

Sustainable Forest Management Plan

to accompany

Application for a clearing permit (area permit) – Form C1

from

Department of Water and Environmental Regulation

for

CA RYAN Pty Ltd

Background

Ross Ryan owns Nelson Location 1486, a farming property at 358 Cosy Creek Road, Balbarrup, approximately 10 km north east of Manjimup in the southwest of Western Australia.

The total area of the property is 200 hectares, most of which is cleared for general farming. The property includes a patch of approximately 50 hectares of regrowth native forest on the eastern side.

Mr Ryan wishes to manage this patch of native forest sustainably by thinning and prescribed burning, with appropriate retention of habitat trees. Income from sale of log timber from a thinning operation will enable him to improve boundary fences and firebreaks as well as undertake regular hazard reduction prescribed burning to minimise risk of damaging bushfire.

Current status of the native forest subject to this application to clear (thin)

The approximately 50 hectares of remnant regrowth native forest on the property is comprised of mixed jarrah (*Eucalyptus marginata*) and marri (*Corymbia calophylla*) with generally minimal understory. Some blackbutt trees (*Eucalyptus patens*) occur on the far eastern side along a slight gully, and there is a heavy stocking of grass trees (*Xanthorrhoea preissii*) in patches. Harvesting of trees for sawlogs has occurred at various times in the distant past. The resulting regrowth forest is mostly very heavily stocked with small, stunted trees with a limited understorey. A silvicultural thinning operation is warranted in order to encourage growth of the healthier and better-quality trees. A thinning operation will enable the forest to more quickly develop “old-growth” forest characteristics.

Soils are typical of the area, varying from lateritic gravels and loams to sand over pallid clays. Drainage is generally good.



Fig 1: Regrowth jarrah/marri forest on Ross Ryan's Manjimup property. Note high density of small, stunted trees and sparse understory.



Fig 2: Regrowth jarrah/marri forest on Ross Ryan's property. Note stump in centre foreground from harvesting probably over 60 years ago.



Fig 3: View of regrowth jarrah/marri forest on Ross Ryan's property looking SE from powerline which runs NE-SW through NW corner of patch of forest. Note the larger size of trees near cleared easement reflecting faster growth and development of trees due to less competition. A thinning operation will lead to a similar result over the whole stand.

Silvicultural/harvesting prescription

- The prescription to be adopted will be to thin the regrowth jarrah/marri forest to a basal area of approximately 15 m²/ha of retained trees, evenly spaced.
- An average of five habitat trees or potential habitat trees per hectare will be retained. Habitat trees will be generally sound, larger trees, especially if they have any sign of existing hollows for fauna.
- Harvesting machinery will be cleaned of any soil and plant matter before entering the property to minimise any risk of introducing jarrah dieback disease.
- Harvesting will be carried out by an experienced local harvesting contractor using machinery suitable for the harvesting of regrowth jarrah/marri forest. This will comprise a tree harvester to fell trees and cut boles into appropriate lengths. Extraction of logs will be carried out using a rubber-tyred forwarder which will also be used to load trucks.
- Extraction tracks will, where necessary, be created by the tree harvester and will follow the longitudinal alignment of the remnant patches of forest and will maximise use of natural gaps between trees.
- Harvesting slash will be removed from around the bases of retained trees during harvesting.
- All harvesting activity will be conducted in accordance with the WA timber industry Codes of Practice, as published from time to time by the Forest Industries Federation (WA) Inc.

- Following harvesting, the thinned areas will be “tops burnt”, that is harvesting debris will be burnt under cool conditions in autumn or winter such that only recently dried harvesting slash and any rolled understory vegetation will burn.

Estimated quantities of forest products to be harvested

The estimated quantities of forest products, by species and grade, which could be produced from the proposed operation are:

- Jarrah sawlog: 300 tonnes
- Marri sawlog: 150 tonnes
- Jarrah firewood and/or charcoal log: 350 tonnes
- **Total:** approx. 800 tonnes

If a market for low grade marri is available, a further approximately 400 tonnes of product could be harvested.

Cockatoos

There is no evidence of cockatoos breeding in this patch of forest, primarily because the regrowth trees have not been able to develop suitable hollows. A thinning operation, with retention of any tree with a potential hollow/s will be retained as current habitat for fauna and for future habitat for hollow nesting birds such as the three WA species of black cockatoo.

Foraging by cockatoos likely takes place in the regrowth forest from time to time, although no evidence was found during a recent inspection. A thinning operation will enhance the prospects of cockatoos by enabling retained trees to develop larger, more spreading crowns, which in turn will lead to heavier fruiting. (Cockatoos feed on seed of fruits of both jarrah and marri trees.)

A cockatoo tree habitat survey is not considered necessary given the silvicultural prescription includes the retention of an average of five habitat trees or potential habitat trees per hectare, and given that the forest is regrowth with minimal development at this point in time of hollows suitable for breeding by cockatoos.

Future management

After the proposed thinning and post-thinning burn, the patches of forest will need little attention for at least five years. At that time, a cycle of regular mild prescribed burning should be adopted to reduce the risk of damage from uncontrolled wildfires.

A further thinning operation will be feasible approximately 20 years hence, and at intervals of 20-40 years thereafter.

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References:

“Djarlma Plan for the Western Australian Forestry Industry: A Framework for Action 2019 – 2030”; Government of Western Australia, 2019
“Managing private native forests and woodlands in the south-west of Western Australia”; Jack Bradshaw, 2020.