

CONSERVATION COMMISSION OF WESTERN AUSTRALIA – REPORT ON OLD-GROWTH NOMINATION WITHIN ARCADIA FOREST BLOCK

Summary

- A large portion of the Arcadia forest block was nominated as old-growth by a member of the public.
- Field sampling of the area coinciding with the indicative harvest area yielded the following overall results:- an estimated 37 stumps per hectare (relatively high); 23% mature or senescent trees in the upper canopy (relatively low); 77% regrowth trees in the upper canopy.
- The coupe area does not meet the uncut or minimal disturbance requirements for jarrah old-growth forest.

Background

The basis for, and general description of, the Conservation Commission's role in assessing old-growth forest is provided in the Conservation Commission's paper *Assessment criteria and process for the Conservation Commission review of old-growth amendments*.

Of most relevance to consideration of old-growth within this forest type is the following old-growth definition for jarrah and jarrah/tingle forest:

"uncut forest or forest subject to minimal disturbance which is not known to be affected by *Phytophthora cinnamomi*".

The effects of disturbance are considered more than minimal where changes to the structure of the overstorey caused by these disturbances are still evident or where changes to the overstorey or understorey are irreversible.

Public nomination of old-growth

As required in the Forest Management Plan 2004-13 (FMP) and further detailed in the Conservation Commission's paper *Assessment criteria and process for the Conservation Commission review of old-growth amendments*, there is a process for persons to request the Conservation Commission to assess whether areas on an indicative timber harvest plan should be classified as old-growth in CALM's corporate database. Such a request was received from the Preston Environment Group on 10 January 2006. However, the level of detail required in relation to both prior assessment or knowledge from the nominees and the size of the nominated area was too large (3,486 hectares) to allow the Conservation Commission to accept the nomination and proceed to undertake an assessment. After requesting more detail a revised nomination was received by the Conservation Commission from the Preston Environment Group on 24 January 2006, see Appendix. Once again there was a lack of clear evidence provided to suggest that the nominated area was other than the CALM records suggested (non old-growth), and the size of the nominated area was also beyond the reasonable resource limitations of the Conservation Commission to assess (2,706 hectares). However, the Conservation

Commission determined to accept the nomination and proceed with a stratified field sampling of the indicative coupe area (total coupe area 335 hectares) given the level of interest in this area.

This report summarises the Conservation Commission's findings based on its consideration of available records and inputs, and its own field survey. This information was analysed to provide the Conservation Commission's overall finding of the old-growth status of forest within the nominated area of Arcadia compartment 3.

Selection of sample locations and sampling process

As detailed in the background section, the total area of the second nomination was 2,706 hectares. As it was not feasible for Conservation Commission field staff to undertake an assessment of the entire area, only the area intersected by the indicative coupe boundary (335 hectares) was assessed. The sample area was further refined through stratification using the following background information:-

- The CALM corporate records indicated that the entire proposed coupe area was harvested once in the 1930-1939 period.
- The aerial photo interpretation from 1960 was utilized to determine forest structural boundaries.
- Known dieback affected areas and areas with mapped tracks were avoided.
- Vegetation complexes were overlaid to ensure that the sample areas were representative of the localized vegetation types.

The sampling plot locations can be seen with the other layers relevant to the stratification process as outlined in Map 1.

Sampling incorporated the process outlined in the document *Assessment criteria and process for the Conservation Commission review of old-growth amendments*. The areas were sampled at the higher of the documented intensities (approximately 25 sample point/plots per two hectares). Observations from field staff indicate that the sample areas selected appear representative of the broader proposed coupe area.

Sample results

The four areas selected for sampling, the locations of the sample points and the raw data collected have been incorporated into Map 2. Area number 4 was visually inspected only as the presence of an unmapped road through the sampling location and crown damage from fire in the southern portion rendered the site less appropriate for data collection. This visual inspection indicated that the site had similar characteristics to the other three areas. In summary, sampling yielded the following results:-

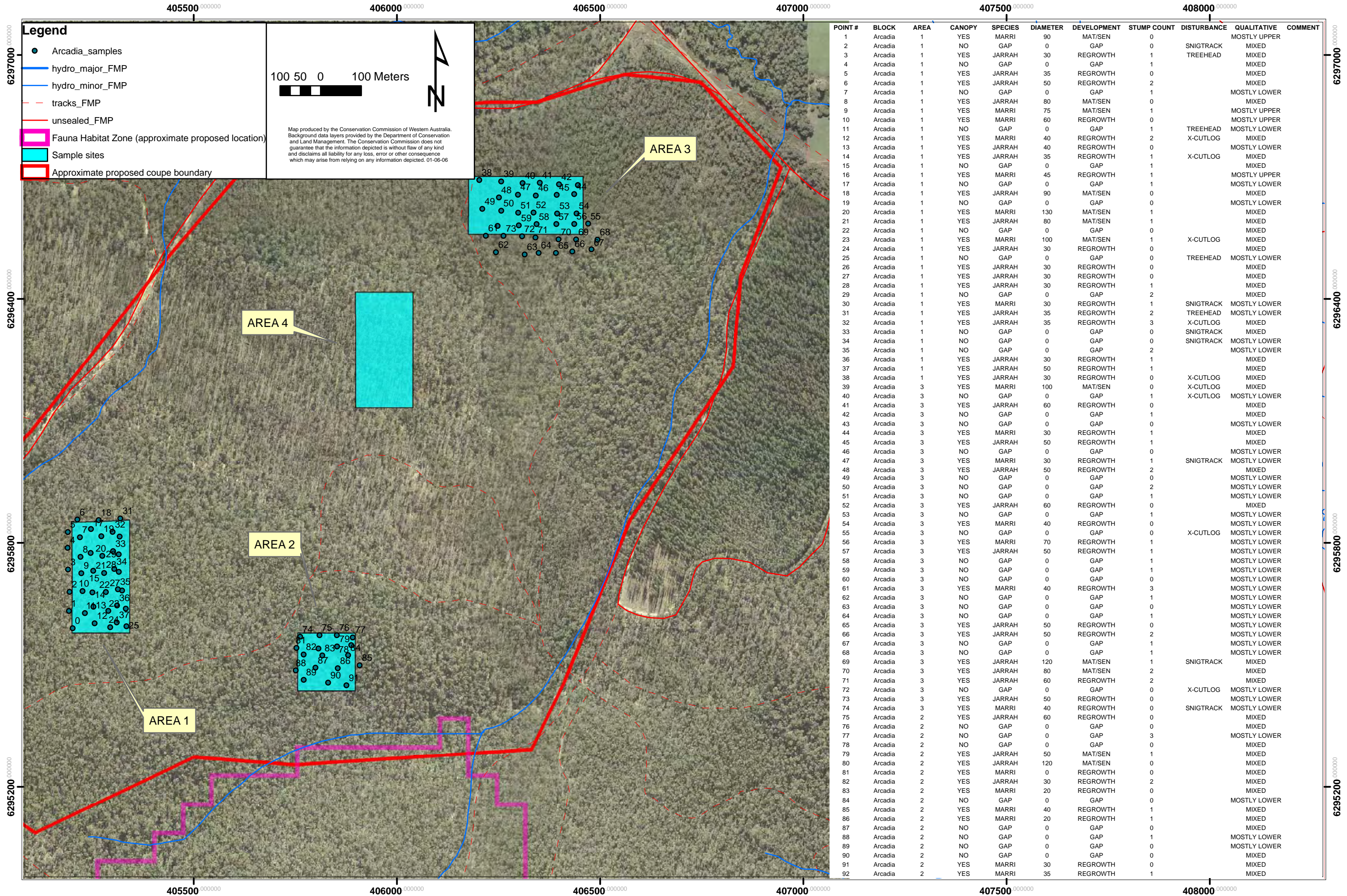
Sample Areas	Estimated total upper crown cover	Estimated upper crown proportion of mature or senescent trees	Estimated upper crown proportion of regrowth trees	Estimated number of stumps per hectare
AREA 1 (4 hectares)	65%	28%	72%	38
AREA 2 (2 hectares)	56%	20%	80%	28
AREA 3 (4 hectares)	50%	17%	83%	40
TOTAL (10 hectares)	58%	23%	77%	37

Recommendation

Both the sample data and the general observations made by Conservation Commission field staff while traversing the nominated area indicate that the CALM corporate records in relation to the old-growth status are accurate. Ground evidence of disturbance is clear from the high number of stumps (approximately 37 stumps per hectare) and logging debris. This disturbance appears to be from logging in the decade of the 1930s and there is ground evidence to indicate that further miscellaneous and unrecorded harvesting (such as sleeper and pole removals) has also been prevalent across the viewed area.

The result of this past disturbance is still evident in the upper canopy of the inspected forest, with a high estimated proportion of regrowth (77%) and a low estimated proportion of mature or senescent trees (23%). These figures contrast with the proportion of mature or senescent trees in uncut jarrah forest which consistently represents at least 50% of the upper canopy. The coupe area does not meet the uncut or minimal disturbance requirements for jarrah old-growth forest.

Map 2. Sample sites with raw data



APPENDIX. Second (revised) nomination map with Conservation Commission sample plots overlaid.

