

# CONSERVATION COMMISSION OF WESTERN AUSTRALIA – REPORT ON THE OLD GROWTH NOMINATION WITHIN WARREN FOREST BLOCK COMPARTMENT 06

## Summary

In March 2007, a request for a review of old-growth status over Warren forest block compartment 06 was made by the Northcliffe Environment Centre.

Warren 06 contains predominantly karri forest with a small portion of mixed forest on the northern boundary.

The stump data provided by DEC has facilitated the development of a general distribution map of past logging within the block. Further surveys were conducted by Conservation Commission audit staff in December 2007. These surveys focussed on four isolated sections of the block adjacent to existing old-growth. The assessment yielded the following results:

Northern plots 1 & 2	35% mature/senescent, logged	- <b>non old-growth</b>
Southern plots 3 & 4	61% mature/senescent, uncut	- <b>old-growth</b>

The areas in the vicinity of northern plots 1 & 2 identified in this report do not meet the requirements for old-growth forest and remain available for logging.

The areas in the vicinity of southern plots 3 & 4 of approximately 9.8 hectares combined, meet the criteria of old-growth forest. These areas have therefore been determined as unavailable for logging.

## Background

According to the Conservation Commission's paper *Assessment criteria and process for the Conservation Commission review of old-growth amendments*, the following old-growth definition applies for the forest type present within the assessment area:

- Karri forest – uncut forest which is mature or senescent;

The Conservation Commission's old-growth field sampling procedure in karri forest is similar to the jarrah forest field assessment methodology however by definition the analysis precludes a minimal disturbance component in the determination of old-growth forest. As defined above, karri stands must be uncut to qualify as old-growth. During the Regional Forest Agreement (RFA), the oldest age class occupying at least 25% crown cover in karri forest was referred to as the dominant age class. Karri forest which was uncut with greater than 25% mature and senescent in the overstorey was mapped as old-growth during the RFA. For the purposes of the assessment of karri forest to determine old-growth areas, the Conservation Commission applies the same criteria for decision-making, as follows;

Karri old-growth forest is present where assessment results indicate areas of 2 hectares or more with the following attributes;

- uncut forest (undisturbed by logging or clearing); and
- 25% or more mature and/or senescent trees in the overstorey.

### ***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 DEC's corporate database. Such a request was received from the Northcliffe Environment Centre on March 21, 2007 in relation to portions of Warren forest block compartment 06.

This report summarises the Conservation Commission's findings based on its consideration of available records and inputs, and its own field sampling.

### ***Forest types***

Karri main-belt

### ***Selection of sample locations and sampling process***

The coupe area was cross-checked and reviewed and a sample area was defined using the following background information:-

- Digitised aerial photographs and data layers were utilized to remotely confirm obvious forest structural boundaries and general observations in relation to forest structure;
- Stump survey locations as provided by DEC.

### ***Sampling Process***

Sampling incorporated the process outlined in the document *Assessment criteria and process for the Conservation Commission review of old-growth amendments*. The DEC stump analysis map (Map 1) has been utilized as a primary data source for determining the need for further detailed field analysis including canopy sampling. Four separate sampling plots (Map 2) were selected within the coupe but outside existing old-growth to determine the canopy condition of the forest and to verify previous stump survey work.

The southwest section of the coupe adjacent to the stream was not sampled. This area was visually assessed and determined to be predominantly herb and sedge-lands associated with the stream (Map 2). For this section of the coupe the existing old-growth layer reasonably depicts the true boundary between the informal reserve and existing old-growth.

### ***Sample Results***

<b><i>Sample Areas</i></b>	<b><i>Estimated total canopy cover</i></b>	<b><i>Estimated canopy cover of mature or senescent trees</i></b>
Northern plot 1 & plot 2 Sample points 17	76.5%	<b>35.3%</b>
Southern plot 3 & plot 4 sample points 49	87.8%	<b>61.2%</b>

Plots 3 & 4 have been identified within the proposed coupe area. These plots are consistent with the following old-growth forest criteria for this forest type:-

- Areas are greater than 2 hectares in size; and
- Areas are uncut; and
- Areas have more than 25% mature and/or senescent trees in the canopy.

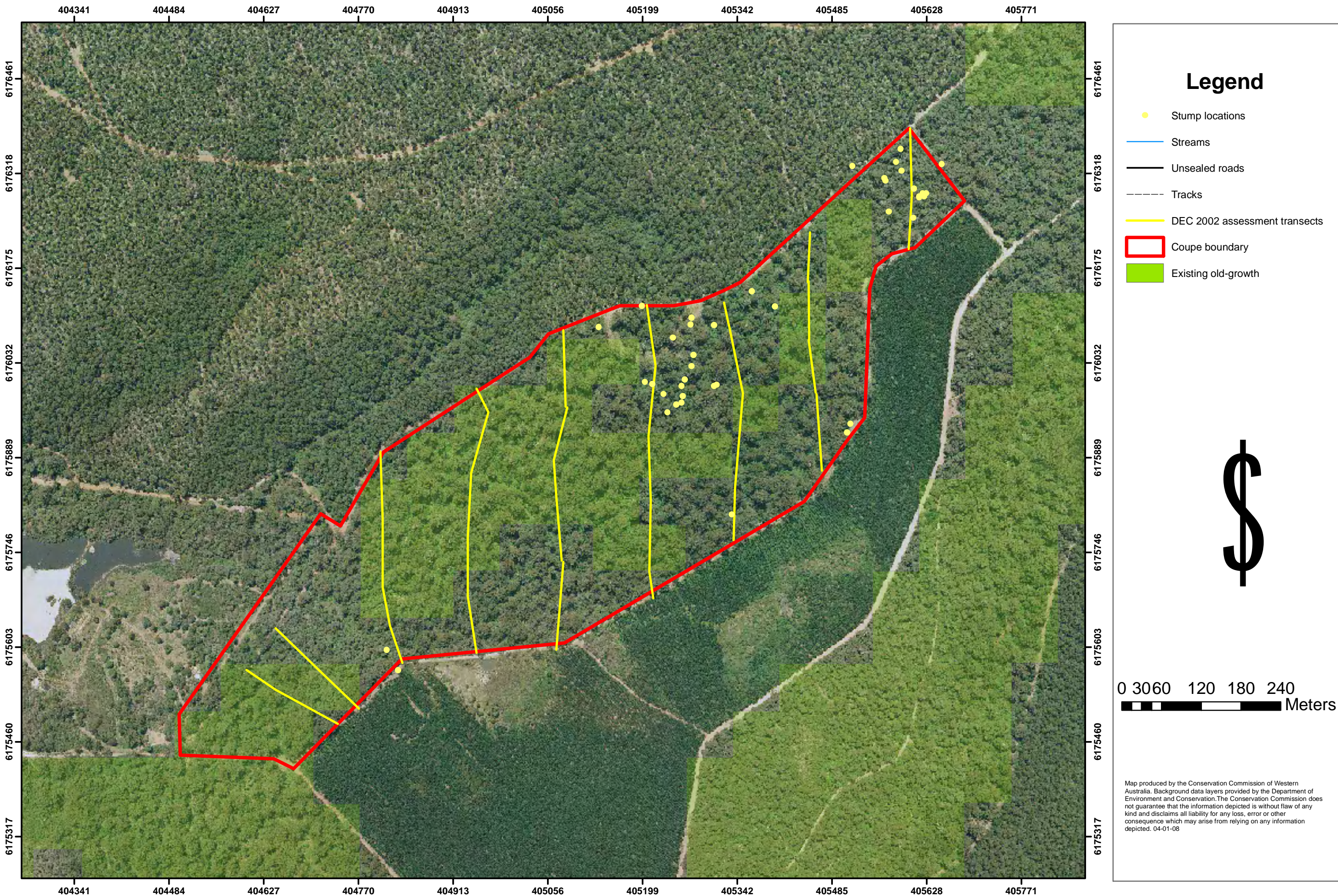
Therefore an area of approximately 9.8 hectares was located within the proposed coupe area which meets the criteria of old-growth forest (Map 2). The existing area of old-growth within the coupe is 17.7 hectares. The total area of old-growth within the coupe is now approximately 27.5 hectares or 70% of the total coupe area. This area will not be available for logging.

Conservation Commission sampling recorded two stumps within plot 3. The location of these stumps was at sample point 33 and sample point 49. Both of these stumps were located within close proximity to the unsealed road. These stumps were not determined to be part of a logging or clearing operation but most likely associated with roading or road maintenance activities.

Plots 1 & 2 within the proposed coupe area are outside the additional areas of old-growth and do not meet the requirements for old-growth forest. Only a small number of sample points were taken in these plots as it was clear from the number of stumps that the areas had been logged.

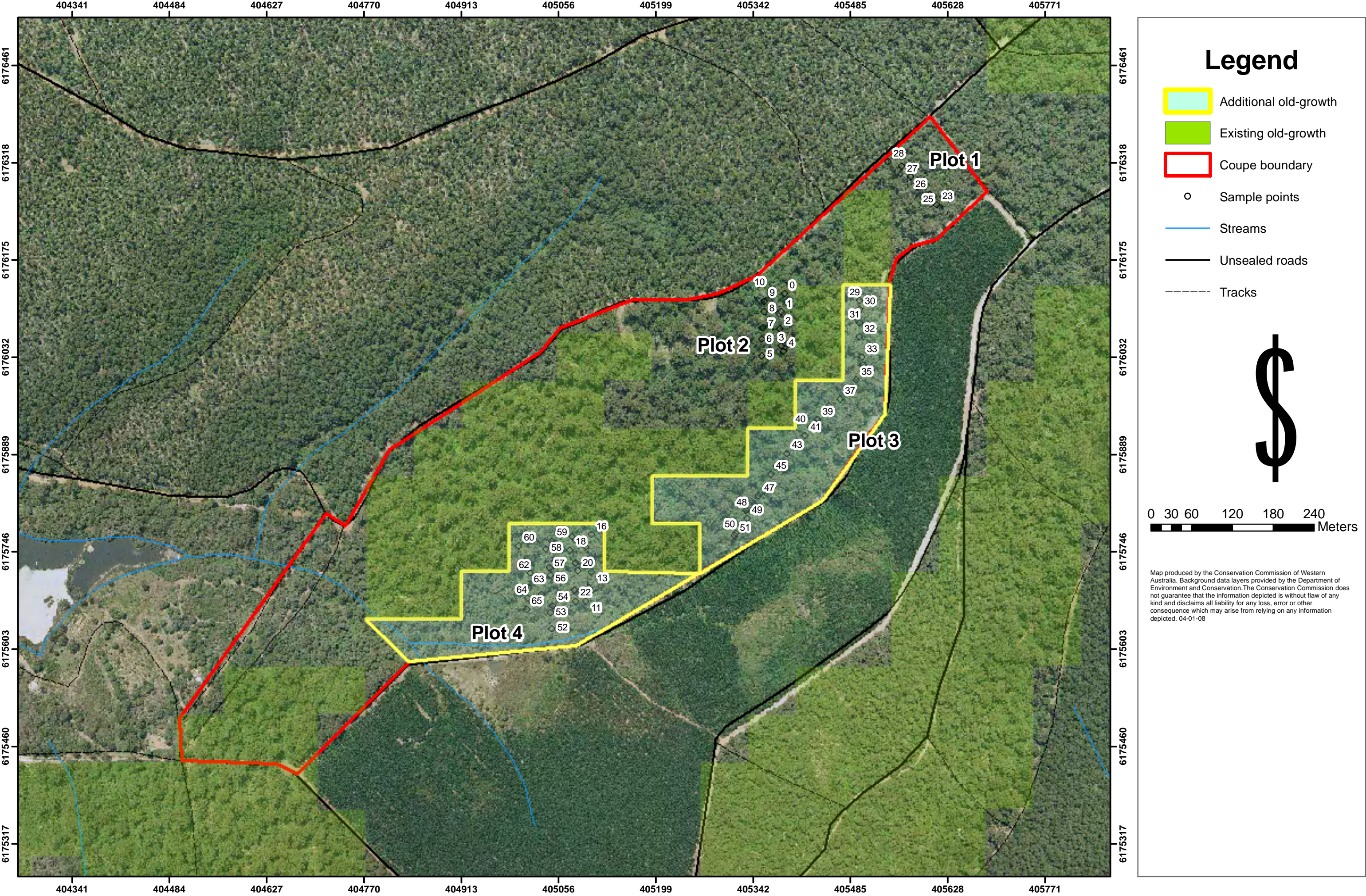


# Map 1 DEC stump distribution map





Map 2 Areas of additional old-growth and Conservation Commission sample plots





MAP 2 - Raw data

FID	BLOCK	CANOPY	SPECIES	DIAMETER	DEVELOPMENT	STUMPS	DISTURBANCE	QUALITATIVE	COMMENT
0	Warren	NO	GAP	0	GAP	0		MIXED	
1	Warren	YES	MARRI	135	MATURE/SENESCENT	0		MOSTLY UPPER	
2	Warren	YES	KARRI	40	REGROWTH	0	SNIGTRACK	MIXED	x-cut log enroute
3	Warren	YES	KARRI	115	MATURE/SENESCENT	0		MOSTLY UPPER	
4	Warren	YES	KARRI	120	MATURE/SENESCENT	1		MOSTLY UPPER	stump noted enroute
5	Warren	NO	GAP	0	GAP	1	SNIGTRACK	GAP	
6	Warren	YES	KARRI	30	REGROWTH	1		MOSTLY LOWER	stump noted enroute
7	Warren	YES	KARRI	120	MATURE/SENESCENT	0	TREEHEAD	MIXED	
8	Warren	NO	GAP	0	GAP	0		MIXED	
9	Warren	YES	MARRI	10	REGROWTH	0		MIXED	
10	Warren	NO	GAP	0	GAP	0		GAP	
11	Warren	NO	GAP	0	GAP	0		MIXED	
12	Warren	YES	KARRI	200	MATURE/SENESCENT	0		MOSTLY UPPER	
13	Warren	YES	KARRI	70	REGROWTH	0		MIXED	
14	Warren	NO	GAP	0	GAP	0		GAP	
15	Warren	YES	KARRI	120	MATURE/SENESCENT	0		MIXED	
16	Warren	YES	KARRI	200	MATURE/SENESCENT	0		MOSTLY UPPER	
17	Warren	YES	KARRI	200	MATURE/SENESCENT	0		MIXED	
18	Warren	YES	KARRI	200	MATURE/SENESCENT	0		MOSTLY UPPER	
19	Warren	YES	KARRI	70	REGROWTH	0		MOSTLY UPPER	
20	Warren	YES	KARRI	30	REGROWTH	0		MIXED	
21	Warren	YES	KARRI	180	MATURE/SENESCENT	0		MOSTLY UPPER	
22	Warren	YES	KARRI	90	REGROWTH	0		MIXED	
23	Warren	YES	MARRI	15	REGROWTH	1	X-CUT LOG_	MIXED	
24	Warren	YES	MARRI	50	MATURE/SENESCENT	0		MIXED	
25	Warren	YES	MARRI	60	MATURE/SENESCENT	0		MIXED	
26	Warren	YES	MARRI	25	REGROWTH	0		MOSTLY LOWER	
27	Warren	YES	KARRI	30	REGROWTH	0		MOSTLY LOWER	
28	Warren	YES	MARRI	25	REGROWTH	0		MOSTLY LOWER	
29	Warren	YES	KARRI	200	MATURE/SENESCENT	0		MOSTLY UPPER	
30	Warren	YES	KARRI	250	MATURE/SENESCENT	0		MOSTLY UPPER	
31	Warren	YES	KARRI	200	MATURE/SENESCENT	0		MOSTLY UPPER	
32	Warren	YES	KARRI	140	MATURE/SENESCENT	0		MOSTLY UPPER	
33	Warren	YES	KARRI	100	MATURE/SENESCENT	1		MIXED	stump small for harv
34	Warren	YES	KARRI	120	MATURE/SENESCENT	0		MOSTLY UPPER	
35	Warren	YES	KARRI	130	MATURE/SENESCENT	0		MOSTLY UPPER	
36	Warren	YES	KARRI	120	MATURE/SENESCENT	0		MOSTLY UPPER	
37	Warren	YES	KARRI	130	MATURE/SENESCENT	0		MIXED	
38	Warren	YES	KARRI	150	MATURE/SENESCENT	0		MOSTLY UPPER	
39	Warren	YES	KARRI	85	REGROWTH	0		MOSTLY UPPER	
40	Warren	NO	GAP	0	GAP	0		MIXED	
41	Warren	YES	KARRI	130	MATURE/SENESCENT	0		MIXED	
42	Warren	YES	KARRI	130	MATURE/SENESCENT	0		MOSTLY UPPER	
43	Warren	YES	KARRI	140	MATURE/SENESCENT	0		MIXED	
44	Warren	YES	KARRI	70	REGROWTH	0		MIXED	
45	Warren	YES	KARRI	95	REGROWTH	0		MOSTLY UPPER	
46	Warren	YES	KARRI	120	MATURE/SENESCENT	0		MIXED	
47	Warren	NO	GAP	0	GAP	0	X-CUT LOG_	GAP	
48	Warren	NO	GAP	0	GAP	0		MIXED	

MAP 2 - Raw data

49	Warren	YES	KARRI	110	MATURE/SENESCENT	1	X-CUT LOG_	MIXED
50	Warren	YES	KARRI	100	MATURE/SENESCENT	0		MOSTLY UPPER
51	Warren	YES	KARRI	125	MATURE/SENESCENT	0		MOSTLY UPPER
52	Warren	YES	OTHER	15	GAP	0		MIXED
53	Warren	YES	KARRI	110	MATURE/SENESCENT	0		MIXED
54	Warren	YES	KARRI	90	REGROWTH	0		MIXED
55	Warren	NO	GAP	0	GAP	0		MOSTLY LOWER
56	Warren	YES	KARRI	120	MATURE/SENESCENT	0		MOSTLY UPPER
57	Warren	YES	KARRI	250	MATURE/SENESCENT	0		MOSTLY UPPER
58	Warren	YES	KARRI	150	MATURE/SENESCENT	0		MOSTLY UPPER
59	Warren	YES	KARRI	30	REGROWTH	0		MOSTLY LOWER
60	Warren	YES	KARRI	35	REGROWTH	0		MIXED
61	Warren	YES	KARRI	300	MATURE/SENESCENT	0		MOSTLY UPPER
62	Warren	YES	KARRI	20	REGROWTH	0		MIXED
63	Warren	YES	KARRI	200	MATURE/SENESCENT	0		MOSTLY UPPER
64	Warren	YES	KARRI	70	REGROWTH	0		MIXED
65	Warren	YES	KARRI	120	MATURE/SENESCENT	0		MIXED