

**Regional  
Vegetation Management Code  
for  
Ongoing Clearing Purposes**

**Northern Brigalow Region  
(Brigalow Belt Bioregion)**

**25 June 2004**



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## 1. Description of Region

This regional vegetation management code applies to the Northern Brigalow Region (Brigalow Belt Bioregion). The boundary of the Northern Brigalow Region is defined in digital form held by the Department of Natural Resources, Mines and Energy, and is illustrated in Figure 1.

The Northern Brigalow Region (Brigalow Belt Bioregion), being 1.9 million hectares, is defined by the northern subregions of the Brigalow Belt Bioregion. It includes subregion 1 (Townsville Plains) and 2 (Bogie River Hills), the northern part of subregion 6 (Northern Bowen Basin), and the eastern extremity of subregion 5 (Wyarra Hills).

Major centres in the Northern Brigalow Region (Brigalow Belt Bioregion) include Thuringowa, Townsville, Giru, Ayr, Brandon, Home Hill, Millaroo, Dalbeg, Gumlu, Merinda, Bowen and Collinsville.

The major river catchments include Ross, Haughton (including Major Creek), Burdekin, Bowen and Don Rivers. The major sub catchments include Barratta, Black, Broken and Elliot River catchments, all of which flow into the Great Barrier Reef lagoon.

The Townsville Plains subregion is dominated by alluvial plains, but is fringed in the east by coastal sand dunes and estuarine clays. It also includes small outcrops of igneous rocks that form low hills. The soils are predominantly texture contrast or alluvial clays. The Bogie River Hills subregion is an undulating to hilly area with relatively shallow soils formed on predominantly igneous rocks, with some alluvial areas along the major watercourses. The Wyarra Hills subregion is a dissected plateau surface formed on acid volcanic rocks, mantled in the east by an old sand sheet that has ironstone exposed around its margins. The soils are predominantly skeletal, with deeper earths on the sand sheet. The area is primarily monsoonal with seasonally high rainfall.

The majority of the Northern Brigalow Region (Brigalow Belt Bioregion) covers the Shires of Bowen (57%) and Burdekin (23%), and also includes Townsville (9%), Mirani (6%), Thuringowa (3.5%) and Dalrymple (2%), of which the majority (62%) is leasehold land. The remainder of the planning area is comprised of freehold land (30%), national parks (4.5%), State reserves, unallocated State land, State forests and water reserves (3.5%).

Based on extent, land use is predominantly grazing, with sugar cane and horticultural crops dominating the coastal floodplains. Industry and urbanisation dominates the Townsville and Thuringowa area.

## 2. Regulatory background

This is a regional vegetation management code to be used for the assessment of development applications for clearing vegetation under the *Integrated Planning Act 1997*. It is prepared in accordance with provisions set out in the *Vegetation*

*Management Act 1999* and is to be applied in the circumstances where the Vegetation Management Act allows that an application for assessable clearing be accepted.

The Chief Executive of the Department that administers the *Vegetation Management Act 1999* is responsible for assessing clearing applications made under that Act.

This code provides the basis, consistent with the purposes of the Vegetation Management Act, for making decisions about vegetation.

### **Purpose of the *Vegetation Management Act 1999***

The *Vegetation Management Act 1999* states:

- (1) The purpose of the Act is to regulate the clearing of vegetation in a way that—
- (a) conserves the following:
    - i. Remnant endangered regional ecosystems
    - ii. Remnant of concern regional ecosystems
    - iii. Remnant not of concern regional ecosystems; and
  - (b) conserves vegetation in declared areas; and
  - (c) ensures the clearing does not cause land degradation; and
  - (d) prevents the loss of biodiversity; and
  - (e) maintains ecological processes; and
  - (f) manages the environmental effects of the clearing to achieve this Act's purpose in relation to matters mentioned in paragraphs (a) to (e); and
  - (g) reduces greenhouse gas emissions.
- (2) The purposes are achieved mainly by providing for—
- (a) codes for the Planning Act relating to the clearing of vegetation that are applicable codes for the assessment of vegetation clearing applications under IDAS; and
  - (b) the enforcement of vegetation clearing provisions; and
  - (c) declared areas; and
  - (d) a framework for decision makings that, in achieving this Act's purpose in relation to subsection (1) (a) to (e), applies the precautionary principle that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment if there are threats of serious or irreversible environmental damage; and
  - (e) the phasing out of broadscale clearing of remnant vegetation by 31 December 2006.
- (3) in this section -  
**“environment”** includes—
- (a) ecosystems and their constituent parts including people and communities; and
  - (b) all natural and physical resources; and
  - (c) those qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community; and

- (d) the social, economic, aesthetic and cultural conditions affecting the matters in paragraphs (a) to (c) or affected by those matters.

### **3. Purposes of the code**

The purpose of the Code is to provide performance criteria and, where appropriate, acceptable solutions that achieve the purpose of the *Vegetation Management Act 1999*.

### **4. Amendments of this code**

Section 15 of the *Vegetation Management Act 1999* (VMA) states that the Minister may amend a regional vegetation management code without undertaking the required consultation if:

- ‘(a) the amendment is only to correct a minor error in the code, or make another change that is not a change of substance; or
- (b) the code states that an amendment of a stated type may be made to the code by amendment under this section and the amendment is of the stated type.’.

The type of amendment that can be made to this code under Section 15 (b) of the VMA is:

- Protection of vegetation associated with rivers identified under legislation regulating wild rivers.

### **5. Scope of applications assessed by this code**

A vegetation clearing application will be assessed under this code if the applicant has satisfied the chief executive that the development applied for is for a relevant purpose listed in S.22A of the *Vegetation Management Act 1999*. The relevant purposes are:

- a project declared to be a significant project under the *State Development and Public Works Organisation Act 1971*, section 26;
- necessary to control non-native plants or declared pests;
- to ensure public safety;
- for establishing a necessary fence, firebreak, road or other built infrastructure, if there is no suitable alternative site for the fence, firebreak, road or infrastructure;
- a natural and ordinary consequence of other assessable development for which a development approval as defined under the *Integrated Planning Act 1997* was given, or a development application as defined under the *Integrated Planning Act 1997* was made, before 16 May 2003;
- for fodder harvesting;
- for thinning;
- for clearing of encroachment;

- for an extractive industry;
- for clearing regrowth on leases issued under the *Land Act 1994* for agriculture or grazing purposes.

## 6. How to use this Code

The code is comprised of nine parts shown in Table 1.

Part A of the code contains performance requirements that must be met by all applications; no acceptable solutions are given.

Parts S, W, M, F, T, E, X and R of the code contain performance requirements that must be met by applications for particular purposes as shown in Table 1. The parts also contain acceptable solutions for meeting those requirements. The stated acceptable solution represents one way in which the relevant performance requirement may be met. Applicants who do not adopt the acceptable solution must show how they will meet the performance requirement. An applicant must meet each Performance Requirement by either:

- a) complying with the acceptable solution; or
- b) satisfying the assessment manager that the performance requirement is met through another solution proposed by the applicant.

Table 1 shows which parts of the code are used for each application purpose. Where the application is for multiple purposes over the same area, the applicant must meet all performance requirements for all of the purposes of the clearing. However, an application that is for clearing in regrowth on leasehold land for one or more of the purposes S, W, M, F, T, E, or X will be assessed under the code for the relevant purpose, and not under the part of the code for regrowth on leasehold land.

In determining whether an application meets the acceptable solution, or whether another solution provided by the applicant meets a performance requirement, the precautionary principle will be applied.

Properly made Development Applications for clearing vegetation made under the *Integrated Planning Act 1997* (IPA) are assessed using:

- Matters mentioned in Section 3.5.4(2) and (3) of IPA, which include:
  - The appropriate part of the code which relates to the purpose of the application; and
  - The laws that are administered by, and the relevant policies that are applied by, the Assessment Manager;
  - The common material as defined in IPA;
- The Property Vegetation Management Plan provided by the applicant;
- If there is a Property Map of Assessable Vegetation over the area which is the subject of the application, that Property Map of Assessable Vegetation;
- Regional Ecosystem or Remnant maps that apply to the area of land that is the subject of the application;
- Any further relevant information supplied by the applicant.

**Table 1: Parts of the code**

<b>Purpose of application</b>	<b>Name</b>	<b>Part</b>
All applications.	Mandatory Requirements for All Clearing	A
A project declared to be a significant project under the <i>State Development and Public Works Organisation Act 1971</i> , section 26.	Requirements for Clearing for Significant projects	S
Necessary to control non-native plants or declared pests.	Requirements for Clearing for Weed or Pest Management	W
For establishing a necessary fence, firebreak, road or other built infrastructure, if there is no suitable alternative site for the fence, firebreak, road or infrastructure.	Requirements for Clearing for Management Activities	M
Clearing that is a natural and ordinary consequence of other assessable development for which a development approval as defined under the <i>Integrated Planning Act 1997</i> was given, or a development application as defined under the <i>Integrated Planning Act 1997</i> was made, before 16 May 2003.	Requirements for Clearing for Management Activities	M
To ensure public safety.	Requirements for Clearing for Management Activities	M
For fodder harvesting.	Requirements for Fodder Harvesting	F
For thinning.	Requirements for Thinning	T
For clearing of encroachment.	Requirements for Clearing Encroachment	E
For an extractive industry.	Requirements for Clearing for an Extractive Industry	X
For clearing regrowth on leases issued under the <i>Land Act 1994</i> for agriculture or grazing purposes, other than clearing for any other purpose listed above.	Requirements for Clearing Regrowth	R

## 7. Assessment code

The performance requirements in Part A of this code must be met. No other solutions comply with the code.

### Part A: Mandatory Requirements for All Clearing

Performance Requirement
<p><b>PR A.1</b></p> <p>To conserve remnant endangered regional ecosystems, clearing does not occur in any “category 1 area” on a Property Map of Assessable Vegetation (PMAV), or where there is no PMAV, in any endangered regional ecosystems except where the Chief Executive is satisfied that the clearing is:</p> <ul style="list-style-type: none"><li>• for a project declared to be a significant project under the <i>State Development and Public Works Organisation Act 1971</i>, section 26; or</li><li>• necessary to control non-native plants or declared pests; or</li><li>• to ensure public safety; or</li><li>• for establishing a necessary fence, firebreak, road or other built infrastructure and no suitable alternative site exists for that fence, firebreak, road or other built infrastructure; or</li><li>• for thinning; or</li><li>• to remove encroachment; or</li><li>• for an extractive industry.</li></ul>

## Performance Requirement

### PR A.2

To conserve remnant of concern regional ecosystems, clearing does not occur in any area shown as a “category 2 area” on a PMAV, or where there is no PMAV, in any of concern regional ecosystems except where the Chief Executive is satisfied that the clearing is:

- for a project declared to be a significant project under the *State Development and Public Works Organisation Act 1971*, section 26; or
- necessary to control non-native plants or declared pests; or
- to ensure public safety; or
- for establishing a necessary fence, firebreak, road or other built infrastructure and no suitable alternative site exists for that fence, firebreak, road or other built infrastructure;
- a natural and ordinary consequence of other assessable development for which a development approval as defined under the *Integrated Planning Act 1997* was given, or a development application as defined under the *Integrated Planning Act 1997* was made, before 16 May 2003; or
- for thinning; or
- to remove encroachment; or
- for an extractive industry.

### PR A.3

To prevent the loss of biodiversity, clearing does not occur to the extent that:

- the remnant extent of a not of concern regional ecosystem falls below 30% of its pre-clearing extent or 10 000 hectares in the bioregion; and
- the remnant extent of an of concern regional ecosystem falls below 10% of its pre-clearing extent; and
- the remnant extent of an of concern regional ecosystem falls below 30% of its pre-clearing extent where its remnant extent is less than 10 000 hectares,

except where the Chief Executive is satisfied that the clearing is:

- for a project declared to be a significant project under the *State Development and Public Works Organisation Act 1971*, section 26; or
- necessary to control non-native plants or declared pests; or
- to ensure public safety; or
- essential for establishing a necessary fence, road or other built infrastructure and no suitable alternative site exists for that fence, road or other built infrastructure; or
- for an extractive industry.

### **Performance Requirement**

#### **PR A.4**

To prevent the loss of biodiversity, clearing does not reduce the total extent of remnant vegetation in the Brigalow Belt Bioregion (Northern) to less than 70% of the pre-clearing extent of remnant vegetation except where the Chief Executive is satisfied that the clearing is:

- for a project declared to be a significant project under the *State Development and Public Works Organisation Act 1971*, section 26; or
- necessary to control non-native plants or declared pests; or
- to ensure public safety.
- for establishing a necessary fence, firebreak, road or other built infrastructure and no suitable alternative site exists for that fence, firebreak, road or other built infrastructure; or
- for an extractive industry.

#### **PR A.5**

To prevent loss of biodiversity, clearing does not occur in an area which is identified on a map<sup>1</sup> prepared by the chief executive of the agency which administers the *Nature Conservation Act 1992* and certified for use for the purposes of this code by the chief executive of the Department of Natural Resources, Mines & Energy, as an area of essential habitat for a species of wildlife listed as vulnerable, rare, near threatened or endangered under that Act, except where the Chief Executive is satisfied that the clearing is:

- for a project declared to be a significant project under the *State Development and Public Works Organisation Act 1971*, section 26; or
- necessary to control non-native plants or declared pests; or
- to ensure public safety; or
- for establishing a necessary fence, firebreak, road or other built infrastructure and no suitable alternative site exists for that fence, firebreak, road or other built infrastructure; or
- for thinning; or
- to remove encroachment.

<sup>1</sup> The map is held in digital form by the Department of Natural Resources, Mines & Energy and may be reduced or enlarged to show the essential habitat for a particular area.

**Performance Requirement**

**PR A.6**

To ensure clearing does not cause land degradation and to maintain ecological processes, clearing does not occur in Drainage Basin Sub Areas that have less than 30% of the area covered with remnant vegetation, unless the Chief Executive is satisfied that the clearing is:

- for a project declared to be a significant project under the *State Development and Public Works Organisation Act 1971*, section 26; or
- necessary to control non-native plants or declared pests; or
- to ensure public safety; or
- for establishing a necessary fence, firebreak, road or other built infrastructure, if there is no suitable alternative site for the fence, firebreak, road or infrastructure; or
- for thinning; or
- for an extractive industry;
- for clearing regrowth on leases issued under the *Land Act 1994* agriculture or grazing purposes.

## Part S: Requirements for Clearing for Significant Projects<sup>2</sup>

Performance Requirement	Acceptable Solution
<p><b>PR S.1</b> To prevent the loss of biodiversity and maintain ecological processes associated with natural wetlands, lakes and springs.</p>	<p><b>AS S.1</b> S.1.1 Clearing does not occur in and within 100 metres of the static high water mark of natural wetlands, lakes and springs; AND S.1.2 Clearing does not occur in regional ecosystems 11.1.3, 11.1.4, 11.2.4 and 11.3.27.</p>
<p><b>PR S.2</b> To prevent the loss of biodiversity and to maintain ecological processes, viable networks of wildlife habitat are maintained.</p>	<p><b>AS 2.2</b> S.2.1 Clearing does not occur in regional corridors, Wildlife Habitat Corridors, Areas of Very High Regional Nature Conservation Significance and Areas of High Regional Nature Conservation Significance; AND S.2.2 Natural wetlands, lakes, springs, endangered regional ecosystems or of concern regional ecosystems are connected by corridors of retained remnant vegetation greater than 200 metres wide; AND S.2.3 Clearing does not occur in corridors of remnant vegetation at least 200 metres wide with a 5:1 length to width ratio that provides connectivity between: i) the clumps of retained vegetation on the property; and ii) the clumps of retained vegetation on adjoining properties; and iii) wetlands; and iv) endangered and of concern regional ecosystems. AND S.2.4 Clearing does not occur in an area which is identified on a map<sup>3</sup> prepared by the chief executive of the agency which administers the <i>Nature Conservation Act 1992</i> and certified for use for the purposes of this code by the chief executive of NRM&amp;E, as an area of essential habitat for a species of wildlife listed as vulnerable, rare, near threatened or endangered under that Act.</p>

<sup>2</sup> Significant projects are those declared to be a significant project under the *State Development and Public Works Organisation Act 1971*, section 26.

<sup>3</sup> The map is held in digital form by the Department of Natural Resources, Mines & Energy and may be reduced or enlarged to show the essential habitat for a particular area.

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR S.3</b> To ensure clearing does not cause land degradation, to prevent the loss of biodiversity and to maintain ecological processes, watercourses and adjacent habitat are protected to:</p> <ul style="list-style-type: none"> <li>a) maintaining bank stability by protecting against erosion and slumping; and</li> <li>b) maintaining water quality by filtering sediments, nutrients and other pollutants; and</li> <li>c) maintaining aquatic habitat; and</li> <li>d) providing food for aquatic ecosystems; and</li> <li>e) maintaining wildlife habitat.</li> </ul>	<p><b>AS S.3</b></p> <p>2.3.1 Clearing does not occur in or within:</p> <ul style="list-style-type: none"> <li>a) 50 metres of each high bank of each stream order 1 and 2; and</li> <li>b) 100 metres of each high bank of each stream order 3 and 4; and</li> <li>c) 200 metres of each high bank of each stream order 5 or greater.</li> </ul> <p>AND</p> <p>2.3.2 Within Existing Intensive Use Areas clearing does not occur in or within:</p> <ul style="list-style-type: none"> <li>a) 50 metres of each high bank of each stream order 1, 2, 3 and 4; and</li> <li>b) 100 metres of each high bank of each stream order 5 and greater.</li> </ul>
<p><b>PR S.4</b> To prevent the loss of biodiversity, adequate representation of regional ecosystems is maintained.</p>	<p><b>AS S.4</b></p> <p>S.4.1 Clearing does not occur in regional ecosystems 11.1.3, 11.2.4, 11.2.5, 11.3.7, 11.3.9, 11.3.25, 11.3.34, 11.3.35, 11.5.9, 11.7.1, 11.7.2, 11.7.3, 11.7.4, 11.8.3, 11.8.4, 11.8.5, 11.9.2, 11.9.13, 11.10.1, 11.10.3, 11.10.4, 11.10.7, 11.1.0.12, 11.11.1, 11.11.2, 11.11.5, 11.11.6, 11.11.8, 11.11.9, 11.11.12, 11.11.15, 11.12.3, 11.12.4, 11.12.6 and 11.12.9;</p> <p>AND</p> <p>S.4.2 Clearing does not reduce the extent of any of the following Regional Ecosystems to less than the associated percentage of the pre-clearing extent of that Regional Ecosystem on the property:</p> <ul style="list-style-type: none"> <li>a) 11.3.29, 11.3.10, 11.3.30, 11.5.2 , 11.5.3, and 11.12.1 – 50%; and</li> <li>b) On properties less than 200 hectares, clearing of regional ecosystem 11.3.12 - 50%;</li> <li>c) On properties greater than 200ha, clearing of regional ecosystem 11.3.12 – 90%.</li> </ul> <p>AND</p> <p>S.4.3 Clearing in regional ecosystem 11.12.1 does not reduce the extent of the regional ecosystem to less than 70% of the pre-clearing extent of the regional ecosystem within the area to which this code applies;</p> <p>AND</p>

Performance Requirement	Acceptable Solution
	<p>S.4.4 Clearing does not occur in regional ecosystems 11.3.31, 11.4.4 and 11.9.3.</p> <p>OR</p> <p>S.4.5 Where clearing occurs in areas listed in S.4.1, S.4.2, S.4.3, S.4.4, or S.4.5 the clearing is offset by protecting another area of non-remnant vegetation<sup>4</sup> (other than a category 1, category 2, category 3 or category 4 area on a PMAV) that achieves the following:</p> <ul style="list-style-type: none"> <li>a) the regional ecosystem to be restored is the same regional ecosystem as the regional ecosystem to be cleared; and</li> <li>b) the area of the regional ecosystem to be restored is at least equal to the area to be cleared; and</li> <li>c) there is a demonstrated high probability that within 20 years the area being restored will be capable of being mapped as remnant vegetation.</li> </ul>
<p><b>PR S.5</b> To ensure clearing does not cause land degradation and to maintain ecological processes, no adverse effect on the environment from soil erosion is to occur.</p>	<p><b>AS S.5</b></p> <p>S.5.1 Clearing must not be undertaken in a manner that allows adverse environmental effects from soil erosion caused by the clearing to occur outside the permit area.</p> <p>AND</p> <p>S.5.2 Mechanical clearing does not occur on slopes greater than 3% and clearing does not occur on slopes greater than 5%</p> <p>AND</p> <p>S.5.4 Clearing does not occur within the hydrological catchment of the Ross River Dam;</p> <p>AND</p> <p>S.5.5 Clearing does not occur in regional ecosystems 11.3.32, 11.5.12, 11.7.2, 11.7.4, 11.8.4, 11.9.2, 11.9.9, 11.10.1, 11.10.3, 11.10.4, 11.10.7, 11.10.12, 11.11.1, 11.11.2, 11.11.5, 11.11.6, 11.11.8, 11.11.9, 11.11.12, 11.11.15, 11.12.2, 11.12.3, 11.12.4, 11.12.6, 11.12.7, 11.12.9, and 11.12.13.</p>

<sup>4</sup> Other than vegetation that would be required to be retained under the conditions of a development approval.

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR S.6</b> To ensure clearing does not cause land degradation and to maintain ecological processes, increased salinity and waterlogging and the salinisation of ground and surface water are prevented.</p>	<p><b>AS S.6</b> Clearing does not:</p> <ul style="list-style-type: none"> <li>a) occur in existing or identified potential discharge areas; or</li> <li>b) occur within 50 metres of an existing or potential discharge areas; or</li> <li>c) reduce the extent of remnant vegetation to less than 30% of the pre-clearing extent of remnant vegetation in the contributing catchment; and</li> <li>d) occur in areas already subject to increased waterlogging or areas at risk of waterlogging as a result of clearing; and</li> <li>e) occur within regional ecosystems 11.5.9, 11.5.12 and 11.7.1.</li> </ul>
<p><b>PR S.7</b> To ensure clearing does not cause land degradation and to maintain ecological processes, the release of acid and associated metal contaminants into the environment from the disturbance of acid sulfate soils is prevented.</p>	<p><b>AS S.7</b> S.7.1 Clearing does not occur in regional ecosystems 11.1.1 and 11.1.2;</p> <p>AND</p> <p>S.7.2 Clearing does not occur in areas below 5 metres Australian Height Datum;</p> <p>OR</p> <p>S.7.3 Clearing in areas below 5 metres Australian Height Datum:</p> <ul style="list-style-type: none"> <li>a) does not result in disturbance or exposure of ASS or changes to the hydrology of the site likely to result in aeration of horizons containing iron sulfides or mobilisation of acid and metals; and</li> <li>b) is carried out in accordance with an acid sulfate soil Environmental Management Plan prepared in accordance with <i>State Planning Policy 2/02: Planning and Managing Development involving Acid Sulfate Soils</i>.</li> </ul>
<p><b>PR S.8</b> To conserve remnant endangered regional ecosystems and remnant of concern regional ecosystems, the current extent of endangered and of concern regional ecosystems is and category 1 and category 2 areas shown on a Property Map of Assessable Vegetation are maintained.</p>	<p><b>AS S.8</b> S.8.1 Clearing does not occur in endangered regional ecosystems or of concern regional ecosystems or in category 1 and category 2 areas shown on a Property Map of Assessable Vegetation;</p> <p>OR</p> <p>S.8.2 Where clearing occurs in areas listed in S.6.1, the clearing is offset by protecting another area of non-remnant vegetation (other than a category 1, category 2, category 3 or category 4 area on a PMAV) that achieves the following:</p>

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
	<ul style="list-style-type: none"> <li>a) the regional ecosystem to be restored is the same regional ecosystem as the regional ecosystem to be cleared; and</li> <li>b) the area of the regional ecosystem to be restored is at least equal to the area to be cleared; and</li> <li>c) there is a demonstrated high probability that within 20 years the area being restored will be capable of being mapped as remnant vegetation.</li> </ul>
<p><b>PR S.9</b>            Conserve remnant vegetation, prevent loss of biodiversity, maintain ecological processes, ensure clearing does not cause land degradation and manage the environmental effects of clearing.</p>	<p><b>AS S.9</b>            S.9.1 Clearing does not occur in an area of vegetation retained as a condition of a previous development permit on the property.            S.9.2 Clearing is limited to the extent that is reasonably necessary for the construction and operation of the significant project.</p>

## Part W: Requirements for Clearing Vegetation for Weed and Pest Management<sup>5</sup>

Performance Requirement	Acceptable Solution
<p><b>PR W.1</b> To prevent the loss of biodiversity and maintain ecological processes associated with natural wetlands, lakes and springs.</p>	<p><b>AS W.1</b> W.1.1 Mechanical clearing does not occur in, or within 100 metres of the static high water mark of, natural wetlands, lakes and springs; AND W.1.2 Mechanical clearing does not occur in regional ecosystems 11.1.3, 11.1.4, 11.2.4 and 11.3.27.</p>
<p><b>PR W.2</b> To prevent the loss of biodiversity and to maintain ecological processes, viable networks of wildlife habitat are maintained.</p>	<p><b>AS W.2</b> W.2.1 Mechanical clearing does not occur in Regional Corridors, Wildlife Habitat Corridors, Areas of Very High Regional Nature Conservation Significance and Areas of High Regional Nature Conservation Significance; AND W.2.2 Clearing does not remove mature trees.</p>
<p><b>PR W.3</b> To ensure clearing does not cause land degradation, to prevent the loss of biodiversity and to maintain ecological processes, watercourses and adjacent habitat are protected: a) maintaining bank stability by protecting against erosion and slumping; and b) maintaining water quality by filtering sediments, nutrients and other pollutants; and c) maintaining aquatic habitat; and d) providing food for aquatic ecosystems; and e) maintaining wildlife habitat.</p>	<p><b>AS W.3</b> W.3.1 Mechanical clearing does not occur in within the following areas: a) 50 metres of each high bank of each stream order 1 and 2; and b) 100 metres of each high bank of each stream order 3 and 4; and c) 200 metres of each high bank of each stream order 5 or greater; OR W.3.2 Mechanical clearing does not occur in within Existing Intensive Use Areas that are within: a) at least 50 metres from each high bank of each stream order 1,2,3 or 4; and b) at least 100 metres from each high bank of each stream order 5 or above;</p>

<sup>5</sup> Weed and Pest management refers to the clearing of vegetation for the control of non-native plants or pests declared under the *Land Protection (Pest and Stock Route Management) Act 2002*.

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR W.4</b> To ensure clearing does not cause land degradation and to maintain ecological processes, no adverse effect on the environment from soil erosion is to occur.</p>	<p><b>AS W.4</b> W.4.1 Mechanical clearing does not occur on: a) dispersible soils; b) sodosols within regional ecosystem 11.3.10; c) slopes greater than 3%.</p>
<p><b>PR W.5</b> To ensure clearing does not cause land degradation and to maintain ecological processes, increased salinity and waterlogging and the salinisation of ground and surface water are prevented.</p>	<p><b>AS W.5</b> W.5.1 Mechanical clearing does not occur : a) in or within 50 metres of existing or potential discharge areas; and b) in areas subject to waterlogging or areas at risk of waterlogging as a result of clearing.</p>
<p><b>PR W.6</b> To ensure clearing does not cause land degradation and to maintain ecological processes, the release of acid and associated metal contaminants into the environment from the disturbance of acid sulfate soils (ASS) is prevented.</p>	<p><b>AS W.6</b> W.6.1 Mechanical clearing does not occur in regional ecosystems 11.1.1, 11.1.2; AND W.6.2 Mechanical clearing in areas below 5 metres Australian Height Datum: a) does not result in disturbance or exposure of ASS or changes to the hydrology of the site likely to result in aeration of horizons containing iron sulfides or mobilisation of acid and metals; or b) is carried out in accordance with an acid sulfate soil Environmental Management Plan prepared in accordance with <i>State Planning Policy 2/02: Planning and Managing Development involving Acid Sulfate Soils</i>.</p>
<p><b>PR W.7</b> To prevent the loss of biodiversity, the natural floristic composition and range of densities of the regional ecosystem at that locality are maintained.</p>	<p><b>AS W.7</b> Clearing in all remnant regional ecosystems: a) is limited to the extent reasonably necessary for the removal of non-native plants or declared pests; and b) maintains viable populations of each native species present and listed in the regional ecosystem description<sup>6</sup>.</p>

<sup>6</sup> The Regional Ecosystem description is the full description of the regional ecosystem that appears in the Regional Ecosystem Description Database published by the Environmental Protection Agency.

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR W.8</b> To ensure clearing does not cause land degradation, to prevent the loss of biodiversity and to maintain ecological processes, the environmental effects of clearing for control of non-native plants and declared pests are minimised.</p>	<p><b>AS W.8</b> W.8.1 Mechanical clearing only occurs where:</p> <ul style="list-style-type: none"> <li>a) the infested area to be cleared is greater than 250m<sup>2</sup> and</li> <li>b) clearing is required to provide immediate access to the area of non-native plants or declared pests if no alternative route exists and</li> <li>c) greater than 60% of the total projective foliage cover (including shrub and canopy layers) is composed of a non-native plant or declared pest, or</li> <li>d) the area contains a rabbit warren complex.</li> </ul> <p>AND</p> <p>W.8.2 Clearing using aerial application of herbicide only occurs where:</p> <ul style="list-style-type: none"> <li>a) greater than 60% of the total projective foliage cover (including shrub and canopy layers) is composed of a non-native plant or declared pest, and</li> <li>b) the area to be cleared is greater than 1 hectare.</li> </ul> <p>AND</p> <p>W.8.3 Clearing by other means is limited to:</p> <ul style="list-style-type: none"> <li>a) the area infested by the pest plus a 1 metre buffer around the extent of the pest infestation; and</li> <li>b) the extent necessary to provide access to the area of non-native plants or declared pests, if no alternative route exists.</li> </ul> <p>AND</p> <p>W.8.4 For a declared animal pest, clearing occurs only where there is no suitable alternative method of control.</p>

## Part M: Requirements for Clearing for Minor Management Activities<sup>7</sup>

Performance Requirement	Acceptable Solution
<p><b>PR M.1</b> To prevent the loss of biodiversity and maintain ecological processes associated with natural wetlands, lakes and springs.</p>	<p><b>AS M.1</b> M.1.1 Clearing does not occur in or within 100m of the static high water mark of natural wetlands, lakes and springs; AND M.1.2 Clearing does not occur in regional ecosystems 11.1.3, 11.1.4, 11.2.4 and 11.3.27.</p>
<p><b>PR M.2</b> To prevent the loss of biodiversity and to maintain ecological processes, viable networks of wildlife habitat are maintained.</p>	<p><b>AS M.2</b> M.2.1 Clearing does not occur in regional corridors, Wildlife Habitat Corridors, Areas of Very High Regional Nature Conservation Significance and Areas of High Regional Nature Conservation Significance; AND M.2.2 Natural wetlands, lakes, springs, endangered regional ecosystems or of concern regional ecosystems are connected by corridors of retained remnant vegetation greater than 200 metres wide; AND M.2.3 Clearing does not remove any mature trees; AND M.2.4 Clearing does not occur in corridors of remnant vegetation at least 200 metres wide with a 5:1 length to width ratio that provides connectivity between: a) the clumps of remnant vegetation on the property; and b) the clumps of remnant vegetation between adjoining properties; and c) wetlands; and d) endangered and of concern regional ecosystems;</p>

<sup>7</sup> Management Activities include clearing that is:

- a) for establishing a necessary fence, firebreak, road or other built infrastructure, if there is no suitable alternative site for the fence, firebreak, road or infrastructure; or
- b) a natural and ordinary consequence of other assessable development for which a development approval as defined under the *Integrated Planning Act 1997* (IPA) was given, or a development application as defined under IPA was made, before 16 May 2003; or
- c) to ensure public safety.

Performance Requirement	Acceptable Solution
	<p>AND</p> <p>M.2.5 Clearing does not occur in an area which is identified on a map<sup>8</sup> prepared by the chief executive of the agency which administers the <i>Nature Conservation Act 1992</i> and certified for use for the purposes of this code by the Chief Executive of the Department of Natural Resources, Mines &amp; Energy, as an area of essential habitat for a species of wildlife listed as vulnerable, rare, near threatened or endangered under that Act.</p>
<p><b>PR M.3</b></p> <p>To ensure clearing does not cause land degradation, to prevent the loss of biodiversity and to maintain ecological processes, watercourses and adjacent habitat are protected:</p> <p>a) maintaining bank stability by protecting against erosion and slumping; and</p> <p>b) maintaining water quality by filtering sediments, nutrients and other pollutants; and</p> <p>c) maintaining aquatic habitat; and</p> <p>d) providing food for aquatic ecosystems; and</p> <p>e) maintaining wildlife habitat.</p>	<p><b>AS M.3</b></p> <p>Clearing does not occur in or within:</p> <p>a) 50 metres of each high bank of each stream order 1 and 2; and</p> <p>b) 100 metres of each high bank of each stream order 3 and 4; and</p> <p>c) 200 metres of each high bank of each stream order 5 or greater;</p> <p>OR</p> <p>M.3.2 Within Existing Intensive Use Areas clearing does not occur within:</p> <p>a) 50 metres from each high bank of each stream order 1 to 4; and</p> <p>b) 100 metres from each high bank of each stream order 5 or greater.</p>
<p><b>PR M.4</b></p> <p>To ensure clearing does not cause land degradation and to maintain ecological processes, no adverse effect on the environment from soil erosion is to occur.</p>	<p><b>AS M.4</b></p> <p>M.4.1 Clearing does not occur on dispersible soils;</p> <p>AND</p> <p>M.4.2 Clearing does not occur on sodosols within regional ecosystem 11.3.10;</p> <p>AND</p> <p>M.4.3 Mechanical clearing does not occur on slopes greater than 3%;</p> <p>AND</p> <p>M.4.4 Clearing does not occur on slopes greater than 5%;</p> <p>AND</p> <p>M.4.5 Clearing does not occur in regional ecosystems 11.3.32, 11.5.12, 11.7.2, 11.7.4, 11.8.4, 11.9.2, 11.9.9, 11.10.1, 11.10.3, 11.10.4, 11.10.7,</p>

<sup>8</sup> The map is held in digital form by the Department of Natural Resources, Mines & Energy and may be reduced or enlarged to show the essential habitat for a particular area.

Performance Requirement	Acceptable Solution
	<p>11.10.12, 11.11.1, 11.11.2, 11.11.5, 11.11.6, 11.11.8, 11.11.9, 11.11.12, 11.11.15, 11.12.2, 11.12.3, 11.12.4, 11.12.6, 11.12.7, 11.12.9, and 11.12.13.</p>
<p><b>PR M.5</b> To ensure clearing does not cause land degradation and to maintain ecological processes, increased salinity and waterlogging and the salinisation of ground and surface water are prevented.</p>	<p><b>AS M.5</b> M.5.1 Clearing for built infrastructure where the clearing exceeds 2 hectares does not occur:</p> <ul style="list-style-type: none"> <li>a) in existing or identified potential discharge areas; or</li> <li>b) within at least 50 metres of an existing or potential discharge areas; or</li> <li>c) to an extent that would reduce the extent of remnant vegetation to less than 30% of the pre-clearing extent of remnant vegetation in either contributing catchments or groundwater flow systems at a higher elevation in the catchment than existing or potential discharge areas (saline or non-saline); or</li> <li>d) within regional ecosystems 11.5.9, 11.5.12 and 11.7.1; or</li> <li>f) to an extent that would reduce the extent of remnant vegetation to less than 50% of the pre-clearing extent of remnant vegetation in the contributing catchment.</li> </ul> <p>M.5.2 Clearing does not occur in areas subject to waterlogging or areas at risk of waterlogging as a result of clearing.</p>
<p><b>PR M.6</b> To ensure clearing does not cause land degradation and to maintain ecological processes, the release of acid and associated metal contaminants into the environment from the disturbance of acid sulfate soils is prevented.</p>	<p><b>AS M.6</b> M.6.1 Clearing does not occur in regional ecosystems 11.1.1 and 11.1.2; AND M.6.2 Clearing does not occur in areas below 5 metres Australian Height Datum; OR M.6.3 Clearing in areas below 5 metres Australian Height Datum:</p> <ul style="list-style-type: none"> <li>a) does not result in disturbance or exposure of ASS or changes to the hydrology of the site likely to result in aeration of horizons containing iron sulfides or mobilisation of acid and metals; or</li> <li>b) is carried out in accordance with an acid sulfate soil Environmental Management Plan prepared in accordance with <i>State Planning Policy 2/02: Planning and Managing Development involving Acid Sulfate Soils</i>.</li> </ul>

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR M.7</b> To conserve remnant endangered regional ecosystems and remnant of concern regional ecosystems, the current extent of endangered and of concern regional ecosystems and category 1 and category 2 areas shown on a Property Map of Assessable Vegetation are maintained.</p>	<p><b>AS M7</b> Clearing does not occur in remnant endangered regional ecosystems or remnant of concern regional ecosystems or areas shown as ‘category 1’ or ‘category 2’ areas on a Property Map of Assessable Vegetation.</p>
<p><b>PR M.8</b> Conserve remnant vegetation, prevent loss of biodiversity, maintain ecological processes, ensure clearing does not cause land degradation and manage the environmental effects of clearing.</p>	<p><b>AS M.8</b> M.8.1 Clearing does not occur in an area of vegetation retained as a condition of a previous development permit on the property. AND M.8.2 Clearing is limited to the extent that is reasonably necessary for the construction of the fence, road, firebreak or built infrastructure, or for public safety..</p>

## Part F: Requirements for Fodder Harvesting<sup>9</sup>

<b>Performance Requirement PR F.1</b>
To ensure clearing does not cause land degradation, to maintain ecological processes and to prevent the loss of biodiversity, clearing for fodder harvesting does not occur unless the property or area in which the property is located is drought declared on or after 25 June 2004.

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR F.2</b> To prevent the loss of biodiversity and maintain ecological processes associated with natural wetlands, lakes and springs.</p>	<p><b>AS F.2</b> F.2.1 Clearing does not occur in and within 100m of the static high water mark of natural wetlands, lakes and springs; AND F.2.2 Clearing does not occur in regional ecosystems 11.1.3, 11.1.4, 11.2.4 and 11.3.27.</p>
<p><b>PR F.3</b> To prevent the loss of biodiversity and to maintain ecological processes, viable networks of wildlife habitat are maintained.</p>	<p><b>AS F.3</b> F.3.1 Clearing does not remove any mature trees; AND F.3.2 Clearing does not occur in Regional Corridors, Wildlife Habitat Corridors, Areas of Very High Regional Nature Conservation Significance and Areas of High Regional Nature Conservation Significance.</p>
<p><b>PR F.4</b> To ensure clearing does not cause land degradation, to prevent the loss of biodiversity and to maintain ecological processes, watercourses and adjacent habitat are protected to:</p> <ol style="list-style-type: none"> <li>a. maintain bank stability by protecting against erosion and slumping; and</li> <li>b. maintain water quality by filtering sediments, nutrients and other pollutants; and</li> <li>c. maintain aquatic habitat; and</li> <li>d. provide food for aquatic ecosystems; and</li> <li>e. maintain wildlife habitat.</li> </ol>	<p><b>AS F.4</b> Clearing does not occur within:</p> <ol style="list-style-type: none"> <li>a) 50 metres of each high bank of a stream order of 1 to 2; and</li> <li>b) 100 metres of each high bank of a stream order of 3 to 4; and</li> <li>c) 200 metres of each high bank of a stream order of 5 or greater.</li> </ol>

<sup>9</sup> Fodder harvesting is the clearing of woody native plants suitable for browse fodder. Lopping for fodder harvesting does not require approval. Lopping means cutting or pruning branches, but not removing a trunk, or cutting or pruning so severely that the tree is likely to die.

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR F.5</b> To ensure clearing does not cause land degradation and to maintain ecological processes, no adverse effect on the environment from soil erosion is to occur.</p>	<p><b>AS F.5</b> F.5.1 Clearing does not occur on dispersible soils; AND F.5.2 Clearing does not occur on sodosols within regional ecosystem 11.3.10; AND F.5.3 Clearing does not occur on slopes greater than 3%; AND F.5.5 Clearing does not occur in regional ecosystems 11.3.32, 11.5.12, 11.7.2, 11.7.4, 11.8.4, 11.9.2, 11.9.9, 11.10.1, 11.10.3, 11.10.4, 11.10.7, 11.10.12, 11.11.1, 11.11.2, 11.11.5, 11.11.6, 11.11.8, 11.11.9, 11.11.12, 11.11.15, 11.12.2, 11.12.3, 11.12.4, 11.12.6, 11.12.7, 11.12.9, and 11.12.13.</p>
<p><b>PR F.6</b> To ensure clearing does not cause land degradation and to maintain ecological processes, increased salinity and waterlogging and the salinisation of ground and surface water are prevented.</p>	<p><b>AS F.6</b> Clearing does not disturb the soil surface and does not remove native vegetation from: a) in and within 50 metres of existing or potential discharge areas; and b) areas subject to waterlogging or areas at risk of waterlogging as a result of clearing.</p>
<p><b>PR F.7</b> To conserve remnant not of concern regional ecosystems and to prevent the loss of biodiversity, the floristic composition and the structural integrity of the regional ecosystem are maintained.</p>	<p><b>AS F.7</b> Clearing: a) maintains floristic composition and size classes of the regional ecosystem typical at that locality; and b) maintains viable populations of each species listed in the regional ecosystem description.</p>
<p><b>PR F.8</b> To ensure clearing does not cause land degradation, to prevent the loss of biodiversity and to maintain ecological processes, the environmental effects of fodder harvesting are minimised.</p>	<p><b>AS F.8</b> Clearing: a) occurs by selective felling, cutting or breaking<sup>10</sup>; and b) is limited to suitable fodder species; and c) does not remove plants that are not suitable fodder species.</p>

<sup>10</sup> Selective felling, cutting or breaking involves the harvesting of individual trees only.

**Part T: Requirements for Thinning<sup>11</sup>**

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR T.1</b> To prevent loss of biodiversity and maintain ecological processes associated with natural wetlands, lakes and springs.</p>	<p><b>AS T.1</b> T 1.1 Mechanical clearing does not occur in, or within 100 metres of the static high water mark of natural wetlands, lakes and springs, AND T 1.2 Mechanical clearing does not occur in regional ecosystems 11.1.3, 11.1.4, 11.2.4 and 11.3.27.</p>
<p><b>PR T.2</b> To prevent the loss of biodiversity and to maintain ecological processes, viable networks of wildlife habitat are maintained.</p>	<p><b>AS T.2</b> T.2.1 Clearing: a) does not clear mature trees; and b) does not alter species composition or densities typical of the regional ecosystem surrounding that locality; and c) does not occur in pre-existing thick patches of remnant vegetation; and d) maintains viable populations of each species present and listed in the regional ecosystem description<sup>12</sup>. AND T.2.2 Clearing achieves a mosaic pattern that includes the protection of patches and strips of remnant vegetation representative of a range of densities of the regional ecosystem.</p>
<p><b>PR T.3</b> To ensure clearing does not cause land degradation, to prevent the loss of biodiversity and to maintain ecological processes, watercourses and adjacent habitat are protected to: a) maintain bank stability by protecting against erosion and slumping; and b) maintain water quality by filtering sediments, nutrients and other pollutants; and c) maintain aquatic habitat; and d) provide food for aquatic ecosystems; and e) maintain wildlife habitat.</p>	<p><b>AS T.3</b> T.3.1 Mechanical clearing does not occur within: a) 50 metres of each high bank of a stream order of 1 to 2; and b) 100 metres of each high bank of a stream order of 3 to 4; and c) 200 metres of each high bank of a stream order of 5 or greater; OR T.3.2 Within Existing Intensive Use Areas mechanical clearing does not occur within: a) at least 50 metres from each high bank of a stream order of 1, 2, 3 or 4; and b) at least 100 metres from each high bank of a stream order of 5 or greater.</p>

<sup>11</sup> Thinning means the selective clearing of vegetation at a locality to restore a regional ecosystem to the floristic composition and range of densities typical of the regional ecosystem surrounding that locality. The term does not include using a chain or cable linked between two tractors, bulldozers or other traction vehicles.

<sup>12</sup> The Regional Ecosystem description is the full description of the regional ecosystem that appears in the Regional Ecosystem Description Database published by the Environmental Protection Agency.

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR T.4</b> To ensure clearing does not cause land degradation and to maintain ecological processes, no adverse effect on the environment from soil erosion is to occur.</p>	<p><b>AS T.4</b> T.4.1 Clearing does not occur on dispersible soils; AND T.4.2 Mechanical clearing does not occur on slopes greater than 3%; AND T.4.3 Chemical clearing does not occur on slopes greater than 5%.</p>
<p><b>PR T.5</b> To ensure clearing does not cause land degradation and to maintain ecological processes, increased salinity and waterlogging and the salinisation of ground and surface water are prevented.</p>	<p><b>AS T.5</b> Clearing does not occur: a) in existing or potential discharge areas; and b) within 50 metres of existing or potential discharge areas; and c) in areas known to have a high risk of scalding; and d) in areas subject to waterlogging or areas at risk of waterlogging as a result of clearing.</p>
<p><b>PR T.6</b> To ensure clearing does not cause land degradation and to maintain ecological processes, the release of acid and associated metal contaminants into the environment from the disturbance of acid sulfate soils is prevented.</p>	<p><b>AS T.6</b> T.6.1 Clearing does not occur in regional ecosystems 11.1.1 and 11.1.2; AND T.6.2 Clearing in low-lying coastal lands below 5 metres Australian Height Datum; a) does not result in disturbance or exposure of ASS or changes to the hydrology of the site likely to result in aeration of horizons containing iron sulfides or mobilisation of acid and metals; or b) is carried out in accordance with an acid sulfate soil Environmental Management Plan prepared in accordance with <i>State Planning Policy 2/02: Planning and Managing Development involving Acid Sulfate Soils</i>.</p>
<p><b>PR T.7</b> To prevent the loss of biodiversity, thinning only occurs in areas where demonstrated thickening has occurred.</p>	<p><b>AS T.7</b> T.7.1 Clearing only occurs in areas where it is demonstrated that the density of the vegetation has thickened. AND T.7.2 Clearing only occurs in areas of thickening which is demonstrated by: a) comparing the density of remnant vegetation in the earliest available aerial photography that includes the subject area with the most recent available aerial photography that shows the same area; and b) finding that there is an increase in the density or</p>

Performance Requirement	Acceptable Solution
	<p>extent of vegetation that is inconsistent with of the range of densities of the regional ecosystem surrounding that locality or</p> <p>c) finding that the species is not listed in the description of the regional ecosystem<sup>13</sup>.</p>
<p><b>PR T.8</b> To prevent the loss of biodiversity, the natural floristic composition and range of densities of the regional ecosystem at that locality are maintained.</p>	<p><b>AS T.8</b> Clearing:</p> <p>a) does not remove mature trees; and</p> <p>b) attains the species composition, size classes and densities typical of the regional ecosystem surrounding that locality; and</p> <p>c) maintains viable populations of each species present and listed in the regional ecosystem description<sup>14</sup>; and</p> <p>d) does not remove pre-existing thick patches of remnant vegetation; and</p> <p>e) achieves a mosaic pattern of the range of densities of the regional ecosystem surrounding that locality.</p>

<sup>13</sup> The Regional Ecosystem description is the full description of the regional ecosystem that appears in the Regional Ecosystem Description Database published by the Environmental Protection Agency.

<sup>14</sup> As above.

## Part E: Requirements for Clearing Encroachment<sup>15</sup>

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR E.1</b> Prevent loss of biodiversity and maintain ecological processes associated with natural wetlands, lakes and springs.</p>	<p><b>AS E.1</b> Clearing does not occur in and within 100 metres of the static high water mark of natural wetlands, lakes and springs.</p>
<p><b>PR E.2</b> To prevent loss of biodiversity and to maintain ecological processes, viable networks of wildlife habitat are maintained.</p>	<p><b>AS E.2</b> Clearing:</p> <ul style="list-style-type: none"> <li>a) does not alter species composition or densities typical of the regional ecosystem; and</li> <li>b) maintains viable populations of each species present and listed in the regional ecosystem description.</li> </ul>
<p><b>PR E.3</b> To ensure clearing does not cause land degradation, to prevent the loss of biodiversity and to maintain ecological processes, watercourses and adjacent habitat are protected to:</p> <ul style="list-style-type: none"> <li>a) maintaining bank stability by protecting against erosion and slumping; and</li> <li>b) maintaining water quality by filtering sediments, nutrients and other pollutants; and</li> <li>c) maintaining aquatic habitat; and</li> <li>d) providing food for aquatic ecosystems; and</li> <li>e) maintaining wildlife habitat.</li> </ul>	<p><b>AS E.3</b></p> <p>E.3.1 Mechanical clearing does not occur within:</p> <ul style="list-style-type: none"> <li>a) 200 metres from each high bank of each stream order 5 or greater; and</li> <li>b) 100 metres width from each bank of each stream order 3 to 4; and</li> <li>c) 50 metres from each bank of each stream order 1 to 2.</li> </ul> <p>OR</p> <p>E.3.2 Clearing within Existing Intensive Use Areas clearing does not occur within:</p> <ul style="list-style-type: none"> <li>a) at least 50 metres from each high bank of stream orders 1,2,3, or 4; and</li> <li>b) at least 100 metres from each high bank of stream order 5 or greater.</li> </ul>
<p><b>PR E.4</b> To ensure clearing does not cause land degradation and to maintain ecological processes, no adverse effect on the environment from soil erosion is to occur.</p>	<p><b>AS E.4</b></p> <p>E.4.1 Clearing does not occur on dispersible soils; AND</p> <p>E.4.2 Mechanical clearing does not occur on slopes greater than 3%; AND</p> <p>E.4.3 Chemical clearing does not occur on slopes greater than 5%.</p>

<sup>15</sup> Encroachment means a woody species that has invaded an area of a grassland regional ecosystem to the extent the area is no longer consistent with the description of the regional ecosystem.

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR E.5</b> To ensure clearing does not cause land degradation and to maintain ecological processes, increased salinity and waterlogging and the salinisation of ground and surface water are prevented.</p>	<p><b>AS E.5</b> Clearing does not occur:</p> <ul style="list-style-type: none"> <li>a) in or within 50 metres of existing or potential discharge areas; and</li> <li>b) in areas subject to waterlogging or areas at risk of waterlogging as a result of clearing.</li> </ul>
<p><b>PR E.6</b> To ensure clearing does not cause land degradation and to maintain ecological processes, the release of acid and associated metal contaminants into the environment from the disturbance of acid sulfate soils is prevented.</p>	<p><b>AS E.6</b> Clearing in low-lying coastal areas below 5 metres Australian Height Datum;</p> <ul style="list-style-type: none"> <li>a) does not result in disturbance or exposure of ASS or changes to the hydrology of the site likely to result in aeration of horizons containing iron sulfides or mobilisation of acid and metals; or</li> <li>b) is carried out in accordance with an acid sulfate soil Environmental Management Plan prepared in accordance with <i>State Planning Policy 2/02: Planning and Managing Development involving Acid Sulfate Soils</i>.</li> </ul>
<p><b>PR E.7</b> To prevent the loss of biodiversity, clearing for encroachment only occurs in areas where demonstrated encroachment has occurred.</p>	<p><b>AS E.7</b> E.7.1 Clearing for encroachment only occurs in a regional ecosystem for which an application for clearing of encroachment may be accepted under the <i>Vegetation Management Act 1999</i> section 22A(2);</p> <p>AND</p> <p>E.7.2 Clearing only occurs in areas of encroachment which is demonstrated by:</p> <ul style="list-style-type: none"> <li>a) comparing the density of woody remnant vegetation in the earliest available aerial photography that includes the subject area with the most recent available aerial photography that shows the same area; and</li> <li>b) finding that there is an increase in the density or extent of woody vegetation that is inconsistent with the description of the regional ecosystem, or</li> <li>c) finding that the woody species is not listed in the description of the regional ecosystem.</li> </ul>

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR E.8</b> To prevent the loss of biodiversity, the floristic composition and range of densities of the regional ecosystem at that locality are maintained.</p>	<p><b>AS E.8</b> Clearing:</p> <ul style="list-style-type: none"> <li>a) attains the species composition, size classes and densities typical of the regional ecosystem surrounding that locality; and</li> <li>b) maintains viable populations of each species present and listed in the regional ecosystem description; and</li> <li>c) does not remove pre-existing thick patches of woody vegetation; and</li> <li>d) removes only the encroaching species.</li> </ul>

## Part X: Requirements for Clearing for an Extractive Industry<sup>16</sup>

An application that is for clearing for extractive industry and is also for the purpose of clearing for a significant project declared under the *State Development and Public Works Organisation Act 1971*, section 26 will be assessed under this part of the code, and not under Part S.

An application that is for clearing for extractive industry and is also for the purpose of clearing for establishing a necessary fence, firebreak, road or other built infrastructure, or for clearing that is a natural and ordinary consequence of other assessable development for which a development approval as defined under the *Integrated Planning Act 1997* was given, or a development application as defined under the *Integrated Planning Act 1997* was made, before 16 May 2003, will be assessed under this part of the code, and not under Part M.

Performance Requirements	Acceptable Solution
<p><b>PR X.1</b> Prevent loss of biodiversity and maintain ecological processes associated with natural wetlands, lakes and springs.</p>	<p><b>AS X.1</b> X.1.1 Clearing does not occur in or within 100m of the static high water mark of natural wetlands, lakes and springs; AND X.1.2 Clearing does not occur in regional ecosystems 11.1.3, 11.1.4, 11.2.4 and 11.3.27.</p>
<p><b>PR X.2</b> To prevent loss of biodiversity and to maintain ecological processes, viable networks of wildlife habitat are maintained</p>	<p><b>AS X.2</b> X.2.1 Vegetation is retained in corridors with a 5:1 length to width ratio, which provide connectivity between: a) clumps of retained vegetation on the property or on adjoining properties; and b) wetlands; and c) endangered or of concern regional ecosystems.  OR X.2.2 Viable networks of wildlife habitat are maintained by offsetting areas of vegetation immediately adjacent to the area of vegetation affected by the application, in a manner that meets the requirements of X.2.1.  AND X.2.3 Clearing does not occur in regional corridors, Wildlife Habitat Corridors, Areas of Very</p>

<sup>16</sup> Extractive industry means one or more of the following:

- (a) dredging material from the bed of any waters;
- (b) extracting rock, sand, clay, gravel, loam or other material, from a pit or quarry;
- (c) screening, washing, grinding, milling, sizing or separating material extracted from a pit or quarry.

Performance Requirements	Acceptable Solution
	<p>High Regional Nature Conservation Significance and Areas of High Regional Nature Conservation Significance.</p>
<p><b>PR X.3</b>                      To ensure clearing does not cause land degradation, to prevent the loss of biodiversity and to maintain ecological processes, watercourses and adjacent habitat are protected to:</p> <ul style="list-style-type: none"> <li>a) maintain bank stability by protecting against erosion and slumping; and</li> <li>b) maintain water quality by filtering sediments, nutrients and other pollutants; and</li> <li>c) maintain aquatic habitat; and</li> <li>d) provide food for aquatic ecosystems; and</li> <li>e) maintain wildlife habitat.</li> </ul>	<p><b>AS X.3</b>                      X.3.1 Clearing does not occur in or within:</p> <ul style="list-style-type: none"> <li>a) 50 metres of each high bank of each stream order 1 and 2; and</li> <li>b) 100 metres of each high bank of each stream order 3 and 4; and</li> <li>c) 200 metres of each high bank of each stream order 5 or greater;</li> </ul> <p>OR</p> <p>X.3.2 Within Existing Intensive Use Areas clearing does not occur within:</p> <ul style="list-style-type: none"> <li>a) 50 metres from each high bank of each stream order 1 to 4; and</li> <li>b) 100 metres from each high bank of each stream order 5 or greater.</li> </ul>
<p><b>PR X.4</b>                      To ensure clearing does not cause land degradation and to maintain ecological processes, no adverse effects on the environment from soil erosion is to occur.</p>	<p><b>AS X.4</b>                      X.4.1 Clearing must not be undertaken in a manner that allows adverse environmental effects from soil erosion resulting from the clearing to occur outside the operational area.</p> <p>AND</p> <p>X 4.2 Clearing is:</p> <ul style="list-style-type: none"> <li>a) staged in line with operational needs to restrict clearing to the operational area; and</li> <li>b) limited to the area from which material will be extracted within the term of the permit.</li> </ul>
<p><b>PR X.5</b>                      To ensure clearing does not cause land degradation and to maintain ecological processes, increased salinity and waterlogging and the salinisation of ground and surface water are prevented.</p>	<p><b>AS X.5</b>                      X.5.1 Clearing does not occur:</p> <ul style="list-style-type: none"> <li>a) in existing or identified potential discharge areas; or</li> <li>b) within at least 50 metres of an existing or potential discharge areas; or</li> <li>c) to an extent that would reduce the extent of remnant vegetation to less than 30% of the pre-clearing extent of remnant vegetation in either contributing catchments or groundwater flow systems at a higher elevation in the catchment than existing or potential discharge areas (saline or non-saline); or</li> </ul>

Performance Requirements	Acceptable Solution
	<p>d) within regional ecosystems 11.5.9, 11.5.12 and 11.7.1; or</p> <p>e) to an extent that would reduce the extent of remnant vegetation to less than 50% of the pre-clearing extent of remnant vegetation in the contributing catchment.</p> <p>AND</p> <p>X.5.2 Clearing does not occur in areas subject to waterlogging or areas at risk of waterlogging as a result of clearing.</p>
<p><b>PR X.6</b> To ensure clearing does not cause land degradation and to maintain ecological processes, the release of acid and associated metal contaminants into the environment from the disturbance of acid sulfate soils (ASS) is prevented.</p>	<p><b>AS X.6</b> X.6.1 Clearing does not occur in regional ecosystems 11.1.1 and 11.1.2;</p> <p>AND</p> <p>X.6.2 Clearing does not occur in areas below 5 metres Australian Height Datum;</p> <p>OR</p> <p>X.6.3 Clearing in areas below 5 metres Australian Height Datum:</p> <p>a) does not result in disturbance or exposure of ASS or changes to the hydrology of the site likely to result in aeration of horizons containing iron sulfides or mobilisation of acid and metals; or</p> <p>b) is carried out in accordance with an acid sulfate soil Environmental Management Plan prepared in accordance with <i>State Planning Policy 2/02: Planning and Managing Development involving Acid Sulfate Soils</i>.</p>
<p><b>PR X.7</b> To conserve remnant endangered regional ecosystems and remnant of concern regional ecosystems, the current extent of endangered and of concern regional ecosystems and category 1 and category 2 areas shown on a Property Map of Assessable Vegetation are maintained.</p>	<p><b>AS X.7</b> Clearing does not occur in an endangered or of concern regional ecosystem or an area shown as ‘category 1’ or ‘category 2’ on a Property Map of Assessable Vegetation, unless the clearing:</p> <p>a) is in a resource/processing area or transport route of a Key Resource Area identified in a State Planning Policy on Protection of Extractive Resources, or if no State Planning Policy is made, is in a resource/processing area or transport route for an area that in the opinion of the chief executive is an extractive resource of State significance;</p> <p>AND</p> <p>b) the clearing is offset by protecting an area of non-remnant (other than a category 1, category</p>

<b>Performance Requirements</b>	<b>Acceptable Solution</b>
	<p>2, category 3 or category 4 area on a PMAV), or remnant vegetation that may otherwise be approved to be cleared under this code that achieves the following:</p> <ul style="list-style-type: none"> <li>i. the regional ecosystem to be restored is or will be the same regional ecosystem as the regional ecosystem to be cleared; and</li> <li>ii. the area of the regional ecosystem to be restored is at least equal to the area to be cleared; and</li> <li>iii. there is a demonstrated high probability that within 20 years the area being restored will be capable of being mapped as remnant vegetation.</li> </ul>
<p><b>PR X.8</b>            Conserve remnant vegetation, prevent loss of biodiversity, maintain ecological processes, ensure clearing does not cause land degradation and manage the environmental effects of clearing.</p>	<p><b>AS X.8</b>            X.8.1 Clearing does not occur in an area of vegetation retained as a condition of a previous development permit for clearing on the property;</p> <p>AND            X.8.2 Clearing for the construction of infrastructure associated with an extractive industry operation is limited to the extent that is reasonably necessary for the construction and operation of the infrastructure;</p> <p>AND            X.8.3 Clearing is:</p> <ul style="list-style-type: none"> <li>a) staged in line with operational needs to restrict clearing to the area required for active extractive activity at any one time; and</li> <li>b) limited to the area from which material will be extracted within the term of the permit.</li> </ul>

## Part R: Requirements for Clearing Regrowth on Leasehold Land<sup>17</sup>

Where this part of the code refers to a regional ecosystem in the acceptable solutions, the pre-clearing extent map will be used to determine the location and extent of the regional ecosystem.

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR R.1</b> Prevent loss of biodiversity and maintain ecological processes associated with natural wetlands, lakes and springs.</p>	<p><b>AS R.1</b> Clearing of regrowth does not occur in and within 100 metres of the static high water mark of natural wetlands, lakes and springs.</p>
<p><b>PR R.2</b> To prevent the loss of biodiversity and to maintain ecological processes, viable networks of wildlife habitat are maintained.</p>	<p><b>AS R.2</b></p> <p>R.2.1 Clearing does not occur in Wildlife Habitat Corridors, Areas of Very High Regional Nature Conservation Significance and Areas of High Regional Nature Conservation Significance; AND</p> <p>R.2.2 Clearing does not isolate natural wetlands, lakes, springs, endangered regional ecosystems or of concern regional ecosystems; AND</p> <p>R.2.3 Clearing does not remove any mature trees; AND</p> <p>R.2.4 Vegetation is retained in clumps with a perimeter (metres) to area (hectare) ratio of less than 200:1; which are connected by corridors of vegetation at least 200 metres wide with a 5:1 length to width ratio and AND</p> <p>R.2.5 Where retained vegetation adjoins the property, corridors with a 5:1 length to width ratio are connected to that retained vegetation.</p>

<sup>17</sup> For the purposes of this code, regrowth is non-remnant vegetation that has emerged following clearing undertaken on or before 31 December 1989, and is on a lease issued under the *Land Act 1994* for agriculture or grazing purposes.

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR R.3</b> To ensure clearing does not cause land degradation, to prevent the loss of biodiversity and to maintain ecological processes, watercourses and adjacent habitat are protected:</p> <ul style="list-style-type: none"> <li>a. maintaining bank stability by protecting against erosion and slumping; and</li> <li>b. maintaining water quality by filtering sediments, nutrients and other pollutants; and</li> <li>c. maintaining aquatic habitat; and</li> <li>d. providing food for aquatic ecosystems; and</li> <li>e. maintaining wildlife habitat.</li> </ul>	<p><b>AS R.3</b></p> <p>R.3.1 Clearing does not occur within at least:</p> <ul style="list-style-type: none"> <li>a) 50 metres of each high bank of a stream order 1 to 2; and</li> <li>b) 100 metres of each high bank of a stream order of 3 to 4; and</li> <li>c) 200 metres of each high bank of a stream order of 5 or greater;</li> </ul> <p>OR</p> <p>R.3.2 Within Existing Intensive Use Areas clearing does not occur within:</p> <ul style="list-style-type: none"> <li>a) at least 50 metres from each high bank of a stream order of 1 to 4; and</li> <li>b) at least 100 metres from each high bank of a stream order of 5 or greater.</li> </ul>
<p><b>PR R.4</b> To ensure clearing does not cause land degradation and to maintain ecological processes, no adverse effect on the environment from soil erosion is to occur.</p>	<p><b>AS R.4</b></p> <p>R.4.1 Clearing does not occur on dispersible soils; AND</p> <p>R.4.2 Clearing does not occur on sodosols within regional ecosystem 11.3.10; AND</p> <p>R.4.3 Mechanical clearing does not occur on slopes greater than 3%; AND</p> <p>R.4.4 Chemical clearing does not occur on slopes greater than 5%; AND</p> <p>R.4.5 Clearing does not occur within the Ross River Dam catchment; AND</p> <p>R.4.6 Clearing does not occur in regional ecosystems 11.3.32, 11.5.12, 11.7.2, 11.7.4, 11.8.4, 11.9.2, 11.9.9, 11.10.1, 11.10.3, 11.10.4, 11.10.7, 11.10.12, 11.11.1, 11.11.2, 11.11.5, 11.11.6, 11.11.8, 11.11.9, 11.11.12, 11.11.15, 11.12.2, 11.12.3, 11.12.4, 11.12.6, 11.12.7, 11.12.9, and 11.12.13.</p>

<b>Performance Requirement</b>	<b>Acceptable Solution</b>
<p><b>PR R.5</b> To ensure clearing does not cause land degradation and to maintain ecological processes, increased salinity and waterlogging and the salinisation of ground and surface water are prevented.</p>	<p><b>AS R.5</b> Clearing does not occur:</p> <ul style="list-style-type: none"> <li>a) within existing or potential discharge areas; and</li> <li>b) within 50 metres of an existing or potential discharge area; and</li> <li>c) in areas subject to waterlogging or areas at risk of waterlogging as a result of clearing; and</li> <li>d) in priority recharge areas; and</li> <li>e) within regional ecosystems 11.5.9, 11.5.12 and 11.7.1.</li> </ul>
<p><b>PR R.6</b> No adverse effects on the environment caused by the release of acid and metal contaminants from the disturbance of acid sulfate soils.</p>	<p><b>AS R.6</b></p> <p>R.6.1 Clearing does not occur in regional ecosystems 11.1.1 and 11.1.2; AND</p> <p>R.6.2 Clearing does not occur in areas below 5 metres Australian Height Datum; OR</p> <p>R.6.3 Clearing in areas below 5 metres Australian Height Datum:</p> <ul style="list-style-type: none"> <li>c) does not result in disturbance or exposure of ASS or changes to the hydrology of the site likely to result in aeration of horizons containing iron sulfides or mobilisation of acid and metals; or</li> <li>d) is carried out in accordance with an acid sulfate soil Environmental Management Plan prepared in accordance with <i>State Planning Policy 2/02: Planning and Managing Development involving Acid Sulfate Soils</i>.</li> </ul>

## 8. Dictionary

**Acid sulfate soils:** are soils or sediments containing highly acidic soil horizons or layers affected by the oxidation of iron sulfides and/or soil or sediment containing iron sulfides or other sulfidic material that has not been exposed to air and oxidised.

**Aerial photography:** Vertical aerial photographs, identified by film number, run number and frame number, captured as part of a coordinated aerial photography program or project on which the date of photography, flying height, lens focal length and project name are specified.

**Areas of Very High and High Regional Nature Conservation Significance:** are defined in digital form held by the Department of Natural Resources, Mines and Energy, and illustrated in Figure 3.

**Chemical and soil fertility:** includes water holding capacity, soil structure, organic matter, soil biology and nutrients.

**Contributing catchment:** means for-

- a) a local ground water flow system, the area of the surface catchment measured above a point 5 km downstream from an existing or potential discharge area;
- b) an intermediate groundwater flow system, the area encompassed by a 15km radius from an existing or potential discharge area;
- c) a regional groundwater flow system, the area with the relevant drainage basin sub area at a higher elevation than an existing or potential discharge area.

**Corridors:** are continuous strips of vegetation; that link larger tracts of native vegetation; that are used or capable of being used by wildlife for movement; and are capable of being habitat in their own right.

**Demonstrated, for a proposed offset,** includes demonstrated by reference to published literature, the written opinion of a recognised expert in the field of revegetation; or by comparison to revegetation projects in similar regional ecosystems and similar conditions.

**Demonstrated thickening:** means the increase in the density of woody vegetation which can be proven by reference to the earliest available aerial photograph that includes the subject property when compared with the most recent available aerial photograph that includes the subject property.

**Discharge area is:**

- a) that part of the land surface where groundwater discharge produces a net movement of water out of the groundwater; and
- b) identified through an assessment process that is consistent with the document: *Salinity Management Handbook*, Queensland Department of Natural Resources, 1997; and

c) identified on an approved salinity hazard map.

**Dispersible soils:** are soils in which clay material disintegrates into particles less than 2 microns when submerged in distilled water for 12 hours.

**Encroachment:** means a woody species that has invaded an area of a grassland regional ecosystem to the extent the area is no longer consistent with the description of the regional ecosystem.

**Existing Intensive Use Areas:** are defined in digital form held by the Department of Natural Resources, Mines and Energy, and illustrated in Figure 4.

**Floristic composition:** is determined by the Queensland Herbarium's complete description of the regional ecosystem.

**Fodder harvesting:** is the clearing of fodder species for the purpose of being eaten by stock.

**Fodder species:** are species where the proponent can establish with published literature, to the satisfaction of the Chief Executive, that:

- a) in the local conditions, the species is suitable for browse fodder (that it is palatable, non-toxic and contributes to stock nutrition); and
- b) the species will regenerate successfully after harvesting.

**Grassland regional ecosystem:** means a grassland regional ecosystem prescribed under a regulation as a grassland regional ecosystem.

**Groundwater flow system:** is a zone with hydrogeological characteristics that influence the occurrence of dryland salinity. The hydrogeological characteristics relate to the movement of groundwater from a recharge area, through a transmission zone, to a discharge area or a potential discharge area.

**High bank:** is the terrace or bank or, if no bank is present, the point on the active floodplain which confines the normal flow, and which is either permanent or intermittent.

**Key resource area:** is an area identified in a State Planning Policy for Extractive Industries as a Key Resource Area.

**Lake:** is a lagoon, billabong, or other natural area of open water, whether permanent or intermittent.

**Locality:** is the immediate site of the proposed clearing, or the same regional ecosystem within a 20 km radius of the site of the clearing.

**Mature trees:** are trees that:

- a) are present in the stand as dominants or co-dominants; and
- b) have a trunk diameter, measured 1.3m above the ground, more than one half of that of the largest trees of the same species in the regional ecosystem typical at that locality, or

- c) have more than one hollow more than 10cm in diameter and more than 2 metres above the ground.

**Mechanical clearing:** is the use of machinery to clear vegetation which disturbs the soil surface or uproots woody vegetation.

**Non-native plants:** are those that are not native to Australia.

**Non-remnant:** is native vegetation that is not a remnant regional ecosystem.

**Operational area:** means the area actively being used for extractive industry at any one time.

**Pre-clearing extent:** for a regional ecosystem, means the extent of the regional ecosystem before it was cleared, which is shown on a digital map prepared by the Queensland Herbarium.

**Priority recharge areas** are areas

- a) identified as moderate-high or high on the recharge layer of an approved Salinity Hazard Map of the Department of Natural Resources, Mines and Energy; or
- b) identified using an assessment process that is consistent with the document: *Salinity Management Handbook*, Queensland Department of Natural Resources, 1997.

**Property:** is a lease, a license or permit under the Land Act; a single freehold lot or an aggregation of freehold lots that are geographically contiguous and are managed as a single unit.

**Protecting:** when offsetting means - the area is either: declared as an area of high nature conservation value or vulnerable to land degradation under the *Vegetation Management Act 1999*; a protected tenure under the *Nature Conservation Act 1992*; or covenanted under the *Land Title Act 1994*.

**Recharge areas:** are identified by either -

- a) an assessment process that is consistent with the document: *Salinity Management Handbook*, Queensland Department of Natural Resources, 1997; or
- b) an approved salinity hazard map.

**Regional Corridors:** are defined in digital form held by the Department of Natural Resources, Mines and Energy, and illustrated in Figure 3.

**Resource/processing area:** means the area of an extractive resource and the operational areas associated with extraction and processing of extractive materials. For a Key Resource Area identified by a State Planning Policy on Protection of Extractive Resources, the terms means the resource/processing area defined for that Key Resource Area in that State Planning Policy

**Soil erosion:** includes the accelerated soil loss associated with landslip, gully erosion, rill erosion, sheet erosion, stream bank erosion, wind erosion or scalding; and associated loss of chemical, physical or biological fertility.

**Springs:** are –

- a) where water naturally rises to and flows over the surface of land; and
- b) those areas listed in: Fensham and Fairfax (2002) ‘Queensland springs distribution-assessment’

**Sodosols:** are soils with a strong contrast between surface and subsoil clay content, and that have subsoils that are sodic (exchangeable sodium percentage ESP>6) and are not strongly acidic.

**Static high water mark:** is the settled ordinary water level that occurs under average meteorological conditions. It is less than extreme levels that can be caused by storm surges.

**Stream order:** is a numerical ordering classification of each watercourse segment according to its position within a catchment. When two streams of the same order join, the resulting watercourse becomes one stream order larger. If two streams of different order join, the resultant stream order is that of the larger stream, as shown in Figure 2

**Thinning:** means the selective clearing of vegetation at a locality to restore a regional ecosystem to the floristic composition and range of densities typical of the regional ecosystem surrounding that locality. The term does not include using a chain or cable linked between 2 tractors, bulldozers or other traction engines.

**Transport Route:** means the route used to transport<sup>18</sup> extractive materials to markets. For a Key Resource Area identified by a State Planning Policy on Protection of Extractive Resources, the term means the transport route defined for that Key Resource Area in that State Planning Policy

**Viable network:** areas of vegetation that exhibit high levels of connectivity, are representative of all regional ecosystems on the property, are large enough to allow ecosystem functioning, are self generating and able to remain in the landscape in spite of threatening processes.

**Viable populations:** means maintaining a range of size classes of the species at sufficient populations to ensure its ongoing presence at that site.

**Waterlogging:** is the saturation of soil by soil water.

**Wetlands:** are one or more of the following:-

- a) areas of permanent or periodic/intermittent inundation, with water that is static or flowing fresh, brackish or salt, including areas of

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<sup>18</sup>Generally road haulage is used to transport extractive materials, but in some circumstances could be:

- Rail transport, for example for transporting rail ballast where the extractive resource deposit is adjacent to rail (some rail ballast is trucked to a distribution centre at a rail siding); or
- Conveyor transport comprising a loading point, conveyor, and a distribution centre where there are significant rates of extraction.

marine water the depth of which at low tide does not exceed 6 metres. To be a wetland the area must have one or more of the following attributes:

- i. at least periodically the land supports plants and animals that are adapted to and dependent on living in wet conditions for at least part of their life cycle.
  - ii. the substratum is predominantly undrained soils that are saturated, flooded or ponded long enough to develop anaerobic conditions in the upper levels.
  - iii. the substratum is non-soil and is saturated with water, or covered by shallow water at some time;
- b) those areas shown as a swamp, lake, marsh, waterhole, wetland, billabong, pool or spring on the latest Sunmap 1:100,000 or 1:250,000 topographic map; and
- c) those areas listed in: Environment Australia (2001). *A Directory of Important Wetlands in Australia*. Third Edition. Environment Australia, Canberra
- d) Wetland regional ecosystems 11.1.3, 11.1.4, 11.2.4, 11.3.27.

Wildlife habitat: is the combination of factors both biotic and abiotic that meet the requirements of a particular species of native plant or animal.

Wildlife Habitat Corridors: are defined in digital form held by the Department of Natural Resources, Mines and Energy, and illustrated in Figure 3.

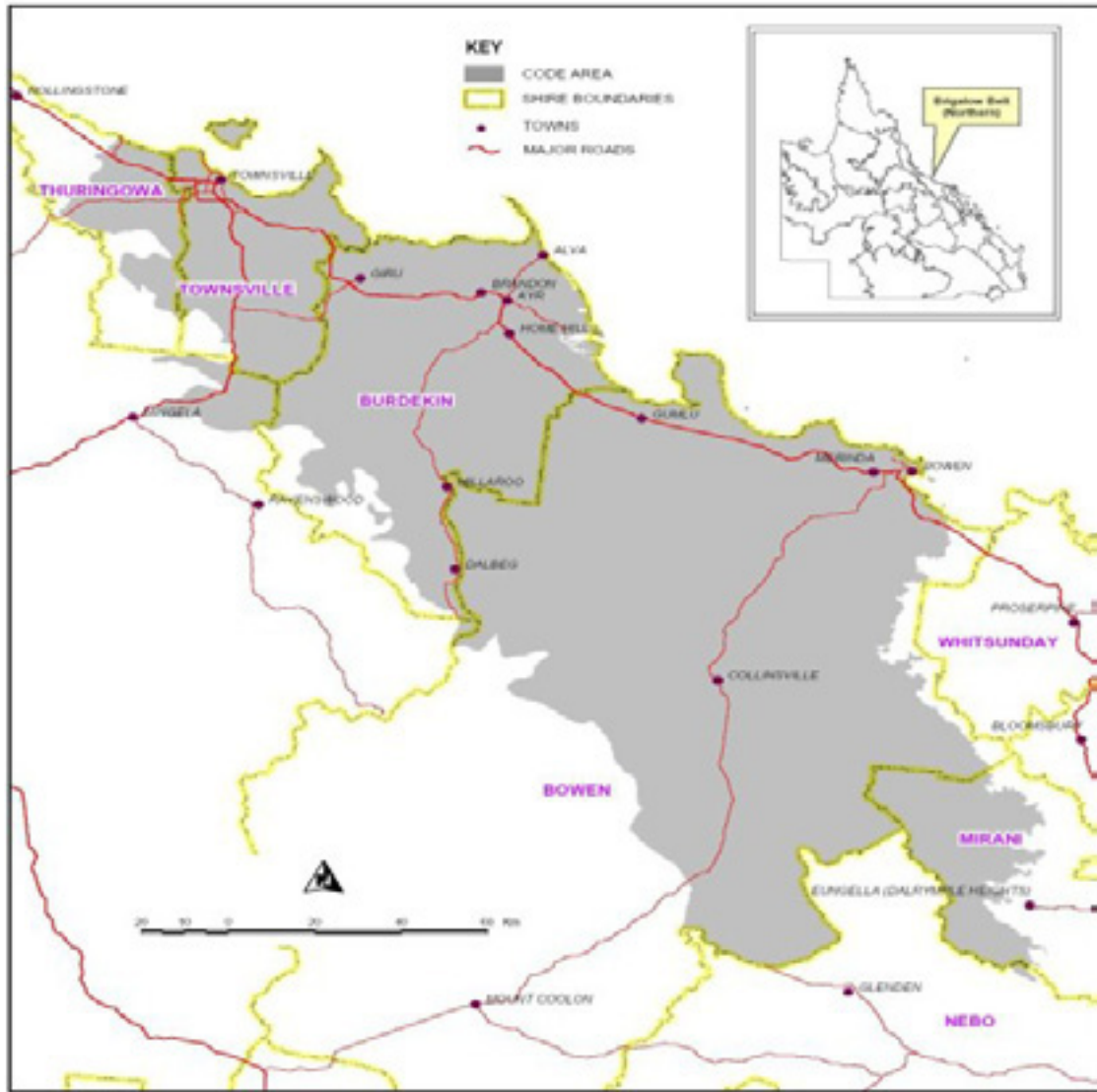
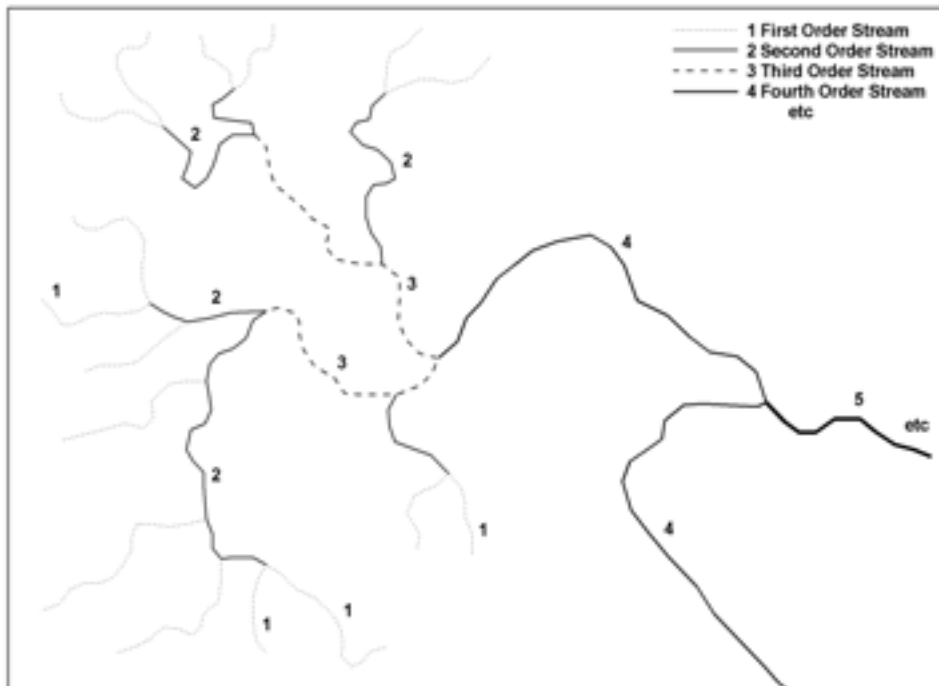


Figure 1: Location of the Northern Brigalow Region (Brigalow Belt Bioregion)



**Figure 2: Diagrammatic view of stream ordering**

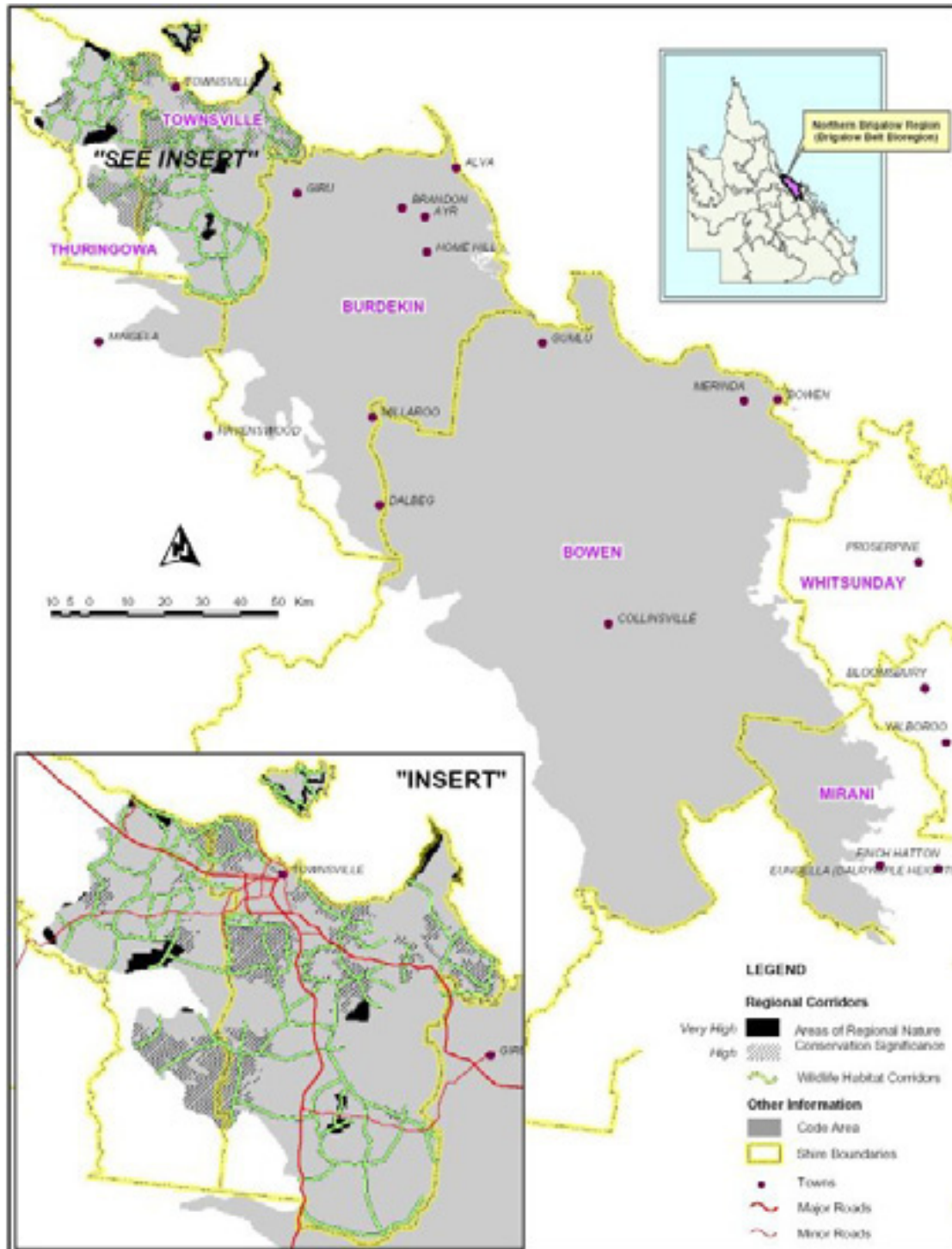


Figure 3: Regional Corridors: Areas of Regional Nature Conservation Significance and Wildlife Habitat Corridors

