# General guide to the vegetation clearing codes

Accepted development vegetation clearing codes

Effective 7 February 2020

For landholders throughout Queensland



#### CS8227

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# About this guide

This guide has been developed to help landholders operate under the accepted development vegetation clearing codes. It refers to the requirements of the Vegetation Management Act 1999 and the Planning Act 2016, which jointly regulate the clearing of vegetation for land use and development under the Queensland vegetation management framework.

The guide is not intended to be exhaustive. It provides supplementary information only, and is designed to be read in conjunction with the relevant codes. It includes:

- general supporting information that applies to all codes
- technical information that applies to all codes.



It is recommended that you familiarise yourself with the local, state and federal Acts and Regulations that apply to your operations. Be sure you have any permits or approvals that are required under other legislation.



Codes, guides and self-audit sheets are available at on the accepted development vegetation clearing codes webpage

# Code abbreviations used in this document

- Fodder code = Accepted Development Vegetation Clearing Code: Managing Fodder Harvesting
- Encroachment code = Accepted Development Vegetation Clearing Code: Managing Encroachment
- Weeds code = Accepted Development Vegetation Clearing Code: Managing Weeds
- NEC code = Accepted Development Vegetation Clearing Code: Necessary Environmental Clearing
- Extractive code = Accepted Development Vegetation Clearing Code: Clearing for an **Extractive Industry**
- Infrastructure code = Accepted Development Vegetation Clearing Code: Clearing for Infrastructure
- Ag efficiency code = Accepted Development Vegetation Clearing Code: Clearing to Improve Agricultural Efficiency
- Regrowth code = Accepted Development Vegetation Clearing Code: Managing Regulated Regrowth Vegetation

# **Further information**

# For more information:

- call 135 VEG (135 834)
- email vegetation@dnrme.qld.gov.au
- search 'Vegetation Management' on www.qld.gov.au.

# Glossary

All terms in this guide have the meaning provided in the codes or the <u>Vegetation Management Act 1999</u>. A list of terms defined in the <u>Vegetation Management Act 1999</u> is available in Appendix 1.

Common terms	General meaning
Category A area	An area which is:  • a declared area  • an offset area, an exchange area, an area that has been subject to unlawful clearing or an enforcement notice, an area subject to clearing as a result of a clearing offence or  • an area that the chief executive determines to be Category A.  Category A areas are colour-coded red on the regulated vegetation management map.
Category B area	An area which is remnant vegetation or an area the chief executive determines to be Category B.  Category B areas are colour-coded dark blue on the regulated vegetation management map.
Category C area	An area which is high-value regrowth vegetation on freehold land, Indigenous land or land the subject of a lease issued under the <i>Land Act 1994</i> for agriculture or grazing purposes or an occupation licence under that Act, in an area that has not been cleared in the last 15 years which is also an endangered, of concern, or least concern regional ecosystem. Category C areas may also include vegetation which the chief executive decides to show as Category C.  Category C areas are colour-coded light blue on the regulated vegetation management map.
Category R area	An area which is a regrowth watercourse and drainage feature area located within 50 metres of a watercourse located in the Burdekin, Burnett–Mary, Eastern Cape York, Fitzroy, Mackay–Whitsunday or Wet Tropics catchments identified on the vegetation management watercourse and drainage feature map.  The vegetation management framework regulates clearing of native vegetation within this buffer area.  Category R areas are colour-coded yellow on the regulated vegetation management map.
Category X area	All areas other than Category A, B, C and R areas. Category X areas are areas not generally regulated by the vegetation management laws. Category X areas are coloured-coded white on the regulated vegetation management map.
Clear (vegetation)	To remove, cut down, ringbark, push over, poison or destroy in any way, including by burning, flooding or draining; but not including destroying standing vegetation by stock, or lopping a tree
Code	Accepted development vegetation clearing code
DA	Development approval
DES	Department of Environment and Science
Department/ DNRME	Department of Natural Resources, Mines and Energy
DSDMIP	Department of State Development, Manufacturing, Infrastructure and Planning
Environmental offset	An activity undertaken to counterbalance or compensate for a lasting adverse impact on significant environmental matters (e.g. valuable species and ecosystems) on one site. Offsets can be financial or property-driven (i.e. by securing land at another site and managing that land over time to replace those significant environmental matters that were lost); or a combination of both. Environmental offsets provide the flexibility to approve development in one place on the basis of a requirement to make an equivalent environmental gain in another place where there is not the same value to industry.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Qld)
Essential habitat map	A map certified by the chief executive as showing areas of the state the chief executive reasonably believes are areas of essential habitat for protected wildlife.
Exempted development	See the Planning Regulation 2017, Schedule 24

Common terms	General meaning	
Fodder harvesting	The clearing of vegetation that predominantly consists of fodder species for use as a food source for livestock.  Used as a normal part of land management and during droughts, fodder harvesting is typically carried out in strips, blocks or other sections so as to leave a proportion of vegetation intact to conserve the area and broader regional ecosystem; and with the cleared vegetation remaining where it is cleared, for nearby stock to feed on.	
Koala habitat tree	<ul> <li>(a) a tree of the Corymbia, Melaleuca, Lophostemon or Eucalyptus genera that is edible by koalas; or</li> <li>a tree of a type typically used by koalas for shelter, including, for example, a tree of the Angophora genus</li> </ul>	
Immature koala habitat tree	Means a koala habitat tree that is not a <i>mature tree</i> or <i>habitat tree</i> and is two metres or more in height.	
Koala Habitat Area	See the Nature Conservation (Koala) Conservation Plan 2017, section 7B	
Koala offset	Means an environmental offset under the <i>Environmental Offsets Act 2014</i> provided for a matter of State environmental significance mentioned in schedule 2, section 6(3) or 6(4) of the Environmental Offset Regulation 2014 that is in relation to a koala habitat area.	
Koala Priority Area	See the Nature Conservation (Koala) Conservation Plan 2017, section 7A	
Managing thickened vegetation	<ul> <li>The selective clearing of vegetation at a locality that does not include clearing using a chain or cable linked between two tractors, bulldozers or other traction vehicles:</li> <li>to restore a regional ecosystem to the floristic composition and range of densities typical of the regional ecosystem in the bioregion in which it is located</li> <li>to maintain ecological processes and prevent loss of diversity.</li> </ul>	
NCA	Nature Conservation Act 1992 (Qld)	
Planning Act	Planning Act 2016 (Qld)	
PMAV	Property map of assessable vegetation—a map certified by the chief executive as a PMAV for an area and showing the vegetation category areas for the area (e.g. Category C area, Category X area)	
RE	Regional ecosystem.	
Regrowth watercourse and drainage feature area	An area located within 50 metres of a watercourse or drainage feature located in the Burdekin, Burnett–Mary, Eastern Cape York, Fitzroy, Mackay–Whitsunday or Wet Tropics catchments identified on the vegetation management watercourse and drainage feature map.	
Regulated regrowth vegetation	Vegetation contained in a category C or category R area.	
Remnant vegetation	Vegetation that:  • is an endangered regional ecosystem, an of concern regional ecosystem, or a least concern regional ecosystem  • forms the predominant canopy of the vegetation covering more than 50% of the undisturbed predominant capacity; averaging more than 70% of the vegetation's undisturbed height; and composed of species characteristic of the vegetation's undisturbed predominant canopy.	
RPP	Riverine protection permit.	
SLATS	Statewide Landcover and Trees Study. SLATS is a vegetation monitoring initiative of the Queensland Government with the primary objective of assessing the extent of woody vegetation in Queensland and assessing all woody vegetation change (clearing) in Queensland.	
VMA or Act	Vegetation Management Act 1999 (Qld)	
Water Act	Water Act 2000 (Qld)	

# Part 1: General information

# Vegetation management framework

The Vegetation Management Act 1999, in conjunction with the Planning Act 2016 and subordinate legislation, regulates the clearing of vegetation in Queensland. By providing an alternative path to development application and assessment processes, accepted development vegetation clearing codes offer opportunities for landholders to clear for low-risk property management activities, while ensuring the objectives of the Act are achieved.

# Accepted development vegetation clearing codes

Each code outlines the requirements for clearing vegetation for particular purposes and to achieve the desired environmental outcomes.

Each accepted development vegetation clearing code:

- · describes the scope of the activities covered by that code
- outlines the compulsory notification process to be followed before undertaking the clearing activity (section 2 of the code)
- stipulates the compliance requirements (section 3 of the code)
- prescribes the clearing requirements.

Any clearing that complies with an applicable code is accepted development (under Schedule 7, Part 3, 12, of the Planning Regulation 2017), meaning that you can undertake operational work that is the clearing of native vegetation without a development approval. Some requirements of a code may however require you to obtain another approval before commencing clearing under the code e.g.Material Change of Use development approval. If the proposed clearing is for a relevant purpose but does not comply with the code for that purpose, it is assessable development and you must obtain a development approval before clearing. Please note that you may be committing an offence under the Planning Act (section 163) if you undertake the clearing without appropriate approval.

# Scope

Each accepted development vegetation clearing code defines the activities, locations and other requirements that must be met for that code to apply. If your proposed clearing activity does not fall within the scope, then you cannot operate under that particular code, and you won't need to read any further into the code.

Scope requirements generally include:

- land tenure (e.g. freehold, Indigenous, leasehold etc.)
- vegetation categories, as defined in the VMA and displayed on the regulated vegetation management maps (e.g. Category B area being remnant vegetation)—see Part 2 of this guide
- REs (some clearing activities are only permitted in certain REs).

The Figure 1 flow chart may help you determine your options for lawfully clearing native vegetation under the Queensland vegetation management framework.

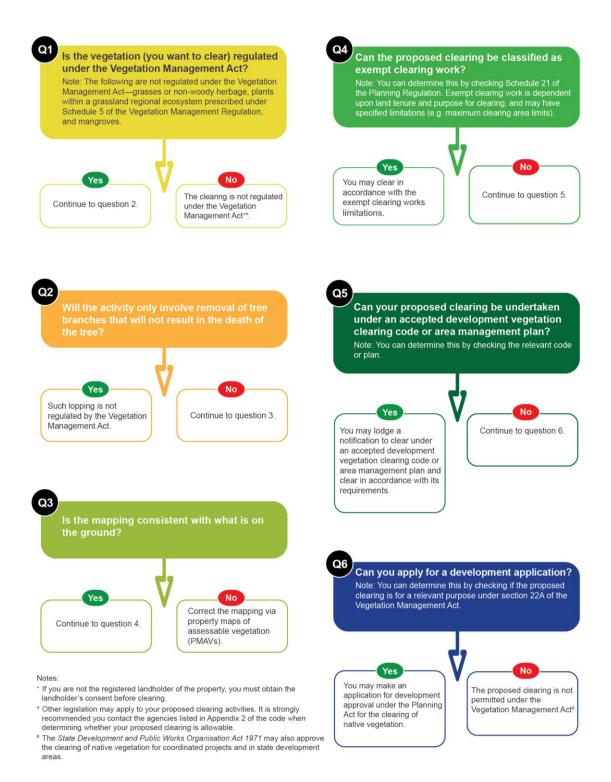


Figure 1: Flow chart for determining approvals required for clearing native vegetation

In some cases, certain types of clearing qualify as <u>exempt clearing work</u>, which means that you can clear without having to do so under a code and without having to obtain a development approval under the vegetation management framework. For example, exempt clearing work includes clearing during a bushfire emergency under the directions of an authorised fire officer, and clearing to reduce an imminent risk that vegetation poses to people or property.

TIP

See <u>www.qld.gov.au</u> and search 'exempt clearing work' for further information on exemptions.

# Vegetation management report

For relevant information about your property, you should obtain a vegetation management property report (also known as a property report) and accompanying maps. To do this, use the online request form at www.qld.gov.au (search for 'vegetation management maps').



You will need a lot number and plan number before you start.

The report will give you maps and information about vegetation categories and REs on your property. This information will help you determine whether your proposed activities are within the scope of a particular code and will also provide information you will need in order to notify DRNME of your intention to clear.

# Notification process

Before operating under a code, you must notify DNRME of your intention to clear under the code and provide particular supporting information. The notification can be made by either:

- landholders undertaking their own work
- third parties undertaking work on the landholder's land, with the consent of the landholder to enter, access and undertake clearing or other works on their land.

#### Examples

A machinery contractor may be authorised by a landholder to notify DNRME on the landholder's behalf.

A resource company or natural resource management group may undertake their own work on a landholder's land (with the consent of the landholder).

Either the landholder or the third party may authorise another person to lodge the notification on their behalf. Anyone who lodges the application, other than the landholder, will need to certify that they have the landholder's consent to lodge the application.

Landholders and third parties are encouraged to notify DNRME online. Notification forms are also available at DNRME offices, and may be lodged in person or by post. There is no notification fee.

## Before notifying

Make sure you read and understand the relevant code/s before completing the notification form.

If you intend to clear native vegetation on leasehold land or land subject to a forest consent area or forest entitlement area, contact the Department of Agriculture and Fisheries to ensure the state has no commercial interest in the timber.

If your property report identifies any part of the intended clearing area as a high-risk area for protected plants (i.e. all plants that are native to Australia), read the protected plants information for further requirements.

If your property is located in the South East Queensland (SEQ) Regional Plan area and your property report identifies that the proposed clearing is in a koala habitat area, seek guidance from the Department of Environment and Science on koala habitat protections.

Department of Environment and Science - Koala protection

E: SEQKoalaStrategy @des.qld.gov.au

W: https://environment.des.qld.gov.au/wildlife/animals/livingwith/koalas

P: Koala team -13 QGOV (13 74 68)

# Preparing and submitting your notification

You are required to provide the following details when you notify DNRME:

- Contact details
- Lot on plan on which the clearing is proposed
- Tenure of the property (e.g. freehold, leasehold etc.)
- Landholder's details
- Your details
- Information that clearly identifies the area to be cleared (i.e. maps, GPS coordinates using the Map Grid of Australia MGA 94 format, delineated area) estimate (in hectares) of the area to be cleared
- REs in which the clearing is proposed<sup>1</sup>



Notifications are not transferable when a property is sold. If you have recently purchased a property, you will need to notify DNRME of your intention to clear under the code.

# Confirmation from the Department of Natural Resources, Mines and Energy

If you complete an online notification form, you should receive confirmation by email within 10 minutes of completing the notification. If you do not receive a confirmation email, your notification has not been received. For more information call 135 VEG (135 834), email vegetation@dnrme.qld.gov.au or search 'vegetation management' on www.qld.gov.au

If you complete a hard copy notification form, we will confirm receipt of your notification by email or post.



Do not commence clearing until you receive confirmation of your notification from DNRME.

# Landholder or third-party obligations

The landholder or third party whose name appears on the notification is legally liable for any clearing activity undertaken. This is the case even if the application was lodged by a contractor, employee or another agent.

If you have lodged a notification and another person will undertake clearing on your behalf, you should:

- ensure they view a copy of the notification confirmation provided by DNRME before commencing any clearing activity
- document and retain your instructions to contractors, employees or other agents
- supervise any clearing activity undertaken to ensure that it is done in accordance with the code
- keep a record of the name, address and contact details of the person clearing on your behalf.

# Record-keeping requirements

Additional record-keeping requirements, including any that are code-specific, are detailed in the compliance requirements of each code.



We strongly recommend that you keep copies of any invoices provided by agents, such as a clearing contractor.

<sup>1</sup> DNRME collects this information to meet its obligations under the VMA. Only the location and the purpose of the notified activity are included on the public register. Your personal information will not be disclosed to any other parties unless authorised or required by law.

## Self-auditing

To help you monitor your compliance with the codes, we recommend that you (or the person clearing on your behalf) undertake a self-audit after operating within a small portion of the total area that you propose to clear. If your self-audit results show that you have not followed the code requirements when clearing this portion, stop further clearing operations and contact DNRME for assistance on how to proceed.

Before you lodge another notification, some of the codes require you to complete a self-audit to ensure that the clearing has satisfied the code requirements. You are not required to provide the results of the self-audit to DNRME when you re-notify, however, as part of the compliance requirements, you must keep the results and make them available to DNRME upon request.



Keep your self-audit results on file!

Landholders must use the relevant self-audit sheet for the clearing that has been undertaken. Self-audit sheets are available at www.qld.gov.au on the accepted development clearing codes page. To obtain hard copies of self-audit sheets, call 135 VEG (135 834), email vegetation@dnrme.qld.gov.au or search 'Vegetation Management' on www.qld.gov.au



Compliance with the code does not exempt you from requirements under other State, Commonwealth or local government laws. Landholders should contact other relevant agencies to discuss their proposed activities prior to clearing. Contact information is provided in each code.

# Part 2: Vegetation management mapping

# Online maps

You can download a range of maps and reports to help you understand the vegetation types and categories that are relevant to the vegetation management framework over your area of interest:

- Regulated vegetation management maps show the vegetation categories needed to determine clearing requirements. More detail on these maps is provided in the section below. These maps are updated monthly to show new property maps of assessable vegetation (PMAVs).
- A vegetation management supporting map is provided as an attachment to a regulated vegetation management map. This supporting map gives information on REs, wetlands, watercourses and essential habitat.
- Vegetation management reports (also known as property reports) contain the maps detailed above plus a protected plants flora survey trigger map, Koala habitat areas and koala priority areas map (SEQ Regional Plan area only) and a range of related information that may help in the self-assessment process.



To request a map or report, use the online request form at www.qld.gov.au (search for 'vegetation management maps').

<sup>2</sup> If, after viewing the regulated vegetation management map for your property, you consider that the on-ground vegetation is not consistent with the mapped RE, you may apply to amend the map by lodging a PMAV application. For more information, visit www.qld.gov.au (search for 'vegetation management').

# Regulated vegetation management maps

Regulated vegetation management maps show the different vegetation categories that are present on your land. This information will help you determine the type of approval you need for vegetation clearing. Therefore, it is useful to understand the types of vegetation in each category:

- Category A area—vegetation that is subject to compliance notices, offsets and voluntary declarations
- Category B area—remnant vegetation shown on a regional ecosystem or remnant map as an endangered regional ecosystem, an of concern regional ecosystem or a least concern regional ecosystem
- Category C area—high-value regrowth vegetation
- Category R area—regrowth watercourse area
- Category X area—vegetation that is generally exempt from requirements under vegetation management laws.

The vegetation management supporting maps are colour-coded to the status of vegetation shown:

- Pink—endangered regional ecosystem
- Orange—of concern regional ecosystem
- Green—least concern regional ecosystem.



IP If you believe that the vegetation shown on the map doesn't match what's on the ground, please let us know by applying for a PMAV. For more information, visit www.qld.gov.au (search for 'vegetation management')

The supporting maps (provided as attachments to your requested property report) give you additional information such as the location of wetlands, watercourses and essential habitat on your property.

# Essential habitat map

Essential habitat is defined by the VMA as the habitat of endangered, vulnerable or near-threatened wildlife (protected wildlife) prescribed under the Nature Conservation Act 1992.

Essential habitat is shown on the vegetation management supporting maps. The mapping relies on information sourced by a number of different government and non-government agencies and experts.

Essential habitat is mapped over areas of vegetation that are likely to contain either:

- three or more essential habitat factors3
- the relevant species at any stage of its life cycle.

The maps help to identify the essential habitat so that clearing of vegetation may be managed to prevent the loss of biodiversity.

# Regional ecosystems

Regional ecosystems (REs) are vegetation communities that are consistently associated with a particular combination of geology, landform and soil in a bioregion. REs are shown on the vegetation management supporting map.

<sup>3</sup> Biological and/or non-biological requirements of a species that are necessary or desirable for the wildlife at any stage of its life cycle, including vegetation community, altitude, soils, position in landscape, or regional ecosystem.

Using a combination of satellite imagery, aerial photography and on-ground investigation, the Queensland Herbarium has mapped the remnant extent of REs for much of the state.<sup>4</sup> Each RE has been assigned a vegetation management status based on its current remnant extent—that is, how much of it remains in a bioregion.

#### **Endangered** status means:

- the area of remnant vegetation is less than 10% of the pre-clearing extent of the RE or
- the area of remnant vegetation is 10–30% of the pre-clearing extent of the RE, and less than 10 000 hectares.

#### Of concern status means:

- the area of remnant vegetation is 10–30% of the pre-clearing extent of the RE or
- the area of remnant vegetation is more than 30% of the pre-clearing extent of the RE, and less than 10 000 hectares.

#### Least concern status means:

- the area of remnant vegetation is more than 30% of the pre-clearing extent of the RE and
- more than 10 000 hectares.

REs are further categorised into the following five groups based on vegetation structure—dense, middense, sparse, very sparse and grassland. These structural categories are indicative of the expected density or composition of vegetation in its natural state.

<sup>4</sup> Science, Information Technology and Innovation, Queensland Government 2016, 'Regional ecosystem framework', viewed 21 December 2016, <a href="https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/framework/">https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/framework/</a>.

# **Bioregions**

Queensland has been divided into 13 bioregions, each of which represents a broad landscape pattern that is the result of the interplay between factors including geology, climate and biota. Within each bioregion, there are a number of REs that make up the diversity of landscapes across the region. As each bioregion is different in nature, the vegetation management requirements under the framework differ.

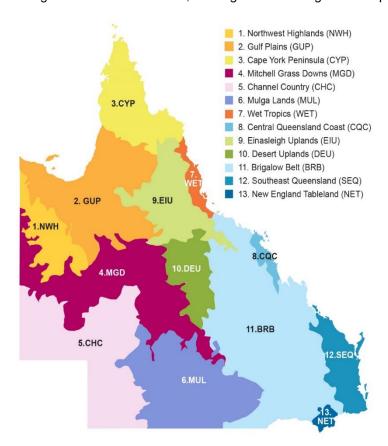


Figure 2: Queensland bioregions

# Reading regional ecosystem maps



Regional ecosystem mapping can also be viewed through the **Queensland Globe** at <a href="www.qld.gov.au">www.qld.gov.au</a> (search 'Queensland Globe').

Each identified area on the map is called a polygon. Each polygon is labelled with a three-number code identifying the RE:

- The first number indicates the bioregion in which the RE is situated.
- The second number refers to the **land zone** in which the ecosystem occurs.
- The third number refers to the **specific ecosystem** and denotes **vegetation type**.

#### **Example**

In the RE code 6.3.21:

- 6 is the code for the Mulga Lands bioregion
- 3 indicates alluvial systems such as creeks, rivers and floodplains
- 21 indicates low woodlands of mulga on low alluvial sand dunes.

Most regional ecosystem maps show polygons with more than one RE code. The order in which the REs are listed reflects the relative size and extent of these different ecosystems on the ground.

## **Example**

A mixed polygon labelled **6.5.1/6.5.2**, **70/30** contains approximately 70% of RE 6.5.1 and 30% of RE 6.5.2.

If you have areas mapped as more than one RE, you may need to determine precisely where on the ground each RE is located.

# Part 3: Wetlands, watercourse and drainage features

The codes apply additional restrictions to clearing in or near wetlands, watercourses and drainage features.

While each of these water features is described generally below, their proper definition is contained in the VMA. This definition requires that each water feature:

- is displayed on a relevant map (see details below in 'Mapping') that has been certified by the chief executive of the VMA
- adheres to the written definition in the VMA (see 'General descriptions' below).

The use of certified maps gives landholders certainty about which wetlands, watercourses and drainage features are regulated by the codes.



If you believe the maps to be incorrect, call **135 VEG** (135 834), email <a href="mailto:vegetation@dnrme.qld.gov.au">vegetation@dnrme.qld.gov.au</a> or search 'Vegetation Management' on www.qld.gov.au

# Mapping

The certified map that displays each regulated water feature is described in Table 1 below.

Feature	Certified map under Vegetation Management Act	
Wetlands	Vegetation management wetlands map	
Watercourse	Vegetation management watersource and drainage feeture man	
Drainage feature	Vegetation management watercourse and drainage feature map	

Table 1: Certified maps that display regulated water features

These maps are displayed as layers on the vegetation management support map. To request a map, use the online request form at <a href="www.qld.gov.au">www.qld.gov.au</a> (search 'vegetation management maps'). You can also view the layers on Queensland Globe at <a href="www.qld.gov.au">www.qld.gov.au</a> (search Queensland Globe).

When implementing the codes on the ground, you are likely to need more detail than is shown on the certified map. For example, if the requirement is 'no mechanical clearing within 20 metres of a wetland', you will need to determine the edge of the wetland from on-ground observations rather than using the map. You will still need to understand and apply the written definitions from the VMA below.

#### Wetlands

In general, wetlands are identified on the vegetation management wetlands map, and are features that:

- support plants that are adapted to and rely on inundation of water for at least part of their life cycle
- can include fresh, brackish and marine environments
- can be dry for long periods of time between inundations (even 10 years or longer)
- include lakes, lagoons, estuaries, rivers, floodplains, swamps, bogs, billabongs, marshes, coral reefs and seagrass beds.

#### Watercourse

In general, a watercourse is identified on the vegetation management watercourse and drainage feature map, and is a feature that:

- is a river, creek or stream, including an anabranch, in which water flows permanently or intermittently, regardless of how frequently flows occur
- includes natural and artificial channels
- includes in-stream islands or bars
- · extends to the outer banks of the watercourse
- does not include drainage features (see the definition of 'drainage feature' below).

Watercourse and drainage feature mapping outside of South East Queensland is at a 1:100,000 scale (with stream orders), whilst SEQ watercourse and drainage feature mapping is at a finer 1:25,000 scale (without stream orders) for all codes other than extractive industry. Stream ordered vegetation management watercourse and drainage feature mapping at a 1:100,000 scale is available for the purpose of the extractive industry code in SEQ.

#### Drainage feature

In general, drainage features are identified on the vegetation management watercourse and drainage feature map, and are features that:

- contain overland-flow water during and immediately after rain
- only flow for a short period of time after rain
- generally do not have enough continuing flow to create a riverine environment.

# Defining bank

The defining bank (as referred to in the codes) is the bank that confines the seasonal flows, but which may be inundated by flooding from time to time. The defining bank can be either:

- the bank or terrace that confines the water before the point of flooding or
- where there is no bank, the seasonal high water line that represents the point of flooding.

The seasonal high water line is defined as a zone that represents the usual peak seasonal flow level, identifiable by deposition, debris or characteristic vegetation zonation.

The defining bank is used by the codes as a starting point to measure riparian buffers away from the water feature.

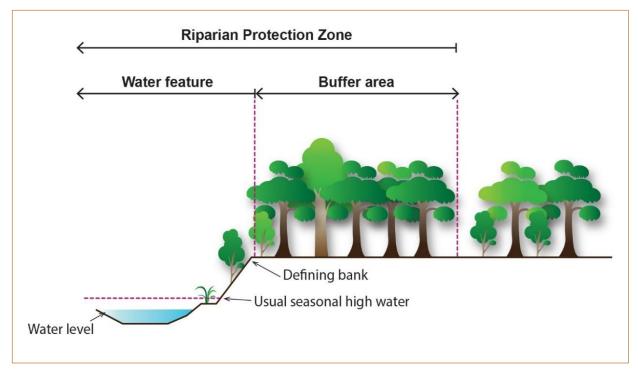


Figure 3: Example of a defining bank and buffer area—the width of the buffer is dependent on the stream order

## Locating the defining bank on the ground

In many cases, the defining bank of a wetland, watercourse or drainage feature is reasonably clear by observing the ground topography. If there are several defining banks, with each corresponding to higher flows, the highest defining bank is normally used. The only exception may be if local knowledge indicates that this highest bank corresponds to infrequent large flood events, in which case the next lower defining bank may be appropriate to use instead.

If no defining bank is evident, look for any evidence of a seasonal high water line such as the deposition of sediment, build-up of debris or a characteristic vegetation zonation. This area is used as a surrogate for the defining bank when measuring buffer distances.

# Part 4: Essential habitat

Essential habitat is the habitat of native wildlife prescribed under the *Nature Conservation Act 1992* as endangered, vulnerable or near-threatened (protected wildlife). Essential habitat is important for biodiversity and is protected under the VMA.

# Identifying essential habitat

When you request a property report for your lot, essential habitat for protected wildlife will include suitable habitat on the lot, or where a species has been known to occur up to 1.1 km from the sighting. The following information is included in a vegetation management property report to help you identify essential habitat:

- Section 3.5 provides information on how essential habitat is calculated and if it has been identified on the lot.
- Table 6 in section 3.5 provides information about the protected wildlife species captured by the essential habitat areas on the lot.
- The vegetation supporting map in section 5.2 shows any essential habitat on the lot as blue hatching.

# Interacting with essential habitat

If you have identified essential habitat on your property you cannot clear it unless the clearing is exempt, you have a development approval authorising the clearing, or the clearing is authorised in accordance with a code. Guidance is provided in Part 8 below if you are required to legally secure an exchange area in order to clear in essential habitat for a category C area or a category R area.

# Part 5: Koala habitat in South East Queensland

In response to declining Koala population numbers in South East Queensland (SEQ), new koala regulations have been introduced which place restrictions on interfering with koala habitat in the SEQ Regional Plan area. To align with koala protections, relevant codes have been amended to enhance koala conservation outcomes in SEQ whilst ensuring that reasonable and necessary vegetation clearing can be undertaken.

# Koala protections

Clearing in accordance with the codes is generally exempted development under the Koala regulations, meaning that you can conduct your clearing as usual without a development approval, as long as you meet the requirements of the code. However, there are certain circumstances where clearing in accordance with the codes may not be exempt under the Koala regulations. These circumstances (Planning Regulation 2017, Schedule 24) include clearing in a koala habitat area for:

- (a) the construction or maintenance of a fence, road, track, irrigation channel, contour bank or other linear infrastructure, other than a powerline or drainage and erosion control structure, if the cleared area is more than 5m wide or
- (b) the construction or maintenance of an airstrip or helipad if the cleared area is more than 500m<sup>2</sup> or
- (c) the construction or maintenance of non-linear infrastructure, other than an airstrip or helipad, in a category B area or category C area if the cleared area is more than 500m² or
- (d) an extractive industry, other than clearing for a fence, road, track, irrigation channel, contour bank or other linear infrastructure, in a category C area if the cleared area is more than 500m<sup>2</sup> or
- (e) the diversion of a section of a watercourse or drainage feature, within the meaning of the Water Act 2000, schedule 4, in a way that replicates the section, in a category C area if the cleared area is more than 500m<sup>2</sup>.

If your proposed clearing is within a koala habitat area and meets any of the clearing circumstances above, it is recommended that you seek further information from the Department of Environment and Science on whether your proposed clearing is regulated by the koala protection framework and what further actions to take.



If you have any queries about the Koala Strategy, regulations or mapping, please contact the Department of Environment and Science:

E: SEQKoalaStrategy@des.qld.gov.au

W: https://environment.des.qld.gov.au/wildlife/animals/living-

with/koalas

P: 13 QGOV (13 74 68)

# Koala priority areas

Koala priority areas (KPAs) are areas in SEQ that have been identified as having the highest likelihood of achieving conservation outcomes for koalas. KPAs are shown as grey hatching on the Koala habitat areas and koala priority areas map. Regulations apply under the koala protection framework to KPAs. If you require further information about what you can do in a KPA, contact the Department of Environment and Science.

# Koala habitat areas

Koala habitat areas (KHAs) are areas in SEQ that contain koala habitat which is essential for the conservation of a viable koala population in the wild. KHAs are shown as dark green and light green on the map of Koala priority areas and koala habitat areas. Some codes have requirements that apply to koala habitat areas. Regulations apply under the koala protection framework to KHAs. If you require further information about what you can do in a KHA, contact the Department of Environment and Science

The map of Koala priority areas and koala habitat areas is provided as an attachment to the vegetation management property report. You can find out whether there is koala habitat on your lot by downloading a property report.



To request a map or report, use the online request form at <a href="https://www.qld.gov.au">www.qld.gov.au</a> (search for 'vegetation management maps').

# Part 6: Soil and water quality protections

All codes contain soil and water quality protections to avoid potential land degradation and its secondary impacts. The primary land degradation issues dealt with by the codes are:

- soil erosion and instability
- salinity
- acid sulfate soils.

These issues can all lead to reduced water quality. Some codes include practices to deal with all three, while others may only deal with two, due to the types of activities authorised by the code or types of REs in which clearing may occur. For example, the Managing Fodder Harvesting code does not cover acid sulfate soil issues because there are minimal acid sulfate soils in the REs in which fodder harvesting can occur.

# Soil erosion and instability

Soil erosion and instability is defined in the codes as the occurrence of gully erosion greater than 30 centimetres in depth, landslips, a scarp, soil scalding or stream-bank slumping.

Landslips are normally obvious where the earth slides away from an adjacent piece of earth, sometimes with only minor movement. A scarp is a steep bank or slope resulting from movement of adjacent earth. Soil scalding is an area bare of vegetation due to extremely adverse growing conditions, such as loss of topsoil and/or being too salty or acidic.

The codes require that for areas subject to clearing, 'recognised best practice methods' must be employed to:

- prevent increased soil erosion and instability
- stabilise any soil erosion and instability caused by clearing
- prevent increased sediment run-off entering a wetlands, watercourse or drainage feature.

'Recognised best practice methods' may include activities such as clearing methods, stock management strategies, timing, revegetation and infrastructure location. Further options and details on recognised best practice methods can be obtained from a range of sources, including federal, state and local government publications.

#### Soil conservation



A useful state government publication is the **Soil conservation** guidelines for Queensland (3rd edition)—download the guide at <a href="www.qld.gov.au">www.qld.gov.au</a> (search 'soil conservation guidelines for Queensland').

The methods described in the *Soil conservation guidelines for Queensland* apply to a wide range of scenarios. While specific reference may not be made to vegetation clearing activities, many of the methods described will be applicable, depending on your own individual situation and clearing activities.

The guidelines describe a range of things to consider in the management of your land to prevent and rectify soil erosion and instability from clearing activities. They include:

- slope of the land cleared
- placement of access tracks
- maintenance and growth of vegetative ground cover
- grazing pressure
- working along the contour
- control of stock access
- species selection
- fence locations
- off-stream watering points
- preventing run-off water from concentrating.

More detail is available in the various chapters of the guidelines. The following chapters may be relevant to your situation:

- Chapter 2 'Soil conservation planning' highlights the need for coordinated planning of soil conservation issues across the whole landscape, including consideration of clearing activities.
- Chapter 14 'Property infrastructure' deals with access tracks and laneways that would be
  associated with clearing activities. This chapter may also be useful when considering stabilisation
  actions that may involve a change in infrastructure or property layout.

- Chapter 10 'Land management on flood plains' covers management issues on grazing lands (e.g. stocking rates, stock movements, fencing, off-stream water points) that may be relevant to your proposed clearing activities and any potential stabilisation actions.
- Chapter 11 'Stream stability' provides explanations of stream-bank erosion processes and considerations to reduce erosion, including the role of vegetation in stabilising land around streams
- Chapter 13 'Gully erosion and its control' provides considerable detail on how to minimise, manage and rectify gully erosion on grazing lands.

## Other considerations

Care must be taken to ensure that clearing does not expose subsoils that are highly erodible and prone to deep or extensive gullying. Such subsoils can also develop tunnel erosion beneath the surface if water flow is able to penetrate into the subsoil. These soils occur in some parts of the Burdekin and Fitzroy catchments, as well as in other zones with extensive areas of dispersive soils.

Extra care needs to be taken in sensitive areas, such as those within the defining bank of a wetlands, watercourse or drainage feature, or within various buffers around these areas. While mechanical clearing is not permitted in these areas, non-mechanical selective management and harvesting in these areas may be permitted. Any such clearing in these areas need to be done with great care to avoid any increase in erosion or instability.

If you are undertaking controlled burning, you should consider the implications for subsequent erosion risk from reduced vegetative cover. Issues to consider include the location, extent, intensity and timing of the fire, along with any other management practices to reduce the erosive power of wind and water.

# Salinity

When clearing vegetation, ensure the activity does not further contribute to any dryland salinity in the area. Salinity may be caused by rising groundwater tables that bring salts closer to the surface. There may be other surface expressions of saline water in the landscape caused by seepage due to local geology. Maintaining deep-rooted vegetation such as trees and shrubs in these areas helps to prevent the water table rising and other surface expressions of saline water.

The codes generally prevent or limit the extent of clearing within 100 metres of a salinity expression area, which is defined in the code as an area containing more than one of the following salinity indicators:

- Plant species tolerant of saline conditions, shallow water tables or poor drainage (waterlogging)
- Wet areas in lower parts of the landscape or bare soil (soil scalding)
- Dieback of larger trees in low, wetter parts of the landscape (outside drought conditions or the effects of fire)
- Salt accumulations on the surface (often white and powdery, sometimes crystalline)
- Areas of shallow groundwater<sup>6</sup>

Various resources provide examples of these indicators and other relevant information on salinity.



The Queensland Government website provides information on identifying salinity areas and how to prevent and manage such areas—visit <a href="www.qld.gov.au">www.qld.gov.au</a> (search 'salinity'). A useful reference from these web pages is the **Salinity management handbook**.

<sup>5</sup> For example—Melaleuca spp. (in particular Melaleuca bracteata and Melaleuca quinquenervia), Sporobolus spp. (in particular saltwater or marine couch), Salsola australis (soft roly-poly), Sclerolaena spp. (in particular prickly roly-poly), Cyperus spp. (sedges), Juncus spp. (rushes), Atriplex spp. (saltbushes), Paspalum spp. (water couch), Enchylaena tomentosa (ruby saltbush), Sesuvium portulacastrum (purslane), Tecticornia species (samphires), Phragmites spp.

<sup>6</sup> A water table less than 5 metres from the surface would generally be considered as shallow for this purpose. One mechanism to identify this is from a nearby bore.

## Acid sulfate soils

Acid sulfate soils are soils containing iron sulfides. In Queensland, acid sulfate soils are frequently located in coastal areas at elevations of less than 5 metres above mean sea level. They can also be found in some inland areas at higher elevations. When they are disturbed and exposed to air, oxygen reacts with them to produce sulfuric acid and soluble iron.

The acid can mobilise aluminium, lead or other heavy metals if present in the soil, and the discharge water can degrade waterways and adversely affect the surrounding environment. Due to this risk, some codes prohibit mechanical disturbance to a depth greater than 30 centimetres in land zone 3 at elevations less than 5 metres. Acid sulfate soils may also occur in other land zones, but these zones are not covered by the codes.

Mechanical disturbance is the use of machinery (e.g. tractors, dozers, graders, rippers) that physically disturbs topsoil and potentially uproots vegetation.

Land zone 3 is termed 'alluvial river and creek flats'. Land zones are also described in more detail at www.qld.gov.au (search 'land zone definitions').



The land zone of an area can be identified by the middle number in the RE code (e.g. 6.3.21) from a vegetation management supporting map.

Elevation information can be obtained from various sources, such as printed topographic maps, GPS units or online topographic maps on the QTopo website at gtopo.dnrm.qld.gov.au.

The Queensland Globe online mapping tool also contains an acid sulfate soil layer that displays areas where acid sulfate soils have been mapped.



Visit Queensland Globe at www.qld.gov.au (search 'Queensland Globe').

# Part 7: Avoid and minimise

Where a code requires avoid and minimise, you must make sure that the clearing has been reasonably avoided, and where it cannot be avoided, that the clearing and the adverse impacts of clearing have been minimised.

Where it is not reasonable to undertake the necessary clearing entirely in category X areas or existing cleared areas, you must apply the following 'avoid and minimise' principles (steps) to the location and extent of clearing:

- First step—Locate as much of the clearing in category X areas or existing cleared areas as reasonably possible.
- Second step—Locate as much of the remaining clearing in a category C area or category R area where reasonably possible.
- Third step—Where necessary to clear in a category B area, locate the clearing within least concern regional ecosystems where reasonably possible.
- Fourth step—Take all possible steps to avoid, or if avoidance is not possible, minimise to the greatest extent possible, clearing:
  - a. within riparian protection zones (clearing buffers listed in codes)
  - b. in essential habitat
  - c. in a koala habitat area

- d. of immature koala habitat trees
- e. of habitat trees

The hierarchy for avoiding and minimising impacts to regulated vegetation is detailed in figure 4.

The locations of essential habitat, koala habitat, wetlands and watercourses are included in the Vegetation Management Property Report and on Queensland Globe.

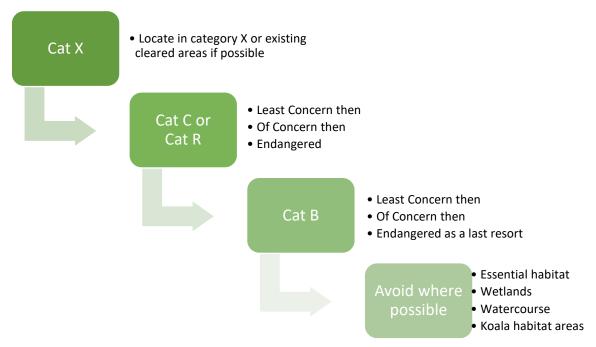


Figure 4: Avoid and minimise hierarchy

# Part 8: Exchange areas

An exchange area is an area of vegetation that must be protected in exchange for clearing vegetation under a code. Exchange areas are required when clearing above specified limits or in sensitive areas in accordance with the following codes:

- Fodder
- Regrowth
- Extractive
- Infrastructure
- NEC

When you are required to legally secure an exchange area to conduct your clearing activity, ensure your exchange area complies with the 'exchange areas' section of the code you have notified under. Guidance is provided below on how to identify a suitable exchange area and draft a management plan.

Each code also contains an appendix outlining three options and their associated requirements for establishing your exchange area. Depending on the condition of the area proposed to be exchanged, you will need to follow either 'Option 1', 'Option 2' or 'Option 3'. The quality of vegetation and land for the proposed exchange area will determine the appropriate option to follow as well as the suitability and size requirements.

### **Exchange areas and Koala Habitat (SEQ only)**

If you intend to conduct clearing in a koala habitat area you may require a development approval for interfering with koala habitat. That development approval may require an environmental offset as a condition of approval (a koala offset). You do not need to provide an exchange area for your proposed clearing where it is required under the Infrastructure code, Extractive industry code or NEC code if a Koala offset has already been required for clearing of that same area.

For more information on the koala regulations, contact the Department of Environment and Science on the details below.



Department of Environment and Science - Koala protection

E: SEQKoalaStrategy@des.qld.gov.au

W: https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas

P: 13 QGOV (13 74 68)

# Legally securing an exchange area

All exchange areas are required to be legally secured before clearing commences.

There are two mechanisms to legally secure and manage an exchange area under 'Option 1' of the exchange area requirements:

- A PMAV that shows the exchange area as a category A area and its associated management plan
  - or
- A declared area (secured through a voluntary declaration) and its associated management plan.

'Option 2' and 'Option 3' of the exchange area requirements can only be legally secured and managed through a voluntary declaration and a management plan.

#### **Exchange area requirement recommendation**

Before undertaking clearing that requires legally securing an exchange area, it is recommended that independent legal and financial advice is obtained regarding the impact of any subsequent certification of a property map of assessable vegetation (PMAV) or declared area (voluntary).

# Exchange area PMAV

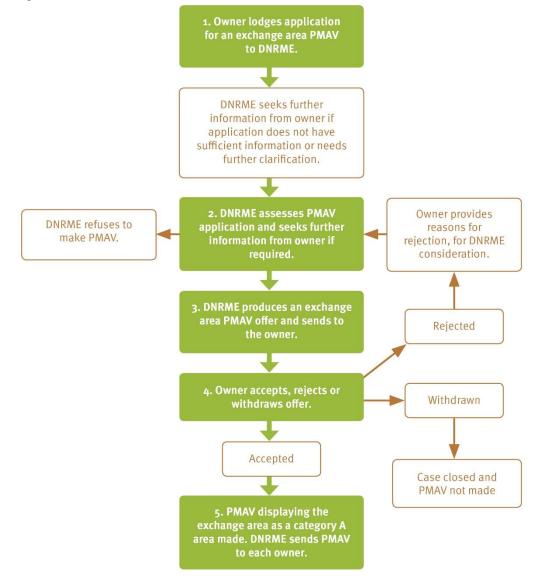
You can apply for an exchange area PMAV to legally secure your exchange area by completing an Application to secure an exchange area, which is available from the Queensland Government website on the <u>exchange areas webpage</u>.

An exchange area PMAV displays the exchange area as a category A area. A category A area has a similar level of protection to remnant vegetation (shown as category B on the RVMM) that is an endangered RE.

If you are considering securing your exchange area through an exchange area PMAV, it is important to keep in mind the management activities you intend to conduct to achieve the outcomes of your management plan. The scope of the codes do not apply to category A areas, and clearing native vegetation required under an exchange area management plan is not itself exempt clearing work under the Planning Regulation 2017. If the area you are proposing to exchange requires extensive active management (e.g. fencing, weed management) to meet the exchange area requirements, it is recommended that you secure your exchange area through a voluntary declaration. If the exchange area is not secured through a voluntary declaration and clearing of regulated native vegetation is required under the exchange area management plan, the clearing may be assessable development under the Planning Act and require a development permit.

It is recommended that you talk to a DNRME officer before legally securing your exchange area to determine which instrument, an exchange area PMAV or a voluntary declaration, is most appropriate in the circumstances for the management activities proposed and the condition of the area.

If the exchange area PMAV is determined to be the most suited instrument in your circumstance, then you can lodge an application for an exchange area PMAV. The standard exchange area PMAV process is shown in figure 5 below.



#### Figure 5: Standard process for legally securing an exchange area through an exchange area PMAV

# Voluntary declaration

You can apply for a voluntary declaration to secure an exchange area by completing the Application to secure an exchange area, which is available from the Queensland Government website on the <u>accepted development clearing codes page</u>.

It is strongly recommended that you familiarise yourself with the requirements of the voluntary declaration process and seek advice from DNRME before completing your application to secure an exchange area.



A guide to voluntary declarations is available at <a href="https://www.qld.gov.au">www.qld.gov.au</a>. Search "development approvals for clearing native vegetation".

The following clearing activities are exempt under a voluntary declaration and management plan (Planning Regulation 2017, Schedule 21, Part 1, Section 1, item 3):

- Weed control
- Public safety
- Fodder harvesting
- Managing thickened vegetation
- · Clearing for encroachment
- Necessary environmental clearing
- Clearing to establish a necessary fence, firebreak, road or vehicular track, where the clearing cannot reasonably be avoided or minimised

It is recommended that you legally secure your exchange area using a voluntary declaration if clearing of regulated native vegetation is required to achieve the outcomes of your management plan. The voluntary declaration instrument is mandatory when securing an exchange area under 'Option 2' or 'Option 3' of the requirements for exchange areas.

# Management plan

Exchange areas, whether secured by an exchange area PMAV or a voluntary declaration, must be managed in accordance with a management plan. The management plan must contain information that demonstrates how the area will be managed to meet either of the following management objectives:

1. to return the exchange area to category B remnant vegetation as soon as possible and within 20 years

or

2. to achieve the nominated substantial conservation outcome or address the nominated significant land degradation issue as soon as possible.

# Management objective 1

If your exchange area is located in a category X area, category C area or category R area, your management plan must have this management objective. You will need to outline in your management plan what works and management actions you will take to ensure that the vegetation in the exchange area will reach remnant status as soon as possible and within 20 years. These actions need to include methods, timing, frequency and intended benefits.

**Option 1**: If you are following the exchange area requirements for 'Option 1' then the vegetation in the category X area for your exchange area will be more than 10 years of age and a functioning regional ecosystem. In order to meet the management objective you may need to conduct minimal weed control and fence the area (to prevent grazing) to help the area regenerate and reach remnant status. This

should be documented as your management works. However, if you need to clear native vegetation for more intensive weed management or to construct the fences, securing the exchange area under a voluntary declaration may be a more appropriate instrument that will allow you to undertake the clearing required by the management plan under the voluntary declaration exemptions. Alternatively, if you secure the exchange area under an exchange area PMAV you could apply for a development approval to undertake this clearing.

When deciding on the management actions you are going to achieve under your management plan, it is recommended that you speak to a DNRME officer to determine whether you will require a development approval or voluntary declaration to conduct your activities.

**Option 2:** If you are following the exchange area requirements for 'Option 2' then your category X area will most likely need further management actions to improve the condition of the vegetation and reach remnant status as soon as possible and within 20 years. An exchange area under 'Option 2' can only be legally secured through a voluntary declaration, so you will have clearing activities available to you for more extensive management such as clearing for weed management. See Part 8 of this guide for more information on what management activities are permitted under a voluntary declaration as this may help you in describing the works you will undertake in the management plan.

**Option 3:** if you are following the exchange area 'Option 3' your management objective must be to return the category X, category C or category R area to remnant status. However, you are also required to achieve an identified substantial conservation outcome or address a significant land degradation issue as soon as possible. For example, a substantial conservation outcome may be restoring a severely weed infested area that is an endangered RE. In this case, your management plan would need to detail the weed management activities you will conduct and the frequency and intensity of treatment. Parts 6 and 9 of this guide provide more information on rehabilitation activities if addressing a significant land degradation issue such as soil erosion or stream bank instability.

# Management objective 2

The second management objective applies to an exchange area located in a category B area and to 'Option 3' of the exchange area requirements. In this case, the exchange area is already of remnant vegetation status so your management works may include restoring, conserving and improve high nature conservation values or repairing and restoring degraded land, and preventing further land degradation.

# Monitoring and auditing processes

Your management plan must also detail monitoring and auditing processes put in place to ensure your exchange area is on track to meet its objective within the required timeframe. When periodically monitoring and auditing your exchange area, if the results are negative or not progressing as anticipated, you should re-evaluate and adapt your management actions. For example, if you have been conducting minimal weed control and after six months find more invasive species that require intensive mechanical treatment, you may need to contact a DNRME officer for advice on what options are available to you to increase the intensity of your management activities.

The exchange area management plan can provide for adaptive management approaches to mitigate any foreseeable risks such as natural disasters.

# Identifying a suitable exchange area

In order to identify a suitable exchange area on your property you need to consider the type and extent of the area required in accordance with the chosen option in the exchange area appendix. For example,

'Option 1' requires an exchange area equal to the size of the impact area and 'Option 2' requires an exchange area double the impact area. Both require the type of area to be at least one of the following:

- The same pre-clear regional ecosystem as the impact area. The <u>vegetation management</u> <u>property report</u> includes a pre-clear regional ecosystem map of the pre-clear extent of your property to find an appropriate area of the same regional ecosystem.
- A higher pre-clear ecosystem regional ecosystem status than the values of the impact area.
   Table 5 of the <u>vegetation management property report</u> outlines the regional ecosystems on your property and their status. If you have a regional ecosystem of a higher status i.e. endangered, and its size is big enough to cover the exchange area ratio, you may use this area as your exchange area.
- Within 50 meters of the defining bank of a watercourse or wetland- Watercourse and wetland mapping is available in your <u>vegetation management property report</u> on the Vegetation Management Supporting Map. In a location that creates a corridor of at least 100 meters of width or an area that adjoins an area mapped as a category A area or category B area. The regulated vegetation management map in your <u>vegetation management property report</u> shows category A and category B areas. You will need to ensure that these areas are at least 4 hectares in size and then check the corridor or area on-ground to confirm its width is at least 100 metres.
- An area of environmental significance to flora and fauna. The supporting map in your <u>vegetation</u> <u>management property report</u> also shows essential habitat for flora and fauna, you can then check other relevant legislation (appendix 1 of each code) to determine the area's significance.

'Option 3' requires an exchange area three times the size of the impact area. You will also need to identify and nominate a substantial conservation outcome or land degradation issue for the area you are going to exchange. Conservation outcomes such as habitat for threatened species and ecological communities can be checked by contacting the relevant agency for other legislation in appendix 1 of each code. Most land degradation issues will need to be identified on-ground.

Impact area means the total area to be cleared in a category C area or category R area that requires an exchange area to be legally secured under a code. The total area to be cleared includes the area below the limit specified in the code and the area that exceeds the specified limit in the code.





Figure 6: an area to be used as an exchange area that is in poor condition (left), an exchange area returning to remnant status (right)



You should plan the exchange area in advance so you can provide the specific location of the exchange area and the size of the area to be cleared when you notify DNRME.

# Part 9: Rehabilitation

Rehabilitation means actively managing an area containing native vegetation in order to improve the ecological function of that area. This guidance applies to rehabilitation requirements in some codes as well as rehabilitating other areas of native vegetation to address land degradation or achieve conservation outcomes.

Revegetation guidance is general guidance only and rehabilitation techniques may vary on a site by site basis. For further information on rehabilitation techniques relevant to your area please contact an environmental specialist or local environmental management groups. Guidance may also be available from local governments.

The NEC and managing weeds codes both include requirements to rehabilitate cleared areas, where a clearing practice requires you to do so. In the section 'rehabilitation requirements', both codes outline a process which must be followed to achieve the revegetation outcomes for the area cleared. Guidance on this process is provided below.

# Step 1 – Stabilising the area

Step 1 involves addressing any erosion and instability issues within the rehabilitation area to prevent soil erosion and instability from occurring within the rehabilitated area.

If you are about to clear an area, and you know you will be required to rehabilitate the area post clearing, the way you clear will influence the success of your rehabilitation efforts. For example, clearing in a way which does not cause, or exacerbate erosion and instability in the area. Removing vegetation using mechanical methods that disturbs the root mass of the vegetation will inherently disturb the soil. Before you clear using high disturbance mechanical methods, consider the erosion risk of the site. If it is high, clearing methods involving less soil disturbance will be more effective.

Erosion risk is likely to be high:

- if erosion is occurring on the site before clearing
- if the subsoil is of a highly erodible variety (like sodic soils), any exposing of the subsoil can result in serious erosion issues.
- if there are steep slopes (i.e. >5%)
- within the defining banks of a wetland, watercourse or drainage feature.

By recognising erosion risk and tailoring your clearing methods accordingly, you may be able to prevent soil erosion from occurring or worsening and reduce the work required to stabilise the area post-clearing.

Once clearing has occurred, your stabilisation requirements will vary depending on the level of erosion present on the site. The following resources are available to help prevent or stabilise erosion, based on the type of erosion and instability at the site:

- Gully erosion—Chapter 13 of the <u>Soil Conservation Guidelines</u> 'Gully erosion and its control' i.e. how to minimise, manage and rectify gully erosion.
- Landslips and scarps (mass movement) Chapter 1 of the Soil Conservation Guidelines.
- Soil scalding—Scald reclamation case study in the 'Managing Grazing Lands in Queensland', which is a guide available on the Queensland Government <u>website</u>.
- Stream bank slumping—Chapter 11 of the <u>Soil Conservation Guidelines</u> 'Stream stability'
  provides explanations of stream-bank erosion processes and considerations to reduce erosion,
  including the role of vegetation in stabilising land around streams.

Refer to the <u>Soil Conservation Guidelines</u> for information about other types of erosion and land management techniques.

# Step 2 – Preparing the area

Step 2 involves preparing the cleared area so that the vegetation you are aiming to restore is able to grow. Preparation activities are listed below.

## Fencing to exclude browsing animals

Fencing can be a useful tool to exclude livestock, native animals or pests from the rehabilitation area. This will prevent animals grazing on re-established or newly planted vegetation. Fencing may be temporary or permanent depending on the grazing risk, the types of animals posing the risk, and the nature of rehabilitation plans. Fencing can also assist in preventing unauthorized access by people and vehicles. If the risks are low, then fencing may not be required.

## Controlling weeds

Weed control is a critical part of successful rehabilitation. It helps to ensure that competition for resources between weeds and native plants or seedlings is minimised, and reduces the need for large scale weed control in the future which may require a further clearing authority.

For more information on weeds, pests and appropriate control methods, refer to the <u>Department of Agriculture and Fisheries</u>.

## Cultivation and ripping

Cultivation when the soil is dry will accelerate the natural breakdown of clods. This tillage needs to be shallow so that deeper (and usually wetter) soil is not compacted. Before starting, check the soil moisture profile to at least cultivation depth to ensure the soil is dry and that it will fracture rather than smear (the localised spreading and smoothing of soil by applied pressure).

Ripping can be beneficial where the rehabilitation site is affected by soil compaction or contains roots and rocks that may interfere with vegetation restoration. The result is allowing better root and water penetration to encourage more root development.

Deep ripping should only be used as a last resort. Ripping moist to wet soil will cause further smearing and compaction. If the soil is dry enough to deep rip, the paddock should be cultivated first to leave some loose soil on the surface. It is important to consider erosion risk and only undertake ripping were it will not cause ongoing erosion issues.

#### Soil moisture levels

Planting and seeding should, where possible, be undertaken prior to a predicted rainfall event or timed to correspond to the expected wet season as much as possible to maximise the successful establishment of plants and seedlings. It is important not to operated machinery on soil that is too moist or wet.

#### **Topsoil**

Topsoil is soil from the upper horizon, which normally contains organic matter. Where possible, topsoil from the site should be spread around the rehabilitation area, as it will contain local seed source and the right nutrients conducive to revegetation. Topsoil should be used as soon as possible after clearing. If this is not possible, you can stockpile the top soil for later use. Note that the topsoil's health (i.e. nutrients and living biota) and native seed viability will deteriorate the longer it is stockpiled. If topsoil is not available on site, you can use off site topsoil and rely on mulched local vegetation for a native seed source.

## Mulching

Spreading mulch over topsoil can help to maintain soil moisture levels and suppress weed recruitment. A good source of mulch is the vegetation you have cleared on the site, as long as it is weed free. Mulching can spread native seeds and boost the recruitment of local species.

# Step 3 – Revegetating

Once the site is prepared and made conducive to the re-establishment of native vegetation, this step can be achieved by natural regeneration, active revegetation, or a combination of both.

## Natural regeneration

Natural regeneration is the easiest and most affordable method to revegetate an area. It relies on natural seed sources, and requires the site to be conducive to the re-establishment of native species (step 1). You can encourage natural regeneration through the following actions:

- Spread out top soil from the area, which contains a natural seed bank.
- Keep the site weed free.
- Maintain sufficient soil moisture levels.
- Exclude animals and processes which may disturb or destroy regeneration.
- Spread a natural seed source around the site.

There are a few ways natural seed can be spread across the site, including:

- Where the site has been recently cleared, mulch the weed free cleared vegetation and spread it over the topsoil.
- Collect seeding branches of local species and shake them around the site.
- Use local seeds in 'seed balls' and distribute these balls around the site. The method to make seed balls is available at many gardening sites on the internet.

Once natural regeneration has started, you should identify the range of species recruiting to ensure they are consistent with the RE you are aiming to rehabilitate. RE descriptions are available in the regional ecosystem description database (REDD) Regional Ecosystem Description Database. Note that REs may exhibit different ranges and proportions of species as they mature, starting with fast growing pioneer species which recruit quickly after disturbance, and moving through to successional stages until a more stable mature growth is achieved. Consult with an environmental specialist if you would like to better understand what to expect over time.

## Active revegetation

In areas which are not conducive to natural regeneration, you may need to actively revegetate. This includes very dry regions, drought stricken areas, a lack of local topsoil, or weed infestations contaminating cleared vegetation and preventing mulching and spreading.

Active revegetation involves sourcing young individuals of local species to plant across the site. These may be sourced from:

- areas which are not regulated by the vegetation management framework (or local and federal government laws)
- tube stock suppliers.

When sourcing these species, care should be taken to acquire a diverse variety of the dominant species listed in the RE description which you are aiming to rehabilitate. If this is not possible, consultation with an environmental specialist who may be able to help to identify substitute species. Care should be taken to acquire seedlings from disease and pathogen-free sources.

# Step 4 – Maintaining the area

After revegetation has commenced (whether through natural or active means), you should maintain the area to support the revegetation process. The actions outlined in step 2 are also relevant for maintaining the site, in particular ongoing weed management and maintaining soil moisture levels. Early in the revegetation process, low impact weed control methods should be employed such as grubbing or spot spraying, as higher impact methods may impact rehabilitation.

# Step 5 – Achieving revegetation outcomes

If you are voluntarily rehabilitating, it is a good idea to set yourself some benchmarks (i.e. a certain density of immature trees expected after a certain timeframe). Benchmarks are best expressed by a required density or vegetation cover percentage after a certain period of time. The density should reflect the required vegetation structure of the RE you are aiming to rehabilitate. The vegetation structure category for each RE is provided in the regional ecosystem description database (REDD) Regional Ecosystem Description Database.

If you are rehabilitating to comply with the weeds or NEC codes, you are required to meet the revegetation outcomes outlined in the table under the section 'rehabilitation requirements'. The timeframes provided in the table for a 12 month groundcover benchmark and a 36 month groundcover/immature tree benchmark allow for climatic and landscape variability. It is recommended that you assess the progress of regeneration before these timeframes to measure whether they are on track. To do this, you can use a variety of density and cover estimation techniques; guidance on two of these methods is provided below.

## Immature tree density estimation technique

Stem density can be estimated using the following transect / line plot method:

1. Select the number of sites per hectare, evenly spaced out. The number and location of the transects / plots for the proposed clearing area and the representative site should be sufficient depending on the extent of clearing, the number of regional ecosystems and the variability within the regional ecosystem. Transects / plots should be located in areas that are representative of the area being assessed (for both the proposed clearing area and the reference site). Transects / plots should also be at least 50 metres from any major disturbance (e.g. road, dam).

#### 2. At each site:

- a. Record the GPS coordinate and take photographs of the vegetation (this is important as you are rehabilitating to comply with a code).
- b. Walk 100 metres in a straight line, laying out a 100 metre tape. At the end of the tape, record the GPS coordinates photographs of the vegetation.
- c. Walk back along the tape and record all immature trees within 2 metres either side of the tape (some people carry a two metre stick to assist them to quickly determine if trees are in or out).
- Calculate the tree density using the process described above and the transect/plot field sheet for measuring tree density. This data sheet is available from the Queensland Government webpage on the <u>development approvals for clearing native vegetation page</u> under the section relevant purpose determination.



A YouTube video for Measuring Tree density is available <a href=here</a>.

## Groundcover or low shrub density estimation technique

**Transect / line plot:** ground cover density can be estimated using the following percentage estimation method:

1. Select the appropriate number of sites per hectare, evenly spaced out. The number and location of the transects / plots for the proposed clearing area and the representative site should be sufficient depending on the extent of clearing, the number of regional ecosystems and the variability within the regional ecosystem. Transects / plots should be located in areas that are representative of the area being assessed (for both the proposed clearing area and the reference site). Transects / plots should also be at least 50 metres from any major disturbance (e.g. road, dam).

#### 2. At each site:

- a. Record the GPS coordinate and take a photographs of the vegetation (this is important is you are rehabilitating to comply with the vegetation management framework).
- b. Walk 100 metres in a straight line, laying out a 100 metre tape. At the end of the tape, record the GPS coordinates photographs of the vegetation.
- c. Walk back along the tape and record only record the low shrub species that you intend to manage, within two metres either side of the tape. Do not include ground over or canopy cover from any immature or mature trees along the strip.

Visually estimate cover: to help visually estimate cover, use figure 7. It shows a range of percentage comparisons to aid the estimation process

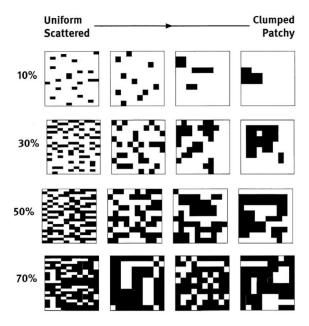


Figure 7: Ground cover estimation

# Part 10: Measuring height and slope

# Measuring tree height

There are several methods you can use to measure the height of trees.

# Using specialist tools

The clinometer is a tool commonly used by foresters to measure tree heights and slope angles. If you have a clinometer, please follow the manufacturer's instructions for use.

There are also many videos online that show how to make and use a simple clinometer, using a protractor, some string and a small weight.

The heights of the crown can also be measured using a laser instrument called a hypsometer. If the top of the tree is not directly above the base of the trunk, it is important to also measure the point directly below the highest point of the tree canopy to get an accurate crown height.

# Pencil (or stick) method

This is a very simple method requiring only a pencil (or small straight stick) and a tape measure. Take a pencil (or small stick) and move several metres or more away from the tree. (Refer to figure 8.)

Outstretch your arm and hold the pencil so that you can measure the height of the tree on the pencil (e.g. line up the top of the pencil with the top of the tree and slide your thumb along the stick to correspond with the base of the tree). You may also need to move closer or further away from the tree to allow a length of the pencil to align with the height of the tree.

Keeping your thumb in the same position and lined up with the base of the tree (and your arm still outstretched), turn the pencil at the base of the tree by 90°. Note the location on the ground that lines up with the top of the pencil. Mark or note this point on the ground and then measure the distance from this point to the base of the tree. This is the height of the tree.

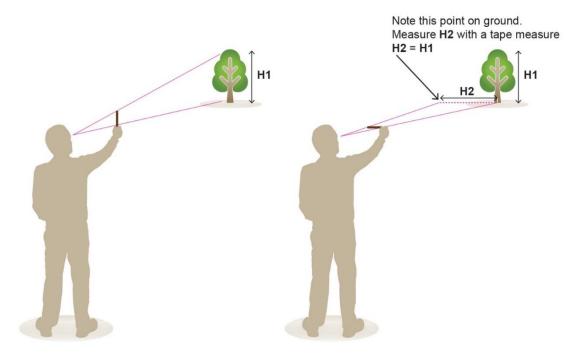


Figure 8: The pencil method

#### Stick and shadow method

For this method you will need to see the tree's shadow on the ground. You will also need a tape measure, a calculator and a stake of any height to hammer into the ground.

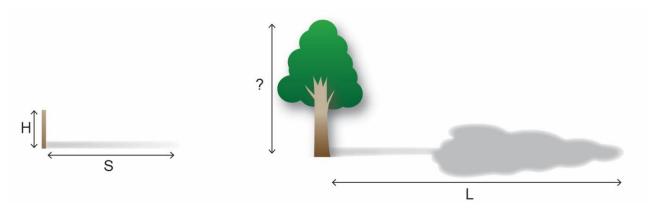


Figure 9: Stick and shadow method

- 1. Hammer a stake vertically into the ground so you can see its shadow. Record the height of the stake above ground (H) and the length of the stake's shadow (S) from the base of the stake.
- 2. Measure the length of the tree's shadow from the centre of the base of the tree (L).
- 3. Ensure that both shadow measurements are taken within a few minutes of each other, using the same units (e.g. metres).
- 4. The tree's height may be estimated using simple proportions:

#### Stick method 2

You can measure the height of trees by projecting a right-angled triangle (one that includes a 90° angle) using your arm, a stick and your line of sight (see figure 10).

- Find a straight stick or length of dowel about 750 mm long. Holding the stick upright in your outstretched hand and in front and level with your eye, measure the horizontal distance from your eye to the stick. Mark the same distance on the stick.
- Grasp the stick at the mark and hold it out in front of you with your arm fully extended and at eye level. The stick must be held vertically pointing upwards. (The distance from your eye to the base of the stick should equal the length of the stick above your hand.)

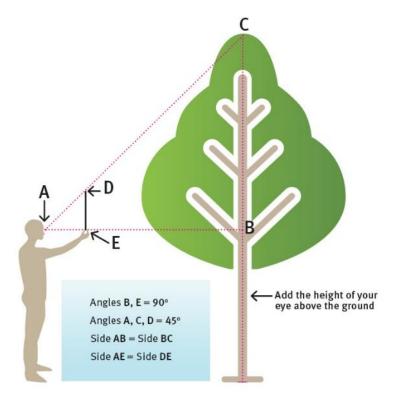


Figure 10: Diagrammatic representation of stick method 2

3. Walk toward or away from the tree until the tip of the stick is visually lined up with the top of the tree. It's often easiest to walk along the

contour so the mark on the stick remains lined up with a point on the tree the same height as your eye. When sighting the top and bottom of the stick, move your eyes rather than your head.

4. The height of the tree will be the distance from your eye to the tree trunk (measure this distance with a measuring tape) plus the height of your eye above the ground.

Height of tree = distance A to 
$$B$$
 – eye height

5. If no long-distance measuring device is available, calibrate your step (the walking distance between your two feet) or pace (walking distance for two steps) over a known distance (e.g. 20 metres). Then measure the distance from A to B in paces or steps and convert to metres.

# Smart phone apps

Various smart phone apps are available that claim to help measure tree height. Care should be taken if using these because:

- the accuracy may depend on the quality of your phone (and may require some manual calibration)
- some apps still require subsequent trigonometric calculations
- the reliability and accuracy of the app may not be proven.

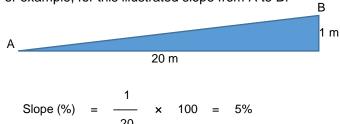
If such apps are used, it is recommended to first verify the results with other methods before using the apps operationally.

# Measuring slope

#### Definition

For the purposes of the codes, slope is measured in percentages, and is defined as the change in vertical height relative to the change in horizontal distance multiplied by 100.

For example, for this illustrated slope from A to B:



The location of points A and B should be selected so the line between them is representative of the slope in question. For example, don't choose high or low spots in the landscape for these points.

# Using a clinometer

The Suunto clinometer (clino) is a tool commonly used by foresters to measure tree heights and slope angles. There are many types of clinometers that are relatively inexpensive. If you can have access to one, ensure it has a scale to measure percentage slope.

Using a clinometer is one of the most accurate methods of measuring slope—differences in vertical height and horizontal distances may be measured accurately in order to calculate the slope. The exact measuring method will depend on the equipment used; please follow the manufacturer's instructions.



Figure 11: Surveyor's level

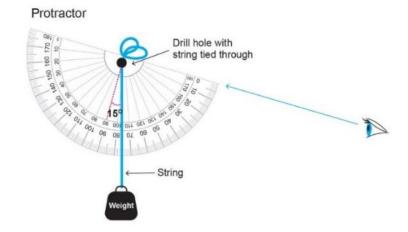
### Homemade clinometer

You can also make your own clinometer using a large protractor with a hole drilled (as shown in figure 12), string and a small weight.

Attach the string through the drilled hole and tie the small weight to the other end of the string. When the flat edge of the protractor is held horizontally, the string should hang down vertically and indicate 90° on the protractor.

To measure a slope, look along the flat edge of the protractor and line it up with a point in the distance (up or down slope) that is the same height above the ground as your eye. The aim is for the flat edge of the protractor to be parallel to the slope you are measuring.

Using the location of the string against the protractor's scale, read off the angle observed—that is, the angle between the 90° line on the protractor and the location of the string.



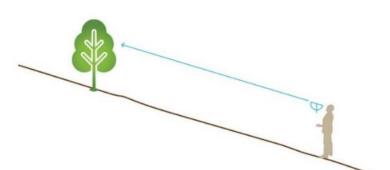


Figure 12: Home-made clinometer and its use in the field

This angle is in degrees and needs to be converted to a percentage. To do this, use a scientific calculator to find the 'tan' of this number and then multiply by 100. For example, if you measured 3°, then:

$$tan (3^{\circ}) \times 100 = 5.2\% slope$$

# Using a line level

You will need string, two stakes, a line level and a measuring tape.

Hammer one stake into the ground on the upper side of slope. Tie a long piece of string (e.g. 10 metres) to the base of the stake and lay the string out directly down the slope.

Walk down to near the end of the string. Hammer the second stake vertically into the ground and pull the string tight to the base of the second stake. Ensure both stakes are in locations that are representative of the overall slope. Raise the string up the second stake until it is perfectly horizontal, as indicated by using the line level along the top of the string.

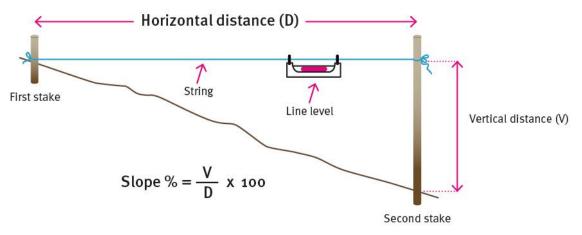


Figure 13: Using a line level to measure slope

Measure the second stake between the string and the ground. This is the vertical distance for the slope calculation. Keep the string tight and measure the length of string between each stake. This is the horizontal distance for the slope calculation.

Use these two distances to calculate slope as shown in figure 13.

## Topographic map

Topographic maps show contour lines that join points of equal elevation. Contour lines that are spaced evenly apart indicate a fairly uniform slope. If ground observations confirm a uniform slope, you can calculate the slope by determining vertical height from adjacent contour lines and the horizontal distance from the scale bar of the map.

For example, if the contour interval is 10 metres, this is the vertical height for the slope calculation. If the horizontal distance between the contour lines is 400 metres (using the scale bar on the map), the slope will be  $(10 \div 400) \times 100 = 2.5\%$ .

Care should be taken to ensure you locate yourself accurately on the map and that the land between the contour lines is of uniform slope. If not, other more reliable methods should be used.

## Smart phone apps

Various smart phone apps are available that claim to measure slope. Care should be taken if using these because the:

- accuracy may depend on the quality of your phone's components
- reliability and accuracy of the app may not be proven.

If such apps are used, it is recommended to first verify their results with other methods before using the apps operationally.

# Appendix 1- VMA schedule terms,

accepted development see the Planning Act, section 44(4).

accepted development vegetation clearing code see section 19O(1) and (2).

approved form means a form approved by the chief executive under section 68D.

**approved restoration plan** means a restoration plan approved by the chief executive under part 3, division 1, subdivision 8.

area management plan see section 21.

area of high nature conservation value means an area declared to be an area of high nature conservation value under—

- (a) a declaration made by the Governor in Council under section 17; or
- (b) an interim declaration made by the Minister under section 18; or
- (c) a declaration made by the chief executive under section 19F.

area vulnerable to land degradation means an area declared to be an area vulnerable to land degradation under—

- (a) a declaration made by the Governor in Council under section 17; or
- (b) an interim declaration made by the Minister under section 18; or
- (c) a declaration made by the chief executive under section 19F.

assessable development see the Planning Act, section 44(3).

assessment benchmarks see the Planning Act, section 43(1)(c).

**biodiversity** means the variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part, and includes—

- (a) diversity within species and between species; and
- (b) diversity of ecosystems.

bioregion means a bioregion shown on map number V0001 held by the department.

built infrastructure includes a building, or other structure, built or used for any purpose.

category A area see section 20AL.

category B area see section 20AM.

category C area see section 20AN.

category R area see section 20ANA.

category X area see section 20AO.

**centre of endemism** means an area containing concentrations of species that are largely restricted to the area.

change application means a change application under the Planning Act.

clear, for vegetation-

<sup>7</sup> Current as at 11 April 2019

- (a) means remove, cut down, ringbark, push over, poison or destroy in any way including by burning, flooding or draining; but
- (b) does not include destroying standing vegetation by stock, or lopping a tree.

*clearing offence* means an offence under the *Forestry Act 1959*, the Nature Conservation Act or the *Environmental Protection Act 1994*.

commercial timber includes timber of a species prescribed under a regulation for section 70A(3).

**contaminant** includes a gas, liquid, solid or energy source, including radioactivity and electromagnetic radiation.

*criminal history*, of a person, means the convictions, including spent convictions, recorded against the person for offences, in Queensland or elsewhere, whether before or after the commencement of this Act.

CYPH Act means the Cape York Peninsula Heritage Act 2007.

decision, for part 4, division 4, see section 68CA.

declared area means an area declared under section 17, 18 or 19F.

declared pest means a plant or an animal, other than a native species of plant or animal, that is—

(a) invasive biosecurity matter under the Biosecurity Act 2014; or

Notes-

- 1 See the Biosecurity Act 2014, schedule 1, part 3 or 4 or schedule 2, part 2.
- 2 See also the note to the *Biosecurity Act 2014*, schedules 1 and 2.
  - (b) controlled biosecurity matter or regulated biosecurity matter under the Biosecurity Act 2014.

deemed refusal means a deemed refusal as defined under the Planning Act.

development means development as defined under the Planning Act.

development application means a development application under the Planning Act.

**development approval** means a development approval under the Planning Act for a vegetation clearing application.

document certification requirement see section 52(5) and (6).

downstream limit, of a watercourse, see the Water Act 2000, schedule 4.

drainage feature see the Water Act 2000, schedule 4.

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

**endangered regional ecosystem** means a regional ecosystem declared to be an endangered regional ecosystem under section 22LA.

enforceable undertaking see section 68CC(1).

equipment includes machinery.

essential habitat, for protected wildlife, see section 20AC(2).

essential habitat map see section 20AC(1).

**exchange area** means an area of vegetation that must be protected in the way provided under an accepted development vegetation clearing code in exchange for clearing vegetation under the code.

extractive industry-

- (a) means 1 or more of the following—
  - (i) dredging material from the bed of any waters;
  - (ii) extracting, from a pit or quarry, rock, sand, clay, gravel, loam or other material;
  - (iii) screening, washing, grinding, milling, sizing or separating material extracted from a pit or quarry; and
- (b) includes carrying out work that is the natural and ordinary consequence of carrying out the work mentioned in paragraph (a).

Example— constructing roads, buildings and other infrastructure

**FA chief executive** means the chief executive of the department that administers the *Forestry Act 1959*. fodder harvesting—

- 1 Fodder harvesting is the clearing of vegetation, predominantly consisting of fodder species—
  - (a) necessary to provide fodder for stock; and
  - (b) carried out in a way that-
    - (i) conserves the vegetation in perpetuity; and
    - (ii) conserves the regional ecosystem in which the vegetation is situated; and
    - (iii) results in the woody biomass of the cleared vegetation remaining where it is cleared.
- 2 For paragraph 1, fodder species are any of the following—
  - (a) Acacia aneura;
  - (b) Acacia brachystachya;
  - (c) Acacia excelsa;
  - (d) Acacia pendula;
  - (e) Acacia sibirica;
  - (f) Alphitonia excelsa;
  - (g) Flindersia maculosa;
  - (h) Geijera parviflora.

forest practice-

- 1 Forest practice means planting trees, or managing, felling and removing standing trees, on freehold land or indigenous land on which the State does not own the trees, for an ongoing forestry business in a—
  - (a) plantation; or
  - (b) native forest if, in the native forest, all the activities are conducted in a way that—
    - (i) ensures restoration of a similar type, and to the extent, of the removed trees; and

- (ii) ensures trees are only felled for the purpose of being sawn into timber or processed into another value-added product (other than woodchips for an export market); and
- (iii) does not cause land degradation; and
- (iv) is consistent with the accepted development vegetation clearing code for native forest practice.
- 2 The term includes carrying out limited associated work, including, for example, drainage, construction and maintenance of roads or vehicular tracks, and other necessary engineering works.
- 3 The term does not include clearing vegetation for the initial establishment of a plantation.

freehold land includes land in a freeholding lease under the Land Act 1994.

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

high value regrowth vegetation means vegetation located—

- (a) on freehold land, indigenous land, or land subject of a lease issued under the *Land Act 1994* for agriculture or grazing purposes or an occupation licence under that Act; and
- (b) in an area that has not been cleared (other than for relevant clearing activities) for at least 15 years, if the area is—
  - (i) an endangered regional ecosystem; or
  - (ii) an of concern regional ecosystem; or
  - (iii) a least concern regional ecosystem.

indigenous community use area see the CYPH Act, schedule.

*indigenous land* means, for regulating the clearing of vegetation, land held under a following Act by, or on behalf of or for the benefit of, Aboriginal or Torres Strait Islander inhabitants or purposes—

- (a) the Aboriginal Land Act 1991;
- (b) the Torres Strait Islander Land Act 1991;
- (c) the Land Act 1994.

information notice, about a decision, means a notice stating each of the following—

- (a) the decision, and the reasons for it;
- (b) the rights of review under this Act;
- (c) the period in which any review under this Act must be started;
- (d) how rights of review under this Act are to be exercised.

lake see the Water Act 2000.

Land Act notice means a compliance notice given for a tree clearing offence under the Land Act 1994 as in force immediately before the commencement of the Vegetation Management and Other Legislation Amendment Act 2004, section 3.

Land Act tenure means any of the following-

- (a) unallocated State land;
- (b) a road;

(c) an area subject to a lease under the Land Act 1994.

#### land degradation includes the following-

- (a) soil erosion;
- (b) rising water tables;
- (c) the expression of salinity;
- (d) mass movement by gravity of soil or rock;
- (e) stream bank instability;
- (f) a process that results in declining water quality.

*least concern regional ecosystem* means a regional ecosystem declared to be a least concern regional ecosystem under section 22LC.

lopping, a tree, means cutting or pruning its branches, but does not include—

- (a) removing its trunk; and
- (b) cutting or pruning its branches so severely that it is likely to die.

managing thickened vegetation means the selective clearing of vegetation at a locality that does not include clearing using a chain or cable linked between 2 tractors, bulldozers or other traction vehicles—

- (a) to restore a regional ecosystem to the floristic composition and range of densities typical of the regional ecosystem in the bioregion in which it is located; and
- (b) to maintain ecological processes and prevent loss of biodiversity.

*minor change application* means a change application for a minor change to a development approval, as defined in the Planning Act.

moratorium exemption means an exemption under the repealed Moratorium Act.

native forest practice means a forest practice other than—

- (a) a forest practice in a plantation; or
- (b) the harvesting, on freehold land, of sandalwood.

Nature Conservation Act means the Nature Conservation Act 1992.

necessary environmental clearing means clearing of vegetation that is necessary to—

(a) restore the ecological and environmental condition of land; or

Example— stabilising banks of watercourses, works to rehabilitate eroded areas, works to prevent erosion of land or for ecological fire management

- (b) divert existing natural channels in a way that replicates the existing form of the natural channels; or
- (c) prepare for the likelihood of a natural disaster; or

Example— removal of silt to mitigate flooding

(d) remove contaminants from land.

occupier, of land, means-

(a) the person in actual occupation of the land or, if there is no person in actual occupation, the person entitled to possession of the land; and

(b) if there is more than 1 occupier of the land—any of the occupiers.

of concern regional ecosystem means a regional ecosystem declared to be an of concern regional ecosystem under section 22LB.

official means-

- (a) the chief executive; or
- (b) an authorised officer.

offset area means a legally secured offset area under the Environmental Offsets Act 2014.

original decision see section 63A(1)(a).

owner, of land, includes the following-

- (a) for freehold land—the registered owner;
- (b) for a lease, licence or permit under the Land Act 1994— the lessee, licensee or permittee;
- (c) for indigenous land—the holder of the title to the land;
- (d) for any tenure under any other Act—the holder of the tenure.

plan area, for part 2, division 5B, see section 21.

Planning Act means the Planning Act 2016.

**planning chief executive** means the chief executive of the department in which the Planning Act is administered.

plantation forestry means the planting and cultivation of timber for commercial purposes.

PMAV see section 20AK.

PMAV application, for part 4, division 4, see section 68CA.

pre-clearing extent, of a regional ecosystem, means the extent of the regional ecosystem before it was cleared.

primary producer, for part 2, division 4C, see section 19Y.

primary production business, for part 2, division 4C, see section 19Y.

primary production entity, for part 2, division 4C, see section 19Y.

property map of assessable vegetation see section 20AK.

proponent, for part 2, division 4, subdivision 2, see section 19E(1).

**protected wildlife** means native wildlife prescribed under the Nature Conservation Act as endangered wildlife, vulnerable wildlife or near threatened wildlife.

**public place** means a place the public is entitled to use, open to the public or used by the public, whether or not on payment of an amount.

reasonably believes means believes on grounds that are reasonable in the circumstances.

reasonably suspects means suspects on grounds that are reasonable in the circumstances.

referral agency, for a development application, see the Planning Act, section 54(2).

**regional ecosystem** means a vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil.

Editor's note— The Queensland Herbarium publishes a map of the regional ecosystems in Queensland and the map is available on the department's website.

**regional ecosystem number**, for a regional ecosystem, means the regional ecosystem number that is established under the Regional Ecosystem Description Database.

Note— The Regional Ecosystem Description Database is a database containing regional ecosystem numbers and descriptions of the regional ecosystems that is maintained by the Queensland Herbarium. The database is available on the department's website at <a href="https://www.dnrm.gld.gov.au">www.dnrm.gld.gov.au</a>.

**regrowth vegetation** means vegetation that is not remnant vegetation.

**regrowth watercourse and drainage feature area** means an area located within 50m of a watercourse or drainage feature located in the Burdekin, Burnett-Mary, Eastern Cape York, Fitzroy, Mackay Whitsunday or Wet Tropics catchments represented on the vegetation management watercourse and drainage feature map.

regulate includes prohibit.

regulated regrowth vegetation is vegetation contained in a category C or category R area.

regulated vegetation management map see section 20A.

relevant clearing activities means-

- (a) fodder harvesting; or
- (b) managing thickened vegetation; or
- (c) clearing of encroachment; or
- (d) controlling non-native plants or declared pests; or
- (e) necessary environmental clearing; or
- (f) managing, felling and removing trees for an ongoing forestry business.

relevant infrastructure activities means-

- (a) establishing and maintaining a necessary fence, firebreak, road, or vehicular track; or
- (b) constructing and maintaining necessary built infrastructure.

relevant PMAV application, for part 4, division 4, see section 68CA.

remnant vegetation means vegetation—

- (a) that is—
  - (i) an endangered regional ecosystem; or
  - (ii) an of concern regional ecosystem; or
  - (iii) a least concern regional ecosystem; and
- (b) forming the predominant canopy of the vegetation—
  - (i) covering more than 50% of the undisturbed predominant canopy; and
  - (ii) averaging more than 70% of the vegetation's undisturbed height; and
  - (iii) composed of species characteristic of the vegetation's undisturbed predominant canopy.

**repealed Moratorium Act** means the Vegetation Management (Regrowth Clearing Moratorium) Act 2009.

restoration notice see section 54B(2).

restoration plan see section 55AA(b).

restricted (fodder harvesting) land, for part 2, division 5B, see section 21A.

review decision see section 63A(1)(b).

road see the Transport Infrastructure Act 1994, schedule 6.

sandalwood means a plant of the species Santalum lanceolatum.

spent conviction means a conviction—

- (a) for which the rehabilitation period under the *Criminal Law (Rehabilitation of Offenders) Act* 1986 has expired under that Act; and
- (b) that is not revived as prescribed by section 11 of that Act.

State land means all land (including roads and reserves), other than—

- (a) freehold land or land contracted to be granted in fee simple by the State; or
- (b) indigenous land on which the State does not own the trees.

**State policy** means the policy approved under section 10(3).

stop work notice see section 54A(2).

trespass notice means a trespass notice under the Land Act 1994, section 406.

undisturbed height, for vegetation, means the height to which the vegetation normally grows.

*undisturbed predominant canopy*, for vegetation, means the predominant canopy the vegetation normally has.

unlawfully cleared means cleared of vegetation by a person in contravention of-

- (a) a vegetation clearing provision, or the repealed *Sustainable Planning Act 2009*, section 578(1), 580(1), 581(1), 582 or 594(1) if the person—
  - (i) has not contested an infringement notice given for the contravention; or
  - (ii) has been convicted of the contravention, whether or not the conviction is recorded; or
- (b) a tree clearing provision under the *Land Act 1994*, as in force before the commencement of the *Vegetation Management and Other Legislation Amendment Act 2004*, section 3.

vegetation see section 8.

vegetation category area see section 20AKA.

vegetation clearing application means—

- (a) a development application for development that involves the clearing of vegetation and is categorised as assessable development under a regulation made under the Planning Act; or
- (b) a change application, other than a minor change application, to change a development approval, as defined in that Act, to approve development mentioned in paragraph (a), if the development approval does not already approve that development.

vegetation clearing offence means an offence against a vegetation clearing provision.

**vegetation clearing provision** means any of the following to the extent the provision relates to the clearing of vegetation—

- (a) the Planning Act, section 162, 163(1), 164, 165 or 168(5);
- (b) for the clearing of vegetation that happened before the repeal of the Sustainable Planning Act 2009—section 578(1), 580(1), 581(1), 582 or 594(1) of that Act.

vegetation management see section 9.

vegetation management map means—

- (a) the essential habitat map; or
- (b) the regulated vegetation management map; or
- (c) the vegetation management watercourse and drainage feature map; or
- (d) the vegetation management wetlands map; or
- (e) a PMAV.

vegetation management watercourse and drainage feature map see section 20AB.

vegetation management wetlands map see section 20AA.

**watercourse** has the meaning given by the *Water Act 2000*, section 5, but a reference to a watercourse in this Act includes a reference to anywhere that is downstream of the downstream limit of the watercourse.

Note for definition watercourse— For the purposes of this Act, the length of a watercourse is not limited by any downstream limit applying to it under the *Water Act 2000*.

**wetland** means an area of land that supports plants or is associated with plants that are adapted to and dependent on living in wet conditions for at least part of their life cycle.

**wildlife refugium** means an area that is a sanctuary to which a species or group of species has retreated, or been confined, in response to threatening processes, including a climatic change.