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# The code applying to a native forest practice on freehold land

## 1.1. Introduction

This is the code applying to native forest practice on freehold land for the purposes of the *Vegetation Management Act 1999* and Schedule 8 Part 1 of the *Integrated Planning Act 1997*.

From 30 November 2005, to be exempt from requiring a development approval for vegetation clearing under the *Integrated Planning Act 1997*, the forest practice must be conducted in the way required by the this code.

Until 30 November 2005 October 2005, compliance with this code may be used to demonstrate compliance with the forest practice definition.

To remove any doubt, this code is not an applicable code for development assessment under the *Integrated Planning Act 1997*.

Under the legislation, a “**native forest practice**” means a forest practice other than in a plantation.

1. “**Forest practice**” means planting trees or managing, felling and removing standing trees, on freehold land, for an ongoing forestry business in a —

(a) plantation; or

(b) native forest, if, in the native forest -

(i) all the activities are conducted in a way that is consistent with a code applying to a native forest practice; or

(ii) if there is no code, all the activities are conducted in a way that –

(A) ensures restoration of a similar type, and to the extent, of the removed trees; and

(B) ensures trees are only felled for the purpose of being sawn into timber or processed into another value added product (other than woodchips for an export market); and

(C) does not cause land degradation as defined under the *Vegetation Management Act 1999*.

2. The term includes carrying out limited associated work, including, for example, drainage, road construction and maintenance, and other necessary engineering works.

3. The term does not include clearing native vegetation for the initial establishment of a plantation.

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## 1.2. Application of the code

This code applies to native forest practice activities conducted on freehold land subject to regulation by the *Vegetation Management Act 1999*.

The clearing of vegetation that is consistent with all aspects of this code may be undertaken without prior development approval for clearing of native vegetation under the *Integrated Planning Act 1997*. This does not give approval for clearing under any other legislation including the *Nature Conservation Act 1994*.

In addition to the felling of trees for the purpose of being sawn into timber or processed into another value added product (other than woodchips for an export market) a native forest practice includes limited silvicultural activities. For the purpose of this code, silvicultural activities are:

- Non-commercial thinning of regeneration.
- Commercial and non-commercial thinning of mid-storey and upper storey trees.
- Use of fire to manage regeneration.
- Limited soil disturbance to encourage regeneration.
- Removal of competing non-native vegetation.

**To be consistent with this code, the clearing of vegetation must only be for purposes directly associated with the production of value added forest products other than wood chips for export.**

## 1.3. Code intent

The intent of the code is to allow for the production of commercial timber from native forests while satisfying the purposes of the *Vegetation Management Act 1999* by ensuring that:

1. The loss of biodiversity is prevented and ecological processes are maintained.
2. The land and water quality values are maintained.
3. Clearing for a native forest practice does not cause land degradation.
4. The forest structure and species composition is maintained.
5. The forest stand is maintained as remnant vegetation within the definition of the *Vegetation Management Act 1999* or is capable of readily returning to remnant status within 20 years of commercial harvesting events.

## 1.4. Required outcomes

From 30 November 2005 to comply with this code, operations must achieve the required outcome of this code within Table 1, column 1. Outlined in column 2 are the required practices for how each required outcome is to be met. If, from 30 November 2005, the requirements in column 2 are not met, the practice is not consistent with this code.

**Table 1. Required outcome and required practices**

<p><b>Column 1</b> <b>Required outcome</b></p>	<p><b>Column 2</b> <b>Required practices</b></p>
<p><b>RO1</b> The biodiversity and ecological processes associated with natural wetlands, lakes and springs are maintained.</p>	<p><b>RP1</b></p> <ul style="list-style-type: none"> <li>a) All trees greater than 60cm DBH must be retained within a 30m wide zone around wetlands, lakes and springs.</li> <li>b) Buffer zones are established on all wetlands, lakes and springs as defined in the Definitions and Explanatory notes and table 2.</li> <li>c) A native forest practice does not occur within wetlands, lakes and springs and associated buffer zones.</li> <li>d) Trees are not fallen into wetlands, lakes and springs and associated buffer zones.</li> <li>e) Filter zones are established on all wetlands, lakes and springs as defined in the Definitions and Explanatory notes and table 2.</li> <li>f) The recovery of any log within a filter zone does not leave exposed mineral earth, or a scour or channel.</li> <li>g) Soil disturbance for regeneration purposes does not occur within buffer zones or filter zones.</li> </ul>
<p><b>RO2</b> The wildlife habitat values of the forest stand are maintained.</p>	<p><b>RP2</b></p> <ul style="list-style-type: none"> <li>a) A native forest practice: <ul style="list-style-type: none"> <li>• Retains at least the number of habitat trees and recruitment habitat trees as specified in the Definitions and Explanatory notes and table 3; and</li> <li>• Retains all feed, nest and shelter trees as defined in the Definitions and Explanatory notes.</li> </ul> </li> <li>b) Where insufficient habitat recruitment trees exist to meet the retention requirements of table 3, the native forest practice does not occur unless it retains additional dominant and codominant trees spaced across each hectare in at least the number of the insufficiency.</li> <li>c) Logging debris that, if burnt, is likely to cause death or damage to a standing tree is not left within 2m of any habitat, recruitment, feed or nest</li> </ul>

	<p>tree.</p> <p>d) No more than 20% of the area in which native forest practice is conducted is disturbed by snig tracks, tracks, roads, and log landings.</p> <p>e) (i) In Coastal Wet Sclerophyll (hardwood) and Coastal Moist Sclerophyll (hardwood) forests types as defined in the Definitions and Explanatory notes and table 8, soil disturbance in addition to the disturbance in RP2 d) only occurs for regeneration purposes and does not exceed an additional 30% of the area of those forest types within the area in which native forest practice is conducted.</p> <p>(ii) In forest types other than Coastal Wet Sclerophyll (hardwood) and Coastal Moist Sclerophyll (hardwood) as defined in the Definitions and Explanatory notes and table 8, no additional soil disturbance to that in PR2 d) is to occur.</p> <p>f) Within the area in which native forest practice is conducted, no species of native vegetation is entirely removed as a result of a harvesting or silvicultural operation.</p> <p>g) Felling of trees and destruction of native vegetation for commercial harvesting and silvicultural activities is not undertaken using a chain, ball and chain, or cable linked to or between tractors, bulldozers or other traction vehicles.</p>
<p><b>RO3</b> Streams, drainage lines and adjacent vegetation are protected by:</p> <ul style="list-style-type: none"> <li>• Maintaining bank stability through protecting against erosion and slumping; and</li> <li>• Maintaining water quality through providing for the filtering of sediment, nutrients and other pollutants; and</li> <li>• Maintaining aquatic habitat; and</li> <li>• Maintaining wildlife habitat.</li> </ul>	<p><b>RP3</b></p> <p>a) Crossings over streams by road, track or snig tracks must be at least 200m from any other crossing on the same stream.</p> <p>b) A crossing over a stream or drainage line does not cross through an unstable section of that stream or drainage line.</p> <p>c) Buffer zones are established adjacent to all streams according to the Definitions and Explanatory notes and table 5.</p> <p>d) Buffer zones are established adjacent to unstable sections of drainage lines according to the Definitions and Explanatory notes.</p> <p>e) A native forest practice, except for a crossing over a stream allowed under RP3 a) and b), does not</p>

	<p>occur within streams, unstable sections of drainage lines or associated buffers.</p> <p>f) Trees are not fallen into streams, unstable sections of drainage lines or associated buffers.</p> <p>g) Filter zones are established adjacent to all buffer zones associated with streams and unstable sections of drainage lines and adjacent to stable sections of drainage lines according to the Definitions and Explanatory notes and table 6.</p> <p>h) A tree within the filter zone is not felled if this may cause the formation of an unstable section in a stream or drainage line.</p> <p>i) The recovery of any log within a filter zone does not leave exposed mineral earth, a scour or channel.</p> <p>j) Soil disturbance for regeneration purposes does not occur within the filter zone.</p>
<p><b>RO4</b> The soil resource is protected against the loss of chemical and physical fertility through compaction, erosion or mass movement.</p>	<p><b>RP4</b></p> <p>a) A native forest practice does not leave exposed mineral earth, a scour or channel in areas vulnerable to mass movement or having majority slopes exceeding 25 degrees (approximately 45%).</p> <p>b) On snig tracks, log landings, roads and tracks constructed for a native forest practice, overland water flows are diverted onto undisturbed areas before the water is able to traverse the maximum distances given in the Definitions and Explanatory notes and table 7.</p> <p>c) Drainage discharge diverted overland is dispersed into a vegetated area or an area of undisturbed ground cover before entering a filter zone.</p> <p>d) Soil disturbance for regeneration purposes does not occur in areas having a majority slope exceeding 10 degrees.</p> <p>e) A native forest practice does not occur on any area while the soil is saturated.</p>
<p><b>RO 5</b> No adverse effects on the environment are caused by the release of acid and metal</p>	<p><b>RP5</b> A native forest practice does not occur in areas where any activity will disturb acid sulphate soils, unless disturbed areas are treated in accordance with the</p>

contaminants from the disturbance of acid sulfate soils.	<u>Queensland Acid Sulfate Soil Technical Manual - Soil Management Guidelines Version 3.8</u> , Dear SE, Moore NG, Dobos SK, Watling KM and Ahern CR, Natural Resources and Mines, Indooroopilly QLD Australia.
<b>RO 6</b> Any harvesting or silviculture operation is only for the forestry component of an on-going business.	<b>RP6</b> a) Silvicultural operations are only undertaken to encourage growth of trees and associated forest products for the purposes of a native forest practice.  b) Harvesting only occurs for the purpose of deriving value added products other than wood chips for export and documentary evidence of the sale of products is maintained.
<b>RO 7</b> The floristic composition and stand structure of the forest regional ecosystem for the locality is maintained over time.	<b>RP7</b> a) Management of the native forest practice ensures retention and regeneration of all species following harvesting and silviculture activities.  b) Regenerating vegetation is managed to ensure sufficient trees are available for subsequent harvesting operations including future recruitment habitat tree requirements.  c) The native forest practice does not include a clear fall harvesting operation.  d) Group selection harvesting operations occur only in Coastal Moist Sclerophyll (hardwood) forest or Coastal Wet Sclerophyll (hardwood) forest.  e) There is a demonstrated high probability that within twenty years the area in which the native forest practice is conducted will be capable of being mapped as remnant vegetation.

## 1.5. Definitions and Explanatory notes.

### Definitions

Areas vulnerable to mass movement:	<p>An area of actual or potential movement of material downslope in a mass as result of shear failure at the boundaries of the mass. This is an area identified in a planning scheme, or an area showing evidence of:</p> <ul style="list-style-type: none"> <li>• Surface creep (e.g. tilted trees).</li> <li>• Minor surface irregularity (e.g. areas of hummocks and depressions).</li> <li>• Major surface irregularity (e.g. benches of abnormal or irregular flat areas in uniform sloping areas; scars; areas stripped of vegetation during slope movement; cracks; linear features showing lateral displacement of the ground surface; and debris mounds, deposits of soil or rock at the base of slopes).</li> </ul>
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- Scarps (i.e. linear features showing the location of vertical displacement of the ground surface).
  - Evidence of rockfall.
  - Evidence of disturbed infrastructure (e.g. tilted powerlines and fences, broken pipes and fractured drains, cracked or tilted walls, cracked or slumped embankment slopes, cracking and fall of material from excavated slopes)

**Buffer zone:** A zone of specified width surrounding or adjacent to the feature to be protected. Table 2 specifies widths for wetlands lakes and springs. Table 5 specifies widths for streams.

For wetlands, lakes and springs –

The width of the buffer zone is measured from the defining bank or, if a defining bank is not present, the seasonal high waterline or from the high water mark if tidal.

For streams and unstable sections of drainage lines -

The width of the buffer zone is measured from the edge of the defining bank, or in the absence of a defining bank is measured from the seasonal high waterline.

For streams and unstable sections of drainage lines where neither of these characteristics are obvious, measure from the centre of the feature and add 2 metres to the total buffer width shown in table 5.

The establishment and width of buffer zones are determined as follows:

- (a) Where an unstable section occurs on a stream, the width of the buffer zone is extended outwards from the stream by a distance equal to three times the maximum height of the instability. Apply the extended buffer both upstream and downstream from the instability for a distance of three times the height of the instability. The extension of the width of the buffer zone applies to the side of the stream with the instability.
- (b) Where an unstable section occurs on a drainage line, a buffer zone is established with a width equal to three times the maximum height of the instability. Apply the buffer both upstream and downstream from the instability for a distance of three times the height of the instability. The buffer zone applies to the side of the drainage line with the instability.

**Clear:** Remove, cut down, ringbark, push over, poison or destroy in any way including by burning, flooding or draining; but does not include destroying standing vegetation by stock, or lopping a tree.

**Clear fall harvesting operation:** A system of harvesting resulting in the creation of gaps larger than 0.5 of a hectare in the forest.

**Codominant tree:** A tree with a crown within the canopy of the forest and a height equal or less than adjacent crowns in the canopy.

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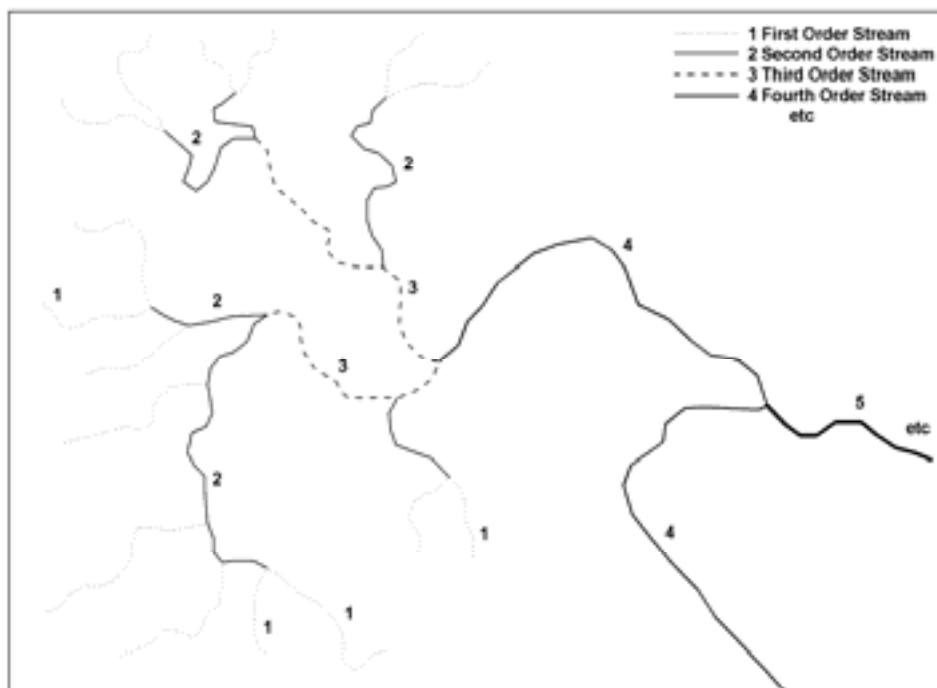
DBH:	Diameter of a tree at breast height where breast height is 1.3 metres from the ground.
Defining bank:	The bank within which seasonal flows are contained, but may be inundated by flooding from time to time.
Dominant tree	A tree with a crown within or above the canopy of the forest and a height in excess of adjacent crowns in the canopy.
Drainage line:	A naturally occurring feature that receives and conducts overland flow but does not feature as a stream on a 1:250000 topographic map series.
Feed tree:	A feed tree used by Yellow-bellied Glider/s. This is identified as a tree having five or more recent bark incisions typically made by the glider. Feed marks are regarded as “recent” when the cut edges of the feed marks either have no callusing or when the calluses have not healed completely across the cut.
Filter zone:	<p>A zone of specified width from buffers associated with wetlands, lakes, springs and streams and from stable sections of drainage lines.</p> <p>For stable sections of drainage lines the width of the filter zone is to be measured from the edge of the defining bank, or in the absence of a defining bank, from the seasonal high waterline. Where neither of these characteristics are obvious, measure from the centre of the drainage line.</p>
Forest type:	Forest types are defined in table 8.
Group selection harvesting:	A system of harvesting that relies on selecting small groups of trees for harvesting to create various sized gaps, smaller than 0.5 of a hectare, within the canopy of a forest in order to stimulate the regeneration of shade intolerant species and encourage the reproduction of a mix aged stand.
Habitat tree:	<p>A tree used or potentially used by hollow-dwelling fauna. Habitat trees Identified as a living tree with one or more visible hollows of 10cm or more in diameter that are positioned at least 2m above the base of the tree.</p> <p>Table 3 states the minimum number of habitat trees (and recruitment habitat trees) required to be retained per hectare by broad forest type.</p> <p>Where there is an insufficient number of habitat trees existing within any hectare of the forest to meet the requirements in row 3 of table 3, refer to row 4 of table 3 to determine the number of recruitment habitat trees required to be retained per hectare depending on the number of existing habitat trees able to be retained within the hectare.</p> <p>Where there is more than the required minimum number of habitat trees available then retention must favour habitat trees using the following criteria:</p> <ul style="list-style-type: none"> <li>• Trees with a diameter greater than 80 cm dbh</li> <li>• Spaced evenly across each hectare.</li> </ul>

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Lake:	A lagoon, billabong or other natural area of open water, whether permanent or intermittent.
Log landing:	An area, constructed or natural, where timber or other forest products are stockpiled and loaded onto a haul truck.
Majority slopes:	The average slope of a decline or an incline measured over a fifty metre length of the decline or incline.
Nest tree:	A tree containing an active bird's nest. An active nest is that of a native species completed and containing eggs, sitting birds or nestlings or under construction. Nests of birds of prey whether in use or not are included (birds of prey are known to reuse nests year after year).
Recruitment habitat tree:	<p>Dominant or codominant trees with signs of developing hollows. Signs are damage to branches, damage to stems, existing small hollows, dead stems/limbs, bumps or swellings on the tree bole, or termite nests. A recruitment habitat tree is a tree that may develop into a habitat tree.</p> <p>Table 3 states the minimum number of recruitment habitat trees required to be retained per hectare by forest type.</p> <p>Where there is an insufficient number of habitat trees existing within any hectare of the forest to meet the requirements in row 3 of table 3, refer to row 4 of table 3 to determine the number of recruitment habitat trees required to be retained depending on the number of existing habitat trees within the forest.</p> <p>Recruitment habitat trees should be selected using the following criterion:</p> <ul style="list-style-type: none"> <li>• Dominant or codominant trees and spaced evenly across each hectare.</li> </ul>
Road or track:	A road or track constructed, maintained or used for the purpose of a native forest practice.
Saturated:	When soils are fully saturated so that surface water pools and /or flows.
Shelter tree:	A tree in which any protected native fauna species is visible when undertaking a native forest practice activity. Protected native fauna is that according to the <i>Nature Conservation Act 1992</i> and includes common fauna species.
Snig track:	A track constructed for the purpose of snigging or forwarding logs or other forest products.
Spring:	Water naturally rising to and flowing over the surface of land.
Stream order:	The numerical ordering classification of each watercourse segment according to its position within a catchment and derived from the 1:250 000 topographic map series. Figure 1 provides a diagrammatic explanation of stream ordering.

Figure 1



**Diagrammatic view of stream ordering**

When two streams of the same order join, the resulting watercourse becomes one stream order larger. If two streams of different order join, the resultant stream order is that of the larger stream.

**Stream:** A gully, creek or a river that is represented on the 1:250000 topographic map series.

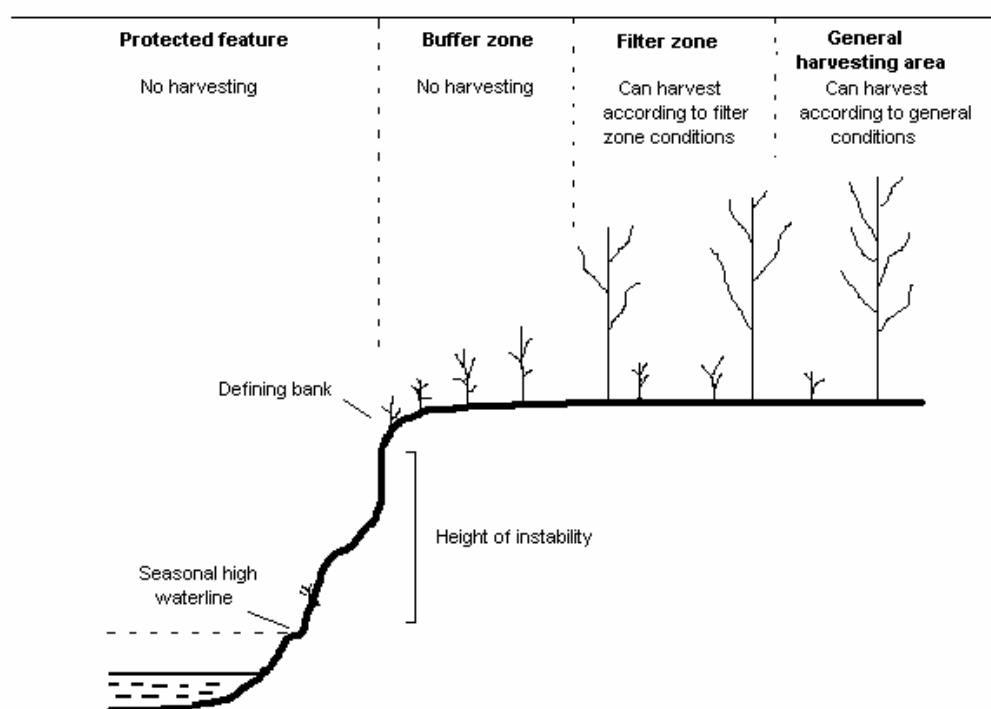
**Topographic map series:** The most recent version of a Sunmap or Commonwealth of Australia topographic map series.

**Unstable section** That section of a stream or a drainage line having a bank or edge, including slumps, overhangs and recently eroded faces, that is unstable and the instability has a vertical height of 50cm or greater.

**Wetlands:** Areas of permanent or periodic/intermittent inundation, with water that is static or flowing fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed 6 metres. To be a wetland the area must have one or more of the following attributes:

- i. at least periodically the land supports plants and animals that are adapted to and dependent on living in wet conditions for at least part of their life cycle.
- ii. the substratum is predominantly undrained soils that are saturated, flooded or ponded long enough to develop anaerobic conditions in the upper levels.
- iii. the substratum is not soil and is saturated with water, or covered by shallow water at some time.

## Explanatory Diagram - Buffer and filter zones on streams and drainage lines



**Table 2. Specified buffer zones and filter zones widths for wetlands, lakes and springs.**

<b>Size of Wetland, lake or spring</b> (the area within defining high bank or, if a defining bank is not present, the seasonal high waterline or the high water mark if tidal.)	<b>Minimum Buffer zone width (metres)</b>	<b>Minimum Filter zone width (metres)</b>
Equal to or greater than 1000m <sup>2</sup>	20	20 metres from the Buffer Zone.
Less than 1000 m <sup>2</sup>	10	10 metres from the Buffer Zone.

**Table 3. Minimum number of habitat and recruitment habitat trees required to be retained per hectare per forest type.**

Forest Type	All forests within the greater glider range <sup>1</sup> OR Coastal wet sclerophyll (hardwood) OR Coastal moist sclerophyll (hardwood) forests OR Rainforests		Coastal dry sclerophyll (hardwood) forests OR Inland dry sclerophyll (hardwood) forests		Cypress forests OR Western acacia forests	
	Number of Habitat trees	Number of Recruitment habitat trees	Number of Habitat trees	Number of Recruitment habitat trees	Number of Habitat trees	Number of Recruitment habitat trees
ROW 3 Minimum number of trees required to be retained where sufficient numbers exist	6	2	4	1	2	1
ROW 4 Minimum number of recruitment habitat trees required to be retained based upon number of existing habitat trees to be retained	5	4	3	3	1	3
	4	5	2	4	0	4
	3	7	1	6		
	2	8	0	7		
	1	10				
	0	11				

**Table 4 - Shires within the preliminary predicted range of the Greater Glider**

Atherton	Esk	Murilla
Banana	Fitzroy	Nanango
Bauhinia	Gatton	Nebo
Beaudesert	Gayndah	Noosa
Belyando	Gladstone	Palm Island
Biggenden	Gold Coast	Peak Downs
Boonah	Goondiwindi	Perry
Bowen	Hervey Bay City	Pine Rivers
Brisbane City	Hinchinbrook	Pittsworth
Broadsound	Inglewood	Redcliffe
Bundaberg	Ipswich	Redland
Burdekin	Isis	Rockhampton
Burnett	Johnstone	Rosalie
Caboolture	Jondaryan	Sarina
Cairns	Kilcoy	Stanthorpe
Calliope	Kilkivan	Tara
Caloundra	Kingaroy	Taroom
Cambooya	Kolan	Thuringowa
Cardwell	Laidley	Tiaro
Charters Towers	Livingstone	Toowoomba
Cherbourg	Logan	Townsville
Chincilla	Mackay	Waggamba

<sup>1</sup> Refer Table 4 - Shires within the preliminary predicted range of the Greater Glider

Clifton	Maroochy	Wambo
Cooloola	Maryborough	Warwick
Crows Nest	Millmerran	Whitsunday
Dalby	Mirani	Wondai
Dalrymple	Miriam Vale	Woocoo
Duaringa	Monto	Woorabinda
Eacham	Mount Morgan	Yarrabah
Eidsvold	Mundubbera	
Emerald	Murgon	

Derived from the diagram of the preliminary predicted range of the Greater Glider *Petauroides volans* in The Mammals of Australia 1995

**Table 5 - Buffers zones are established on all streams as follows:**

Watercourse classification	Minimum BUFFER ZONE WIDTH (metres) for streams and drainage lines, other than for unstable sections
	For unstable sections, establish or extend the buffer as required in the definitions.
Drainage line	0
Stream Order 1	2
Stream Order 2	2
Stream Order 3	5
Stream Order 4	5
Stream Order 5	5
Stream Order 6	10

**Table 6 – Filter Zone are established on all streams and drainage lines as follows**

Watercourse classification	Minimum FILTER ZONE WIDTH (metres) from buffer zone or drainage line.
Drainage line	5
Stream Order 1	10
Stream Order 2	15
Stream Order 3	20
Stream Order 4	25
Stream Order 5	40
Stream Order 6	50

**Table 7 - Maximum distances of overland flow**

Slope	Maximum distance (metres)
<3 degrees	145

3 to 5 degrees	100
6 to 7 degrees	65
8 to 10 degrees	40
11 to 14 degrees	25
>14 degrees	15

**Table 8 - Forest types**

**Coastal Moist Sclerophyll (hardwood) forest** The Coastal Moist forest type is comprised predominately of Grey Ironbark (*E. siderophloia*), White Mahogany (*E. acmenoides*), Grey Gum (*E. biturbinata*, *E. propinqua*) and Blackbutt (*E. pilularis*), with a shrubby acacia/rainforest understorey.

This forest type has the same latitudinal distribution as Coastal Wet Sclerophyll but extends further west and occurs on drier sites with shallower soil.

**Coastal Wet Sclerophyll (hardwood) forest**

This forest type is comprised predominately of Rose Gum/Flooded Gum (*E. grandis*), Sydney Blue Gum (*E. saligna*), Blackbutt (*E. pilularis*), Tallow wood (*E. microcorys*), Brush Box (*Lophostemon confertus*) and Turpentine (*Syncarpia glomulifera*). The understorey ranges from relatively open on recently disturbed sites to dense rainforest in wetter areas. Rainforest species often dominate gullies and watercourses.

Coastal West Sclerophyll forests are found in areas with deep fertile soils such as krasnozems or brown, alluvial earth soils. Rainfall ranges from 1000 to 1200 mm/yr or more.

**Coastal Dry Sclerophyll (hardwood) forest**

This forest type consists of open forests, usually with eucalypt species, an open canopy and an understorey consisting of grasses or acacias and may include other native legumes, casuarinas or grass trees. Within its western extent it may also include some cypress pine. Its distribution extends from the New South Wales border north to Rockhampton and includes coastal areas that are east of the Great Dividing Range.

This forest type is comprised predominately of Spotted Gum (*Corymbia citriodora*), White Mahogany (*E. acmenoides*), Broad-leaved Ironbark (*E. fibrosa* ssp. *fibrosa*), Red Bloodwood (*C. intermedia*, *C. gummifera*), Narrow Leaved Red Ironbark (*E. crebra*), Grey Ironbark (*E. siderophloia*) and Grey Gum (*E. propinqua*, *E. major*). *E. fibrosa* ssp. *Fibrosa* integrates with *E. fibrosa* ssp. *Nubila* at the western edge of its main range, although outlying populations of *E. fibrosa* ssp. *Fibrosa* may occur as far west as Taroom.

**Inland Dry Sclerophyll (hardwood) forest**

This forest type consists of open forests, with some eucalypt species, an open canopy and an understorey consisting of grasses or acacias. Small patches may be dominated cypress pine. Its distribution extends west from the Great Dividing Range on poor soils in low rainfall areas. This forest type is comprised mainly of Red Bloodwood (*C. erythrophloia*, *intermedia*) and/or (*C.*

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*trachyphloia*); Spotted Gum (*Corymbia citriodora*), Narrow Leaved Red Ironbark (*E. crebra*), Grey Ironbark (*E. fibrosa* ssp. *Nubila*) Grey Gum (*E. longirostrata*) and Gum-Topped Ironbark (*E. decorticans*). *E. fibrosa* ssp. *Nubila* intergrades with *E. fibrosa* ssp. *fibrosa* in the eastern parts of its range.

**Cypress forests or Western acacia forests**

This forest type occurs in western areas and usually has a mosaic of varying proportions of Cypress Pine and Acacia species. The canopy may range from closed and shrubby to open forest with grassy understorey. (*Callitris glaucophylla*); Cypress pine with Silver-leaved Ironbark (*E. melanophloia*), Tumbledown Gum (*E. chloroclada*) distributed throughout; or patches of traditionally non-commercial species in moister areas with less sand soil, including Spotted Gum (*Corymbia citriodora*), Brigalow (*Acacia harpophylla*), Poplar Box (*E. populnea*), Smooth-barked Apple (*Angophora leiocarpa*) and Bull Oak (*Allocasuarina luehmannii*).

Cypress occurs in western areas with deep, sandy soil and rainfall less than 400 to 800 mm/year.

**Rainforest**

Forest communities ranging from semi-evergreen vine thickets to complex mesophyll vine forests. Emergent eucalypts, Lophostemom and Syncarpia species are infrequent or absent. Ground cover vegetation is normally sparse and grasses are usually absent. Ferns, palms and mosses are common.