

THE DESTRUCTION OF THE MARRADONG TIMBER RESERVE 145/25 (MTR)

Background

This Timber reserve is located just west of the Boddington town-site , on the eastern fringe of the jarrah forest in Western Australia. The area was settled and clearing began in the 1860's targeting the more fertile river valley soils. The infertile, lateritic soils with its upland jarrah forest remained as unvested Lands Department C class reserves with a purpose of "Timber for Government Requirements". The areas were then subject to many years of uncontrolled, selective cutting by local mills and by neighbours.

Eventually, the value of this forested land and its need for management and protection was recognised. In 1962, 1970 hectares were designated as a Timber Reserve (145/25) and placed under management by the Forests Department. The Department could then enforce regulations on the removal of forest produce for timber, railway sleepers and fencing materials which had occurred uncontrolled for about 100 years and took steps to ensure that the cut-over areas were regenerated and protected. The area was again harvested for timber, under tree-marking supervised by the Department in the late 1980's.

With the assistance of local farmers, fire protection measures, prescribed burning and wildfire suppression were undertaken. However, as the MTR is located some distance from the Dwellingup office several wildfires resulting from lightning strikes, escapes from farm clearing burns or mineral exploration activities have occurred.

Mapping of forest structure and canopy density was carried out by the Forests Department's Harvey Working Plans Office in the late 1960's. This revealed a two-tiered forest, with a pole-sized understorey (canopy cover averaging 25 percent), overtopped with some mature trees (canopy cover of about 15 percent), and a total cover of 40 percent. The pole-sized trees were regrowth and coppice from earlier timber harvesting operations.

Fauna and Flora

Ninox Wildlife Consulting carried out a fauna survey of the area over three seasons during 2006/2007 and concluded the MTR was a fauna refuge of local significance. They recorded 47 species of bird, nine native mammals, four frogs and 17 species of reptile. Three cockatoo species of conservation significance (Baudins, Carnaby and red-tailed) were observed as well as three species of mammal of conservation significance (chuditch, wambenger and brush wallaby).

The flora and vegetation data have been extracted from a 1990 report by Mattiske and Associates. Nine plant communities could be recognised –six of jarrah, two of wandoo and a Heath. 57 families, 161 genera and 290 species were collected. No gazetted rare flora was found but 21 species were potentially rare, of restricted distribution, poorly collected or in need of further study. Data showed relatively high levels of stress (drought, fire damage, Phytophthora) and the frequency of stumps indicated substantial harvesting for timber. Despite this, crown cover up to 33 percent, basal areas up to 32 m²/ha and stem numbers averaging 530/ha were recorded in jarrah forest, indicating the ecosystem was resilient .

The flora and fauna data show that, despite observed reductions in rainfall, wildfires and a very long period of uncontrolled timber harvesting, the MTR prior to mining by Worsley Alumina (South 32) was a flora and fauna refuge of local importance, protecting hundreds of species including six species of conservation significance. The canopy cover and density of trees, as well as the structural and species diversity of the forest ecosystem had been retained.

Mining by Worsley Alumina

Now all this has gone. The infertile, lateritic soils that initially spared the MTR from clearing by farmers were its ultimate downfall. Bauxite mining and refining are significant contributors to the economy and employment in the south-west. The bauxite in these soils proved to be too valuable a commodity and the land under Lease to Worsley Alumina, about 1000 ha, has been totally cleared. Following the removal of four metres of bauxite, some topsoil will be returned, the site will be ripped and seeds of eucalypts and some understorey species sown. These rehabilitated areas will grow but will never replace the structure, plant and animal diversity that was present in the original forest.

The remaining 970 ha in the Western portion of the MTR (WMTR) are within Alcoa's Mining Lease No1 Special Agreement (ML1SA). However Alcoa has sub-leased this portion to Worsley Alumina and it is now included in Worsley's most recent mining plans. Most of the remaining 970 ha will also be cleared and mined. Worsley have advised me that 108 ha have been identified as "areas of biodiversity interest" and have been deferred from mining. The forest ecosystems on the remaining 1860 ha of the Marradong Timber Reserve have been forever destroyed.

An important question to ask is "How much bauxite mining is enough?". Since bauxite mining started 55 years ago, 29000 ha have been cleared and about 120000 ha impacted by these operations. In the next 50 years a further 50000+ ha could be mined and an additional 200000 ha impacted.

The current State Agreements with Alcoa and Worsley Alumina will expire soon and will need to be renewed by Parliament. Now is the time for EPA and the community to comprehensively review both of these operations, and to provide sound advice to Government and Parliament.

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References

Mattiske and Associates (1990) Flora and Vegetation, Marradong Timber Reserve (prepared for Worsley Alumina)

Ninox Wildlife Consulting (2007) Vertebrate Fauna Survey 2006-2207, Marradong Timber Reserve (prepared for Worsley Alumina)

Photographs Aerial and ground photos of mined and forested areas (credit: Jeremy Perey)

