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1. Introduction

This report provides additional and corrected information that supplements that provided in Background Report C, Environment and Heritage Report Volumes I and II.

As stated in Volume 1, the data presented on forest ecosystem assessment in Chapter 2.3.1 and the old growth assessment in Chapter 4.5 was preliminary and subject to further refinement and checking. Updated information is presented in this supplementary report.

Additionally the assessment of high quality wilderness areas envisaged in Volume I, Chapter 5.4 has been completed. This information is also presented in this report.

This updated information will be used as the basis for further assessment of issues and preliminary development of the Regional Forest Agreement options. The data may be further revised following consideration of comments received from the community.

2. Applying the CAR reserve criteria

The analysis of reservation status in this report uses the *Proposed nationally agreed criteria for the establishment of a Comprehensive, Adequate and Representative reserve system for forests in Australia* (JANIS 1996). JANIS states that the criteria for biodiversity, old growth and wilderness are to be considered guidelines rather than mandatory targets.

Further assessment of the existing reservation area status against the JANIS criteria and the amount and areas to be considered for the Regional Forest Agreement (RFA) will occur in the development of RFA options. The final outcome for the CAR reserve system in the RFA will also provide for acceptable social and economic outcomes.

3. Forest ecosystem assessment

3.1 Forest community mapping

Since completion of the initial mapping presented in Volume I further review has been undertaken by experts. A number of minor changes have been made to

correct the coverage. These changes have resulted from correction of map sheet joins, coding errors, adding codes to forested polygons that were missed in the original coverage and correction of incorrectly assigned polygons.

Updated area figures of the current extent of each forest community are given in Table 2.5 which replaces Table 2.5 in Volume I, page 42.

Plotted copies of the updated map of current extent of forest communities will be available for inspection through the Public Land Use Commission. New 1:250,000 maps are being printed and will be distributed to replace the version 1 maps.

3.2 Pre-1750 vegetation reconstruction

As foreshadowed in Volume I (pages 38-39) the preliminary 1750 vegetation reconstruction analysis has been reviewed. This review followed the methodology described in Volume I. However, there was a significantly greater input from experts in refining the figures.

Revised area statements are given in Table 2.5, which replaces Table 2.5 in Volume I (pp. 42-3). For some forest communities there are significant differences from the previous preliminary figures. There are three main reasons for this:

- an error in the original cleared land coverage, which classed large areas of natural non-forest vegetation types in western Tasmania as cleared forest-this resulted in overestimates of clearing of rainforest and *Eucalyptus nitida* forest;
- underestimates of natural non-forest types, particularly on King and Flinders islands;
- revision of the data for native conifer communities (pencil pine, Huon pine, King Billy pine) so that they contain figures on forested areas only, consistent with the published map-the previous report included 'non-forest' areas of these communities (that is, woodland types and small clumps and individuals in non-forest areas).

It is estimated that Tasmania retains 63 per cent of its pre-1750 forest cover.

Table 2.5 Existing and estimated pre-1750 area of mapped forest communities in Tasmania

Forest community	Present area (ha)	Estimated pre-1750 area (ha)
Coastal <i>Eucalyptus amygdalina</i>	190 210	357 800
<i>E. amygdalina</i> on dolerite	178 300	248 100
<i>E. amygdalina</i> inland	25 800	76 900
<i>E. amygdalina</i> on sandstone	30 110	114 300
<i>E. viminalis</i> – <i>E. ovata</i> – <i>E. amygdalina</i> – <i>E. obliqua</i> damp sclerophyll forest	40 630	89 100
Grassy <i>E. globulus</i>	14 450	28 500
<i>E. pulchella</i> – <i>E. globulus</i> – <i>E. viminalis</i> grassy/shrubby forest	151 310	219 100
<i>E. viminalis</i> grassy	112 490	242 900
<i>E. viminalis</i> ± <i>E. globulus</i> coastal shrubby forest	1 220	4 700
<i>E. tenuiramis</i> on granite	3 020	3 200
<i>E. tenuiramis</i> on dolerite	8 430	8 900
Inland <i>E. tenuiramis</i>	55 010	123 800
<i>E. sieberi</i> on granite	17 660	19 400
<i>E. sieberi</i> on other substrates	46 000	52 200
<i>E. obliqua</i> dry	164 140	258 200
<i>E. nitida</i> dry	159 850	174 400
<i>E. delegatensis</i> dry	289 530	317 900
<i>E. pauciflora</i> (on dolerite)	18 810	27 800
<i>E. pauciflora</i> (on sediments)	16 200	31 400
Furneaux <i>E. nitida</i>	29 810	40 600
Furneaux <i>E. viminalis</i>	140	200
Shrubby <i>E. ovata</i>	7 210	232 000
<i>E. rodwayi</i>	8 670	11 900
<i>E. risdonii</i>	370	500
<i>E. morrisbyi</i>	20	250
<i>E. coccifera</i>	54 540	59 200
<i>E. subcrenulata</i>	10 240	10 600
<i>E. obliqua</i> wet	425 700	606 800
<i>E. regnans</i>	76 050	99 900
<i>E. nitida</i> wet	74 410	87 400
<i>E. delegatensis</i> wet	285 720	316 800
<i>E. brookeriana</i>	4 560	13 500
King Island <i>E. globulus</i> – <i>E. brookeriana</i> – <i>E. viminalis</i>	2 420	58 300
<i>E. viminalis</i> wet	4 180	78 100
<i>Allocasuarina verticillata</i>	1 430	3 500
<i>Notelaea ligustrina</i> and/or <i>Pomaderris apetala</i> closed forest	290	300
<i>Callitris rhomboidea</i>	790	1 100
<i>Banksia serrata</i> woodland	160	200
<i>Acacia dealbata</i>	54 090	59 000
Pencil pine – deciduous beech	190	260
Pencil pine	330	700
King Billy pine	18 090	20 000
King Billy pine – deciduous beech	790	800
Huon pine	8 600	11 000
Tall rainforest	192 010	212 700
Short rainforest	377 870	401 100
<i>Acacia melanoxylon</i> on flats	9 010	16 100
<i>Acacia melanoxylon</i> on rises	13 310	20 400
<i>Leptospermum lanigerum</i> – <i>Melaleuca squarrosa</i> swamp forest	18 950	40 800
<i>Melaleuca ericifolia</i> coastal swamp forest	600	19 600
Total	3 032 720	4 822 210

3.3 Rare, vulnerable and endangered forest communities

Table 2.8 in Volume I (p. 47) has been updated to take account of the updated forest community areas in Table 2.5. One of the JANIS criteria for biodiversity is that at least 60 per cent of the remaining extent of vulnerable forest ecosystems and all, where practicable, of the existing area of rare and endangered forest ecosystems should be included in the CAR reserve system.

The conservation status of grassy *E. globulus* forest needs further assessment to determine if it should be classified as endangered due to continuing threatening processes (land clearing).

Table 2.8 Rare forest communities in Tasmania

Classification	Forest community
Rare	
R1	<i>E. risdonii</i> forest <i>E. morrisbyi</i> forest Furneaux <i>E. viminalis</i> forest
R2	Furneaux <i>E. viminalis</i> forest <i>E. risdonii</i> forest <i>E. morrisbyi</i> forest <i>Notelaea ligustrina</i> and/or <i>Pomaderris apetela</i> closed forest <i>Callitris rhomboidea</i> forest <i>Banksia serrata</i> woodlands King Billy pine-deciduous beech forest <i>Melaleuca ericifolia</i> coastal swamp forest
R3	<i>E. morrisbyi</i> forest <i>Notelaea ligustrina</i> and/or <i>Pomaderris apetela</i> closed forest <i>Callitris rhomboidea</i> forest <i>Banksia serrata</i> woodlands pencil pine forest Pencil pine-deciduous beech forest <i>E. risdonii</i> forest King Island <i>E. globulus</i> - <i>E. brookeriana</i> - <i>E. viminalis</i> forest Furneaux <i>E. viminalis</i> forest <i>E. viminalis</i> - <i>E. globulus</i> coastal shrubby forest
Vulnerable	
V1	<i>E. amygdalina</i> inland forest <i>E. amygdalina</i> on sandstone <i>E. viminalis</i> - <i>E. globulus</i> coastal shrubby forest <i>E. brookeriana</i> wet forest
V2	Pencil pine forest Pencil pine-deciduous beech forest King Billy pine forest King Billy pine-deciduous beech forest
Endangered	
E1	Nil
E2	Shrubby <i>E. ovata</i> forest <i>E. morrisbyi</i> forest King Island <i>E. globulus</i> - <i>E. brookeriana</i> - <i>E. viminalis</i> forest <i>E. viminalis</i> wet forest <i>Melaleuca ericifolia</i> coastal swamp forest
E3	Furneaux <i>E. viminalis</i> forest <i>Notelaea ligustrina</i> and/or <i>Pomaderris apetela</i> closed forest

3.4 Regional reservation analysis

Table 2.6 in Volume I (p. 44) has been updated to reflect the revised area estimates of existing and pre-1750 forest communities.

Table 2.6.1 provides an assessment of the existing reservation area status against the JANIS criteria for forest ecosystem reservation. Included in the table are estimates of the existing area on non-reserved public land and private land. This table presents new information not included in Volume I.

Twenty of the 50 communities exceed the JANIS criteria. Thirty communities are reserved at levels below the JANIS criteria. Protection of all remaining unreserved areas would be required to meet the JANIS criteria for six communities - Furneaux *E. viminalis* (140 hectares), *E. morrisbyi* (20 hectares), shrubby *E. ovata* (7 180 hectares), King Island *E. globulus* - *E. brookeriana* - *E. viminalis* (2 300 ha); *E. viminalis* wet (4 160 ha); and *Notelaea ligustrina* and/or *Pomaderris apetela* closed forest (100 hectares).

The aggregate area of forest below the JANIS criteria for regional reservation of forest ecosystems is 196 810 hectares-123 510 hectares on public land and 73 300 hectares on private.

3.5 Sub-regional reservation status of forest communities

Table C.1 in Volume II (pp. 80-8) has been updated to reflect the revised forest community mapping.

Table 2.6 Reservation status of forest communities

Forest community	Reserved area (ha)			% of existing reserved	% of pre-1750 area reserved		
	Dedicated reserves	Informal reserves	Total		Dedicated reserves	Informal reserves	Total
Coastal <i>Eucalyptus amygdalina</i>	20 970	11 530	32 510	17	6	3	9
<i>E. amygdalina</i> on dolerite	6 700	6 950	13 640	8	3	3	6
<i>E. amygdalina</i> inland	740	660	1 400	5	1	1	2
<i>E. amygdalina</i> on sandstone	910	900	1 810	6	1	1	2
<i>E. viminalis</i> – <i>E. ovata</i> – <i>E. amygdalina</i> – <i>E. obliqua</i> damp	4 120	2 400	6 510	16	5	3	7
Grassy <i>E. globulus</i>	3 270	960	4 230	29	12	3	15
<i>E. pulchella</i> – <i>E. globulus</i> – <i>E. viminalis</i> grassy/shrubby forest	7 360	6 600	13 960	9	3	3	6
<i>E. viminalis</i> grassy	620	830	1 450	1	0	0	1
<i>E. viminalis</i> ± <i>E. globulus</i> coastal	250	30	280	23	5	1	6
<i>E. tenuiramis</i> on granite	1 310	10	1 320	44	41	0	41
<i>E. tenuiramis</i> on dolerite	2 320	1 250	3 570	42	26	14	40
Inland <i>E. tenuiramis</i>	1 490	1 770	3 260	6	1	1	3
<i>E. sieberi</i> on granite	570	1 620	2 190	12	3	8	11
<i>E. sieberi</i> on other substrates	3 430	2 820	6 250	14	7	5	12
<i>E. obliqua</i> dry	16 720	20 190	36 910	22	6	8	14
<i>E. nitida</i> dry	94 280	26 570	120 850	76	54	15	69
<i>E. delegatensis</i> dry	52 110	22 690	74 800	26	16	7	24
<i>E. pauciflora</i> (on dolerite)	370	1 980	2 350	12	1	7	8
<i>E. pauciflora</i> (on sediments)	2 860	1 050	3 910	24	9	3	12
Furneaux <i>E. nitida</i>	4 170	1 380	5 550	19	10	4	14
Furneaux <i>E. viminalis</i>	0	0	0	0	0	0	0
Shrubby <i>E. ovata</i>	50	220	270	4	0	0	0
<i>E. rodwayi</i>	10	270	280	3	0	2	2
<i>E. risdonii</i>	40	130	170	45	7	25	32
<i>E. morrisbyi</i>	0	0	0	0	0	0	0
<i>E. coccifera</i>	29 180	8 510	37 690	69	49	15	64
<i>E. subcrenulata</i>	7 700	810	8 510	83	73	8	81
<i>E. obliqua</i> wet	37 420	38 640	76 060	18	6	7	13
<i>E. regnans</i>	5 860	7 530	13 390	18	6	8	14
<i>E. nitida</i> wet	50 360	13 740	64 090	86	58	16	73
<i>E. delegatensis</i> wet	56 810	18 270	75 080	26	18	6	24
<i>E. brookeriana</i>	50	220	270	6	0	2	2
K. I. <i>E. glob.</i> – <i>E. brook.</i> – <i>E. vim.</i>	120	10	130	5	0	0	0
<i>E. viminalis</i> wet	120	200	320	8	0	0	0
<i>Allocasuarina verticillata</i>	430	100	530	37	12	3	15
<i>N. ligustrina</i> and/or <i>P. apetala</i>	190	0	190	66	63	0	63
<i>Callitris rhomboidea</i>	200	60	260	33	17	5	23
<i>Banksia serrata</i> woodlands	120	0	120	74	50	0	50
<i>Acacia dealbata</i>	3 990	5 750	9 740	18	7	10	17
Pencil pine – deciduous beech	330	0	330	100	48	0	48
Pencil pine	190	0	190	100	73	0	73
King Billy pine	8 640	6 060	14 700	81	43	30	73
King Billy pine – deciduous beech	200	430	630	80	23	51	74
Huon pine	6 080	630	6 720	65	45	5	59
Tall rainforest	46 070	40 500	86 580	45	22	19	41
Short rainforest	164 480	67 140	231 610	61	41	17	58
<i>Acacia melanoxylon</i> on flats	610	360	970	11	4	2	6
<i>Acacia melanoxylon</i> on rises	560	770	1 320	10	3	4	6
<i>Leptospermum lanigerum</i> – <i>Melaleuca squarrosa</i> swamp	7 580	1 010	8 590	45	19	2	21
<i>Melaleuca ericifolia</i> coastal swamp forest	190	30	220	37	1	0	1
Total	652 140	323 570	975 710	32	13	7	20

Table 2.6.1 Reservation analysis

Forest community	% of pre-1750 area reserved	JANIS criteria	Criteria exceeded	Area below JANIS criteria (ha)	Area on public land outside existing reserves (ha)	Area on private land (ha)
Coastal <i>Eucalyptus amygdalina</i>	9	15	no	21 160	87 650	70 050
<i>E. amygdalina</i> on dolerite	6	15	no	23 570	31 950	132 710
<i>E. amygdalina</i> inland	2 (5*)	60*	no	14 080	1 810	22 590
<i>E. amygdalina</i> on sandstone	2 (6*)	60*	no	16 260	10 670	17 630
<i>E. viminalis</i> – <i>E. ovata</i> – <i>E. amygdalina</i> – <i>E. obliqua</i> damp	7	15	no	6 850	17 340	16 770
Grassy <i>E. globulus</i>	15	15	yes	0	2 380	7 840
<i>E. pulchella</i> – <i>E. globulus</i> – <i>E. viminalis</i> grassy/shrubby forest	6	15	no	18 920	35 630	101 720
<i>E. viminalis</i> grassy	1	15	no	34 980	2 750	108 280
<i>E. viminalis</i> ± <i>E. globulus</i> coastal	6 (23*)	60*	no	450	20	910
<i>E. tenuiramis</i> on granite	41	15	yes	0	1 500	200
<i>E. tenuiramis</i> on dolerite	40	15	yes	0	4 140	710
Inland <i>E. tenuiramis</i>	3	15	no	15 310	5 000	46 760
<i>E. sieberi</i> on granite	11	15	no	720	13 240	2 240
<i>E. sieberi</i> on other substrates	12	15	no	1 580	32 260	7 190
<i>E. obliqua</i> dry	14	15	no	1 820	73 910	53 320
<i>E. nitida</i> dry	69	15	yes	0	32 860	6 140
<i>E. delegatensis</i> dry	24	15	yes	0	108 250	106 480
<i>E. pauciflora</i> (on dolerite)	8	15	no	1 820	2 100	14 370
<i>E. pauciflora</i> (on sediments)	12	15	no	800	3 080	9 210
Furneaux <i>E. nitida</i>	14	15	no	540	17 010	7 250
Furneaux <i>E. viminalis</i>	0 (0*)	100*	no	140	120	20
shrubby <i>E. ovata</i>	0 (4*)	100*	no	6 940	360	6 580
<i>E. rodwayi</i>	2	15	no	1 510	350	8 040
<i>E. risdonii</i>	32 (45*)	60*	no	60	10	200
<i>E. morrisbyi</i>	0 (0*)	100*	no	20	0	20
<i>E. coccifera</i>	64	15	yes	0	7 470	9 380
<i>E. subcrenulata</i>	81	15	yes	0	1 710	10
<i>E. obliqua</i> wet	13	15	no	14 960	272 030	77 610
<i>E. regnans</i>	14	15	no	1 600	56 930	5 730
<i>E. nitida</i> wet	73	15	yes	0	9 550	770
<i>E. delegatensis</i> wet	24	15	yes	0	159 600	51 040
<i>E. brookeriana</i>	2 (6*)	60*	no	2 470	8 220	3 760
K. I. <i>E. glob.</i> – <i>E. brook.</i> – <i>E. vim.</i>	0 (5*)	100*	no	2 300	540	1 760
<i>E. viminalis</i> wet	0 (8*)	100*	no	3 860	1 000	2 860
<i>Allocasuarina verticillata</i>	15	15	yes	0	130	770
<i>N. ligustrina</i> and/or <i>P. apetala</i>	63 (66*)	100*	no	100	60	40
<i>Callitris rhomboidea</i>	23 (33*)	60*	no	200	250	280
<i>Banksia serrata</i> woodlands	50 (74*)	60*	yes	0	0	40
<i>Acacia dealbata</i>	17	15	yes	0	25 920	18 420
Pencil pine – deciduous beech	73 (100*)	60*	yes	0	0	0
Pencil pine	48 (100*)	60*	yes	0	0	0
King Billy pine	73 (81*)	60*	yes	0	3 400	0
King Billy pine – decid. beech	74 (80*)	60*	yes	0	160	0
Huon pine	61	15	yes	0	1 840	0
Tall rainforest	41	15	yes	0	89 840	15 600
Short rainforest	58	15	yes	0	133 800	12 480
<i>Acacia melanoxylon</i> on flats	6	15	no	1 450	5 880	2 160
<i>Acacia melanoxylon</i> on rises	6	15	no	1 740	8 220	3 760
<i>Leptospermum lanigerum</i> – <i>Melaleuca squarrosa</i> swamp	21	15	yes	0	5 050	5 310
<i>Melaleuca ericifolia</i> coastal swamp forest	1 (37*)	100*	no	600	180	200
Total				196 810		

* = percentage of existing area

Table C.1 Area of mapped forest communities by IBRA bioregion

Forest community		Woolnorth	Ben Lomond	Furneaux	Midlands	D'Entrecasteaux	Frey
Coastal <i>Eucalyptus amygdalina</i>	area (ha)	24 740	133 260	—	3 320	60	28
	reserved (ha)	5 100	18 300	—	560	0	8
	% reserved	21	14	—	17	0	
<i>E. amygdalina</i> on dolerite	area (ha)	18 180	42 670	—	41 110	220	70
	reserved (ha)	1 210	2 420	—	830	10	8
	% reserved	7	6	—	2	3	
<i>E. amygdalina</i> inland	area (ha)	910	4 550	—	19 780	—	
	reserved (ha)	0	160	—	1 240	—	
	% reserved	0	4	—	6	—	
<i>E. amygdalina</i> on sandstone	area (ha)	320	1 020	—	3 950	800	23
	reserved (ha)	14	110	—	350	130	1
	% reserved	4	10	—	9	17	
<i>E. viminalis</i> – <i>E. ovata</i> – <i>E. amygdalina</i> – <i>E. obliqua</i> damp sclerophyll forest	area (ha)	29 990	2 080	—	7 700	—	
	reserved (ha)	4 800	170	—	1 280	—	
	% reserved	16	8	—	17	—	
Grassy <i>E. globulus</i>	area (ha)	—	—	—	2 910	600	10
	reserved (ha)	—	—	—	870	90	3
	% reserved	—	—	—	30	14	
<i>E. pulchella</i> – <i>E. globulus</i> – <i>E. viminalis</i> grassy/shrubby forest	area (ha)	—	—	—	28 560	10 720	110
	reserved (ha)	—	—	—	2 020	1 310	10
	% reserved	—	—	—	7	12	
<i>E. viminalis</i> grassy	area (ha)	2 930	19 380	—	58 760	200	21
	reserved (ha)	160	30	—	430	50	
	% reserved	6	0	—	1	27	

Table C.1 (cont'd) Area of mapped forest communities by IBRA bioregion

Forest community		Woolnorth	Ben Lomond	Furneaux	Midlands	D'Entrecasteaux	Fre
<i>E. viminalis</i> ± <i>E. globulus</i> coastal shrubby forest	area (ha)	10	—	—	70	—	
	reserved (ha)	0	—	—	0	—	
	% reserved	0	—	—	0	—	
<i>E. tenuiramis</i> on granite	area (ha)	—	—	—	—	—	
	reserved (ha)	—	—	—	—	—	
	% reserved	—	—	—	—	—	
<i>E. tenuiramis</i> on dolerite	area (ha)	—	—	—	—	840	
	reserved (ha)	—	—	—	—	510	
	% reserved	—	—	—	—	60	
Inland <i>E. tenuiramis</i>	area (ha)	—	—	—	33 950	1 110	
	reserved (ha)	—	—	—	2 400	80	
	% reserved	—	—	—	7	7	
<i>E. sieberi</i> on granite	area (ha)	—	16 830	—	—	—	
	reserved (ha)	—	2 050	—	—	—	
	% reserved	—	12	—	—	—	
<i>E. sieberi</i> on other substrates	area (ha)	—	42 840	—	—	—	
	reserved (ha)	—	5 440	—	—	—	
	% reserved	—	13	—	—	—	
<i>E. obliqua</i> dry	area (ha)	29 120	29 560	—	13 850	29 670	3
	reserved (ha)	5 350	3 610	—	2 360	7 120	
	% reserved	18	12	—	17	24	
<i>E. nitida</i> dry	area (ha)	14 220	—	—	20	3 100	
	reserved (ha)	2 870	—	—	10	2 840	
	% reserved	20	—	—	65	92	
<i>E. delegatensis</i> dry	area (ha)	3 940	29 800	—	10 370	7 830	6
	reserved (ha)	1 380	7 120	—	1 730	5 300	
	% reserved	35	24	—	17	68	

Table C.1 (cont'd) Area of mapped forest communities by IBRA bioregion

Forest community		Woolnorth	Ben Lomond	Furneaux	Midlands	D'Entrecasteaux	Freyci
<i>E. pauciflora</i> (on dolerite)	area (ha)	—	—	—	450	—	1 3
	reserved (ha)	—	—	—	0	—	7
	% reserved	—	—	—	0	—	
<i>E. pauciflora</i> (on sediments)	area (ha)	—	1 840	—	1 310	—	
	reserved (ha)	—	120	—	0	—	
	% reserved	—	6	—	0	—	
Furneaux <i>E. nitida</i>	area (ha)	—	—	29 820	—	—	
	reserved (ha)	—	—	5 550	—	—	
	% reserved	—	—	19	—	—	
Furneaux <i>E. viminalis</i>	area (ha)	—	—	140	—	—	
	reserved (ha)	—	—	0	—	—	
	% reserved	—	—	0	—	—	
Shrubby <i>E. ovata</i>	area (ha)	3 030	440	—	2 680	240	7
	reserved (ha)	100	30	—	70	10	
	% reserved	3	6	—	2	3	
<i>E. rodwayi</i>	area (ha)	110	40	—	110	—	2 1
	reserved (ha)	100	0	—	0	—	
	% reserved	92	0	—	0	—	
<i>E. risdonii</i>	area (ha)	—	—	—	380	—	
	reserved (ha)	—	—	—	170	—	
	% reserved	—	—	—	44	—	
<i>E. morrisbyi</i>	area (ha)	—	—	—	20	—	
	reserved (ha)	—	—	—	0	—	
	% reserved	—	—	—	0	—	
<i>E. coccifera</i>	area (ha)	30	30	—	—	3 950	
	reserved (ha)	20	30	—	—	3 330	
	% reserved	59	100	—	—	84	

Table C.1 (cont'd) Area of mapped forest communities by IBRA bioregion

Forest community		Woolnorth	Ben Lomond	Furneaux	Midlands	D'Entrecasteaux	Freycine
<i>E. subcrenulata</i>	area (ha)	140	—	—	10	4 250	—
	reserved (ha)	140	—	—	10	3 130	—
	% reserved	100	—	—	100	74	—
<i>E. obliqua</i> wet	area (ha)	125 070	53 460	—	8 460	110 840	30 630
	reserved (ha)	14 640	5 250	—	2 360	21 440	9 030
	% reserved	12	10	—	17	19	29
<i>E. regnans</i>	area (ha)	2 660	27 450	—	1 070	21 220	3 280
	reserved (ha)	570	4 320	—	250	3 230	700
	% reserved	22	16	—	23	15	21
<i>E. nitida</i> wet	area (ha)	2 970	—	—	—	2 400	—
	reserved (ha)	550	—	—	—	1 520	—
	% reserved	19	—	—	—	64	—
<i>E. delegatensis</i> wet	area (ha)	14 810	47 460	—	4 270	24 670	21 380
	reserved (ha)	3 850	5 480	—	1 030	6 880	3 910
	% reserved	26	12	—	24	28	18
<i>E. brookeriana</i>	area (ha)	4 460	—	—	—	—	200
	reserved (ha)	250	—	—	—	—	0
	% reserved	6	—	—	—	—	0
King Island <i>E. globulus</i> – <i>E. brookeriana</i> – <i>E. viminalis</i>	area (ha)	2 430	—	—	—	—	—
	reserved (ha)	130	—	—	—	—	—
	% reserved	5	—	—	—	—	—
<i>E. viminalis</i> wet	area (ha)	2 630	—	—	60	—	810
	reserved (ha)	250	—	—	0	—	500
	% reserved	10	—	—	0	—	61
<i>Allocasuarina verticillata</i>	area (ha)	200	300	190	270	—	460
	reserved (ha)	190	40	50	30	—	210
	% reserved	95	13	28	12	—	46

Table C.1 (cont'd) Area of mapped forest communities by IBRA bioregion

Forest community		Woolnorth	Ben Lomond	Furneaux	Midlands	D'Entrecasteaux	Fre
<i>Notelaea ligustrina</i> and/or <i>Pomaderris apetala</i> closed forest	area (ha)	50	20	—	30	50	
	reserved (ha)	0	0	—	30	50	
	% reserved	0	0	—	100	100	
<i>Callitris rhomboidea</i>	area (ha)	—	—	140	—	—	
	reserved (ha)	—	—	0	—	—	
	% reserved	—	—	0	—	—	
<i>Banksia serrata</i> woodlands	area (ha)	160	—	—	—	—	
	reserved (ha)	120	—	—	—	—	
	% reserved	74	—	—	—	—	
Pencil pine – deciduous beech	area (ha)	—	—	—	—	—	
	reserved (ha)	—	—	—	—	—	
	% reserved	—	—	—	—	—	
Pencil pine	area (ha)	—	—	—	—	10	
	reserved (ha)	—	—	—	—	10	
	% reserved	—	—	—	—	100	
King Billy pine	area (ha)	10	—	—	—	2 650	
	reserved (ha)	10	—	—	—	2 620	
	% reserved	100	—	—	—	99	
King Billy pine – deciduous beech	area (ha)	—	—	—	—	10	
	reserved (ha)	—	—	—	—	10	
	% reserved	—	—	—	—	100	
Huon pine	area (ha)	—	—	—	—	40	
	reserved (ha)	—	—	—	—	40	
	% reserved	—	—	—	—	100	
Tall rainforest	area (ha)	29 320	25 140	—	110	6 920	
	reserved (ha)	9 050	10 530	—	80	4 790	
	% reserved	31	42	—	69	69	

Table C.1 (cont'd) Area of mapped forest communities by IBRA bioregion

Forest community		Woolnorth	Ben Lomond	Furneaux	Midlands	D'Entrecasteaux	Frey
Short rainforest	area (ha)	25 850	—	—	140	23 080	
	reserved (ha)	6 100	—	—	30	19 620	
	% reserved	24	—	—	22	85	
<i>Acacia melanoxylon</i> on flats	area (ha)	8 000	250	—	—	—	
	reserved (ha)	620	20	—	—	—	
	% reserved	8	7	—	—	—	
<i>Acacia melanoxylon</i> on rises	area (ha)	8 040	70	—	—	—	
	reserved (ha)	740	0	—	—	—	
	% reserved	9	0	—	—	—	
<i>Leptospermum lanigerum</i> – <i>Melaleuca squarrosa</i> swamp forests	area (ha)	7 440	40	290	—	1 260	
	reserved (ha)	520	0	0	—	1 230	
	% reserved	7	0	0	—	97	
<i>Melaleuca ericifolia</i> coastal swamp forest	area (ha)	200	390	10	—	—	
	reserved (ha)	190	30	0	—	—	
	% reserved	96	7	0	—	—	

4. Old growth

4.1 *Revised mapping*

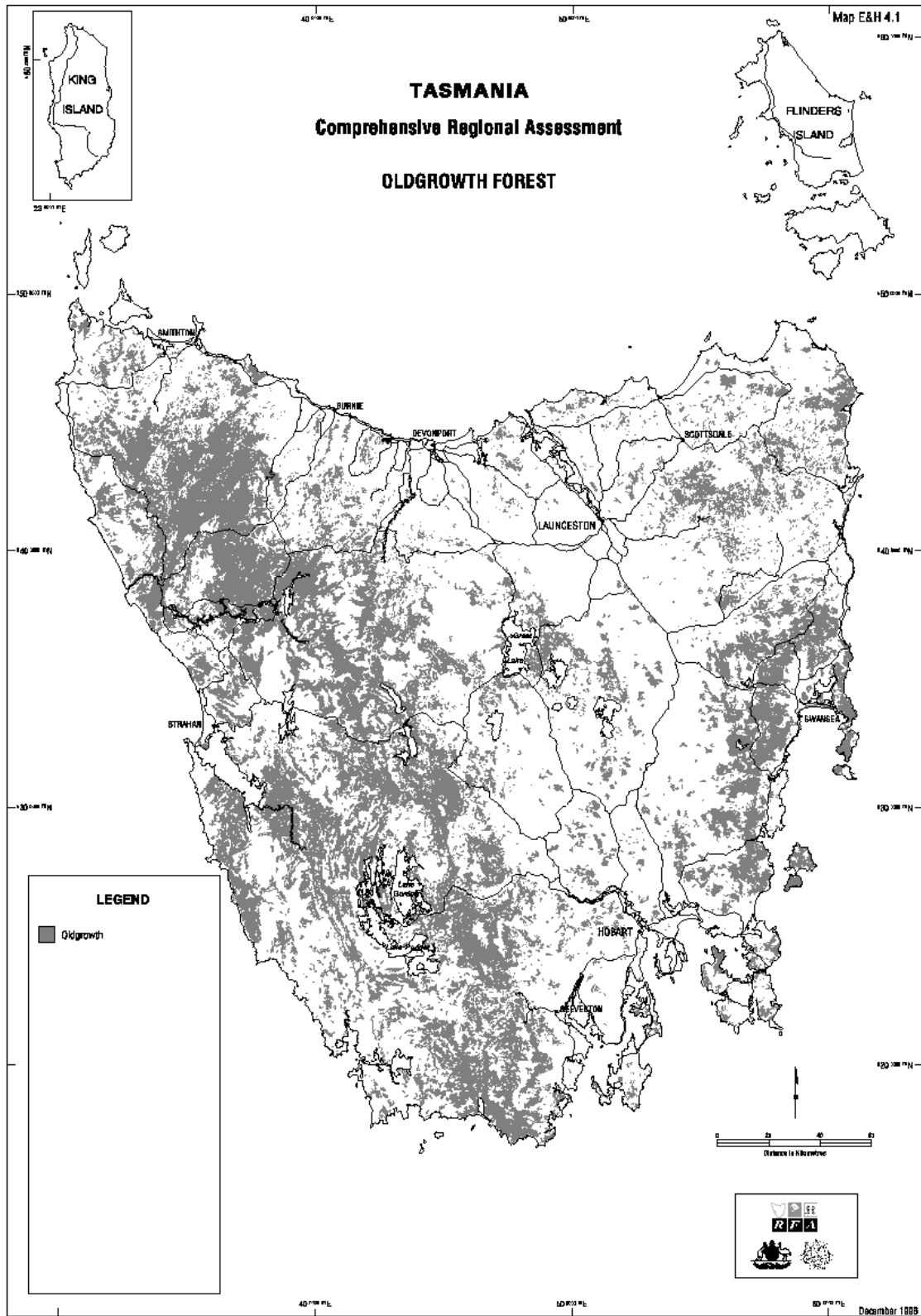
The mapping of old-growth forest presented in Volume I was of a preliminary nature. The datasets have been further validated and refined and this has resulted in some changes to the mapping including:

- correction of coding errors in the senescence, PI and timber harvesting history datasets;
- minor correction of the GIS program to be consistent with the old-growth ruleset;
- a revised rule to exclude polygons on private property with a ‘g’ senescence code for certain dry forest communities;
- more detailed PI and senescence mapping for large polygons containing dry forest communities on private land to better differentiate old-growth components;
- changes to take account of the revised forest community mapping.

4.2 *The extent of old-growth forest*

Updated figures of the current extent of old-growth forest for each forest community are given in Table 4.1, which replaces Tables 4.1 to 4.5 in Volume I (pp. 177-9).

Map E&H 4.1 shows the extent of old growth.



Plotted copies of the revised maps of the current extent of old-growth forest communities will be available for inspection through the Public Land Use Commission. New 1:250 000 maps are being printed and will be distributed to replace the preliminary version 1 maps.

Table 4.1 Old-growth forest

Forest community	Total forest area (ha)	Total old-growth area (ha)	Old-growth as a proportion of total area (%)
Coastal <i>Eucalyptus amygdalina</i>	190 210	40 080	21
<i>E. amygdalina</i> on dolerite	178 300	30 490	17
<i>E. amygdalina</i> inland	25 800	2 860	11
<i>E. amygdalina</i> on sandstone	30 110	6 600	22
<i>E. viminalis</i> – <i>E. ovata</i> – <i>E. amygdalina</i> – <i>E. obliqua</i> damp sclerophyll	40 630	2 500	6
Grassy <i>E. globulus</i>	14 450	4 910	34
<i>E. pulchella</i> – <i>E. globulus</i> – <i>E. viminalis</i> grassy/shrubby forest	151 310	63 840	42
<i>E. viminalis</i> grassy	112 490	8 490	8
<i>E. viminalis</i> ± <i>E. globulus</i> coastal	1 220	870	71
<i>E. tenuiramis</i> on granite	3 020	2 900	96
<i>E. tenuiramis</i> on dolerite	8 430	5 490	65
Inland <i>E. tenuiramis</i>	55 010	7 970	14
<i>E. sieberi</i> on granite	17 660	960	5
<i>E. sieberi</i> on other substrates	46 000	1 660	4
<i>E. obliqua</i> dry	164 140	46 960	29
<i>E. nitida</i> dry	159 850	107 370	67
<i>E. delegatensis</i> dry	289 530	79 820	28
<i>E. pauciflora</i> on dolerite	18 810	1 870	10
<i>E. pauciflora</i> on sediments	16 200	4 300	27
Shrubby <i>E. ovata</i>	7 210	470	7
<i>E. rodwayi</i>	8 670	730	8
<i>E. risdonii</i>	370	10	2
<i>E. morrisbyi</i>	20	0	0
<i>E. coccifera</i>	54 540	32 630	60
<i>E. subcrenulata</i>	10 240	7 420	73
<i>E. obliqua</i> wet	425 700	83 490	20
<i>E. regnans</i>	76 050	13 290	17
<i>E. nitida</i> wet	74 410	49 600	67
<i>E. delegatensis</i> wet	285 720	104 420	37
<i>E. brookeriana</i>	4 560	690	15
<i>E. viminalis</i> wet	4 180	140	3
<i>Allocasuarina verticillata</i>	1 430	970	68
<i>Notelaea ligustrina</i> and/or <i>Pomaderris apetala</i>	290	270	93
<i>Callitris rhomboidea</i>	790	600	76
<i>Banksia serrata</i> woodlands	160	160	100
Pencil pine – deciduous beech	190	170	86
Pencil pine	330	330	100
King Billy pine	18 090	17 300	96
King Billy pine – deciduous beech	790	370	47
Huon pine	8 600	7 570	88
Tall rainforest	192 010	159 650	83
Short rainforest	377 870	335 800	89
<i>Acacia melanoxylon</i> on flats	9 010	0	0
<i>Leptospermum lanigerum</i> – <i>Melaleuca squarrosa</i> swamp	18 950	9 960	53
<i>Melaleuca ericifolia</i> coastal swamp forest	600	310	52
Total	3 103 950	1 246 290	40

4.3 *Reservation analysis*

The reservation status of old-growth forest communities has been revised to reflect the revised mapping. Table 4.6 below replaces Tables 4.6 to 4.10 in Volume I (pp. 180-4).

JANIS separates old-growth forest into two classes. Where old-growth forest is rare or depleted (generally less than 10 per cent of the extant distribution) within a forest ecosystem, the JANIS criterion is for all viable examples to be protected through a range of mechanisms. For other forest ecosystems the JANIS criterion is for 60 per cent of the existing old growth component of each forest ecosystem to be protected, consistent with a flexible approach where appropriate. Levels of protection in the RFA may be varied to achieve a range of objectives.

An additional table (Table 4.11) provides a comparison of the current reservation of old-growth forest with the JANIS criteria. Included are estimates of the existing area on non-reserved public and private land of those forest communities that are reserved below the JANIS criteria. This table presents new information not included in Volume I.

The data indicates that of the 45 forest communities assessed, 14 currently exceed the criteria, 29 are below the criteria and two have no assessed old-growth component. Old growth comprises less than 10% of their extant distribution in eight communities-the JANIS criteria would require all of their unreserved area to be protected: *E. viminalis* - *E. ovata* - *E. amygdalina* - *E. obliqua* damp sclerophyll (1 800 hectares); *E. viminalis* grassy (7 160 hectares); *E. sieberi* on granite (780 hectares); *E. sieberi* on other substrates (1 350 hectares); shrubby *E. ovata* (360 hectares); *E. rodwayi* (610 hectares); *E. risdonii* (10 hectares); and *E. viminalis* wet (80 hectares). Inland *E. amygdalina* and *E. pauciflora* on dolerite are close to having less than 10% of their extant distribution as old growth. These old-growth communities require further consideration as to their conservation status.

The aggregate area of forest below the JANIS criteria for old-growth reservation is 146 760 hectares-128 140 hectares on public land and 18 620 hectares on private land.

Table 4.6 Old-growth forest reservation assessment

Forest community	Area of old growth reserved (ha)			Proportion of old growth reserved (%)		
	Dedicated	Informal	Total	Dedicated	Informal	Total
Coastal <i>Eucalyptus amygdalina</i>	10 540	2 070	12 610	26	5	31
<i>E. amygdalina</i> on dolerite	1 610	4 180	5 790	5	14	19
<i>E. amygdalina</i> inland	70	70	140	2	2	5
<i>E. amygdalina</i> on sandstone	290	410	700	4	6	11
<i>E. viminalis</i> – <i>E. ovata</i> – <i>E. amygdalina</i> – <i>E. obliqua</i> damp sclerophyll	350	330	670	14	13	27
Grassy <i>E. globulus</i>	2 620	100	2 720	53	2	55
<i>E. pulchella</i> – <i>E. globulus</i> – <i>E. viminalis</i> grassy/shrubby forest	5 220	3 920	9 140	8	6	14
<i>E. viminalis</i> grassy	410	120	530	5	1	6
<i>E. viminalis</i> ± <i>E. globulus</i> coastal	100	30	130	12	3	14
<i>E. tenuiramis</i> on granite	1 270	10	1 280	44	0	44
<i>E. tenuiramis</i> on dolerite	1 440	750	2 190	26	14	40
Inland <i>E. tenuiramis</i>	340	480	820	4	6	10
<i>E. sieberi</i> on granite	110	70	180	11	7	19
<i>E. sieberi</i> on other substrates	150	170	320	9	10	19
<i>E. obliqua</i> dry	7 680	11 430	19 110	16	24	41
<i>E. nitida</i> dry	64 020	21 440	85 460	60	20	80
<i>E. delegatensis</i> dry	31 020	9 070	40 100	39	11	50
<i>E. pauciflora</i> on dolerite	180	730	910	10	39	49
<i>E. pauciflora</i> on sediments	2 230	490	2 720	52	11	63
Shrubby <i>E. ovata</i>	20	90	110	4	19	24
<i>E. rodwayi</i>	10	110	120	1	15	16
<i>E. risdonii</i>	0	0	0	0	0	0
<i>E. morrisbyi</i>	n/a	n/a	n/a	n/a	n/a	n/a
<i>E. coccifera</i>	19 900	5 790	25 690	61	18	79
<i>E. subcrenulata</i>	5 920	580	6 500	80	8	88
<i>E. obliqua</i> wet	16 980	11 940	28 920	20	14	35
<i>E. regnans</i>	3 210	1 690	4 900	24	13	37
<i>E. nitida</i> wet	34 670	10 620	45 290	70	21	91
<i>E. delegatensis</i> wet	43 170	7 690	50 880	41	7	49
<i>E. brookeriana</i>	10	30	40	1	4	6
<i>E. viminalis</i> wet	50	10	60	35	7	42
<i>Allocasuarina verticillata</i>	400	40	440	41	5	46
<i>Notelaea ligustrina</i> and/or <i>Pom. apetala</i>	190	0	190	70	0	70
<i>Callitris rhomboidea</i>	200	30	230	33	5	38
<i>Banksia serrata</i> woodlands	120	0	120	75	0	75
Pencil pine – deciduous beech	170	0	170	100	0	100
Pencil pine	340	0	340	100	0	100
King Billy pine	10 070	5 220	15 290	58	30	88
King Billy pine – deciduous beech	170	170	340	46	46	92
Huon pine	6 080	570	6 650	80	8	88
Tall rainforest	42 930	36 340	79 280	27	23	50
Short rainforest	159 790	63 500	223 290	48	19	67
<i>Acacia melanoxylon</i> on flats	n/a	n/a	n/a	n/a	n/a	n/a
<i>Leptospermum lanigerum</i> – <i>Melaleuca squarrosa</i> swamp	7 330	280	7 620	74	3	76
<i>Melaleuca ericifolia</i> coastal swamp forest	0	30	30	0	10	10
Total	481 380	200 600	681 980	39	16	55

n/a = no mapped old growth in this community

Table 4.11 Reservation analysis

Forest community	% of old-growth reserved	JANIS criteria	Criteria met?	Area below the JANIS criteria (ha)	Area on public land outside existing reserves (ha)	Area on private land (ha)
Coastal <i>Eucalyptus amygdalina</i>		60	no	11 440	15 870	11 600
<i>E. amygdalina</i> on dolerite		60	no	12 500	15 540	9 150
<i>E. amygdalina</i> inland		60	no	1 570	110	2 600
<i>E. amygdalina</i> on sandstone		60	no	3 260	4 350	1 550
<i>E. viminalis</i> – <i>E. ovata</i> – <i>E. amygdalina</i> – <i>E. obliqua</i> damp		100	no	1 800	1 510	280
Grassy <i>E. globulus</i>		60	no	230	1 350	850
<i>E. pulchella</i> – <i>E. globulus</i> – <i>E. viminalis</i> grassy/shrubby forest		60	no	29 160	23 680	31 020
<i>E. viminalis</i> grassy		100	no	7 160	980	6 180
<i>E. viminalis</i> ± <i>E. globulus</i> coastal		60	no	390	0	740
<i>E. tenuiramis</i> on granite		60	no	460	1 450	170
<i>E. tenuiramis</i> on dolerite		60	no	1 100	3 150	150
Inland <i>E. tenuiramis</i>		60	no	3 960	970	6 180
<i>E. sieberi</i> on granite		100	no	780	680	100
<i>E. sieberi</i> on other substrates		100	no	1 350	970	380
<i>E. obliqua</i> dry		60	no	9 060	20 090	7 750
<i>E. nitida</i> dry		60	yes	0	18 270	3 630
<i>E. delegatensis</i> dry		60	no	7 790	28 890	10 830
<i>E. pauciflora</i> on dolerite		60	no	210	500	450
<i>E. pauciflora</i> on sediments		60	yes	0	750	830
Shrubby <i>E. ovata</i>		100	no	360	60	300
<i>E. rodwayi</i>		100	no	610	60	550
<i>E. risdonii</i>		100	no	10	0	10
<i>E. morrisbyi</i>		-	n/a	n/a	n/a	n/a
<i>E. coccifera</i>		60	yes	0	4 150	2 800
<i>E. subcrenulata</i>		60	yes	0	920	0
<i>E. obliqua</i> wet		60	no	21 170	51 070	3 500
<i>E. regnans</i>		60	no	3 080	8 020	370
<i>E. nitida</i> wet		60	yes	0	4 220	90
<i>E. delegatensis</i> wet		60	no	11 800	48 780	4 780
<i>E. brookeriana</i>		60	no	380	80	440
<i>E. viminalis</i> wet		100	no	80	50	30
<i>Allocasuarina verticillata</i>		60	no	130	80	510
<i>N. ligustrina</i> and/or <i>P. apetala</i>		60	yes	0	50	30
<i>Callitris rhomboidea</i>		60	no	130	130	240
<i>Banksia serrata</i> woodlands		60	yes	0	0	40
Pencil pine – deciduous beech		60	yes	0	0	0
Pencil pine		60	yes	0	0	0
King Billy pine		60	yes	0	2 010	0
King Billy pine – deciduous beech		60	yes	0	30	0
Huon pine		60	yes	0	920	0
Tall rainforest		60	no	16 510	75 000	5 360
Short rainforest		60	yes	0	107 190	5 310
<i>Acacia melanoxylon</i> on flats		60	n/a	n/a	n/a	n/a
<i>Leptospermum lanigerum</i> – <i>Melaleuca squarrosa</i> swamp		60	yes	0	2 090	250
<i>Melaleuca ericifolia</i> coastal swamp forest		60	no	280	160	110
Total				146 760		

5. Summary of CAR reserve analysis for old growth and biodiversity

The protection of additional areas of old-growth forest also contributes to the protection of forest ecosystems as outlined in section 3.4. Table 5.1 summarises the estimate of area below the JANIS reservation criteria for each community, combining old-growth and forest ecosystem areas. Each total is further subdivided into public land and private land based on the NFPS policy that the CAR reserve system should, in the first instance, be selected from public land.

When old growth and forest ecosystems are integrated the aggregate area of forest below the JANIS reservation criteria is 259 000 hectares of forest. This comprises 128 000 hectares of old growth plus 48 000 hectares of additional forest on public land (total public land 176 000 ha) and 19 000 hectares of old growth and 64 000 hectares of additional forest on private land (total private land 83 000 hectares).

Table 5.1 Summary of biodiversity and old growth

Forest community	Old growth area below JANIS criteria			Additional forest ecosystem area	
	Total old growth (ha)	public land (ha)	private land (ha)	Total additional forest ecosystem (ha)	public land (ha)
Coastal <i>Eucalyptus amygdalina</i>	11 440	11 440	0	9 720	9 720
<i>E. amygdalina</i> on dolerite	12 500	12 500	0	11 070	11 070
<i>E. amygdalina</i> inland	1 570	110	1 460	12 510	1 700
<i>E. amygdalina</i> on sandstone	3 260	3 260	0	13 000	7 410
<i>E. viminalis</i> – <i>E. ovata</i> – <i>E. amygdalina</i> – <i>E. obliqua</i> damp	1 800	1 510	280	5 050	5 050
Grassy <i>E. globulus</i>	230	230	0	0	
<i>E. pulchella</i> – <i>E. globulus</i> – <i>E. viminalis</i> grassy/shrubby forest	29 160	23 680	5 480	0	
<i>E. viminalis</i> grassy	7 160	980	6 180	27 820	1 770
<i>E. viminalis</i> ± <i>E. globulus</i> coastal	390	0	390	60	20
<i>E. tenuiramis</i> on granite	460	460	0	0	
<i>E. tenuiramis</i> on dolerite	1 100	1 100	0	0	
Inland <i>E. tenuiramis</i>	3 960	970	2 990	11 350	1 040
<i>E. sieberi</i> on granite	780	680	100	0	
<i>E. sieberi</i> on other substrates	1 350	970	380	230	230
<i>E. obliqua</i> dry	9 060	9 060	0	0	
<i>E. nitida</i> dry	0	0	0	0	
<i>E. delegatensis</i> dry	7 790	7 790	0	0	
<i>E. pauciflora</i> (on dolerite)	210	210	0	1 610	1 610
<i>E. pauciflora</i> (on sediments)	0	0	0	800	800
Furneaux <i>E. nitida</i>	not assessed	not assessed	not assessed	540	540
Furneaux <i>E. viminalis</i>	not assessed	not assessed	not assessed	140	120
Shrubby <i>E. ovata</i>	360	60	300	6 580	300
<i>E. rodwayi</i>	610	60	550	900	290
<i>E. risdonii</i>	10	0	10	50	
<i>E. morrisbyi</i>	0	0	0	20	

Table 5.1 (cont'd) Summary of biodiversity and old growth

Forest community	Old growth area below JANIS criteria			Additional biodiversity area b	
	Total (ha)	public land (ha)	private land (ha)	Total (ha)	public land (ha)
<i>E. coccifera</i>	0	0	0	0	
<i>E. subcrenulata</i>	0	0	0	0	
<i>E. obliqua</i> wet	21 170	21 170	0	0	
<i>E. regnans</i>	3 080	3 080	0	0	
<i>E. nitida</i> wet	0	0	0	0	
<i>E. delegatensis</i> wet	11 800	11 800	0	0	
<i>E. brookeriana</i>	380	80	300	2 090	2 090
K. I. <i>E. glob.</i> – <i>E. brook.</i> – <i>E. vim.</i>	not assessed	not assessed	not assessed	2 300	54
<i>E. viminalis</i> wet	80	50	30	3 780	95
<i>Allocasuarina verticillata</i>	130	80	50	0	
<i>N. ligustrina</i> and/or <i>P. apetala</i>	0	0	0	100	6
<i>Callitris rhomboidea</i>	130	130	0	70	7
<i>Banksia serrata</i> woodlands	0	0	0	0	
<i>Acacia dealbata</i>	not assessed	not assessed	not assessed	0	
Pencil pine – deciduous beech	0	0	0	0	
Pencil pine	0	0	0	0	
King Billy pine	0	0	0	0	
King Billy pine – deciduous beech	0	0	0	0	
Huon pine	0	0	0	0	
Tall rainforest	16 510	16 510	0	0	
Short rainforest	0	0	0	0	
<i>Acacia melanoxylon</i> on flats	0	0	0	1 450	1 450
<i>Acacia melanoxylon</i> on rises	not assessed	not assessed	not assessed	1 740	1 740
<i>Leptospermum lanigerum</i> – <i>Melaleuca squarrosa</i> swamp	0	0	0	0	
<i>Melaleuca ericifolia</i> coastal swamp forest	280	170	110	320	1
Total	146 760	128 140	18 620	112 280	47 56

6. Wilderness

6.1 *High-quality wilderness areas*

A map of wilderness quality was prepared for the Environment and Heritage Report Volume 1. The report did not define high-quality wilderness areas or analyse the reservation status of wilderness. Boundaries of high-quality wilderness areas have now been drafted based on the JANIS criteria.

The JANIS criteria for determining high quality wilderness areas are as follows:

(1) Determining potential wilderness areas:

- Potential areas will have a minimum NWI rating of 12. In addition, minimum thresholds for each of the wilderness quality indicators will be set within the regional context. These thresholds will take into account the importance of the indicators, and in particular the biophysical naturalness component as a primary indicator.
- The guideline for size which is considered generally appropriate for areas encompassing forested wilderness is 8,000 ha. However, thresholds of less than 8,000 ha may apply to areas contiguous with the sea or which adjoin wilderness areas in adjacent regions. Higher thresholds may apply within a region where wilderness is extensive.
- The presence in potential areas of “nodal” areas with higher wilderness quality may provide an indication of their significance and may guide the future management of identified wilderness areas.
- Other factors which are not considered in determining the NWI rating may need to be considered, in determining wilderness quality. These factors may include the impacts of exotic plants and feral animals on biophysical naturalness.

(2) Determining wilderness boundaries

- potential areas identified using the NWI database will be considered in a regional context to ensure their viability as wilderness, including considerations of shape.
- both ecological and management features such as topography, water catchment boundaries, roads and other transport routes, may be useful when delineating boundaries.

The rules used in delineating high-quality wilderness areas and their boundaries are in Appendix A. Specifically, they relate to the JANIS criteria in the following ways:

- NWI 12 has been used as the threshold of high wilderness quality.
- No minimum thresholds have been set for any of the wilderness factors (remoteness from access, remoteness from settlement, aesthetic naturalness and biophysical naturalness). An examination of the impact of applying the thresholds for these factors in East Gippsland showed little significant change in the area delineated.
- An 8 000 hectare minimum area has been applied, except where the area abuts a significant length of coastline, where no minimum figure has been defined. Only one significant area of less than 8 000 hectares (7 470 hectares) was identified.
- nodal areas of higher wilderness quality have not been specifically considered but all identified areas greater than the minimum size have a core area containing wilderness quality of 14 or greater.
- ecological and management features were used in delineating boundaries.

6.2 Identified wilderness areas

Sixteen high-quality wilderness areas have been identified. The areas are shown on Map E&H 5.2. Larger scale maps will be available for inspection at the Public Land Use Commission. Table 4.1 lists the areas, their current tenure and their reservation status.

6.3 Reservation analysis

A JANIS criterion for wilderness reservation is:

‘Ninety percent, or more if practicable, of the area of high quality wilderness that meet minimum area requirements should be protected in reserves.’

At present, 69.3 per cent of high quality wilderness areas is within dedicated reserves and a further 16.4 per cent is within informal reserves. The area below the 90% protection criteria is 83 570 hectares.

Table 6.1 High quality wilderness areas

Name	dedicated reserve	informal reserve	other public land	private land	total
South West	968 520	154 790	65 070	80	1 188 460
Cradle-Central Plateau	311 210	27 550	34 930	2 460	376 150
Norfolk Range	1 140	79 280	11 820	40	92 280
Meredith Range	1 270	13 890	48 290	0	63 450
Donaldson River	0	5 050	48 290	0	53 340
Savage River	0	32 170	19 420	0	51 590
Henty River	270	1 450	22 150	80	23 950
Mt Field	11 180	2 420	1 800	0	15 400
Sumac	9 240	1 590	3 260	0	14 090
Mt Heemskirk	0	30	10 840	0	10 870
Ben Lomond	9 810	10	470	10	10 300
Douglas Apsley	10 000	0	60	0	10 060
Little Henty	320	420	8 310	10	9 060
Freycinet	8 460	0	0	0	8 460
Maria Island	8 450	0	0	0	8 450
Mt William	7 160	0	0	500	7 660
Total	1 347 030	318 650	274 710	3 180	1 943 570
Percentage	69.3	16.4	14.1	«3520/1 950860 »0.2	100

figures are in hectares

Appendix A Guidelines for the delineation of high-quality wilderness areas for the Tasmanian CRA

1. Boundaries to be delineated using 1:100 000 topographic maps and National Wilderness Inventory wilderness quality maps.
2. Exclude areas predominantly of wilderness quality < 12 , although some excluded parts may include grid cells with wilderness quality ≥ 12 .
3. Exclude areas of wilderness quality ≥ 12 with a total patch size of less than 8 000 hectares
 - patches of high quality wilderness less than 8 000 hectares may be considered if a significant part of the area is contiguous with the coastline (including islands).
4. In defining rational boundaries
 - use topographic features as far as possible, for example rivers, creeks, ridges, catchment boundaries
 - where topographic features are indistinct use roads or tenure boundaries
 - exclude major embayments (for example Port Davey , Macquarie Harbour) and HEC impoundments
 - optimise integrity-aim for low area:perimeter ratio, exclude narrow linear patches < 2 kilometres across, and exclude fragmented patches.
5. Where a road is the only disturbance feature at the edge of a wilderness area and the road is appropriate to use as a boundary, then the boundary should be set back from the centreline of the road:
 - 50 metres for major highways;
 - 25 metres for major roads;
 - 15 metres for low grade roads or power lines.
6. Areas with a wilderness < 12 may be included where
 - this is necessary to achieve rational boundaries
 - a management decision has been made to close roads and rehabilitate them and/or allow areas to regenerate.
7. Bass Strait Islands are excluded.