

Schedule 2 – Native Vegetation Management



Native Vegetation Management

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Native Vegetation Management

1.0 Clearing

Under the *Native Vegetation Act 2003*, clearing of remnant vegetation and protected regrowth requires either development consent or the approval of a PVP. Such approval cannot be given unless the proposed clearing improves or maintains environmental outcomes. The Regulation provides for the Environmental Outcomes Assessment Methodology, applied through the PVP Developer, to determine that 'improve or maintain test'. Section 27 of the Act requires that the CMA is to have regard to any relevant provisions of CAPs when approving a PVP. CAPs will also need to comply with any statewide standards for native vegetation developed by the NRC. This may involve the application of statewide standards to the regional level, for example by inclusion of maps of native vegetation.

2.0 Funding PVPs via PVP Developer

Funding that contributes to enhancing native vegetation for environmental outcomes on private land will be distributed through PVPs with the PVP Developer objectively scoring the benefits. The environmental outcomes can relate to one or more of: water quality, soils, salinity and/or biodiversity (including threatened species). For example, where stock is excluded from riparian areas to allow regeneration and improve water quality, a PVP will be used. Regardless of whether new trees are planted, improving the condition of riparian vegetation can improve water quality, stream bank stability and aquatic biodiversity.

If the project processed by a CMA, is on private land and has the potential to benefit environmental outcomes through management of native vegetation, then it will need to go through a PVP via the PVP Developer. This may include projects with multiple benefits, multiple funding sources or where multiple partners are involved.

3.0 History of Native Vegetation in the Catchment

Patterns of clearing

Clearing is usually selective, occurring on the more fertile soils suitable for agriculture and other forms of development. This results in disproportionate loss of some habitats. Therefore, in the past, agricultural clearing has selected against those species whose habitat requirements cannot be met by the more marginal country on less fertile sites.

Native vegetation in healthy condition in these areas (ie. on land capable of supporting cropping) is scarce and is likely to have high conservation value. Less fertile, more erodible country is also currently under increasing pressure from clearing.

Fragmentation

The result of clearing usually leaves a 'fragmented' landscape. The inherent values of native vegetation are more difficult to sustain, in the long term, when vegetation is fragmented. This is because the fragments, or remnants, of native vegetation are more susceptible to influences from the cleared or developed land that surrounds them, such as uncontrolled grazing, weed invasion, drift from herbicide or fertiliser drift, increased light, wind and temperature variation, and increased predation of native fauna by feral animals.

These influences are called 'edge effects', because they work in from the edge of the remnant. Remnants of native vegetation with relatively long edges (like windbreaks or roadsides) have a greater boundary to area ratio than square blocks of native vegetation, and are more likely to quickly degrade. Isolation of remnants of native vegetation leaves the species within them less mobile, and prone to stochastic events such as fire, drought or disease. This eventually causes local and regional extinctions.

Remnant Vegetation Degradation

Degradation of native vegetation refers to a deterioration of its condition. Native vegetation in healthy condition may have a variety of features - intact ground layer, no or few weeds, a shrub layer (where appropriate), mature trees (maybe with hollows), ground debris, standing dead timber and active regeneration. Because of the fragmentation and lack of active management, remnants of native vegetation may become degraded. Exotic vegetation may invade, grazing may eliminate palatable species (including shrubs and regenerating seedlings), drift from superphosphate may favour environmental weed species, and larger trees with hollows may have been deliberately removed.

If number of species of native plants and animals able to survive in the remnant fall – the ecosystem becomes 'simplified'. This simplification is readily observed in the native vegetation that remains in many agricultural regions, as remnants of native vegetation generally no longer contain any shrubs. As ecosystem function declines, dieback may set in, leading to a host of other land degradation problems. It can be time-consuming and expensive to repair the land degradation once it has become a problem. It is easier and cheaper to protect and manage the existing native vegetation although it is essential to the long term viability of these remnants to establish effective connectivity to larger remnants.

4.0 General Principles of Native Vegetation Management

The following information is based on the principles for native vegetation management developed by the Lower Macquarie-Castlereagh and North Lachlan Bogan Regional Vegetation Committees. These principles have been reviewed by the Central West CMA and the following ones adopted:

- 1 All life depends on healthy ecosystem services/function.
- 2 Native vegetation is an integral part of agricultural production systems and needs to be managed as such.
- 3 Biodiversity conservation and production are not mutually exclusive.
- 4 Management is required to maintain healthy native vegetation communities in a modified landscape.
- 5 We should manage native vegetation in a manner that does not compromise the choices of future generations.
- 6 The right to use land carries with it a duty of caring.
- 7 Private landholders are needed to practice conservation of native vegetation to support and add to public conservation.
- 8 Maintaining healthy native vegetation communities is the best practical way to enhance biodiversity.
- 9 It is better to conserve existing native vegetation rather than replace it.
- 10 The costs of conservation outcomes for greater public benefit, beyond the landholders duty of care, should be supported by the whole community.
- 11 Our current landscape is the result of the cumulative impacts of past decisions. We will learn from history and make appropriate changes.
- 12 Society depends on productive and sustainable primary production, which, in turn, depends on a sustainable landscape.
- 13 Decisions should be based on the best possible information. Research should be facilitated to cover gaps in our knowledge and understanding and, where appropriate, local historical knowledge should be incorporated in analyses.
- 14 We are at or beyond our biophysical limits and business as usual is not good enough.

- 15 To promote native vegetation management that minimises land and water degradation
- 16 To provide for balanced land use and water use, including conservation, habitat enhancement/preservation and agriculture, where they relate to native vegetation
- 17 To identify and protect areas of native vegetation with particular cultural, habitat and/or hydrological values
- 18 To promote awareness of the effects of regrowth encroachment, including land and environmental degradation / soil erosion, in this region
- 19 To promote understanding of natural resource issues as they relate to native vegetation and to develop and implement an effective communication process for native vegetation management
- 20 To promote sustainable land management practices for current and potential land use
- 21 To promote practices that enhance native grass communities
- 22 To plan for revegetation and rehabilitation where needed with appropriate species
- 23 To identify and protect areas with sensitive or significant:
 - natural or cultural heritage values,
 - habitats, including for threatened species, populations and ecological communities,
 - riparian zones,
 - connectivity values,
 - values as remnants, or
 - values for minimising land and water degradation
- 24 To provide a mechanism for meaningful incentives and support for the conservation and/or re-establishment of native vegetation
- 25 Expand the range of uses of native vegetation
- 26 Increase the awareness and understanding of biodiversity and ecosystem function and its relationship to sustainable production
- 27 Promote the cultural and spiritual values of native vegetation, respect and protect sacred sites and respect all aboriginal cultures.
- 28 Promote opportunities for partnerships between Aboriginal people and land managers concerning ongoing cultural practices
- 29 Recognise and acknowledge the responsibility of Aboriginal people for the country
- 30 Facilitate the involvement of Aboriginal people in native vegetation management

5.0 Native Vegetation Targets

Statewide Targets set by the Natural Resources Commission

The following Targets have been set by the Natural Resource Commission. The statewide target below specifically relate to native vegetation.

By 2015 there is an increase in native vegetation extent and an improvement in native vegetation condition.

Measured by:

- Extent of each vegetation type by IBRA sub-region
- Vegetation condition
- Area of each vegetation type managed for conservation (until monitoring protocols are developed for vegetation condition)

The following targets have been set by the Central West CMA in relation to native vegetation. The nine Management Targets listed contribute to the achievement of the Vegetation Catchment Target.

Central West Vegetation Catchment Target

CTV1 - By 2015, 1,200,000ha (13%) of the catchment area is managed primarily to maintain or achieve optimal native vegetation condition, and all vegetation types are represented in the catchment.

Central West Vegetation Management Targets

The Central West CMA has nine Vegetation Management Targets identified in the CAP (MTV1-9). The successful achievement of these targets will lead to an increase in area of native vegetation in the catchment and an improvement in native vegetation condition.

6.0 PVP Development and Implementation

Native vegetation incentives will be delivered via the PVP Developer. It is envisaged that CAP targets will be incorporated into the PVP Developer to ensure all native vegetation on ground activities are contributing to CAP Management Targets. Therefore the outcomes identified in all incentive PVPs will directly contribute to CAP Management Targets and therefore the Vegetation Catchment Target.

PVPs will target vegetation of high conservation value, riparian vegetation, native grasslands, vegetation on low capability lands and vegetation on high priority saline sites in line with CAP Management Targets.

The following are guiding principles for identifying the above priority areas.

High Conservation Value Vegetation

High conservation vegetation is native vegetation that has one of the following attributes. These attributes were developed by the Lower Macquarie-Castlereagh and North Lachlan Bogan Regional Vegetation Committees.

- (a) Vegetation with <30% of its reconstructed extent remaining across the region
- (b) Naturally restricted communities (<0.5% of the region in reconstructed extent)
- (c) Edge of range communities (within 50km to edge of their natural range)
- (d) Koala habitat species
- (e) Wetland plant communities for protected migratory birds
- (f) Endangered ecological communities (listed in the TSC Act)
- (g) Wetlands, swamps, lakes and some areas of inundation, including groundwater dependant ecosystems such as; communities associated with ephemeral watercourses, ecosystems in streams fed by groundwater and limestone systems and springs.
- (h) Threatened species habitat
- (i) Habitat for a species listed under the Japan-Australia Migratory Birds Agreement (JAMBA) and/or China-Australia Migratory Birds Agreement (CAMBA)
- (j) Wildlife corridors

(k) Native vegetation listed on the Register of the National Estate as an "Indicative Place", "Natural Classification"

Riparian Vegetation

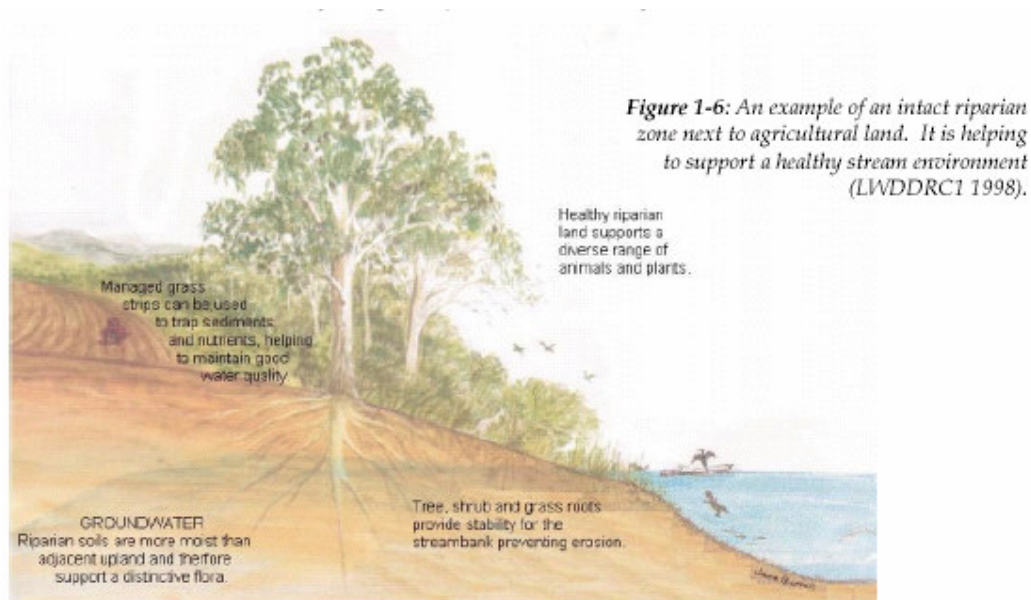
The riparian zone or riparian land can be defined as "any land which adjoins, directly influences or is influenced by a body of water" and can include (adapted from Tubman & Price 1999):

- the land immediately alongside creeks and rivers, including the river bank itself
- gullies and dips which sometimes run with surface water areas surrounding lakes
- wetlands on river floodplains which interact with the river in times of flood

"It is important not to think of riparian land as just a narrow strip along each riverbank. Depending on the nature of the land (floodplain, gorge or valley) and the adjacent landuse (national park, farming, housing), the width of riparian land that needs special management will range from very narrow or non-existent, through to a wide, densely vegetated corridor" (LWDDRC1 1998). These riparian areas provide valuable connectivity, and often complement larger connected remnants on other land systems.

Vegetation can also be used as a guide to determine the boundary of riparian zones, as the composition of riparian vegetation differs from terrestrial vegetation. "It is based on the vegetation types and associations which are characteristic of an area where the hydrology is the key determinant (as it is in wetlands). Riparian vegetation ranges from emergent aquatic plants through to terrestrial tree species. It is the presence and mix of species and their relationship to stream processes which defines the zone in these terms" (NSW Water Resources Council 1993).

The size of the riparian zone can be determined by the management objective. For example, the width of the riparian area managed to act as a buffer strip to filter overland flow differs from the width of riparian area that would be managed for a wildlife corridor. The width of riparian land in each case is determined by the management objective and is managed separately to the surrounding land, as demonstrated in the figure below:



In reality, the riparian zone is the area, next to your creek or river, that you are prepared to manage differently from the surrounding land.

Native Grasslands

Native grasslands predominantly contain grass and forb species indigenous to the Central West catchment. These are commonly found in the understorey of woodlands and open woodlands. The Central West catchment also has some open grasslands including Mitchell (*Astrebla sp.*), Spear (*Austrostipa sp.*) and Wallaby (*Austrodanthonia sp.*) grass vegetation communities. There are many native grassland communities represented in the catchment.

Low Capability Lands

Low capability lands have been defined in the Lower Macquarie-Castlereagh and North Lachlan Bogan Regional Vegetation Management Plans. Low capability lands have not been specifically mapped in the catchment and a general soils map is included in Appendix 1 of the CAP. Low capability lands can be defined by one or more of the following attributes:

- Land capability classes V - VIII (as defined by DLWC land capability classes),
- Fragile soils, being soils that are highly erodible or extremely low in nutrients that would become degraded very quickly if the protective vegetation cover were to be removed,
- Saline land,
- Significant geological features,
- Environmentally sensitive lands identified as environmentally sensitive by a LEP

Vegetation on High Priority Saline Sites

Salinity is regarded as one of the greatest environmental threats facing the Central West catchment. The Murray Darling Basin Salinity Audit predicted that the Macquarie, Bogan and Castlereagh catchments will have some of the highest electrical conductivity (EC) and salt load levels within the basin. It is the aim of the Central West CMA to conserve vegetation and where possible, revegetate in high risk salinity areas to minimise salt load entering the river systems.

High priority saline sites have been identified by subcatchment in the "Salinity Risk Assessment of the Central West Catchment" (Humphries 2000). A salinity risk assessment map is provided in Appendix 1 of the CAP. The Salinity Risk Assessment process aimed to highlight areas within the catchment that require priority attention for salinity management.

7.0 Status of Native Vegetation in the Central West

It is envisaged that information on the Broad Vegetation Types identified in the Central West catchment and associated relevant information will be available in the near future. Once received, this information will be added to the Schedule.