

# Code of Practice for Timber Production 2014

Consultation draft of proposed 2019 amendments



## Cover Photo

Mountain Ash (*Eucalyptus regnans*) forest, La Trobe State Forest, Central Highlands of Victoria.

## Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



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ISBN 978-1-76077-655-8 (pdf)

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## Foreword

Our beautiful forests and ecosystems are fundamental to the health and wellbeing of all Victorians. They provide clean air, water and a place for us to connect with our natural environment.

In partnership with Traditional Owners and the community, and informed by science, the Victorian Government is undertaking a rigorous and ambitious program of forest management reform to ensure the best possible outcomes for the environment and community. In 2018 I requested an *Independent Review of Timber Harvesting Regulation* to ensure that timber harvesting is conducted in such a manner to ensure that environmental, cultural and economic values of State forests are protected and enhanced. An outcome of that review includes updating the *Code of Practice for Timber Production 2014* (Code) and incorporated *Management Standards and Procedures for timber harvesting operations in Victoria's State forests 2014*.



I am pleased to present a draft Code with updates that focus on creating clear, accurate, and enforceable regulation for timber production in State forests that is aligned with Government policies and strategies. The proposed changes mean better enforcement of regulations, greater clarity and improved compliance by industry.

The proposed changes to the Code formalise the protection of large trees with a diameter greater than 2.5 metres, as I announced in March last year, and protecting the Large Brown Tree Frog in accordance with its Action Statement. A Regulatory Impact Statement has been developed to ensure these protections are efficient and effective and uses data and information to calculate the benefits to biodiversity. The calculated benefits are, of course, just one aspect to consider and do not capture the full value of protecting these plants and animals.

Large trees provide habitat for a range of hollow-dependant animals including the Greater Glider, Leadbeater's Possum, Yellow-bellied Glider, Mountain Brush-tailed Possum, Masked Owl, Sooty Owl and Powerful Owl. The Large Brown Tree Frog is listed as threatened under the *Flora and Fauna Guarantee Act 1988*, and in Victoria it has only been found in a small number of sites in East Gippsland. These proposed protections in the Code require immediate action to ensure large trees and Large Brown Tree Frogs are protected now and into the future.

This update precedes a more comprehensive review of the Code commencing later this year. The comprehensive review will be informed by robust science derived from work streams such as the Forest Protection Survey Program, and broader regulatory and forest management planning reviews.

I invite all Victorians to contribute their views on the draft Code to ensure that forests are effectively managed now and for future generations. Visit <https://engage.vic.gov.au/future-of-our-forests/code-of-practice> for more information and to help shape the future of Victoria's forests.

A handwritten signature in blue ink, appearing to read 'Lily D'Ambrosio'.

*The Hon Lily D'Ambrosio MP*

*Minister for Energy, Environment and Climate Change*

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## Glossary:

**'Action Statement'** means an Action Statement prepared as part of the *Flora and Fauna Guarantee Act 1988* (Vic) for any listed taxon or community of flora or fauna or potentially threatening process as soon as possible after that taxon, community or process is listed.

**'agroforestry'** means the simultaneous and substantial production of **forest** and other agricultural products from the same land unit (defined in the Victoria Planning Provisions).

**'Allocation Order'** means an order made in accordance with Part 3 of the *Sustainable Forests (Timber) Act 2004* (Vic).

**'approved'** means unless otherwise stated means a plan or practice that is:

- a) in the case of **State forest**, approved by the **Minister** or **delegate** in accordance with this Code and its incorporated document; or
- b) in the case of private land, approved by the **responsible authority** (usually **local government**) in accordance with a planning scheme or a permit issued under a planning scheme.

**'Approved road'** means the section of a road or extent of a significant road improvement operation to be constructed **within Special Protection Zone** that is authorised by the **Minister** or **delegate**.

**'Ash'** means any one or more of Mountain Ash (*Eucalyptus regnans*), Alpine Ash (*Eucalyptus delegatensis*) or Shining Gum (*Eucalyptus nitens*).

**'Authorised officer'** has the same meaning as in section 3 of the *Conservation Forests and Lands Act 1987* (Vic).

**'basal area'** means the sum of the cross-sectional areas measured at breast height (1.3m) of the trees in a given **stand** (or plot). Usually expressed as square metres per hectare (m<sup>2</sup>/ha).

**'biodiversity'** means the natural diversity of all life: the sum of all our native species of flora and fauna, the genetic variation within them, their habitats, and the ecosystems of which they are an integral part.

**'blading-off'** means the use of a machine to sweep drifts of loose mud, slush, vegetation or soil from the surface of a road or **coupe infrastructure (landings etc.)**.

**'Box Ironbark'** means forest characterised by a **canopy** of box, ironbark and gum-barked eucalypts, growing to 25 m in height, over a sparse understorey of wattles, small-leaved and prostrate shrubs, herbs and grasses. The main trees are White Box (*Eucalyptus albens*), Red Box (*Eucalyptus polyanthemos*), Red Ironbark (*Eucalyptus tricarpa*), Mugga Ironbark (*Eucalyptus sideroxylon*), Yellow Gum (*Eucalyptus leucoxylon*) and Red Stringybark (*Eucalyptus macrorhyncha*). In some areas they may grow with, or be replaced by, Yellow Box (*Eucalyptus melliodora*), Long-leaf Box, Silver Bundy (*Eucalyptus nortonii*), Forest Red Gum (*Eucalyptus tereticornis*), Coast Grey Box (*Eucalyptus bosistoana*), Gippsland Grey Box (*Eucalyptus bosistoana*), Blue Box (*Eucalyptus baueriana*) and Yellow Stringybark (*Eucalyptus muelleriana*).

**'buffer'** means a protective margin of vegetation excluded from any **timber harvesting operations** abutting a **waterway** or an area of **rainforest** or other special area or value, which protects it from

potentially detrimental disturbances in the surrounding **forest**. Buffer width or radius is defined as horizontal distance from which various **timber harvesting operations** are excluded.

‘**cable harvesting**’ means a hauling system using towers, winches, blocks and cables to extract harvested **timber**.

‘**canopy**’ means the uppermost layer of a **forest**, characterized by the crowns of the trees.

‘**Central Highlands FMAs**’ means the area of the Central Gippsland, Central and Dandenong FMAs which fall within the Central Highlands **Regional Forest Agreement** boundary.

‘**chemical control agent**’ refer to **pesticide**.

‘**clearfall**’ means a silvicultural method of harvesting a **coupe** whereby all **merchantable** trees, apart from those to be retained for **wildlife** habitat, are removed.

‘**Code**’ means *The Code of Practice for Timber Production 2014*.

‘**compartment**’ means a specific area of **State forest** usually bounded by natural features. One compartment is often broken up into several coupes.

‘**confluent stream**’ means where two or more flowing bodies of water join together to form a single stream.

‘**cording**’ means log material, eucalypt and non-eucalypt, with a **diameter** greater than 15cm placed in a corduroy fashion on **landings** and **snig tracks** to distribute machine loading over a larger area.

‘**coupe**’, in relation to :

- a) **State forest**, has the same meaning as in the *Sustainable Forests (Timber) Act 2004 (Vic)*; and
- b) **private land**, means a single area of forest or **plantation** of variable size, shape and orientation from which timber is harvested in one operation.

‘**coupe diary**’ means the key means of communicating and documenting information relevant to the management of **timber harvesting operations** and subsequent silvicultural treatment during the life of a **coupe**. The coupe diary forms part of the **Forest Coupe Plan** and entries can be made by the **harvesting entity**, the contractor/logging team leader, or additional contractors working during the life of the **coupe**.

‘**coupe-access road**’ means a **temporary road** constructed to link existing **permanent roads** to **in-coupe roads**, sometimes referred to as a coupe driveway and is considered part of a **coupe**.

‘**coupe infrastructure**’ means log **landings**, log dumps / storage facilities, **snigging** and **forwarding tracks** and boundary trails.

‘**crown**’ (tree) means the main **canopy** of a tree, including the main branches and leaves.

‘**crown**’ (roading) means the slope of a road surface to the outside for drainage.

‘**Crown**’ (governance) means the State of Victoria.



**'cultural heritage significance'** means archaeological, anthropological, contemporary, historical, scientific, social or spiritual significance, and significance in accordance with Aboriginal tradition.

**'dead'** (Leadbeater's Possum habitat) means a tree that is obviously (physiologically) dead. It must be self-supporting (rooted into the ground) and would remain standing should any supporting material be removed. Dead trees must be **mature** and more than 6 m in height and greater than 1.5 m in diameter at breast height. Dead trees must be one of the **Ash** species and where species cannot be determined all dead eucalypts in areas known to be in an Ash area are assumed to be Ash.

**'Dead'** (other contexts) means a self-supporting (rooted into the ground) tree that is physiologically dead.

**'delegate'** means a person or role to whom the **Minister** or **Secretary** has delegated responsibilities and functions under Part 2 of the *Conservation, Forests and Land Act 1987* (Vic) or has been authorised by the Minister to consider applications sought in accordance with the **Code** and the **Management Standards and Procedures**.

**'Department'** means the Department of Environment, Land, Water and Planning (DELWP), or its successor.

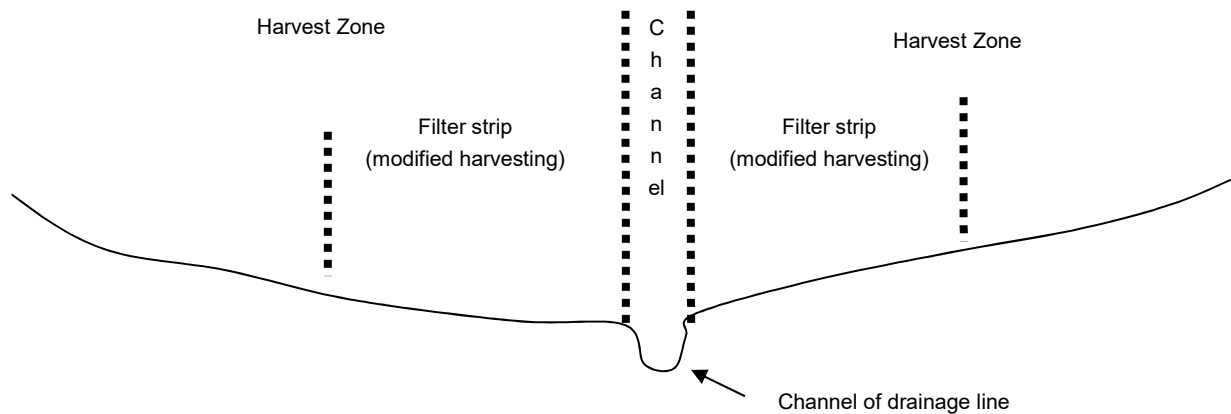
**'diameter'** means the width measurement of a tree or log. On a standing tree it is measured at 1.3 m above the upper ground level.

**'domestic'** (firewood) means firewood that is collected for personal use and is not sold to a third party or used in a commercial enterprise.

**'drainage lines'** means depressions that have visible evidence of periodically flowing water (including obvious sedimentation or other clear evidence of overland flow) that feed into **temporary** or **permanent streams**. A defined channel may or may not be present. Visible water flow would be expected after storm events or briefly in the wettest times of the year. Distinctive **riparian vegetation** is not likely to be present.

Artificial **drainage lines** that do not discharge directly into **waterways** are not considered within the above definition.

In **native forests**, **drainage lines** will generally be protected from harvesting by a **filter strip** (Glossary Figure 1). Refer to the **Management Standards and Procedures**.



### Glossary Figure 1 – Drainage Lines in Native Forests

This figure demonstrates the use of filter strips and modified harvesting to minimise soil disturbance within drainage lines. Note: Diagram not to scale. Zone widths vary according to circumstances.

**‘ecologically similar locality’** means from a similar elevation, aspect, soil type and/or climate, as close as possible to the harvested area.

**‘ecological vegetation class (EVC)’** means an area delineated and published by the **Department** (available on [data.vic.gov.au](http://data.vic.gov.au)) that contains one or more native plant communities with similar floristic, life form and ecological characteristics and represents a grouping of broadly similar environments such as biogeographic range, and although differing in species, have similar habitat and ecological processes operating.

**‘erosion risk’** means the likelihood of erosion occurring due to **soil erodibility**, **rainfall erosivity**, slope and soil disturbance.

**‘even-aged’** means forests or **stands** that are predominantly of the one age. Usually originating as a result of a wildfire or timber harvesting activity.

**‘exotic’** means introduced to Australia, not native.

**‘extraction’** means removing produce from stump to log **landing** or storage area.

**‘exclusion area’** means a term used in this **Code** to represent specific areas where **timber harvesting operations** are excluded in accordance with this **Code**, as distinct from existing **Special Protection Zones**, or areas requiring **buffers**.

**‘existing road’** means a permanent or **temporary road** of any class that with or without **road maintenance** may be used for timber **haulage**. A road is not considered an **existing road** if **road construction** or **significant road improvement operations** are required for it to be usable for **haulage**.

**‘extraction track’** means a track along which logs are extracted from the **forest** to the roadside or a **landing**. Also called a **forwarding track** or a **snig track**.

**‘fauna’** means any animal including reptiles, birds, mammals, marsupials and fish.

**‘fill disposal area’** means a site where surplus soil and rock material produced as a by-product of **road construction** may be stockpiled or disposed of.

**‘filter’ or ‘filter strips’** means an area of vegetated ground adjacent to a forest attribute (where **merchantable overstorey** may have been removed, if present), designated to minimise soil disturbance and/or disturbance to the forest attribute. Trees may be felled from within a filter or filter strip subject to certain conditions, however machinery entry is not permitted unless related to **sanctioned** activities.

**‘flora’** means any type of plant.

**‘floristics’** means the proportion of species and distribution within a particular area.

**‘forest’** means an area with a high density of trees typically composed of an **overstorey (canopy** or upper tree layer) and an **understorey**.

**‘Forest Coupe Plan’** means a plan that must be prepared for each **timber harvesting operation** in **State forest**, containing a map identifying the area and a schedule incorporating the specifications and conditions under which the **timber harvesting operation** is to be administered and controlled. The **coupe diary** is considered part of the Forest Coupe Plan.

**‘Forest Management Area’ (FMA)** means a territorial unit for planning and management of **State forests** in Victoria. The approximate location and extent of FMA boundaries are defined by the **Department’s** corporate spatial dataset FMA25.

**‘Forest Management Zoning Scheme’ (FMZS)** means an administrative planning scheme comprising zones that set priorities and permitted uses in different parts of State forest. The FMZS is established by the Forest Management Plans, which are working plans pursuant to section 22 of the *Forests Act 1958* (Vic).

**‘forest type’** means the classification of **forests** according to their life form and height of the tallest trees, projected foliage cover of the tallest trees and the main component species and elevation.

**‘forwarding’** means the movement of logs in a forwarder machine.

**‘forwarding track’** means an **extraction track** along which logs are carried in a forwarder.

**‘fuel hazard rating’** is as defined by the **Department’s** *Overall fuel hazard assessment guide*. For the purpose of this **Code**, the forest fire danger index threshold rating is < 50. ‘High’ **fuel hazard rating** means a high level of difficulty suppressing a bushfire at forest fire danger index <50, while ‘moderate’ **fuel hazard rating** means a moderate level of difficulty suppressing a bushfire at forest fire danger index <50.

**‘General Management Zone (GMZ)’** means the component of Forest Management Zoning Scheme (FMZS) managed for a range of uses and values, with sustainable timber production a major use.

**‘Gippsland FMAs’** means the area of the Central Gippsland, North East and Tambo FMAs which fall within the Gippsland **Regional Forest Agreement** boundary.

**‘gross coupe area’** means the entire **coupe** area within the **coupe** boundary including harvesting exclusions.

**‘growth stage’** means the a system used to describe the life cycle of trees based mainly on **crown** form – the main growth stages being **regeneration, regrowth, mature** and **senescent**.

**'habitat tree'** means a tree identified and protected from harvesting to provide habitat or future habitat for **wildlife**. A **habitat tree** may include living trees or dead stags, and often contains **hollows** that are suitable shelter and/or nesting sites for animals such as possums and parrots.

**'harvesting entity'** means an organisation or person responsible for conducting a **timber harvesting operation**. In **State forest** the **harvesting entity** is either **VicForests** or the holder of a licence granted under section 52 of the *Forests Act 1958* (Vic).

**'harvesting team leader'** means, on **private land**, the principal licensee or harvesting contractor, or a person appointed by the principal licensee or harvesting contractor, responsible for supervising and controlling the **timber harvesting operation** in the forest.

**'haulage'** means delivering timber from the **coupe** to a buyer or transporting timber on a truck to a place for collection by a buyer or sale to a buyer.

**'heathland'** means ecosystems that are characterised by a dense layer of small-leafed shrubs, usually 1-2 m tall, over a ground layer of sedges, coarse lilies, rope-rushes, prostrate shrubs and herbs. In most places there are occasional small, short-trunked, spreading trees, to 15 m tall, which may form a sparse **canopy** on deeper soils.

**'historic place'** means a building, a garden, a tree, the remains of a ship or part of a ship, an archaeological site, a precinct, a site or the land associated with any of these things that has **cultural heritage significance**.

**'hollow'** means an opening in the trunk or branches of a tree. Hollows often form after a branch dies and falls off a tree. Hollows must have an entrance diameter in excess of 4 cm and not have a height in excess of 30 cm. However in the context of Leadbeater's Possum habitat hollows are cavities formed in the trunk or branches of a live or dead tree. They are formed in Ash eucalypt trees through a variety of processes but are generally related to ageing and decay, although physical injury and insect damage may also contribute. They vary in size, both in cavity opening diameter and cavity depth and volume, from small openings of 4 - 8 cm to very large with entrance diameters of 18 - 30 cm or more.

**'hollow bearing tree'**, in the context of Zone 1A habitat, means living **mature** or **senescent** trees of **Ash** eucalypt species containing **hollows**. Hollow bearing tree in the context of Zone 1B habitat means **dead mature** or **senescent** living trees of Ash eucalypt species containing **hollows**.

**'in-coupe road'** means a timber extraction road of class 5E or above constructed specifically for use during harvesting and associated activities and usually closed at the completion of **timber harvesting operations**. It is located completely within the approved **coupe** boundary.

**'landing'** means a place where trees or parts of trees are sorted, processed and/or loaded for transport from the **forest**. Areas where there has been no significant soil disturbance associated with landing establishment, and where no further processing takes place, are not regarded as landings. Conversion sites that do not involve earthworks or clearing, or where there has been no significant soil disturbance, are also not regarded as landings.

**'land manager'** means the government department, agency, corporation or statutory authority responsible for managing **public land** for or on behalf of the Crown.

**'land owner'** means the person who is the owner or authorised occupier of freehold land.

**‘Landscape sensitivity area’** means areas identified as having a high scenic quality and visual sensitivity. They are usually areas that are readily visible from high-usage recreational facilities such as look-outs, walking tracks, tourist roads, or campsites.

**‘large tree’** means a living tree of any species that has a diameter at breast height over bark (DBHOB) equal to or greater than 2.5 metres.

**‘local government’** means the relevant Council or Municipal District as defined in the *Local Government Act 1989* (Vic).

**‘Management Standards and Procedures’** means the *Management Standards and Procedures for timber harvesting operations in Victoria’s State forests, 2019*.

**‘managing authority’** means the organisation responsible for the planning and management of a **timber harvesting operation**. In **State forests**, **VicForests** is the **managing authority** for **timber harvesting operations**.

**‘matting’** means smaller head material (branches), bark or other vegetation that is used to cover **cording on snig tracks** and **landings**.

**‘mature’** means a **growth stage** of trees. **Mature Ash** species have the following characteristics, in order of assessment priority. Note that no single characteristic defines maturity on its own, although the first characteristic (apical dominance) holds the most significant assessment weight:

1. Lack of clear apical dominance within the upper **crown**
2. Presence of permanent shaping branches with **diameters** at least one third of the bole diameter at their junction with the bole (clear of collar)
3. Shaping branches are not related either to the presence of long term natural gaps in the **canopy**, or to an open grown tree position. In the case of a natural gap, such branches often occur only on one side of the tree, and the ‘assessment weight’ given to this characteristic may need to be downgraded (i.e. the need for other indicators increases as part of the overall assessment)
4. The shaping branches contribute significantly to lateral **crown** shape and may be competing with other shaping branches for tree height position, creating a rounded **crown** appearance (related to (1) above)
5. Apical dominance will also cease at the shaping branch level (having reached maximum length), and can induce secondary (epicormic) branch development along shaping branches, and
6. Some branch death (dieback) and breakage is typical, but not a dominant feature. This loss of leaf area (photosynthetic capacity) can also induce secondary (epicormic) growth to replace lost photosynthetic capacity

**Diameters** of early **mature** trees may occur between 90 to 200 cm DBHOB, with typical heights of 50 to 100 m. Diameters of full **mature** trees may be expected between 150 to 300 cm, with typical heights of 60 to 100 m. This overlap of ranges between trees in different stages indicates why diameter and height are not good indicators of **growth stage**.

**‘merchantable’** means a tree or part of a tree from which saleable forest produce can be obtained.

**‘mature individuals’** when used in reference to flora, means individuals which are capable of producing reproductive material such as buds, flowers, fruits, cones or seeds. Note that this

terminology is distinct from age classes or **growth stages** of trees or **stands** of trees (see **mature** in **growth stages**).

'**microclimate**' means the climate of a small, localised part of a forest. Vegetation, soil conditions and local topography may create pronounced microclimatic differences.

'**Minister**' means the Minister for Energy, Environment and Climate Change or their successor.

'**mixed species**' means mountain mixed species, alpine mixed species, foothill mixed species and coastal mixed species.

'**Montane Riparian Thicket (MRT)**' means an area containing at least 40 % **canopy** cover of Mountain Tea-tree (*Leptospermum grandifolium*). Where other **rainforest canopy** species are present MRT is sometimes confused with **rainforest**. However areas with 40 % or more Mountain Tea-tree **canopy** cover are defined as MRT not **rainforest**. Key **understorey** species typically consist of a cover of 5 % Mountain Pepper (*Tasmannia lanceolata*), 1 % Common Bird-orchid (*Chiloglottis gunnii* s.l.), 40 % Red-fruit Saw-sedge (*Gahnia sieberiana*) and Billabong Rush (*Juncus usitatus*), 1 % of at least 2 of either Mountain Club-sedge (*Isolepis subtilissima*) or tasman Flax-lily (*Dianella tasmanica*) or Forest Sedge (*Carex alsophila*), 20 % of at least 3 of either Common Finger-fern (*Grammitis Billardierei*) or Hard Water-fern (*Blechnum nudum*) or Mother Shield-fern (*Polystichum proliferum*) or fishbone Water-fern (*Blechnum wattsi*), 5 % Austral King-fern (*Todea Barbara*) or Soft Tree-fern (*Dicksonia Antarctica*), 1 % Kangaroo Fern (*Microsorium pustulatum* ssp. *Pustulatum*) or Alpine Filmy fern (*Hymenophyllum pelatum*) and 20 % Bryophytes/Lichens.

'**native forest**' means an area originally naturally occurring, that is dominated by trees having usually a single stem and a **mature** or potentially **mature stand** height exceeding two metres and with existing or potential crown cover of **overstorey** strata about equal to or greater than 20 per cent. This definition includes areas of trees that are sometimes described as woodlands, but does not include **plantations** (which may exhibit the characteristics of a native forest but are established for commercial purposes).

'**native vegetation**' means plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses.

'**net coupe area**' means the **gross coupe area** less allowances made for harvesting exclusions.

'**net harvested area**' means the **net coupe area** less areas that were not harvested.

'**new plantation**' means a plantation development where the previous land use was not plantation.

'**North East FMAs**' means the areas of the North East, Benalla-Mansfield and Central FMAs which fall within the North East **Regional Forest Agreement** boundary.

'**old growth**' means forest which contains significant amounts of its oldest **growth stage** - usually **senescent** trees - in the upper stratum and has been subject to any disturbance, the effect of which is now negligible. For a **stand** to qualify as old-growth, the **regrowth growth stage**, if present, must be sparse (less than 10% of the total **crown** cover of the **stand**). Negligibly disturbed forest is that in which disturbance is known to have occurred, but the disturbance is unlikely to have altered the structure (**growth stage** and crown cover) or the usual species composition which characterises a given vegetation class; or, if the alteration did occur in the past, it is no longer measurable.

‘operator’ means a person who conducts a **timber harvesting operation**. Typically a machine or chainsaw operator.

‘Outrows’ means roughly parallel, narrow corridors within a **coupe** from which all trees are harvested to allow access and egress by the harvesting machinery.

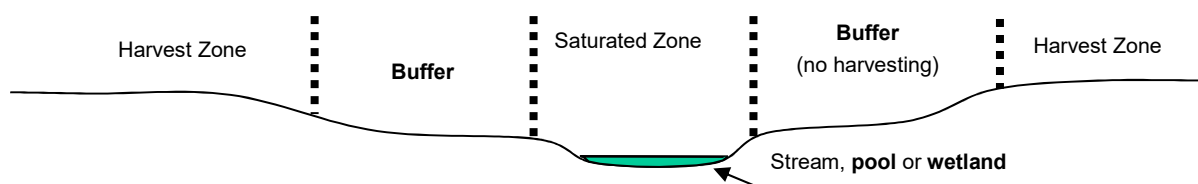
‘overwood’ means **mature** trees that are taller than trees at a lower level.

‘overstorey’ means the larger, taller trees in a **forest**, forming the **canopy**.

‘permanent road’ means a road or track of class 5E and above, and includes roads, tracks, bridges, crossings and culverts which are permanently required for the continuing management of the **forest**, including **timber harvesting operations**.

‘permanent stream’ means a river or stream that flows throughout the year. **Permanent streams** may stop flowing or dry out in extremely dry years. **Permanent streams** will support distinctive **riparian vegetation** (except where previously removed by human activity, and not including *E camaldulensis*), indicative of extended periods of **saturation** and distinguishable from vegetation communities in surrounding areas. Streams have a well-defined incised permanent channel. See also **pools** and **wetlands**.

In **native forests**, **permanent streams**, **pools** and **wetlands** are buffered from harvesting (Glossary Figure 2). Refer to the **Management Standards and Procedures**.



#### Glossary Figure 2 – Permanent Streams, Pools or Wetlands in Native Forests

**Permanent streams, pools** or wetlands are shown in Figure 2. A saturated zone exists, which is a well-defined incised permanent channel. These must be protected by a buffer at all times where no harvesting is excluded. Note: Diagram not to scale. Zone widths vary according to circumstances.

‘**pesticide (and/or chemical control agent)**’ means a chemical product that is used to control pest plants or animals. Includes herbicides, insecticides, fungicides, rodenticides and other similar products. Their registration for sale and use is controlled by State and Commonwealth legislation.

‘**permeability**’ means the ability of soils to directly absorb water. Soils with high permeability and low potential for overland flow are able to directly absorb large quantities of water without producing any significant run-off. These soils will be generally well structured with a friable surface and a high organic matter content. Soils with low permeability and high potential for overland flow will not readily absorb heavy falls of rain nor small surface flows of water. The soils will be generally poorly structured with poorly defined aggregation.

‘**planned burning**’ has the same meaning as in the *Code of Practice for Bushfire Management on Public Land, 2012*.

‘**plantation**’ means managed **stands** of trees of either native or **exotic** species, planted or sown primarily for **timber harvesting operation** purposes.

**‘Plantation Development Notice’** means a notice that must be prepared and lodged with **local government** before a **plantation** is established for the first time. The notice must contain the information set out in Section 4.1 of this **Code**.

**‘pool’** means an area of still water of at least 4 metres in diameter within or adjacent to the main channel of a permanent or **temporary stream**. A **pool** may dry out in extremely dry years. In **native forests**, **pools** are buffered from harvesting (refer to Table 2).

**‘population’** means a group (2 or more) of individuals of the same species that are demographically, genetically, or spatially distinct from other groups of individuals.

**‘precautionary principle’** means when contemplating decisions that will affect the environment, careful evaluation of management options be undertaken to wherever practical avoid serious or irreversible damage to the environment; and to properly assess the risk-weighted consequences of various options. When dealing with threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

**‘private land’**, for the purposes of this **Code**, private land comprises:

- i) land alienated from the Crown;
- ii) unalienated land of the Crown managed and controlled by a person or body other than the Minister for Energy, Environment and Climate Change, the Minister for Agriculture, or the **Secretary** or their equivalents;
- iii) unalienated land of the Crown occupied under a lease from the Crown; or
- iv) land licensed or vested under the *Victorian Plantations Corporation Act 1993* (Vic).

**‘provenance (of seed)’** means the original geographic source or place from which that seed was obtained.

**‘public land’** means unalienated land of the Crown managed and controlled by the Minister for Environment and Climate Change, the Minister for Agriculture and Food Security, or the **Secretary**, whether or not occupied under a licence or other right (but not including land occupied under a licence under the *Victorian Plantations Corporation Act 1993* (Vic)).

**‘rainfall erosivity’** means the potential of rainfall to cause soil erosion and is directly related to rainfall amount and rainfall intensity.

**‘rainforest’** means closed (>70 per cent projected foliage cover) broadleaved forest vegetation with a more or less continuous rainforest tree **canopy** of variable height, and with a characteristic composition of species and life forms, of at least 0.1 ha in area and 20 metres width. Rainforest includes closed transitional and seral communities with emergent eucalypts (including Cool Temperate Mixed Forest as a recognised subset of rainforest), that are of similar botanical composition to **mature** rainforests in which eucalypts are absent.

**‘rare’** in so far as it relates to **biodiversity**, means a group of species that are very uncommon, scarce, or infrequently encountered.

**‘Recovery Team (Regent Honeyeater)’** means a team of experts established to guide, evaluate, review progress, and implement recommendations which may arise from research under the Regent Honeyeater **Action Statement**.



**‘regeneration’** (forestry) means the renewal or re-establishment of **native forest** flora by natural or artificial means following disturbance such as a **timber harvesting operation** or fire.

**‘regeneration’** (growth stage) means a **growth stage** of trees. Eucalypt seedlings that haven’t reached **reproductive maturity** (typically less than 10 years old) are classified as regeneration.

**‘Regional Forest Agreements (RFAs)’** means agreements between the State of Victoria and the Commonwealth for the conservation and sustainable management of **native forests**. The RFAs provide certainty for forest-based industries, forest-dependent communities and conservation. They are the result of years of scientific study, consultation and negotiation covering a diverse range of interests.

**‘regrowth’** is a **growth stage** of trees. Regrowth eucalypts have narrow, conical **crowns** (pointed) with relatively high individual crown densities. The majority of branches lie at an acute angle to the main stem and overall height is still increasing.

**‘regularly used sites (Regent Honeyeater)’** means a site known to have been used by Regent Honeyeaters at some time in at least three of the past six years.

**‘rehabilitation’** means the restoration of a site of disturbance usually associated with **landings** and other within-**coupe infrastructure**.

**‘reproductive maturity’** means the **life** stage when an organism can reproduce. In the case of trees it means when a tree can set enough seed to repopulate the area occupied by the parent tree if the parent tree were removed. **Ash** species typically reach **reproductive maturity** after 10 years of age.

**‘responsible authority’** means the person or body that is specified to be the responsible authority in accordance with s.13 of the *Planning and Environment Act 1987* (Vic).

Note. Generally (but not always) the responsible authority is the **local government** responsible for administering the local planning scheme. It is the responsible authority that administers the operation of the **Code** on **private land** and for **plantations**.

**‘restricted access catchments’** means catchments managed by agreement between Melbourne Water and the **Department**.

**‘retained trees’** means trees retained on a **coupe** during a **timber harvesting operation** because they are **unmerchantable**, are to serve as **seed trees** or **wildlife habitat trees**, or have been selected to grow on after **thinning**.

**‘riparian vegetation’** means vegetation that requires free or unbound water, or conditions that are noticeably moist along the margins of streams, **drainage lines**, and lakes.

**‘river health’** means an ecologically healthy river where the major natural features, **biodiversity** and/or functions of the river are still present and will continue into the future. Some change from the natural state may have occurred to provide for human use.

**‘road’** means an area of land generally developed for the purpose of the driving or riding of motor vehicles.

**'road construction'** means the establishment and extension of a new road or new section of road; this does not include **road maintenance** or significant road improvement on already existing temporary or **permanent roads**.

**'road maintenance'** means works designed to restore the serviceability of the surface, drainage and verges of an existing temporary or **permanent road** to the condition of its original road class and within the original road footprint. **Road maintenance** works include:

- I. Grading / re-forming road carriage way surface;
- II. Re-surfacing / re-sheeting / or armouring carriage way surface with rock;
- III. Clearing table-drains and culverts to maintain water runoff;
- IV. Blading off of roads, where measures are in place to prevent adverse impacts on water quality; and
- V. the management of sight lines and road drying by the cutting of vegetation within the road verge to the maximum allowable width for original intended road class.

**'road works'** includes **road construction, significant road improvement operations** and **road maintenance**.

**'rotation'** means the planned number of years between the **regeneration** of a **forest stand** and its final harvesting, taking into account the full range of values and uses the owner wishes to derive from the **forest**.

**'run-off'** with regard to road construction means a short graded channel angled away from road edges to divert road drainage water off the road into undisturbed vegetation. Sometimes called a mitre drain.

**'salvage harvesting operation'** means **timber harvesting operations** conducted to recover **timber** following wildfire, storms, floods, disease, insect attack or other events that cause significant tree mortality or damage.

**'sanctioned'** means an action or practice that has been assessed and **approved** by the **managing authority** unless otherwise stated.

**'sanctioned road'** means a road authorised by the **managing authority** to be constructed for the purpose of **coupe** access within **buffers** or **filters** identified in a **forest coupe plan**.

**'saturation'**, associated with **waterways**, means the area where the soil is muddy or permeated with water attributable to the water body. The saturation zone ends where moisture is no longer visibly present in the soil. This saturation zone is often delineated by **riparian vegetation**.

**'Seasonally Closed Road'** means a road which is temporarily closed on a seasonal basis usually for environmental reasons, under s21 (1) of the *Forests Act 1958 (Vic)*.

Note: the **Department**, as a registered State road authority, may also close a roadway or pathway, or part of a roadway or pathway, for a particular period during the year under provisions in the *Road Management Act 2004 (Vic)*

**'Secretary'** means the body corporate established by Part 2 of the *Conservation, Forests and Lands Act 1987 (Vic)*.

‘**seed tree**’ means a tree retained on harvested **coupes** to provide seed for natural **regeneration** of that **coupe**. May also be a **habitat tree**.

‘**seed tree harvesting**’ means an even-aged silvicultural system in which all live trees are felled apart from a number of uniformly distributed trees retained to provide seed for **regeneration** and habitat. **Seed trees** generally comprise 10-15 % of the **basal area** of the original **stand**.

‘**selective harvesting**’ means a silvicultural system used to harvest and regenerate particular **forest types**. Trees are harvested either singly or in small groups at intervals indefinitely. **Regeneration** is established continually in the gaps produced and an uneven-aged **stand** is maintained.

‘**senescent**’ means a **growth stage** of trees. Senescent eucalypts are characterised by dead branches and declining **crown** leaf area, with the trunk of the tree likely to contain burls and bumps. The top of the tree is invariably broken off with the remaining crown more than 95 % secondary, being composed of branches of epicormic origin.

‘**shelterwood coupes**’ means an area that is harvested using the shelterwood silvicultural method where the original **stand** is removed in two separate **timber harvesting operations**. Firstly a proportion of the **mature** trees are cut to allow the establishment of essentially even-aged **regeneration** under sheltered conditions (this is called Shelterwood 1), followed by a second cut (usually about 10 years later) of the remainder of the **mature** (seed) trees (this is called Shelterwood 2).

‘**significant road improvement operations**’ means operations on an **existing road** that

- improve the road to a higher road classification (e.g., 5D to 5B); and/or;
- correct excess adverse (uphill >10%) and/or favourable (downhill >15%) road grades; and/or
- widens and/or correct the geometry of existing corners beyond the minimum clearance widths of a higher road class; and/or
- requires removal of **native vegetation** greater than the following thresholds:
  - 0.5 ha of **native vegetation** in an EVC with Bioregional Conservation Status of Endangered, Vulnerable or **Rare**; and
  - 1 ha of **native vegetation** in an EVC with Bioregional Conservation Status of Depleted or Least Concern.

In general these works include operations such as major resurfacing, major corner widening, significant bridge or other stream crossing structure works, including bridge replacement.

‘**silviculture**’ means the science and practice of managing harvesting, **forest** establishment, composition, and growth, to achieve specified objectives.

‘**site preparation**’ means the preparation of the ground to provide conditions suitable for seedling establishment by either seed or planted seedlings.

‘**Sites of Significance for Rainforest**’ means areas designated by the **Department** as containing the most significant **rainforest stands**.

‘**snigging**’ means the towing or winching of a log from the stump to the **landing** site, usually along a **snig track**.

‘**snig track**’ means the track along which a log is snigged.

**‘soil erodibility’** means the susceptibility of a soil to erosion when exposed and/or disturbed. Classified into low, medium or high according to prescribed techniques.

**‘Special Management Zone (SMZ)’** means a component of **Forest Management Zoning Scheme (FMZS)** which are managed to conserve specific features and values, while catering for sustainable timber production and other utilisation activities under certain conditions, specified in **SMZ** plans.

**‘Special Protection Zone (SPZ)’** means a component of **Forest Management Zoning Scheme (FMZS)** which are managed primarily for conservation values, forming a part of Victoria’s Comprehensive, Adequate and Representative reserve system. **Timber harvesting operations** are generally excluded from **SPZ**.

**‘Special Water Supply Catchment’** means land declared to be a special water supply catchment area under Division 2 of Part 4 or otherwise listed in Schedule 5 of the *Catchment and Land Protection Act 1994* (Vic), subject to any relevant amendments or revocations published in the Government Gazette.

**‘stand’** means a group of trees in a **forest** that can be distinguished from other groups on the basis of age, species composition, condition, etc. Usually at least 1 ha in size.

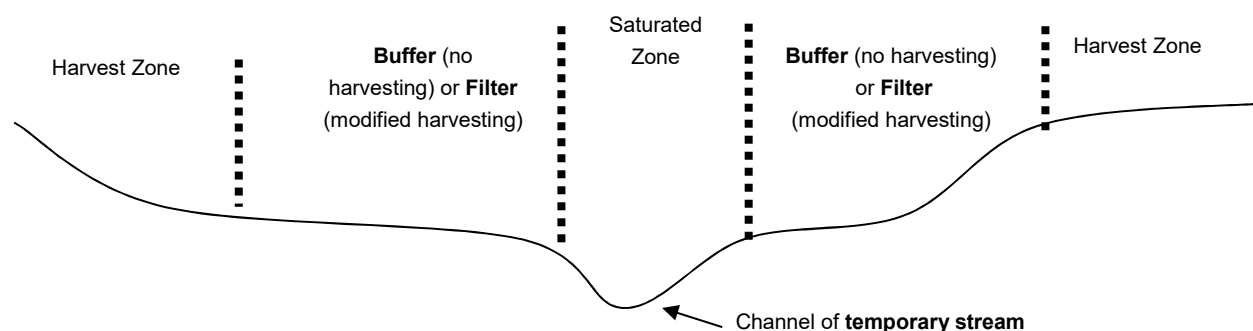
**‘State forest’** has the same meaning as in the *Forests Act 1958* (Vic) and any other category of **public land** where **timber harvesting operations** are a permitted land use but does not include land occupied under a licence under the *Victorian Plantations Corporation Act 1993* (Vic).

**‘stocking’** means a measure of density of any given **forest stand**, which can be expressed in a variety of terms, such as the number of trees per hectare, the **basal area** per hectare, and the percentage of stocked plots.

**‘temporary effluent’** has the same meaning as **temporary stream**.

**‘temporary road’** means a road or track and any associated bridges, crossings and culverts that does not form part of the **permanent road** network. A temporary road is usually constructed for the purpose of accessing a **coupe(s)** (or part thereof) to undertake a **timber harvesting operation** and will be closed and rehabilitated on the completion of the **timber harvesting operation** in that **coupe(s)**. A temporary road can include **in-coupe roads** and **coupe access roads** or driveways.

**‘temporary stream’** means a stream that has a clearly defined continuous channel or streambed and flow during certain seasonal periods of the year, such as following snowmelt, but not throughout the year. Temporary streams contain distinctive **riparian vegetation** (except where previously removed by human activity, and not including *E camaldulensis*), indicative of periods of **saturation** and distinguishable from vegetation communities in surrounding areas. Note: in **native forests**, **temporary streams** may be protected from harvesting by **buffers** or **filter strips** (Figure 3). Refer to the **Management Standards and Procedures**.



### Figure 3 – Temporary Streams in Native Forests

Temporary Streams have a clearly defined continuous channel or streambed, that flows subject to seasonal periods throughout the year. These may be protected by a buffer where harvesting is excluded. Note: Diagram not to scale. Zone widths vary according to circumstances.

‘**tending**’ means the treating of a **forest stand** to protect, maintain, or improve its **stand** health and/or timber production potential. **Thinning** and **selective harvesting** are types of tending.

‘**thinning**’ means the removal of part of a **forest stand** or crop, with the aims of increasing the growth rate and/or health of **retained trees** and, in commercial thinning, obtaining **timber** from trees that would otherwise eventually die before final harvest. Thinning is a type of **tending**.

‘**timber**’ means a general term used to describe standing trees or felled logs before processing into wood products. This includes timber from trees or parts of trees which are specified as available for **timber harvesting operations**, but does not include firewood collected for **domestic** use.

‘**timber harvesting operation**’ has the same meaning as in the *Sustainable Forests (Timber) Act 2004* (Vic).

‘**Timber Harvesting Plan**’ means a plan prepared under this **Code** for private **native forests** (Section 3.1.1) and **plantations** (Section 4.5.1), usually consisting of a map identifying the area(s) to be harvested and a statement of conditions applying to the timber production activity, and lodged with the **responsible authority**. The plan may apply to a single **coupe** or to an area in which a number of **coupes** are to be harvested.

‘**timber release plan**’ has the same meaning as timber release plan defined in the *Sustainable Forests (Timber) Act 2004* (Vic).

‘**understorey**’ means the layer of vegetation that grows below the **canopy** formed by the tallest trees in a **forest**.

‘**uneven-aged**’ means forests or **stands** where at least two distinct age groups of trees are present.

‘**verified**’ means verified by the **Department** according to established survey standards.

‘**VicForests**’ has the same meaning as it has in the *Conservation, Forests and Lands Act 1987* (Vic).

‘**water supply protection area**’ means a catchment from which water is used for domestic water supply purposes, and includes **Special Water Supply Catchments**, designated catchments identified in forest management plans and catchments protected under the statutory planning provisions in the *Planning and Environment Act 1987* (Vic).

‘**waterway**’ includes (but is not limited to) a **permanent stream**, **temporary stream**, **drainage line**, **pool or wetland** as those terms are defined in this **Code**.

‘**wetland**’ means a permanent spring, swampy ground, wetland or other body of standing water. A wetland may dry out seasonally. A wetland will support distinctive **riparian vegetation** (not including *E camaldulensis*), indicative of extended periods of **saturation** and distinguishable from vegetation communities in surrounding areas.

**'wildlife'** has the same meaning as in the *Wildlife Act 1975* (Vic).

**'wildlife corridor'** means a strip of **forest** of varying width reserved from harvesting, to facilitate fauna movement (including gene movement) between patches of forest of varying ages and stages of development.

# 1. General

## 1.1. Background

Wood products have long been harvested from our **native forests**. Over the past several decades, other users and uses of **forests**, such as **biodiversity** protection, clean water and recreation opportunities have become increasingly important to the community. An expanded network of national parks and other conservation reserves has been declared in areas that were once available for timber harvesting, and public scrutiny of **timber harvesting operations** is now acknowledged as integral to the right to use this natural resource.

**Plantations** are now the largest producer of **timber** in Victoria. **Plantations** provide commercial returns while potentially improving the health of catchments, diversifying farm income or providing another productive use for agricultural land.

Victoria has benefited significantly from a long period of scientific research and field-based forest management experience. As knowledge of forest ecosystems continues to develop, there will be a corresponding improvement in the management of forests that will ensure activities are undertaken within sound ecological limits to ensure a sustainable long-term path for this industry.

In 1989, the Victorian Parliament ratified the first *Code of Forest Practices for Timber Production*. **The Code** set out standards for **timber harvesting operations** in **State forests**, to better manage the potential impacts of timber harvesting. The Code was revised in 1996 to take account of new research information, field experience over the previous six years, and the implementation of the Code on **private land** in late 1993. The Code was further reviewed and published in 2007 and 2014.

In 2018, at the request of the Minister for Energy, Environment and Climate Change, the **Department** commissioned an independent review of timber harvesting regulations to ensure that environmental, cultural and economic values of **State forests** are protected and enhanced for future generations. The review panel developed a report outlining 14 recommendations, all of which were accepted in full by the **Department**. Recommendation 10 of the report outlined the need to improve regulatory tools, including by engaging with stakeholders to develop a common understanding of the **Code**. As such, the 2019 proposed variations of the Code aim to provide greater regulatory certainty and improve environmental outcomes. This variation of the **Code** builds on previous reviews, further clarifying the legal requirements of the **managing authority, harvesting entities** and **operators** when conducting and planning **timber harvesting operations**. The objectives of the 2019 **Code** variation are to ensure it is clear, accurate, enforceable and aligned to existing commitments. The **Code** will continue to be reviewed on a regular basis, informed by a comprehensive review of relevant forestry science.

## 1.2. The Code of Practice for Timber Production

### 1.2.1 Why a Code of Practice for Timber Production?

Maintaining the benefits to society provided by the timber industry depends on balancing community needs and concerns with careful stewardship and responsible management. The effective implementation of a **Code** helps to ensure that timber production is compatible with the conservation of the wide range of values associated with **forests**, and of any such values associated with land on which commercial **plantation** development is proposed.

### 1.2.2 Purpose of the Code

The purpose of the **Code** is to provide direction to the **managing authority, harvesting entities and operators** to deliver sound environmental performance when planning for and conducting commercial **timber harvesting operations** in a way that:

- permits an economically viable, internationally competitive, sustainable timber industry;
- is compatible with the conservation of the wide range of environmental, social and cultural values associated with **forests**;
- provides for the ecologically sustainable management of **native forests** proposed for cyclical **timber harvesting operations**; and
- enhances public confidence in the management of timber production in Victoria's **forests and plantations**.

### 1.2.3 How is the Code made?

The **Code** is made by the **Minister** under Part 5 of the *Conservation Forests and Lands Act 1987* (Vic). As the Code is a prescribed legislative instrument under the *Subordinate Legislation (Legislative Instruments) Regulations 2011* the *Subordinate Legislation Act 1994* (Vic) also applies to the making of the **Code**.

### 1.2.4 Scope of the Code

The **Code** applies to the planning and conducting of all commercial timber production and **timber harvesting operations** on both **public land** and **private land** in Victoria. **Timber harvesting operations** are defined in the *Sustainable Forests (Timber) Act 2004* (Vic) as any felling, cutting, removing and **haulage** activities carried out for the purposes of sale or processing and sale of **timber**. The **Code** does not apply to the collection or production of firewood for **domestic** use. Unless stated otherwise, any **haulage, road construction, significant road improvement or road maintenance works, tending, regeneration or rehabilitation** activities conducted in association with a **timber harvesting operation** are by definition, also a **timber harvesting operation**.

### 1.2.5 Policy and Laws governing timber harvesting operations in Victoria

Timber harvesting in Victoria is governed by a wide range of Commonwealth and State legislation, regulations and policies. The **Code** addresses the legal obligations that the **managing authority, harvesting entities and operators** must comply with during the planning and conducting of **timber harvesting operations** in addition to existing relevant law. Therefore, the **Code** does not duplicate the legal obligations of the **managing authority, harvesting entities and operators** already existing in Commonwealth or State legislation including the relevant laws (legislation) listed in the *Conservation, Forests and Lands Act 1987* (Vic). Appendix A provides a list of the existing legislation, regulations and policies that apply to **timber harvesting operations** that are in addition to the **Code**. Appendix A is not an exhaustive list.

### 1.2.6 Application of the Code

This **Code** and any document incorporated into this **Code** (including the **Management Standards and Procedures**) apply only to the **managing authority, harvesting entities and operators**.



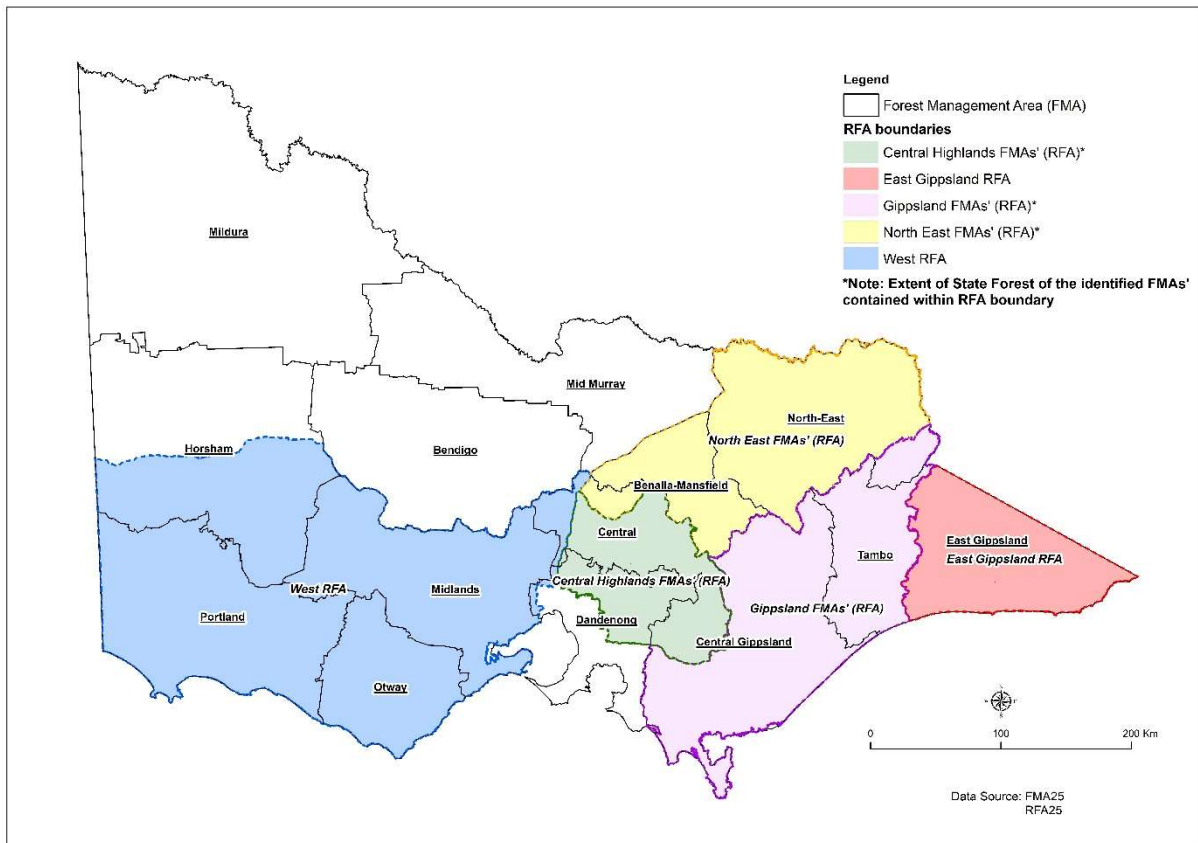
### 1.2.7 Description of Land to which Code Applies

The **Code** applies to all land in the State of Victoria that is either being used for or is intended to be used for timber production or **timber harvesting operations**.

On **public land**, the land to which this **Code** applies is **State forests** (Chapter two). On **private land** and leased **Crown** land, (chapters three and four), the land to which this **Code** applies includes land occupied under a licence under the *Victorian Plantations Corporation Act 1993 (Vic)*, land alienated from the Crown, unalienated land of the Crown occupied under a lease from the Crown, or unalienated land of the Crown managed and controlled by other than the Minister for Environment, Energy and Climate Change, the Minister for Agriculture, or the **Secretary**.

The **Code** does not apply to **domestic** firewood collection or production, **agroforestry**, windbreaks or other amenity plantings, or to the occasional felling of trees for local uses on the same property or by the same landowner or manager. Small **plantations** and woodlots of five hectares or less (total area existing or proposed on contiguous land which is in the same ownership) are also exempt from the **Code**, as are plantings established for non-commercial purposes. The **Code** does not apply to revegetation conducted for the purposes of erosion or salinity control.

The **Secretary** to the **Department** is a referral authority for **timber harvesting operations** applications as specified in Clause 66 of the Victoria Planning Provisions (VPPs) and all planning schemes. The **Code** is consistent with the VPPs in recognising that **plantations** are established primarily for **timber harvesting operations**. Thus, planning controls concerned with the development of **plantations** explicitly allow for their subsequent management and harvesting.



**Figure 4: Indicative map of forest management areas relevant to the Code.**

Several administrative management and planning and **forest management areas** exist across Victoria. These are important as they identify use of land and the how these areas of forest are managed.

### 1.2.8 Long-term (Strategic) Forest Management Planning

As a matter of broad policy, sound planning ensures that the full range of **State forest** values are managed sustainably for current and future generations. These values include ecological diversity, cultural heritage, landscape, provision of recreation and educational opportunities as well as a range of renewable forest products. It is important to ensure that forest management is responsive to changing community expectations, expanding knowledge of forest ecosystems and techniques to improve planning approaches.

Long-term (strategic) forest management planning is undertaken in accordance with legislation and processes such as **Regional Forest Agreements (RFA's)** and includes outputs like policies relating to specific forest values (e.g. threatened species) and forest management plans.

The **Forest Management Zoning Scheme (FMZS)** is a product of broad strategic planning and is a spatial representation of forest values which are managed in Victoria's **State forests**. The **FMZS** seeks to achieve a balance between a range of value inputs, conservation and forest use objectives, including consideration of legislative and policy constraints.

The **FMZS** identifies three management zones within **State forest**: the **Special Protection Zone (SPZ)**; the **Special Management Zone (SMZ)**; and the **General Management Zone (GMZ)**. **SMZs** are managed to conserve specific features and values, while catering for sustainable timber production and other utilisation activities under certain conditions, specified in **SMZ** plans. **SPZs** are managed primarily for conservation values, forming a part of Victoria's Comprehensive, Adequate and

Representative reserve system. **Timber harvesting operations** are generally excluded from **SPZ**. **GMZs** are managed for a range of uses and values, with sustainable timber production a major use.

Long-term forest management planning aims to maintain an ecologically sustainable timber resource that mitigates the impacts on all forest values. Effective and inclusive long-term forest management planning processes provide the setting for which the **Code** and the **Management Standards and Procedures** have been established, and seek to:

- provide for the perpetuation of native **biodiversity**;
- maintain a range of forest age classes and structures;
- identify and mitigate impacts on all cultural heritage values;
- minimise impact on water quality and quantity within any particular catchment;
- minimise adverse visual impact in **landscape sensitivity areas**; and
- facilitate effective **regeneration** of harvested forest.

### 1.2.9 Compliance on State forest

Under the *Sustainable Forests (Timber) Act 2004* (Vic), compliance with this **Code** is mandatory for any person planning for or conducting a **timber harvesting operation** on **State forest**. Penalties for non-compliance may apply if **timber harvesting operations** on **State forest** are not in accordance with the **Code**.

**Timber harvesting operations** on **public land** other than **State forest** are governed by lease and licence conditions which may specify a requirement to comply with this **Code**.

The **Code** is a prescribed legislative instrument made and enforced under relevant law listed in the *Conservation, Forests and Lands Act 1987* (Vic). For the purposes of each relevant law the **Secretary** is an **authorised officer** and is therefore responsible for ensuring compliance with the **Code** on **State forest**. The **Department's** Chief Conservation Regulator may be delegated by the **Secretary** to discharge these responsibilities and monitor compliance with authorised officers appointed by the **Secretary** pursuant to the *Conservation, Forests and Lands Act 1987* (Vic).

### Certification schemes

In addition, **timber** producers on **State forest** may choose to adopt independent product accreditation under national and international systems, which have associated performance criteria and auditing requirements that meet or exceed the requirements of this **Code**.

### Incorporated Documents

The *Management Standards and Procedures for timber harvesting operations in Victoria's State forests 2019* (**Management Standards and Procedures**) are incorporated into this **Code** to provide detailed mandatory operational instructions, including region specific instructions for **timber harvesting operations** in Victoria's **State forests**.

The **Management Standards and Procedures** are consistent with the Operational Goals and Mandatory Actions of this **Code** and must be complied with for **timber harvesting operations** in Victoria's **State forests**.

The **Management Standards and Procedures** are informed by relevant policy documents including policies relating to specific forest values such as threatened species, guidelines and strategies within forest management plans made under the *Forests Act 1958* (Vic) and **Action Statements** made

under the *Flora and Fauna Guarantee Act 1988* (Vic). The **Management Standards and Procedures** replace any directions relating to **timber harvesting operations** contained within these documents.

### 1.2.10 Compliance on Private Land

Timber production is a defined land use in the VPPs and all planning schemes. Clause 53.11 specifies the provisions relating to timber production and this **Code** is an incorporated document which must be considered.

**Local government** is responsible for ensuring compliance with the planning system. The **Code** must be complied with to the satisfaction of the **responsible authority** (usually **local government**), whether or not a permit is required.

#### Certification schemes

In addition, **timber** producers on **private land** may choose to adopt independent product accreditation under national and international systems, which have associated performance criteria and auditing requirements that meet or exceed the requirements of this **Code**.

#### Associated Documents

The *Management Guidelines for the Code of Practice for Timber Production on Private Land (native vegetation and plantations) in Victoria* (MGs) aid interpretation of the **Code** on **private land** and **plantations**. The MGs are consistent with the Operational Goals and Mandatory Actions of this **Code**. Variations to the MGs must address the Operational Goals and Mandatory Actions of this **Code**.

### 1.2.11 Terminology

The following terms are used in the **Code** to provide a structure for the **Code's** intended outcomes and the mechanisms within the **Code** to achieve these. The glossary provides further definitions.

A Code Principle is a broad outcome that expresses the intent of the **Code** for each aspect of sustainable forest management.

An Operational Goal states the desired outcome or goal for each of the specific areas of **timber harvesting operations**, to meet the Code Principles.

Mandatory Actions are actions to be conducted in order to achieve each operational goal. The **Managing authority, harvesting entities** and **operators** must undertake all relevant mandatory actions to meet the objectives of the **Code**. Mandatory Actions are focussed on practices or activities. Failure to undertake a relevant Mandatory Action would result in non-compliance with this **Code**.

## 1.3. Code Principles

Timber production on all **native forest** and **plantations** in Victoria are guided by the Code Principles described in Table 1. The Code Principles express the broad outcomes of the intent of the **Code** for each aspect of sustainable forest management.

The six Code Principles are developed from the internationally recognised Montreal Process criteria, and are consistent with the objectives of the *Sustainability Charter for Victoria's State forests*. Reporting mechanisms such as *Victoria's State of the Forests Report* use the same principles, and demonstrate Victoria's commitment to being an international leader in sustainable forest management.

The six Code Principles are that:

1. Biological diversity and the ecological characteristics of native flora and fauna within **forests** are maintained.
2. The ecologically sustainable long-term timber harvesting capacity of forests managed for timber harvesting is maintained or enhanced.
3. Forest ecosystem health and vitality is monitored and managed to reduce pest and weed impacts.
4. Soil and water assets within forests are conserved. River health is maintained or improved.
5. Cultural heritage values within forests are protected and respected.
6. Planning is conducted in a way that meets all legal obligations and operational requirements.

Timber production must always be planned and conducted according to knowledge developed from research and management experience so as to achieve the intent of the Code Principles. Application of this knowledge will ensure that **timber** can continue to be utilised while ensuring that impacts on soil, water, **biodiversity**, forested landscapes and significant archaeological, historic and other cultural heritage sites are avoided or minimised.

In Table 1, the Operational Goals of the **Code** are aligned with each Code Principle. These Operational Goals are repeated in the body of the **Code**, with a variety of Mandatory Actions to achieve each Goal. This framework translates the high level Principles into on-ground action.

**Table 1 Relationship between Code Principles and Operational Goals**

These high level operational principles each relate to achievable operational goals on the ground.

Code Principles	Operational Goals	Section
<p>Biological diversity and ecological characteristics of native flora and fauna within forests is maintained.</p>	<p>Timber harvesting operations in State forests specifically address biodiversity conservation risks and consider relevant scientific knowledge at all stages of planning and implementation.</p>	<p><b>2.2.2</b> and <b>3.2.2</b> Conservation of Biodiversity <b>1.2.8, 2.3.1</b> Operational Planning and <b>3.1.1</b> Forest Planning</p>
	<p>Timber harvesting operations in private native forests specifically address the conservation of biodiversity, in accordance with relevant legislation and regulations, and considering relevant scientific knowledge at all stages of planning and implementation.</p>	
	<p>Chemicals are only used where appropriate to the site conditions and application is conducted with due care for the maintenance of forest health, water quality, biodiversity and soil values.</p>	<p><b>2.2.2</b> and <b>3.2.2</b> Conservation of Biodiversity <b>4.3.2</b> Chemical Usage</p>
	<p>Fertiliser and chemicals are only used where appropriate to the site conditions and circumstances and with care for the maintenance and protection of water quality, biodiversity, soil values and neighbouring land uses.</p>	
	<p>Planning and implementation of timber harvesting operations in plantations address the conservation of biodiversity, including rainforest, in accordance with relevant laws.</p>	<p><b>4.2.2</b> Conservation of Biodiversity</p>
<p>The ecologically sustainable long-term timber production capacity of forests managed for timber harvesting operations is maintained or enhanced.</p>	<p>Harvested native forest is managed to ensure that the forest is regenerated and the biodiversity of the native forest is perpetuated.</p>	<p><b>2.2.2</b> and <b>3.2.2</b> Conservation of Biodiversity <b>2.6.1</b> and <b>3.5.1</b> Regeneration</p>
	<p>The natural floristic composition and representative gene pools are maintained when regenerating native forests by using appropriate seed sources and mixes of dominant species.</p>	
	<p>Timber harvesting operations are planned and conducted to maintain a long-term ecologically sustainable timber resource.</p>	<p><b>1.2.8, 2.3.1</b> Operational Planning</p>
	<p>Harvested native forest is managed to ensure that the forest is regenerated and the biodiversity of the native forest is perpetuated.</p>	<p><b>2.6.1</b> and <b>3.5.1</b> Regeneration</p>
	<p>Stocking and early seedling growth is monitored and remedial action is taken where necessary to successfully regenerate harvested areas of native forests.</p>	<p><b>3.5.2</b> Stocking Assessment and Remedial Treatment</p>
	<p>Timber harvesting operations are recorded in a way that facilitates future public reporting and policy purposes.</p>	<p><b>2.3.3</b> Record Keeping</p>

Code Principles	Operational Goals	Section
	The productive capacity and other values of the forest are maintained or enhanced by appropriate tending of stands.	<b>2.6.2</b> and <b>3.5.2</b> Tending
	The planning and management of permanent and temporary roads for timber haulage and machinery transport is fit for intended purpose, and protects environmental and cultural values and the safety of all road users.	<b>2.4</b> and <b>3.3</b> Rooding
	The management of all roads that are part of plantation timber harvesting operations takes account of environmental and cultural values, the safety of road users and the intended use of the road.	<b>4.4</b> Plantation Rooding
	<p>Timber harvesting operations are conducted in a manner appropriate to the site, and manages the impact on soil, water and other values, including biodiversity and cultural heritage.</p> <p>Timber harvesting is conducted in a manner appropriate to the site, to manage the impact on soil, water and other values, including biodiversity and cultural heritage.</p>	<p><b>2.5</b> Timber Harvesting</p> <p><b>3.4</b> and <b>4.5.2</b> Timber Harvesting</p>
<p>Forest ecosystem health and vitality is monitored and managed to reduce pest and weed impacts.</p>	<p>Forest <b>[plantation]</b> health is monitored and maintained by employing appropriate preventative, protective and remedial measures.</p>	<p><b>2.2.2</b> and <b>3.2.2</b> Conservation of Biodiversity</p> <p><b>4.3.3</b> Plantation Health</p>
<p>Soil and water assets within forests are conserved.</p> <p><b>River health</b> is maintained or improved.</p>	<p>Water quality and river health are maintained or improved by protecting waterways and aquatic and riparian habitat from disturbance.</p> <p>Water pollution is minimised and soil productive capacity is maintained by avoiding harvesting in inappropriate areas or slopes and undertaking necessary preventive measures.</p> <p>Water quality and river health are maintained or improved in plantations by protecting waterways from disturbance.</p> <p>Soil erosion and water pollution are minimised by avoiding timber harvesting operations in plantations in inappropriate areas or slopes and undertaking necessary preventative measures.</p> <p>Chemicals are only used where appropriate to the site conditions and is conducted with due care for the maintenance of forest health, water quality, biodiversity and soil values.</p> <p>Fertiliser and chemicals are only used where appropriate to the site conditions and circumstances and with care for the maintenance and protection of water quality, biodiversity, soil values and neighbouring land uses.</p>	<p><b>2.2.1</b> Water Quality and <b>2.3.1</b> Operational Planning</p> <p><b>2.2.1</b>, <b>3.2.1</b> and <b>4.2.1</b> Water Quality, River Health and Soil Protection</p> <p><b>2.2.1</b>, <b>3.2.1</b> and <b>4.2.1</b> Water Quality, River Health and Soil Protection</p> <p><b>4.3.2</b> Chemical Usage</p>

Code Principles	Operational Goals	Section
	<p>During or following wet weather conditions, timber harvesting operations are modified or where necessary suspended to minimise risks to soil and water quality values.</p>	<p><b>2.2.1, 3.2.1 and 4.2.1</b> Water Quality, River Health and Soil Protection</p> <p><b>2.5.3, 3.4.3 and 4.5.4</b> Timber Harvesting</p>
	<p>Site preparation is appropriate to the characteristics of the particular site, and take into account the maintenance of soil and water values as well as site productivity.</p>	<p><b>4.3.1</b> Site Preparation</p>
<p>Cultural heritage values within forests are protected and respected.</p>	<p>Long-term forest management planning maintains an ecologically sustainable timber resource that mitigates the impacts on all forest values.</p> <p>Effective and inclusive planning processes are used for timber harvesting operations to meet the requirements of this Code and the Management Standards and Procedures.</p>	<p><b>1.2.8 and 2.3.1</b> Operational Planning</p>
	<p>Timber harvesting operations are conducted in a manner appropriate to the site, and manages impacts on soil, water and other values including biodiversity and cultural heritage.</p>	<p><b>2.5, 3.4.1 and 4.5.2</b> Timber Harvesting</p>
<p>Planning is conducted in a way that meets all legal obligations and operational requirements.</p>	<p>Long-term forest management planning maintains an ecologically sustainable timber resource that mitigates the impacts on all forest values.</p> <p>Effective and inclusive planning processes are used for timber harvesting operations to meet the requirements of this Code and the Management Standards and Procedures</p>	<p><b>1.2.8 and 2.3.1</b> Operational Planning</p>
	<p>Plantations on private land are designed, managed and operated in accordance with this Code.</p> <p>Local government is appropriately informed of new plantation development on private land by the lodgement of either a Plantation Development Notice or a planning permit, in accordance with this Code.</p>	<p><b>4.1.1</b> Plantation planning and design</p>
	<p>Approval for timber production in native forests on private land is obtained through the relevant planning scheme.</p>	<p><b>3.1</b> Forest Planning</p>
	<p>A Timber Harvesting Plan is prepared in accordance with the requirements of this Code and submitted to the relevant local government prior to the commencement of timber harvesting.</p>	<p><b>3.1.1 and 4.5.1</b> Timber Harvesting Plan</p>
	<p>A Forest Coupe Plan which specifies operational requirements is prepared in accordance with this Code prior to the commencement of each timber harvesting operation.</p>	<p><b>2.3.1</b> Operational Planning</p>



## 2. Code Application – State Forests

This chapter applies to the planning, harvesting, roading, **tending** and **regeneration** of **State forests** where **timber harvesting operations** are conducted, including both **native forests** and **plantation forests** that are owned and managed by the State.

### 2.1 \*\*\*\*\* Revoked \*\*\*\*\* (Relevant content moved to Section 1.2.8)

### 2.2 Environmental Values in State forests

**Timber harvesting operations** in **native forests** may have local impacts on environmental values such as water quality and **biodiversity**. Appropriate planning and management through the lifecycle of the **timber harvesting operation** can minimise these impacts. This section includes requirements that must be observed during planning, roading, harvesting, **tending** and **regeneration** of **native forests**.

#### 2.2.1 Water Quality, River Health and Soil Protection

##### Operational Goals

Water quality and **river health** are maintained or improved by protecting **waterways** and aquatic and riparian habitat from disturbance.

Water pollution is minimised and soil productive capacity is maintained by avoiding harvesting in inappropriate areas or slopes and undertaking necessary preventive measures.

Chemicals are only used where appropriate to the site conditions and are applied with due care for the maintenance of forest health, water quality, **biodiversity** and soil values.

During or following wet weather, **timber harvesting operations** are modified or where necessary suspended to minimise risks to soil and water quality values.

##### Mandatory Actions

2.2.1.1 Planning and management of **timber harvesting operations** must comply with relevant water quality, **river health** and soil protection measures specified within the **Management Standards and Procedures**.

2.2.1.2 Management actions to protect **waterways**, **river health** and soil must be appropriate to the waterway class, soil category, and potential water quality risk posed by **timber harvesting operations** at each site.

2.2.1.3 Additional measures to protect water quality and aquatic habitat (including widening buffers or filter strips) must be adopted within **coupes** where there is a high local risk due to:

- i. local topography;
- ii. the intensity and magnitude of the **timber harvesting operation**;
- iii. events such as wildfire that reduce the effectiveness of protection measures; or
- iv. the location of the **timber harvesting operation** in a declared **Special Water Supply Catchment** or any other **water supply protection area**.

### Protecting waterways and aquatic and riparian habitat

- 2.2.1.4 Use **buffers** and **filters** of effective width in forest adjacent to aquatic and riparian habitats to protect them from **microclimate** changes, sedimentation and disturbance.
- 2.2.1.5 Where practical exclude roads and **snig tracks** from aquatic and riparian habitats.
- 2.2.1.6 Where crossings are required, minimise the extent of habitat damage, constriction to stream flow and barriers to fish and other aquatic fauna.
- 2.2.1.7 Remove temporary crossings immediately after harvesting or any subsequent **regeneration** work is complete using a technique that minimises soil and habitat disturbance.

### Minimising water pollution

- 2.2.1.8 Use drainage, artificial structures, **buffers** and **filters** of effective width to slow and disperse surface flows and deposit sediment before reaching waterways.
- 2.2.1.9 Locate **coupe infrastructure**, **roads** and other activities that generate sediment or other potential pollutants in places where risk of entry into waterways is lowest unless otherwise **sanctioned**.
- 2.2.1.10 Minimise the extent and duration of soil disturbance adjacent to or within waterways.
- 2.2.1.11 Use management practices such as modified harvesting techniques, scheduling, wet weather suspensions or progressive **rehabilitation** to minimise the potential for sediments and other pollutants to move into streams.
- 2.2.1.12 Design, construct and maintain **roads**, crossings, **coupe infrastructure** and drainage structures to withstand foreseeable rainfall events and traffic conditions, and protect water quality.
- 2.2.1.13 Ensure chemical use is appropriate to the circumstances and takes into account the maintenance of water quality.

### Maintaining soil productive capacity

- 2.2.1.14 Minimise potential for soil erosion or mass movement by planning and using operational methods and restrictions appropriate to the assessed soil erosion risk and slope.
- 2.2.1.15 Locate **coupe infrastructure** and roads to minimise soil erosion and degradation.
- 2.2.1.16 Use appropriate equipment, harvesting techniques and operational management to minimise soil rutting, mixing or compaction.
- 2.2.1.17 Limit the area of soil affected by **coupe infrastructure** and roads to the minimum required to safely complete **timber harvesting operations** to the required standard.
- 2.2.1.18 Employ topsoil conservation techniques in timber harvesting areas affected by **coupe infrastructure** and **roads**.
- 2.2.1.19 During **timber harvesting operations** maintain effective drainage of **coupe infrastructure** and **roads**.
- 2.2.1.20 Minimise the time soil is left unvegetated, except at **coupe infrastructure** sites that are required in the longer term.
- 2.2.1.21 Ensure chemical use is appropriate to the circumstances and takes into account the maintenance of soil productive capacity.

## 2.2.2 Conservation of Biodiversity

### Operational Goal

**Timber harvesting operations** in **State forests** specifically address **biodiversity** conservation risks and consider relevant scientific knowledge at all stages of planning and management.

Harvested **State forest** is managed to ensure that the **forest** is regenerated and the **biodiversity** of the **native forest** is perpetuated.

The natural floristic composition and representative gene **pools** are maintained when regenerating **native forests** by protecting long-lived **understorey** species and using appropriate seed sources and mixes of dominant species.

Forest health is monitored and maintained by employing appropriate preventative, protective and remedial measures.

Chemicals are only used where appropriate to the site conditions and are conducted with due care for the maintenance of forest health, water quality, **biodiversity** and soil values.

### Mandatory Actions

#### Addressing biodiversity conservation risks considering scientific knowledge

- 2.2.2.1 Planning and management of **timber harvesting operations** must comply with relevant biodiversity conservation measures specified within the **Management Standards and Procedures**.
- 2.2.2.2 The **precautionary principle** must be applied to the conservation of **biodiversity** values. The application of the **precautionary principle** will be consistent with relevant monitoring and research that has improved the understanding of the effects of forest management on forest ecology and conservation values.
- 2.2.2.3 The advice of relevant experts and relevant research in conservation biology and flora and fauna management must be considered when planning and conducting **timber harvesting operations**.
- 2.2.2.4 During planning identify **biodiversity** values listed in the **Management Standards and Procedures** prior to roading, harvesting, tending and **regeneration**. Address risks to these values through management actions consistent with the **Management Standards and Procedures** such as appropriate location of **coupe infrastructure, buffers, exclusion areas**, modified harvest timing, modified silvicultural techniques or retention of specific structural attributes.
- 2.2.2.5 Protect areas excluded from harvesting from the impacts of **timber harvesting operations**.
- 2.2.2.6 Ensure chemical use is appropriate to the circumstances and provides for the maintenance of **biodiversity**.
- 2.2.2.7 **Rainforest** communities must not be harvested.

#### Perpetuating the biodiversity of harvested native forests

- 2.2.2.8 Long-term (strategic) forest management planning must incorporate wildlife corridors, comprising appropriate widths of retained forest, to facilitate animal movement between patches of **forest** of varying ages and stages of development, and contribute to a linked system of reserves.
- 2.2.2.9 Modify coupe size and **rotation** periods to maintain a diversity of **forest** structures throughout the landscape.

- 2.2.2.10 Retain and protect **habitat trees** or habitat patches and long-lived understorey species to provide for the continuity and replacement of old **hollow bearing trees** and existing vegetation types within each coupe.
- 2.2.2.11 Use **silvicultural** systems that suit the ecological requirements of the forest type.
- 2.2.2.12 Regenerate harvested areas using seed from **overstorey** species with **provenances** native to the area.

### Maintaining forest health

- 2.2.2.13 Implement appropriate vehicle and equipment hygiene precautions when moving from areas of known pest plant, pest animal and pathogen infestations.
- 2.2.2.14 Implement appropriate control actions where **timber harvesting operations** have introduced or exacerbated a pathogen or weed.
- 2.2.2.15 Report the suspected introduction of new or unknown exotic agents to the Victorian Government's Biosecurity section.
- 2.2.2.16 Where Myrtle Wilt (*Chalara australis*), Cinnamon Fungus (*Phytophthora cinnamomi*) or Root Rot (*Armillaria*) is known to exist, apply appropriate measures to minimise the spread of these pathogens.

## 2.3 Operational Planning and Record Keeping

### 2.3.1 Operational Planning

Planning associated with the establishment of **timber harvesting operations** is critical to achieving the environmental outcomes encompassed by the **Code**. Operational planning includes a requirement for clear documentation of intended measures to protect the environment during proposed **timber harvesting operations** such as roading, harvesting, **tending**, **haulage** and **regeneration**.

#### Operational Goals

Effective and inclusive planning processes are used for **timber harvesting operations** to meet the requirements of this **Code** and the **Management Standards and Procedures**.

A **Forest Coupe Plan** which specifies operational requirements is prepared in accordance with the requirements of this **Code** prior to the commencement of each **timber harvesting operation**.

#### Mandatory Actions

- 2.3.1.1 All **timber harvesting operations** must be planned to meet the requirements of this **Code** and the **Management Standards and Procedures**.
- 2.3.1.2 A **Forest Coupe Plan** must:
- i) be prepared by the **managing authority** prior to the commencement of a **timber harvesting operation** including **road construction** coupes or **significant road improvement operation** coupes;
  - ii) communicate the intended boundaries, activities and requirements in adequate detail to enable **operators** to complete work to the required standard, comply with the **Code** and comply with the **Management Standards and Procedures** for the life of the **coupe**, and to support the **Secretary** in reviewing compliance;
  - iii) be **sanctioned** by the **managing authority**;

- iv) record evidence of **timber harvesting operations** being **approved** if occurring within **SPZ** or outside the area identified in an **Allocation Order** or licensed to the **harvesting entity**;
- v) record details of the type of **timber harvesting operation**; and
- vi) document all exemptions or temporary variations to operational requirements of the **Management Standards and Procedures** and any **sanctioned** activities or decisions made until the timber harvesting **coupe** is successfully regenerated and rehabilitated.

2.3.1.3 **Coupes** associated with roading, must be planned with adequate time to construct the required standard of access without compromising safety, water quality and other values

2.3.1.4 In addition to the requirements outlined in this **Code**, Forest Coupe Plans for **salvage harvesting operations** must complement any additional recovery strategies and **rehabilitation** plans.

### 2.3.2 Record Keeping

**Timber harvesting operations** records are routinely used for operational, policy and public information purposes.

#### Operational Goals

**Timber harvesting operations** are recorded in a way that facilitates future compliance checks, public reporting and policy development purposes.

#### Mandatory Actions

2.3.2.1 The following information must be recorded for all **timber harvesting operations** in a format that allows for future reference:

- i) harvesting and **tending** location, **silviculture** system and timing;
- ii) **regeneration** location, method, timing, seed source and final **stocking** rate; and
- iii) pre and post-harvest **basal area** in **tending** operations.

## 2.4 Roading for Timber Harvesting Operations

This section covers the planning, design, construction, maintenance and use of permanent and **temporary roads** for **timber haulage** and machinery transport. This section does not consider requirements for **snigging** and **forwarding tracks**, which are covered under **coupe infrastructure** (section 2.5.2).

**Timber harvesting operation roads** have the potential to create significant environmental impacts, particularly on water quality and **river health**. This **Code** aims to protect a range of environmental values while allowing safe and economic roading for **timber harvesting operations**.

#### Operational Goal

The planning and management of permanent and **temporary roads** for timber **haulage** and machinery transport ensures that the **roads** are fit for purpose and protect environmental and cultural values and the safety of all **road** users.

## 2.4.1 Road Planning

### Mandatory Actions

- 2.4.1.1 Planning and management of **timber harvesting operations** must comply with this **Code** and relevant **road** planning measures specified within the **Management Standards and Procedures** unless the **road** is covered by a formal roading agreement with the **Department** that would supersede this requirement.
- 2.4.1.2 **Road** planning and design for new and substantially upgraded roads must ensure the road network is safe and adequate for the intended range of uses and users, while ensuring the protection of water quality and conservation values, including **river health**.
- 2.4.1.3 **Road** planning must:
- i. locate **roads** so as to minimise risks to safety and environmental values, particularly soil, water quality and **river health**, during both construction and ongoing **road** use; and
  - ii. ensure that the timing of construction activities minimises risks associated with unsuitable weather conditions and provides for completion to the required standard in advance of **timber harvesting operations**.
- 2.4.1.4 Existing **roads** must be used for access to a **coupe** or work site and to haul timber, except where it can be clearly demonstrated that a new or relocated road further minimises or removes existing threats to soil, water quality or **biodiversity**.
- 2.4.1.5 **Forest Coupe Plans** for **roads** must be based on field surveys to ensure that all environmentally sensitive locations are identified and appropriate design and construction techniques are adopted.

## 2.4.2 Road Design

Good **road** design is vital to minimise construction and maintenance costs, reduce environmental risk such as impacts to water quality, improve efficiency of **haulage**, and ensure public safety is maintained. It is important when designing a new **road** or improvements to an existing **road** that water is moved off the **road** into undisturbed vegetation to reduce the velocity (and hence erosivity) of water, and to provide the greatest possible infiltration of water into soil to trap sediments before discharge into **waterways**.

**Road** design includes the consideration of location, use, traffic volume, aspect, soil type, slope, topography, surface materials, road shape as well as **road** drainage and other **coupe infrastructure** including culverts, drains, batters, bridges and fords.

### Mandatory Actions

- 2.4.2.1 Planning and management of **timber harvesting operations** must comply with this **Code** and relevant road design measures specified within the **Management Standards and Procedures** unless the road is covered by a formal roading agreement with the **Department** that would supersede this requirement.
- 2.4.2.2 New or upgraded roads must be designed to a standard capable of carrying anticipated traffic with reasonable safety, and ensure the protection of water quality and **river health**, and **biodiversity** conservation values.
- 2.4.2.3 All **fill disposal areas** and embankments must be planned and designed to minimise soil erosion, mass soil movement, and potential water quality deterioration.

- 2.4.2.4 Stream crossings must be designed according to traffic requirements and the nature, size and period of flow (both pre and anticipated post-harvest) and characteristics of the bed and banks of the stream.
- 2.4.2.5 Appropriate drainage must be provided. Spacing of drainage outlets along a **road** must take into account the soil erodibility, rainfall frequency and intensity, and the proximity of the road to streams.
- 2.4.2.6 Energy dissipating structures or silt traps must be used where necessary to reduce water velocity and trap sediments.
- 2.4.2.7 Drainage onto exposed erodible soil or over fill slopes must be avoided where possible. Structures and earthworks required to avoid such discharges are to be identified during planning and construction as required.
- 2.4.2.8 Drainage must be prevented from discharging directly onto any **road**.
- 2.4.2.9 Before entering a waterway, **road** drainage must discharge onto vegetation or through a structure that effectively dissipates the velocity of drainage flows.
- 2.4.2.10 Materials or techniques with low sediment generating potential must be applied to the **road** area on bridge approaches and on unsurfaced bridges or culverts, when crossing permanent or temporary streams.

### 2.4.3 Road Construction

#### Mandatory Actions

- 2.4.3.1 Planning and management of **timber harvesting operations** must comply with this **Code** and relevant **road construction** measures specified within the **Management Standards and Procedures** unless the **road** is covered by a formal roading agreement with the **Department** that would supersede this requirement.
- 2.4.3.2 **Road construction** must be conducted in a manner consistent with plans and designs.
- 2.4.3.3 All **fill disposal areas** and embankments must be appropriately stabilised. Where revegetation is used to stabilise fills or embankments, the species must be suitable for the site and where possible indigenous to the area.
- 2.4.3.4 Erosion and sediment control must be an ongoing activity over the duration of the construction activity, integrated with the works schedule. **Road construction** sites must have erosion mitigation measures in place and appropriate temporary drainage to ensure that the site is left protected between construction activities.
- 2.4.3.5 Quarry materials known to be infected with any pest plant or pathogen must not be used.
- 2.4.3.6 **Road construction** must ensure that:
  - i. disturbance to stream beds and banks is kept to a minimum;
  - ii. soil and rock fill is not pushed into **waterways**, nor placed into a position where there is a risk that it can erode into a **waterway**; and
  - iii. cement, raw concrete, soil fill and other **road** making materials are not spilt or disposed of into **waterways** during **road construction**.

#### 2.4.4 Road Maintenance

##### Mandatory Actions

- 2.4.4.1 Planning and management of **timber harvesting operations** must comply with this **Code** and relevant **road maintenance** measures specified within the **Management Standards and Procedures** unless the **road** is covered by a formal roading agreement with the **Department** that would supersede this requirement.
- 2.4.4.2 **Roads** used for **timber haulage** must be maintained in a manner that minimises erosion and protects water quality and other environmental values.
- 2.4.4.3 **Road** drainage systems must be maintained at sufficient frequency to minimise erosion and the discharge of sediment into **waterways**.
- 2.4.4.4 **Blading-off** of **roads** must be **sanctioned** and recorded in the **coupe diary** and is only permitted where measures are in place to prevent potential adverse impacts on water quality and where effective side drainage can be maintained.

#### 2.4.5 Suspension of Haulage

**Haulage** may need to cease on **forest roads** for periods when wet weather or other adverse conditions such as excessive dust affect the **road** surface and drainage and can compromise water quality and public safety.

##### Mandatory Actions

- 2.4.5.1 Planning and management of **timber harvesting operations** must comply with relevant suspension of **haulage** measures specified within the **Management Standards and Procedures** unless the **road** is covered by a formal roading agreement with the **Department** that would supersede this requirement.
- 2.4.5.2 Heavy vehicle traffic associated with **timber harvesting operations** must not use **roads** in **State forests** when persistent wet weather or **road** stability compromise **road** drainage and water quality.
- 2.4.5.3 Heavy vehicle traffic associated with **timber harvesting operations** must not use roads in **State forests** when persistent dry weather causes the surface materials to disintegrate to a degree that poses a threat to water quality, in the absence of suitable preventative or remedial actions to manage the risk to water quality.

#### 2.4.6 Road Closure

##### Mandatory Actions

- 2.4.6.1 Planning and management of **timber harvesting operations** must comply with relevant **road** closure measures specified within the **Management Standards and Procedures** unless the **road** is covered by a formal roading agreement with the **Department** that would supersede this requirement.
- 2.4.6.2 **Roads** no longer required for **timber harvesting operations** or other forest management purposes, must be permanently closed to vehicle traffic and effectively drained following completion of the **timber harvesting operation**.



## 2.5 Timber Harvesting

**Timber harvesting operations** in **State forest** are conducted in accordance with a **Forest Coupe Plan** (Section 2.3.1).

### Operational Goal

**Timber harvesting operations** are conducted in a manner appropriate to the site, and manages impacts on soil, water and other values including **biodiversity** and cultural heritage.

**Timber harvesting operations** are conducted in a manner that mass soil movements do not occur.

### 2.5.1 Coupe Management

#### Mandatory Actions

- 2.5.1.1 Planning and management of **timber harvesting operations** must comply with relevant **coupe** management measures specified in the **Management Standards and Procedures**.
- 2.5.1.2 **Timber harvesting operations** must be conducted in accordance with the Forest Coupe Plan and all applicable **Special Management Zone** plans.
- 2.5.1.3 The location of **coupe** boundaries, **Special Protection Zones**, **buffers**, **filters**, **exclusion areas**, areas where special management applies and **habitat trees** must be easily distinguishable in the field.
- 2.5.1.4 **Timber harvesting operations** must only be undertaken within established **coupe** boundaries as indicated on the Forest Coupe Plan and where required marked in the field, unless the **timber harvesting operation** is specifically **sanctioned** or **approved** in accordance with this **Code** and the **Management Standards and Procedures**.

#### Timber harvesting operations within areas that are not available for harvesting

- 2.5.1.5 **Timber harvesting operations** (excluding **road maintenance** and **haulage** on **existing roads**, **approved roads** or **sanctioned roads**) are not permitted in **Special Protection Zones**, **buffers**, or **exclusion areas** identified on the **Forest Coupe Plan**, except where:
  - i. The **managing authority** has been **approved** to conduct **timber harvesting operations**, including the removal of a limited number of trees associated with the construction and use of a **coupe-access road**, **snig track** or associated stream crossings within a **Special Protection Zone** or **exclusion area**; or
  - ii. the **operator** has been **sanctioned** to construct and use an **in-coupe road** or **coupe driveway**, **snig track** or associated stream crossing, including the removal of a limited number of trees associated with these activities within a **buffer** or **filter**; or
  - iii. the **operator** has been **sanctioned** to remove a limited number of trees to protect public or worker safety; or
  - iv. the **managing authority** has been **approved** to conduct **regeneration** or **rehabilitation** works of harvested **native forest** areas or use existing associated **coupe infrastructure** located within **Special Protection Zones** or **exclusion area**; or
  - v. the **operator** has been **sanctioned** to conduct **regeneration** or **rehabilitation** works in **buffers** or **filters**; or

- vi. the **managing authority** has been **approved** to conduct seed collection activities within **Special Protection Zones** or **exclusion areas**.

2.5.1.6 Areas outside the **coupe** boundary or within **special protection zones**, **buffers** and other **exclusion areas** must be protected from damage caused by trees felled in adjacent areas. Trees or debris accidentally felled into these areas may be removed only where **sanctioned**. **Sanction** will only be given if significant damage and disturbance of soil and vegetation outside the harvestable area can be avoided.

#### Timber harvesting operations within filter strips

2.5.1.7 Disturbance to soil and understorey vegetation from **timber harvesting operations** in **filter strips** must be minimised.

2.5.1.8 Trees may be felled from within **filter strips** where machinery does not enter the **filter strip**. The felling of trees into **filter strips** must be avoided where possible.

#### Timber harvesting operations on steep slopes

2.5.1.9 **Timber harvesting operations** must not occur on slopes where they cannot be conducted safely, or they threaten the stability of the soil or have high potential for adverse off-site effects. The potential for mass soil movement must be assessed by the **managing authority** and necessary preventative actions undertaken.

2.5.1.10 On slopes with a high soil erosion hazard or where there is an assessed risk of mass soil movement, additional measures must be taken to avoid movement of soil into streams, such as modification to harvesting methods or increasing of the widths of **buffers** and **filter strips**.

#### 2.5.2 Coupe Infrastructure

**Coupe infrastructure** includes log **landings**, log storage facilities, **snigging** and **forwarding tracks**, and boundary trails.

#### Mandatory Actions

2.5.2.1 Planning and management of **timber harvesting operations** must comply with relevant **coupe** infrastructure measures specified within the **Management Standards and Procedures**.

2.5.2.2 **Log landings** and log storage facilities must not be located in **SPZ** or **exclusion areas** unless **approved** and noted on the **Forest Coupe Plan**.

2.5.2.3 **Coupe** infrastructure must be rehabilitated on completion of **timber harvesting operations**, where not required for future **timber harvesting operations** or an authorised purpose for which **native vegetation** is not compatible. **Rehabilitation** techniques must ensure that suitable soil conditions are provided for the **regeneration** and growth of vegetation existing on the site prior to harvesting (refer to section 2.6.1). Progressive **rehabilitation** of **coupe** infrastructure during **timber harvesting operations** must be undertaken where operationally possible.

2.5.2.4 **Snigging** and **forwarding tracks** must be placed at the greatest practicable distance from **waterways** without compromising **operator** safety.

2.5.2.5 Tracks must have effective drainage to prevent soil erosion. Cross-drains, where used, must be spaced and angled as appropriate to the soil erosion hazard, to disperse surface run-off and prevent discharge of turbid water into streams or **drainage lines**.

- 2.5.2.6 **Snigging** and **forwarding** tracks and boundary trails must not be bladed off where this would result in an adverse impact on water quality or the loss of topsoil from the site. Any blading off of **coupe** infrastructure must be **sanctioned** and recorded in the **coupe diary**.
- 2.5.2.7 **Rehabilitation** of **coupe** infrastructure must be assessed within three years of initial treatment and, where found inadequate, remedial action must be taken.

### 2.5.3 Operational Restrictions

#### Operational Goal

During or following wet weather, **timber harvesting operations** are modified or suspended as necessary to minimise risks to soil and water quality values.

#### Mandatory Actions

- 2.5.3.1 Planning and management of **timber harvesting operations** must comply with relevant operational restrictions specified within the **Management Standards and Procedures**.
- 2.5.3.2 **Timber harvesting operations** must be suspended when water begins to flow along tracks, threatening stream water quality or soil values, unless appropriate remedial actions are taken.
- 2.5.3.3 **Timber harvesting operations** that involve machine traffic must be suspended when significant rutting would be caused by such traffic, unless actions are taken to actively manage that risk.
- 2.5.3.4 **Timber harvesting operations** conducted on **landings** must be suspended when continuation would result in significant deterioration of the **landing** surface causing increased levels of compaction or mixing of bark through soil on the **landing** surface.
- 2.5.3.5 **Snigging** and use of heavy machinery must not increase water quality risks from roading.

## 2.6 Forest Regeneration and Management

This section covers the **regeneration** of **State forests** and the subsequent management of such **forest stands**. Unless required for another **approved** purpose, all **State forest** areas subject to **timber harvesting operations** will be regenerated to standards that approximate the original **forest** composition.

### 2.6.1 Regeneration

#### Operational Goals

Harvested areas of **native forest** are successfully regenerated.

The natural floristic composition and representative gene **pools** are maintained when regenerating **native forests** by using appropriate seed sources and mixes of dominant **overstorey** species.

#### Mandatory Actions

- 2.6.1.1 Planning and management of **timber harvesting operations** must comply with relevant **regeneration** measures specified within the **Management Standards and Procedures**.
- 2.6.1.2 **State forest** available for **timber harvesting operations** must not be cleared to provide land for the establishment of **plantations**.

- 2.6.1.3 Action must be taken by the **managing authority** to ensure the successful **regeneration** of a harvested **coupe**, except where:
- i. the land is to be used for an authorised purpose for which **native vegetation** is not compatible (for example services, public infrastructure and structures); or
  - ii. **timber** has been harvested by **thinning**; or
  - iii. the naturally occurring **regrowth** is assessed as sufficient.
- 2.6.1.4 Following **timber harvesting operations**, **State forest** must be regenerated with **overstorey** species native to the area, wherever possible using the same **provenances**, or if not available, from an **ecologically similar locality**.
- 2.6.1.5 **Regeneration** must aim to achieve the approximate **canopy floristics** that were common to the **coupe** prior to harvesting, if known.
- 2.6.1.6 Silvicultural methods for **regeneration** must suit the ecological requirements of the **forest type**, taking into consideration the requirements of sensitive **understorey** species and local conditions.
- 2.6.1.7 Harvested **coupes** must be regenerated as soon as practical, including follow up or remedial action in the event of **regeneration** failure.
- 2.6.1.8 All practical measures must be taken to protect areas excluded from harvesting from the impacts of burns and other **regeneration** activities.
- 2.6.1.9 Where mechanical disturbance is used, it must be undertaken with due consideration of **erosion risks** and the proximity of **waterways** (refer to section 2.2.1).

## 2.6.2 Tending

Appropriate action may be taken to tend **native forest stands** where such actions are consistent with environmental safeguards and offsite impacts can be minimised. Examples of such action include **stand** improvement (such as selective **overwood** or underwood removal or reduction), **thinning**, fertilising and other silvicultural practices to promote **stand** health and timber production.

### Operational Goal

The productive capacity and other values of the **forest** are maintained or enhanced by appropriate **tending** of **stands**.

### Mandatory Actions

- 2.6.2.1 Planning and management of **timber harvesting operations** must comply with relevant **tending** measures specified within the **Management Standards and Procedures**.
- 2.6.2.2 **Tending** must comply with all relevant mandatory actions for **timber harvesting operations**.
- 2.6.2.3 **Tending** must:
- i. enhance the ecologically sustainable long-term timber production capacity of the thinned **stand**;
  - ii. minimise impacts on **understorey** species, particularly long-lived elements; and
  - iii. avoid construction of roads, **landings** and associated **coupe infrastructure** that will not be required for subsequent **timber harvesting operations**.

## 3. Code Application – Private Native Forests

This chapter applies to all **timber harvesting operations** (including planning, harvesting, roading, **tending** and **regeneration**) for **native forests** on **private land**. Private **native forest** landowners need to consider potential impacts on soil and water quality, aquatic habitat, and **biodiversity**, Aboriginal and other cultural heritage places and visual amenity when managing **native forest** for timber production.

### 3.1 Forest Planning

Proper planning is critical to achieving timber production requirements and the environmental outcomes encompassed by the **Code**. Forest management planning provides clear documentation of intended reservation of areas, measures to protect the environment and proposed **timber harvesting operations**.

Under the requirements of planning schemes, timber production on **private land** must comply with the **Code**. **Local government** (the **responsible authority**) is required to consider the Operational Goals and Mandatory Actions in this **Code** when issuing permits for **timber harvesting operations**.

Private **native forest** harvesting must be in accordance with ‘*Guidelines for the removal, destruction or lopping of native vegetation (2017)*’, an incorporated document in the Victoria Planning Provisions and all planning schemes.

#### Operational Goals

Approval for **timber harvesting operations** in **native forest** on **private land** is obtained through the relevant planning scheme.

#### 3.1.1 Timber Harvesting Plan

A **Timber Harvesting Plan** is the basic record of the forest manager’s intended activities in an area of **forest**. It applies to a single **coupe**, a number of **coupes** or to an area in which a number of **coupes** are to be harvested. It assists the **managing authority**, harvesting entities and **operators** and **local government** in understanding and assessing:

- area to be harvested and operational requirements;
- compliance with the operational goals and mandatory actions of this **Code**;
- compliance with the planning scheme requirements; and
- compliance with relevant legislation.

#### Operational Goal

A **Timber Harvesting Plan** is prepared in accordance with the requirements of this **Code** and submitted to the relevant **local government** prior to the commencement of the **timber harvesting operation**.

#### Mandatory Actions

3.1.1.1 A **Timber Harvesting Plan** must be submitted to **local government** not less than 28 days before the commencement of any **timber harvesting operations**. The 28 day minimum lodgement time may be waived with the agreement of the **local government**.

3.1.1.2 A **Timber Harvesting Plan** is current for 24 months following lodgement with the **local government**.

3.1.1.3 When preparing a **Timber Harvesting Plan**, the following issues must be addressed:

- i. methods to minimise impacts on **biodiversity**, water quality and **river health** from **timber harvesting operations** including associated roads;
- ii. ways to minimise impacts on significant visual landscape values; and

- iii. ways to minimise impacts on cultural heritage values.

3.1.1.4 The **Timber Harvesting Plan** must include:

- i. landowners name and address;
- ii. estimated timber volumes to be harvested;
- iii. the proposed **haulage** route;
- iv. a map showing:
  - the coupe location(s);
  - the area(s) to be harvested;
  - areas excluded from harvesting within the **coupe** boundary, including areas reserved or specifically managed for **biodiversity** conservation, **waterway** protection (including any **buffers** or **filter strips**), or protection of cultural heritage values;
  - power lines; and
  - new or upgraded roads and **coupe** infrastructure within the property.
- v. conditions applying to the **timber harvesting operation**;
- vi. fire protection measures;
- vii. the period during which **timber harvesting operation** is to occur; and
- viii. a **regeneration** program to follow harvesting, where required.

3.1.1.5 The size of **clearfall**, **seed tree harvesting** or **shelterwood coupes** should generally not exceed 40 hectares **net harvested area**. **Coupes** may be aggregated but not exceed 120 hectares **net harvested area** over a period of up to five years. Aggregated coupes must not be contiguous (forming a **coupe** greater than 120 hectares within a five year period).

3.1.1.6 **Thinning coupes** must not exceed 120 hectares **net harvested area**. Single tree selection **coupes** may be of any size, where landscape or environmental values are not affected.

3.1.1.7 **Coupe** boundaries must take advantage of topographic and/or artificial features (such as roads and property boundaries) where they exist, with due regard to safety, operational requirements, landscape values and environmental values. Where **coupe** boundaries do not follow obvious natural or artificial features, they must be clearly marked on site.

3.1.1.8 Characteristics of **coupes** for salvage of timber in **forests** damaged by fire, pests, pathogens or other events may differ from undamaged forests. A special (salvage) plan or an amended **Timber Harvesting Plan** must be developed, taking into account:

- i. the need for urgency in timber recovery; and
- ii. the need to modify prescriptions, as required, to meet environmental care goals and address recovery strategies for other forest values such as fauna.

3.1.1.9 **Salvage harvesting operations** must take as much account of environmental care as any other **timber harvesting operation**.

3.1.1.10 A copy of the **Timber Harvesting Plan** and any supporting prescriptions must be provided to the **harvesting team leader**. The Plan's implementation, including specific prescriptions to be applied to the **coupe**, must be discussed with him/her. These documents must be available on site while **timber harvesting operation** is in progress.

3.1.1.11 All amendments and variations to operational requirements (such as the removal of trees from **buffers** or outside the **coupe** for safety purposes) must be documented in the **Timber Harvesting Plan** and dated by the **harvesting team leader**.

## 3.2 Environmental Values in Private Native Forests

**Timber harvesting operations** in private **native forests** may impact on environmental values such as water quality and **biodiversity**. Appropriate planning and management through the lifecycle of the **timber harvesting operation** can minimise these impacts.

This section includes requirements that must be observed during planning, **tending**, roading, harvesting and **regeneration of native forests on private land**.

### 3.2.1 Water Quality, River Health and Soil Protection

#### Operational Goals

Water quality and **river health** are maintained or improved by protecting **waterways** and aquatic and riparian habitat from disturbance.

Water pollution is minimised and soil productive capacity is maintained by avoiding harvesting in inappropriate areas or slopes and undertaking necessary preventative measures.

Chemicals are only used where appropriate to the site conditions and is conducted with due care for the maintenance of **forest** health, water quality, **biodiversity** and soil values.

During or following wet weather conditions, the **timber harvesting operation** is modified or where necessary suspended to minimise risks to soil and water quality values.

#### Mandatory Actions

##### Waterway Classification

- 3.2.1.1 Use the following categories when determining **buffer** and filter widths for **waterways** within and immediately adjacent to each **coupe**.
- i. **permanent streams, pools and wetlands;**
  - ii. **temporary streams;**
  - iii. **drainage lines.**

Aids to the identification of each class of **waterway** are provided in the glossary. The classification of a **waterway** is based on characteristics observed prior to harvesting, noting that stream flow may change following harvesting.

##### Protecting waterways and aquatic and riparian habitat

- 3.2.1.2 Management actions to protect **waterways**, **river health** and soil must be appropriate to the waterway class, soil category, and potential water quality risk posed by **timber harvesting operations** at each site.
- 3.2.1.3 Water quality and **river health** must be protected by establishing and maintaining **buffers** and/or **filter strips** (to each side of the **waterway**). **Buffers** and **filter strips** must be specified on the basis of field risk assessments, and the outcomes shown in the **Timber Harvesting Plan**. As part of the field risk assessment, the potential risk to water quality is determined through consideration of:
- i. **soil erodibility;**
  - ii. soil **permeability;**
  - iii. **rainfall erosivity** (including season of **timber harvesting operation**);
  - iv. topography;
  - v. type of **timber harvesting operation**; and
  - vi. location of **coupe** infrastructure.

3.2.1.4 Water quality and **river health** must be protected from **microclimate** changes, sedimentation and disturbance by maintaining buffers and/or filter strips (to each side of the **waterway**) of not less than the widths specified below in table 2.

**Table 2 Minimum widths in metres for buffers and filter strips applicable to various waterway categories, in relation to water quality risk and slope**

Waterway Class	Sites with low or moderate water quality risk	Sites with high or very high water quality risk	
	Slope 0-30°	Slope 0-20°	Slope 21° - 30°
1. Pools, permanent streams and wetlands	20m B	30m B	40m B
2. Temporary streams	10m F	10m B + 10m F	20m B
3. Drainage lines	10m F	10m F	15m F

**Notes:**

- Slope is the average slope of the **coupe** area in the vicinity of the water body.
- **Buffers** and **filter strips** must be applied to each waterway class regardless of the origins of the channelling.
- The width of **buffer** areas and **filter strips** must be measured in the horizontal plane, from the edge of the saturated zone (at time of harvesting) or channel (whichever is greater), on each side of the **waterway**.

3.2.1.5 Additional measures to protect water quality and aquatic habitat (including widening **buffers** or **filter strips**) must be adopted within **coupes** where there is a high local risk due to:

- i. local topography;
- ii. the intensity and magnitude of the **timber harvesting operation**; or
- iii. the location of the **timber harvesting operation** in a declared **Special Water Supply Catchment** or any other **water supply protection area**.

3.2.1.6 To the maximum extent possible, exclude **roads** and **snig tracks** from aquatic and riparian habitats.

3.2.1.7 Where crossings are required, minimise the extent of habitat damage, constriction to stream flow and barriers to fish and other aquatic fauna.

3.2.1.8 Remove temporary crossings immediately after harvesting or any subsequent **regeneration** is complete using a technique that minimises soil and habitat disturbance.



### Minimising water pollution

- 3.2.1.9 Use drainage, artificial structures, **buffers** and **filters** of effective width to slow and disperse surface flows and deposit sediment before reaching **waterways**.
- 3.2.1.10 Unless otherwise **approved** on the **Timber Harvesting Plan**, locate **coupe infrastructure, roads** and other activities that generate sediment and other potential pollutants in places where risk of entry into **waterways** is lowest.
- 3.2.1.11 Minimise the extent and duration of soil disturbance adjacent and within **waterways**.
- 3.2.1.12 Use management practices such as modified harvesting techniques, scheduling, wet weather suspensions or progressive **rehabilitation** to minimise potential for sediments and other pollutants to move into streams.
- 3.2.1.13 Design, construct and maintain **roads, crossings, coupe infrastructure** and drainage structures to withstand anticipated rainfall events and traffic conditions, and protect water quality.
- 3.2.1.14 Ensure chemical use is appropriate to the circumstances and takes into account the maintenance of water quality.

### Maintaining soil productive capacity

- 3.2.1.15 Minimise potential for soil erosion and mass movement by planning and using operational methods and restrictions appropriate to the soil **erosion risk** and slope.
- 3.2.1.16 Locate **coupe infrastructure and roads** to minimise soil erosion and degradation.
- 3.2.1.17 Use appropriate equipment, techniques and operational management to minimise soil rutting, mixing and compaction.
- 3.2.1.18 Limit the area of soil affected by **coupe infrastructure** to the minimum required to safely complete **timber harvesting operation** to the required standard.
- 3.2.1.19 Employ topsoil conservation techniques in areas affected by **coupe infrastructure**.
- 3.2.1.20 Maintain effective drainage of **coupe infrastructure and roads**.
- 3.2.1.21 Ensure chemical use is appropriate to the circumstances and takes into account the maintenance of soil productive capacity.

### 3.2.2 Conservation of Biodiversity

#### Operational Goal

Planning, harvesting, roading and **silvicultural** treatment in private **native forests** specifically address the conservation of **biodiversity**, in accordance with relevant legislation and regulations, and considering relevant scientific knowledge.

Harvested **native forest** is managed to ensure that the **forest** is regenerated and the **biodiversity** of the **native forest** is perpetuated.

The natural floristic composition and representative gene **pools** are maintained when regenerating **native forests** by using appropriate seed sources and mixes of dominant species.

#### Mandatory Actions

#### Addressing biodiversity conservation risks

- 3.2.2.1 Where fire is used in **timber harvesting operation**, all practicable measures must be taken to protect all areas excluded from harvesting from the impacts of unplanned fire.

3.2.2.2 **Rainforest** communities in Victoria must not be harvested. **Rainforest** communities must be protected from the impacts of harvesting through the use of appropriate **buffers** to maintain microclimatic conditions and protect from disease and other disturbance.

### Maintaining natural floristic composition and representative gene pools

3.2.2.3 Use **silvicultural** systems that suit the ecological requirements of the **forest type**.

3.2.2.4 Regenerate harvested areas using species and **provenances** native to the area.

### 3.2.3 Forest health

Maintaining forest health is important for ensuring the long-term ecological integrity and productivity of forests. Forest health can be promoted through **stand** management practices such as fire application, timber harvesting, including salvage felling and **thinning** and weed, pest and pathogen control. Some activities may require a permit from relevant planning authorities.

#### Operational Goal

Forest health is monitored and maintained by employing appropriate preventative, protective and remedial measures.

Chemicals are only used where appropriate to the site conditions and are conducted with due care for the maintenance of forest health, water quality, **biodiversity** and soil values.

#### Mandatory Actions

3.2.3.1 Implement appropriate vehicle and equipment hygiene precautions when moving from areas of known pest plant, pest animal and pathogen infestations.

3.2.3.2 Implement appropriate control actions where **timber harvesting operations** have introduced or exacerbated a pathogen or weed.

3.2.3.3 Report the suspected introduction of new or unknown **exotic** agents to the Victorian Government's Biosecurity section.

3.2.3.4 Where Myrtle Wilt fungus (*Chalara australis*), Cinnamon Fungus (*Phytophthora cinnamomi*) or Root Rot (*Armillaria*) is known to exist, apply appropriate measures to minimise the spread of these pathogens.

3.2.3.5 Ensure chemical use is appropriate to the circumstances and takes into account the maintenance of **biodiversity**.

## 3.3 Rooding for Timber Production

This section covers the planning, design, construction, maintenance and use of permanent and **temporary roads** for **haulage** and machinery transport. This section does not consider requirements for **snigging** and **forwarding tracks**, which are covered under **coupe** infrastructure (section 3.4.2).

Timber production **roads** have the potential to create significant environmental impacts, particularly on water quality and **river health**. The aim of this **Code** is to protect a range of environmental values while allowing economic rooding for timber production, management purposes and other uses.

#### Operational Goal

The planning and management of permanent and **temporary roads** for timber **haulage** and machinery transport ensures that the **roads** are fit for intended purpose and protect environmental and cultural values and the safety of road users.

### 3.3.1 Road Planning

#### Mandatory Actions

- 3.3.1.1 **Road** planning and design for new and substantially upgraded roads within the property must ensure the road is adequate for the intended use, while ensuring the protection of water quality and conservation values, including **river health**.
- 3.3.1.2 **Road** planning must:
- i. locate **roads** to minimise risks to environmental values, particularly soil, water quality and **river health**, during both construction and ongoing road use; and
  - ii. time construction activities to minimise risks associated with unsuitable weather conditions.
- 3.3.1.3 **Existing roads** must, where practicable, be used for access to a **coupe** or work site and to haul timber, except where it can be clearly demonstrated that a new or relocated **road** minimises or removes existing threats to soil, water quality or **biodiversity**.
- 3.3.1.4 Plans for **roads** must be based on field surveys to ensure all environmentally sensitive locations are identified and appropriate design and construction techniques adopted.

### 3.3.2 Road Design

Good **road** design is vital to minimise construction and maintenance costs, reduce environmental risk such as impacts to water quality, improve efficiency of **haulage**, and ensure public safety is maintained. It is important when designing a new **road** or improvements to an existing **road** that water is moved off the **road** into undisturbed vegetation to reduce the velocity (and hence erosivity) of water, and to provide the greatest possible infiltration of water into soil to trap sediments before discharge into **waterways**.

**Road** design includes the consideration of **road** location, aspect, shape, traffic frequency, type and volume, slope, topography, surface materials, as well as **road** infrastructure including culverts, drains, batters, bridges and fords.

#### Mandatory Actions

- 3.3.2.1 New or upgraded **roads** must be designed to a standard capable of carrying anticipated traffic with reasonable safety, and ensuring the protection of water quality and **river health**, and **biodiversity** conservation values.
- 3.3.2.2 All **fill disposal areas** and embankments must be planned and designed to minimise soil erosion, mass soil movement, and potential water quality deterioration.
- 3.3.2.3 Stream crossings must be designed according to traffic requirements and the nature, size and period of flow (both pre and anticipated post-harvest) and characteristics of the bed and banks of the stream.
- 3.3.2.4 Appropriate drainage must be provided. Spacing of drainage outlets along a **road** must take into account of the **soil erodibility**, the **rainfall erosivity**, and the proximity of the **road** to streams.
- 3.3.2.5 Energy dissipating structures or silt traps must be used where necessary to reduce water velocity and trap sediments.
- 3.3.2.6 Drainage onto exposed erodible soil or over fill slopes must be avoided where possible. Structures and earthworks required to avoid such discharges are to be identified during planning and construction as required.

### 3.3.3 Road Construction

#### Mandatory Actions

- 3.3.3.1 **Road construction** must be conducted in a manner consistent with plans and designs.
- 3.3.3.2 All **fill disposal areas** must be stabilised and rehabilitated when no longer required. Where revegetation is used to stabilise fills or embankments, the species must be suitable for the site and task, and where possible indigenous to the area.
- 3.3.3.3 Erosion and sediment control must be an ongoing activity over the duration of the construction activity, integrated with the works schedule. **Road construction** sites must not be left unprotected between construction activities, as this constitutes an unacceptable water pollution risk.
- 3.3.3.4 Quarry materials known to be infected with any pest plant or pathogen must not be used.
- 3.3.3.5 **Road construction** must ensure that:
- i. disturbance to stream beds and banks is kept to a minimum;
  - ii. soil and rock fill is not pushed into streams, nor placed into a position where there is a risk that it can erode into a stream; and
  - iii. cement, raw concrete, soil fill and other road making materials are not spilt into watercourses during any construction.

### 3.3.4 Road Maintenance

#### Mandatory Actions

- 3.3.4.1 **Roads** used for **timber haulage** must be maintained to minimise erosion and protect water quality and other environmental values.
- 3.3.4.2 **Road** drainage systems must be maintained to minimise erosion and the discharge of sediment into **waterways**.
- 3.3.4.3 **Blading-off** of **roads** is only permitted where measures are in place to prevent potential adverse impacts on water quality and where effective side drainage can be maintained.

### 3.3.5 Suspension of Haulage

#### Mandatory Actions

- 3.3.5.1 Heavy vehicle traffic must not use **roads** in private **native forests** when persistent wet weather or **road** stability compromise **road** drainage and water quality.
- 3.3.5.2 Heavy vehicle traffic must not use **roads** in private **native forests** when persistent dry weather causes the surface materials to unravel to a degree that poses a threat to water quality, in the absence of suitable preventative or remedial actions to manage the risk to water quality.

### 3.3.6 Road Closure

#### Mandatory Action

- 3.3.6.1 **Roads** no longer required for **timber harvesting operations** or other management purposes, must be permanently closed and effectively drained.

## 3.4 Timber Harvesting

### 3.4.1 Timber Harvesting

#### Operational Goal

Timber harvesting is conducted in a manner appropriate to the site, to manage the impact on soil, water and other values including **biodiversity** and cultural heritage.

During or following wet weather conditions, **timber harvesting operations** are modified or where necessary suspended to minimise risks to soil and water quality values.

#### Mandatory Actions

3.4.1.1 All timber harvesting, including **thinning**, must be consistent with the **Timber Harvesting Plan**.

#### Coupe boundaries

3.4.1.2 The location of **coupe** boundaries, **buffers**, areas excluded from harvesting and areas where special management applies must be easily distinguishable in the field.

3.4.1.3 Timber harvesting must only occur within the designated boundaries of the **coupe** as indicated on the **Timber Harvesting Plan** and where required, marked in the field, unless the timber harvesting is specifically exempted in accordance with this **Code**.

3.4.1.4 **Timber** must be directed to fall within the **coupe** boundary unless unsafe to do so. A decision to fall outside the **coupe** boundary must be documented on the **Timber Harvesting Plan**.

#### Timber harvesting within buffers

3.4.1.5 Timber harvesting is not permitted in **buffers** (identified on the **Timber Harvesting Plan**), except where the limited removal of the minimum number of trees is necessary for:

- i. the protection of worker safety; or
- ii. the construction of roads or stream crossings.

#### Removal of trees from these areas must be noted on the Timber Harvesting Plan

3.4.1.6 **Buffers** must be protected from damage caused by trees felled in adjacent areas. Trees accidentally felled into **buffers** may be removed if significant damage and disturbance of soil and vegetation in the **buffer** can be avoided.

3.4.1.7 Machinery must not enter a **buffer** area except for the construction and use of stream crossings specified in the **Timber Harvesting Plan**.

3.4.1.8 Pushing of fill or harvesting debris into a **buffer** or construction of drain structures within a **buffer** is not permitted except for construction of an **approved** stream crossing.

#### Timber harvesting within filter strips

3.4.1.9 Trees may be felled from within **filter strips**. The felling of trees into **filter** strips must be avoided where possible.

3.4.1.10 Disturbance to soil and understorey vegetation from timber harvesting in filter strips must be minimised.

3.4.1.11 Machinery must not enter a filter strip, except at stream crossings as specified in the Timber Harvesting Plan.

3.4.1.12 Pushing of fill or harvesting debris into a filter strip is not permitted except for the construction of an **approved** stream crossing.

## Timber harvesting on steep slopes

- 3.4.1.13 Timber harvesting must not occur on slopes where it cannot be conducted safely, threatens the stability of the soil or has high potential for adverse off-site effects. The potential for mass soil movement must be assessed and necessary preventative actions undertaken.
- 3.4.1.14 Timber harvesting using ground-based machinery must be excluded from slopes greater than 30 degrees. Small areas within coupes (of less than 10 per cent of the net harvested area) that are greater than 30 degrees may be harvested where the land is assessed as capable of supporting activities without risk of soil movement.
- 3.4.1.15 Logging techniques specifically designed for steep slopes (such as cable logging) may be used on all steep slopes (exceeding 30 degrees) where the area is assessed as being capable of supporting harvesting activities without risk of soil movement.
- 3.4.1.16 On slopes with a high soil erosion hazard or where there is an assessed risk of mass soil movement, additional measures must be taken to avoid movement of soil into streams, such as modification to harvesting methods or increasing of the widths of buffers and filter strips.

### 3.4.2 Coupe Infrastructure

**Coupe** infrastructure includes log **landings** and dumps, **snigging** and **forwarding tracks** used as part of **timber harvesting operations**.

#### Mandatory Actions

- 3.4.2.1 Log **landings** and dumps must not be located within areas excluded from harvesting.
- 3.4.2.2 **Coupe** infrastructure must be rehabilitated on completion of timber production, where not required for future **timber harvesting operations**, using **rehabilitation** techniques that provide suitable soil conditions for the **regeneration** and growth of vegetation existing on the site prior to harvesting. Refer to section 3.5 of this **Code**.
- 3.4.2.3 **Snigging** and **forwarding tracks** must be placed at the greatest practicable distance from **buffers** and **filter strips**, without compromising **operator** safety.
- 3.4.2.4 Tracks must have effective drainage to prevent soil erosion. Cross-drains, where used, must be spaced and angled according to any prescriptions in planning schemes, conditions of any planning permit or other **approved** plan to prevent surface run-off and subsequent discharge of turbid water into streams or **drainage lines**.
- 3.4.2.5 **Snigging** and **forwarding tracks** must not be bladed off where this would result in an adverse impact on water quality or the loss of topsoil from the site.
- 3.4.2.6 **Rehabilitation** of **coupe** infrastructure must be assessed within three years of initial treatment and, where found inadequate, remedial action must be taken.

### 3.4.3 Operational Restrictions

#### Operational Goal

During or following wet weather conditions, **timber harvesting operations** are modified or where necessary suspended to minimise risks to soil and water quality values.

#### Mandatory Actions

- 3.4.3.1 **Snigging** and **forwarding** must be suspended when significant rutting is likely to be caused by machine traffic unless actions are taken to reduce that risk.

3.4.3.2 **Snigging** and **forwarding** must be suspended when water begins to flow along tracks, threatening stream water quality or soil values, unless appropriate remedial actions have been taken to protect those values.

3.4.3.3 **Timber harvesting operations on landings** must be suspended when continuation would result in significant deterioration of the **landing** surface causing increased levels of compaction or mixing of bark through soil on the **landing** surface.

## 3.5 Forest Regeneration and Management

This section covers the **regeneration** of private **native forest** and the subsequent management of such **stands**, where required. Unless required for another **approved** purpose, private **native forests** in Victoria are to be successfully regenerated to approximate the original forest composition.

### 3.5.1 Regeneration

**Regeneration** of private **native forests** must be in accordance with *Guidelines for the removal, destruction or lopping of native vegetation (2017)* an incorporated document in the VPPs and all planning schemes.

#### Operational Goals

Harvested **native forest** is managed to ensure that the **forest** is regenerated and that the **biodiversity** of the **native forest** is perpetuated.

The natural **floristic** composition and representative gene pools are maintained when regenerating **native forests** by using appropriate seed sources and mixes of dominant species.

#### Mandatory Actions

3.5.1.1 Action must be taken to secure the **regeneration** of harvested **coupes**, except where:

- i. the land is to be used for an **approved** purpose for which **native vegetation** is not compatible (for example, **approved** services, pre-existing apiary sites and infrastructure, and structures); or
- ii. timber has been harvested by **thinning** a **stand**; or
- iii. the **stocking** of seedlings or **regrowth** is assessed as sufficient through natural **regeneration** processes.

3.5.1.2 **Silvicultural** methods for **regeneration** must suit the ecological requirements of the **forest type** and local conditions.

3.5.1.3 Where fire is used in **regeneration**, all practicable measures must be taken to protect all areas excluded from harvesting (including **buffers** and **filter strips**).

3.5.1.4 Private **native forest** must be regenerated following **timber harvesting**, with species native to the area, wherever possible using the same **provenances**, or if not available, from an ecologically similar locality. An ecologically similar locality for a species is from a similar elevation, aspect, soil type and/or climate, preferably as close as possible to the harvested area.

3.5.1.5 Except where past management practices may have altered species composition, **regeneration** must aim to approximate the composition and spatial distribution of **canopy** species common to the **coupe** prior to harvesting, where they can be determined.

3.5.1.6 Where mechanical disturbance is used, it must be undertaken with due consideration of **erosion risk** potential and the proximity of **waterways** (refer to section 3.2.1).

### 3.5.2 Stocking Assessment and Remedial Treatment

#### Operational Goal

**Stocking** and early seedling growth is monitored and remedial action is taken where necessary to successfully regenerate harvested areas of **native forests**.

#### Mandatory Actions

- 3.5.2.1 **Stocking** on harvested **coupes** must be assessed within three years of treatment, to determine whether **regeneration** has been successfully achieved and to ensure that re-treatment occurs where necessary.
- 3.5.2.2 Where **stocking**, health or early growth is inadequate, remedial work must be conducted as soon as practicable to obtain adequate **regeneration**. Further assessment must be undertaken following remedial treatment.
- 3.5.2.3 The results of assessment must be recorded for future reference.

### 3.5.3 Tending

**Tending** includes **stand** improvement (such as **overwood** removal or reduction), **thinning**, fertilising and other **silvicultural** practices to promote **stand** health and timber production. Appropriate action may be taken to tend **native forest stands** where consistent with environmental safeguards and offsite impacts are minimised.

#### Operational Goal

The productive capacity and other values of the forest are maintained or enhanced by appropriate **tending** of **stands**.

#### Mandatory Actions

**Tending** must be planned and conducted in a manner that minimises adverse impacts on areas that are excluded from harvesting.



## 4 Code Application – Plantations

**Plantations** are managed **stands** of trees of either native or **exotic** species, planted or sown primarily for timber production purposes. This chapter applies to **timber harvesting operations** in all **plantations**, except those managed by the **Department** (which are subject to chapter two).

**Plantation** development is regulated by the Victoria Planning Provisions (VPP) and a permit is generally not required. Refer to your local planning scheme for details. The **Code** is an incorporated document in the VPP.

### 4.1 Plantation Planning and Design

#### 4.1.1 Plantation Planning and Design

##### Operational Goals

**Plantations** on **private land** are designed, managed and operated in accordance with this **Code**.

**Local government** is appropriately informed of **new plantation** development on **private land** by the lodgement of either a **Plantation Development Notice** or a planning permit, in accordance with this **Code**.

##### Mandatory Actions

4.1.1.1 **Plantation** design must take account of environmental values and be consistent with relevant fire protection requirements.

4.1.1.2 For new **plantations** where a planning permit is not required, a **Plantation Development Notice** must be lodged with the **local government** not less than 28 days prior to the commencement of **site preparation**. The 28 day minimum lodgement time may be waived with the agreement of the **local government**.

4.1.1.3 A **Plantation Development Notice** must include:

- i. the landowners name and address;
- ii. the total area to be planted;
- iii. species to be planted;
- iv. year of planting;
- v. a map of the **plantation**, showing:
  - the location of the **plantation**;
  - any access **roads** or tracks;
  - power lines;
  - any retained **native vegetation** within the **plantation** boundaries.

## 4.2 Environmental Values in Plantations

Environmental values such as **biodiversity**, carbon sequestration, salinity control and water quality in **plantations** must be considered at all stages, from planning through to harvesting and re-establishment. Adverse impacts from **plantations** on environmental values, particularly water quality and **river health**, can be minimised by appropriate planning and management.

### 4.2.1 Water Quality, River Health and Soil Protection

**Waterways** include all permanent and **temporary streams, pools, wetlands** and drainage lines\*. Well managed **plantation** establishment, **tending**, roading and harvesting near **waterways** may avoid unacceptable off-site impacts.

#### Operational Goals

Water quality and **river health** values are maintained or improved in **plantations** by protecting **waterways** from disturbance.

Soil erosion and water pollution are minimised by avoiding **timber harvesting operations** in inappropriate areas or slopes and undertaking necessary preventive measures.

#### Mandatory Actions

##### Waterways

- 4.2.1.1 The entry of soil and other pollutants into **waterways** must be avoided as far as is practicable.
- 4.2.1.2 **Timber harvesting operations** (including establishment, **tending**, roading, harvesting and re-establishment) must be planned and conducted in such a manner as to minimise mass movement or sedimentation of **waterways**.
- 4.2.1.3 Machinery activity within 20 metres of any **waterway** must be kept to the minimum necessary, to avoid soil disturbance.
- 4.2.1.4 Machinery activity must not occur within five metres of the saturated zone of a permanent or **temporary stream** (except for the minimum necessary to construct stream crossings), or **wetland**.
- 4.2.1.5 Crossing of **waterways** with ground-based machinery must be avoided, except when constructing or using a designated crossing. Where temporary crossings or log culverts are used, they must be removed immediately after harvesting or any subsequent replanting work for which they are required, using a technique that minimises soil disturbance.
- 4.2.1.6 Tree **extraction** must not cause disturbance to the bed or bank of permanent or **temporary streams**. Damage to associated **riparian vegetation** must be minimised.
- 4.2.1.7 Retained **native vegetation** along a **waterway** must be protected from damage caused by ground based **timber production**. Trees accidentally felled into retained vegetation or across a **waterway** may only be removed with minimal disturbance to vegetation or soil.

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\* Note that artificial **drainage lines** (ditches) are not considered waterways for the purpose of this Code.

- 4.2.1.8 Additional measures to protect water quality and aquatic habitat, including increasing the zone of minimal machinery activity, must be adopted where there is a high local risk due to:
- i. the erodibility of soils;
  - ii. **rainfall erosivity**;
  - iii. steep slopes;
  - iv. particular riparian habitat values;
  - v. the intensity and magnitude of the **timber harvesting operation**; and
  - vi. any particular requirements of a water supply off take point.

### Steep Slopes

- 4.2.1.9 **Timber harvesting operations** (including establishment, **tending**, roading, harvesting and re-establishment) must be planned and conducted in such a manner as to not compromise soil stability or lead to mass movement or sedimentation of **waterways**.
- 4.2.1.10 **Timber harvesting operations** must not occur on slopes where they cannot be conducted safely, or if it threatens the stability of the soil or has high potential for adverse off-site effects. The potential for mass soil movement must be assessed and necessary preventative actions applied.
- 4.2.1.11 Soil and water values must be protected by the limitation of **site preparation** and timber production on steep slopes or on lesser slopes of unstable soil where erosion hazard is high.
- 4.2.1.12 On slopes greater than 30 degrees with low or medium soil erosion hazard, and slopes less than 30 degrees with a high or very high soil erosion hazard, additional measures must be taken to avoid movement of soil into streams, such as the adoption of **cable harvesting** or the provision of appropriate **buffers** and **filter strips**.

## 4.2.2 Conservation of Biodiversity

### Operational Goal

**Timber harvesting operations** planning and implementation in **plantations** address the conservation of **biodiversity**, including **rainforest**, in accordance with relevant laws.

### Mandatory Actions

- 4.2.2.1 Retained **native vegetation** must be protected from damage caused by **timber harvesting operations**.
- 4.2.2.2 Any burning undertaken must be planned and managed to minimise damage to retained **native vegetation** both within and outside the operational area.

## 4.3 Establishment and Management of Plantations

Establishment activities for **plantation** development include **site preparation**, chemical usage and processes for maintaining forest health.

### 4.3.1 Site Preparation

**Site preparation** activities should be appropriate for successful tree establishment and growth, whilst minimising potential adverse environmental impacts.

#### Operational Goal

**Site preparation** is appropriate to the characteristics of the particular site, and take into account the maintenance of soil and water values as well as site productivity.

#### Mandatory Actions

- 4.3.1.1 If waste **timber** and debris are to be burned, then burning must minimise damage to retained **native vegetation** within or outside the operational area.
- 4.3.1.2 Burning must not be conducted under power lines except with approval from the electricity supply and distribution authority.
- 4.3.1.3 Where windrows or heaps are created, soil within them must be kept to a minimum.

### 4.3.2 Chemical Usage

Fertilisers may be applied at establishment and during the life of the **plantation** to stimulate growth and correct nutrient deficiencies. Chemicals may also be used to limit competition from grasses and weeds to maximise tree growth or to manage tree diseases or nutrient deficiencies affecting tree health.

#### Operational Goal

Fertiliser and chemicals are only used where appropriate to the site conditions and circumstances and with care for the maintenance and protection of water quality, **biodiversity**, soil values and neighbouring land uses.

#### Mandatory Actions

- 4.3.2.1 Chemical use must be appropriate to the circumstance and conducted with due consideration given to the maintenance of water quality, soil and **biodiversity**. Potential off-site, non-target impacts must be minimised.
- 4.3.2.2 When using herbicides or **pesticides** in a declared **Special Water Supply Catchment**, the relevant Water Authority must be notified prior to application.

### 4.3.3 Plantation Health

**Plantation** health may be promoted through management practices such as **thinning**, salvage harvesting, weed, pest and disease control, to ensure the ongoing viability of the **stand** and avoid impacts on nearby landowners.

#### Operational Goal

**Plantation** health is monitored and maintained by employing appropriate preventative, protective and remedial measures.

## Mandatory Actions

- 4.3.3.1 If the introduction of an **exotic** agent is suspected, the Victorian Government's Biosecurity section must be informed.
- 4.3.3.2 Where there is a known risk of introducing pests and pathogens, the risk must be minimised through appropriate treatment of equipment when moving from known infected areas.
- 4.3.3.3 Trees in the vicinity of power lines that are suffering from damage or disease must be removed where they are at risk of falling and making contact with power lines.

## 4.4 Plantation Roothing

This section covers the planning, design, construction, maintenance and use of **plantation roads** and stream crossings.

### Operational Goal

The management of all **roads** that are part of timber production take account of environmental and cultural values, the safety of **road** users and the intended use of the **road**.

#### 4.4.1 Road Planning

##### Mandatory Actions

4.4.1.1 **Road** planning for new **roads** must:

- i. identify and record possible environmental risks and construction difficulties, so that adequate design standards can be used, and so that construction activities can be timed to minimise risks associated with wet weather;
- ii. locate **roads** to minimise risks to environmental values, particularly soil, water quality and **river health**, during both construction and ongoing **road** use, while ensuring road user safety;
- iii. minimise the number of stream crossings.

#### 4.4.2 Road Design

**Road** design includes the consideration of traffic type and volume, surface materials, **road** shape as well as **road** infrastructure including culverts, drains, batters, bridges and fords.

Good **road** design is vital for maintaining water quality. It is important to control the speed (and hence erosivity) of water, and to provide the greatest possible infiltration to trap sediments before discharge into **waterways**.

### Mandatory Actions

- 4.4.2.1 **Plantation roads** must be designed to a standard capable of carrying anticipated traffic with reasonable safety, and meeting **Code** requirements, particularly water quality.
- 4.4.2.2 All **fill disposal areas** and embankments must be planned and designed to minimise soil erosion, mass soil movement, and potential water quality deterioration.
- 4.4.2.3 Stream crossings must be designed according to the nature, size and period of flow (both pre and anticipated post-harvest) and characteristics of the bed and banks of the stream.
- 4.4.2.4 Appropriate drainage must be provided. Spacing of drainage outlets along a **road** must take into account **soil erodibility**, the **rainfall erosivity**, and the proximity of the road to streams. Energy dissipating structures or silt traps must be used where necessary to reduce water velocity and trap sediments.
- 4.4.2.5 Drainage onto exposed erodible soil or over fill slopes must be avoided where possible. Structures and earthworks required to avoid such discharges must be identified during planning and construction as required.
- 4.4.2.6 Stream crossings must be appropriately designed to minimise barriers to the passage of fish and other aquatic fauna.

### 4.4.3 Road Construction

#### Mandatory Actions

- 4.4.3.1 **Road construction** must be conducted in a manner consistent with plans and designs.
- 4.4.3.2 All fill disposal areas must be stabilised and rehabilitated when no longer required.
- 4.4.3.3 Adequate temporary stabilisation must be employed to deal with site earthwork drainage and erosion control if **road construction** is halted or suspended for any reason.
- 4.4.3.4 Quarry materials known to be infected with any pest plant or pathogen must not be used.
- 4.4.3.5 **Road construction** must ensure that:
  - i. disturbance to stream beds and banks is kept to a minimum;
  - ii. soil and rock fill is not pushed into streams, nor placed into a position where there is a risk that it will erode into a stream; and
  - iii. cement, raw concrete, soil fill and other **road** making materials are not spilt into watercourses during any construction.

### 4.4.4 Road Maintenance

#### Mandatory Actions

- 4.4.4.1 **Roads** used for **timber haulage** must be maintained to minimise erosion and protect water quality and other environmental values.
- 4.4.4.2 **Road** drainage systems must be maintained to minimise erosion and the discharge of turbid water into **waterways**.
- 4.4.4.3 Blading off of **roads** is only permitted where measures are in place to prevent potential adverse impacts on water quality and where effective side drainage can be maintained.

#### 4.4.5 Suspension of Haulage

##### Mandatory Actions

- 4.4.5.1 Heavy vehicle traffic must not use **roads** in **plantations** when persistent wet weather or **road** stability compromise **road** drainage and water quality.
- 4.4.5.2 Heavy vehicle traffic must not use **roads** in **plantations** when persistent dry weather causes the surface materials to unravel to a degree that poses a threat to water quality, in the absence of suitable preventative or remedial actions to manage the risk to water quality.

#### 4.4.6 Road Closures

##### Mandatory Actions

- 4.4.6.1 **Roads** must be closed (either temporarily or permanently) and effectively rehabilitated where they are no longer required or where their continued use will threaten environmental values.
- 4.4.6.2 **Roads** that are permanently closed must be adequately drained.

### 4.5 Timber Harvesting

Timber harvesting is the felling of trees, and includes **thinning** of **plantations**. Mandatory Actions relevant to timber production that are necessary for the protection of environmental values are described in section 4.2.

#### 4.5.1 Timber Harvesting Plan

##### Operational Goal

A **Timber Harvesting Plan** is prepared in accordance with the requirements of this **Code** and submitted to the relevant **local government** prior to the commencement of harvesting operations.

##### Mandatory Action

- 4.5.1.1 A **Timber Harvesting Plan** must be submitted to **local government** not less than 28 days before the commencement of any harvesting operations. The 28 day minimum lodgement time may be waived with the agreement of **local government**.
- 4.5.1.2 When preparing a **Timber Harvesting Plan** the following issues must be addressed:
  - i. protection of relevant environmental and cultural heritage values;
  - ii. methods to minimise impacts on water quality and **river health** from timber harvesting and associated **roads**; and
  - iii. any necessary arrangements with the distribution authority for the electrical operational control of power lines during harvesting.
- 4.5.1.3 The **Timber Harvesting Plan** must include:
  - i. landowners name and address;
  - ii. the months during which operations are to occur;
  - iii. estimated timber volumes to be harvested;
  - iv. proposed **haulage** routes;
  - v. a map showing:
    - the **plantation** or **coupe** location;

- significant features within the **coupe** boundary including **waterways** and any areas reserved or specifically managed for protection of **biodiversity** or cultural heritage values;
  - the area(s) to be harvested;
  - new or upgraded **roads**;
  - power lines;
  - **plantation** infrastructure
- vi. conditions applying to the **timber harvesting operation**, including any permit conditions where required; and
- vii. fire protection measures.
- 4.5.1.4 A copy of the **Timber Harvesting Plan** and any supporting prescriptions must be provided to the **harvesting team leader**. The Plan's implementation, including specific prescriptions to be applied to the **plantation**, must be discussed with him/her. These documents must be available on site while **timber harvesting operations** are in progress. All amendments and variations to operational requirements (such as the removal of trees from **buffers** for safety purposes) must be documented in the **Timber Harvesting Plan** and dated by the **harvesting team leader**.
- 4.5.1.5 A **Timber Harvesting Plan** is current for 24 months following lodgement with **local government**.
- 4.5.1.6 A **Timber harvesting Plan** applies to a single **coupe**, a number of **coupes** or to an entire **plantation's timber harvesting operations**.
- 4.5.1.7 **Local government** may accept the lodgement of a **Timber Harvesting Plan** for multiple locations and operations rather than individual **Timber Harvesting Plans** if it is satisfied that the composite **Timber Harvesting Plan** adequately covers the information required for all **coupes** included in the Plan.
- 4.5.1.8 For larger operations covering several **coupes** over a period of years, a Scheduling Plan may be prepared and submitted (with the agreement of **local government**), which identifies:
- i. **coupe** general locations;
  - ii. planned operational periods;
  - iii. **haulage** routes; and
  - iv. expected volumes.
- 4.5.1.9 A Scheduling Plan replaces the need to include the information from 4.5.1.8 in a **Timber Harvesting Plan**. Submitting a Scheduling Plan does not remove the requirement for the remaining items in 4.5.1.3 to be addressed in a **Timber Harvesting Plan** and submitted at the appropriate time.
- 4.5.1.10 A Scheduling Plan is current for up to five years following lodgement with **local government**, however any significant variations must be communicated to **local government** prior to their implementation.

## 4.5.2 Timber Harvesting

### Operational Goal

Timber harvesting is conducted in a manner appropriate to the site, to manage the impact on soil, water and other values, including **biodiversity** and cultural heritage.



## Mandatory Action

- 4.5.2.1 All timber harvesting, including **thinning**, must be consistent with the **Timber Harvesting Plan**.
- 4.5.2.2 The location of boundaries must be easily distinguishable in the field.

## 4.5.3 Plantation Infrastructure

The operation of a harvesting **coupe** generally requires the development and use of specific infrastructure, including log **landings** and dumps, and **snigging** and **forwarding tracks**. The planning and use of **plantation** infrastructure must be undertaken in a manner that minimises impacts on environmental values.

### Mandatory Actions

- 4.5.3.1 **Plantation** infrastructure (including tracks) must be designed, located, constructed and maintained to minimise potential adverse impacts on soil and water quality.
- 4.5.3.2 The placement of log **landings** and dumps must avoid areas that have been excluded from harvesting specifically for the purpose of protecting or managing values such as **biodiversity** conservation, **waterways** or cultural heritage.
- 4.5.3.3 The area of log **landings** and log dumps must be minimised without compromising safety.
- 4.5.3.4 All infrastructure must be stabilised and rehabilitated to minimise **erosion risk** upon completion of timber production, where not required for future timber production. All tracks must be effectively rehabilitated to prevent soil erosion.
- 4.5.3.5 **Extraction** and **forwarding tracks** must be located to minimise potential adverse impact on soil and water quality and maintain effective drainage to prevent soil erosion. They should be placed at the greatest practicable distance from **waterways**, without compromising safety.
- 4.5.3.6 Tracks must have effective drainage to prevent soil erosion. Cross-drains, where used, must be spaced and angled to prevent surface run-off and subsequent discharge of turbid water into streams or **drainage lines**.
- 4.5.3.7 **Snigging** and **forwarding tracks** must not be bladed off where this would result in an adverse impact on water quality or the loss of topsoil from the site.

## 4.5.4 Operational Restrictions

### Operational Goal

During or following wet weather conditions, **timber harvesting operations** are modified or where necessary suspended to minimise risks to soil and water quality values.

### Mandatory Actions

- 4.5.4.1 **Timber harvesting operations** must be restricted or stopped where there is a risk to soil and water quality values during or following wet weather conditions.
- 4.5.4.2 Extraction, **forwarding** and **haulage** must be suspended when water begins to flow along tracks, except where appropriate preventive actions have been taken to address risks to off-site water quality.

## Appendix A

### Legislation, Regulations and Policies applying to timber harvesting operations on State forest and private land in Victoria.

Appendix A provides a list of legislation, regulations and policies applying to timber harvesting operations that are in addition to the Code. Appendix A is not an exhaustive list.

Commonwealth legislation	Public	Private
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>	Y	Y
<i>Agricultural and Veterinary Chemicals Act 1994</i>	Y	Y
<i>Australian Heritage Council Act 2003</i>	Y	Y
<i>Biosecurity Act 2015</i>	Y	Y
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Y	Y
<i>Export Control Act 1982</i>	Y	Y
<i>National Environment Protection Measures (Implementation) Act 1998</i>	Y	Y
<i>Native Title Act 1993</i>	Y	Y
<i>Regional Forests Agreement Act 2002</i>	Y	Y

State legislation	Public	Private
<i>Aboriginal Heritage Act 2006</i>	Y	Y
<i>Accident Compensation Act 1985</i>	Y	Y
<i>Agricultural and Veterinary Chemicals (Control of Use) Act 1992</i>	Y	Y
<i>Building Act 1993</i>	Y	Y
<i>Catchment and Land Protection Act 1994</i>	Y	Y
<i>Climate Change Act 2017</i>	Y	Y
<i>Conservation, Forests and Lands Act 1987</i>	Y	Y
<i>Country Fire Authority Act 1958</i>	Y	Y
<i>Crown Land (Reserves) Act 1978</i>	Y	N
<i>Dangerous Goods Act 1985</i>	Y	Y
<i>Electricity Safety Act 1998</i>	Y	Y
<i>Emergency Management Act 2013</i>	Y	Y
<i>Environment Protection Amendment Act 2018</i>	Y	Y
<i>Environment Protection Act 2017</i>	Y	Y
<i>Environmental Protection Act 1970</i>	Y	Y
<i>Fences Act 1968</i>	N	Y
<i>Firearms Act 1996</i>	Y	Y
<i>Fisheries Act 1995</i>	Y	Y
<i>Flora and Fauna Guarantee Act 1988</i>	Y	Y
<i>Forests Act 1958</i>	Y	Y

<i>Forests (Wood Pulp Agreement Act 1996)</i>	Y	N
<i>Heritage Act 2017</i>	Y	Y
<i>Heritage Rivers Act 1992</i>	Y	Y
<i>Land Act 1958</i>	Y	Y
<i>Land Conservation (Vehicle Control) Act 1972</i>	Y	
<i>Local Government Act 1989</i>	N	Y
<i>Marine and Coastal Act 2018</i>	Y	Y
<i>National Parks Act 1975</i>	Y	N
<i>Occupational Health and Safety Act 2004</i>	Y	Y
<i>Parks Victoria Act 2018</i>	Y	
<i>Planning and Environment Act 1987</i>	Y	Y
<i>Planning and Environment (Planning Schemes) Act 1996</i>	N	Y
<i>Plant Biosecurity Act 2010</i>	Y	Y
<i>Prevention of Cruelty to Animals Act 1986</i>	Y	Y
<i>Reference Areas Act 1978</i>	Y	N
<i>Road Management Act 2004</i>	Y	Y
<i>Safety on Public Land Act 2004</i>	Y	N
<i>State Owned Enterprises Act 1992</i>	Y	N
<i>Summary Offences Act 1966</i>	Y	N
<i>Sustainable Forests (Timber) Act 2004</i>	Y	N
<i>Subordinate Legislation Act 1994 (Vic)</i>	Y	Y
<i>Traditional Owner Settlement Act 2010</i>	Y	N
<i>Victorian Plantations Corporation Act 1993</i>	Y	Y
<i>Water Act 1989</i>	Y	Y
<i>Wildlife Act 1975</i>	Y	Y
<i>Workplace Injury Rehabilitation and Compensation Act 2013</i>	Y	Y

<b>Regulations*</b>	<b>Public</b>	<b>Private</b>
<i>Aboriginal Heritage Regulations 2018</i>	Y	Y
<i>Agricultural and Veterinary Chemicals (Control of Use) Regulations 2017</i>	Y	Y
<i>Conservation, Forests and Lands (Infringement Notice) Regulations 2017</i>	Y	Y
<i>Country Fire Authority Regulations 2014</i>	N	Y
<i>Dangerous Goods (Explosives) Regulations 2011</i>	Y	Y
<i>Dangerous Goods (HCGD) Regulations 2016</i>	Y	Y
<i>Dangerous Goods (Storage and Handling) Regulations 2012</i>	Y	Y
<i>Electricity Safety (Electric Line Clearance) Regulations 2015</i>	Y	Y
<i>Electricity Safety (Installations) Regulations 2009</i>	Y	Y

<i>Fences Regulations 2014</i>	N	Y
<i>Flora and Fauna Guarantee Regulations 2011</i>	Y	N
<i>Forests (Fire Protection) Regulations 2014</i>	Y	N
<i>Forests (Licenses and Permits) Regulations 2009</i>	Y	N
<i>Forests (Recreation) Regulations 2010</i>	Y	N
<i>Heritage Regulations 2017</i>	Y	Y
<i>Land Conservation (Vehicle Control) Regulations 2013</i>	Y	N
<i>Occupational Health and Safety Regulations 2017</i>	Y	Y
<i>Planning and Environment Regulations 2015</i>	Y	Y
<i>Subordinate Legislation (Legislative Instruments) Regulations 2011</i>	Y	Y
<i>Subordinate Legislation (Prevention of Cruelty to Animals Regulations 2008) Extension Regulations 2018</i>	Y	Y
<i>Road Management (General) Regulations 2016</i>	Y	N
<i>Traditional Owner Settlement Regulations 2017</i>	Y	N
<i>Victorian Plantations Corporation (Register of Plantation Licences) Regulations 2018</i>	Y	Y
<i>Wildlife Regulations 2013</i>	Y	Y
<i>Workplace Injury Rehabilitation and Compensation Regulations 2014</i>	Y	Y

<b>Policy</b>	<b>Public</b>	<b>Private</b>
<i>Australia's Biodiversity Conservation Strategy 2010-2030</i>	Y	Y
<i>Code of Practice for Bushfire Management on Public Land 2012</i>	Y	N
<i>Biodiversity 2037 – Protecting Victoria's Environment (2017)</i>	Y	Y
<i>Invasive Plants and Animals Framework (2017)</i>	Y	Y
<i>National Forest Policy Statement (1992)</i>	Y	Y
<i>National Forest Industries Plan (2018)</i>	Y	Y
<i>National Indigenous Forest Strategy (2005)</i>	Y	Y
<i>Our Forests, Our Future (2002)</i>	Y	Y
<i>State Environment Protection Policy (Air Quality Management)</i>	Y	Y
<i>State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade)</i>	Y	Y
<i>State Environment Protection Policy (Prevention and Management of Contamination of Land)</i>	Y	Y
<i>State Environment Protection Policy (Waters of Victoria)</i>	Y	Y
<i>Sustainability Charter for Victoria's State forests (2006)</i>	Y	N
<i>Victoria's Climate Change Adaptation Plan (2017-2020)</i>	Y	Y
<i>Water for Victoria (2016)</i>	Y	Y

\*Most statutory rules including many of these sunset after 10 years.



