

Plantations and Reafforestation (Code) Regulation 2001

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New South Wales

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New South Wales

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Plantations and Reafforestation (Code) Regulation 2001



New South Wales

1 Name of Regulation

This Regulation is the *Plantations and Reafforestation (Code) Regulation 2001*.

2 Commencement

This Regulation commences on the commencement of the *Plantations and Reafforestation Act 1999*.

Editorial note—

The *Plantations and Reafforestation Act 1999* commenced on 14.12.2001. See Gazette No 190 of 14.12.2001, p 9834.

3 Plantations and Reafforestation Code

The *Plantations and Reafforestation Code* set out in the Appendix to this Regulation has effect.

Note—

For the purposes of section 70 (4) of the *Plantations and Reafforestation Act 1999*, the Code sets out certain matters (relating to applications for authorisation under that Act, the creation of offences against the *Plantations and Reafforestation Code*, and the issuing of penalty notices in respect of certain offences against the Act and Code) for which Regulations are made under the Act.

4 Notes

The explanatory note, table of contents and notes in the text of this Regulation (including notes in the Appendix) do not form part of this Regulation.

5 Savings provision—authorised officers

A person who was an authorised officer under section 61 of the Act immediately before the substitution of that section by the *Plantations and Reafforestation Amendment Act 2010* is taken to be an authorised officer appointed under that section as substituted.

Appendix Plantations and Reafforestation Code

Part 1 Preliminary

1 Name of Code

This is the *Plantations and Reafforestation Code*.

2 Dictionary and definitions

- (1) Expressions that are defined in the Dictionary at the end of this Code have the meanings given to them by the Dictionary.
- (2) Expressions used in this Code that are defined in Part 1 of the *Plantations and Reafforestation Act 1999* have the same meanings in this Code as the meanings given to them in that Part unless they are otherwise defined in this Code.

Part 2 General

3 Authorisation of replanting, regeneration and coppicing on timber plantations

- (1) An authorisation for a timber plantation authorises (without the need for a new authorisation) the following:
 - (a) the management of the plantation by coppice (whether or not the cuttings are used for commercial purposes),
 - (b) any naturally occurring regeneration from plantation trees or shrubs,
 - (c) the replanting of trees or shrubs for the purpose of timber production, but only if the only area replanted is, or is part of, the area authorised to be planted for the purpose of timber production under the authorisation.
- (2) In this clause, **coppice** means the cutting back of plantation trees to encourage regeneration of further trunks from the root-stock.

4 Authorisation of progressive planting of plantations

An authorisation for a plantation may authorise the progressive planting of a plantation.

Note—

Clause 14 (3) sets out additional matters that must be included in the plantation plan that must accompany an application for authorisation of a plantation that is proposed to be planted progressively. Clause 54 sets out requirements relating to the time by which progressive planting must be completed.

5 Harvesting limit for exempt farm forestry

For the purposes of section 6 (1) (c) of the Act, the maximum amount of harvesting permitted for exempt farm forestry is the harvesting of the maximum amount of timber grown (including by replanting) on 30 hectares.

6 Harvesting limit for management operations

For the purposes of the definition of **management operations** in section 4 (1) of the Act, the maximum amount of harvesting permitted for management operations on a plantation is the harvesting (being the cutting and removal from the plantation) of 100 trees for each hectare of the plantation in each calendar year.

Note—

Trees that are cut down but not removed from the plantation are not counted as harvested trees for the purposes of applying this harvesting limit.

7 Arbitration

For the purposes of section 37 (1) (b) of the Act, the Minister must request the National Secretary of the Association of Consulting Foresters to appoint an independent arbitrator.

8 Matters excluded from operation of Code

This Code does not prevent the following:

- (a) the taking of any measures authorised to be taken under the [Rural Fires Act 1997](#), or the [State Emergency and Rescue Management Act 1989](#), in relation to an emergency within the meaning of the latter Act,
- (b) the taking of any measures authorised to be taken under section 63 of the [Rural Fires Act 1997](#) in relation to preventing the occurrence of bushfires, or minimising the danger of their spreading,
- (c) any clearing carried out in accordance with a bush fire risk management plan under the [Rural Fires Act 1997](#).

Note—

Accordingly, the taking of such measures, or the carrying out of such clearing, cannot amount to a contravention of the Code.

9 Application of Code to overlapping buffer zones

If the areas of any buffer zones required under Part 4 overlap, the overlapping area is taken to be or be part of the overlapping buffer zone that attracts the most restrictive provisions of this Code (and not part of the other buffer or buffers concerned).

10 Application of amendments to Code to authorised plantations

- (1) Any amendment to this Code applies to existing authorised plantations unless a provision of this Code expressly provides otherwise.
- (2) In this clause, **existing authorised plantations** means plantations that are authorised under the Act before the commencement of the instrument that makes the relevant amendment.

10A Requirement to check for Aboriginal sites

- (1) The owner and manager of an authorised plantation must ensure that, before any plantation operations involving soil disturbance are carried out on the plantation, a search of the Aboriginal Heritage Information Management System is undertaken in respect of possible Aboriginal objects located on the proposed site or sites of soil disturbance.

Maximum penalty: 100 penalty units.

- (2) Subclause (1) does not require such a search unless the soil disturbance activities are to be carried out more than 12 months after the authorisation of the plantation or more than 12 months after a previous search of the Aboriginal Heritage Information Management System in respect of the same site or sites.
- (3) In this clause, **Aboriginal Heritage Information Management System** means the database established under section 90Q of the *National Parks and Wildlife Act 1974*.

Part 3 Obtaining authorisation for a plantation

Note—

Clause 65 makes it an offence for a person to provide false or misleading information in or in relation to an application for authorisation of a plantation.

11 Site must be visited by authorised person before application is submitted

- (1) Before an application for authorisation of a plantation is submitted, the proposed plantation (being the area or areas of land comprising the plantation or proposed plantation with respect to which the application for authorisation applies) must be visited by a person authorised by the Director-General, for the following purposes:
 - (a) to assess the class of soil regolith stability (being R1, R2, R3 or R4, as defined in the Dictionary) and soil salinity,
 - (b) to identify any places, objects or items of heritage significance that are the subject of complying development standards in Division 2 of Part 4,
 - (c) to identify any areas of native vegetation that exist on the proposed plantation that are the subject of complying development standards in Division 3 of Part 4,
 - (d) to otherwise provide assistance in relation to the application.
- (2) The Director-General may waive this requirement by notifying the applicant in writing.
- (3) The identification of any Aboriginal objects carried out for the purposes of subclause (1) (b) is to be done in accordance with the *Aboriginal Due Diligence Code for Plantation Officers administering the Plantations and Reafforestation (Code) Regulation 2001*, published by the Department and dated 13 September 2010.

12 Application forms

- (1) An applicant for authorisation of a plantation must complete an application form, in the form approved by the Minister, that is appropriate to the type of authorisation sought.
- (2) The applicant is required to submit the application (including anything required by the application form or this Part to be submitted as part of the application) to the Director-General.
- (3) The Director-General must provide any person intending to make an application for authorisation with copies of the appropriate form.

13 Applicants must submit certain statements as part of application

- (1) An applicant for authorisation of a complying plantation must submit as part of the application a statement that shows compliance or proposed compliance with the complying development standards in Part 4.
- (2) An applicant for authorisation of a plantation under section 14 of the Act must submit as part of the application:
 - (a) a statement that shows the extent of any compliance or proposed compliance with the standards in Part 4, and
 - (b) a statement of the environmental effects of the plantation operations that do not or will not comply with those standards.

14 Applicants must submit plantation plan as part of application

- (1) An applicant for authorisation of a plantation must submit, as part of the application, a plantation plan that is prepared in accordance with this clause and any guidelines that the Minister may issue from time to time with respect to the content and preparation of plantation plans.
- (2) The plantation plan must include:
 - (a) the name, address and contact details of the manager or the owner or owners of the landholding (being the lot or lots on which the proposed plantation is or is to be situated), and
 - (b) details of any roads or proposed roads within the plantation or proposed plantation, and
 - (c) the location of any water storage for fire fighting purposes on the plantation and the access routes to the location.
- (3) If the application is for authorisation of a plantation that is to be progressively planted, the following must also be identified on the base image:

- (a) the sub-areas of the proposed plantable area that are to be progressively planted,
- (b) the year in which each of those sub-areas is proposed to be planted.

Part 4 Complying development standards for establishment operations

Notes—

- (1) All complying plantations must be established in accordance with these standards.
- (2) Section 13 (4) of the Act provides that it is a condition of an authorisation for a complying plantation that establishment operations comply with the relevant development standards of the Code (being the standards contained in this Part). Section 20 (6) of the Act makes it an offence for an owner or manager of an authorised plantation to contravene, or cause or permit the contravention of, any condition to which the authorisation is subject.

Division 1 Standards relating to the protection of soil and water

15 Buffer zones for drainage features

- (1) There must be a buffer zone at least 20 metres wide between:
 - (a) any area on which plantation operations are carried out, and
 - (b) any wetland of more than 0.1 of a hectare in size.
- (2) There must be a buffer zone at least 20 metres wide between:
 - (a) any area on which plantation operations are carried out, and
 - (b) the edge of any river.
- (3) Any drainage depression occurring on soil classed R4 in a plantation must have a buffer zone at least 10 metres wide on either side.
- (4) Any drainage line in a plantation must have a buffer zone at least 10 metres wide on either side.

16 Method for measuring buffer zones

The width of buffer zones is to be measured along the ground and from the following points:

- (a) in the case of a wetland—its edge,
- (b) in the case of a drainage depression occurring on soil classed R4—the centre of the depression,
- (c) in the case of a river or drainage line—the top edge of its banks.

17 Establishment operations in buffer zones on timber plantations

- (1) Planting in the buffer zone of any wetland or river:

- (a) must not be carried out for the purpose of harvesting, and
 - (b) may be carried out for the purpose of protecting the environment but only if:
 - (i) the planting is of local native species by manual cultivation, and
 - (ii) any woody native vegetation that comprises local native species and any native grassland of high conservation value in the buffer zone is retained.
- (2) Planting in the buffer zone of any drainage line, or any drainage depression occurring in R4 soil, may be carried out for the purpose of harvesting or protecting the environment but only if:
- (a) in the case of the drainage depression—there is no planting within 5 metres of the centre of the depression, and
 - (b) in the case of the drainage line—any planting within 5 metres of the edge of the drainage line is by manual cultivation, or spot cultivation by machinery so long as any tyres or tracks on the machinery do not enter the 5 metre area, and

Note—

For example, cultivation may be carried out within the 5 metre area by means of a cultivator head attached to an excavator, provided the excavator does not enter the 5 metre area.

- (c) any planting between 5 and 10 metres of the edge of the drainage line or the centre of the drainage depression is by:
 - (i) manual cultivation, or
 - (ii) spot cultivation, or
 - (iii) line ripping so long as soil conditions are such that only minimal soil disturbance is likely to be caused, or
 - (iv) line cultivation so long as soil conditions are such that only minimal soil disturbance is likely to be caused, the soil regolith is R1 or R3 and the rainfall erosivity rating is less than 2000.
- (d) any woody native vegetation that comprises local native species and any native grassland of high conservation value in the buffer zone is retained.

18 Slope limits and other restrictions on site preparation operations

- (1) Slope limits for mounding, line ripping and spot cultivation are set according to erosion hazard, which is determined on a combined reading of rainfall erosivity and class of soil regolith stability.

Note—

The classes of soil regolith stability referred to in this Division (R1, R2, R3 and R4) are defined in the Dictionary to this Code.

- (1A) Mounding must be constructed on the contour with grades that will not result in erosion of the mound channel or mound discharge point or erosion due to overtopping of the mounds.
- (2) Subject to subclause (3), mounding, line ripping and spot cultivation of the plantable area may be carried out only if the slope of the plantable area is within the slope limit set for an area with the combined rainfall erosivity and class of soil regolith stability of the plantable area, as set out in the Table in this subclause to which the relevant operation relates:

Slope limits for mounding

1. If the rainfall erosivity of the area is: (MJ.mm/ha.hr.yr)	2. And class of soil regolith stability for the area is:			
	R1	R2	R3	R4
	3. Then the slope of the area must not exceed:			
0-1999	30°	20°	25°	10°
2000-3999	25°	15°	20°	5
4000-5999	25°	10°	20°	no mounding allowed
6000 +	20°	5°	10°	no mounding allowed

Slope limits for line ripping and spot cultivation

1. If the rainfall erosivity of the area is: (MJ.mm/ha.hr.yr)	2. And the class of soil regolith stability for the area is:			
	R1	R2	R3	R4
	3. Then the slope of the area must not exceed:			
0-1999	30°	25°	30°	15°
2000-3999	25°	20°	25°	10°
4000-5999	25°	15°	25°	5°
6000 +	25°	10°	20°	5°

- (3) The slope limits apply only to the slope of the majority of the plantable area, that is,

individual areas of the plantable area of up to 50×50 metres may exceed the limit by up to 5° and still be included in the operation concerned, provided the total of such areas does not exceed 5% of the plantable area.

- (4) Runoff water flowing from mounds must be directed onto a stable area, or a structure, capable of filtering runoff water and trapping sediment.
- (5) Machinery used for site preparation must not be operated on a site being prepared if the soil on the site is saturated or if surface runoff is occurring. (Surface runoff occurs when rain is not immediately absorbed into the soil and becomes overland flow.)
- (6) Establishment operations must not cause impeded or concentrated water flow that results in soil erosion within drainage depressions.

Division 2 Standards relating to protection of places, objects or items of heritage significance

19 Buffer zones for places, objects and items of heritage significance

- (1) Any Aboriginal place or Aboriginal object that is identified in a plantation must be surrounded by a buffer:
 - (a) in the case of any burial site—at least 50 metres wide, and
 - (b) in the case of any scarred or carved tree or any stone arrangement—at least 20 metres wide, and
 - (c) in the case of any artefact scatter or any other Aboriginal place or Aboriginal object—at least 10 metres wide,unless a consent to disturb the place or object is obtained under that Act.
- (2) Any item of the environmental heritage that is identified in a plantation must be surrounded by a buffer at least 10 metres wide unless an approval or permit to disturb the item is obtained under the [Heritage Act 1977](#).

20 Method for measuring buffer zones

- (1) The width of the buffer zone of any Aboriginal place or item of the environmental heritage that is a place or a precinct is to be measured from the edge of its boundaries.
- (2) The width of the buffer zone of any Aboriginal object or item of the environmental heritage that is not a place or precinct is to be measured along the ground and from the outermost edges of the object or item or, in the case of a scatter of objects or items, from the outermost edges of the objects or items lying farthest from the centre of the scatter.

Division 3 Standards relating to protection of biodiversity

21 No clearing in buffer zones of places, objects or items of heritage significance

Clearing that is otherwise allowed by this Division is not allowed in relation to the buffer zones of places, objects or items of heritage significance.

22 Native vegetation that must be retained

- (1) The following native vegetation in a plantation must be retained (that is, the clearing of it is prohibited):
 - (a) any area of rainforest or wetland, or any native vegetation on rocky outcrops,
 - (b) any native vegetation of a type listed for conservation in the regional vegetation schedule,
 - (c) any native grassland of high conservation value,
 - (d) any individual patch of woody native vegetation (other than that referred to in paragraphs (a) and (b)) of more than 1 hectare.
- (2) Despite subclause (1) (d):
 - (a) regrowth vegetation that the regional vegetation schedule allows to be cleared may be cleared from any patch within that provision, and
 - (b) the Director-General may authorise the clearing of irregular projections from any patch within that provision if:
 - (i) the clearing is to improve the functional design of the plantation, and
 - (ii) not more than 10% of the patch is so authorised to be cleared.

Note—

Any area of native vegetation on a plantation that is the subject of the complying development standards in this Division will be identified by an authorised person during a pre-application visit under clause 11.

- (3) In this clause, **rocky outcrop** means any area of at least 0.2 of a hectare, 70% of the surface of which is comprised of exposed boulders of more than 0.6 of a metre in diameter.

23 Minimum number of native habitat trees that must be retained

- (1) If a plantation is 30 hectares or more:
 - (a) at least 30 native habitat trees must be retained on any given 30 hectares of plantation, or
 - (b) if there are less than 30 native habitat trees on any given 30 hectares of

plantation, all those trees must be retained.

Note—

If possible, habitat trees should be retained in groups of 2 or more to minimise the impact of this requirement on plantation design and to reduce loss of biodiversity.

- (2) If a plantation is less than 30 hectares, at least 1 native habitat tree must be retained for each hectare of the plantation.
- (3) Despite subclauses (1) and (2), any tree required to be retained under those provisions may be cleared if the following requirements are met:
 - (a) if the cleared tree has a diameter at breast height of between 40 and 80 centimetres:
 - (i) the cleared tree must be replaced with 10 new trees (being local native species), and
 - (ii) an area of at least 0.01 of a hectare must be retained, being the area on which the new trees are to be located,
 - (b) if the cleared tree has a diameter at breast height of more than 80 centimetres:
 - (i) the cleared tree must be replaced with 20 new trees (being local native species), and
 - (ii) an area of at least 0.02 of a hectare must be retained, being the area on which the new trees are to be located,
 - (c) the retained area on which the replacement trees are to be located (the designated area) may be located anywhere in the plantation provided that its location will enhance biodiversity or reduce soil salinity in the plantation (for example, by locating it adjacent to existing buffers or in buffers that do not contain native grassland of high conservation value),
 - (d) if 10, or 20, (as the case may be) tree seedlings have not naturally regenerated (that is, from seed-stock of existing local native species) in the designated area within 18 months then the balance of the replacement trees must be planted in that area as seedling trees,
 - (e) the 18 month period referred to in paragraph (d) is to start from the date that all plantation planting in the plantation is completed (or, in the case of a plantation that is authorised to be planted progressively, from the date of completion of all plantation planting in the sub-area in which the designated area is, or is primarily, located),
 - (f) any designated area for replacement trees (that is, before any natural regeneration or planting of seedlings occurs), and any replacement tree (including

any seedling tree) must be retained and managed in accordance with Division 6 of Part 5.

Note—

Under section 15 of the Act, the Minister is to require a species impact statement to accompany an application for authorisation under the Act if the Minister considers that such a statement would be required to accompany the application if it were a development application under Part 4 of the *Environmental Planning and Assessment Act 1979* for the plantation or proposed plantation.

Under section 13 of the Act, a plantation cannot be a complying plantation if it is one in respect of which a species impact statement is so required to be provided by the Minister.

- (4) Subclause (3) does not apply to a plantation that is authorised under the Act after the commencement of the *Plantations and Reafforestation (Code) Amendment Regulation 2010*.

24 Limit on clearing patches of woody native vegetation of 1 hectare or less on remainder of plantation

- (1) This clause applies to individual patches of woody native vegetation of 1 hectare or less and isolated native trees in a plantation other than those:
- (a) that are, or are parts of, buffer zones of drainage features or places, objects or items of heritage significance, or
 - (b) that are required to be retained by clause 22 or 23.
- (2) The maximum total area of native vegetation to which this clause applies that may be cleared from the area of the plantation that remains after excluding:
- (a) any buffer zone of a drainage feature or place, object or item of heritage significance, and
 - (b) any area of native vegetation or area designated for the location of replacement trees that is required to be retained by clause 22 or 23,

is an area equal to 10% of that remaining area.

Note—

In applying this limit, preference should be given to retaining native vegetation adjacent to the buffer zones of drainage features or that occurs on landscape features in the plantation (for example, ridge tops, upper, mid and lower slopes, and valley floors).

- (3) For the purpose of applying the limit on clearing in subclause (2) to isolated native trees:
- (a) an isolated tree with a diameter at breast height of more than 40 centimetres is taken to have an area size of 0.02 of a hectare, and
 - (b) an isolated tree with a diameter at breast height of 40 centimetres or less is taken

to have an area equal to the area that would be contained within the drip line of the tree.

- (4) Any native vegetation to which this clause applies that is not cleared in accordance with subclause (2) must be retained and managed in accordance with Division 6 of Part 5, unless it is regrowth vegetation that the regional vegetation schedule allows to be cleared.
- (5) (Repealed)

25 Regional vegetation schedule

- (1) The Minister may make a regional vegetation schedule for the purposes of this Code.
- (2) A regional vegetation schedule:
 - (a) is to identify the land to which it applies, and
 - (b) is to contain provisions relating to:
 - (i) the types of native vegetation that must be conserved on that land (being native vegetation that is or forms part of a community that is significantly limited in extent or whose numbers have been significantly reduced due to extensive clearing), and
 - (ii) the types of regrowth vegetation that may be cleared,in the establishment of complying plantations (being provisions that specify the range of species concerned and define the community structure that is to apply in respect of those species).
- (3) For the purpose of allowing submissions to be made on a draft regional vegetation schedule, the Minister must:
 - (a) exhibit the draft schedule at the Head Office of the Department and at its regional offices, and
 - (b) allow a period of not less than 30 days for comment, and
 - (c) before the draft schedule is exhibited, advertise the dates and places of exhibition and the period allowed for comment in a newspaper circulating throughout the State and (if the matter relates to a particular area only) in a local newspaper circulating in or near that area.
- (4) The consultation procedure under subclause (3) extends to amendments to a regional vegetation schedule that the Minister considers to be significant.
- (5) A regional vegetation schedule takes effect from the day that it is published in the Gazette (or on such later date as may be specified in the published schedule).

- (6) The Minister may amend or revoke a regional vegetation schedule.
- (7) Any amendment to a regional vegetation schedule takes effect from the day the amended version of the schedule is published in the Gazette (or on such later date as may be specified in the published schedule).
- (8) A revocation of a regional vegetation schedule takes effect from the day notice of the revocation is published in the Gazette.
- (9) A regional vegetation schedule applies to a plantation in the form in which the schedule exists at the time the application for authorisation of the plantation is lodged.
- (10) If, in relation to a plantation, there is no regional vegetation schedule in force when this Code commences, the Minister may, by notice published in the Gazette, determine the matters required to be dealt with in the schedule.
- (11) Any such notice is taken to be a regional vegetation schedule but is to operate as such only on an interim basis until such time as a regional vegetation schedule in respect of the plantation concerned is made in accordance with this clause.

Division 4 Standards relating to bush fire hazard reduction

25A Setbacks from buildings

- (1) This clause applies to establishment operations for an authorised plantation:
 - (a) that are carried out on or after the commencement of this clause, or
 - (b) that were not completed before the commencement of this clause,including establishment operations in respect of a replanting, but only if the replanting is more than 30 per cent of the plantable area, or 30 hectares, of a plantation, whichever is greater.
- (2) Establishment operations to which this clause applies must be carried out so as to ensure that no trees or shrubs are planted within 70 metres of any habitable dwelling, other than a habitable dwelling that:
 - (a) is located within the property boundary of the plantation, and
 - (b) is uninhabited.
- (3) If an uninhabited habitable dwelling that is located within the property boundary of a plantation becomes inhabited after establishment operations have commenced, any trees or shrubs planted within 70 metres of the dwelling in the course of those operations must be removed.
- (4) Establishment operations to which this clause applies must be carried out so as to

ensure that no trees or shrubs are planted within 100 metres of any building that has a special fire protection purpose.

(5) Subclauses (2)–(4) do not apply if the Director-General is satisfied that an appropriate distance has been established between a habitable dwelling, or a building that has a special fire protection purpose, and the trees or shrubs on a plantation in accordance with:

(a) *Planning for Bush Fire Protection*, or

(b) an applicable environmental planning instrument under the *Environmental Planning and Assessment Act 1979*.

(6) In this clause:

Building Code of Australia has the same meaning as it has in the *Environmental Planning and Assessment Act 1979*.

habitable dwelling means a building that:

(a) is a Class 1, 2, 3 or 4 building under the *Building Code of Australia*, and

(b) is in a habitable condition.

Planning for Bush Fire Protection means the document so entitled, ISBN 0 9751033 2 6, prepared by the NSW Rural Fire Service in co-operation with the Department of Planning, dated December 2006.

special fire protection purpose has the same meaning as it has in section 100B of the *Rural Fires Act 1997*.

(7) For the purposes of this clause, a building is in a **habitable condition** if:

(a) it has an intact roof, intact floors and intact walls, and

(b) it appears to be structurally sound.

25B Setbacks from powerlines

(1) This clause applies to establishment operations for an authorised plantation:

(a) that are carried out on or after the commencement of this clause, or

(b) that were not completed before the commencement of this clause,

including establishment operations in respect of a replanting, but only if the replanting is more than 30 per cent of the plantable area, or 30 hectares, of a plantation, whichever is greater.

(2) Establishment operations to which this clause applies must be carried out so as to

ensure that no trees or shrubs are planted within 6 metres from the outside edge of any powerline.

- (3) Establishment operations to which this clause applies must be carried out so as to ensure that any trees or shrubs planted within the following distances from the outside edge of any powerline do not exceed 3 metres in height:
- (a) in the case of a powerline with a nominal operating voltage of not more than 11kV—a distance greater than 6 metres from the powerline but not greater than 10 metres,
 - (b) in the case of a powerline with a nominal operating voltage of more than 11kV but not more than 33kV—a distance greater than 6 metres from the powerline but not greater than 12.5 metres,
 - (c) in the case of a powerline with a nominal operating voltage of more than 33kV but not more than 66kV—a distance greater than 6 metres from the powerline but not greater than 15 metres,
 - (d) in the case of a powerline with a nominal operating voltage of more than 66kV but not more than 132kV—a distance greater than 6 metres from the powerline but not greater than 22.5 metres,
 - (e) in the case of a powerline with a nominal operating voltage of more than 132kV but not more than 330kV—a distance greater than 6 metres from the powerline but not greater than 30 metres,
 - (f) in the case of a powerline with a nominal operating voltage of more than 330kV—a distance greater than 6 metres from the powerline but not greater than 35 metres.
- (4) In this clause, a **powerline** includes any structures or equipment used for or in connection with the supply of electricity.

25C Access to water supply

Any water storage located on a plantation must be accessible for fire fighting purposes wherever practicable.

Part 5 Regulation of management operations

Note—

Clause 66 makes it an offence for an owner or manager of an authorised plantation to contravene or cause or permit the contravention of any requirement imposed by this Part.

Division 1 Operational plans, records and data

26 Operational plan requirements

- (1) An operational plan must be prepared in respect of each of the following plantation operations:
 - (a) site preparation involving ripping or ploughing (including ripping or ploughing in combination with mounding),
 - (b) construction of a road,
 - (b1) any construction that crosses a drainage feature,
 - (c) any harvesting that exceeds the maximum amount of harvesting permitted for management operations (that is, any harvesting that involves the cutting and removal from the plantation of more than 100 trees for each hectare of the plantation in each calendar year).
- (2) An operational plan must be prepared before the commencement of the operation to which it relates.
- (3) If an operational plan is prepared in accordance with subclause (1) (c), the owner or manager must provide the Director-General with a copy of the plan at least 7 days before the commencement of harvesting operations.

27 Content of operational plans

- (1) All operational plans required under clause 26 must include the following:
 - (a) a map showing:
 - (i) the area that is to be the subject of the proposed operation, and
 - (ii) the boundaries of any area in the plantation in respect of which the carrying out of the proposed operation is restricted or prohibited by this Code or the authorisation for the plantation (with the relevant restriction or prohibition identified),
 - (b) work instructions for the carrying out of the proposed operation that identify:
 - (i) the procedures required to be used in the operation, and
 - (ii) any restrictions or prohibitions (as referred to in paragraph (a)) required to be considered in undertaking the operation.

The instructions must be written but may include diagrams.

Note—

Guidelines concerning the preparation of operational plans are available from the Department.

- (2) In addition, an operational plan that is required under clause 26 (1) (c) must:
 - (a) identify any roads, extraction tracks, loading sites and river crossings in the plantation that are to be used in the operation, and any directional requirements for extraction, and
 - (b) clearly indicate any areas designated as suitable for carrying out the harvesting operation in wet weather, and
 - (c) note any requirements for placing slash.

28 Operational records

- (1) All operational records (or a copy of them if they are prepared by a contractor) must be kept for 7 years.
- (2) The following matters must be included in operational records:
 - (a) any change in the size of the area that was the subject of the operation from that marked on the map in the operational plan, and
 - (b) any departure from, or variation of, the work instructions given in the operational plan, that was applied during the actual operation.
- (3) In this clause, **operational record** means any record (including an operational plan) that relates to an operation referred to in clause 26 (1).

28A Identification of fire roads and water storage

- (1) If a plantation has an area of 100 hectares or more, the owner or manager of the plantation must provide to the NSW Rural Fire Service and the Director-General a digital mapping layer that identifies any fire roads (within the meaning of clause 41C) and water storage within the plantation.
- (2) The digital mapping layer must be provided in a form approved by the Director-General and the Commissioner of the NSW Rural Fire Service.
- (3) The digital mapping layer must be provided:
 - (a) in the case of a plantation that is authorised under the Act on or after the commencement of this clause—within 3 months after the establishment of the plantation, or
 - (b) in the case of a plantation that was authorised under the Act before the commencement of this clause—within 3 months after the date of the first replanting of more than 30 per cent of the plantable area, or 30 hectares, of the plantation (whichever is greater), carried out after that commencement.

Division 2 Roads and tracks

Note—

Provisions in this Division that apply to roads and tracks apply also to fire trails that are roads or tracks. Provisions that apply specifically to fire trails apply whether the fire trail is a road or a track.

Subdivision 1 Road location and design

29 Meaning of “existing” and “new” road, track or fire trail

In this subdivision, **existing** road, track or fire trail refers to any road, track or fire trail that existed before the lodgement of the application for authorisation of the plantation on which it is located (and **new** road, track or fire trail means one that exists after that time).

30 Existing roads and tracks

Any existing road or track in a plantation, wherever located, may be used for plantation operations only if:

- (a) it is operationally stable, and
- (b) it is drained, maintained and managed in accordance with clauses 44–50.

31 Location of new roads

New roads must follow natural benches and ridges wherever possible, and should not be located on steep side slopes or unstable ground.

32 Roads and tracks to avoid crossing drainage features

New roads and tracks in a plantation:

- (a) must not cross any wetland, and
- (b) may only cross any other drainage feature if there is no practical alternative route available.

33 Roads and tracks in buffer zones

- (1) New roads and tracks must not be located in the buffer zone of any place, object or item of heritage significance, or of any wetland.
- (2) The only sections of new roads or tracks that may be located in the buffer zone of any other drainage feature are those:
 - (i) that are necessary to cross that drainage feature, or
 - (ii) whose location in the buffer zone will result in less environmental damage than if they were located on any practicable alternative route that would avoid the buffer zone.

- (3) Clearing of native vegetation in buffer zones for the purpose of creating tracks or constructing sections of road must be kept to the minimum necessary for their efficient creation or construction.

34 Roads, tracks and fire trails in retained areas of native vegetation

- (1) New sections of road, track or fire trail may be constructed in retained areas of native vegetation only if:
 - (a) there is no practicable alternative route available, and
 - (b) any section of road, track or fire trail within such an area:
 - (i) is no more than 50 metres long (or such other distance as may be agreed to by the Director-General), and
 - (ii) is of the minimum width required for its safe use.
- (2) In this clause, **retained area of native vegetation** means any area of native vegetation or area designated for the location of replacement trees that is required by the complying development standards in Division 3 of Part 4 to be retained (to the extent that the authorisation for the plantation requires compliance with those standards).

35 New roads on steep ground slopes

Sections of new roads may be constructed on ground slopes exceeding 30° only if:

- (a) there is no practical alternative route available, and
- (b) the sections are designed (after appropriate geotechnical investigation) by a suitably qualified person using currently acceptable engineering standards to ensure stability.

36 Use of unformed Crown roads for plantation operations

- (1) This clause concerns unformed Crown roads, which are public roads that are declared to be Crown roads for the purposes of the *Roads Act 1993* but the surface of which is either undefined or defined only by traffic use.
- (2) Plantation operations may be carried out on an unformed Crown road within the landholding only with the previous consent of all owners of neighbouring properties whose access through the Crown road is likely to be impeded by the plantation operations.

Subdivision 2 Crossings over drainage features

37 Types of crossings allowed

- (1) Crossings over drainage features (other than wetlands) may only be made using

bridges, culverts or causeways, or any combination of these.

Note—

Wetlands must not be crossed under any circumstances.

- (2) Despite subclause (1), machinery may cross through any drainage depression or drainage line if:
 - (a) the part of the drainage depression or drainage line where the crossing is to occur is shallow and dry, and
 - (b) the soil in the area surrounding the drainage depression or drainage line is dry, and
 - (c) measures are taken to prevent water from the approaches used by the machinery from running into the drainage depression or drainage line in the event of wet weather, and
 - (d) no earthworks are required to enable the machinery to cross through the drainage depression or drainage line.
- (3) Despite subclause (1), harvesting machinery may cross drainage lines or drainage depressions by using slash crossings, but only if there is no water flowing in the channel or depression.
- (4) Any temporary crossing over a drainage feature must be removed within 5 days of the completion of the plantation operation in respect of which it was erected.
- (5) The removal of any temporary crossing must be done in a manner that prevents, as much as is reasonably practicable, disturbance to the bed and banks of the drainage feature.
- (6) If the bed and banks of a drainage feature are in an unstable condition after the removal of a temporary crossing, the bed and banks must be reshaped to provide for a stable cross section where water flow is not impeded.
- (7) In this clause:

slash crossing means a temporary crossing formed by the placement of logging slash in the drainage line or drainage depression (generally to prevent damage to the banks of the drainage line or rutting within the depression).

temporary crossing means a crossing constructed to provide machinery access for only short term plantation operations such as harvesting.

38 Construction of crossings

The construction of any crossing over a drainage feature must be carried out in a manner that minimises the depositing of any loose material into the drainage feature and any

disturbance to its bed or banks.

39 Size and stability of crossings

- (1) Any crossing over a river must be designed, constructed and maintained:
 - (a) so as to enable conveyance of:
 - (i) the peak flow from a 1-in-5 year storm event (that is, a rainfall event predicted to occur on average once in 5 years), or
 - (ii) the flood plain level of flow (being the level of flow that needs to exist for water to break out of the defined banks of the river and enter a flood plain),whichever is the lesser, and
 - (b) so that the flow velocity through the crossing exceeds by no more than 10% the flow velocity through the natural channel of the river at the site of the crossing, that is, before the crossing existed (the aim being to prevent impediment to fish passage).

Note—

If a culvert is chosen as a crossing, arch and box culverts are to be preferred to pipe culverts.

- (2) Any causeway or culvert base used to cross a river must be set at the level of the stream bed so as to provide continuity in flow and so that a bed of natural sediment can form at the bottom.
- (3) Any crossing over a drainage feature (other than a river) must be designed to convey the peak flow from a 1-in-5 year storm event.
 - (3A) Any causeway or culvert base used to cross a drainage feature (other than a river) must be set at the level of the stream bed unless the average longitudinal gradient of the drainage feature within 50 metres upstream or downstream of the crossing is more than 6°.
 - (3B) The outlet of any causeway or culvert referred to in subclause (3A) must be stable and must facilitate the passage of fish.
 - (3C) Subclauses (3A) and (3B) apply only in respect of a causeway or culvert base constructed or replaced after the commencement of those subclauses.
- (4) The surface of any crossing, and the approaches on either side of it, must be made of stable material that is unlikely to be displaced during normal use of the crossing or approach, or by any flood up to and including the peak flow of a 1-in-10 year storm event (that is, a rainfall event predicted to occur on average once in 10 years).
- (5) Any causeway must consist of gravel, rock, bitumen, concrete, logs, or other stable

material that is unlikely to produce water turbidity.

40 Inspection and maintenance of crossings

All crossings must be inspected regularly and maintained in effective working order.

41 Approaches to crossings over rivers and drainage lines

- (1) Any approaches to a crossing over a river or drainage line must be drained, using a drainage structure, within 5 to 30 metres of the crossing (or if this is impracticable, such other further distance that is as near as practicable to the crossing).
- (2) Any approaches to a crossing over a drainage depression on soil classed R4 must be drained, with minimal exposure of subsoils, so that any concentrated water flow is managed to prevent scouring or channelisation within the depression.

Subdivision 2A Fire roads

41A Object of Subdivision

The object of this Subdivision is to require certain roads to be provided on plantations that are accessible by Category 1 fire tankers (as used by the NSW Rural Fire Service) and to make provision for the identification of such roads as fire roads on plantations.

41B Application

- (1) Subject to subclauses (2) and (3), this Subdivision applies:
 - (a) in the case of a plantation that is authorised under the Act on or after the commencement of this clause—on and from that commencement, or
 - (b) in the case of a plantation that was authorised under the Act before the commencement of this clause—on and from the date of the first replanting of more than 30 per cent of the plantable area, or 30 hectares, of the plantation (whichever is greater) carried out after that commencement.
- (2) Clause 41I (1)–(4) applies:
 - (a) in the case of a plantation that is authorised under the Act on or after the commencement of this clause—on and from that commencement, or
 - (b) in the case of a plantation that was authorised under the Act before the commencement of this clause—on and from the date of the first replanting of more than 30 per cent of the plantable area, or 30 hectares, of the plantation (whichever is greater) carried out after that commencement or the date that is 5 years after that commencement, whichever occurs first.
- (3) Clause 41I (5) applies:

- (a) in the case of a plantation that is authorised under the Act on or after the commencement of this clause—on and from that commencement, or
- (b) in the case of a plantation that was authorised under the Act before the commencement of this clause—on and from the date that is 1 year after that commencement.

41C Definitions

In this Subdivision:

access road means a road or track that provides trafficable access into or out of a plantation.

Category 1 fire tanker means a medium rigid 4WD vehicle used by the NSW Rural Fire Service that is up to 8 metres in length and is capable of holding more than 3,000 litres of water.

fire road means an access road, a perimeter track or a link road on a plantation that meets the requirements for a fire road under this Subdivision.

link road means a road or track that links any discontinuous section of a perimeter track to another section of perimeter track or to an access road.

perimeter track means a road or track constructed as close as possible to the edge of all planted areas of a plantation.

41D Construction of perimeter tracks and link roads

- (1) A perimeter track that is a fire road must be constructed on a plantation unless it is impractical to do so because of topography, slope, soil regolith or rainfall erosivity.
- (2) If it is not possible to construct a continuous perimeter track on a plantation, a link road that is a fire road must be constructed to link any discontinuous section of perimeter track to another section of perimeter track or to an access road that is a fire road, unless it is impractical to do so because of topography, slope, soil regolith or rainfall erosivity.

41E Designation of fire roads

The owner of a plantation may designate any access road on the plantation to be a fire road, but only if it meets the requirements for a fire road set out in this Subdivision.

41F General fire road construction requirements

- (1) A fire road:
 - (a) must have a trafficable width of at least 4 metres, and

- (b) must have strips at least 1 metre wide on each side that are kept clear of woody vegetation, and
 - (c) must have at least 4 metres of overhead clearance from any structure or foliage.
- (2) The grade for a fire road must not be more than 15°. However, a perimeter track may include two sections of not more than 200 metres in length with a grade of not more than 20° in any 500 metre length of track.
- (3) Any drainage feature crossing or any road drainage structure on a fire road must:
- (a) be constructed to enable a vehicle that is 8 metres long to freely pass over the crossing or structure, and
 - (b) have an approach and departure angle of not more than 25°.
- (4) If the height of any crossbank or drainage structure on a fire road is more than 300 millimetres, the ramp over angle must not be less than 165°. However, in the case of a perimeter track that has a grade of more than 12°, the ramp over angle must be as large as is practicable.
- (5) A fire road must not have a curve with a radius that is less than 15 metres.
- (6) A fire road must not have crossfall that is more than 6°. Any negative camber on a curve of a fire road must be minimised as much as is practicable.
- (7) The owner and manager of a plantation must ensure the following records are kept and are made available to the Director-General if requested to do so:
- (a) evidence in writing that any fire road on the plantation (and any bridge or culvert located on a fire road) was constructed so that it is suitable for a vehicle that weighs 15 tonnes gross and has an axle loading of 10 tonnes, and
 - (b) an inspection log that records that any such fire road, bridge or culvert has been inspected at least once a year and that it remains in substantially the same condition as when it was constructed.

41G Turnarounds

- (1) A turnaround area must be constructed:
- (a) at the end of any fire road if the road ends at a dead end, and
 - (b) at a suitable point on a fire road:
 - (i) where the road grade beyond that point is more than 12°, and
 - (ii) where the ramp over angle of any rollover structure beyond that point is less than 165°, and

- (c) before the road becomes inaccessible by a Category 1 fire tanker.
- (2) A turnaround area must have a radius of:
 - (a) at least 12 metres, or
 - (b) if there is insufficient space to have a radius of at least 12 metres because of topography—at least 10 metres.
- (3) Despite subclause (2), the following may be taken to be a turnaround area:
 - (a) a road intersection,
 - (b) a T-junction constructed perpendicular to a fire road on a level surface if each terminating end of the junction is at least 10 metres in length from the intersection of the roads and the inner radius of that intersection is at least 6 metres.

41H Passing opportunities

- (1) Passing opportunities alongside a fire road must be constructed at intervals of not more than 250 metres, unless the topography does not allow for such opportunities to be constructed.
- (2) A passing opportunity must be at least 3 metres wide for a distance of at least 20 metres.
- (3) A road intersection may be taken to be a passing opportunity.

41I Signage

- (1) A sign must be erected on each section of fire road that is accessible by a Category 1 fire tanker to indicate that the section is so accessible.
- (2) A sign displaying the words 'Link Road' must be erected on a link road.
- (3) If a section of a fire road ends in a dead end or is otherwise inaccessible by a Category 1 fire tanker, a sign must be erected at the start of the section that indicates there is a dead end or that the fire road is so inaccessible.
- (4) A sign must be erected on a fire road to indicate the location of any water storage accessible from that road.
- (5) If there are no fire roads located on a plantation, a sign must be erected at any entry to the plantation from a public road stating that there are no fire roads on the plantation.
- (6) A sign erected after the commencement of this clause must comply with any signage design standards of the Bush Fire Co-ordinating Committee constituted under the

Rural Fires Act 1997.

- (7) In this clause, **a section of fire road** means a continuous section of fire road between intersections.

Subdivision 3 Road construction and road and track drainage

42 Road and batter fill

- (1) Trees, stumps or other woody debris must not be used to provide fill for road construction.
- (2) Any fill batter must be stabilised using one or more of the following methods or any other method that achieves a similar result:
- (a) allowing revegetation to grow over the batter,
 - (b) placing a suitable protective cover over the batter,
 - (c) placing appropriate mulch material over the batter.

43 Drainage of roads and tracks

- (1) This clause applies to the following:
- (a) a road or track that existed after the lodgement of the application for authorisation of the plantation on which it is located,
 - (b) a road or track that existed before the lodgement of the application for authorisation of the plantation on which it is located, and that is not operationally stable.
- (2) All reasonable steps must be taken to minimise soil erosion from roads and tracks. Accordingly, at least one of the following measures must be adopted, as appropriate in the circumstances:
- (a) establish or maintain vegetative cover (that is, plant material, living or dead, that protects the soil surface from erosion),
 - (b) crossfall drain the road or track with outfall or infall drainage (preferably with the outward or inward slope being between 4% and 6%), or by shaping the road or track to a crown so that water drains to both of its sides,
 - (c) construct drainage structures to convey water away from the road or track formation (for example, crossdrains, mitre drains, or relief culverts).
- (3) Any drainage structure must be designed so as to convey the peak flow from a 1-in-5 year storm event (that is, a rainfall event predicted to occur more than once in five years).

- (4) Any rollover banks must be constructed and maintained to provide a minimum effective height of 15 centimetres consolidated.
- (5) Where drainage structures are established on a road or track, the structures must be placed in accordance with the Table below if the concentrated water flow on the surface of the road or track or table drains is likely to exceed the distances specified in the Table.

If the slope of the road or track is:	Then the drainage structure must be placed at least every:	If the slope of the road or track is:	Then the drainage structure must be placed at least every:
1°	250 metres	16°	38 metres
2°	200 metres	17°	36 metres
3°	150 metres	18°	34 metres
4°	125 metres	19°	32 metres
5°	100 metres	20°	30 metres
6°	90 metres	21°	28 metres
7°	80 metres	22°	26 metres
8°	70 metres	23°	24 metres
9°	65 metres	24°	22 metres
10°	60 metres	25°	20 metres
11°	55 metres	26°	19 metres
12°	50 metres	27°	18 metres
13°	45 metres	28°	17 metres
14°	40 metres	29°	16 metres
15°	40 metres	30°	15 metres

Note—

For example, if the slope of a road on which there is likely to be a concentrated water flow is 20°, and the distance of the part of that road on which there is likely to be a concentrated water flow exceeds 30 metres, then a drainage structure must be placed at least every 30 metres on the stretch of that road on which there is likely to be a concentrated flow.

44 Inlets and outlets of drainage structures

- (1) Any drainage structure must be located so that it discharges onto a stable area, or into a structure capable of filtering runoff water and trapping sediment.

- (2) Scouring at the outlets of any drainage structure must not undermine the structure, or trigger gully or rill erosion (that is, the removal of soil by water flow causing an incised channel to be formed).

This may require the construction of receiving drains or energy dissipaters or both. (An energy dissipater is a structure that dissipates the energy of the flow of water by spreading the flow over a larger area. It may involve something as simple as placing a wall or area of rocks at a drain or culvert outlet.)

45 Installation and maintenance of drainage structures on roads and tracks

- (1) Any type of drainage structure that is to be used to divert water from the surface of a road or track (for example, crossbanks, crossdrains, culverts, table drains or mitre drains):
- (a) must be installed:
 - (i) in the case of a new road—during construction, and
 - (ii) in the case of a track—within 7 days of completing the operations for which the track was used, and
 - (b) must be maintained in effective working order.
- (2) Despite subclause (1), any temporary fire trail that is constructed during fire fighting must be effectively drained as soon as practicable after the fire event.

Subdivision 4 Road maintenance and closure

46 Inspection and maintenance of roads, crossings and drainage structures

All roads must be inspected regularly and maintained in a stable condition.

47 Blading-off of roads

- (1) Blading-off of roads (that is, the use of a machine to sweep drifts of loose mud, slush or soil from the surface of the road to provide temporary access following wet weather) may only be carried out as follows:
- (a) the blading-off must only be carried out once on any section of road per harvesting event where it is necessary to provide short-term road access to a log loading site,
 - (b) the bladed-off material must be stockpiled in a recoverable position where it cannot wash into any river, drainage line or drainage depression and must be respread as soon as is practicable,
 - (c) the bladed-off section of road must be drained and stabilised as soon as practicable after the blading-off has occurred.

- (2) The Director-General must be notified of the blading-off within 2 days after it has occurred.

48 Disused roads

The following requirements apply to any road constructed for plantation operations that is no longer being used or intended to be used for any purpose:

- (a) the road must be closed to traffic, and
- (b) any crossing must be removed unless its removal would cause greater disturbance to the environment than if left in place.

Subdivision 5 Road management during harvesting

49 Log haulage

- (1) Hauling is not allowed over any road if resulting rutting is, or is likely to be, more than 150 millimetres deep for any distance exceeding 20 metres.
- (2) Hauling is not allowed on any natural surface road (not including a natural gravel road) if there is runoff from the road surface.

50 Road damage

- (1) Hauling is not allowed over any damaged section of road.
- (2) Roads must be repaired before hauling can recommence over the section of road concerned.
- (3) A section of road with a damaged drainage structure or blocked culvert must be repaired as soon as practicable.

Division 3 Site management

Note—

Operational plans must be prepared before carrying out any ripping or ploughing operations (including ripping or ploughing in combination with mounding operations).

See clauses 27 and 28 for requirements for operational plans and records that must be kept concerning these operations.

51 Preservation of vegetation on slopes exceeding 18°

- (1) Vegetation (living or dead) must be retained in the uncultivated area between cultivation lines or mounds on any area the slope of which is greater than 18°.
- (2) Nothing in this clause prevents the use of bare soil extraction tracks on any area the slope of which is greater than 18°.

52 Windrowing

- (1) Windrows and debris heaps from site preparation:
 - (a) must be located at least 20 metres inside any boundary of the landholding, and
 - (b) must be located outside any area of native vegetation or area designated for the location of replacement trees that is required by the complying development standards in Division 3 of Part 4 to be retained (to the extent that the authorisation for the plantation requires compliance with those standards), and
 - (c) must be located outside any buffer zone of a drainage feature or place, object or item of heritage significance.
- (2) Debris must be heaped with minimum disturbance to topsoil.
- (3) Unless it is impractical to do so:
 - (a) windrows and debris heaps must be located across the slope of the land, and
 - (b) any dozer used for windrowing must be fitted with a root rake (that is, an implement fitted to the dozer, generally consisting of tines or steel fingers, that can move logs and debris without shifting large amounts of soil).

Division 4 Protection of places, objects and items of heritage significance

53 Buffer zones for places, objects and items of the environmental heritage identified after establishment

- (1) An Aboriginal object or Aboriginal place that is identified in a plantation after establishment of the plantation must be surrounded by a buffer zone as referred to in clause 19 (1) unless a consent to disturb the object or place is obtained under the [National Parks and Wildlife Act 1974](#).
- (2) An item of the environmental heritage that is identified in a plantation after establishment of the plantation must be surrounded by a buffer zone at least 10 metres wide unless an approval or permit to disturb the item is obtained under the [Heritage Act 1977](#).

Division 5 Managing progressive planting

54 Time by which progressive planting must be completed

If an authorisation for a plantation authorises the progressive planting of a plantation, all sub-areas of the plantation that were nominated in the plantation plan must be established within 5 years of the date of the grant of authorisation (or such other time as may be agreed to by the Director-General).

Division 6 Managing retained areas

55 Application of this Division

- (1) This Division applies to retained areas, being:
 - (a) any area of native vegetation, any area of habitat trees or any area designated for the location of replacement trees that is required by the complying development standards in Division 3 of Part 4 to be retained (to the extent that the authorisation for the plantation requires compliance with those standards), and
 - (b) any buffer zone of a drainage feature, and
 - (c) any buffer zone of a place, object or item of heritage significance (except in relation to any of the provisions of this Division that the Director-General determines by notice to the owner or manager of the plantation).
- (2) For the purposes of this clause, a retained area is taken to be bounded by the outer drip line of the canopy vegetation or habitat trees.

56 Conservation and enhancement of retained areas

- (1) Plantation operations must not be carried out in any retained area (except as otherwise allowed by this Code).
- (2) Any retained area must be managed so as to conserve its biodiversity and ecological integrity, and (in the case of any buffer zone of a place, object or item of heritage significance) its cultural heritage values.
- (3) Any area designated for the location of replacement trees must also be managed so as to enhance its biodiversity.
- (4) Any seedlings from non-native pine trees (being plantation trees) that have regenerated within any area designated for the location of replacement trees must be controlled to the extent necessary to ensure the successful establishment and growth of local native species of plant.
- (5) Activities for the purposes of private native forestry (within the meaning of the [Native Vegetation Regulation 2005](#)) must not be carried out in any retained area.
- (6) Any burning of plantation debris must not scorch retained habitat trees or other retained native vegetation.
- (7) Any herbicide spraying operations in a plantation must not affect retained habitat trees or other retained native vegetation.
- (8) This clause does not prevent prescribed burning for the purpose of bush fire hazard reduction work to be carried out on an authorised plantation in accordance with a

bush fire hazard reduction certificate under the *Rural Fires Act 1997*.

Note—

The clearing of native vegetation that is required to be retained by this Part constitutes an offence against clause 66 even in cases where it would not constitute an offence against section 12 of the *Native Vegetation Act 2003* (Clearing requiring approval) because, for example, it falls within the description of routine agricultural management activities.

57 Grazing in retained areas

All stock must be excluded from any retained area for a period of 12 continuous months. The 12 month period must start from:

- (a) in the case of a plantation that is authorised to be planted progressively, from the date of completion of all plantation planting or replanting (as the case may be) in the sub-area in which the retained area is, or is primarily, located, and
- (b) in any other case, the date that all plantation planting or, if the plantation is to be replanted under an authorisation, the date that all plantation replanting, is completed.

Part 6 Regulation of harvesting operations

Note—

Clause 66 makes it an offence for an owner or manager of an authorised plantation to contravene or cause or permit the contravention of any requirement imposed by this Part.

Division 1 Slope limits for harvesting operations

Note—

Operational plans must be prepared before carrying out any harvesting that involves the cutting and removal of more than 100 trees for each hectare of the plantation in each calendar year. See clauses 27 and 28 for requirements for operational plans and records that must be kept concerning these operations.

58 Method for setting slope limits

Slope limits for harvesting operations are set according to erosion hazard, which is determined on a combined reading of rainfall erosivity and class of soil regolith stability.

Note—

The classes of soil regolith stability referred to in this Division (R1, R2, R3 and R4) are defined in the Dictionary to this Code.

59 Slope limits for harvesting operations

- (1) Subject to subclause (2), a harvesting operation referred to in this clause must not be carried out on the plantable area if the slope of the plantable area exceeds the limit set for an area with the combined rainfall erosivity and class of soil regolith stability of the plantable area, as set out in the Table in this clause to which the operation relates.
- (2) The slope limits apply only to the slope of the majority of the plantable area, that is,

individual areas of the plantable area of up to 50×50 metres may exceed the limit by up to 5° and still be included in the harvesting operation concerned, provided the total of such areas does not exceed 5% of the plantable area.

- (3) Despite subclauses (1) and (2), the slope limits set out in the Tables in this clause do not apply to harvesting operations referred to in this clause that are carried out on a plantation in respect of which establishment operations have been completed before the commencement of this Code. Instead, such operations are to be carried out in accordance with guidelines issued by the Minister from time to time concerning acceptable slope limits for such plantations.

Slope limits for snigging

1: If the rainfall erosivity of the area is: (MJ.mm/ha.hr.yr)	2: And the class of soil regolith stability for the area is:			
	R1	R2	R3	R4
	3: Then the slope limit is:			
0-3999	30°	30°	30°	25°
4000-4999	30°	20°	30°	20°
5000-5999	30°	20°	25°	15°
6000 +	25°	15°	20°	10°

Slope limits for skyline harvesting

1: If the rainfall erosivity of the area is: (MJ.mm/ha.hr.yr)	2: And the class of soil regolith stability for the area is:			
	R1	R2	R3	R4
	3: Then the slope limit is:			
0-3999	no limit	no limit	no limit	40°
4000-4999	no limit	40°	40°	40°
5000-5999	no limit	40°	40°	30°
6000 +	no limit	40°	40°	30°

- (4) In this clause:

skyline harvesting means an operation in which logs are hauled from the stumps to a collection point, or are loaded, by means of a wheeled device (a skyline carriage) that rides back and forth on a cable way stretched tautly between two points (a skyline).

snigging means pulling logs, wholly or partly supported on the ground, from the stump to the log dump or landing.

Division 2 Log dumps and landings

60 Location of log dumps and landings

- (1) Log dumps and log landings whose creation involves earthworks must not be located:
 - (a) within the buffer zone of any drainage feature, or place, object or item of heritage significance, or
 - (b) within 10 metres of the centreline of any drainage depression on soil classed R1, R2 or R3, or
 - (c) within any area of native vegetation, any area of habitat trees or any area designated for the location of replacement trees that is required by the complying development standards in Division 3 of Part 4 to be retained (to the extent that the authorisation for the plantation requires compliance with those standards).
- (2) Runoff from any log dump or log landing must discharge onto a stable surface that is capable of filtering runoff water and trapping sediment.
- (3) Nothing in this clause prevents the temporary stockpiling of logs within a drainage depression if this would result in less soil disturbance than alternative locations, so long as at least 70% of groundcover is maintained on the affected area.

61 Cessation of operations on log dump or landing

If operations on a log dump or log landing are not carried out for more than two weeks at a time, measures to minimise and control soil erosion must be implemented as soon as is reasonably practicable.

61A Completion of harvesting operations

When harvesting operations have been completed, the log dump or log landing must be restored to facilitate the discharge of surface water onto stable surfaces that are capable of filtering runoff water and trapping sediment.

Division 3 Protection of buffer zones

62 Buffer zones in which harvesting is prohibited

- (1) No harvesting is allowed in the buffer zone of any wetland, river or place, object or

item of heritage significance.

- (2) Despite subclause (1), the Director-General may allow one-off harvesting in any such area of a timber plantation or proposed timber plantation accredited under the *Timber Plantations (Harvest Guarantee) Act 1995* immediately before the repeal of that Act if such harvesting would have complied with the requirements of the law in force before that repeal.

63 Requirements for harvesting in the buffer zones of drainage features

Trees planted in the buffer zone of a drainage feature for the purpose of harvesting (in accordance with clause 17 (2)) may only be harvested in accordance with the following requirements:

- (a) the person carrying out the harvesting operation must be satisfied that the top 200 millimetres of soil in the area to be harvested is dry enough to allow the operations to be carried out without risk of soil erosion to the edge of the drainage feature,
- (b) harvesting and extraction machinery may only enter an area within 5 metres:
- (i) of the edge of a drainage line (measured from the top edge of its banks or, if there are no banks, from the edge of its apparent water flow area), or
- (ii) of the centre of a drainage depression occurring on soil classed R4,
- if this is done in accordance with clause 37 or if entering the 5 metre area will result in less environmental damage than the use of any practicable alternative route that would avoid the 5 metre area,
- (c) directional felling must be used to prevent as much as practicable the felling of trees into the defined channel of a wetland, river or drainage line,
- (d) if directional felling cannot practicably be carried out, or if trees are accidentally felled into the defined channel of a wetland, river or drainage line, the relevant trees must be removed from the channel, unless the removal is likely to cause more than minimal disturbance to the bed and banks of the channel,
- (e) if logs are removed from within a buffer area, the following must be undertaken (so long as weather conditions permit):
- (i) any disturbed area must be restored to 70% groundcover within 7 days of the removal of the logs,
- (ii) any furrow created by the removal of the logs must be filled or drained to prevent concentrated flow direct to the drainage feature.

Division 4 Restoration of harvested area

64 Restoration of harvested area

A harvested area must be stabilised to prevent soil erosion (for example, by planting it with grass or other suitable vegetation).

Division 5 Timber extraction

64A Extraction tracks

- (1) Harvesting operations must minimise water runoff from the harvest area by ensuring that, as far as practicable:
 - (a) timber extraction operations that utilise snigging are uphill, and
 - (b) operations using forwarders minimise extraction track construction by utilising walkover techniques on a bed of slash.
- (2) The grade of constructed extraction tracks must not exceed 25°.
- (3) Blading-off of extraction tracks is not allowed.

64B Extraction track drainage

- (1) Harvesting operations must maximise the use of crossfall drainage and slash coverage of extraction tracks, as far as practicable.
- (2) Crossbanks, if required, must comply with the following:
 - (a) a crossbank must be constructed so as to baulk and divert the flow of water away from the track surface,
 - (b) water must be diverted onto a stable surface capable of handling concentrated water flow which provides for efficient sediment trapping and energy dissipation,
 - (c) a crossbank must have a minimum effective height of 35 centimetres unconsolidated or 25 centimetres consolidated, and generally should not be greater in height than 50 centimetres,
 - (d) a crossbank must be constructed within 1 week after the completion of harvesting operations on the track, unless the soil is saturated.
- (3) If bare soil areas exist on an extraction track, the areas must be drained to ensure that any surface flow does not exceed the maximum distances for each track grade specified in the Table to this clause.

Table

Track grade

Maximum distance of surface flow

Up to and including 5°	100 metres
More than 5° and up to and including 10°	60 metres
More than 10° and up to and including 15°	40 metres
More than 15° and up to and including 20°	25 metres
More than 20° and up to and including 25°	20 metres

Division 6 Wet weather provisions

64C Use of harvesting machinery

- (1) Machinery used for harvesting must not be operated on a harvesting area or natural surface log dump or landing if surface runoff is occurring.
- (2) Machinery used for harvesting must not be operated on a harvesting area or natural surface log dump or landing if the soil is saturated, unless:
 - (a) the machinery is supported by a bed of slash, and
 - (b) walkover extraction techniques are utilised, and
 - (c) the rutting depths do not exceed the depths specified in the Table to subclause (3).
- (3) If rutting that occurs on bare soil areas of extraction tracks exceeds the depths specified in the Table to this subclause, the areas must be restored to the natural surface level and must be drained in accordance with clause 64B (3).

Table

Location	Permitted rutting depth
Within 10 metres of any road	150 millimetres
Within 30 metres of a log dump or landing or on major extraction tracks	250 millimetres
Anywhere else within a harvesting area	100 millimetres

- (4) Nothing in this clause prevents the use of stationary loading machines operating on roadsides or log dumps and landings.

Part 7 Offences and penalty notices

65 Offence of providing false information in application for authorisation

A person must not, in or in connection with an application for an authorisation of a plantation, provide information or produce a document that the person knows to be false

or misleading in a material particular.

Maximum penalty: 100 penalty units.

66 Offence of contravening any requirement imposed by Part 5 or Part 6

An owner or manager of an authorised plantation who contravenes or causes or permits the contravention of any requirement imposed by Part 5 or Part 6 is guilty of an offence.

Maximum penalty: 100 penalty units.

67 Penalty notice offences

For the purposes of section 62 of the Act:

- (a) each offence created by a provision specified in Column 1 of Schedule 2 is declared to be a penalty notice offence, and
- (b) the prescribed penalty for such an offence is the amount specified in Column 2 of Schedule 2.

68 (Repealed)

Schedule 1 Patches of woody native vegetation

(Dictionary)

Determining the existence of patches

For the purpose of determining the existence of patches of woody native vegetation, east and west of the Newell Highway represent a biogeographic divide.

East of the Newell Highway

Generally, patches of woody native vegetation are to be determined by the existence of a group of 2 or more woody native plants, with each of those plants lying within 2 crown separations of the nearest woody native plant.

However, in locations where the expected natural native vegetation structure is more dense than 2 crown separations, an authorised person who assesses the proposed plantation under clause 11 of the Code may reduce the crown separation requirement to 1. Accordingly, patches in these locations will be determined by the existence of a group of 2 or more woody native plants, with each of those plants lying within 1 crown separation of the nearest woody native plant.

West of the Newell Highway

Patches of woody native vegetation are determined by the presence of a group of 2 or more woody native plants, with each of those plants lying within 5 crown separations of the nearest woody native plant.

Calculation of crown separation and boundary of patch

The crown diameter of each woody native plant in the tallest stratum is used to calculate crown

separation.

In determining whether a woody native plant lies within the required crown separation of the nearest woody native plant (and so is included in the patch), the crown diameter of the most outlying of those 2 plants (that is, outlying in relation to the woody native plant that is used as a starting point) is used.

The boundary of the patch is the line that:

- (a) contains the projected crowns of all the woody native plants within the patch, and
- (b) joins the outer drip line of each outermost crown of the patch with that of the nearest outermost crown of the patch.

In this Schedule:

woody native plants means any native trees or shrubs.

Schedule 2 Penalty notice offences

(Clause 67)

Column 1	Column 2
Offence	Amount of penalty
<i>Plantations and Reafforestation Act 1999</i>	
Section 9 (3)	\$1,100
Section 20 (6)	\$1,100
Section 58 (5)	\$1,100
Section 59 (4)	\$1,100
Section 61 (4) (a)	\$1,100
<i>Plantations and Reafforestation (Code) Regulation 2001</i>	
Clause 10A (1)	\$1,100
Clause 65	\$1,100
Clause 66	\$1,100

Dictionary

(Clause 2)

Aboriginal object has the same meaning as in the *National Parks and Wildlife Act 1974*.

Aboriginal place has the same meaning as in the *National Parks and Wildlife Act 1974*.

bare soil area means an area where there is less than 70% groundcover.

batter means an earth slope formed during road construction either by the placing of fill material or

by cutting into the natural hillside.

biodiversity means the variety of life forms—different species of plants, animals and micro-organisms, the genes they contain and the ecosystem they form.

buffer zone means a protective margin of vegetation that surrounds or is adjacent to specified drainage features or places, objects or items of heritage significance and which protects them from potentially detrimental disturbances in the surrounding area.

causeway means a natural or constructed crossing (other than a bridge) that enables vehicles to cross a drainage feature.

crossbank means a mound of earth placed across a road or track to divert water from the surface, which may be consolidated or unconsolidated.

crossdrain means a drain excavated across the full width of a road or track to divert water (for example, a spoon drain, crossbank or rollover bank).

crossfall drainage means drainage caused by shaping a road so that all water drains across and off the road surface rather than along it. Drainage created by a crossfall can be infall, outfall, or crowned (the latter being drainage caused by shaping a road so that water drains to both sides of the road).

culvert means one or more adjacent enclosed pipes or open drains that are used to convey water underneath a road.

cut means a portion of land where earth has been removed by excavation.

Department means the Department of Land and Water Conservation.

diameter at breast height means the measurement of the diameter of a tree made:

- (a) at a height of 1.3 metres above the ground level (measured from the ground level of the up slope side of the tree if the tree is on a slope), and
- (b) at right angles to the axis of the tree.

If the tree is branched or deformed at 1.3 metres above the ground level, the measurement must be taken at the nearest point above or below that point, where the trunk becomes more cylindrical.

Director-General means the Director-General of the Department.

drainage depression means a level to gently inclined shallow, open depression, generally with a smoothly concave cross-section, rising to moderately inclined hill slopes, that conveys runoff water only during or immediately after (that is, only hours or days after) periods of heavy rainfall.

drainage feature means any of the following:

- (a) a wetland,
- (b) a river,
- (c) a drainage line,

(d) a drainage depression on soil classed R4.

drainage line means a channel down which surface water naturally concentrates and flows, conveying water only during, or immediately after (that is, only hours or days after) periods of heavy rainfall. Drainage lines exhibit one or more of the following features which distinguish them from drainage depressions:

- (a) evidence of active erosion or deposition (for example, gravel, pebble, rock or sand bed deposited by water),
- (b) an incised channel more than 300 millimetres deep with clearly defined bed and banks,
- (c) first or second order streams with permanent flow,
- (d) third or higher order streams without permanent flow.

For the purposes of this definition, stream orders are as determined according to the Strahler System using a 1:25,000 or 1:50,000 topographic map published by the Government (whichever is the smallest scale so published).

drip line means the perimeter of the area that would be formed (if it rained only on the crown of a tree) by drips falling from the crown onto the ground below.

earthworks means any operation involved in moving, loosening, depositing, shaping, compacting or stabilising soil and rock for the purpose of construction (for example, of a road or log dump).

erosion means the wearing away of land by running water, rainfall, wind, ice or other geological agents.

extraction means the transportation of trees, stems or logs from the point of felling to a processing or roadside loading area (usually a log dump or landing).

extraction track means a track used for extraction. (Extraction tracks include snig tracks, along which logs are dragged, either wholly on the ground or supported at one end, by the use of wheeled or tracked vehicles.)

fill means excavated material that is used to raise (fill) the surface of an area to a specified level.

fire trail means a way that is used for either or both of the following purposes:

- (a) to provide access for fire control vehicles,
- (b) to prevent or check the spread of fire during fire fighting or prescribed burning operations.

A fire trail may be a track or a road, depending on whether or not it is constructed.

forwarder means a logging vehicle that transports logs, fully supported off the ground, between the point of felling and a log dump or landing.

groundcover means material that covers the ground surface and has the effect of reducing erosion. Groundcover includes (but is not limited to) vegetation, leaf litter, tree debris, gravel, rock, straw, mulch, geotextile fabrics, erosion control mats, jute mesh and coconut mesh.

ground slope means the slope of the natural land surface at any given point in the landscape.

habitat trees means mature, large trees, with a diameter at breast height (as defined in clause 24) of more than 40 centimetres, that provide a habitat for tree-dwelling fauna.

Note—

Arboreal mammals and nesting birds generally depend upon these trees for foraging and to provide hollows for den and nesting sites.

infall drainage means drainage caused by constructing the surface of the road with an inward slope in the opposite direction to that of the side slope of the natural surface, allowing runoff to be shed to the high terrain side of the road.

item of the environmental heritage has the same meaning as in the [Heritage Act 1977](#).

line cultivation means cultivating lines on the ground using a ripper and other attached equipment to shatter the compacted soil layer and produce a planting area that does not result in a permanent mound or a cultivation line in excess of 600 millimetres in width.

line ripping means ripping lines in the ground (for example, with multi-tine equipment or a wing or wide-foot plate on a ripper) to shatter the compacted layer of the soil.

log dump or **log landing** means an area where logs or parts of logs are assembled for sorting and preliminary processing (for example, cross-cutting) before being loaded on to trucks for transport from the plantation. Log dumps or landings do not include areas set aside for stockpiling logs.

manual cultivation means tilling the soil in preparation for planting using only hand tools.

mounding means the cultivation of soil to form mounds.

native grassland of high conservation value means native grassland:

- (a) that has been extensively cleared from the region, is inadequately conserved within it, or is at its geographical limit, and
- (b) that exhibits one or more of the following features:
 - (i) it is relatively large in area, or is an area that connects two other large areas of native vegetation,
 - (ii) it is in unusually healthy condition (that is, it is in much the same condition, and has much the same species composition and community structure, as may have existed a hundred or more years ago),
 - (iii) it includes a diversity of native species (that is, not just grass species, but a diversity of forbs that grow between the grass tussocks, such as native legumes, orchids, daisies and lilies),
 - (iv) it is a habitat for rare and threatened species of native plants and animals,
 - (v) it has very few weeds and has had only minimal past disturbance from ploughing, spraying or fertilising, and
- (c) that is determined by the Department (based on the preceding factors and associated surveys) to

be native grassland of high conservation value.

native vegetation means any of the following types of indigenous vegetation:

- (a) trees,
- (b) understorey plants,
- (c) groundcover,
- (d) plants occurring in a wetland,

but does not include any mangroves, seagrasses or any other type of marine vegetation within the meaning of the *Fisheries Management Act 1994*.

outfall drainage means drainage caused by constructing the surface of the road with an outward slope in the same direction as that of the side slope of the natural surface, allowing runoff to be shed to the low terrain side of the road.

patch of woody native vegetation means an area of woody native vegetation, the existence and boundaries of which are determined in accordance with Schedule 1.

peak flow means the highest flow rate of the drainage feature concerned during or following a specific rainfall event.

place, object or item of heritage significance means:

- (a) an Aboriginal place, or
- (b) an Aboriginal object, or
- (c) an item of the environmental heritage.

plantable area means a plantation excluding:

- (a) any area of native vegetation or area designated for the location of replacement trees that is required by the complying development standards in Division 3 of Part 4 to be retained (to the extent that the authorisation for the plantation requires compliance with those standards), and
- (b) any buffer zone of a drainage feature or place, object or item of heritage significance.

R1, R2, R3 and R4 are classes of regolith stability applied to soils as follows:

- R1 high coherence soils with low potential to deliver sediment,
- R2 low coherence soils (when wet) with low potential to deliver sediment,
- R3 high coherence soils with high potential to deliver sediment,
- R4 low coherence soils (when wet) with high potential to deliver fine sediment.

rainfall erosivity rating is the measure of the erosive potential of a specific rainfall event (being the product of two rainstorm characteristics: total kinetic energy of the storm multiplied by its maximum 30 minute intensity, as defined in the Universal Soil Loss Equation).

rainforest means any contiguous area of woody native vegetation dominated by rainforest species and with a rainforest structure (and it includes, but is not limited to, rainforest as defined in Integrated Forestry Operations Approvals (IFO) under the [Forestry and National Park Estate Act 1998](#)).

regional vegetation schedule means the regional vegetation schedule for the region in which a plantation is located that is made, or taken to be made, under clause 25, as applied in accordance with that clause.

regolith means unconsolidated residual or transported material that overlies the solid rock on the earth.

regrowth has the same meaning as in the [Native Vegetation Act 2003](#).

relief culvert means a drainage structure that transports water collected (generally by a table drain) from the road surface under the road for controlled discharge downslope.

river means a third order or higher order stream (as determined according to the Strahler System using a 1:25,000 or 1:50,000 topographic map published by the Government, whichever is the smallest scale so published) with a permanent flow.

road means a way that is constructed primarily for vehicles by means of earthworks involving the cut or fill (or both) of the natural surface on the way. A road may include a fire trail if it is so constructed.

rollover bank means a type of crossdrain and may be:

- (a) a shallow drain (sometimes used in combination with a compacted low earth crossbank called a rollover crossbank) that is constructed across the full width of a road or track, or
- (b) a rollover drain, which is used on moderate to steep sections of roads or tracks and sized so that the road or track remains trafficable. Rollover drains help to prevent erosion of the road or track surface by discharging water at numerous points on the low terrain side of the road or track.

runoff water means the portion of precipitation falling on a catchment area that flows from the catchment past a specified point.

rutting means soil disturbance caused by the sinking of the wheels or tracks of vehicles or machinery.

sediment means particles of soil material that have been transported or deposited by water flow.

slash means tree debris left following the felling, processing and extraction of logs.

spot cultivation means cultivation of an area for the planting of individual tree seedlings, either manually or using mechanical cultivation equipment, that does not result in continuous ground disturbance within or between tree rows.

table drain means a drain constructed along the side of a road between the shoulder and a cut batter, that collects and drains runoff water away from the road surface and also intercepts runoff water from cut batters that might otherwise flow onto the road surface.

the Act means the [Plantations and Reafforestation Act 1999](#).

the landholding means the lot or lots on which a plantation is or is to be situated.

track means a way for vehicles and machinery that is not constructed.

wetland means any area that is:

- (a) covered by a shallow body of water (being a body of water that is not the result of unusual flooding, high rainfall, temporary water diversion, or a marked permeability break in the soil profile leading to the development of a perched water table), and
- (b) inundated cyclically, intermittently or permanently with water, and
- (c) under normal circumstances, predominantly vegetated with plant communities adapted for life in saturated soil conditions, and
- (d) characterised by soils that exhibit reducing conditions.

Wetlands generally include marshes, billabongs, swamps and sedge lands.

windrow means a row of cut vegetation raked up for clearing (for example timber which is pushed into lines for burning during a clearing operation).

woody native vegetation means native trees and shrubs.