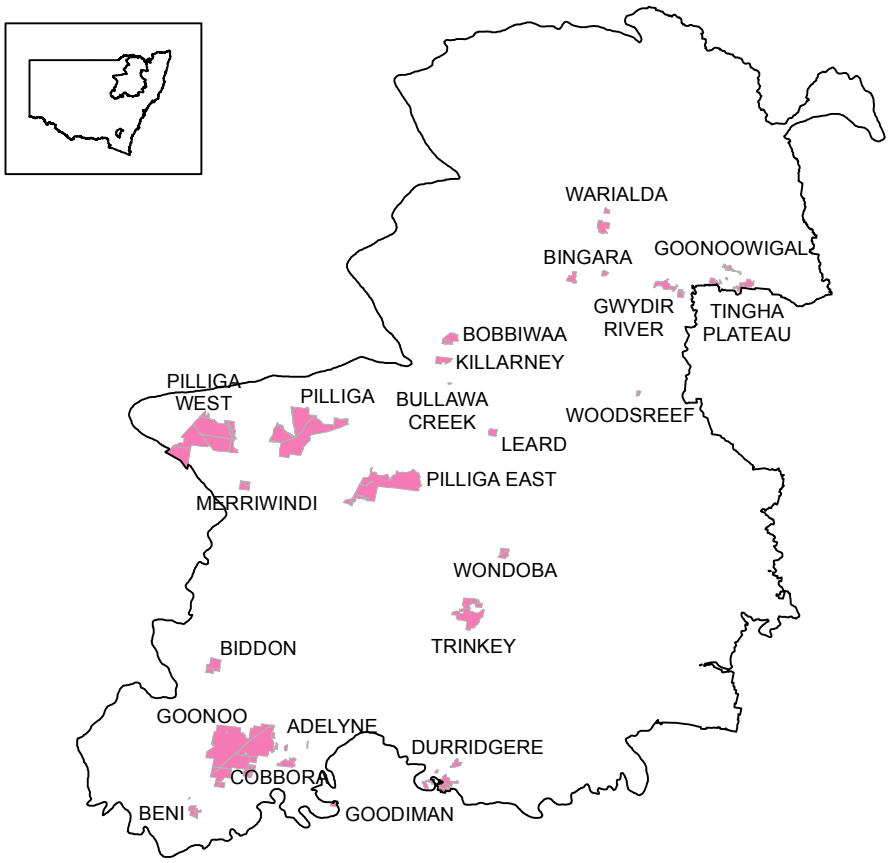
NSW GOVERNMENT Natural Resources Commission

FACT SHEET

Brigalow and Nandewar State Conservation Areas

Actively managing for better ecological outcomes

The NSW Premier asked the Natural Resources Commission to investigate active and adaptive management of cypress forests in the State Conservation Areas of the Brigalow and Nandewar Community Conservation Area. This fact sheet answers frequently asked questions about the review, drawing on the findings and recommendations within the Commission's final report to Government.



Brigalow and Nandewar Community Conservation Area
CCA Zone 3 State Conservation Areas

Figure: Brigalow and Nandewar Community Conservation Area

Where are the Brigalow and Nandewar State Conservation Areas?

The Brigalow and Nandewar State Conservation Areas are in north-western NSW. There are 23 state conservation areas in the Brigalow and Nandewar region, covering 195,095 hectares. The largest of these are the Pilliga forests.

The Brigalow and Nandewar State Conservation Areas make up 2.5 percent of the larger Brigalow and Nandewar Conservation Community Area. The Community Conservation Area covers around 7.9 million hectares, of which 90 percent (or 7.1 million hectares) is private land. Other land uses in the Community Conservation Area include forestry, national parks and Aboriginal areas.

What is a state conservation area, and how are they different from national parks?

State conservation areas and national parks have similar conservation objectives. For example, management objectives for state conservation areas include managing for social, economic and environmental sustainability, and seeking to maintain or improve the landscape function, ecological processes and natural diversity of the land. However, state conservation areas differ from national parks in that they allow for coal, mineral and petroleum exploration and mining.

How are the forests in the Brigalow and Nandewar region different from forests found in the coastal and range areas of NSW?

Unlike forests found in coastal NSW and areas of the ranges, little or no old growth forests are found in the Brigalow and Nandewar State Conservation Areas. The State Conservation Areas are found in a landscape where approximately 60 to 70 percent of the original vegetation has been cleared.

The remaining forests in the Brigalow and Nandewar region have been subject to varied Aboriginal and European management practices, as well as other disturbances such as large wildfires. These interventions and disturbances have led to changes in the forest structure and composition over time, not all of which have been ecologically beneficial.

Changes in the landscape have also been driven by the unique ecological characteristics of cypress pine, particularly the ability to form large stands of dense regeneration given the right conditions. Management interventions that suit the unique ecology of cypress pine, such as ecological thinning, are not necessarily appropriate for other forest types.

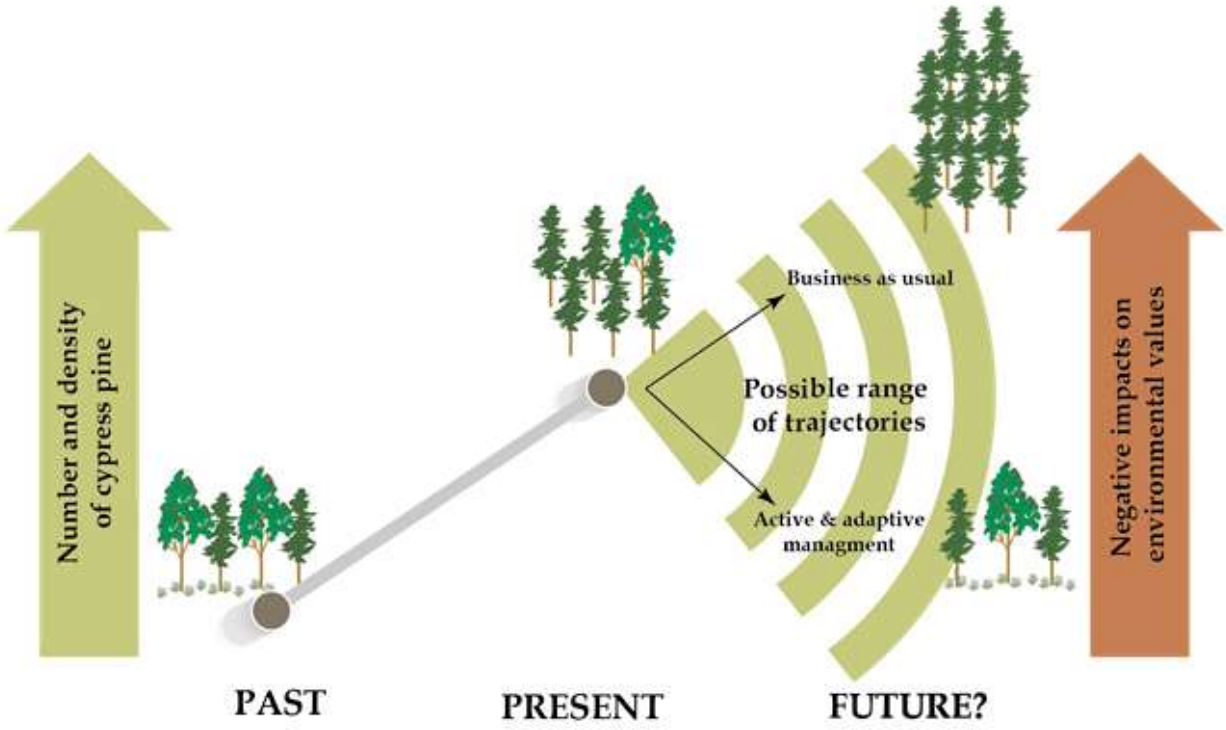
Why is dense vegetation an issue in the Brigalow and Nandewar region?

Small patches of dense vegetation provide useful habitat for native flora and fauna within a landscape mosaic. However, when dense vegetation expands to cover large areas it is likely to have an adverse impact on a range of ecological values, including biodiversity, by reducing the variety of different habitats available.

Although there is some debate about the exact structure and composition of the pre-European landscape, there is a general consensus that, since European settlement, many formerly open grassy cypress pine woodlands have shifted into denser forest or scrub formations. Recent studies suggest that the extent and density of cypress and bulloak has expanded, and is likely to increase further under future climate change predictions, leading to an ongoing decline in habitat diversity and lower biodiversity outcomes.

How much dense vegetation is in the State Conservation Areas?

The Commission found that the majority of the State Conservation Areas contain a variety of vegetation communities, including stands of cypress and bulloak of varying density. However, around 15 percent of the total area (30,053 hectares) was assessed as having higher densities of cypress or bulloak that may benefit from active management. Pilliga, Pilliga West, and Trinkey State Conservation Areas were identified as having the largest areas of denser vegetation. The Commission estimates an additional 40,000 hectares (around 20 percent) of the total area of the State Conservation Areas should be actively monitored to assess whether cypress and bulloak densities are increasing over time.



Why does management in the State Conservation Areas need to change?

The existing plans of management for the State Conservation Areas do not address the potential for dense stands of vegetation to impact forest structural diversity and habitat values, despite the Brigalow and Nandewar Community Conservation Agreement 2009 permitting ecological thinning to meet specified ecological objectives.

Business-as-usual management is unlikely to deliver the best ecological outcomes for these ecosystems. Forests are not static; they are continually changing, and management needs to recognise and respond to those changes. A wider range of active management options are needed to change the potential trajectory of the cypress forests to one that supports a greater variety of ecological outcomes.

What is active management?

Active management is managing for change by carrying out deliberate interventions in the landscape to meet a specified objective. Many conservation practitioners and researchers accept that direct human interventions may be necessary in some circumstances to achieve desired conservation goals and objectives.

In the Brigalow and Nandewar State Conservation Areas, current plans of management already allow for active management to control pests and weeds, and to manage wildfires. The Commission is recommending that additional interventions such as ecological thinning, targeted grazing and prescribed fire be available to managers as options for improving vegetation structure and composition where appropriate. The benefits of these interventions include increased landscape heterogeneity, groundcover, and regeneration and growth of trees that improve ecological habitat.

What is ecological thinning? Is it the same as commercial harvesting?

Ecological thinning means selectively removing trees or dense stands of vegetation to achieve specified ecological outcomes. Vegetation is one of the few aspects of the landscape that land managers can practically manage. Ecological thinning is about changing the structure and composition of areas of dense vegetation so that these areas are better able to provide suitable habitat for native animals and plants.

Ecological thinning is not the same as commercial harvesting, as the primary focus of ecological thinning is not the promotion or extraction of merchantable timber. However, ecological thinning for environmental outcomes may generate residues with a secondary commercial value.

How are you recommending grazing be used?

In the past, heavy livestock grazing caused substantial damage across Australian ecosystems, including cypress pine forests and associated woodlands. However, in some specific circumstances livestock grazing regimes may have positive or neutral impacts on environmental values.

In comparison to ecological thinning and prescribed fire, livestock grazing is likely to have much more limited use. However, the Natural Resources Commission believes it is important that managers have the option of using grazing in specific areas where it is likely to deliver ecological benefits. Any use of grazing should be informed by the current grazing trial currently underway in the south-western cypress conservation reserves.

What is adaptive management?

Adaptive management is a formal framework that helps managers ensure that active interventions are contributing to stated management objectives, and learn about what interventions work best to improve their management strategies over time. Put more simply, adaptive management can be described as ‘learning by doing’. Adaptive management is a necessary means to manage the complexity, uncertainty and risks inherent in environmental and natural resources management.

How much will active and adaptive management cost?

The Natural Resources Commission modelled an ecological thinning program treating denser areas of vegetation in Pilliga, Pilliga West and Trinkey State Conservation Areas over five years. Overall, the Commission estimates that the modelled ecological thinning program would cost in the vicinity of $3.85 million to $7.1 million over five years, depending on thinning intensity.

By putting cost recovery mechanisms in place, the Commission estimates that costs for the modelled program could be reduced by up to 65 percent under a cost recovery scheme, incurring a total program cost of between $2 million and $2.5 million over five years. Alternatively, under a goods for services scheme, cost reductions will vary, with Government incurring only program management costs of around $0.95 million for the five year program as a best case scenario.

Is the Natural Resources Commission suggesting these forests be managed for commercial benefits?

No, all management within the State Conservation Areas should be carried out by the NSW National Parks and Wildlife Service for the primary purpose of achieving specified ecological outcomes guided by the relevant plan of management for each area.

However, legal advice indicates that residues generated from ecological thinning could be used for secondary commercial purposes as part of cost recovery initiatives, providing the interventions have been carried out for the primary purpose of delivering positive environmental outcomes.

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