forest Owls: Site Based Approach”)
- condition 6.4.2 (“Large Forest Owls: Landscape Approach”)
- condition 6.6 (“Southern Brown Bandicoot *Isoodon obesulus*”)
- condition 6.8 (“Smoky Mouse *Pseudomys fumeus*”)
- condition 6.9 (“Brush-tailed Phascogale *Phascogale tapoatafa*”)
- condition 6.10 (“Spotted-tailed Quoll *Dasyurus maculatus*”)
- condition 6.11 (“Koala *Phascolarctos cinereus*”)
- condition 6.12 (“Squirrel Glider *Petaurus norfolcensis*”)
- condition 6.13 (“Yellow-bellied Glider *Petaurus australis*”).

An exclusion zone to which this condition applies is referred to in this condition as a soft exclusion zone.

- b) A tree whose base is in a harvestable area may be felled into, and removed from, a soft exclusion zone in a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes) if:
- i. it is not practicable to fell the tree so that it falls wholly outside the zone; and
 - ii. there are reasonable grounds for believing, when the tree is selected for felling, that it will produce at least one high quality timber product; and
 - iii. the tree is felled in such a way so as to avoid as far as practicable damage to the trees growing in the zone.
- c) However, no harvesting machinery may enter, or be used within, a soft exclusion zone for the purpose of felling a tree into the zone under this condition (being condition 5.1B).

(Note: Harvesting machinery may enter an exclusion zone to which condition 5.1B applies under condition 5.1A for the purpose of felling trees outside the zone away from the zone. However, harvesting machinery may not be used within the zone for felling trees into the zone.)

- d) In any one harvesting operation:
- i. no more than six trees may be felled under this condition (being condition 5.1B) across any 200 metre length of the boundary of the soft exclusion zone, whatever two hundred metre length of the boundary is considered; and
 - ii. the number of trees that may be removed under this condition (being condition 5.1B) may not exceed the number calculated by applying the principle set out in condition 5.1B (d) (i).
- e) For the avoidance of doubt, the number of trees that may be felled into, or removed from, a soft exclusion zone in a harvesting operation is not reduced by the number of trees that are accidentally felled into the zone, or subsequently removed from the zone under condition 5.1A, in the same harvesting operation.
- f) Without affecting the operation of condition 5.1B (b) (ii), a part of a tree that has been felled into a soft exclusion zone under this condition may be removed (subject to condition 5.1C (b) (i)) even though that particular part is unlikely to produce a high quality timber product.

(Note: Condition 5.1B (b) (ii) restricts the trees that may be selected for felling under this condition to those which are likely to produce at least one high quality timber product. Under condition 5.1C (b) (i), the crown of the tree must be left where it has fallen, as a general rule.)

- g) For the avoidance of doubt:
- i. if the total length of the boundary of a soft exclusion zone is less than 200 metres, no trees may be felled across that boundary under this condition (being condition 5.1B); and
 - ii. a boundary of a soft exclusion zone continues despite its intersection with another exclusion zone or other area that is not a harvestable area (such as a high conservation value old growth forest or wetland). Accordingly, for the purpose of determining whether

trees (and how many trees) may be felled across the boundary of a soft exclusion zone, any part of the boundary that is located within another area may be taken into account.

(Note: The following example illustrates the effect of condition 5.1B (g) (ii). Under condition 6.13, a 50 metre radius exclusion zone must be implemented around a Yellow-bellied Glider den, resulting in an exclusion zone having a boundary of approximately 300 metres. Assume that this exclusion zone overlaps with an area of high conservation value old growth forest, with 200 metres or so of the boundary of the exclusion zone being located within the HCVOG and the other 100 metres of the boundary adjoining the harvestable area. Trees are not permitted to be felled into the HCVOG for the purpose of timber production. However, trees may be felled into the exclusion zone around the Yellow-bellied Glider den under condition 5.1B. For the purpose of determining if, and how many, trees may be felled across the 100 metres of the boundary of that exclusion zone adjoining the harvestable area, the 200 metres of the boundary that is located within the HCVOG may be taken into account. Accordingly, 6 trees may be felled across that 100 metres of boundary adjoining the harvestable area (but no trees may be felled across the 200 metres or so of the boundary that is located within the HCVOG).)

5.1C Rules for removing timber from exclusion zones

- a) This condition (being condition 5.1C) regulates the manner of removal of timber from exclusion zones in harvesting operations (including thinning operations that have timber production as one of their purposes). It applies only to:
 - i. trees that have been accidentally felled into an exclusion zone and that may be removed from the zone under condition 5.1A; and
 - ii. trees that have been felled into a soft exclusion zone and that may be removed from the zone under condition 5.1B.
- b) A tree may be removed from an exclusion zone only in accordance with the following rules:
 - i. the crown must be left where it has fallen, unless the whole of the tree (or the whole of that part of the tree that has fallen into the zone) is removed from the zone, or is moved within the zone, using a mechanical harvester;
 - ii. in removing any part of the tree (or logs into which the tree is cut) from the zone, any disturbance to the ground (including vegetation) must be minimised as far as practicable;
 - iii. where practicable, any part of the tree that has fallen into the zone (or logs into which the tree is cut) must be removed from the zone without contacting the ground. In any other case, contact with the ground must be minimised as far as practicable;
 - iv. the wheels or tracks of any machinery used to remove any part of the tree that has fallen into the zone (or logs into which the tree is cut) must remain outside the zone.
- c) Snigging may be carried out to remove a part of the tree (apart from the tree's crown) or any logs into which the tree is cut from the exclusion zone, but only if:
 - i. applying the rules set out in condition 5.1C (b), this is the only practicable method of removing that part of the tree or those logs; and
 - ii. the wheels or tracks of any machinery involved in the snigging remain outside the exclusion zone (as required by condition 5.1C (b) (iv)).
- d) Despite condition 5.1C (b) (iv) and condition 5.1C (c) (ii), where a harvesting machine has entered an exclusion zone under condition 5.1A for the purpose of felling trees away from the zone, it may also be used to remove a tree or part of a tree felled into the zone.
- e) However, the wheels or tracks of the harvesting machine may not (to any significant extent) be repositioned or moved within the exclusion zone solely for the purpose of removing the tree or part of the tree from the zone. In other words, the wheels or tracks may be repositioned or moved significantly only if this is necessary for a purpose related to felling and removing trees in the harvestable area.
- f) The restrictions on the operation of harvesting machinery within an exclusion zone set out in condition 5.1A (d) and (e) apply to the operation of a machine when removing a tree or part of a

tree felled into the zone. For example, the machine must remain wholly within 5 metres from the boundary of the zone and must be operated using only walkover techniques.

5.1D Roads and snig tracks in threatened species exclusion zones – construction etc.

- a) This condition (being condition 5.1D) makes provision for the construction of roads and snig tracks, and the re-opening or brushing-up of snig tracks, within certain exclusion zones. An exclusion zone that is required to be established under any of the following conditions is referred to in this condition as a threatened species exclusion zone:

- condition 5.13 (“Bird Nest and Roost Site Protection”)
- condition 5.14.1 (“Tree Roost Protection”)
- condition 5.14.2 (“Subterranean Roost Protection”)
- condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
- condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
- condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
- condition 6.4.1 (“Large Forest Owls: Site Based Approach”)
- condition 6.4.2 (“Large Forest Owls: Landscape Approach”)
- condition 6.6 (“Southern Brown Bandicoot *Isodon obesulus*”)
- condition 6.8 (“Smoky Mouse *Pseudomys fumeus*”)
- condition 6.9 (“Brush-tailed Phascogale *Phascogale tapoatafa*”)
- condition 6.10 (“Spotted-tailed Quoll *Dasyurus maculatus*”)
- condition 6.11 (“Koala *Phascolarctos cinereus*”)
- condition 6.12 (“Squirrel Glider *Petaurus norfolcensis*”)
- condition 6.13 (“Yellow-bellied Glider *Petaurus australis*”)
- condition 6.14 (“Golden-tipped Bat *Kerivoula papuensis*”)
- condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”).

AMENDMENT

4

1 March 2013
Condition 5.1D
a) modified

- b) A reference in this condition (being condition 5.1D) to a SFNSW report and authority is a reference to the report that the relevant SFNSW regional manager (or more senior officer) has prepared in accordance with Schedule 6 or 6A to this licence and his or her authorisation of the proposed construction or re-opening of the road or snig track.

Construction of roads and snig tracks within threatened species exclusion zones

- c) A road or snig track may be constructed in a threatened species exclusion zone, but only if all of the following requirements are met:

- i. in the case of a proposed snig track, no part of the threatened species exclusion zone for which the snig track is proposed is located within an exclusion zone referred to in any of the following conditions:
- condition 5.8 (“Ridge and Headwater Habitat”)
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 7 (b) (“General survey requirements”);

AMENDMENT

4

1 March 2013
Condition 5.1D
b) modified

AMENDMENT

4

1 March 2013
Condition 5.1D c)
i. omitted

- ii. in the case of a proposed road, no part of the threatened species exclusion zone for which the road is proposed is located within an exclusion zone referred to in any of the following conditions:
- condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 7 (b) (“General survey requirements”);
- iii. the Department of Environment and Conservation has approved in writing the construction of the road or snig track (before the commencement of the construction), following receipt of the relevant SFNSW report and authority.

(Note: See condition 5.8 (f) which deals separately with the construction of roads and road re-opening within ridge and headwater habitat exclusion zones.)

- d) The construction of the road or snig track may be carried out only in accordance with the conditions (if any) imposed by the Department of Environment and Conservation as part of its approval, relating to the mitigation or amelioration of the impacts of the proposed construction on the threatened species exclusion zone.

(Note: The construction of a road or snig track in an exclusion zone is also subject to the requirements set out in the conditions relating specifically to high conservation value old growth forest, rainforest and rainforest exclusion zones, rare non-commercial forest ecosystems or protection zones (as applicable).)

See also condition 5.1 (k) that authorises a road or snig track that has been constructed or re-opened or brushed-up under the licence to be used for snigging.)

Re-opening of snig tracks within threatened species exclusion zones

- e) A snig track (including a snig track that was in existence before the commencement of this approval) within a threatened species exclusion zone or an exclusion zone that is referred to in condition 5.8 (“Ridge and Headwater Habitat”) or 7 (b) (“General survey requirements”) that has become re-vegetated may be re-opened (by clearing, scraping or treating regrowth), but only if all of the following requirements are met:

- i. no part of the threatened species or other exclusion zone in which the snig track is proposed to be re-opened is located within an exclusion zone referred to in any of the following conditions:
- condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”);
- ii. in the case of an exclusion zone referred to in any of the following conditions, the Department of Environment and Conservation has approved the re-opening in writing (before the commencement of any work to re-open the track), following receipt of the relevant SFNSW report and authority:
- condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
 - condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
 - condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
 - condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”).

(Note: The re-opening of a snig track in a threatened species exclusion zone or exclusion zone referred to in condition 5.8 or 7 (b) is also subject to the requirements set out in the conditions relating specifically to high conservation value old growth forest, rainforest and rainforest exclusion zones, rare non-commercial forest ecosystems or protection zones (as applicable). Those requirements include the preparation of a report in accordance with Schedule 6A.

Note that, as the licence does not permit the construction of new snig tracks within a ridge and headwater habitat exclusion zone or a condition 7 (b) exclusion zone, the provisions in relation to re-opening snig tracks in these exclusion zones can only apply to snig tracks that were in existence at the time the approval commenced (13 May 2002).

Where all of the trees growing on a re-vegetated snig track have a dbhob of less than 20cm, then SFNSW may have the option of “brushing-up” the snig track under condition 5.1D (i). Brushing-up (unlike construction and re-opening) does not require the preparation of a Schedule 6 or 6A report.)

- f) If SFNSW receives written notice from the Department of Environment and Conservation to the effect that, in view of the extent of revegetation of the snig track that SFNSW proposes to re-open within a threatened species exclusion zone (or other exclusion zone referred to in condition 5.8 or 7 (b)), the track is no longer readily distinguishable from the surrounding forest, then SFNSW may re-open the snig track only with the written approval of the Department. Approval is required only if SFNSW receives the written notice no later than 3 working days after receipt of the relevant SFNSW report and authority.

(Note: Where the snig track is to be re-opened within a threatened frog or plant exclusion zone referred to in condition 5.1D (e) (iii), the approval of the Department of Environment and Conservation is required under that provision in every case (before any work to re-open the snig track is commenced).)

- g) The re-opening of a snig track may be carried out only in accordance with the conditions (if any) imposed by the Department of Environment and Conservation as part of its approval (where approval is required under condition 5.1D (e) or under condition 5.1D (f)), relating to the mitigation or amelioration of the impacts of the proposed re-opening on the threatened species exclusion zone (or other exclusion zone referred to in condition 5.8 or 7 (b)).
- h) If the approval of the Department of Environment and Conservation is required under condition 5.1D (f), it does not matter whether the relevant SFNSW report is prepared in accordance with Schedule 6 or Schedule 6A to this licence.

Brushing-up of snig tracks within threatened species exclusion zones

- i) Where a snig track within a threatened species exclusion zone or an exclusion zone referred to in condition 5.8 (“Ridge and Headwater Habitat”) or 7 (b) (“General survey requirements”) has become re-vegetated, but none of the trees growing within the zone on the snig track have a diameter at breast height over bark of 20cm or more, the snig track may be brushed-up. However, all of the following requirements must be met:
- i. the snig track was in existence at the time of commencement of this approval or has been constructed in accordance with this approval (and any subsequent re-opening has been done in accordance with this approval);
 - ii. no part of the snig track that is proposed to be brushed-up is located within an exclusion zone referred to in any of the following conditions:
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
 - condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
 - condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
 - condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”);
 - iii. it is proposed to use the snig track after it is brushed-up in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes).

(Note: Where the requirements in relation to “brushing-up” a re-vegetated snig track within an exclusion zone cannot be met, SFNSW may have the option of seeking instead to re-open the track under condition 5.1D (e). Re-opening of a snig track within an exclusion zone can be done, however, only if the relevant part of the exclusion zone is also located within a high conservation value old growth forest, rainforest or rainforest exclusion zone, rare non-commercial forest ecosystem or a protection zone. The conditions relating to these areas require SFNSW to prepare a report in accordance with Schedule 6A, whereas “brushing-up” of a re-vegetated snig track does not require a report to be prepared before work is undertaken.

Note that, as the licence does not permit the construction of new snig tracks within a ridge and headwater exclusion zone or a condition 7 (b) exclusion zone, the provisions in relation to brushing-up of snig tracks in these exclusion zones can only apply to snig tracks that were in existence at the time the approval commenced (13 May 2002).

Note, also, that although it is not a pre-condition of brushing-up a snig track within a threatened species exclusion zone (or a ridge and headwater habitat exclusion zone or 7 (b) exclusion zone) that it also be located within an area such as high conservation value old growth forest or rainforest, this is a pre-condition for constructing or re-opening a snig track within such an exclusion zone.)

- j) A snig track may be brushed-up under this condition (being condition 5.1D) any number of times.
- k) SFNSW must ensure that all practicable measures are taken to minimise any adverse impacts on the relevant threatened species exclusion zone (or other exclusion zone referred to in condition 5.8 or 7 (b)) of:
 - i. the brushing-up of a snig track; and
 - ii. any snigging carried out on a snig track, within the threatened species exclusion zone or other exclusion zone. In particular, hollow-bearing trees may not be felled or removed, or used as bumper trees for moving logs.

(Note: Where a road is constructed, or a snig track is re-opened or constructed, the relevant conditions relating to High Conservation Value Old Growth Forest, Rainforest, Rare Non-Commercial Forest Ecosystems or protection zones impose the requirement to minimise any adverse impacts of the construction or re-opening on the environment.)

- l) An approval granted by NPWS or the Department of Environment and Conservation (and any conditions imposed as part of the approval) under condition 5.1 (b) or clause 10 of this approval (or both), before the commencement of this condition (being condition 5.1D), is taken to be an approval under this condition also.

5.1E Marking-up of boundaries

- a) A reference in this condition (being condition 5.1E) to an environmentally sensitive area is a reference to:
 - an area of high conservation value old growth forest;
 - an area of rainforest (that is not protected by an exclusion zone);
 - an exclusion zone around warm temperate rainforest or cool temperate rainforest;
 - an area comprising a rare non-commercial forest ecosystem;
 - an exclusion zone referred to in any of the following conditions:
 - condition 5.8 (“Ridge and Headwater Habitat”)
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)

- condition 5.13 (“Bird Nest and Roost Site Protection”)
- condition 5.14.1 (“Tree Roost Protection”)
- condition 5.14.2 (“Subterranean Roost Protection”)
- condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
- condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
- condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
- condition 6.4.1 (“Large Forest Owls: Site Based Approach”)
- condition 6.4.2 (“Large Forest Owls: Landscape Approach”)
- condition 6.6 (“Southern Brown Bandicoot *Isoodon obesulus*”)
- condition 6.8 (“Smoky Mouse *Pseudomys fumeus*”)
- condition 6.9 (“Brush-tailed Phascogale *Phascogale tapoatafa*”)
- condition 6.10 (“Spotted-tailed Quoll *Dasyurus maculatus*”)
- condition 6.11 (“Koala *Phascolarctos cinereus*”)
- condition 6.12 (“Squirrel Glider *Petaurus norfolcensis*”)
- condition 6.13 (“Yellow-bellied Glider *Petaurus australis*”)
- condition 6.14 (“Golden-tipped Bat *Kerivoula papuensis*”)
- condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”)
- condition 7 (b) (“General survey requirements”); and
- a buffer zone referred to in any of the following conditions:
 - condition 5.12 (“Threatened Frog General Protection Measures”)
 - condition 6.7 (“Long-nosed Potoroo *Potorous tridactylus*”)
 - condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”).

(Note: A riparian habitat protection zone that is required to be established under condition 5.7 is not an environmentally sensitive area for the purposes of this condition.)

- b) A part of the boundary of an environmentally sensitive area must be marked in the field if:
 - i. in the case of road construction, road re-opening, snig track construction and snig track re-opening, the route or proposed route of the road or snig track will come within 100 metres of that part of the boundary; and
 - ii. in the case of any other specified forestry activity (other than bush fire hazard reduction work), the activity will come within 50 metres of that part of the boundary.
- c) Where the harvesting plan operational map (as referred to in condition 3 (a)) depicts a particular environmentally sensitive area by indicating that it is the area enclosed by a line, the outer edge of that line is to be treated as the boundary of the area when marking it in the field.
- d) Where a boundary or part of a boundary of an environmentally sensitive area is required to be marked in the field under condition 5.1E (b), this must be done before any trees are felled or killed within 100 metres of that boundary.
- e) Where an environmentally sensitive area has two or more boundaries, only the boundary (or part of the boundary) that adjoins or is closest to the area in which the specified forestry activity is to be undertaken is required to be marked in the field under this condition (being condition 5.1E), but only if:
 - i. no trees are to be felled or killed within, or felled into, that environmentally sensitive area; and

- ii. no harvesting machinery is to enter that environmentally sensitive area (for example, for the purpose of felling trees growing in the harvestable area).

(Note: Under the terms of the licence, there are a number of exceptions to the prohibitions set out in conditions 5.1, 5.3, 5.4 and 5.5 on carrying out specified forestry activities and other activities in environmentally sensitive areas. For example, trees may be felled into certain of these areas (in the course of a harvesting operation for the purpose of timber production), harvesting machinery has limited access to some of these areas (for the purpose of felling timber growing outside the areas) and roads and snig tracks may be constructed within these areas in certain circumstances. Condition 5.1E (e) requires only that part of the boundary of an environmentally sensitive area adjoining or closest to the area in which the specified forestry activity is to be undertaken to be marked in the field if it is not proposed to invoke any of the exceptions referred to above which allow the environmentally sensitive area to be affected.)

- f) Where two or more environmentally sensitive areas overlap, any part of the boundary of one of those areas that is located within another of those areas is not required to be marked in the field under this condition (being condition 5.1E), but only if:
 - i. no trees are to be felled or killed within, or felled into, either or any of those environmentally sensitive areas; and
 - ii. no harvesting machinery is to enter either or any of those environmentally sensitive areas (for example, for the purpose of felling trees growing in the harvestable area).

(Note: The effect of condition 5.1E (f) is to allow overlapping environmentally sensitive areas to be effectively treated as one environmentally sensitive area for the purpose of the boundary marking requirements. If it is not proposed to undertake any of the limited range of permissible activities that directly affect any of the environmentally sensitive areas concerned, any part of the boundary of an environmentally sensitive area that is located within another environmentally sensitive area does not need to be marked in the field.)

- g) A particular part of a boundary of an environmentally sensitive area is not required to be marked in the field under this condition (being condition 5.1E) with the written agreement of the Department of Environment and Conservation.

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 the marking-up of a compartment.
 - i. Nests and roosts for those species listed in Condition 5.13 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. Allocasurina or Casuarina spp. with chewed cones beneath;
 - 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 and Regent Honeyeater feed or nest trees;
 - xii. Permanent soaks and seepages in *Heleioporus australiacus* potential habitat; and
 - xiii. Threatened flora species and protected native plants likely to occur in the compartment requiring protection under Condition 6.16 of this licence;
 - xiv. Rocky outcrops and cliffs;

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1 March 2013
Condition 5.2 a)
vii. replaced

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Condition 5.2 a)
xiv.to xvi. added

- xv. Heath and scrub; and
 - xvi. Wetlands.
- 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.

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 1
 17 May 2004
 Condition 5.3 a)-
 c) replaced
 Ref Appendix E

5.3 High Conservation Value Old Growth Forest

Prohibitions on activities in HCVOGF

- a) The following rules apply to any area that is, or is within, High Conservation Value Old Growth Forest, except as varied by this condition (being condition 5.3) or condition 5.20 (relating to beekeeping):
 - i. specified forestry activities are prohibited in High Conservation Value Old Growth Forest;
 - ii. no tree is to be felled into High Conservation Value Old Growth Forest. If a tree falls into High Conservation Value Old Growth Forest, then no part of the tree can be removed;
 - iii. harvesting machinery is not to be used within High Conservation Value Old Growth Forest.

Trees accidentally felled into HCVOGF

- a1) Condition 5.3 (a) is not breached where a tree (or part of a tree) is accidentally felled into High Conservation Value Old Growth Forest.
- a2) A tree that is accidentally felled into High Conservation Value Old Growth Forest in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes) may be removed from the Forest.
- a3) However, the tree may be removed only if there are reasonable grounds for believing that the tree will produce at least one high quality timber product. For the avoidance of doubt, any part of the tree may be removed (subject to condition 5.3 (a4)) even though that particular part is unlikely to produce a high quality timber product.
- a4) The tree may be removed from High Conservation Value Old Growth Forest only in accordance with the following rules:
 - i. the crown must be left where it has fallen, unless the whole of the tree (or the whole of that part of the tree that has fallen into the Forest) is removed from the Forest, or is moved within the Forest, using a mechanical harvester;
 - ii. in removing any part of the tree (or logs into which the tree is cut) from the Forest any disturbance to the ground (including vegetation) must be minimised as far as practicable;
 - iii. where practicable, any part of the tree that has fallen into the Forest (or logs into which the tree is cut) must be removed from the Forest without contacting the ground. In any other case, contact with the ground must be minimised as far as practicable;
 - iv. the wheels or tracks of any machinery used to remove any part of the tree that has fallen into the Forest (or logs into which the tree is cut) must remain outside the Forest.
- a5) Snigging may be carried out to remove a part of the tree (apart from the tree's crown) that has been accidentally felled into the Forest, but only if:
 - i. applying the rules set out in condition 5.3 (a4), this is the only practicable method of removing that part of the tree or logs into which the tree is cut; and
 - ii. the wheels or tracks of any machinery involved in the snigging remain outside the Forest (as required by condition 5.3 (a4) (iv)).

- a6) Nothing in this condition (being condition 5.3) prevents the use of a harvesting arm of a mechanical harvester to rehabilitate or reinstate ground or soil in High Conservation Value Old Growth Forest in accordance with another term or condition of this approval.

Roads, snig tracks etc

- b) A road may be re-opened, and routine maintenance on a road may be carried out, in High Conservation Value Old Growth Forest.
- b1) Where a snig track within High Conservation Value Old Growth Forest has become re-vegetated, but none of the trees growing within the Forest on the snig track have a diameter at breast height over bark of 20cm or more, the snig track may be brushed-up. However, all of the following requirements must be met:
- i. the snig track was in existence at the time of commencement of this approval or has been constructed in accordance with this approval (and any subsequent re-opening has been done in accordance with this approval);
 - ii. no part of the snig track that is proposed to be brushed-up within the Forest is located within an exclusion zone referred to in any of the following conditions:
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
 - condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
 - condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
 - condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”);
 - iii. it is proposed to use the snig track after it is brushed-up in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes).

(Note: Where the requirements in relation to “brushing-up” a re-vegetated snig track within High Conservation Value Old Growth Forest cannot be met (eg. because part of the snig track passes through a threatened frog exclusion zone), SFNSW may have the option of seeking instead to re-open the track under condition 5.3 (g1). However, re-opening requires SFNSW to prepare a report in accordance with Schedule 6A, whereas “brushing-up” of a re-vegetated snig track does not require a report to be prepared before work is undertaken.)

- b2) A snig track may be brushed-up under condition 5.3 (b1) any number of times.
- c) Harvesting machinery may travel along roads and snig tracks (located within High Conservation Value Old Growth Forest) that were in existence at the time of commencement of this approval or that have been constructed in accordance with this approval (but only if any subsequent re-opening or brushing-up has been done in accordance with this approval).
- d) A road and snig track may be constructed, and snigging may be carried out, in any area that is, or is within, High Value Conservation Old Growth Forest, but only where:
- i. there is no practicable alternative site available for the purposes of the road or snigging;
 - ii. there has been no record made of any threatened species on the site of the proposed construction or snigging;
 - iii. 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;
 - iv. **Condition revoked (Amendment 1).**

- v. such areas are not in exclusion zones relating to threatened species referred to in condition 5.1D unless carried out in accordance with condition 5.1D.
- (e) 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.
- (f) **Condition revoked (Amendment 1).**
- (g) Where an exclusion zone referred to in condition 5.1D as it relates to a threatened species is located either wholly or partially within an area of High Conservation Value Old Growth Forest, then SFNSW is only permitted to construct roads and snig tracks in accordance with condition 5.1D.

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Condition 5.3 g)
modified
Ref Appendix E

- g1) A snig track (including a snig track that was in existence at the time of commencement of this approval) that has become re-vegetated may be re-opened (by clearing, scraping or treating regrowth) within High Conservation Value Old Growth Forest, but only if all of the following requirements are met:

- i. for practical purposes, there is no alternative route available for the snig track outside the Forest;
- ii. the manager of the regional office of SFNSW responsible for managing the land on which the snig track is located, or a more senior officer, has prepared a report in accordance with Schedule 6A to this licence and has authorised the proposed re-opening in writing before any work to re-open the track is commenced.

(Note: Where the whole or part of a snig track is also within an exclusion zone referred to in any of the following conditions, condition 5.1D provides that the proposed re-opening may be carried out only with the written approval of the Department of Environment and Conservation and is subject to any conditions imposed by the Department as part of its approval:

- condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
- condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
- condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
- condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”)

The written approval of the Department of Environment and Conservation may also be required where the snig track is to be re-opened within an exclusion zone, even though it is not an exclusion zone referred to above. If the Department has given SFNSW written notice that, in view of the extent of revegetation of the snig track within the exclusion zone, the track is no longer readily distinguishable from the surrounding forest, then the written approval of the Department is required before any work to re-open the snig track is commenced.)

- g2) A copy of the report and authority referred to in condition 5.3 (g1) must be faxed to the Department of Environment and Conservation as soon as possible after they have been issued.

- g3) For the avoidance of doubt:

- i. a road may not be constructed in any part of High Conservation Value Old Growth Forest which is also, or is also within, any of the exclusion zones referred to in the following conditions:

- condition 5.9 (“Wetlands”)
- condition 5.10 (“Heath and Scrub”)
- condition 5.11 (“Rocky Outcrops and Cliffs”)
- condition 7 (b) (“General survey requirements”);

- ii. a snig track may not be constructed in any part of High Conservation Value Old Growth Forest which is also, or is also within, any of the exclusion zones referred to in the following conditions:

- condition 5.8 (“Ridge and Headwater Habitat”)

AMENDMENT 4
1 March 2013
Condition 5.3 g1) ii.
omitted and
following number
renumbered

- condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 7 (b) (“General survey requirements”); and
- iii. a snig track may not be re-opened in any part of High Conservation Value Old Growth Forest which is also, or is also within, any of the exclusion zones referred to in the following conditions:
- condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”).

- g4) SFNSW must ensure that all practicable measures are taken to minimise any adverse impacts on the environment of any of the following activities within High Conservation Value Old Growth Forest:
- i. construction of a road or snig track;
 - ii. re-opening or brushing-up of a snig track;
 - iii. any snigging carried out on a snig track.

In particular, hollow-bearing trees may not be felled or removed, or used as bumper trees for moving logs.

- g5) A snig track may be re-opened any number of times, subject to this condition (being condition 5.3) and condition 5.1D (if applicable), and only in accordance with the provisions of those conditions.

(Note: There is no limit on the number of times the authority conferred by condition 5.3 to re-open snig tracks may be exercised. However, on each occasion, the snig track may be re-opened only if the pre-conditions for doing so continue to be met and re-opening work is carried out in accordance with condition 5.3. For example, if it is proposed to re-open a snig track that has been re-opened in the past, but the trees that have regrown on the snig track have reached a dbhob of more than 20cm, then a new SFNSW report and authority is required.)

- (h) The field boundary of High Conservation Value Old Growth Forest must match the location and extent of High Conservation Value Old Growth Forest as defined in this licence.
- (i) On Crown-timber lands that have not previously been assessed to identify High Conservation Value Old Growth Forest for the purpose of this approval, such as travelling stock reserves, lands acquired by the Forestry Commission of New South Wales, and purchase-tenure lands:
- i. the process for the identification of High Conservation Value Old Growth Forest must be developed by FCNSW within 12 months of the commencement date of the amendment to this approval. The final process, and any subsequent amendments to the process, must be approved by the EPA. Once finalised, the process must be made publicly available.
 - ii. once the process is approved it must be applied to those lands during the pre-operation planning process and the boundary of such areas must be mapped; and
 - iii. the mapped High Conservation Value Old Growth Forest boundaries must be maintained as a Geographic Information System theme in ESRI Feature Class format called "Assessed_HCVOG" which must be updated and provided to the EPA prior to specified forestry activities being undertaken on those lands..

<p>AMENDMENT 4 1 March 2013 Condition 5.3 (i) added</p>

5.4 Rainforest

- a) At the time of harvest planning, all known locations of Rainforest and exclusion zones to be established around Warm Temperate and Cool Temperate Rainforest, must be shown on the harvesting plan operational map.

(Note: known locations of Rainforest must include CRAFTI rainforest.)

- b) The on ground identification and location of Rainforest and exclusion zones established around Warm Temperate and Cool Temperate Rainforest, must be undertaken before or during pre-logging mark-up.
- c) The location of all Rainforest and exclusion zones established around Warm Temperate and Cool Temperate Rainforest identified in accordance with condition 5.4 b) must be shown on a map at the same scale as the harvesting plan operational map and included in the compartment history planning documentation.
- d) A 20 metre wide exclusion zone must be implemented around all areas of Warm Temperate Rainforest and Cool Temperate Rainforest.

Prohibitions on activities in Rainforest and Rainforest exclusion zones

- e) The following rules apply to any area that is, or is within, Rainforest or an exclusion zone established around Warm Temperate Rainforest or Cool Temperate Rainforest (“a Rainforest exclusion zone”), except as varied by this condition (being condition 5.4) or condition 5.20 (relating to beekeeping):
 - i. specified forestry activities are prohibited in Rainforest and Rainforest exclusion zones;
 - ii. no tree is to be felled into Rainforest or a Rainforest exclusion zone. If a tree falls into Rainforest or a Rainforest exclusion zone, then no part of the tree can be removed;
 - iii. harvesting machinery is not to be used within Rainforest and Rainforest exclusion zones.

Trees accidentally felled into Rainforest and Rainforest exclusion zones

- e1) Condition 5.4 (e) is not breached where a tree (or part of a tree) is accidentally felled into Rainforest or a Rainforest exclusion zone.
- e2) A tree that is accidentally felled into:
 - i. Rainforest (that is not protected by an exclusion zone); or
 - ii. a Rainforest exclusion zone,

in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes) may be removed from the Rainforest or the exclusion zone.
- e3) However, the tree may be removed only if there are reasonable grounds for believing that the tree will produce at least one high quality timber product. For the avoidance of doubt, any part of the tree may be removed (subject to condition 5.4 (g)) even though that particular part is unlikely to produce a high quality timber product.
- e4) For the avoidance of doubt, where a tree has been felled accidentally into both an exclusion zone around Warm Temperate Rainforest or Cool Temperate Rainforest and the Rainforest protected by the exclusion zone, no part of the tree felled into the Rainforest can be removed.

Trees may be felled into Warm Temperate Rainforest exclusion zone in limited circumstances

- f) A tree whose base is in a harvestable area may be felled into, and removed from, an exclusion zone around Warm Temperate Rainforest in a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes) if:
 - i. the Warm Temperate Rainforest protected by the exclusion zone includes vegetation growing alongside a watercourse, drainage line or other water body; and
 - ii. it is not practicable to fell the tree so that it falls wholly outside the exclusion zone; and
 - iii. there are reasonable grounds for believing, when selecting the tree for felling, that it will produce at least one high quality timber product; and
 - iv. the tree is felled in such a way so as to avoid, as far as practicable, damage to trees growing in the exclusion zone.

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1
17 May 2004
Condition 5.4 e)-
g) replaced
Ref Appendix E

- f1) However, no harvesting machinery may enter, or be used within, the exclusion zone around Warm Temperate Rainforest for the purpose of felling a tree into the exclusion zone under condition 5.4 (f).
- f2) In any one harvesting operation:
- i. no more than two trees may be felled (under condition 5.4 (f)) across any 200 metre length of the outer boundary of the exclusion zone around Warm Temperate Rainforest, whatever 200 metre length of the boundary is considered; and
 - ii. the number of trees that may be removed (under condition 5.4 (f)) may not exceed the number calculated by applying the principle set out in condition 5.4 (f2) (i).

A reference (in condition 5.4 (f2), (f 3) and (f4)) to the outer boundary of the exclusion zone around Warm Temperate Rainforest is a reference to a boundary of the zone that is 20 metres from the edge of the Warm Temperate Rainforest protected by the zone.

- f3) No trees may be felled, under condition 5.4 (f):
- i. across that part of the outer boundary of an exclusion zone around Warm Temperate Rainforest that occurs on one side of the watercourse or drainage line if that part of the outer boundary is less than 200 metres in length (irrespective of whether the exclusion zone encompasses rainforest growing on the other side of the watercourse or drainage line as well); and
 - ii. in any other case (such as where the exclusion zone protects Warm Temperate Rainforest surrounding a pool or dam), across the outer boundary of the exclusion zone around Warm Temperate Rainforest if the total length of that boundary is less than 200 metres.
- f4) For the avoidance of doubt, the outer boundary of an exclusion zone around Warm Temperate Rainforest continues despite its intersection with another area that is not a harvestable area (such as an exclusion zone for the protection of a threatened species). Accordingly, for the purpose of determining whether trees (and how many trees) may be felled across the outer boundary of the exclusion zone, any part of the outer boundary that is located within another area may be taken into account.

(Note: The following example illustrates the effect of condition 5.4 (f4) above: Warm Temperate Rainforest grows along the side of a watercourse for 200 metres; 100 metres of the boundary of that Rainforest passes through an exclusion zone (having a width of 50 metres) to protect the green and golden bell frog. Under the terms of this licence, no trees can be felled into or within such an exclusion zone for the purpose of timber production. Under condition 5.4 (d), a 20 metre wide exclusion zone must also be implemented around the Warm Temperate Rainforest. Assume that 100 metres of the boundary of the Rainforest exclusion zone adjoins the harvestable area. It may not be necessary – from a practical perspective – to “implement” an exclusion zone around that part of the Rainforest growing within the exclusion zone to protect the frog because harvesting timber is prohibited in that part in any case. However, condition 5.4 (f) above makes it clear that State Forests can treat the exclusion zone around the Rainforest as extending into the exclusion zone to protect the frog. Accordingly, it can add the length of that part of the boundary of the Warm Temperate Rainforest exclusion zone that is within the exclusion zone to protect the frog to the length of that part of the boundary of the Warm Temperate Rainforest exclusion zone that adjoins the harvestable area, for the purposes of determining if, and how many, trees can be felled across the latter part of the boundary. As the total length of the boundary will be more than 200 metres, two trees will be able to be felled across the 100 metre length of the boundary adjoining the harvestable area (but none will be able to be felled across that part of the boundary that is within the exclusion zone to protect the frog).)

- f5) Without affecting the operation of condition 5.4 (f) (iii), a part of a tree that has been felled into an exclusion zone around Warm Temperate Rainforest under condition 5.4 (f) may be removed (subject to condition 5.4 (g)) even though that particular part is unlikely to produce a high quality timber product.
- f6) For the avoidance of doubt, a tree may not be felled into an exclusion zone around Warm Temperate Rainforest under condition 5.4 (f) if it will also fall into the Rainforest protected by the exclusion zone.

Restrictions on manner of removal of trees

- g) A tree that has been felled into Rainforest or into a Rainforest exclusion zone may not be removed under condition 5.4 (e2) or under condition 5.4 (f) (in the case of an exclusion zone around Warm Temperate Rainforest) unless the following rules are complied with:
- i. where the tree has been felled into a Rainforest or into a Rainforest exclusion zone (but no part of the tree has fallen into the Rainforest protected by the exclusion zone), the crown of the tree must be left where it has fallen or the whole of the tree (or the whole of that part of the tree that has fallen into the Rainforest or the exclusion zone) must be removed from, or moved within, the Rainforest or the exclusion zone using a mechanical harvester;
 - ii. where the tree has been felled into both a Rainforest exclusion zone and the Rainforest protected by the exclusion zone, but the crown of the tree has fallen wholly within the Rainforest, then the crown, and any other part of the tree that has fallen into the Rainforest, must be left where they have fallen;
 - iii. where the tree has been felled into both a Rainforest exclusion zone and the Rainforest protected by that zone, and the crown of the tree spans both the exclusion zone and the Rainforest, the crown must be left where it has fallen in both the exclusion zone and the Rainforest.
- g1) The following rules also apply to the removal of the tree:
- i. in removing any part of the tree (or logs into which the tree is cut) from the Rainforest or the Rainforest exclusion zone any disturbance to the ground (including vegetation) must be minimised as far as practicable;
 - ii. where practicable, any part of the tree that has fallen into the Rainforest or the exclusion zone (or logs into which the tree is cut) must be removed from the Rainforest or the exclusion zone without contacting the ground. In any other case, contact with the ground must be minimised as far as practicable;
 - iii. the wheels or tracks of any machinery used to remove any part of the tree that has fallen into the Rainforest or the exclusion zone (or logs into which the tree is cut) must remain outside the Rainforest or the exclusion zone.
- g2) Snigging may be carried out to remove a part of the tree (apart from the tree's crown) or logs into which the tree is cut from the Rainforest or the exclusion zone, but only if:
- i. applying the rules set out in condition 5.4 (g1), this is the only practicable method of removing that part of the tree or those logs; and
 - ii. the wheels or tracks of any machinery involved in the snigging remain outside the Rainforest or the exclusion zone (as required by condition 5.4 (g1) (iii)).
- g3) For the avoidance of doubt:
- i. the number of trees that may be felled into, or removed from, an exclusion zone around Warm Temperate Rainforest under condition 5.4 (f) in a particular harvesting operation is not reduced by the number of trees that are accidentally felled into the exclusion zone, or subsequently removed from the exclusion zone under condition 5.4 (e2), in the same harvesting operation; and
 - ii. conversely, the authority conferred by condition 5.4 (e2) to remove trees that have been accidentally felled into the exclusion zone in a harvesting operation is not affected by the number of trees that are felled into, or removed from, the exclusion zone under condition 5.4 (f) in the same harvesting operation.
- Accordingly, the total number of trees that are removed from the exclusion zone in a particular harvesting operation may exceed the number referred to in condition 5.4 (f2) (ii).
- g4) Nothing in this condition (being condition 5.4) prevents the use of a harvesting arm of a mechanical harvester to rehabilitate or reinstate ground or soil in Rainforest or an exclusion zone around Warm Temperate Rainforest or Cool Temperate Rainforest in accordance with another term or condition of this approval.

Roads, snig tracks etc

- g5) A road may be re-opened, and routine maintenance on a road may be carried out, in Rainforest or an exclusion zone around Warm Temperate Rainforest or Cool Temperate Rainforest.
- g6) Where a snig track within Rainforest or an exclusion zone around Warm Temperate Rainforest or Cool Temperate Rainforest has become re-vegetated, but none of the trees growing within the Rainforest or the exclusion zone on the snig track have a diameter at breast height over bark of 20cm or more, the snig track may be brushed-up. However, all of the following requirements must be met:
- i. the snig track was in existence at the time of commencement of this approval or has been constructed in accordance with this approval (and any subsequent re-opening has been done in accordance with this approval);
 - ii. no part of the snig track that is proposed to be brushed-up within the Rainforest or the exclusion zone is located within an exclusion zone referred to in any of the following conditions:
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
 - condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
 - condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
 - condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”);
 - iii. it is proposed to use the snig track after it is brushed-up in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes).

(Note: Where the requirements in relation to “brushing-up” a re-vegetated snig track within Rainforest or a Rainforest exclusion zone cannot be met (eg. because part of the snig track passes through a threatened frog exclusion zone), SFNSW may have the option of seeking instead to re-open the track under condition 5.4 (k1)). However, re-opening requires SFNSW to prepare a report in accordance with Schedule 6A, whereas “brushing-up” does not require a report to be prepared before work is undertaken.)

- g7) A snig track may be brushed-up under condition 5.4 (g6) any number of times.
- g8) Harvesting machinery may travel along roads and snig tracks (within Rainforest or an exclusion zone around Warm Temperate Rainforest or Cool Temperate Rainforest) that were in existence at the time of commencement of this approval or that have been constructed in accordance with this approval (but only if any subsequent re-opening or brushing-up has been done in accordance with this approval).
- h) A road and snig track may be constructed, and snigging may be carried out, in any area that is, or is within, Rainforest or exclusion zones established around Warm Temperate Rainforest and Cool Temperate Rainforest, but only where:
- i. there is no practicable 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. **Condition revoked (Amendment 1).**
 - iv. such areas are not in exclusion zones relating to threatened species referred to in condition 5.1D unless carried out in accordance with condition 5.1D.

AMENDMENT
4
1 March 2013
Condition 5.4 h)
ii. omitted

AMENDMENT 1
17 May 2004
Condition 5.4 h)v
modified
Ref Appendix E

- i) 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.

j) **Condition revoked (Amendment 1).**

AMENDMENT 1
17 May 2004
Condition 5.4 k)
modified
Ref Appendix E

- k) Where an exclusion zone referred to in condition 5.1D as it relates to a threatened species is located either wholly or partially within an area of Rainforest, or wholly or partially within an exclusion zone established around Warm Temperate Rainforest or Cool Temperate Rainforest, then SFNSW is only permitted to construct roads and snig tracks in accordance with condition 5.1D.

AMENDMENT 1
17 May 2004
Condition 5.4 k1-
k5) added
Ref Appendix E

- k1) A snig track (including a snig track that was in existence at the time of commencement of this approval) that has become re-vegetated may be re-opened (by clearing, scraping or treating regrowth) within Rainforest or an exclusion zone around Warm Temperate Rainforest or Cool Temperate Rainforest, but only if all of the following requirements are met:

- i. for practical purposes, there is no alternative route available for the snig track outside the Rainforest or the exclusion zone;
- ii. the manager of the regional office of SFNSW responsible for managing the land on which the snig track is located, or a more senior officer, has prepared a report in accordance with Schedule 6A to this licence and has authorised the proposed re-opening in writing before any work to re-open the track is commenced.

AMENDMENT 4
1 March 2013
Condition 5.4 k1) ii.
omitted

(Note: Where the whole or part of a snig track is also within an exclusion zone referred to in any of the following conditions, condition 5.1D provides that the proposed re-opening may be carried out only with the written approval of the Department of Environment and Conservation and is subject to any conditions imposed by the Department as part of its approval:

- condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
- condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
- condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
- condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”)

In addition, the written approval of the Department of Environment and Conservation may be required where the snig track is to be re-opened within an exclusion zone, even though it is not an exclusion zone referred to above. If the Department has given SFNSW written notice that, in view of the extent of revegetation of the snig track within the exclusion zone, the track is no longer readily distinguishable from the surrounding forest, then the written approval of the Department is required before any work to re-open the snig track is commenced.)

- k2) A copy of the report and authority referred to in condition 5.4 (k1) must be faxed to the Department of Environment and Conservation as soon as possible after they have been issued.

k3) For the avoidance of doubt:

- i. a road may not be constructed in any part of a Rainforest or an exclusion zone around Warm Temperate Rainforest or Cool Temperate Rainforest which is also, or is also within, any of the exclusion zones referred to in the following conditions:
- condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 7 (b) (“General survey requirements”);
- ii. a snig track may not be constructed in any part of a Rainforest or an exclusion zone around Warm Temperate Rainforest or Cool Temperate Rainforest which is also, or is also within, any of the exclusion zones referred to in the following conditions:
- condition 5.8 (“Ridge and Headwater Habitat”)
 - condition 5.9 (“Wetlands”)

- condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 7 (b) (“General survey requirements”); and
- iii. a snig track may not be re-opened in any part of a Rainforest or an exclusion zone around Warm Temperate Rainforest or Cool Temperate Rainforest which is also, or is also within, any of the exclusion zones referred to in the following conditions:
- condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”).
- k4) SFNSW must ensure that all practicable measures are taken to minimise any adverse impacts on the environment of any of the following activities within Rainforest or an exclusion zone around Warm Temperate Rainforest or Cool Temperate Rainforest:
- i. construction of a road or snig track;
 - ii. re-opening or brushing-up of a snig track;
 - iii. any snigging carried out on a snig track.

In particular, hollow-bearing trees may not be felled or removed, or used as bumper trees for moving logs.

- k5) A snig track may be re-opened any number of times, subject to this condition (being condition 5.4) and condition 5.1D (if applicable), and only in accordance with the provisions of those conditions.

Note: There is no limit on the number of times the authority conferred by condition 5.4 to re-open snig tracks may be exercised. However, on each occasion, the snig track may be re-opened only if the pre-conditions for doing so continue to be met and re-opening work is carried out in accordance with condition 5.4. For example, if it is proposed to re-open a snig track that has been re-opened in the past, but the trees that have regrown on the snig track have reached a dbhob of more than 20cm, then a new SFNSW report and authority is required.

5.5 Rare Non-Commercial Forest Ecosystems

Prohibitions on activities in Rare Non-Commercial Forest Ecosystem

- a) The following rules apply to any area that is, or is within, Rare Non-Commercial Forest Ecosystem, except as varied by this condition (being condition 5.5) or condition 5.20 (relating to beekeeping):
- i. specified forestry activities are prohibited in Rare Non-Commercial Forest Ecosystem;
 - ii. no tree is to be felled into Rare Non-Commercial Forest Ecosystem. If a tree falls into Rare Non-Commercial Forest Ecosystem, then no part of the tree can be removed;
 - iii. harvesting machinery is not to be used within Rare Non-Commercial Forest Ecosystem.

Trees accidentally felled into Rare Non-Commercial Forest Ecosystems

- a1) Condition 5.5 (a) is not breached where a tree (or part of a tree) is accidentally felled into Rare Non-Commercial Forest Ecosystem. A tree that is accidentally felled into Forest Ecosystem in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes) may be removed from the Forest Ecosystem.
- a2) However, the tree may be removed only if there are reasonable grounds for believing that the tree will produce at least one high quality timber product. For the avoidance of doubt, any part of the tree may be removed (subject to condition 5.5 (a8) (i)) even though that particular part is unlikely to produce a high quality timber product.

Trees may be felled into Rare Forest Ecosystems in limited circumstances

AMENDMENT 1
17 May 2004
Condition 5.5 a)-c)
added
Ref Appendix E

- a3) A tree whose base is in a harvestable area may be felled into, and removed from, Rare Non-Commercial Forest Ecosystem in a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes) if:
- i. it is not practicable to fell the tree so that it falls wholly outside the Forest Ecosystem; and
 - ii. there are reasonable grounds for believing, when selecting the tree for felling, that it will produce at least one high quality timber product; and
 - iii. the tree is felled in such a way so as to avoid, as far as practicable, damage to trees growing in the Forest Ecosystem.

- a4) However, no harvesting machinery may enter, or be used within, Rare Non-Commercial Forest Ecosystem for the purpose of felling a tree into the Forest Ecosystem under condition 5.5 (a3).

(Note: Harvesting machinery may enter Rare Non-Commercial Forest Ecosystem for the purpose of felling trees away from the Forest Ecosystem. However, harvesting machinery may not be used within the Forest Ecosystem for felling trees into the Forest Ecosystem.)

- a5) In any one harvesting operation:

- i. no more than six trees may be felled (under condition 5.5 (a3)) across any 200 metre length of the boundary of the Forest Ecosystem, whatever 200 metre length of the boundary is considered; and
- ii. the number of trees that may be removed (under condition 5.5 (a3)) may not exceed the number calculated by applying the principle set out in condition 5.5 (a5) (i).

- a6) Without affecting the operation of condition 5.5 (a3) (ii), a part of a tree that has been felled into Rare Non-Commercial Forest Ecosystem under condition 5.5 (a3) may be removed (subject to condition 5.5 (a8) (i)) even though that particular part is unlikely to produce a high quality timber product.

- a7) For the avoidance of doubt:

- i. if the total length of the boundary of a Rare Non-Commercial Forest Ecosystem is less than 200 metres, no trees may be felled across that boundary under condition 5.5 (a3); and
- ii. the boundary of a Rare Non-Commercial Forest Ecosystem continues despite its intersection with another area that is not a harvestable area (such as an exclusion zone for the protection of a threatened species). Accordingly, for the purpose of determining whether trees (and how many trees) may be felled across the boundary of a Rare Non-Commercial Forest Ecosystem under condition 5.5 (a3) and (a5), any part of the boundary that is located within another area may be taken into account.

(Note: The following example is given to illustrate the effect of condition 5.5 (a7) (ii) above: a rare non-commercial forest ecosystem has a boundary of 200 metres. 100 metres of the boundary passes through an exclusion zone to protect the green and golden bell frog. Under the terms of this licence, no trees may be felled into or within such an exclusion zone for the purpose of timber production. The other 100 metres of the boundary of the rare non-commercial forest ecosystem adjoins a harvestable area in which trees may be felled. For the purpose of determining whether (and how many) trees can be felled into the rare non-commercial forest ecosystem, the 100 metres of its boundary that is within the exclusion zone to protect the frog can be added to the 100 metres of its boundary that adjoins the harvestable area – accordingly, because the total length of the boundary is 200 metres, 6 trees may be felled across the 100 metres of the boundary that adjoins the harvestable area. No trees may, however, be felled across the 100 metres of the boundary that is located within the exclusion zone to protect the frog.)

Restrictions on manner of removal of trees

- a8) A tree that has been felled into Rare Non-Commercial Forest Ecosystem under condition 5.5 (a3), or accidentally, may be removed only in accordance with the following rules:
- i. the crown must be left where it has fallen, unless the whole of the tree (or the whole of that part of the tree that has fallen into the Forest Ecosystem) is removed from the Forest Ecosystem, or is moved within the Forest Ecosystem, using a mechanical harvester;

- ii. in removing any part of the tree (or logs into which the tree is cut) from the Forest Ecosystem any disturbance to the ground (including vegetation) must be minimised as far as practicable;
 - iii. where practicable, any part of the tree that has fallen into the Forest Ecosystem (or logs into which the tree is cut) must be removed from the Forest Ecosystem without contacting the ground. In any other case, contact with the ground must be minimised as far as practicable;
 - iv. the wheels or tracks of any machinery used to remove any part of the tree that has fallen into the Forest Ecosystem (or logs into which the tree is cut) must remain outside the Forest Ecosystem.
- a9) Snigging may be carried out to remove a part of the tree (apart from the tree's crown) that has been felled into Rare Non-Commercial Forest Ecosystem under condition 5.5 (a3), or accidentally, but only if:
- i. applying the rules set out in condition 5.5 (a8), this is the only practicable method of removing that part of the tree or logs into which the tree is cut; and
 - ii. the wheels or tracks of any machinery involved in the snigging remain outside the Rare Non-Commercial Forest Ecosystem (as required by condition 5.5 (a8) (iv)).
- a10) For the avoidance of doubt:
- i. the number of trees that may be felled into, or removed from, Rare Non-Commercial Forest Ecosystem under condition 5.5 (a3) in a particular harvesting operation is not reduced by the number of trees that are accidentally felled into the Forest Ecosystem, or subsequently removed from the Forest Ecosystem under condition 5.5 (a1), in the same harvesting operation; and
 - ii. conversely, the authority conferred by condition 5.5 (a1) to remove trees that have been accidentally felled into the Forest Ecosystem in a harvesting operation is not affected by the number of trees that are felled into, or removed from, the Forest Ecosystem under condition 5.5 (a3) in the same harvesting operation.

Accordingly, the total number of trees that are removed from the Forest Ecosystem in a particular harvesting operation may exceed the number referred to in condition 5.5 (a5) (ii).

Entry and use of harvesting machinery for limited purposes

- b) A harvesting machine may enter, and be used within, Rare Non-Commercial Forest Ecosystem in order to fell and remove any tree whose base is in the harvestable area in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes).
- b1) However, a harvesting machine may enter and be used within Rare Non-Commercial Forest Ecosystem to fell the tree whose base is in the harvestable area under condition 5.5 (b) only if:
 - i. the tree cannot be felled from outside the Forest Ecosystem, using the techniques of directional felling, so that it does not fall into the Forest Ecosystem; and
 - ii. there are reasonable grounds for believing, when selecting the tree for felling, that it will produce at least one high quality timber product.

The harvesting machine may be used only to fell the tree away from the Forest Ecosystem (that is, into the harvestable area).

- b2) A harvesting machine may be operated under condition 5.5 (b) within Rare Non-Commercial Forest Ecosystem only using walkover techniques and in such a way so as:
 - i. to minimise skewing of its tracks (if any) to the greatest extent practicable; and
 - ii. to minimise disturbance to the ground (including vegetation) within the Forest Ecosystem to the greatest extent practicable.

In particular, a harvesting machine may be operated within Rare Non-Commercial Forest Ecosystem, under condition 5.5 (b), only with any blades, rippers or other similar attachments positioned so that they do not disturb the ground (including vegetation).

- b3) The wheels or tracks of a harvesting machine that has entered Rare Non-Commercial Forest Ecosystem must remain wholly within 5 metres from the boundary of the Forest Ecosystem when being used under condition 5.5 (b).

Use of harvesting machinery inside Forest Ecosystem to remove trees

- c) Despite condition 5.5 (a8) (iv) and condition 5.5 (a9) (ii), where a harvesting machine has entered Rare Non-Commercial Forest Ecosystem under condition 5.5 (b) for the purpose of felling trees away from the Forest Ecosystem, it may also be used to remove a tree (or part of the tree) that has been felled into the Forest Ecosystem under condition 5.5 (a3) or accidentally.
- c1) However, the wheels or tracks of the harvesting machine may not (to any significant extent) be repositioned or moved within the Forest Ecosystem solely for the purpose of removing a tree that has been felled into the Forest Ecosystem. In other words, they may be repositioned or moved significantly only if this is necessary for a purpose related to felling and removing trees in the harvestable area.
- c2) The restrictions on the operation of harvesting machinery set out in condition 5.5 (b2) and (b3) apply to the operation of a machine when removing a tree or part of a tree as referred to in condition 5.5 (c). For example, the machine must remain wholly within 5 metres from the boundary of the Forest Ecosystem and must be operated using only walkover techniques.
- c3) Nothing in this condition (being condition 5.5) prevents the use of harvesting machinery in Rare Non-Commercial Forest Ecosystem for the purpose of rehabilitating or reinstating ground or soil in accordance with another term or condition of this approval (such as clause 18I of the approval).

Roads etc.

- c4) Road re-opening and routine road maintenance may take place in Rare Non-Commercial Forest Ecosystem.
- c5) Where a snig track within Rare Non-Commercial Forest Ecosystem has become re-vegetated, but none of the trees growing within the Forest Ecosystem on the snig track have a diameter at breast height over bark of 20cm or more, the snig track may be brushed-up. However, all of the following requirements must be met:
- i. the snig track was in existence at the time of commencement of this approval or has been constructed in accordance with this approval (and any subsequent re-opening has been done in accordance with this approval);
 - ii. no part of the snig track that is proposed to be brushed-up within the Forest Ecosystem is located within an exclusion zone referred to in any of the following conditions:
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
 - condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
 - condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
 - condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”);
 - iii. it is proposed to use the snig track after it is brushed-up in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes).

(Note: Where the requirements in relation to “brushing-up” a re-vegetated snig track within Rare Non-Commercial Forest Ecosystem cannot be met, SFNSW may have the option of seeking instead to re-open the track under condition 5.5 (g1). However, re-opening requires SFNSW to prepare a

report in accordance with Schedule 6A, whereas “brushing-up” does not require a report to be prepared before work is undertaken.)

- c6) A snig track may be brushed-up under condition 5.5 (c5) any number of times.
- c7) Harvesting machinery may travel along roads and snig tracks (located within Rare Non-Commercial Forest Ecosystem) that were in existence at the time of commencement of this approval or that have been constructed in accordance with this approval (but only if any subsequent re-opening or brushing-up has also been done in accordance with this approval).
- d) A road and snig track may be constructed, and snigging may be carried out, in any area that is, or is within, Rare Non-Commercial Forest Ecosystems, but only where:

AMENDMENT 4
1 March 2013
Condition 5.5 d)
ii. omitted and following numbers renumbered

- i. there is no practicable 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. **Condition revoked (Amendment 1).**

- iv. such areas are not in exclusion zones relating to threatened species referred to in condition 5.1D unless carried out in accordance with condition 5.1D.

AMENDMENT 1
17 May 2004
Condition 5.5 d)v modified
Ref Appendix E

- e) 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.

AMENDMENT 1
17 May 2004
Condition 5.5 g) modified
Ref Appendix E

- f) **Condition revoked (Amendment 1).**

- g) Where an exclusion zone referred to in condition 5.1D as it relates to a threatened species is located either wholly or partially within an area of Rare Non-Commercial Forest Ecosystems, then SFNSW is only permitted to construct roads and snig tracks in accordance with condition 5.1D.

AMENDMENT 1
17 May 2004
Condition 5.5 g1)-g5) added
Ref Appendix E

- g1) A snig track (including a snig track that was in existence at the time of commencement of this approval) that has become re-vegetated may be re-opened (by clearing, scraping or treating regrowth) within Rare Non-Commercial Forest Ecosystem, but only if all of the following requirements are met:

AMENDMENT 4
1 March 2013
Condition 5.5 g1)
ii. omitted and following numbers renumbered

- i. for practical purposes, there is no alternative route available for the snig track outside the Forest Ecosystem;
- ii. the manager of the regional office of SFNSW responsible for managing the land on which the snig track is located, or a more senior officer, has prepared a report in accordance with Schedule 6A to this licence and has authorised the proposed re-opening in writing before any work to re-open the track is commenced.

Note: Where the whole or part of a snig track is also within an exclusion zone referred to in any of the following conditions, condition 5.1D provides that the proposed re-opening may be carried out only with the written approval of the Department of Environment and Conservation and is subject to any conditions imposed by the Department as part of its approval:

- *condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)*
- *condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)*
- *condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)*
- *condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”)*

In addition, the written approval of the Department of Environment and Conservation may be required where the snig track is to be re-opened within an exclusion zone, even though it is not an exclusion zone referred to above. If the Department has given SFNSW written notice that, in view of the extent of revegetation of the snig track within the exclusion zone, the track is no longer readily distinguishable from the surrounding forest, then the written approval of the Department is required before any work to re-open the snig track is commenced.)

- g2) A copy of the report and authority referred to in condition 5.5 (g1) must be faxed to the Department of Environment and Conservation as soon as possible after they have been issued.
- g3) For the avoidance of doubt:
- i. a road may not be constructed in any part of a Rare Non-Commercial Forest Ecosystem which is also, or is also within, any of the exclusion zones referred to in the following conditions:
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 7 (b) (“General survey requirements”);
 - ii. a snig track may not be constructed in any part of a Rare Non-Commercial Forest Ecosystem which is also, or is also within, any of the exclusion zones referred to in the following conditions:
 - condition 5.8 (“Ridge and Headwater Habitat”)
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 7 (b) (“General survey requirements”); and
 - iii. a snig track may not be re-opened in any part of a Rare Non-Commercial Forest Ecosystem which is also, or is also within, any of the exclusion zones referred to in the following conditions:
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”).
- g4) SFNSW must ensure that all practicable measures are taken to minimise any adverse impacts on the environment of any of the following activities within Rare Non-Commercial Forest Ecosystem:
- i. construction of a road or snig track;
 - ii. re-opening or brushing-up of a snig track;
 - iii. any snigging carried out on a snig track.

In particular, hollow-bearing trees may not be felled or removed, or used as bumper trees for moving logs.

- g5) A snig track may be re-opened any number of times, subject to this condition (being condition 5.5) and condition 5.1D (if applicable), and only in accordance with the provisions of those conditions.

(Note: There is no limit on the number of times the authority conferred by condition 5.5 to re-open snig tracks may be exercised. However, on each occasion, the snig track may be re-opened only if the pre-conditions for doing so continue to be met and re-opening work is carried out in accordance with condition 5.5. For example, if it is proposed to re-open a snig track that has been re-opened in the past, but the trees that have regrown on the snig track have reached a dbhob of more than 20cm, then a new SFNSW report and authority is required.)

5.6 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
- i. Damage to the following types of trees or shrubs must be avoided or minimised to the greatest extent practicable during harvesting operations:
 - all stands of *Allocasuarina* or *Casuarina* spp.,

AMENDMENT 4 1 March 2013 Condition 5.6 g) i. replaced

- individual shrubs or trees of *Allocasuarina* or *Casuarina* spp. where there is evidence that Glossy Black-cockatoos have been feeding on them, such as chewed cones at the base of the trees,
- ii. Specified forestry activities should be conducted in such a manner as to minimise damage to stands where *Allocasuarina* spp. dominate the canopy, sub-canopy or understorey.

(Note: it is not the intention to stop harvesting operations in areas identified in condition 5.6 f) ii. above. The NPWS does not intend to take proceedings where damage to *Allocasuarina* stands occurs in areas of the South Coast Sub-region where *Allocasuarina* is present as a sub-canopy/understorey species in high density and relatively uniform distribution throughout the net harvest area. In such circumstances, damage to areas with larger *Allocasuarina* trees and areas with *Allocasuarina* trees carrying high numbers of cones should be minimised.)

- iii. 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.
- iv. 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.
- v. Damage to flowering or fruiting banksias and *Xanthorrhoea* spp. should be avoided during forestry operations.

h) Protection of retained trees

- i. When conducting specified forestry activities and post-logging burning, damage to trees retained under conditions 5.6 a), 5.6 b), 5.6 c), 5.6 d), 5.6 e) and 5.6 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.
- ii. 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, *Allocasuarina* with more than 30 crushed cones beneath, 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 metres radius. Habitat and recruitment trees must not be used as bumper trees during harvesting operations.
- iii. Retained trees referred to in conditions 5.6 a) i., 5.6 b) i., 5.6 c) i., 5.6 d) i., 5.6 e) i., 5.6 f) i., 5.6 f) iii. and 5.6 f) iv. 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.

AMENDMENT 1
17 May 2004
Condition 5.7
replaced
Ref Appendix E

5.7 Riparian Habitat Protection – protection zones

- a) A protection zone (hard) must be established along either side of a stream for its entire length. A protection zone (soft) must be established along the entire length of each protection zone (hard).
- b) Each protection zone is to have at least the width shown in Table 1 set out below. The width of each zone is to be measured as follows:
 - i. the width of a protection zone (hard) is to 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; and
 - ii. the width of a protection zone (soft) is to be measured from its boundary with the adjoining protection zone (hard); and
 - iii. the width is to be measured along the ground surface.

Table 1: Minimum widths of protection zones for streams (shown in metres)

Stream Order	Protection zone (hard)	Protection zone (soft)
1 st Order	5	5
2 nd Order	5	15
3 rd Order	5	25
4 th Order or greater	5	45

(For the purposes of applying Table 1, stream order is to be determined in accordance with Schedule 1 to this licence).

5.7.1 Specified forestry activities restricted within protection zones (hard)

- a) The following rules apply to a protection zone (hard), except as varied by this condition (being condition 5.7.1), condition 5.7.3 and condition 5.20 (relating to beekeeping):
 - i. specified forestry activities are prohibited in a protection zone (hard);
 - ii. no tree is to be felled into a protection zone (hard). If a tree falls into a protection zone (hard), then no part of the tree can be removed;
 - iii. harvesting machinery is not to be used in a protection zone (hard).
- b) Condition 5.7.1 (a) is not breached where a tree (or part of a tree) is accidentally felled into a protection zone (hard).
- c) A tree that has been accidentally felled into a protection zone (hard) in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes) may be removed from the zone.
- d) However, the tree may be removed only if there are reasonable grounds for believing that the tree will produce at least one high quality timber product. For the avoidance of doubt, a part of a tree may be removed (subject to condition 5.7.1 (e)) from the protection zone (hard) even though that particular part is unlikely to produce a high quality timber product.
- e) The following rules apply to the removal of the tree that has been accidentally felled into the protection zone (hard):
 - i. the crown must be left where it has fallen, unless the whole of the tree (or the whole of that part of the tree that has fallen into the zone) is removed from the protection zone (hard), or is moved within, the protection zone (hard), using a mechanical harvester;
 - ii. the wheels or tracks of any machinery used to remove any part of the tree (or logs into which the tree is cut) must remain outside the protection zone (hard).

(Note: Where a harvesting machine has entered the adjoining protection zone (soft) under condition 5.7.2 for the purpose of felling trees in the harvestable area, it may also be used to remove a tree that has been accidentally felled into the protection zone (hard) (see condition 5.7.2 (g)). However, the restrictions set out in condition 5.7.2 on the operation of harvesting machinery continue to apply when it is being used to remove a tree from the protection zone (hard).)
- f) SFNSW must record the date on which any tree was accidentally felled into a protection zone (hard) and its location.
- g) Nothing in this condition (being condition 5.7.1) prevents the use of harvesting machinery for the purpose of rehabilitating ground or soil in accordance with another term or condition of this approval (such as conditions in Schedule 4A to the terms of the licence under the *Protection of the Environment Operations Act 1997*).

5.7.2 Restricted operations in protection zones (soft)

- a) The following rules apply to a protection zone (soft), except as varied by this condition (being condition 5.7.2), condition 5.7.3 or condition 5.20 (relating to beekeeping):
 - i. specified forestry activities are prohibited in a protection zone (soft);

- ii. harvesting machinery is not to be used in a protection zone (soft).
- b) Trees may be felled into and removed from a protection zone (soft), but only in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes) or in the course of road or snig track construction or re-opening, snig track brushing-up or road maintenance.
- c) However, condition 5.7.2 (b) is not breached where a tree is accidentally felled into the protection zone (soft) other than as referred to in that condition.
- d) The following rules apply to the removal of a tree that has been felled into the protection zone (soft) in the course of harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes):
 - i. the crown must be left where it has fallen, unless the whole of the tree (or the whole of that part of the tree that has fallen into the zone) is removed from the protection zone (soft), or is moved within the protection zone (soft), using a mechanical harvester;
 - ii. the wheels or tracks of any machinery used to remove any part of the tree (or logs into which it is cut) must remain outside the protection zone (soft).
- e) A harvesting machine may enter, and be used within, a protection zone (soft) in order to fell and remove any tree whose base is in the harvestable area in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes).
- f) However, a harvesting machine may enter and be used within a protection zone (soft) to fell a tree whose base is in the harvestable area only if:
 - i. the tree cannot be felled from outside the protection zone (soft) (that is, in the harvestable area) using the techniques of directional felling, so that it does not fall into the protection zone (soft); and
 - ii. there are reasonable grounds for believing, when selecting the tree for felling, that it will produce at least one high quality timber product.

The harvesting machine may be used only to fell the tree away from the protection zone (soft) (that is, into the harvestable area).

- g) A harvesting machine that has entered a protection zone (soft) for the purpose of felling trees in the harvestable area may also be used to remove a tree that has been felled into the protection zone (soft), despite condition 5.7.2 (d) (ii), or to remove a tree that has been felled into the adjoining protection zone (hard).
- h) A harvesting machine may be operated under this condition (being condition 5.7.2) within a protection zone (soft) only using walkover techniques and in such a way so as:
 - i. to minimise skewing of its tracks (if any) to the greatest extent practicable; and
 - ii. to minimise disturbance to the ground (including vegetation) within the protection zone (soft) to the greatest extent practicable.

In particular, a harvesting machine may be operated within a protection zone (soft), under this condition, only with any blades, rippers or other similar attachments positioned so that they do not disturb the ground (including vegetation).

- i) The wheels or tracks of a harvesting machine that has entered a protection zone (soft) under condition 5.7.2 (e) must remain wholly within 5 metres from the boundary of the zone and the harvestable area when being used under this condition (being condition 5.7.2).
- j) The wheels or tracks of a harvesting machine that has entered a protection zone (soft) under condition 5.7.2 (e) may not (to any significant extent) be repositioned or moved solely for either or both of the following purposes:
 - i. for the purpose of removing a tree from the protection zone (soft);
 - ii. for the purpose of removing a tree accidentally felled into the adjoining protection zone (hard).

In other words, the wheels or tracks of the machine may be moved or repositioned significantly only if this is also necessary for a purpose related to felling and removing trees in the harvestable area.

- k. Harvesting machinery (or any other tracked or wheeled machinery) may not enter into, or be used within, any part of a protection zone (soft) where the soil is saturated, under this condition (being condition 5.7.2).
- l. Nothing in this condition (being condition 5.7.2) prevents the use of harvesting machinery for the purpose of rehabilitating ground or soil in accordance with another term or condition of this approval (such as conditions in Schedule 4A to the terms of the licence under the *Protection of the Environment Operations Act 1997* set out in this approval).

5.7.3 Road and snig track construction in protection zones

- a) A road and snig track (including a road or snig track crossing) may be constructed, and a snig track may be re-opened (by clearing, scraping or treating re-growth), in a protection zone where, for practical purposes, there is no alternative site or route available for the road or snig track outside the protection zone.
- b) The road or snig track may be constructed, and a snig track may be re-opened, only if, before the commencement of the construction or of any work to re-open the snig track:
 - i. the manager of the regional office of SFNSW responsible for managing the land on which the construction is proposed to be carried out or on which the snig track is located, or a more senior officer, has prepared a report in accordance with Schedule 6 or, in the case of a snig track to be re-opened, Schedule 6A to this licence; and
 - ii. the relevant regional manager or more senior officer has authorised the construction or proposed re-opening in writing.
- c) A copy of the report and authority referred to in condition 5.7.3 (b) must be faxed to the Department of Environment and Conservation as soon as possible after they have been issued.
- d) For the avoidance of doubt:
 - i. a road may not be constructed in any part of a protection zone which is also, or is also within, any of the exclusion zones referred to in the following conditions:
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 7 (b) (“General survey requirements”);
 - ii. a snig track may not be constructed in any part of a protection zone which is also, or is also within, any of the exclusion zones referred to in the following conditions:
 - condition 5.8 (“Ridge and Headwater Habitat”)
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 7 (b) (“General survey requirements”); and
 - iii. a snig track may not be re-opened in any part of a protection zone which is also, or is also within, any of the exclusion zones referred to in the following conditions:
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”).

(Note: Where the site or route of a proposed road or snig track is also (wholly or partly), within an exclusion zone to which condition 5.1D applies, that condition provides that the construction of the

AMENDMENT

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1 March 2013

Condition 5.7.3

a) ii. omitted

road or snig track may be carried out only with the written approval of the Department of Environment and Conservation and in accordance with any conditions imposed by the Department as part of its approval.

Where it is proposed to re-open a snig track within both a protection zone and an exclusion zone referred to in any of the following conditions, condition 5.1D provides that the proposed re-opening may be carried out only with the written approval of the Department of Environment and Conservation and in accordance with any conditions imposed by the Department as part of its approval:

- condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
- condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
- condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
- condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”)

In addition, the written approval of the Department of Environment and Conservation may be required where the snig track is to be re-opened within an exclusion zone, even though it is not an exclusion zone referred to above. If the Department has given SFNSW written notice that, in view of the extent of revegetation of the snig track within the exclusion zone, the track is no longer readily distinguishable from the surrounding forest, then the written approval of the Department is required before any work to re-open the snig track is commenced.)

- e) Where a snig track within a protection zone has become re-vegetated, but none of the trees growing on the snig track within the zone have a diameter at breast height over bark of 20cm or more, the snig track may be brushed-up. However, both of the following requirements must be met:
- i. no part of the snig track that is proposed to be brushed-up within the protection zone is located within an exclusion zone referred to in any of the following conditions:
 - condition 5.9 (“Wetlands”)
 - condition 5.10 (“Heath and Scrub”)
 - condition 5.11 (“Rocky Outcrops and Cliffs”)
 - condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”)
 - condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”)
 - condition 6.3 (“Stuttering Frog *Mixophyes balbus*”)
 - condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”);
 - ii. SFNSW proposes to use the snig track after it is brushed-up in the course of a harvesting operation for the purpose of timber production (including a thinning operation that has timber production as one of its purposes).

Note: Where the requirements in relation to “brushing-up” a re-vegetated snig track within protection zone cannot be met, SFNSW may have the option of seeking instead to re-open the track. Re-opening requires SFNSW to prepare a report in accordance with Schedule 6A, whereas “brushing-up” does not require a report to be prepared before work is undertaken.

- f) A snig track may be re-opened or brushed-up any number of times, subject to this condition (being condition 5.7.3) and condition 5.1D (if applicable), and only in accordance with the provisions of those conditions. However, both of the following requirements must also be met:
- i. the snig track was in existence at the time of commencement of this approval or has been constructed in accordance with the approval; and
 - ii. any previous re-opening or brushing-up has been done in accordance with this approval.
- g) SFNSW must ensure that all practicable measures are taken to minimise any adverse impacts on the environment of any of the following activities within a protection zone:
- i. the construction of a road or snig track;

- ii. re-opening or brushing-up of a snig track;
- iii. any snigging carried out on a snig track.

In particular, hollow-bearing trees may not be felled or removed, or used as bumper trees for moving logs.

- h) Road re-opening and routine road maintenance may also take place in a protection zone.
- i) Harvesting machinery may travel along roads and snig tracks located within protection zones that were in existence at the time of commencement of this approval or that have been constructed in accordance with this approval (but only if any subsequent re-opening or brushing-up has also been done in accordance with this approval).

5.8 Location of Ridge and Headwater Habitat

<p>AMENDMENT 4 1 March 2013 Condition 5.8 replaced</p>
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- a) For every 500 hectares of areas within the South Coast 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 5.8 (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 5.8 (a) i. (eg. total length 500 metres), or a 500 metres minimum length established for the exclusion zone in condition 5.8 (a) ii.
- e) Exclusion zones implemented under condition 5.8 (a) above should connect the relevant second or third order stream via the associated lower order stream(s). Areas of identified High Conservation Value Old Growth Forest, Rare Non-commercial Forest Types and Rainforest may be used as the basis of exclusion zones.
- f) Ridge and Headwater Habitat exclusion zones must not, to the greatest extent practicable, cross existing roads.
- 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 landuse of areas linked by the proposed exclusion zones compared to those previously in place.

- h) Except as provided by conditions 5.1 and 5.8 , 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.

5.9 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.

5.10 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.

5.11 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.)

5.12 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).

5.13 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. Sooty Owl nest 50 metre radius
- vi. Sooty Owl roost..... 30 metre radius
- vii. Barking Owl nest..... 50 metre radius
- viii. Barking Owl roost 30 metre radius
- ix. Bush Stone-Curlew nest 100 metre radius
- x. Glossy Black-Cockatoo nest..... 50 metre radius
- xi. Turquoise Parrot nest..... 30 metre radius
- xii. Osprey nest 100 metre radius
- xiii. Square-tailed Kite nest 100 metre radius
- xiv. Regent Honeyeater nest..... 20 metre radius
- xv. Varied Sittella nest 20 metres radius
- xvi. Little Lorikeet nest 30 metre radius
- xvii. Little Eagle nest 100 metre radius
- xviii. Flame Robin nest..... 50 metres radius
- xix. Scarlet Robin nest..... 50 metres radius
- xx. Gang-gang Cockatoo nest 20 metres radius
- xxi. Speckled Warbler nest..... 5 metres radius
- xxii. Black-chinned Honeyeater 20 metres radius
(eastern sub-species) nest
- xxiii. Hooded Robin nest 50 metres radius
- xxiv. Brown Treecreeper nest..... 20 metres radius

b) Where nests and roosts of Powerful Owl, Masked Owl, Sooty 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, Sooty Owl, Barking Owl and Osprey.

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, Glossy Black-Cockatoo, Bush Stone-Curlew, 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.

e) Trees which 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 Glossy Black-Cockatoo nests or 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 5.13 a)
xiv.-xxiv. added

AMENDMENT
4
1 March 2013
Condition 5.13 d)
replaced

AMENDMENT
4
1 March 2013
Condition 5.13 e)
modified

AMENDMENT
4
1 March 2013
Condition 5.13 f)
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 5.13 f), prior to consideration by the relevant Ministers.)

5.14 Bat Roost Protection

5.14.1 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 5.14.2
to 4 replaced

5.14.2 Subterranean Roost Protection

Exclusion zones for bats

- b) 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.
- c) 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.
- d) 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.
- e) 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

- f) 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 5.14.2 (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 5.14.2 (b) i. or (c) ii. (as the case may be).
- g) 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 5.14.2 (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

h) 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.

5.14.3 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.

5.15 Grazing

- a) The areal extent of grazing authorities issued by SFNSW must not be extended except where they fulfill 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.

5.16 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 which promotes and maintains an understorey mosaic which includes significant areas of dense understorey vegetation.
- c) Hazard reduction work must be conducted in a manner which 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.)

5.17 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: Bush Stone-Curlew, Varied Sittella, Flame Robin, Scarlet Robin, Speckled Warbler, Grey-crowned Babbler, Diamond Firetail, Hooded Robin, Brown Treecreeper, Rosenberg's Monitor, Broad-headed Snake, Brush-tailed Phascogale, Spotted-tailed Quoll, and Eastern Pygmy Possum.
- c) In compartments with records of CWR species (other than those listed in part b) above), commercial and domestic firewood licences should 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).

AMENDMENT 4
1 March 2013
Condition 5.17
modified

- e) Domestic firewood collection permits issued by SFNSW must state that where firewood collection is undertaken in areas that have not been recently logged (within the last five years) the following conditions apply:
- i. Firewood may only be collected from within 20 metres of either side of a permanent road or within a 20 metre radius of a log dump. A permanent road is defined as a road shown on a harvesting plan operational map that remains open to public vehicular traffic after the completion of a harvesting operation.
 - ii. Firewood must not be collected from any of the following areas: High Conservation Value Old Growth Forest, Rainforest or exclusion zones established around Warm Temperate or Cool Temperate Rainforest, Rare Non-Commercial Forest Ecosystems, protection zones (hard and soft)..
 - iii. Only timber that has fallen or has already been felled may be collected. Timber greater than 40 centimetres diameter must not be collected or damaged. Logs with hollows, irrespective of the diameter of the log, must not be collected or damaged. Standing dead trees or stags must not be felled.

AMENDMENT 1
17 May 2004
Condition 5.17 e)
(ii) replaced
Ref Appendix E

5.18 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.

5.19 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, 5.3 High Conservation Value Old Growth Forest, 5.4 Rainforest, 5.7 Protection Zones, 5.8 Ridge and Headwater Habitat, 5.9 Wetlands, 5.10 Heath and Scrub, 5.11 Rocky Outcrops and Cliffs, 5.12 Threatened Frog General Protection Measures, 5.13 Bird Nest and Roost Site Protection and 5.14 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 Rainforest, 5.7 Protection Zones, 5.8 Ridge and Headwater Habitat, 5.9 Wetlands, 5.10 Heath and Scrub, 5.11 Rocky Outcrops and Cliffs, 5.13 Bird Nest and Roost Site Protection, 5.14 Bat Roost Protection, 6.2 Giant Burrowing Frog, 6.3 Stuttering Frog, 6.4 Masked Owl, Barking Owl and Powerful Owl, 6.6 Southern Brown Bandicoot, 6.8 Smoky Mouse, 6.9 Brush-tailed Phascogale, 6.11 Koala and 6.12 Squirrel Glider, of this licence.
- d) Miscellaneous forestry operations are prohibited in areas of High Conservation Value Old Growth Forest referred to in Condition 5.3, Rainforest referred to in Condition 5.4, Rare Forest Ecosystems referred to in Condition 5.5, Wetlands referred to in Condition 5.9, Heath and Scrub referred to in Condition 5.10, Rocky Outcrops and Cliffs referred to in Condition 5.11 and Flying Fox Camps referred to in Condition 5.14.4.
- 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.

AMENDMENT 1
17 May 2004
Condition 5.19 b)-c)
modified
Ref Appendix E

5.20 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 5.20 b) – i), trees (that are plants within the meaning of this condition) in the South Coast 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 South Coast 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 South Coast Subregion (other than within environmentally sensitive land) is authorised by paragraph i of condition 5.20 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 5.20 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 5.20 (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 (5.20 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 5.20 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 5.20 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 5.20 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 5.20 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 5.20 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 (5.20) 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 (5.20) prevents a beehive being set down on any site in the South Coast Subregion in circumstances where it is not necessary to destroy, cut or lop plants to enable this to occur.

Definitions

- i) In this condition (5.20):

“environmentally sensitive land” means any area of land in the South Coast 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 (“Rainforest”),
 - condition 5.7 relating to the protection of riparian habitat, whether as made when this approval came into effect on 13 May 2002 or as substituted by Amendment No.1 to this approval,
 - condition 5.8 (“Ridge and Headwater Habitat”),
 - condition 5.9 (“Wetlands”),
 - condition 5.10 (“Heath and Scrub”),
 - condition 5.11 (“Rocky Outcrops and Cliffs”),

<p>AMENDMENT 1 17 May 2004 Condition 5.20 i) modified Ref Appendix E</p>
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- condition 5.12 (“Threatened Frog General Protection Measures”),
- condition 5.13 (“Bird Nest and Roost Site Protection”),
- condition 5.14.1 (“Tree Roost Protection”),
- condition 5.14.2 (“Subterranean Roost Protection”),
- condition 5.14.3 (“Protection of Flying-fox camps”),
- condition 6.1 (“Green and Golden Bell Frog *Litoria aurea*”),
- condition 6.2 (“Giant Burrowing Frog *Heleioporus australiacus*”),
- condition 6.3 (“Stuttering Frog *Mixophyes balbus*”),
- condition 6.4.1 (“Large Forest Owls: Site Based Approach”),
- condition 6.4.2 (“Large Forest Owls: Landscape Approach”),
- condition 6.6 (“Southern Brown Bandicoot *Isoodon obesulus*”),
- condition 6.7 (“Long-nosed Potoroo *Potorous tridactylus*”),
- condition 6.8 (“Smoky Mouse *Pseudomys fumeus*”),
- condition 6.9 (“Brush-tailed Phascogale *Phascogale tapoatafa*”),
- condition 6.10 (“Spotted-tailed Quoll *Dasyurus maculatus*”),
- condition 6.11 (“Koala *Phascolarctos cinereus*”),
- condition 6.12 (“Squirrel Glider *Petaurus norfolcensis*”),
- condition 6.13 (“Yellow-bellied Glider *Petaurus australis*”),
- condition 6.14 (“Golden-Tipped Bat *Kerivoula papuensis*”),
- condition 6.16.2 (“Exclusion of specified forestry activities from 100% of individuals with a 10 metre exclusion zone and a further 10 metre buffer”); and

“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 Green and Golden Bell Frog *Litoria aurea*

- a) Where there is a record of *Litoria aurea* in a compartment or within 50 metres outside the boundary of the compartment, an exclusion zone of at least 50 metres radius must be implemented around the record.
- b) In addition, where the record is associated with a wetland or dam, a 50 metre 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 of where the vegetation type 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.

6.2 Giant Burrowing Frog *Heleioporus australiacus*

- a) A 500 metre radius (78 hectare) exclusion zone must be established around each record of Giant Burrowing Frog.
- b) Where the application of condition 6.2 a) prevents the establishment of log dumps or roads essential for the conduct of operations in other sections of the compartment/s, the shape and location of the exclusion zone may be modified with written approval from the NPWS.

(Note: the principles to be applied where approval to vary the shape of the exclusion zone is sought are that the exclusion zone should: (i) be centred on the record; (ii) minimise boundary to area ratio; and (iii) have boundaries based on topographic features or be recognisable in the field.)

- c) Harvesting operations must not occur within a two kilometre radius of a Giant Burrowing Frog record when there is water runoff from road surfaces within the area currently being harvested.
- d) When the species is known to be extant at 20 locations on NPWS or SFNSW estate within the South Coast Sub-region, each separated by at least two kilometres, the following must apply:
 - i. SFNSW must notify the NPWS in writing of the 20 locations and of the intention to apply condition 6.2 e) ii.;
 - ii. condition 6.2 a) may be reduced to a 300 metre radius (28 hectare) exclusion zone.

(Note: condition 6.2 d) ii. also applies to exclusion zones previously established under 6.2 a))

- e) For the purposes of determining separate locations under condition 6.2 e), where there are two or more records of Giant Burrowing Frog within one kilometre of each other, the geographic centre of the group of records may be used as the point from which the distance to other locations is measured.

(Note: the conditions applying to Giant Burrowing Frog may be jointly reviewed by SFNSW and the NPWS as new information about the status and ecology of the species in the South Coast Sub-region arises. The recommendation arising from such a review will be provided to the relevant Ministers for consideration.)

6.3 Stuttering Frog *Mixophyes balbus*

- a) An exclusion zone that complies with the following design criteria must be implemented around each record of *Mixophyes balbus*:
 - i. A one kilometre radius planning area must be designated around each record;
 - ii. Within the planning area a 300 metre wide exclusion zone must be implemented on each side of the stream channel in which the species was recorded;
 - iii. Within the planning area, exclusion zones of a minimum 30 metre wide must be implemented on each side of all other stream channels (as marked on 1:25,000 topographic maps) that are connected to the stream channel in which the species was recorded.

(Note: in some instances adjacent exclusion zones may overlap. Two examples of the application of these design criteria are provided in Schedule 8.)

- b) When the species is known to be extant at 10 locations on NPWS or SFNSW estate within the South Coast Sub-region, each separated by at least two kilometres, the following must apply:
 - i. SFNSW must notify the NPWS in writing of the 10 locations and of the intention to apply condition 6.3 d) ii.;
 - ii. an exclusion zones of at least 30 metres wide must be implemented on both sides of all streams within 200 metres of a record of *Mixophyes balbus*.

(Note: condition 6.3 d) ii. also applies to exclusion zones previously established under 6.3 a))

(Note: where there is uncertainty as to what constitutes separate locations for the purpose of condition 6.3 d), SFNSW and the NPWS will jointly resolve the issue.)

- c) The width of all 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.

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1 March 2013
Condition 6.3A
added

6.3A 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.

6.4 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 of the commencement date 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 6.4 d)
replaced

6.4.1 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 (or 1200 hectare) 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) Where the two kilometre radius planning area encompasses private land the boundary of the planning area may be modified to include the nearest 1200 hectares of public land.
- c) Within this planning area an exclusion zone, or exclusion zones, of a total of 300 hectares must be implemented.

- d) 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.
- e) 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 6.9.1 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 6.9.1 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 6.9.1 b) above, Category 4 habitat must be utilised. In the event that there is not sufficient area of Category 1, Category 2, Category 3 and Category 4 habitat to meet the requirements of condition 6.9.1 b) above, Category 5 habitat must be utilised.
- f) 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: High Conservation Value Old Growth Forest;
 - iv. Category 4: Marginal modelled habitat; and then
 - v. Category 5: any other areas of suitable habitat.
- g) Modelled habitat and High Conservation Value Old Growth Forest 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 6.9.1 c) and d) above.
- h) 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.)
- i) 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.
- j) 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.
- k) 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.

6.4.2 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 6.3.2 d), e) and f) below. Other exclusion zones within SFNSW estate outside of statutory reserves (e.g., high conservation value old growth forest, stream exclusion zones etc) can be used to meet the exclusion zone requirements, where consistent with the requirements of condition 6.3.2 d), e) and f) below.
- d) Of the areas to be retained in condition 6.3.2 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 6.3.2 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. Where practicable, planning and placement of exclusion zones should maximise the inclusion of other types of owl records within exclusion zones.

AMENDMENT
4
1 March 2013
Condition 6.5
replaced

6.5 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 6.5 (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.

6.6 Southern Brown Bandicoot *Isodon obesulus*

- a) An exclusion zone of at least 200 hectares must be implemented around each record of the species.
- b) Records within 500 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 200 hectare exclusion zone.
- c) Exclusion zones are to comply with the following design criteria:

- i. must be centred on the record;
- ii. should follow sub-catchment boundaries;
- iii. must only comprise NPWS and SFNSW tenure (including statutory reserves); and,
- iv. where condition 6.5 b) applies, the exclusion zone must encompass all records within 500 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 Southern Brown Bandicoot.
- e) When 15 Southern Brown Bandicoot exclusion zones are implemented within the South Coast Sub-region, 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 6.5 e), prior to consideration by the relevant Ministers.)

6.7 Long-nosed Potoroo *Potorous tridactylus*

Where there is a record of a Long-nosed Potoroo in a compartment:

- a) Specified forestry activities must be excluded from a 5 metre radius buffer around 12 retained trees per 2 hectares. These 12 trees can include trees retained under other conditions of this licence.
- b) Post-logging burning must be planned to avoid burning within the 5 metre radius buffers by scheduling burning at times of higher fuel moisture, and individually lighting heaps of logging debris, so that burning is mainly confined to those heaps.

6.8 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 6.8 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 South Coast Sub-region, 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 6.8 e), prior to consideration by the relevant Ministers.)

6.9 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) High Conservation Value Old Growth Forest occurring in statutory reserves within the 800 metres radius may be used to meet the exclusion zone requirements, where it is consistent with the requirements of condition 6.8 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 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.)

- h) 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.
- i) 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.
- j) 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.

(Note: the NPWS will advise SFNSW of the recommendation made by the NPWS to the relevant Ministers in relation to the review of Condition 6.5 h), prior to consideration by the relevant Ministers.)

6.10 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 5.7.
- 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 5.7.
- 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 6.10 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 6.10 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 6.10 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 Tiger 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 parts in 6.10 a) and b) above.

6.11 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, integrated harvesting (regeneration) 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 b) and c) must be connected to other retained areas within the compartment (e.g. High Conservation Value Old Growth Forest, 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 dbhob; *Eucalyptus cypellocarpa*, *E. maidenii*, *E. longifolia*, *E. bosistoana*, *E. globoidea*, *E. muelleriana* and *E. consideniiana*. 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 dbhob and be of the following species: *Eucalyptus cypellocarpa*,

E. maidenii, *E. longifolia*, *E. bosistoana*, *E. globoidea*, *E. muelleriana* and *E. consideriana*. 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 dbhob 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.

6.12 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, totaling 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) 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 6.9.1 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 6.9.1 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 6.9.1 b) above, Category 4 habitat must be utilised. In the event that there is not sufficient area of Category 1, Category 2, Category 3 and Category 4 habitat to meet the requirements of condition 6.9.1 b) above, Category 5 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: High Conservation Value Old Growth Forest;
 - iv. Category 4: Marginal modelled habitat; and then
 - v. Category 5: any other areas of suitable habitat.
- f) Modelled habitat and High Conservation Value Old Growth Forest 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 6.9.1 c) and d) above.
- g) 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.)

- h) 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.
- i) 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.
- j) 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 6.12 h), prior to consideration by the relevant Ministers.)

6.13 Yellow-bellied Glider *Petaurus australis*

- a) A 50 metre radius exclusion zone must be implemented around Yellow-bellied Glider dens.
- b) All Yellow-bellied Glider sap feed trees must be retained. All Yellow-bellied Glider sap feed trees must be marked for retention.
- c) 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.
- d) The feed trees retained in condition 6.13 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 (*Corymbia maculata*, *C. gummifera*, *Eucalyptus botryoides*, *E. bosistoana*, *E. saligna*, *E. cypellocarpa*, *E. viminalis*, *E. fastigata*, *E. ovata*, *E. angophoroides*).

6.14 Golden-tipped Bat *Kerivoula papuensis*

Where there is a record of *Kerivoula papuensis* within a compartment or within 200 metres outside of the boundary of the compartment, the following must apply:

- a) Exclusion zones of at least 30 metres wide must be implemented on both sides of all first order streams and second order streams within a 200 metre radius of the record. Other standard Stream Exclusion Zones apply within this area.
- b) The width of exclusion zones referred to in a) above 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.

<p>AMENDMENT 4 1 March 2013 Condition 6.15 omitted</p>
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6.15 Condition omitted (Amendment 4)

6.16 Threatened, Poorly Reserved ROTAP and Regionally Rare Flora

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

Individuals of the threatened species or protected native plants that are 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 6.16.1,
Table 1 – species
modified

Table 1 Flora species protected by condition 6.16.1

Family	Species
Euphorbiaceae	<i>Chamaesyce psammogeton</i>
Rutaceae	<i>Correa baeuerlenii</i>
Myrtaceae	<i>Eucalyptus aggregata</i>
Myrtaceae	<i>Eucalyptus kartzoffiana</i>
Myrtaceae	<i>Eucalyptus macarthuri</i>
Myrtaceae	<i>Eucalyptus robertsonii</i> ssp <i>hemisphaerica</i>
Rubiaceae	<i>Galium australe</i>
Brassicaceae	<i>Irenepharsus magicus</i>
Brassicaceae	<i>Irenepharsus trypherus</i>
Myrsinaceae	<i>Lysimachia vulgaris</i> var. <i>davurica</i>
Euphorbiaceae	<i>Monotaxis macrophylla</i>
Proteaceae	<i>Persoonia glaucescens</i>
Rhamnaceae	<i>Pomaderris bodalla</i>
Rhamnaceae	<i>Pomaderris walshii</i>
Lamiaceae	<i>Prostanthera densa</i>
Fabaceae	<i>Pultenaea humilis</i>
Solanaceae	<i>Solanum celatum</i>

6.16.2 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 10 metres radius exclusion zone must be implemented around all individuals.
- An additional 10 metre width buffer zone must be implemented around all exclusion zones established under Condition 6.16.2 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.

AMENDMENT
4
1 March 2013
Condition 6.16.2,
Table 2 – species
modified

Table 2 Flora species protected by condition 6.16.2

Family	Species
Fabaceae	<i>Bossiaea bombayensis</i>
Orchidaceae	<i>Caladenia tessellata</i>
Cupressaceae	<i>Callitris oblonga ssp. corangensis</i>
Orchidaceae	<i>Calochilus pulchellus</i>
Asteraceae	<i>Calotis glandulosa</i>
Cyperaceae	<i>Carex klaphakei</i>
Orchidaceae	<i>Cryptostylis hunteriana</i>
Asclepiadaceae	<i>Cynanchum elegans</i>
Goodeniaceae	<i>Dampiera fusca</i>
Monimiaceae	<i>Daphnandra sp C (sp 1 Illawarra)</i>
Fabaceae (Faboideae)	<i>Dillwynia glaucula</i>
Poaceae	<i>Distichlis distichophylla</i>
Orchidaceae	<i>Diuris aequalis</i>
Orchidaceae	<i>Diuris ochroma</i>
Orchidaceae	<i>Diuris pedunculata</i>
Myrtaceae	<i>Eucalyptus langleyi</i>
Myrtaceae	<i>Eucalyptus parvula</i>
Myrtaceae	<i>Eucalyptus pulverulenta</i>
Myrtaceae	<i>Eucalyptus recurva</i>
Myrtaceae	<i>Eucalyptus sturgissiana</i>
Orchidaceae	<i>Genoplesium plumosum</i>
Orchidaceae	<i>Genoplesium vernalis</i>
Proteaceae	<i>Grevillea molyneuxii</i>
Proteaceae	<i>Grevillea rivularis</i>
Proteaceae	<i>Grevillea wilkinsonii</i>
Haloragaceae	<i>Haloragis exalata ssp exalata var exalata</i>
Myrtaceae	<i>Leptospermum thompsonii</i>
Myrtaceae	<i>Melaleuca biconvexa</i>
Epacridaceae	<i>Monotoca rotundifolia</i>
Thymelaeaceae	<i>Pimelea axiflora subsp. pubescens</i>
Poaceae	<i>Plinthanthesis rodwayi</i>
Rhamnaceae	<i>Pomaderris cotoneaster</i>
Rhamnaceae	<i>Pomaderris gilmourii var cana</i>
Rhamnaceae	<i>Pomaderris pallida</i>
Rhamnaceae	<i>Pomaderris parrisiae</i>
Rhamnaceae	<i>Pomaderris sericea</i>
Orchidaceae	<i>Prasophyllum affine</i>
Orchidaceae	<i>Prasophyllum canaliculatum</i>
Orchidaceae	<i>Prasophyllum sp. Majors Creek (Jones 11084)</i>
Orchidaceae	<i>Pterostylis gibbosa</i>

Family	Species
Orchidaceae	<i>Pterostylis ventricosa</i>
Orchidaceae	<i>Pterostylis vernalis</i>
Restionaceae	<i>Restio longipes</i>
Sterculiaceae	<i>Rulingia prostrata</i>
Asteraceae	<i>Rutidosis leiolepis</i>
Asteraceae	<i>Rutidosis leptorrhynchoides</i>
Myrtaceae	<i>Syzygium paniculatum</i>
Santalaceae	<i>Thesium australe</i>
Myrtaceae	<i>Triplarina nowraensis</i>
Rutaceae	<i>Zieria adenophora</i>
Rutaceae	<i>Zieria baeuerlenii</i>
Rutaceae	<i>Zieria citriodora</i>
Rutaceae	<i>Zieria granulata</i>
Rutaceae	<i>Zieria murphyi</i>
Rutaceae	<i>Zieria tuberculata</i>
Gentianaceae	<i>Gentiana wingecarribiensis</i>
Fabaceae (Mimosoideae)	<i>Acacia bynoeana</i>
Fabaceae (Mimosoideae)	<i>Acacia clunies-rossiae</i>
Fabaceae (Mimosoideae)	<i>Acacia flocktoniae</i>
Fabaceae (Faboideae)	<i>Bossiaea oligosperma</i>
Proteaceae	<i>Hakea sp B (Kowmung River)</i>
Thymelaeaceae	<i>Pimelea spicata</i>
Orchidaceae	<i>Prasophyllum fuscum</i>
Fabaceae (Faboideae)	<i>Pultenaea parrisiae ssp parrisiae</i>
Lamiaceae	<i>Westringia kydrensis</i>
Fabaceae (Mimosoideae)	<i>Acacia lucasii</i>
Lamiaceae	<i>Prostanthera rugosa</i>
Orchidaceae	<i>Prasophyllum canaliculatum</i>
Orchidaceae	<i>Pterostylis hians</i>

6.16.3 Species Specific Management Plan.

- a) Where SFNSW can demonstrate to the satisfaction of the NPWS that the application of Conditions 6.16.1 or 6.16.2 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.

6.16.4 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 and 2 or their exclusion/buffer zones (as required by Conditions 6.16.1 and 6.16.2) 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 6.16.1 and 6.16.2 and Conditions 6.16.3 and 6.16.4 is as follows. Conditions 6.16.1 and 6.16.2 are to be implemented in the majority of circumstances. Where the application of Conditions 6.16.1 and 6.16.2 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 (*Corymbia maculata*, *C. gummifera*, *Eucalyptus botryoides*, *E. bosistoana*, *E. saligna*, *E. cyellocarpa*, *E. viminalis*, *E. fastigata*, *E. ovata*, *E. angophoroides*).
- iv. **Kerivoula papuensis:** Exclusion zones of at least 30 metres wide must be implemented on both sides of all first order streams and second order streams within the compartment. The

width of 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.

- 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 200 hectares of net logging area.

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-roading 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 the NPWS 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-roading 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-roading 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: *Heleioporus australiacus*, 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.

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 1:25,000 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:
 1. Nests and roosts for those species listed in Condition 5.13 of this licence;
 2. Dens of the following species: Yellow-bellied Glider, Squirrel Glider and Brush-tailed Phascogale;
 3. Flying-fox camps;
 4. Latrine and den sites of the Spotted-tailed Quoll;
 5. Distinctive scats (e.g. Spotted-tailed Quoll, Koala);
 6. Predator scats (these must be collected for analysis);
 7. *Allocasuarina* and *Casuarina* spp. with chewed cones beneath;
 8. Yellow-bellied Glider and Squirrel Glider sap feed trees;
 9. Microchiropteran bat tree roosts;
 10. Microchiropteran bat subterranean roosts (caves, tunnels and disused mineshafts);
 11. Swift Parrot and Regent Honeyeater feed or nest trees; and,
 12. Permanent soaks and seepages in potential habitat for *Heleioporus australiacus*;
 - 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 1:25,000 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.

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(b) i. 7. modified

- 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 1:25,000 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	Survey
Frogs		
Red-crowned Toadlet	<i>Pseudophryne australis</i>	Incidental, riparian frog
Heath Frog	<i>Litoria littlejohni</i>	Incidental, riparian frog
Booroolong Frog	<i>Litoria booroolongensis</i>	Riparian frog
Giant Burrowing Frog	<i>Heleioporus australiacus</i>	Incidental, riparian frog, non-riparian frog, targeted
Green and Golden Bell Frog	<i>Litoria aurea</i>	Targeted
Stuttering Frog	<i>Mixophyes balbus</i>	Riparian frog
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>Meliphreptus gularis gularis</i>	Other diurnal birds
Bush Stone-curlew	<i>Burhinus grallarius</i>	Call playback and targeted
Eastern Bristlebird	<i>Dasyornis brachypterus</i>	Targeted
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

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Condition 8.8.1,
Table 3 – title
modified

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Condition 8.8.1,
Table 3 – references
to 'hairnube' and
'scat and track'
omitted

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Condition 8.8.1,
Table 3 – species
modified

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Condition 8.8.1,
Table 3 –
explanation added

Fauna group / Common name	Scientific name	Survey
Non-flying mammals		
Broad-toothed Rat	<i>Mastacomys fuscus</i>	Remote Camera Survey
Brush-tailed Phascogale	<i>Phascogale tapoatafa</i>	Spotlight, Remote Camera Survey
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, Remote Camera Survey
Southern Brown Bandicoot	<i>Isodon obesulus</i>	Remote Camera Survey
Spotted-tailed Quoll	<i>Dasyurus maculatus</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
Eastern Cave Bat	<i>Vespedelus troughtoni</i>	Subterranean roost
Golden-tipped Bat	<i>Kerivoula papuensis</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 Golden-tipped Bat and Spotted-tailed Quoll, 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.

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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 1:25,000 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;
- n) For riparian and non-riparian frog surveys: mark on map and record time spent at each site surveyed; and
- o) For each day or night of survey, on arriving at the survey location the following is to be recorded:
 - 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.)

8.8.3.A Riparian frog survey

Riparian frog surveys must target the following species: *Heleioporus australiacus*, *Mixophyes balbus*, *Pseudophryne australis* and *Litoria booroolongensis*. Riparian frog surveys must be conducted as follows:

- a) Surveys must be conducted for a minimum duration of one person hour for areas up to 200 hectares of net survey area, plus an additional 15 minutes per 50 hectares above 200 hectares. If more than one stream is surveyed, a minimum of 10 minutes must be spent at each separate site.
- b) Three call playback sessions must be conducted per one hour search. After an initial two minute listening period, calls of target threatened frog species must be played for two minutes followed by a minimum five minutes listening period. When an observer is unsure of a species' identification, the call responses should be taped to allow verification by a suitably experienced frog expert.
- c) Surveys must be conducted twice, on different nights. Surveys must not commence earlier than 30 minutes prior to sunset and must conclude no later than sunrise.

- d) Surveys must not be conducted in cold, windy conditions. All attempts should be made to survey just after rain, during very light rain, or when rain is intermittent.
- e) For *Litoria booroolongensis*, surveys should be repeated during the day with particular attention taken to search rocks and debris by the creeks and vegetation overhanging the creeks (search should be conducted so as not to result in damage to habitat).
- f) Survey season: *Litoria booroolongensis*: November to February. *Mixophyes balbus*: September to March. *Heleioporus australiacus*: Spring to Autumn during or immediately after rain. *Pseudophryne australis*: Summer.

8.8.3.B Non-riparian frog survey

Non-riparian frog surveys must target the following species: *Heleioporus australiacus* and *Pseudophryne australis*. Non-riparian frog surveys must be conducted as follows:

- a) Where soaks, seepages or bogs occur, a minimum of 30 minutes, up to a maximum of two hours, must be spent surveying them within each 200 hectares of net survey area. The length of time spent surveying must be determined by the number and extent of soaks, seepages and bogs in the net survey area.
- b) For each additional 50 hectares of net survey area, an additional 10 minutes must be added on to the minimum, and an addition 30 minutes must be added on to the maximum time referred to in part a).
- c) A minimum of 10 minutes should be spent surveying each soak, seepage or bog.
- d) Call playback should be conducted at each soak, seepage or bog. Where call playback is conducted, it must consist of two minutes call playback followed by five minutes listening. When an observer is unsure of a species' identification, the call responses should be taped to allow verification by a suitably experienced frog expert.
- e) Surveys must not be conducted in cold, windy conditions. All attempts should be made to survey just after rain, during very light showers, or when showers are intermittent.
- f) Survey Season: *Heleioporus australiacus*: Spring to Autumn during or immediately after rain. *Pseudophryne australis*: Summer.

8.8.3.C Giant Burrowing Frog *Heleioporus australiacus* survey

A road-based night survey for *Heleioporus australiacus* must be conducted as follows:

- a) A minimum of two kilometres of road-based survey per 200ha of net logging area must be conducted.
- b) Surveyor must drive along roads in or adjacent to compartments at a speed of less than 15 kilometres per hour.
- c) Call playback must be conducted at 3 points along the road survey. Species call must be played for 3 minutes followed by a 10 minute listening period. When an observer is unsure of a species' identification, the call responses should be taped to allow verification by a suitably experienced frog expert.
- d) Surveys are best conducted on warm, still nights during rain.
- e) Survey season: Spring to Autumn (very wet and warm conditions needed).

8.8.3.D Green and Golden Bell Frog *Litoria aurea* survey

- a) Permanent wetlands or dams of greater than one hectare surface area must be surveyed for a minimum of 1 hour, both day and night. For large wetlands or dams, survey effort should be proportional to this effort. For smaller wetlands and dams a minimum of 30 minutes survey must be undertaken both day and night.
- b) Night searches must be conducted twice on two separate nights. Surveys must not commence earlier than 30 minutes prior to sunset and must conclude no later than sunrise.

- c) Call playback must be conducted at 50-100m intervals around wetland and/or dam perimeter with call played for two minutes followed by a five minute listening period. When an observer is unsure of a species' identification, the call responses should be taped to allow verification by a suitably experienced frog expert.
- d) Surveys must not be conducted in cold, windy conditions. All attempts should be made to survey immediately prior to significant rainfall, just after rain, during very light rain, or when rain is intermittent.
- e) Survey Season: September to February.

(Note: Any variation to this survey technique must be approved in writing by NPWS prior to surveys commencing.)

8.8.3.E 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.

8.8.4 Diurnal bird surveys

8.8.4.A Eastern Bristlebird survey

Surveys for the Eastern Bristlebird must be conducted as follows:

- a) A minimum 30 minutes duration must be spent searching for the species. These searches must be conducted in conjunction with call playback.
- b) Call playback must consist of calls being played for five minutes followed by a 10 minute listening period. (Note: Taped calls used in playback should be of local dialect.)
- c) Care should be taken to avoid playing calls too frequently or too loud during the breeding season.
- d) Each potential site should be surveyed a number of times as birds may not be detected in the first survey.
- e) Surveys should be conducted in the early morning and late afternoon.
- f) Survey Season: Spring, during the breeding season when males call to defend territory.

8.8.4.B Bush Stone-curlew

Survey for Bush Stone-curlew must be conducted as follows:

- a) Call playback must be conducted at 500 metre intervals within areas of potential habitat during the breeding season (July to January). Calls must be played for a minimum 5 minutes followed by a 10 minute listening period.
- b) Call playback must be conducted at dusk and concentrated within the net logging area.
- c) Playback survey must be combined with a slow walk to flush the birds.
- d) Nest searches must be conducted in conjunction with playback walk.
- e) Survey season: July to January.

8.8.4.C Other Diurnal Birds survey

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.

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c) modified and d)
iii. added

- 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:
 - 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.

When conducting spotlight surveys, particular emphasis must also be placed on identifying and recording *Heleioporus australiacus*.

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.

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modified

- 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.)

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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: Broad-toothed Rat, Brush-tailed Phascogale, Long-nosed Potoroo, Smoky Mouse and Southern Brown Bandicoot.
- 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)

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Condition 8.8.9
omitted

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).
 - 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 8.8.11 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 8.8.11 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.

AMENDMENT
4
1 March 2013
Condition
8.8.11.A omitted

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.

AMENDMENT
4
1 March 2013
Condition
8.8.11.B modified

8.8.11 Microchiropteran bat surveys

8.8.11.A CONDITION OMITTED (Amendment 4)

8.8.11.B Golden-tipped Bat *Kerivoula papuensis*

Surveys for *Kerivoula papuensis* must be conducted as follows:

- a) A minimum of two sites per 200 hectares of net logging area, plus an additional site per 100 hectares above 200 hectares, must be harp trapped. At each site, harp traps must be set for a minimum period of two consecutive nights.
- b) Harp traps must be set well before dusk.
- c) Harp traps must be set across creeks, pools and other appropriate flyways close to streams to increase the chance of trap success. Supplementary screening should be used where necessary.
- d) Survey Season: October to late March.

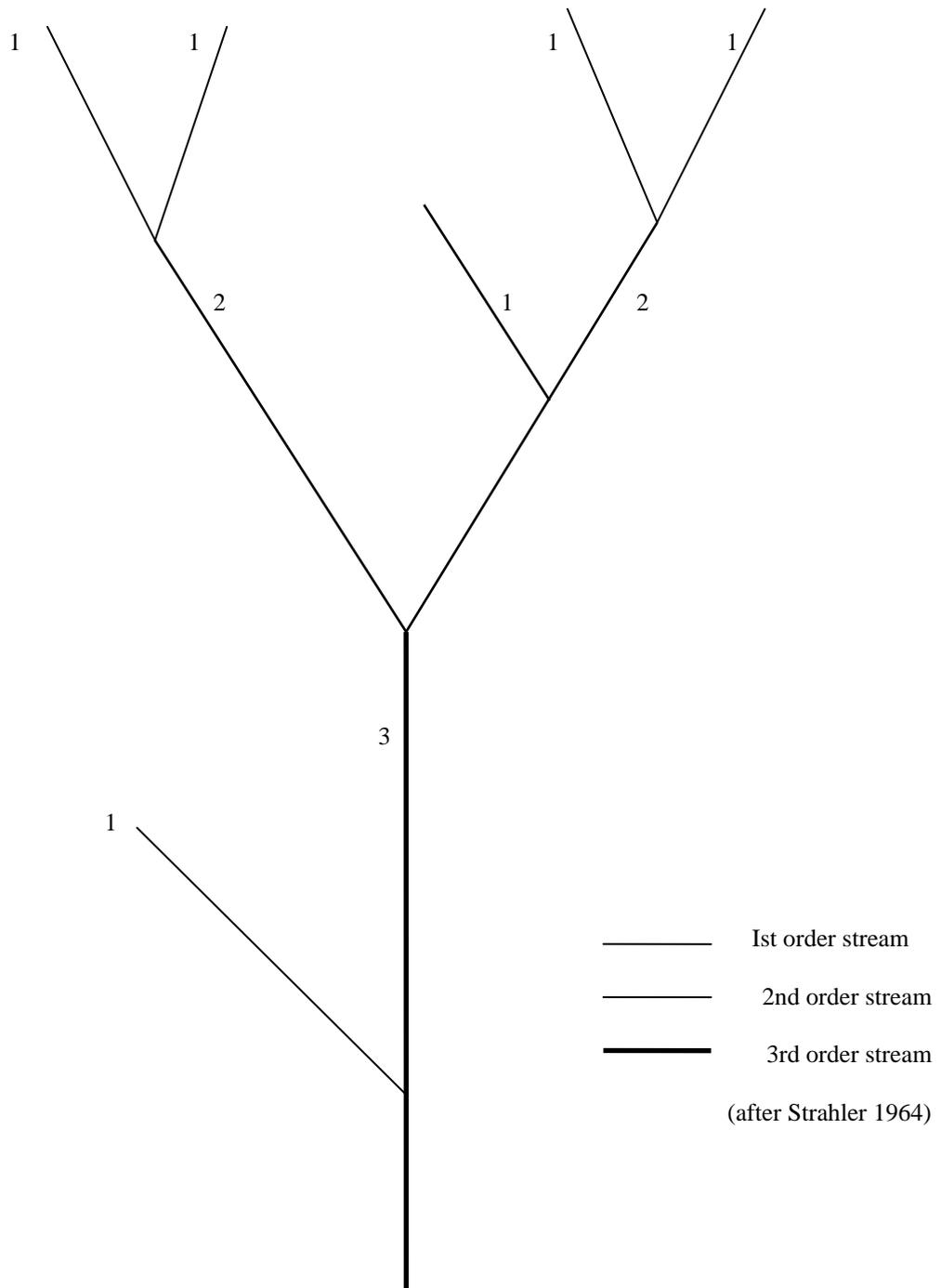
AMENDMENT
4
1 March 2013
Condition
8.8.11.B (d)
omitted and
following number
renumbered

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>Correa baeuerlenii</i>	2	A
<u>Distribution</u> : Coastal ranges from the Clyde River to near Tathra.		
<u>Likely habitat</u> : Wet sclerophyll forests & margins of rainforest.		
<u>Additional known habitat details</u> : Usually adjacent to creeks. Flowers spring & sporadically at other times.		
<i>Cynanchum elegans</i>	1	B
<u>Distribution</u> : Gloucester district, Newcastle, Illawarra area & inland to Mt Dangar. Scattered sites along the central coast & lower north coast areas extending inland to the Hunter Valley. e.g. Delicate Nobby, Fairfield, Camels Hump NR, Woko NP.		
<u>Likely habitat</u> : Dry & subtropical rainforest & sclerophyll forest		
<u>Additional known habitat details</u> : On clays or clay loams & in scrub or woodland on steep basalt scree slopes. Recorded in Spotted Gum forest 0-200m alt.		
<i>Cryptostylis hunteriana</i>	2	B
<u>Distribution</u> : South from the Gibraltar Range, chiefly in coastal districts e.g. Riamukka SF, Gibraltar Range NP		
<u>Likely habitat</u> : Swamp-heath.		
<u>Additional known habitat details</u> : On sandy soils in small, localised colonies most often on the flat plains close to the coast. Also known from some mountainous areas growing in moist depressions and swampy habitats. Recorded on granite & sandstone. Flowers Dec - Feb.		
<i>Eucalyptus kartzoffiana</i>	2	A
<u>Distribution</u> : Araluen to Bendethera. Deua NP.		
<u>Likely habitat</u> : Wet & dry sclerophyll forest, often in gullies & creek lines.		
<u>Additional known habitat details</u> : Associated with <i>Eucalyptus viminalis</i> , <i>E. radiata</i> , <i>E. maidenii</i> & <i>Casuarina cunninghamiana</i> .		
<i>Eucalyptus parvula</i>	2	B
<u>Distribution</u> : Big Badja to Nunnock Swamp FR. e.g. Kybean, Brown Mountain, Nunnock Swamp FR.		
<u>Likely habitat</u> : Tussock grassland, wet flats & swamp surrounded by dry sclerophyll woodland.		
<u>Additional known habitat details</u> : Associated with <i>Eucalyptus stellulata</i> , <i>E. viminalis</i> , <i>E. rubida</i> & <i>E. pauciflora</i> .		
<i>Genoplesium vernalis</i>	not listed	B
<u>Distribution</u> : Orchid known only from open forest north of Batemans Bay (East Lynne).		
<u>Likely habitat</u> : Open forest, shrubby understorey.		
<u>Additional known habitat details</u> :		

Leptospermum sejunctum not listed B

Distribution: Nowra area.

Likely habitat: Dry sclerophyll forest & woodland.

Additional known habitat details: Seepage areas. Sandstone substrate. Associated species include *Eucalyptus maculata*, *E. gummifera*, *E. punctata*, *E. imitans* & *Kunzea ambigua*.

Phyllota humifusa 2 B

Distribution: From Jellor (west of Mittagong) to Penrose (Bundanoon area). e.g. Penrose SF.

Likely habitat: Dry sclerophyll forest & woodland with heathy understorey.

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

Pomaderris brunnea 2 B

Distribution: From Tantawangalo SF to south of Walcha. e.g. Picton area, upper Cordeaux Dam, Wollemi NP, Menangle, Nepean River, Tantawangalo SF, Tuggalo SF.

Likely habitat: Woodland & open forest.

Additional known habitat details: On river bank, intermediate between Silvertop Stringybark & New England Blackbutt.

Pomaderris parrisiae 2 B

Distribution: From Cobargo to Eden.

Likely habitat: Wet sclerophyll forest.

Additional known habitat details: Sometimes on margins of rainforest.

Pterostylis gibbosa 2 B

Distribution: Currently only known from five locations - three in the Illawarra region (Yallah and Albion Park), one in the Shoalhaven region (Nowra) and one in the Hunter region. The Nowra population occurs in Worrigee Nature Reserve which adjoins Currumbene State Forest.

Likely habitat: Open forest and woodlands.

Additional known habitat details: The Illawarra and Nowra populations all occur on poorly drained soils derived from the Berry Formation of undifferentiated siltstone, shale and sandstone. Nowra population occurs in *Eucalyptus maculata* (Spotted Gum) open forest. All sites are flat or gently sloping.

Restio longipes 2 B

Distribution: From the Budawangs to the Blue Mountains. e.g. Blue Mountains NP, Kanangra Boyd NP, Stingray Swamp FR, Budawang NP.

Likely habitat: Swamps or depressions in heath or dry sclerophyll forest.

Additional known habitat details: Sandy alluvium.

Thesium australe

2

B

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

Likely 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.

Triplariana nowraensis

1

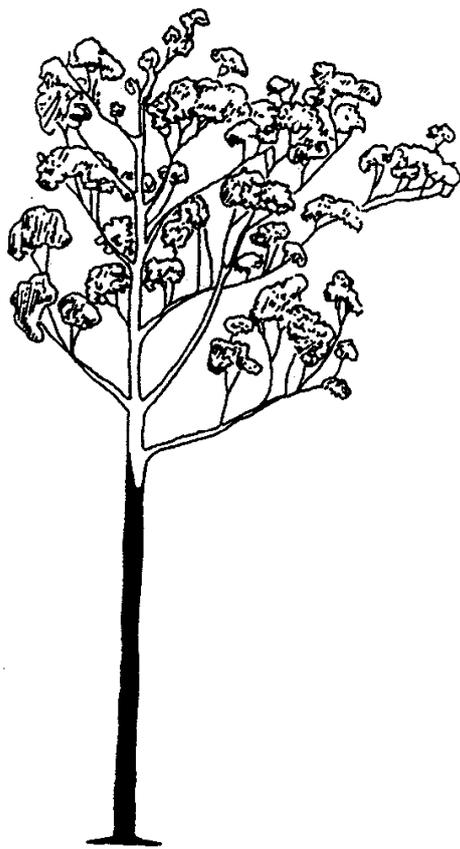
B

Distribution: Nowra to Tomerong.

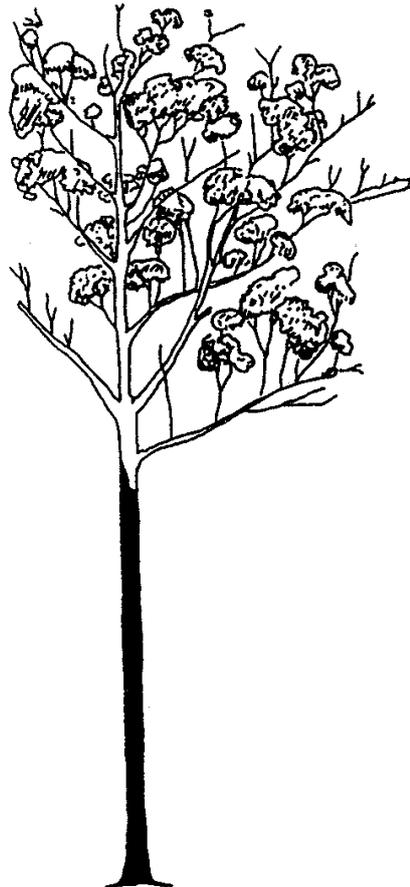
Likely habitat: Dry sclerophyll forest with a heathy understorey.

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
Giant Burrowing Frog	<i>Heleioporus australiacus</i>	2
<u>Distribution</u> : Coast and ranges from the central coast of NSW to eastern Victoria.		
<u>Macrohabitat</u> : Found in very variable sites, and can be found on the forest floor at quite a distance from water. Mostly restricted to Hawkesbury sandstone areas.		
<u>Microhabitat</u> : Typically around sandy creek banks. Lives in and calls from burrows of small creeks. Breeds adjacent to non-perennial stream beds in poorly drained areas.		
Green and Golden Bell Frog	<i>Litoria aurea</i>	1
<u>Distribution</u> : From Byron Bay along the east coast of NSW, to the Australian Capital Territory, and into east Gippsland, Victoria. Confined to narrow coastal strip (within 20-30km of coast).		
<u>Macrohabitat</u> : No association with any particular forest type. 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 on emergent vegetation or near edge of water and is also active at night.		
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. In the Eden Region there are records from Yambulla State Forest.		
<u>Macrohabitat</u> : Flowing rocky streams generally on the western slopes of the Divide.		
<u>Microhabitat</u> : Basks during daytime on rocks near the waters edge.		
Stuttering Frog	<i>Mixophyes balbus</i>	2
<u>Distribution</u> : Mid to high elevations from south of the Richmond River in far northern NSW, along the coastal catchments of NSW, and East Gippsland in Victoria.		
<u>Macrohabitat</u> : Rainforest and wet sclerophyll forest, with moist leaf litter, usually close to permanent running water. Disperses along forest floor during moist conditions and may be found some distance from permanent water, e.g. ridge tops.		
<u>Microhabitat</u> : Usually calls on, or under, the leaf litter along streambanks. <i>M. balbus</i> often call from rocks in rapidly flowing sections of streams.		
Heath Monitor	<i>Varanus rosenbergi</i>	2
<u>Distribution</u> : Two disjunct populations in the Sydney and Canberra 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 or rocks or in burrows. Terrestrial and diurnal.		

Bush Stone-curlew***Burhinus grallarius* 1**

Distribution: Widespread distribution in woodland habitats throughout Australia. Recent records from the coast and ranges of far northern NSW.

Macrohabitat: Dry, grassy open forest, woodland and forest edges. Usually found on flat terrain at low elevations.

Microhabitat: A nocturnal species, it usually lies hidden during the day. Forages in areas containing native grasses, with abundant leaf litter, fallen timber and logs are suitable habitat. The nest is a small scrape on bare ground, often near a bush or tree, or beside fallen limb.

Eastern Bristlebird***Dasyornis brachypterus* 2**

Distribution: Restricted to coastal south-east Australia, from the Conondale Range in south-east Queensland to eastern Victoria. There is a major geographic separation of 750 km between populations in Border and Nightcap ranges in far northern NSW and near Kiama and Jervis Bay in south-east NSW.

Macrohabitat: It occupies a variety of heath or tussock grass habitats, usually on the boundary of woodland or forest.

Microhabitat: Optimum habitat appears to be eucalypt forest with sorghum tussock grass understorey and high litter levels. Most territories are close to a rainforest refuge, with a number of fallen logs and a creek or gully. Calls mainly at dusk and dawn.

Glossy Black Cockatoo***Calyptorhynchus lathami* 2**

Distribution: Patchy distribution in a wide coastal band from Eungella, eastern Queensland, to Orbost, Victoria. In NSW it is found on the coast, tablelands and as far west as the Riverina and the Pilliga Scrub.

Macrohabitat: Occurs in a range of forest types with a canopy or understorey that includes *Allocasuarina* spp, which are its food source.

Microhabitat: The presence of *Allocasuarina* spp is an indicator of likely habitat (*A. littoralis* in SE NSW). Chewed cones beneath trees indicate the presence of the species in an area. Large, mature hollow-bearing trees are required for nesting.

Masked Owl***Tyto novaehollandiae* 2**

Distribution: Found south from Cooktown, Queensland to the Pilbara region in Western Australia. Found sporadically along the coast and tablelands of NSW.

Macrohabitat: 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.

Microhabitat: 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. leucoxyton* 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* et al.

Sooty Owl*Tyto tenebricosa* 2

Distribution: Coastal south-east Australia from the Conondale Range in south-east Queensland to eastern Victoria. Found throughout coastal NSW, generally east of the Great Dividing range.

Macrohabitat: Regarded as a specialist inhabitant of rainforest and tall open forest, however it is occasionally recorded foraging in adjacent dry sclerophyll forests. Roosts by day in dense gully vegetation such as rainforest, although the species will also roost in tree hollows, caves and rock overhangs. Requires large, hollow-bearing trees for nesting.

Microhabitat: Forages mostly in areas with a moist understorey, feeding predominantly on small arboreal mammals and terrestrial mammals. Nests in hollows of large eucalypts and rainforest trees, typically in the range of 125-160 cm dbhob.

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, sedgelands 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.

Brush-tailed Rock Wallaby*Petrogale penicillata* 2

Distribution: Restricted to south-east Australia from Nanango in southern Queensland, to the Grampians in western Victoria. It occurs as isolated and highly localised populations in the upper reaches of easterly flowing rivers between south-east Queensland and Gippsland in eastern Victoria, and as isolates in western Victoria and central NSW. In NSW, the species is concentrated around the Great Dividing Range.

Macrohabitat: Rocky areas with escarpments, ledges, caves, tumbled boulder fields and terraces, (Northerly aspects are favoured), in, or adjacent to wet and dry sclerophyll forest or woodlands, which in turn are in close proximity to grasslands, open, grassy forest or river flats. Also occasionally found in drier rainforest types.

Microhabitat: Shelters in rocky areas during the day and feeds in adjacent grasslands and riparian areas from dawn and dusk.

Long-nosed Potoroo*Potorous tridactylus* 2

Distribution: Disjunct distribution along coastal south-east Australia from near Gladstone in Queensland, to south-west Victoria and in Tasmania. Found from sea level up to 1500m in altitude. In NSW, it is found throughout coastal and subcoastal areas.

Macrohabitat: Potential habitat for this species is diverse: coastal forest and woodland with a moderately dense heathy understorey, dense coastal scrubs, wet and dry sclerophyll forest and sub-tropical, warm temperate and cool temperate rainforest of the eastern slopes and highlands. Often associated with gullies and forest ecotones.

Microhabitat: Open areas are used for foraging while areas of dense ground cover / understorey provide areas for shelter and protection from predators. Feeds on fungi, moving up and down slope as they become seasonally available in these areas.

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.

Southern Brown Bandicoot*Isoodon obesulus* 1

Distribution: Restricted to areas around Sydney and the far south-east coastal area.

Macrohabitat: Dry sclerophyll forests with heathy understorey, heathlands, woodlands and grasslands. Found in all aspects of the topographic sequence.

Microhabitat: Areas with dense, low ground cover.

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 decorticating 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.

Eastern Little Mastiff-bat

Mormopterus norfolkensis 2

Distribution: From far south-east Queensland, south to Pambula in eastern NSW. All records are east of the Dividing Range. The species is known from less than about 15 widely scattered localities within its range, and appears to be sparse and localised in NSW. Recorded from the lower north coast and ranges.

Macrohabitat: Habitat requirements are poorly defined, but records occur mainly from low elevation dry sclerophyll forest and woodlands, with some from rainforest.

Microhabitat: Known to roost in tree hollows.

Golden-tipped Bat

Kerivoula papuensis 2

Distribution: Disjunct distribution in eastern Australia from Cape York Peninsula south to southern NSW. Although widely distributed, the species appears to be localised and sparse.

In NSW the species is known from sites from coastal areas to the escarpment of the Dividing range, where it has been recorded at altitudes of up to 1000 m. Most records from NSW are from the north-east region, but it has been recorded as far south as the Bega area.

Macrohabitat: Rainforest, wet sclerophyll forest with rainforest understorey, wet and dry sclerophyll forests adjacent to rainforest. Has also been recorded in dry sclerophyll forest at distances from rainforest.

Microhabitat: Roost requirements are poorly known, but the species has been recorded roosting in dense clumps of vegetation, scrubwren and gerygone nests, and tree hollows. Has an unusual diet, which includes orb weaving spiders.

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.

Eastern Cave Bat *Vespadelus troughtoni* 2

Distribution: Throughout eastern Queensland and eastern NSW, inland to central NSW.

Macrohabitat: Precise habitat requirements unknown. Most records are from dry sclerophyll forests and woodlands often associated with sandstone escarpments.

Microhabitat: Roosts in caves, crevices in cliffs, rock outcrops.

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

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>
Glossy Black-Cockatoo	<i>Calyptorhynchus lathami</i>
Olive Whistler	<i>Pachycephala olivacea</i>
Osprey	<i>Pandion haliaetus</i>
Pink Robin	<i>Petroica rodinogaster</i>
Sooty Owl	<i>Tyto tenebricosa</i>
Square-tailed Kite	<i>Lophoictinia isura</i>
Turquoise Parrot	<i>Neophema pulchella</i>
Non-flying mammals	
Brush-tailed Rock Wallaby	<i>Petrogale penicillata</i>
White-footed Dunnart	<i>Sminthopsis leucopus</i>
Flying mammals	
Common Bentwing-bat ¹	<i>Miniopterus schreibersii</i>
Eastern Cave Bat	<i>Vespadelus troughtoni</i>
Eastern False Pipistrelle	<i>Falsistrellus tasmaniensis</i>
Eastern Freetail-bat	<i>Mormopterus norfolkensis</i>
Greater Broad-nosed Bat	<i>Scoteanax rueppellii</i>
Large-footed Myotis	<i>Myotis adversus</i>
Yellow-bellied Sheath-tail-bat	<i>Saccolaimus flaviventris</i>
Reptiles	
Broad-headed Snake	<i>Hoplocephalus bungaroides</i>

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

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

Fauna group / Common name	Scientific name
Frogs	
Giant Burrowing Frog	<i>Heleioporus australiacus</i>
Green and Golden Bell Frog	<i>Litoria aurea</i>
Littlejohn's Tree Frog	<i>Litoria littlejohni</i>
Stuttering Frog	<i>Mixophyes balbus</i>
Birds	
Barking Owl	<i>Ninox connivens</i>
Black-chinned Honeyeater (eastern sub-species)	<i>Melithreptus gularis gularis</i>
Masked Owl	<i>Tyto novaehollandiae</i>
Powerful Owl	<i>Ninox strenua</i>
Regent Honeyeater	<i>Xanthomyza phrygia</i>
Swift Parrot	<i>Lathamus discolor</i>
Non-flying mammals	
Brush-tailed Phascogale	<i>Phascogale tapoatafa</i>
Koala	<i>Phascolarctos cinereus</i>
Long-nosed Potoroo	<i>Potorous tridactylus</i>
Smoky Mouse	<i>Pseudomys fumeus</i>
Southern Brown Bandicoot	<i>Isodon obesulus</i>
Spotted-tailed Quoll	<i>Dasyurus maculatus</i>
Squirrel Glider	<i>Petaurus norfolcensis</i>
Yellow-bellied Glider	<i>Petaurus australis</i>
Flying mammals	
Golden-tipped Bat	<i>Kerivoula papuensis</i>

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

Fauna group / Common name	Scientific name
Frogs	
Booroolong Frog	<i>Litoria booroolongensis</i>
Heath Frog	<i>Litoria littlejohni</i>
Red-crowned Toadlet	<i>Pseudophryne australis</i>
Reptiles	
Rosenberg's Monitor	<i>Varanus rosenbergi</i>
Birds	
Eastern Bristlebird	<i>Dasyornis brachypterus</i>
Non-flying mammals	
Broad-toothed Rat	<i>Mastacomys fuscus</i>
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 High Conservation Value Old Growth Forest, Rainforest and Exclusion Zones around Warm Temperate or Cool Temperate Rainforest, Rare Non-Commercial Forest Ecosystems and Protection Zones

AMENDMENT 1
17 May 2004
Schedule 6
modified
Ref Appendix E

When applying to construct new roads or snig tracks through Rainforest, and/or the Rainforest Exclusion Zone, Rare Non-commercial Forest Ecosystems, High Conservation Value Old Growth Forest and Protection 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 Rainforest or High Conservation Value Old Growth Forest or Rare Forest Ecosystem or Protection Zone (according to RN17);
 - a brief description of the floristics and structure of the Rainforest, and/or the Rainforest Exclusion Zone, or High Conservation Value Old Growth Forest or Rare Forest Ecosystem or Protection Zone;
 - a description of the total area of the Rainforest, and/or the Rainforest Exclusion Zone, or High Conservation Value Old Growth Forest or Rare Forest Ecosystem or Protection Zone to be directly and indirectly affected;
 - the likelihood of the road to fragment the Rainforest and/or the Rainforest Exclusion Zone, or High Conservation Value Old Growth Forest or Rare Forest Ecosystem or Protection Zone patch; and
 - whether the rainforest is SEPP 26 littoral rainforest.
 - 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 6A. Matters to be addressed in assessment of proposals for re-opening of snig tracks through High Conservation Value Old Growth Forest, Rainforest and Exclusion Zones around Warm Temperate Rainforest or Cool Temperate Rainforest, Rare Non-Commercial Forest Ecosystems and Protection Zones

When proposing to re-open a snig track within High Conservation Value Old Growth Forest, Rainforest or a Rainforest Exclusion Zone, a Rare Non-Commercial Forest Ecosystem or a Protection Zone, SFNSW must prepare a report addressing the following matters:

- a) All options that were considered and their cost, and in particular the reasons why other routes (in a harvestable area) were not considered feasible and why it was decided to re-open the snig track;
- b) The specific reasons why the snig track must be re-opened;
- c) The mitigative and ameliorative measures to be applied; and
- d) Results of the field assessment which must be undertaken, including:
 - i. a description of the snig track to be re-opened, including its dimensions and those of any other area affected (such as run-offs etc), method of re-opening, including any cutting and filling that may be involved and construction or re-construction of any stream crossings;
 - ii. an assessment of the likely effect on, and description of, members of any threatened species of plant that will be, or are likely to be, directly or indirectly affected by the re-opening or that grow within 50 metres of the snig track to be re-opened;
 - iii. an assessment of the likely effect on, and description of, members of any threatened species of animal:
 - that will be, or are likely to be, directly or indirectly affected by the re-opening; or
 - records of which occur within 100 metres of the snig track.
 - iv. an assessment of the likelihood of the re-opened snig track creating a barrier to movement of members of a threatened species of animal and of the likelihood of any other increase in the threats to the threatened species, and a description of the barrier that is likely to be created (if any) and those other threats;
 - v. a description of any habitat features that will be, or are likely to be, directly or indirectly affected by the re-opening, including (but not limited to) wetlands or other water bodies and habitat of threatened species;
 - vi. a description of the area affected by the re-opening, and an assessment of the likely effect on that area of the re-opening, including, but not confined to:
 - the type of High Conservation Value Old Growth Forest, Rainforest or Rare Non-Commercial Forest Ecosystem (according to RN17);
 - a brief description of the floristics and structures of the High Conservation Value Old Growth Forest, Rainforest and/or Rainforest Exclusion Zone, Rare Non-Commercial Forest Ecosystem or Protection Zone;
 - a description of the total area of the High Conservation Value Old Growth Forest, Rainforest and/or Rainforest Exclusion Zone, Rare Non-Commercial Forest Ecosystem or Protection Zone to be directly or indirectly affected by the re-opening;
 - the likelihood of the re-opening of the snig track fragmenting (or the extent to which the re-opening of the snig track will fragment) the High Conservation Value Old Growth Forest, Rainforest and/or Rainforest Exclusion Zone, Rare Non-Commercial Forest Ecosystem or Protection Zone;

- in the case of an area of Rainforest or an area within a Rainforest Exclusion Zone, whether the Rainforest (including Rainforest surrounded by the Exclusion Zone) is SEPP 26 littoral rainforest; and
 - an assessment of the likelihood of the re-opening increasing the presence or abundance of weeds or feral animals.
- vii. an assessment of past disturbance in the relevant 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.

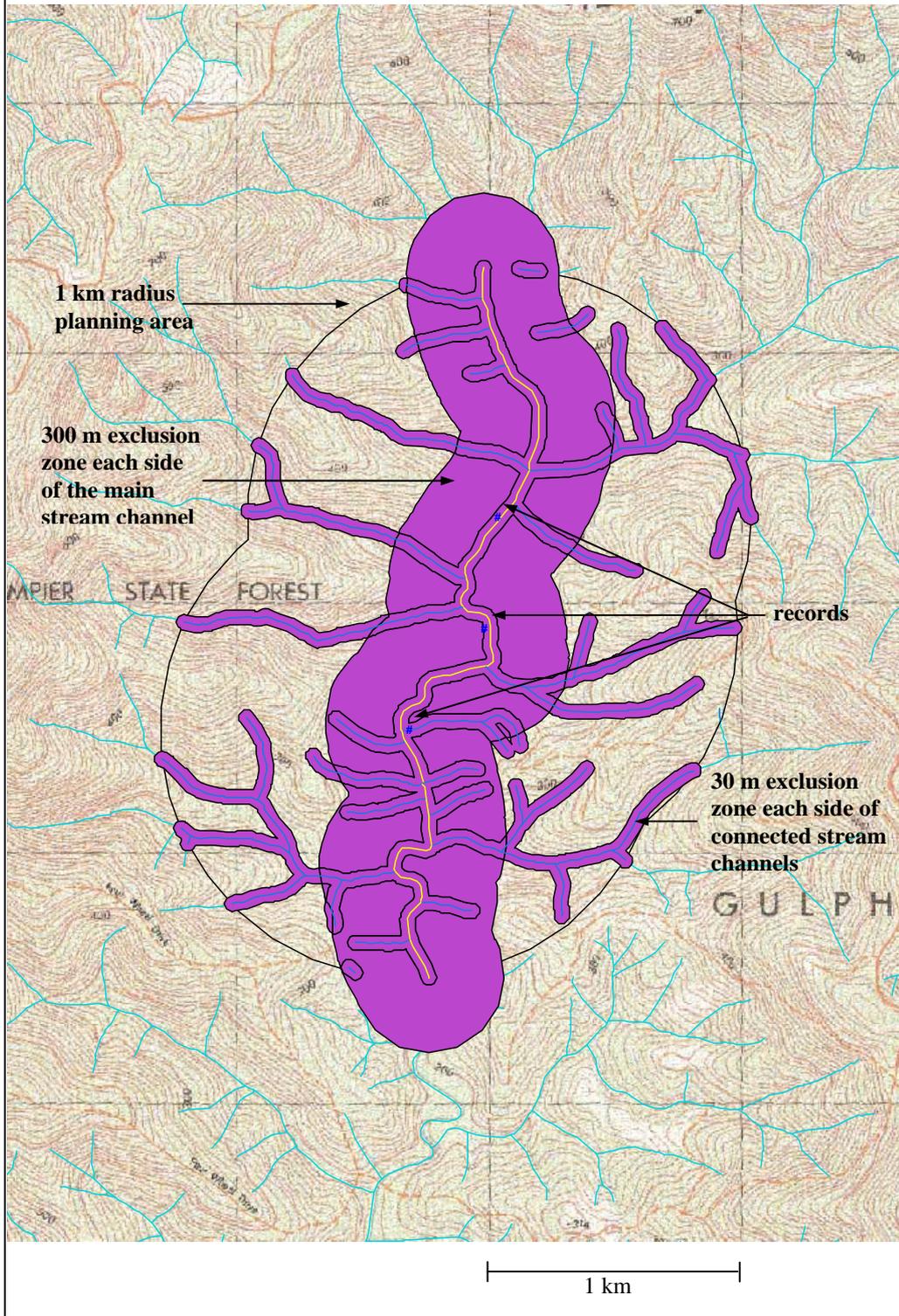
Action Sequence:

- 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.

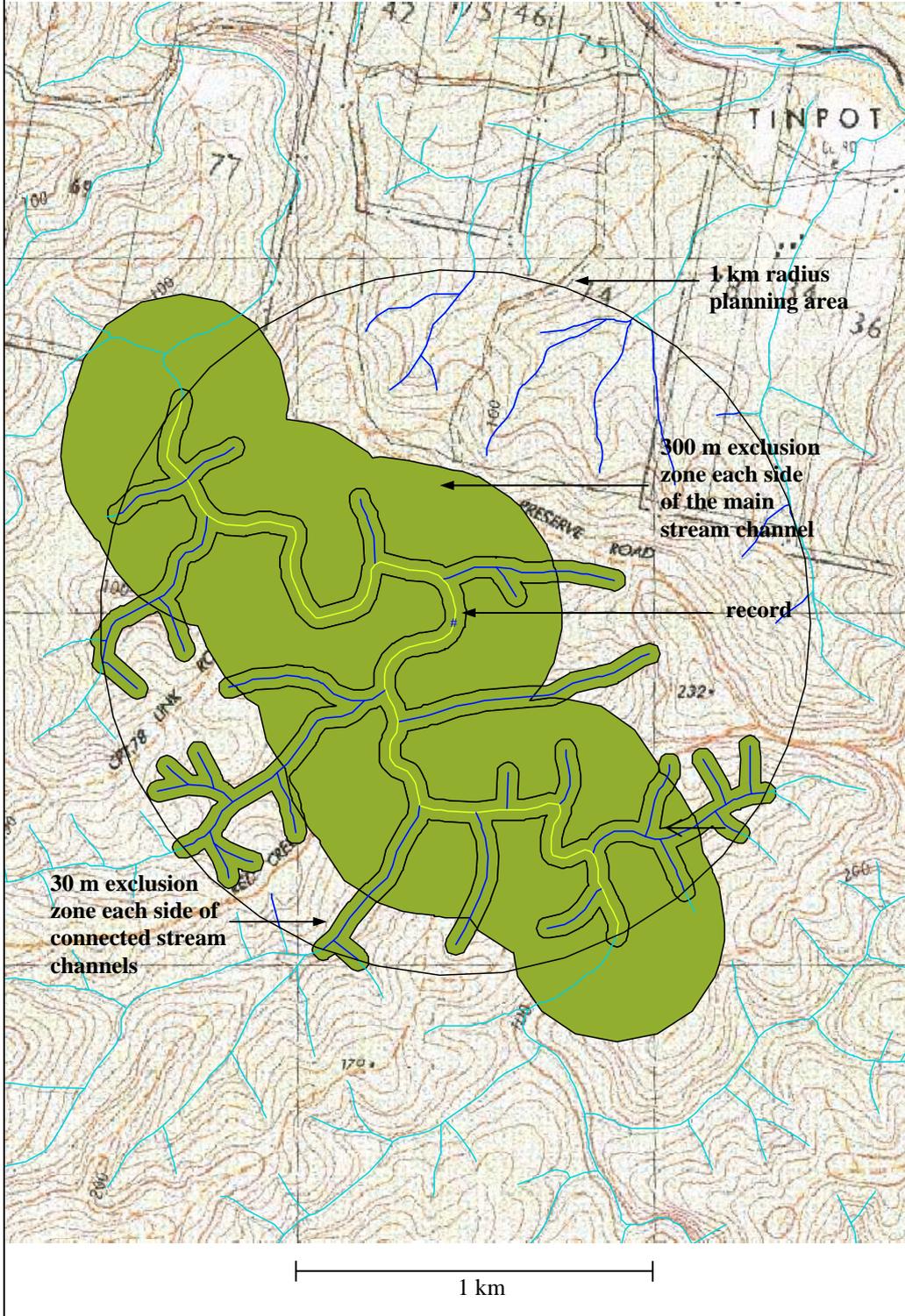
By following these decision rules for action, an effective monitor and control program can be put in place. If it is not effective, the reasons (including no action by other agencies and neighbours) for this are transparent.

Schedule 8. Examples of the application of Condition 6.3 Stuttering Frog

Example 1. Big Belimba Creek, Dampier State Forest



Example 2. Red Creek, Bodalla State Forest



Schedule 9. Transitional provisions

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

AMENDMENT 4
1 March 2013
Schedule 9
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 amendment 1 (May 2004) 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.

9.2 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.