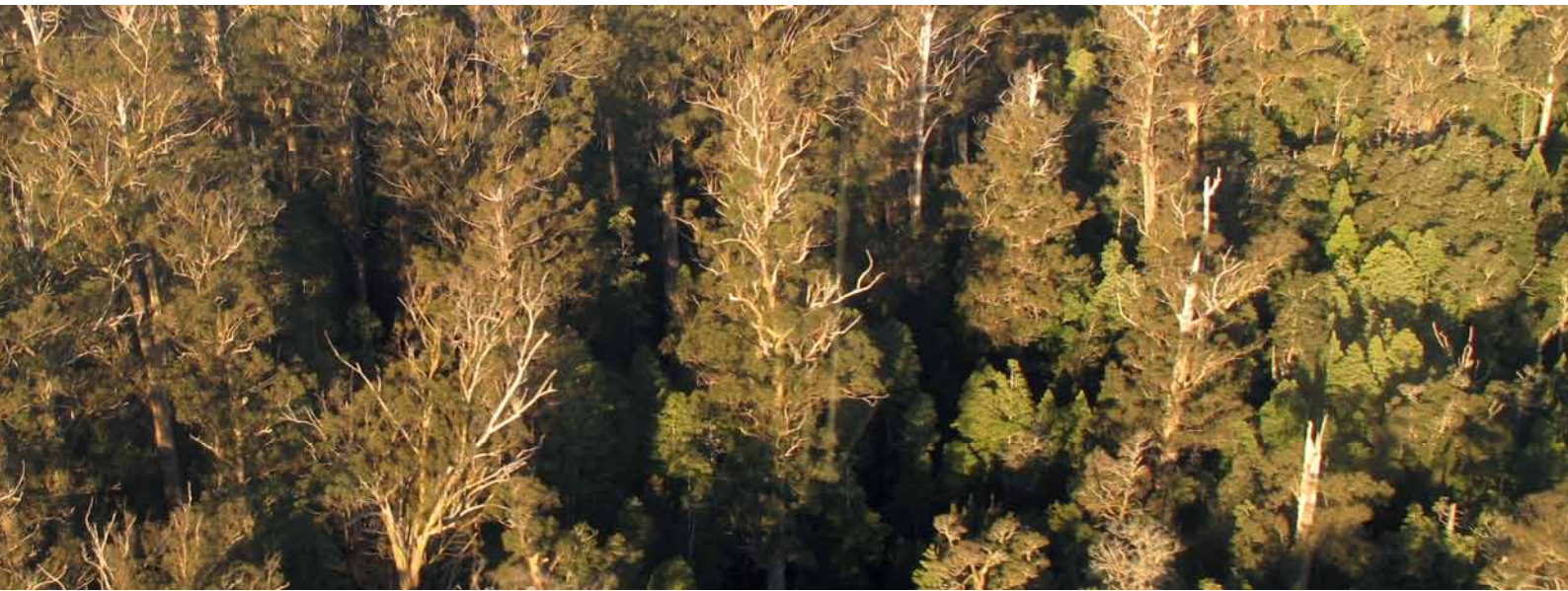


Tasmania's Native Forests: Places for Protection

A backgrounder on the ENGO identified high conservation value reserve areas

June 2011



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1. ENGO Identified High Conservation Value Forest Reserve Areas – In a Nutshell

ENGO identified high conservation value forest reserve areas encapsulate the areas of high conservation value forest that are considered most important to local, state and national conservation organisations for immediate protection.

ENGO identified – they are the result of years of work by many Environment Non-Government Organisations (ENGOs) around the state and country, with input from a wide range of experts.

High conservation value forest – are forests with the presence of one or more important conservation values that are best maintained or enhanced through protection from logging (and or other human disturbances).

Important conservation values considered in developing these reserve areas included:

- Large intact natural forest areas;
- Forest areas displaying ecological maturity;
- Forest areas of social, cultural and spiritual importance to local, national and/or international communities;
- Forest ecosystems and habitat with important biodiversity values, including rare, depleted and under-reserved forest communities and species;
- Forest areas that contribute to good reserve design (eg. Buffering and ecological connectivity); and,
- Forests with important ecosystem services functions (eg. Carbon storage, water catchments).

While the term high conservation value has been given currency by the Forest Stewardship Council in its forest certification it is now widely used around the world to denote conservation management systems that are based on important and/or critical social and environmental values.

High conservation value forests can also include areas of forest where conservation values have been degraded in the past but are likely to be restored through appropriate management (including future absence of logging).

Reserve Areas – The ENGO's consider important conservation values are present across the Tasmanian native forest estate. This is a key reason the ENGO's advocacy for an end to commodity logging in native forests. However it is also recognized that a number of stages are required to end commodity production in native forests including the immediate protection of the most important areas of forest with high conservation values first, followed by a transition of commodity timber production out of the remaining native forests to an appropriate timeline.

It is noted that the increase in the availability of sustainable and socially acceptable plantations will assist the rapid transition out of native forest commodity wood and pulp production and the protection of Tasmania's native forests.

2. Forest Protection: a key part of the Tasmanian Forest Agreement

The opportunity exists for the Commonwealth and Tasmanian Governments to implement an agreement between environmental groups, unions and the logging industry over forest management in Tasmania. The Statement of Principles aimed to resolve the conflict over forests in Tasmania, protect native forests, and develop a strong sustainable timber industry.

The Statement of Principles states that:

The Commonwealth and State Governments need to act to “Immediately protect, maintain and enhance High Conservation Value Forests identified by ENGO’s on public land”

2.1. Government action needed to protect HCV Forest Reserve Areas.

It is vital that both Commonwealth and State Governments deliver legislative protection of identified forest reserve proposal areas on public land.

The following actions need to be delivered by the Commonwealth and Tasmanian Governments:

- a) The verified map of the ENGO identified high conservation value Forest Reserve Proposal area shown in Map A, representing about 572,000 hectares of native forests on public land must be legislatively protected as secure conservation reserves. These areas of public forests must be moved from multiple use forests (and some other tenures) into secure legislated protected areas;
- b) Governments must secure the highest possible IUCN category I – IV of conservation tenure for the new protected areas;
- c) The protected areas must be managed by the Tasmanian Parks & Wildlife service;
- d) The Commonwealth must immediately nominate all areas of World heritage value as extensions for inclusion to the existing Tasmanian Wilderness World Heritage Area;
- e) Ongoing funds must be secured for ensuring the permanence of the carbon stores and biodiversity in the new IUCN category reserve areas, for parks management and infrastructure;

2.2. Legislation required in the Intergovernmental Agreement for Tasmania’s Forests 2011

The following legislation is required in the Intergovernmental agreement for Tasmania’s forests.

A legislative package to secure the outcomes of the Statement of Principles agreement will need to be passed by the Tasmanian Parliament. This package will need to include the following bundled elements in order to secure the durability of the agreement:

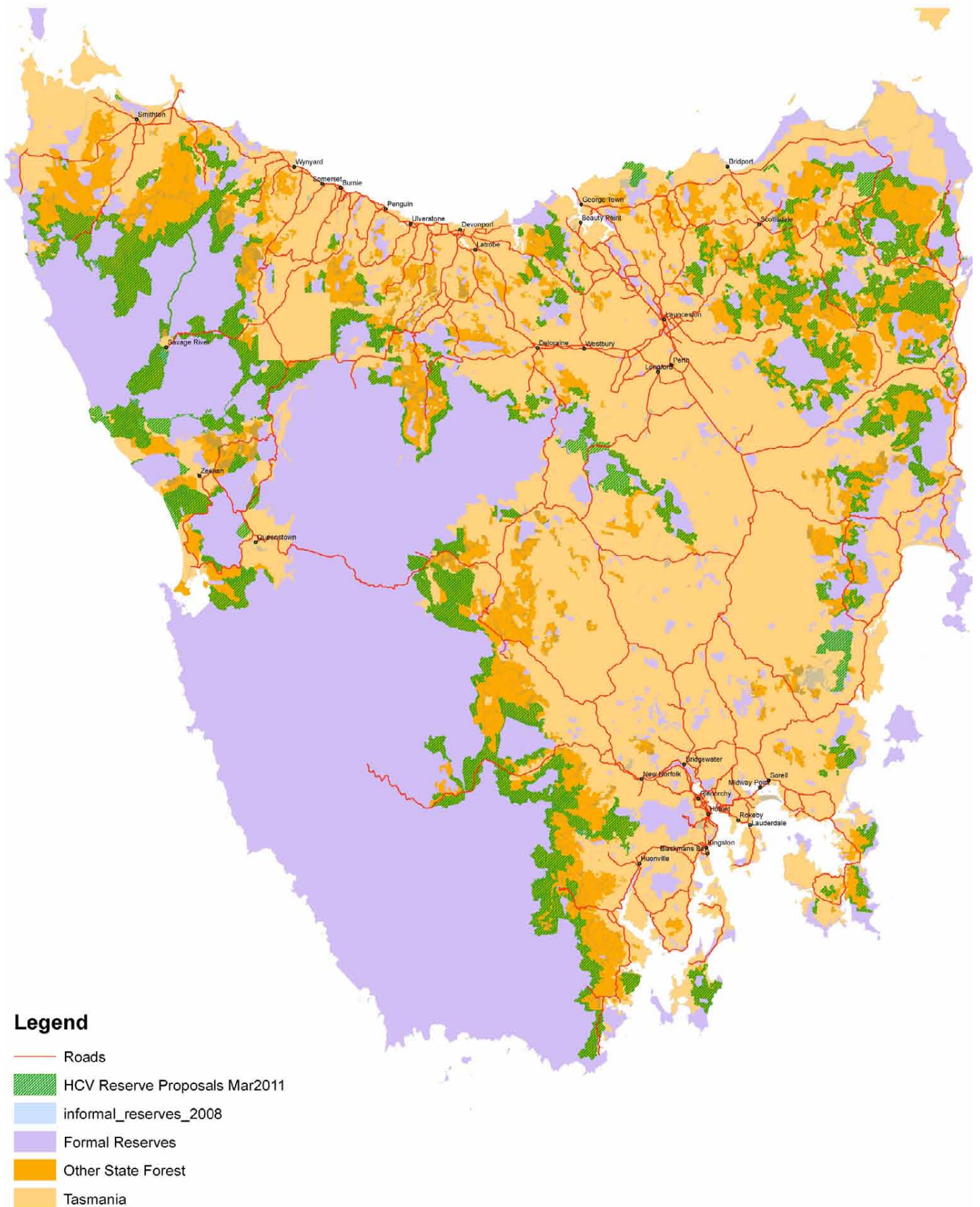
- a) the reduction of the currently legislated high quality sawlog to the agreed volume;
- b) regionally secure wood resource allocations including consideration of wood dependent communities;
- c) the ENGO identified high conservation value reserve areas for gazette as secure reserves;
- d) the necessary restructure of forest management in Tasmania to reflect the changed circumstances;
- e) the necessary instruments to give effect to a transition, with exceptions, from native forest to plantations;
- f) the necessary instruments to give effect to a regional development plan for Tasmania and associated transitional timber industry investments;

Additionally, legislation must be moved through the Federal Parliament, including:

- g) legislation (and or regulation) to only permit plantation forest processing and plantation harvesting residues to be used as biomass for RECs in Tasmania.

Noting that the Tasmanian legislation outlined in 1.1, 1.2 and 1.3 is required to demonstrate permanence, additionality and avoiding leakage, the 3 criteria that need to be met to be recognized as a credible climate mitigation measure.

2.3. Map of ENGO identified High Conservation Value Forest Reserve Area



3. International and National Context for the protection of the ENGO identified High Conservation Value Forest Reserve area.

The conservation significance of Tasmania's forest heritage needs to be viewed in a national and international context and in the context of climate change.

In southern Australia, we have cleared more than half our native forests and more than 85% of our woodlands since European settlement. Cool, wet, temperate forests cover less than 2% of Australia. Most of these forests have been intensively logged. Their habitat value for hollow dependent species has been destroyed, pushing many species closer to extinction. Old growth forests are now rare and old growth, wet forests on fertile soils even rarer. Many of Australia's forest dependent species are still in decline and none that were on the rare, threatened and endangered species lists at the time the Regional Forest Agreements were signed are now safe from extinction. The long term viability of many species continues to decline. Current reserve inadequacies and intensive logging practices combine to build an extinction debt for many species. If many species are to have any possibility of a secure future, prime habitat must be restored and securely protected.

We have known for decades that the majestic tall wet forests of Tasmania are globally significant. What was unknown at the time the Tasmanian Regional Forest Agreement (RFA) was signed is that they contain some of the most carbon dense forests on Earth (PNAS; Green Carbon). Nor did we have any idea how important it would become to re-think reserve systems and overall approaches to biodiversity conservation to maximize the chances of species adapting to and surviving, the impacts of climate change (See 'The Role of Connectivity in Australian Conservation', Soule, Mackey et al, Pacific Conservation Biology, Vol 10 2004 and "Connectivity Conservation and the Great Eastern Ranges Corridor", Mackey, Watson et al ANU Enterprises, 2010, Dunlop and Brown 2008). Nor did we know that protecting and restoring our native forests would become a critical part of the solution to climate change (See Report of the Climate Commission, "The Critical Decade" 2011 pp 58-60).

At this moment we have an unprecedented opportunity to achieve three key conservation objectives:

- We can fix some of the conservation failures and inadequacies inherent in the 1997 Regional Forest Agreement.
- We can increase the overall ecological health of the forest reserve system and maximize its resilience to the new threat of climate change.
- And we can vastly improve the amount of carbon stored in large areas of forest - in the process helping to significantly reduce GHG emissions and making a significant contribution to the national effort to mitigate climate change.

The combined environmental benefits to Australia from strengthening the Tasmanian forest reserve system far outweigh the costs of change.

3.1. Conservation Inadequacies of the Tasmanian RFA

The inadequacies of the RFA process in general and the Tasmanian Regional Forest Agreement in particular have been well documented by many in the science and broader community. (See “Submission to The Senate Inquiry into the Regional Forest Agreements Bill 1998”, January 1999 (Attached)).

Scientists and conservationists alike have always been rightly wary of approaches which suggest achieving percentage targets for reservation will alone secure biodiversity protection (such targets are more driven by political reality than good science). And there has been considerable scientific debate about what percentage of each ecosystem or biome should receive secure protection (Watson et al. 2008). For more than a decade leading conservation biologists have argued for a figure of at least 50% (Soule).

At the 10th Conference of Parties(COP) to the Convention on Biological Diversity (CBD) held in Nagoya in 2010, Australia agreed to a proposed increase in terrestrial reservation targets of 17% of each ecosystem after lengthy debate about whether the scientifically more robust 30-50% figure being urged by the science community could politically be adopted.

Today no robust approach to conservation would fail to consider how to protect and restore the ecological processes that underpin all life in Australia and to incorporate an approach now known as ‘Connectivity Conservation’ into reserve principles and design.

It is now well recognised that the conservation of biodiversity and our natural heritage demands a landscape-wide approach that recognises the importance of ecological connectivity. "Connectivity" is now a foundational concept, and has been defined in terms of a set of ecological processes that demand large scale connectivity for ecosystem health and functionality. (See ‘The Role of Connectivity in Australian Conservation’, Soule, Mackey et al, Pacific Conservation Biology, Vol 10 2004).

The CBD COP agreed that this approach was fundamental to achieving the biodiversity protection and restoration targets set for 2020 when it agreed to:

“Strengthening protected area networks including through the use of connectivity measures such as the development of ecological networks and ecological corridors and the restoration of degraded habitats and landscapes in accordance with [decision IX/18](#) on protected areas and the programme of work on protected areas (goal 1.2, activity 1.2.3); and Restoring degraded ecosystems and ecosystem functions; “

The processes that sustain and regenerate ecological systems and all their components operate across a range of spatial and time scales. Many, if not most, work at space and time scales that far exceed those at which humans manage land and natural resources. Thus, many important ecological processes involve connections at scales until very recently not considered by conventional conservation planning and management (Mackey et al. 2007, McQuillan et al. 2009). None of the ecological processes which require large scale connectivity were considered during the Tasmanian RFA process.

3.2. Ecological Health and Resilience in the Face of Climate Change

The CBD COP also gave deep consideration to the potential impacts on biodiversity of climate change and agreed to reduce the impacts of climate change on biodiversity by among other things:

“Implementing ecosystem management activities, including the protection of natural forests, natural grasslands and peatlands, the sustainable management of forests considering the use of native communities of forest species in reforestation activities, sustainable wetland management, restoration of degraded wetlands and natural grasslands, conservation of mangroves, salt marshes and seagrass beds, sustainable agricultural practices and soil management, amongst others, as a contribution towards achieving and consistent with, the objectives of the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification, the Ramsar Convention on Wetlands and the Convention on Biological Diversity;

In forest landscapes subject to harvesting, clearing and/or degradation, implement, as appropriate, improved land management, reforestation and forest restoration prioritizing the use of native communities of species, to improve biodiversity conservation and associated services while sequestering carbon and limiting the degradation and clearing of native primary and secondary forests; “

The first scientific study to explore the strategies necessary to help species survive the impacts of climate change is the Great Eastern Ranges Report (see above).

The report makes a strong scientific case for ensuring that current (non-climate) threats to species need to be reduced and to ensure large scale connections are maintained or restored across north/south gradients (and where possible east/west gradients).

It has never been more important to maximize the ecological health of natural ecosystems and reduce other threatening processes than in the face of climate change (Dunlop & Brown 2009). It will be critical to do so to give our forests the best chance of surviving the possible impacts of climate change (Thompson et al. 2009).

Approaches which consider how to help species survive the impacts of climate change also include the need to recognize the highly variable nature of ‘landscape productivity’ (the availability of food and habitat resources) in Australia. This analysis has greatly advanced our ability to understand the nature of year to year as well as seasonal variability across Australia and the need for core reserve areas to encompass consistently highly productive areas (Mackey et al. 2007). Many of these important areas are missing from the Tasmanian reserve system.

3.3. Strengthening the role of Forests in Mitigating Climate Change

Since the Stern report the world has recognised that clearing and degrading (logging) natural forests causes significant Greenhouse Gas Emissions.

Australia is playing a leading role in trying to encourage increased forest protection in our region as part of a global climate solution.

Tasmania has some of the most carbon dense forests on Earth (“Re-evaluation of forest biomass carbon stocks and lessons from the world’s most carbon dense forests” Keith et al, PNAS 2009).

Were Australia to elect to account for forest management under article 3.4 of the Kyoto Protocol for the next commitment period (2012-2017) reducing emissions through increased native forest protection (with commensurate reductions in logging) would allow Australia to count reductions in logging emissions towards its Kyoto target.

The recent report of the Climate Commission “The Critical Decade”, makes several pertinent observations: That it is better for the climate to protect and restore native forest carbon stocks (including secondary re-growth forests) than to plant new trees and that the single biggest avoided emission from the land and forest sector would come from ending logging in old growth forests. It also quite rightly points out that biodiversity confers resilience on forest carbon stocks and that on any given site a native forest will store more carbon than a plantation.

There is a clear environmental imperative to protect and restore native forest carbon stocks as part of Australia’s approach to tackling climate change. Securely protecting some of the world’s most carbon dense forests in the proposed additions to the Tasmanian reserve system would clearly make a significant and quick contribution to reducing Australia’s Greenhouse Gas emissions and provide a long term path to increasing their carbon stocks.

4. Conservation Benefits of the ENGO Reserve Areas

4.1. The Change in Forest Type Reservation of the ENGO Reserves

Forestry Tasmania has conducted some analysis of the effect of the ENGO reserve areas on protection of various forest types on State Forest.

Overall the ENGO reserve area encapsulates 36% of the production forest area (State Forest minus Forest Reserves and Informal Reserves) and 33% of the net production forest area (see footnote 2).

Forest Type Summary of ENGO Reserve Areas

Forest Type	Formal reserves * ¹	Informal Reserves	Other State Forest not for harvest ²	Production forest available for harvest	Other (Crown land)	Total
Plantation ³		50	60	2,100	40	2,250
Mature Eucalypt	640	72,270	39,610	91,300	8,315	212,135
Regrowth	530	26,930	23,655	49,500	3,080	103,695
Aged Regrowth	15	2,440	2,185	38,600		43,240
Myrtle Rainforest	940	44,380	17,650	27,100	2,010	92,080
Other & Non-forest	650	40,805	46,375	13,400	17,410	118,640
Total	2,775	186,875	129,535	222,000	30,855	572,040

Production forest available for logging by forest type

Forest Type	Total in State Forest	In ENGO Reserve Area	% in ENGO Reserve Area
Plantation ⁴	114,600	2,100	2%
Mature Eucalypt	186,800	91,300	49%
Regrowth	104,300	49,500	47%
Aged Regrowth	193,100	38,600	20%
Myrtle Rainforest	38,400	27,100	71%

¹ Two formal reserves were still included in area following boundary verification in March 2011 however it was the intention to remove all of these.

² Areas not reserved but not available for commercial logging due to Code restrictions, non viability and other restrictions.

³ Plantations inside the verified boundary are to be rehabilitated to native vegetation as part of a landscape restoration program. Depending on age and growth these could be restored immediately or grown to harvest age, harvested and then rehabilitated.

⁴ Ditto.

Other & Non-forest	39,700	13,400	34%
Total	676,900	222,000	33%

The above shows clearly the focus of the ENGO reserve areas on protecting those areas with a greater proportion of native forest with ecological maturity and less disturbance while leaving a greater proportion of the more disturbed forest for some logging during the transition period and for future special timber production.

4.2. Regrowth and Plantation

Regrowth native forests have a range of important conservation values that need protection. This has been recognized in the past by the inclusion of regrowth forests and forests that have been previously logged in reserves throughout Tasmania.

There are areas of both natural regrowth (mostly from wildfire) and silviculture regrowth (mostly clearfell, burn, sow) that have been specifically included in the reserve areas to deliver protection and restoration of a range of these values as well as for the purposes of reserve design integrity. In the case of silvicultural regrowth, while significant conservation values found in the pre-logged forest have been degraded upon logging, if removed from commercial rotations and placed in secure reserves many of these conservation values (eg hollow bearing trees, fire resistance, carbon stores) will recover over time.

In some cases, active rehabilitation, ecological thinning or another treatment may be useful to deliver the best conservation outcomes in areas of silvicultural regeneration.

Similarly, the small isolated areas of plantation inside the boundary of the reserve area will in the first instance be designated for logging upon maturity, and then subsequent restoration to native forest, (unless they are already considered unviable in which case restoration could occur earlier). This would be in the context of part of a landscape restoration program to improve landscape-scale reserve design and connectivity.

4.3. Tasmania Together Goals for Tasmania's Reserve Estate

The Tasmanian Government has developed a comprehensive set of goals for Tasmania with the Tasmanian community to guide government decision making. A number of these relate to conservation and a few are significantly advanced by the ENGO reserve areas.

Indicator 11.2.2. *'Area of RFA old-growth forest in protected reserves and covenants'* sets out to achieve protection of 1.2 million hectares of old growth forest by 2015. In 2010 the figure stood at around 1 million. This will require an additional 200,000 hectares of old growth to be protected.

It has been calculated that the ENGO reserve area would increase old growth reservation by around 80,000 ha.

Indicator - 11.4.1. *'Percentage of land protected either by legislation or by contract in conservation reserves, under covenant or heritage regimes'* sets out to have 48% of Tasmania's land protected by 2015 and 50% by 2020. In June 2010 DPIPW reported that it was 44.8%. The additional 382,390 ha of reserves created by the ENGO reserve areas (this figure excludes existing informal reserves in the ENGO

reserve area) would create an additional 5.5 % of the state as reserves bringing the total to over 50% and therefore enabling this target to be met.

4.4. An Indicative Desktop Analysis of High Conservation Values across the State Forest Estate

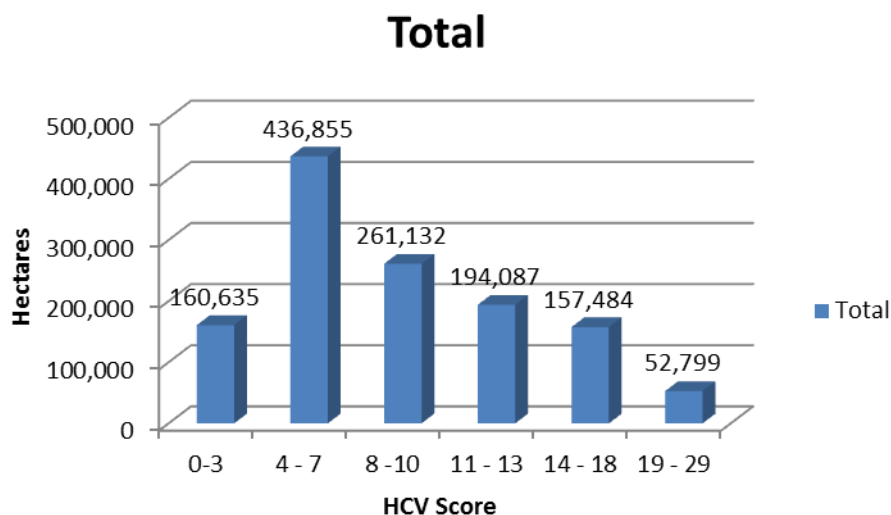
Background

The below mapping exercise was undertaken as an indicative desktop spatial analysis to give some guide of the relative depth of high conservation values in the ENGO reserve area and to make an assessment of the success or otherwise of the reserve area in encapsulating value rich areas from within the unprotected State Forest estate.

The exercise was conducted for State Forest minus Forest Reserves. This area of 1.27 million hectares is referred to as State Forest in the analysis below.

The process result was that all areas of the State Forest were assigned a high conservation value (HCV) score of between 0 and 29.

The total area of State Forest in each scored grouping is shown below (the lowest scoring areas correlated strongly with plantation areas and there was only 2,500 ha where none of the mapped values were present, ie had a score of 0).



4.5. Methodology used

Remoteness

Distance from roads and tracks is used as a surrogate to measure remoteness or limited history of past disturbance.

- More than 250m from any roads and tracks – 2 points
- More than 500m from any roads and tracks – 4 points

World Heritage value

The most recent report on assessed World Heritage values, was produced by Geoff Law in 2009, and was based on extensive accumulated research and scientific work from the past 3 decades. The map from this proposal was used as a measure of forested landscapes recognised as having World Heritage values

- WHA values – 2 points

Ecological maturity

An old growth layer was used as a measure of ecological mature forests. The limitations to this data set are that old growth elements in regrowth forest are excluded and mature eucalypt forest that does not qualify as old growth is also not included although these forest types would generally be considered of equal value. The layer utilised was the result of modification of RFA old growth maps with Tas veg and other sources to update it.

- Old Growth 2010 layer (with 50m buffer) – 4 points

Carbon

Based on the Tasmanian Forest Group Dataset, June 2007, produced by Forestry Tasmania and Private Forests Tasmania. The layers for tall eucalypt and rainforest were used to indicate carbon rich forests. Clearly this is a very coarse measure of carbon richness, but it is considered to provide some weighting to those areas of forest most likely to have highest carbon storage.

- Tall eucalypt and rainforest – 3 points

Reserve Buffer (CAPAD06)

- 1km buffer on all formal reserves – 2 points

National Estate (tas nat estate)

Reflects areas previously recognised as being of national significance.

- Tasmanian National Estate layer – 2 points

Ecological values

- Flora Bioregional distinctiveness (Centres of endemism for Flora species, vegetation community richness, and Primitive and Relictual flora) – 3 layers, 2 points each
- Threatened communities and 50 m buffer – 4 points. (Utilised Tasveg sourced spatial data layer, DPIPWE table of NCA listed communities and a 50m buffer).
- Fauna key species habitat ranges (FPA mapped habitat ranges for spotted quoll, devil, giant freshwater crayfish, grey goshawk, masked owl, new Holland mouse, 40 spotted pardalote, swift parrot, and threatened raptor nests from the State Government Natural Values Atlas with 1km buffer) – 1 point each

Discussion

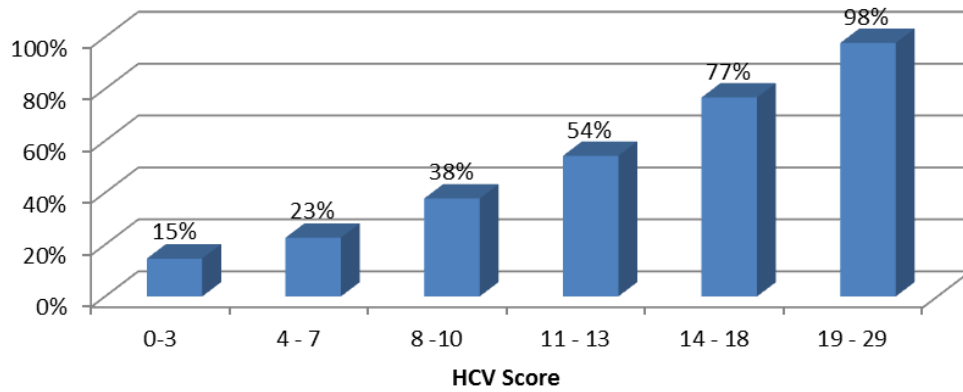
Firstly, due to the limitations of this exercise, it needs to be noted that there are a range of important conservation values that are not included. For example no geo heritage or cultural heritage values were included. There are also a range of ecological values that have not been covered such as many threatened species for which adequate information is not available. Addition of this data would have increased scores across the estate. Because of these limitations it is important to be careful in applying this analysis. Generally it should be considered that most areas could have higher scores (the presence of additional conservation values) than indicated here.

At a statewide level this exercise showed a significant correlation between the ENGO reserve area and the areas of highest scores. (see table below and maps in

Appendix)

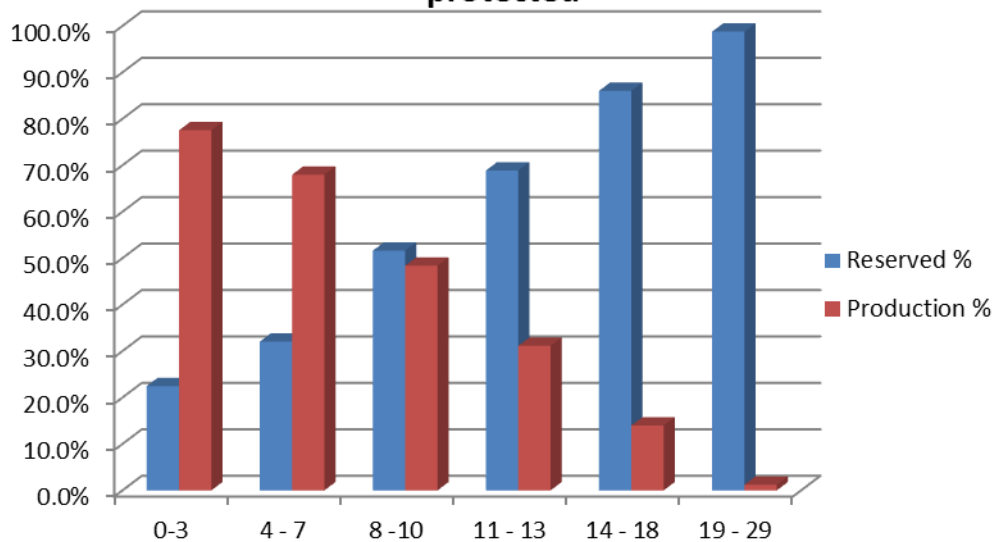
Overall the analysis showed that the ENGO reserve areas had the greatest protection benefit on the highest HCV scores.

% of HCV Scored Forest from Current Gross Production Forest Protected by ENGO Reserve Area



Overall the exercise gave a clear indication that the ENGO reserve area was successful in encapsulating those areas of State Forest with the highest scores, and vice versa, making those areas with the lowest conservation scores available for harvest during the transition period.

% of HCV Scored State Forest reserved and available for logging (production) after ENGO reserve areas protected



5. A Comprehensive, Adequate and Representative Forest Reserve Network in Tasmania: The ENGO proposed forest reserve system explained.

5.1. Background

Local, State, National and International Conservation organizations have been providing evidence to support the case for protection of the Tasmanian Environment particularly Tasmania's forests for nearly four decades.

There have been some very important successes notably following the Helsham enquiry at the end of the 1980's. Efforts by governments to resolve arguments as to native forest use and appropriate reservation outcomes have all been compromised by the perceived need to maintain wood flows from crown native forest for sawn timber and pulpwood products. At the same time particularly in Tasmania there has been a reluctance to adjust cutting volumes to reflect both the resource withdrawals that have occurred and the legacy of decades of unsustainable harvesting.

The response of forest managers has, (in the years before and following on from the signing of the Regional Forest Agreement and the removal of export woodchip controls) been to intensify forest management. This has involved the conversion of over 200,000 ha of native forest to plantations⁵ and the thinning and pruning of some of these plantations. Overall rotation lengths across the whole crown estate have dropped from an initial putative 80-year rotation to one that is probably closer to 40–50 years based on an analysis of available forestry Tasmania 3 year plans. A large expansion of cable logging onto steep slopes has been part of the intensification process and the use of compensatory mechanisms to fund otherwise uneconomic road building into areas of marginal resource value has occurred.

This intensification has in turn had serious consequences for a number of forest dependent species⁶. The response of policy makers to a landmark court case finding that the impact of forestry operations at Wielangta on the east coast of Tasmania threatened a number of species including the Tasmanian Wedge-Tailed Eagle and Swift Parrot was to amend legislation rather than forest practices.

This is the background to a historic opportunity to end decades of conflict over forest use in Tasmania⁷

5.2. Historical context

Following is a summary of the history of the development of robust assessments of conservation values in Australia in general and Tasmania in particular. The role of policy makers in the development of forest reservation together with the role of the environmental non-government organizations (ENGOS) and science community in developing proposals for conservation is examined.

⁵ Forest Practices Authority Annual reports

⁶ Bekessy, S.A., et al. Modelling human impacts on the Tasmanian wedge-tailed eagle (*Aquila audax fleayi*). *Biol. Conserv.* (2009), doi:10.1016/j.biocon.2009.05.010 published in *Biological Conservation*

⁷ Statement of Principles

The current forest reserve claims of ENGOs is placed into its appropriate historical context, the science underpinning the approach to the reserve design is explained. A tabulated analysis of the known mapped values present within the boundary of the verified negotiation layer is also presented in 5.1.

Building the case for forest reservation in Tasmania has been a 30 year process.

In the period leading up to the flooding of Lake Pedder reservation outcomes in Tasmania had been largely based around notions of scenic preservation and nascent wilderness arguments. Gustav Weindorfer being perhaps the most famous exponent of these causes in early days. Jessie Luckman a pioneering conservationist was probably the first to recognise the impact of the logging industry with her campaign to protect areas in the Florentine Valley. The introduction of woodchipping in the early 1970's also saw a number of forest protection campaigns notably in the area now known as the southern forests triggered by the building of a road into the Picton Valley and on the Great Western Tiers associated with clear-fall logging for woodchips in the Huntsman Valley.

Reservation outcomes of this era tended to be acts of charity by government in response to pressures from the community provided that resource interests were not offended. In Tasmania this has always been a long list dominated by mining, forestry, fisheries, electricity generation and agriculture.

The ad hoc nature of reservation outcomes of the period is well illustrated by the swap of tall Eucalypt forests adjacent to Hartz Mountain in the national park for the largely non commercial Precipitous Bluff an area with outstanding wilderness value.

The flooding of Lake Pedder provided the inspiration for Gough Whitlam to establish the Australian Heritage Commission and create a Register of National Estate Places. The decision to create a Register of National Estate places established two really important precedents.

- a) It recognised and legitimised the right of the community to identify places of significance.
- b) It established for the first time a framework for the assessment of natural and cultural (heritage) values.

The Australian Heritage Act was designed to reflect the international framework of the UNESCO World Heritage List. Election to this list requires that a set of criteria should be met. This set of criteria is holistic in its approach but requires a test of outstanding universal value to be applied, noting that these criteria have been through a number of revisions⁸. Over time a fully elaborated set of criteria for the register of the National Estate was developed for assessing heritage values⁹. These criteria have been through a number of iterations and currently have retreated to a minimalist set with a test of national significance being applied¹⁰

While nature conservation based ENGO's had provided a number of thematic reservation and geographically based proposals for forest reservation for example: Reserve Proposals for Tasmanian Rainforests¹¹ and a proposal, (first mooted in the

⁸ <http://whc.unesco.org/en/criteria>

⁹ Commonwealth of Australia, Australian Heritage Commission (1990); *Criteria for the Register of the National Estate 1990*; AHC, Canberra.

¹⁰ <http://www.environment.gov.au/heritage/about/national/criteria.html>

¹¹ Ziegeler, D.L 1983

1970's)¹² for a Douglas Apsley National Park¹³, the development of a Register of National Estate places provided a systematic approach for the identification of forest places and the values they contained. A large number and a number of large nominations of places were made. These nominations were all subject to review by an independent panel of experts and many studies of these places and or national estate values of Tasmanian Forests were funded by Australian Heritage Commission from the mid 1980's to the mid 1990's a number of examples are referenced below^{14,15,16}.

Thirteen years of export wood-chipping in Tasmania together with a wholly inadequate forest protected area system had prompted widespread concern for the fate of the forests and the need for an EIS to examine the impact of Tasmanian woodchips beyond 1988 was established¹⁷. This had to deal with impacts of logging on National Estate places.

Some parts or all of these places identified in the EIS¹⁵ have subsequently been protected but they remain at the heart of much of the current reservation claim by ENGOs.

Following on from release of the EIS¹⁵ and a widely held view that process was manifestly inadequate, a decision to log in the National Estate forests of the Quamby Bluff - Jackeys Marsh area led to Federal Government intervention and a commission of inquiry was established into the Lemonthyme and Southern Forests. This was an intensely political process that led to some large additions to the World Heritage Area. The vast majority of these additions were not forested. As part of the inquiry process a coalition of ENGOs had proposed a set of boundaries¹⁸. These boundaries were largely upheld in a report on the appropriate boundaries of a World Heritage Area in Western Tasmania prepared by the Department of Parks, Wildlife and Heritage for the Minister¹⁹. These claims have been the subject of a number of subsequent reports and correspondence between ENGOs, IUCN, the World Heritage Bureau and the Australian and Tasmanian Governments and continue to be upheld. The forests fringing the WHA, particularly in the southern forests, have been singled out as needing protection in a number of official correspondences.

Most importantly the Parks report¹⁵ established that the area now known as the Tarkine could qualify for World Heritage Listing.

The discourse about the nature of a forest reserve protected area network within the ENGO community began to evolve through engagement with the conservation science community during the 1980's. This evolving understanding saw the recognition that the maintenance of biological diversity was complementary to the protection of wilderness but not necessarily dependent on wilderness for its protection. Many of the places nominated to the register of the National Estate

¹² <http://www.parks.tas.gov.au/?base=6202>

¹³ The Wilderness Society 1984 Douglas Apsley National Park

¹⁴ Harries, D. N. (editor) (1992). *Forgotten Wilderness: North West Tasmania*, A report to the Australian Heritage Commission. Tasmanian Conservation Trust. Hobart.

¹⁵ Kirkpatrick, J. B. Mendel, L. and Gilfedder (1990). *Forest Values in the National Estate Tasmania*. A report to the Australian Heritage Commission.

¹⁶ Kirkpatrick, J.B. and Moscal, A (1986) *The Conservation Status of the Vegetation and Flora of the Great Western Tiers, Tasmania*. Report to the Australian Heritage Commission.

¹⁷ Tasmanian Export Study Group 1985

¹⁸ CEG 1988

¹⁹ DPWS 1990

reflected values of diversity, rarity, evolutionary significance and maintenance of ecosystem processes. These areas are represented in the current reserve proposal in the North West, the Central North, North East Highlands and East Coast (including areas like the Tasman Peninsula and Bruny Island).

The Rio conference in 1992 and the ratification of Convention on Biological Diversity²⁰ coincided with the development of a National Forest Policy Statement²¹ that in turn set the stage for Comprehensive Regional Assessments to lead to Regional Forest Agreements.

While some ENGOs in Tasmania participated in the RFA process the outcomes in Tasmania were bitterly contested because of the failure to deliver the protection of World Heritage quality forests, the old-growth wet forests and the Wilderness rainforests in the Tarkine. The identification of the need to secure protection on private land and a mechanism to secure this was largely overshadowed by green light that was given to the wholesale conversion of native forest to plantations.

The fundamental idea of a comprehensive, adequate and representative reserve system was laudable but unfortunately this wasn't delivered. In Tasmania a series of forest reserve proposals were developed by Government over a 10 year period, Recommended Areas for Protection. This approach was quite deliberately based on using 'representative' samples of areas of wet and dry Eucalypt forest and rainforest. These reserve proposals were a primary input into the final negotiated Regional Forest Agreement outcome for Tasmania.

The response by local, state and National ENGO organizations working on forest conservation was to develop an ADEQUATE reserve design for Tasmania's forest that was first published in 2004²². This has subsequently been reiterated using WildCountry Science principles (described and published by Mackey et al)²³. These boundaries, especially the reserve boundaries for the North-East Highlands, were subsequently tidied up and refined and represent the ENGO identified high conservation value Forest reserve area that are referred to in the statement of principles and will be protected as part of the 2011 Tasmanian Forest Agreement.

5.3. A comprehensive, adequate, representative forest reserve design for Tasmania.

A short summary of the failure to meet the aspirations of a CAR reserve system in Tasmania is presented below.

Comprehensiveness

Comprehensiveness - includes the full range of forest communities recognised by an agreed national scientific classification at appropriate hierarchical levels (NFPS 1992).

This principle requires that the reserve system samples the full range of forest communities across the landscape. However, the wide variation in forest

²⁰ <http://www.cbd.int/convention/text/>

²¹ NFPS 1990 <http://www.daff.gov.au/forestry/policies/statement>

²² The Wilderness Society, 2004. Protecting Forests Growing Jobs. Published Report

²³ Mackey et al, 2007 Applying landscape-ecological principles to regional conservation: the WildCountry Project in Australia, in Key Topics in Landscape Ecology, ed. J.Wu and R. Hobbs. Published by Cambridge University Press. © Cambridge University Press 2007.

ecosystems across the continent, and the large gaps between forested regions, makes effective consideration of comprehensiveness on a continental scale most difficult. Smaller and more manageable regional units (see Section 2.2) are therefore necessary as a basis for consideration of comprehensiveness.

Forest ecosystems, forest types and forest vegetation communities, together with their environmental descriptors, are commonly used as surrogates for biodiversity and as a basis for planning a comprehensive reserve system (see Glossary for specific definitions). However, these terms have different meanings across Australia. For the purposes of this document, they have been grouped under the term "forest ecosystems". These differences in definition mean that the surrogates used to assist with establishing the CAR reserve system will need to be determined on a regional basis.

The 'Forest Ecosystems' used in Tasmania were very coarsely mapped using sample data and some basic environmental domain rule sets. Many of the areas were mistyped this was subsequently demonstrated both in mapping undertaken for the Tasveg project funded by the Natural Heritage Trust and in individual studies²⁴ this has had significant consequences in terms of the overall levels of representativeness and particularly in terms of the protection of rare and threatened forest ecosystems on public and private land. Recent improvements in the characterisation and mapping of forest communities have not translated into more effective forest conservation because the original RFA forest community classification scheme has been 'locked in' by the reporting requirements of the RFA.

ENGO proposals for public land protection redress some of these weaknesses by taking a precautionary approach based on the use of sound reserve design principles. This approach leads to some over representation on the basis of representative criteria but helps meet problems associated with the poor nature of both of the surrogates used and the inadequacies in their mapping. It is important to recognise that the forest reserve system is and will remain manifestly deficient because certain forest ecosystems are largely confined to private land and in some cases forest communities have been heavily cleared such that the remaining extent is below target levels. This needs a continuation of and support by governments for a range of voluntary measures to protect forest on private land. So ultimately the reserve system is not representative and is only comprehensive in the strict sense that regionally based surrogates for capturing biodiversity were identified.

Adequacy

Adequacy - the maintenance of ecological viability and integrity of populations, species and communities (NFPS 1992).

Adequacy addresses the difficult question of extent: what is the level of reservation that will ensure viability and integrity of populations, species and communities. There are many approaches, ranging from best-guess estimates for

²⁴ Cadman 2001 <http://www.environment.gov.au/land/publications/pubs/meander.pdf>

poorly-defined ecosystems, to very accurate calculations for endangered or specific populations of animals and plants. Where data on the viability of populations are available, they should be incorporated in determining the adequacy of a reserve system.

No precise basis exists for determining criteria that provide for adequacy (Watson et al. 2008). However, the general rule is that the chances of long-term survival increase with increased proportions of populations or forest ecosystems reserved and appropriately managed. The degree of risk varies with different species (or suites of species) and with the degree of modification of the contiguous native forest beyond reserves. Most estimates show that the risk of loss is highest where only a small percentage of the distribution of the community or species is reserved and adjoining unreserved forest is cleared or significantly modified.

Replication across the range of geographic, environmental and biotic domains must also be considered when determining the adequacy of the reserve system. Replication is essentially "insurance" against the loss of natural values due to stochastic events (such as fire) which may dramatically alter successional processes and reduce or entirely remove key habitats. Implicit in the maintenance of biodiversity is the requirement to sustain ecological processes and functions and provide for the maintenance of natural patterns of speciation and extinction. This requires that the adequacy of a reserve system be considered in a landscape context (e.g., Saunders and Hobbs, 1991). The extent of inclusion of whole catchments, the degree of sympathetic management of adjacent lands, and the options for provision of corridors to provide linkages are important in the development of integrated nature conservation strategies. Factors operating within the surrounding landscape that are particularly relevant to determining the adequacy of the reserve system are threatening processes (e.g., land clearing and disease), and the conservation strategies adopted in forests outside those areas reserved specifically for conservation.²²

The difficulty for policy makers was that the approach embodied in the text above is fundamentally precautionary. The less adequate a reserve system is the more conservative and restrictive should be the nature of adjacent land use. In the context of the Tasmanian Regional Forest Agreement the requirement for adequacy was almost entirely ignored. The justification being that Tasmania needed to maintain its legislated wood supply commitments. However the outcome actually led to a very large increase in logging and land clearing. At the most basic level the CAR approach cannot deliver the landscape approach described above to encapsulate the idea of adequacy. The pluses and minuses of the CAR approach have been well summarised²¹. Some of the specific failures of the RFA in Tasmania to meet the objectives explicitly embodied in a CAR approach are iterated below.

The level of risk to biodiversity posed by climate change in the coming decades has become more apparent since the RFA. In the context of rapid anthropogenic climate change, adequacy can reasonably be interpreted to mean protection of all viable native forest, particularly when applying the precautionary principle given the level of risk and the inherent uncertainty.

Adequacy should also allow for intact landscapes at a sufficient scale for ecological processes to be maintained, e.g. natural hydrology, fire mosaics and gene flow (Mackey et al. 2007).

Representativeness

Representativeness - those sample areas of the forest that are selected for inclusion in reserves should reasonably reflect the biotic diversity of the communities (NFPS 1992).

This principle is designed to ensure that the diversity within each forest ecosystem is sampled within the reserve system. An example of the application of techniques that consider representativeness is presented by McKenzie and Belbin (1991).

Many species, particularly animals, have distributions that are not easily predicted by surrogates such as forest ecosystems, and information on species distributions and genetic variation should be used in reserve design. There are good distributional data for a large number of forest species, genotypes and communities, and reserve selection methods such as described in Kirkpatrick (1984), Margules *et al* (1988), Pressey and Nicholls (1989) and Margules & Pressey (2000) can be used to ensure that all species whose distributions are relatively well known are represented in the reserve system. The focus of these methods should be on those species that depend on reservation for protection.

Using species distributions alone will not guarantee the inclusion of all elements of biodiversity. However, using these distributions together with other measures of forest diversity can increase confidence that the reserve system does cover the full range of biodiversity. Other measures of forest diversity may include, for example, the occurrence of a vegetation type in relation to different soil types or the variation in structure and floristics present within a forest ecosystem. In practice a combination of approaches needs to be used to assess the representativeness of the reserve system. It is not necessary to ensure that every element of biodiversity that occurs within a forest ecosystem is reserved within that ecosystem. Many species may be well represented in one forest ecosystem in a region and infrequent in another, and it is not necessary to distort reserve boundaries to ensure that they are reserved in each ecosystem occurrence. The important thing is that known species and genotypes are adequately reserved with the aim of maximising their viability within a region, not that they are reserved in every forest ecosystem in which they have been recorded.

Representativeness should be approached in a practical way. Available or readily acquirable data, depending on its type, quality, and resolution, should be used in the design of a reserve system.²⁵

Reservation targets were not met for the representation of a range of forest ecosystems for the following reasons:

- a) World Heritage assessments ignored existing recommendations for further boundary adjustments;
- b) Good reserve design principles were not followed, specifically:
 - o Old-growth targets were met by using linear informal reserves
 - o Boundaries were set half way up mountains
 - o In most cases whole forested catchments were not protected.
 - o Linear and small informal reserves have been used to meet

²⁵ http://www.daff.gov.au/__data/assets/pdf_file/0011/49493/nat_nac.pdf

- representation targets despite their vulnerability and potential lack of viability.
- Explicit World heritage boundary recommendations were ignored
 - Sensitive rainforest reserve areas were fragmented because of the presence of commercial eucalypt patches.
 - Despite the identification of growing threats to a range of species post RFA boundaries have not been adjusted to reflect this (Modifications to reserve design will be required through time as new values are identified and programs monitoring the effectiveness of established reserves identify deficiencies in reserve design and management. Monitoring programs should enable appropriate reporting of the effectiveness of the establishment and success of the CAR reserve system.²²)
 - The integrity of existing reserves was in some cases compromised;
- c) The RFA led to an increase in the intensity of harvesting at both a coupe and landscape level (conversion for plantation establishment occurring on both public and private land at unprecedented levels), and;
- d) Despite strong science based assessments² of the logging related threats to a number of forest dependent species, attempts made in the public interest to seek legal redress and protect areas have been met by policy makers by further entrenching the right to log.

5.4. ENGO reserve design

The reserve design approach adopted by ENGOs has reasserted the original intent of the National Forest Policy Statement (NFPS)¹⁹. This is an approach that guarantees the long-term security of the high conservation values captured within the reserve system. It is not a panacea and the ecological integrity of Tasmania's Native Forest estate depends on the quality of environmental management on public and private land outside of the reserve system. Ultimately this means the continued downsizing and eventual elimination of commodity wood and fibre production from public native forests, the protection of high conservation value forests on private land and the establishment of a small community-based sustainable native forest sector on public land, a review and improvements to land-use planning in Tasmania and the adoption of best practice Forest Stewardship Council certification for both the native forest and plantation sectors.

4.5 Conservation values criteria for reserve proposal areas

The following conservation values criteria were some of but not all the key values used to determine the ENGO forest reserve proposals for immediate legislated reservation:

- Large intact natural forest areas;
- Forest areas displaying ecological maturity;
- Forest areas of social, cultural and spiritual importance to local, national and/or international communities;

- Forest ecosystems and habitat with important biodiversity values;
- rare, depleted and under-reserved forest communities;
- Forest areas that contribute to good reserve design (eg. Buffering and ecological connectivity; and,
- Forests with important ecosystem services functions (eg. Carbon rich forests, water catchments).

References (Additional to those footnoted above)

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6. Appendixes

6.1. Table of conservation values in forest areas within the ENGO Reserve Proposal.

World Heritage Extensions

There are approximately 190,000 ha of State Forest that have been identified as having World Heritage Values. Some areas proposed for World Heritage listing have been the subject of numerous previous documents, correspondence or decisions that identify conservation values and call for their protection. These include:

- 1989 (March): International Union for Conservation of Nature and Natural Resources (IUCN) Technical evaluation of Tasmanian Wilderness for World Heritage Nomination
- 1989 (June): World Heritage Bureau – Minutes from the WHB meeting
- 1989: WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION
- 1989: Minutes of World Heritage Committee Meeting, December
- 1990: International Union for Conservation of Nature and Natural Resources (IUCN)
- Resolution 18.70 at 18th session in Perth, 28th November – 5th December
- 1990: Tasmanian Government, Department of Parks, Wildlife and Heritage (Tasmania)
- 1990: Forests and Forest Industry Council of Tasmania
- Report of the Panel of experts of the conservation technical working group-
- 1993: Commonwealth Department of the Environment Sport and Territories
- Briefing to Federal Environment Minister on impact of Forestry Operations on current World Heritage Area in Southern Tasmania
- 1994: The General Assembly of IUCN - The World Conservation Union, at its 19th Session in Buenos Aires, Argentina, 17-26 January
- 1994: Letter - James Thorsell (Senior Advisor- Natural Heritage –IUCN) to The Wilderness Society
- 1994: BUREAU OF THE WORLD HERITAGE COMMITTEE
- Eighteenth session, Paris, 4-9 July
- 1995: BUREAU OF THE WORLD HERITAGE COMMITTEE
- Nineteenth session, Paris, 3-8 July
- 1995: Letter – Dr Abdul Wichiencharoen, Chairman, World Heritage Committee to Senator John Faulkner, Minister Environment, Sport & Territories. 6th July
- 1995: WORLD HERITAGE COMMITTEE - Nineteenth session, Berlin, 4-9 December

- 2006: WORLD HERITAGE COMMITTEE, Thirtieth Session -Vilnius, Lithuania, 8-16 July
- 2007: WORLD HERITAGE COMMITTEE, Fourteenth Session - Christchurch, New Zealand, 8-16 July

Reserve Proposals

The below table of areas, values and references is not exhaustive however gives a brief overview of some of the known conservation values and references across a broad regional context.

Forest Area	Conservation values	Supporting documentation
North West Forests	Habitat for threatened species including: <ul style="list-style-type: none"> • Tasmanian Wedge-tailed Eagle • Grey Goshawk • Giant Freshwater Crayfish Water catchment values	Mooney report to the court, Wielangta trial Horwitz, P. (1994). The distribution and conservation status of the Tasmanian giant freshwater lobster <i>Astacopsis gouldi</i> Clark (Decapoda: Parastacidae). <i>Biological Conservation</i> . 69:199-206., Jackson, J.E. & D.R. Blühdorn (1999). Draft Recovery Plan for the Tasmanian Giant Freshwater Lobster <i>Astacopsis gouldi</i> Clark. Natural Heritage Trust. Hobart, Tasmania: Inland fisheries Service. [NB the more recent recovery plan for this species has largely avoided mention of critical habitats in the NW and of forestry impacts due to political pressure] Reservation Assessment and Habitat Requirements of the Giant Tasmanian Freshwater Lobster, <i>Astacopsis gouldi</i> Report to the Tasmanian RFA Environment and Heritage Technical Committee, 1997.
Tarkine	The largest remaining single tract of Gondwanan rainforest in Australia, and the largest Wilderness dominated by rainforest in Australia The northern limit of Huon Pine (<i>Lagarostrobos franklinii</i>) A high diversity of wet Eucalypt (tall)	Proposal for a Tarkine National Park (Tasmanian & national environment groups) 2004 Preliminary Tarkine Tourist Plan (Tarkine Discussion Group) 2007 Tarkine: Largest Temperate Rainforest in Australia (TWS) 2004

forests including large, contiguous areas of Eucalyptus oblique (under-reserved in bioregion)

A great diversity of other vegetation communities, such as:

- dry sclerophyll forest
- woodland
- buttongrass moorland
- sandy littoral communities
- wetlands
- grassland
- dry coastal vegetation
- sphagnum communities

A high diversity of non-vascular plants (mosses, liverworts and lichens) including at least 151 species of liverworts and 92 species of mosses

A diverse range of vertebrate fauna including 28 terrestrial mammals, 111 land and freshwater birds, 11 reptiles, 8 frogs and 13 freshwater fish

Habitat for over 60 rare, threatened and endangered species of flora and fauna, including:

- Tasmanian Devil (a stronghold of disease-free devil populations)
- Tasmanian Wedge-tailed Eagle
- Giant Freshwater Crayfish

A complex and diverse invertebrate fauna, including; at least 16 species found nowhere else, the largest freshwater invertebrate on earth Giant Freshwater Crayfish (*Astacopsis gouldi*) and one of the richest amphipod (a type of small crustacean) fauna diversities in the world

Globally unique magnesite karst systems in the Lyons/Keith/Arthur River areas and at Main Rivulet/ Bowry Creek area

Dolomite karst systems in the Trowutta/Sumac/Black River region

Karst landforms in the 'Ahrberg' group (Donaldson and Upper Rapid rivers)

The largest basalt plateau in Tasmania

Mooney report to the court, Wielangta trial

Western Tasmania, A place of Outstanding Universal Value. Geoff Law 2009

World Heritage at the Crossroads, A Review and Evaluation of Critical Forest Issues relating to the TWWHA. Peter Hitchcock 2008

Bednarik, R. G. (2006): Tasmanian Rock Art

Vandalism. Aura Newsletter, Newsletter of the

Australian Rock Art Research Association. Vol 23, No. 1. May 2006

Australian Heritage Commission emergency listing on the National Heritage List, 2009,

JB Kirkpatrick, RJ Peacock, PJ Cullen & MG Neyland 1988 The Wet Eucalypt Forests of Tasmania. Tasmanian Conservation Trust.

C Sharples, 1997 Karst Geomorphology and Values of the Tarkine – Limestone, dolomite and magnesite karst systems of the Arthur-Pieman Region of Tasmania. Tasmanian Conservation Trust.

D.N. Harries, editor. 1992. Forgotten wilderness : North West Tasmania : a report to the Australian Heritage Commission on the heritage values of North West Tasmania. Tasmanian Conservation Trust.

retaining its original vegetation

Other geomorphic features such as the Bulgobac glacial end moraine and fossil sites at Marionoak and Hatfield River

Water catchment values including excellent examples of joint controlled drainage features (e.g. Huskisson Syncline, Meredith Range, Rapid River)

Significant coastal features such as the Sandy Cape dune field and the Arthur River estuary (probably the best example of a large river estuary in good condition in Tasmania)

Large areas of high quality wilderness centered on:

- the Meredith Range
- the Sumac region
- Norfolk Range
- Mt. Bertha/Donaldson River
- Savage/Keith River

(these areas actually abut each other, creating a continuous stretch of wilderness) Areas of high quality scenic value such as:

- Australia's largest tract of rainforest
- the Meredith Range
- the Norfolk Range
- the coastline

One of the richest archaeological sites in Tasmania with the diversity and density of Aboriginal sites ranking it among "the world's greatest archaeological sites"

Large areas of high carbon storage

Leven Canyon

Outstanding geoheritage significance – landform and karst

Habitat for threatened flora and fauna including:

- Tasmanian Wedge-tailed Eagle

Outstanding scenic quality – tourism and recreation

Small and important areas of remnant old growth forest habitat

Mooney report to the court, Wielangta trial

"The Canyon and the Bluff" – A Proposal for protecting the Leven Valley Forests. Feb 2003. The Wilderness Society

	<p>Important for landscape integrity and connectivity</p> <p>Threatened rainforest communities</p>	
Reedy Marsh	<p>Small remnant areas of oldgrowth</p> <p>Habitat for threatened species including:</p> <ul style="list-style-type: none"> • Tasmanian Wedge-tailed Eagle • Spotted-tailed quoll 	<p>Mooney report to the court, Wielangta trial</p>
Dazzler Range	<p>Small remnant areas of oldgrowth</p> <p>Centre of vascular plant endemism</p> <p>Habitat for threatened species including:</p> <ul style="list-style-type: none"> • Tasmanian Wedge-tailed Eagle • Spotted-tailed quoll • Masked owl 	<p>Mooney report to the court, Wielangta trial</p> <p>Bell, P., Mooney, N. and Wiersma, J. (1997). Predicting Essential Habitat for Forest Owls in Tasmania. Australasian Raptor Association Report to the Tasmanian RFA Environment and Heritage Technical Committee, Hobart.</p> <p>Kirkpatrick, JB and Brown, MJ (1983) An atlas of Tasmania's endemic flora. Tasmanian Conservation Trust, Hobart.</p> <p>Kirkpatrick, JB and Brown, MJ (1984) The palaeogeographic significance of local endemism in Tasmanian higher plants. Australasian Science, 15, pp. 112-113.</p>
Great Western Tiers/ Kooparooona Niara	<p>Identified as having World Heritage significance</p> <p>Extensive areas of contiguous oldgrowth forest (including with the TWWHA)</p> <p>Connectivity to TWWHA</p> <p>Wide range of forest types of high degree of naturalness</p> <p>Edaphic controls preserve occurrences of forest types otherwise out of place e.g. dry sclerophyll types in a high rainfall region</p> <p>Contiguous topographic habitat links, lowland to highlands that provide wildlife corridors- most notably for Flame</p>	<p>Great Western Tiers National Park Proposal- Community Groups- 1990</p> <p>Great Western Tiers National Park - an extended proposal (Australian Conservation Foundation, Tasmanian Conservation Trust, The Wilderness Society - September 1995)</p> <p>Western Tasmania, A place of Outstanding Universal Value. Geoff Law 2009</p> <p>World Heritage at the Crossroads, A Review and Evaluation of Critical Forest Issues relating to the</p>

Robins (that have declined substantially in the past several decades) that move from coastal or lowland areas where they spend winter to foothill forests or higher elevation areas such as the Central Highlands to breed.

Geoheritage values include karst, scarps, geomorphic processes, glacial/periglacial landforms and associated hydrological and geomorphic relics

Landscape/ visual amenity includes the inland skyline of much of northern and central Tasmania from Oatlands north; particularly north of Campbelltown

Habitat values and high levels of endemism, especially cave and other invertebrates; birds, mammals, reptiles and plants - particularly alpine plants

Both Aboriginal and European cultural heritage significance

TWWHA. Peter Hitchcock 2008

Mooney report to the court, Wielangta trial

Conservation Values & Management Options for Jackeys Marsh HU303Y (Prepared by Sean Cadman, N Fitzgerald and Micah Visoiu for Jackeys Marsh Residents Ass.) October 2004

Mooney report to the court, Wielangta trial

Submission to the World Heritage Mission to

the TWWHA, March 2008. Tasmanian National

Parks Association.

www.tnpa.asn.au/news/TNPA_Submission%20WHMission%20TWWHA%2017Mar08.pdf

JB Kirkpatrick, RJ Peacock, PJ Cullen & MG Neyland 1988 The Wet Eucalypt Forests of Tasmania. Tasmanian Conservation Trust.

JB Kirkpatrick, A Moscal & M Askey-Doran; 1994. National Estate Values of the Great Western Tiers; Tasmania – the Flora and the Vegetation. Tasmanian Conservation Trust.

North East coast (including Bay of Fires, see below)

Diverse vegetation communities including:

- E. ovata forest
- E. ovata heath woodland
- old growth E. sieberi forest on granite, old growth E. sieberi forest on Mathinna beds
- E. obliqua dry forest
- old growth E. amygdalina coastal forest
- Melaleuca *ericifolia* swamp forest

Habitat for 9 threatened fauna species including:

Bay of Fires, A new National Park for North East Tasmania- Bay of Fires Coastal Preservation Lobby and North East Bioregional Network, 2009

Land Use Plan – North East Bioregional Network and The Wilderness Society, 2010

Linking Landscapes – Improving the Reserve System on Public Land in NE Tasmania (N Fitzgerald) 28 June 2007

Linking Landscape Ecology and Management to Population Viability Analysis- Fox et al Melbourne University for Forestry

- Grey Goshawk
- Tasmanian Wedge-tailed Eagle
- Spotted-tailed Quoll
- Swift Parrot
- Blind Velvet Worm
- Giant Velvet Worm
- Masked Owl

Locality of 29 threatened flora species including:

- sea clubsedge
- spreading heath
- tiny midge-orchid
- coast houndstongue r
- spiny bushpea
- small mudmat
- glossy purplepea
- sticky swordsedge

Aboriginal cultural heritage significance

Landscape connectivity

Visual amenity

Geoheritage (Holocene Dunes)

Tasmania – February 2004

Submission to the RPDC re Gunns' proposed pulp mill. Birds Tasmania 2006

Constable Creek Loila Tier Reserve: A new protected area for N.E. Tasmania -North East Bioregional Network et al- 2007

Bell, P., Mooney, N. and Wiersma, J. (1997). Predicting Essential Habitat for Forest Owls in Tasmania. Australasian Raptor Association Report to the Tasmanian RFA Environment and Heritage Technical Committee, Hobart.

Biogeography of northeast Tasmania. Records of the Queen Victoria Museum, vol. 103. R. Mesibov (Ed.) 1996.

<p>North East Highlands (including the Blue Tier, Constable Creek, Ben Lomond and Mount Albert, Mount Victoria, Mount Barrow and Mount Arthur)</p>	<p>Headwaters of the catchments of over 14 major rivers</p> <p>Diversity of vegetation communities including:</p> <ul style="list-style-type: none"> • Remnant rainforest and glacial refugia • various old growth communities including E. regnans and E. delegatensis dry forest • forest communities recognised as poorly reserved in the Ben Lomond bioregion <p>Locality of rare and threatened flora species including:</p> <ul style="list-style-type: none"> • Dagger wattle • Slender Aphelia • Large gnat orchid • Blue grass lily • Eastern eyebright <p>Habitat for threatened species including:</p> <ul style="list-style-type: none"> • Grey Goshawk • Tasmanian Wedge-tailed Eagle • Spotted tailed-Quoll • Bornemissza's Stag Beetle • Simsons Stag Beetle • Eastern Barred Bandicoot • Tasmanian Devil • Mt Arthur Burrowing Crayfish • Skemps Snail <p>Areas of high carbon storage</p> <p>Aboriginal cultural heritage significance</p> <p>European and Chinese heritage significance</p> <p>Landscape connectivity including contiguous topographic habitat links, lowland to highlands that provide wildlife corridors</p> <p>Visual amenity</p>	<p>Submissions to Regional Forest Agreement (Tasmanian Conservation Trust, 1996)</p> <p>Linking Landscape Ecology and Management to Population Viability Analysis- Fox et al Melbourne University for Forestry Tasmania – February 2004</p> <p>North East Highlands National Park Proposal – Nicklason</p> <p>Constable Creek Loila Tier Reserve: A new protected area for N.E. Tasmania -North East Bioregional Network et al- 2007</p> <p>Vegetation Values for Blue tier Coupe GC139B (N Fitzgerald) July 2006</p> <p>Vegetation Values for Blue Tier Coupe GC145A (N Fitzgerald) July 2006</p> <p>Special Values Report – Larsen Creek GC104A (N Fitzgerald) Feb 2007</p> <p>Special Values, Siamese Ridge Coupe UR020D near Pyengana (N Fitzgerald) March 2006</p> <p>Special Values Report for Ransom River Coupe GC148A near Goshen (N Fitzgerald) Feb 200</p> <p>Special Values Report for Trafalgar Track Coupe UR084A (N Fitzgerald) April 2006</p> <p>Special Values Report for Coupe GL208C (N Fitzgerald) April 2007</p> <p>Special Values Report for Siamese Ridge Coupe UR020D, near Pyengana (N Fitzgerald) April 2007</p> <p>Special Values Report for GL208A (N Fitzgerald) April 2007</p> <p>Special Values Report for Joy Road Coupe TY042N (N Fitzgerald) January 2006</p> <p>Special Values Report for Joy Road Coupes TY023B and TY024A (N Fitzgerald) March 2006</p> <p>Green Carbon The role of natural</p>
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forests in carbon storage, Part 1. A green carbon account of Australia's south-eastern Eucalypt forests, and policy implications- Mackey et al - Australian National University - 2008

Linking Landscapes – Improving the Reserve System on Public Land in NE Tasmania (N Fitzgerald) 28 June 2007

Land Use Plan – North East bioregional Network and The Wilderness Society, 2010

Mooney report to the court, Wielangta trial

Modelling human impacts on the Tasmanian Wedge-tailed Eagle (*Aquila audax fleayi*) – Bekessy et al- 2009

Submission to the RPDC re Gunns' proposed pulp mill. Birds Tasmania 2006

The Contested Meenamatta Petroglyphs, Tasmania – Bednarik et al - The Journal of the Australian Rock Art Research_– 2010 (Blue Tier)

National Estate listing (Australian Heritage Commission) part- 1980 (Ben Lomond)

Proposed Ben Lomond National Park- The Wilderness Society- 2000

Adding the Nile, Valhalla & Razorback Forests to Ben Lomond National Park – The Wilderness Society – 2002

Biogeography of northeast Tasmania. Records of the Queen Victoria Museum, vol. 103. R. Mesibov (Ed.) 1996.

Eastern Tiers including Douglas Apsley	<p>Important, contiguous areas of old growth Eucalyptus forest communities</p> <p>Very high biodiversity values</p> <p>Habitat for threatened species including:</p> <ul style="list-style-type: none"> • Tasmanian Wedge-tailed Eagle • Swift Parrot • Masked Owl <p>Locality of 15 species of threatened flora.</p> <p>Threatened (including endangered) lowland and/or grassy forest communities</p> <p>Landscape connectivity, especially with Douglas Apsley National Park</p> <p>Visual amenity</p> <p>Centre of vascular plant endemism</p>	<p>Scientific submissions as part of Forests and Forest Industry Council, 1990</p> <p>Linking Landscape Ecology and Management to Population Viability Analysis. (by Melbourne University for Forestry Tasmania).</p> <p>Modelling Human Impact on the Tasmanian Wedge-tailed Eagle (Sarah A Bekessy et al) 2009</p> <p>Mooney report to the court, Wielangta trial</p>
Bruny Island	<p>Small but significant areas of old growth forest</p> <p>Very high biodiversity values including distinct genetic populations</p> <p>Disjunct populations of species</p> <p>Habitat for threatened species including:</p> <ul style="list-style-type: none"> • Swift Parrots • Tasmanian Wedge-tailed Eagle <p>Threatened lowland and/or grassy vegetation communities</p> <p>Aboriginal cultural heritage significance</p> <p>Outstanding scenic quality - tourism and recreation</p> <p>Landscape/ reserve connectivity</p>	<p>Mooney report to the court, Wielangta trial</p> <p>Third part of Bruny Island Plan – DIPWE - http://www.dpiw.tas.gov.au/inter.nsf/Attachments/LJEM-5UA87U/\$FILE/third%20part%20of%20Bruny%20Island%20Plan.pdf</p> <p>Swift Parrot Breeding Season Survey 2009: Preliminary results - Matt Webb (Threatened Species Unit) and Chris Tsaros (Birds Australia)</p> <p>Bell, P., Mooney, N. and Wiersma, J. (1997). Predicting Essential Habitat for Forest Owls in Tasmania. Australasian Raptor Association Report to the Tasmanian RFA Environment and Heritage Technical Committee, Hobart.</p> <p>Kirkpatrick, JB and Brown, MJ (1983) An atlas of Tasmania's endemic flora. Tasmanian Conservation Trust, Hobart.</p> <p>Kirkpatrick, JB and Brown, MJ (1984) The palaeogeographic significance of local endemism in Tasmanian higher plants. Australasian Science, 15, pp. 112-</p>

Tylers Hill	Habitat for threatened species including: <ul style="list-style-type: none"> • Swift Parrot breeding and foraging habitat • Tasmanian Wedge-Tailed Eagle Visual amenity from mainland Tasmania, <u>D'Entrecasteaux Channel</u> and South Bruny National Park	Webb, M. Swift Parrot Breeding Season Survey Report – 2007/08, DPIW Special Values Report for Tylers Hill Coupe SO046C near Southport (N Fitzgerald) Dec 2008
Forestier and Tasman Peninsulas	Small but significant areas of old growth forest Very high biodiversity values including Habitat for threatened species including: <ul style="list-style-type: none"> • Swift Parrots • Tasmanian Wedge-tailed Eagle • Burgundy Snail • Masked Owl Locality of threatened flora species including: <ul style="list-style-type: none"> • Peninsula eyebright • Sky-blue Sun orchid Threatened lowland and/or grassy vegetation communities Aboriginal cultural heritage significance Visual amenity Landscape/ reserve connectivity	Surveys for <i>Lissotes latidens</i> (Broad-toothed stag beetle) in priority coupes on the Forestier and Tasman Peninsulas (J M Meggs) 1998 The Eyebright that makes the Tasman Peninsula http://tasmanianplants.com/2009/11/the-eyebright-that-makes-the-tasman-peninsula/ <i>Euphrasia semipicta</i> — Peninsula Eyebright http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=9986 <i>Thelymitra jonesii</i> (Sky-blue Sun-orchid) http://www.environment.gov.au/biodiversity/threatened/species/t-jonesii.html <i>Euphrasia phragmostoma</i> — Buttons Eyebright, Hairy Cliff Eyebright [See www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=7720 Burgundy Snail fact sheet see www.nrmsouth.org.au/uploaded/287/15130508_60burgundynail.pdf Threatened Species Section 2008 Listing Statement for <i>Cyathodes Platystoma</i> (tall Cheeseberry) DPIW Tasmania. Natural Values Tasman Peninsula: Landforms, Flora and Fauna -

		P&WS - 2003 Tasman National Park (The Tasmanian Conservationist No 312) Sept 2007 Bell, P., Mooney, N. and Wiersma, J. (1997). Predicting Essential Habitat for Forest Owls in Tasmania. Australasian Raptor Association Report to the Tasmanian RFA Environment and Heritage Technical Committee, Hobart.
Wielangta	<p>Important, contiguous areas of old growth Eucalyptus forest communities Very high biodiversity values</p> <p>Habitat for threatened species include Tasmanian Wedge-tailed Eagle and 15 threatened plants.</p> <p>Threatened (including endangered) lowland and/or grassy forest communities</p> <p>Landscape connectivity, especially with Douglas Apsley National Park</p> <p>Visual amenity</p>	<p>Scientific submissions as part of Forests and Forest Industry Council, 1990</p> <p>Linking Landscape Ecology and Management to Population Viability Analysis. (by Melbourne University for Forestry Tasmania).</p> <p>Modelling Human Impact on the Tasmanian Wedge-tailed Eagle (Sarah A Bekessy et al) 2009</p> <p>Mooney report to the court, Wielangta trial</p>
Wellington Range	<p>Habitat for threatened species including:</p> <ul style="list-style-type: none"> • Tasmanian Devils • Spotted-tailed Quoll • Eastern Barred Bandicoot • Tasmanian Wedge-tailed Eagle • Grey Goshawk <p>Locality of threatened flora species including:</p> <ul style="list-style-type: none"> • Conical She oak <p>Significant water catchments including:</p> <ul style="list-style-type: none"> • Crabtree Rivulet • Judds Creek • Bakers Creek <p>Significant European heritage including:</p> <ul style="list-style-type: none"> • Jeffreys Track <p>Connectivity values including being contiguous with the Wellington Reserve</p>	<p>West Wellington High Conservation Values Submission (West Wellington Protection Group) Aug 2010</p>

and the TWWHA

Upper
Florentine

Part of the South West Wilderness Area
Identified as having World Heritage
significance

Extensive areas of contiguous oldgrowth
forest (including with the TWWHA)

Connectivity to TWWHA (surrounded on
three sides by the TWWHA)

Diverse vegetation that reflects the
underlying complex of geology and
topography, ranging from tall eucalypt
forest through rainforest, drier eucalypt
forest, heathland and moorland

Habitat for threatened species including:

- Tasmanian Devils
- Spotted-tailed Quoll
- Tasmanian Wedge-tailed Eagle
- Grey Goshawk

Locality of threatened flora species
including:

- Myrtle elbow orchid

Geoheritage including extensive areas of
karst and numerous underground water
systems and numerous cave entrances
located.

Visual amenity

Aboriginal cultural heritage of high
significance

European heritage significance including:

- Timbs Track
- Adamsfield Track
- Florentine River crossing
- Churchill's Hut

Leatherwood honey production area

Significant carbon stores

Western Tasmania, A place of
Outstanding Universal Value.
Geoff Law 2009

World Heritage at the Crossroads,
A Review and Evaluation of Critical
Forest Issues relating to the
TWWHA. Peter Hitchcock 2008

Tasmanian World Heritage Expert
Panel.

& Tasmanian Public Land Use
Commission. &

Commonwealth Forests Taskforce.
1997

Commonwealth Regional Forest
Agreement background report.
Part I, World heritage report :
record of the Tasmanian World
Heritage Expert Panel meeting and
a preliminary analysis of the forest
and mineral resources in areas
identified by the Panel/
[Tasmanian World Heritage Expert

Panel] Tasmanian Public Land Use
Commission in Conjunction with
Commonwealth Forests Taskforce

Upper Florentine: Forests of World
Heritage Value that the Federal
Government has Promised to
Protect (TWS) 2005

"Devils in Danger: An Investigation
into the Threatened Species of the
Upper Florentine [See
[http://stillwildstillthreatened.org/r
esources/devils-danger-
investigation-threatened-sp](http://stillwildstillthreatened.org/resources/devils-danger-investigation-threatened-sp)

Mooney report to the court,
Wielangta trial

Special Values of the Upper
Florentine: Flora, Fauna,
Vegetation, Giant Trees, Geo-
morphology, Archaeology (N
Fitzgerald) Oct-Nov 2006

Oldgrowth for Export – Still Wild
Still Threatened and The
Wilderness Society -2008

“Thynninorchis nothofagicola: myrtle elbow orchid: Tasmanian Threatened Flora Listing Statement” (<http://www.dpiw.tas.gov.au>)

Unpublished results – Citizen Science Carbon Accounting Project in Coupe FO44A – The Wilderness Society -2010

Planning for karst management in multiple-use forest- Eberhard R- Tasforests Vol 10- 1998

A Review of the Geoconservation Values of the Tasmanian Wilderness World Heritage Area; Nature Conservation Report 03/06, Department of Primary Industries, Water and Environment, Tasmanian Government - Sharples, C- 2003

Flora and Fauna Guide to the Upper Florentine Valley –Gibson and Leahy -2010

Threatened Forests of the Derwent Region – Still Wild Still Threatened -2010

<http://www.stillwildstillthreatened.org/sites/default/files/Still%20Wild%20Still%20Threatened%20Report%20to%20the%20World%20Heritage%20Committee%20low%20res.pdf>

Huon / Picton

Part of the South West Wilderness Area Identified as having World Heritage significance

Extensive areas of contiguous oldgrowth forest (including with the TWWHA)

Connectivity to TWWHA , logging and roading currently pose a threat to highly fire sensitive vegetation in the neighbouring TWWHA (e.g. Mt Bobs/The Boomerang)

Threatened species habitat:

- Tasmanian Wedge-tailed Eagles

Significant Geoheritage in the form of Karst systems

Western Tasmania, A place of Outstanding Universal Value. Geoff Law 2009

World Heritage at the Crossroads, A Review and Evaluation of Critical Forest Issues relating to the TWWHA. Peter Hitchcock 2008

Unpublished interdepartmental report on karst

and Aboriginal heritage in undisclosed location.

Approx. 2006. Forestry Tasmania, Department of Primary Industries, Water and Environment, Tasmanian Aboriginal Land and

	<p>Aboriginal cultural heritage of high significance</p> <p>Significant carbon stores</p>	<p>Sea Council. Forest Practices Authority.</p> <p>Mooney report to the court, Wielangta trial</p> <p>Williams, K. 1987. The vegetation of the Southern Forests. Forestry Commission, Tasmania.</p>
Styx	<p>Part of the South West Wilderness Area Identified as having World Heritage significance</p> <p>Extensive areas of contiguous oldgrowth forest (including with the TWWHA)</p> <p>Connectivity to TWWHA</p> <p>Superlative example of the tallest flowering plants in the world (<i>E.regnans</i>)</p> <p>Superlative example of Tall Eucalypt forest (<i>E.regnans</i> with transition to <i>E. delegatensis</i>) intimately associated with Gondwana cool temperate rainforest</p> <p>Contains seven of the state's 10 tallest trees (Giant Trees Consultative Committee, 2004).</p> <p>Habitat for threatened species including:</p> <ul style="list-style-type: none"> • Tasmanian Wedge-tailed Eagles • Tasmanian Devils • Spotted-tailed quolls <p>Visual amenity, including from Tourism icons</p> <p>Upper catchment of Styx River that flows into the Derwent River</p> <p>Significant carbon stores</p>	<p>Western Tasmania, A place of Outstanding Universal Value. Geoff Law 2009</p> <p>World Heritage at the Crossroads, A Review and Evaluation of Critical Forest Issues relating to the TWWHA. Peter Hitchcock 2008</p> <p>The Styx Valley of the Giants National Park Proposal- The Wilderness Society- 2003</p> <p>Mooney report to the court, Wielangta trial</p> <p>Green Carbon The role of natural forests in carbon storage, Part 1. A green carbon account of Australia's south-eastern Eucalypt forests, and policy implications- Mackey et al - Australian National University – 2008</p> <p>Oldgrowth for Export – Still Wild Still Threatened and The Wilderness Society -2008</p> <p>Unpublished remote sensor camera recording – Still Wild Still Threatened -2010/2011</p> <p>The destruction of Tasmania's Ancient 'regrowth' forests – Still Wild Still Threatened – 2010</p> <p>www.stillwildstillthreatened.org/sites/default/files/SWST%20regrowth%20report%202010%20low%20res.pdf</p> <p>Threatened Forests of the Derwent Region – Still Wild Still Threatened -2010</p> <p>http://www.stillwildstillthreatened.org/sites/default/files/Still%20Wild%20Still%20Threatened%20Report%20to%20the%20World%20Heritage%20Committee%20low%20res</p>

Wedge	<p>Part of the South West Wilderness Area Identified as having World Heritage significance</p> <p>Extensive areas of contiguous oldgrowth forest (including with the TWWHA)</p> <p>Connectivity to TWWHA (surrounded on all sides by the TWWHA)</p> <p>Habitat for threatened species including:</p> <ul style="list-style-type: none"> • Tasmanian Wedge-tailed Eagles <p>Significant carbon stores</p> <p>Significant stands of leatherwood important for beekeeping</p>	<p>.pdf</p> <p>Western Tasmania, A place of Outstanding Universal Value. Geoff Law 2009</p> <p>World Heritage at the Crossroads, A Review and Evaluation of Critical Forest Issues relating to the TWWHA. Peter Hitchcock 2008</p> <p>Wedge Agreement (Community Forest Agreement) Dec 2009</p> <p>Oldgrowth for Export – Still Wild Still Threatened and The Wilderness Society -2008</p> <p>The destruction of Tasmania’s Ancient ‘regrowth’ forests – Still Wild Still Threatened – 2010 www.stillwildstillthreatened.org/sites/default/files/SWST%20regrowth%20report%202010%20low%20res.pdf</p> <p>Threatened Forests of the Derwent Region – Still Wild Still Threatened -2010 http://www.stillwildstillthreatened.org/sites/default/files/Still%20Wild%20Still%20Threatened%20Report%20to%20the%20World%20Heritage%20Committee%20low%20res.pdf</p>
Counsel and Central Highlands	<p>Part of the South West Wilderness Area Identified as having World Heritage significance</p> <p>Extensive areas of contiguous oldgrowth forest (including with the TWWHA)</p> <p>Connectivity to TWWHA</p> <p>High levels of floristic diversity.</p> <p>Threatened species habitat:</p> <ul style="list-style-type: none"> • Tasmanian Wedge Tailed eagle. • Tasmanian Devils <p>Geoheritage including:</p> <ul style="list-style-type: none"> • a high probability of karst systems in the area. • Numerous underground water systems have been noted during 	<p>Western Tasmania, A place of Outstanding Universal Value. Geoff Law 2009</p> <p>World Heritage at the Crossroads, A Review and Evaluation of Critical Forest Issues relating to the TWWHA. Peter Hitchcock 2008</p> <p>Unpublished remote sensor photography of Tasmanian Devils – Still Wild Still Threatened</p> <p>Unpublished Flora and Fauna Surveys – Still Wild Still Threatened</p> <p>Oldgrowth for Export – Still Wild Still Threatened and The Wilderness Society -2008</p> <p>The destruction of Tasmania’s</p>

	flora and fauna surveys by SWST.	Ancient 'regrowth' forests – Still Wild Still Threatened – 2010 www.stillwildstillthreatened.org/sites/default/files/SWST%20regrowth%20report%202010%20low%20res.pdf Threatened Forests of the Derwent Region – Still Wild Still Threatened -2010 http://www.stillwildstillthreatened.org/sites/default/files/Still%20Wild%20Still%20Threatened%20Report%20to%20the%20World%20Heritage%20Committee%20low%20res.pdf
Weld	Part of the South West Wilderness Area Identified as having World Heritage significance Extensive areas of contiguous oldgrowth forest (including with the TWWHA) Connectivity to TWWHA Habitat for threatened species including: <ul style="list-style-type: none"> • Tasmanian Wedge-tailed Eagles • Tasmanian Devils • Spotted-tailed quolls Significant Geoheritage Significant sites of Aboriginal cultural heritage Significant carbon stores	A Review of the Geoconservation Values of the Tasmanian Wilderness World Heritage Area; Nature Conservation Report 03/06, Department of Primary Industries, Water and Environment, Tasmanian Government - Sharples, C- 2003 Western Tasmania, A place of Outstanding Universal Value. Geoff Law 2009 World Heritage at the Crossroads, A Review and Evaluation of Critical Forest Issues relating to the TWWHA. Peter Hitchcock 2008
Esperence, Lune River and Cockle Creek	Part of the South West Wilderness Area Identified as having World Heritage significance Extensive areas of contiguous oldgrowth forest (including with the TWWHA) Connectivity to TWWHA Significant Geoheritage Significant sites of Aboriginal cultural heritage Significant carbon stores Visual Amenity (on the flight path to Melaleuca)	Western Tasmania, A place of Outstanding Universal Value. Geoff Law 2009 World Heritage at the Crossroads, A Review and Evaluation of Critical Forest Issues relating to the TWWHA. Peter Hitchcock 2008

6.2. Documents in Support of Extending the Boundary of the Twwha – 1989 to 2008

International organisations and local statutory bodies have been calling for the World Heritage listing of tall, wet forests currently excluded from the Tasmanian Wilderness World Heritage Area (TWWHA) for over 20 years. International bodies include the IUCN and UNESCO's World Heritage Bureau and Commission. More local bodies who have identified the World Heritage values of the forests outside the current boundary, called for the inclusion in the TWWHA or expressed concern over logging impact on values within the TWWHA include the Tasmanian Government's Department of Parks, Wildlife and Heritage, the Forests and Forests Industry Council and the Commonwealth Department of the Environment Sport and Territories.

Below is a compilation of relevant extracts from official minutes, recommendations, reports or correspondence, highlighting the ongoing concern over the logging of forests adjacent to the existing boundary of the TWWHA.

The Tasmanian community and in particular Tasmanian environment groups have repeatedly expressed concerns over the inadequacy of the current siting of the TWWHA boundary to all levels of Government and international bodies. There is a stream of correspondence over this issue, between Tasmanian groups and international organisations that has continued to the present. There remains dissatisfaction over the location of the boundary of the TWWHA, resulting in the decision to send the current mission.

1989 (March): International Union for Conservation of Nature and Natural Resources (IUCN)

Technical evaluation of Tasmanian Wilderness for World Heritage Nomination

The TWWHA was nominated in 1988, the boundaries drawn up by the Australian government in a 'compromise' between the best case scenario from a World heritage point of view and an industry logging agenda. This is because the Government had decided that it would protect no more than 3% of Tasmania's forestry resource. Many areas of World Heritage value that were recommended for protection were left out– for reasons never stated.

As a result, a highly-compromised World Heritage nomination was forwarded to the World Heritage Committee in November 1988. In February 1989, the IUCN's Jim Thorsell visited Tasmania to assess the nomination. His evaluation made several suggestions on how the boundary of the nominated area could be improved.

"Outside the boundaries of the site (The World Heritage Area), extractive forestry operations will approach the perimeter in many places along the eastern boundary and will certainly impact on World Heritage Values. In addition to clear-cutting techniques, the threats are from road building activity, fire escape and reduction in visual quality and wilderness values ... A total of nine specific suggestions for the adjustment of the eastern boundary were reviewed during the IUCN field inspection and all of them, if included, would certainly add further old growth forest, contribute to integrity, and simplify management (specifically these were Beech Creek/Counsel River, Wylds Craig, Gordon and Tiger range, Upper Florentine, Upper Styx, Middle Weld, Middle Huon, Picton Valley and Southeast Cape)."

1989 (June): World Heritage Bureau – Minutes from the WHB meeting

In June 1989, the nomination was duly assessed by the World Heritage Bureau, a seven-nation subset of the 21-nation World Heritage Committee. The Bureau made the following comments:

... The Bureau concurred with the IUCN recommendation to further expand the additional nominated area to include the Denison/Spires/Maxwell area ... plus a number of areas along the Eastern boundary of the current extension and welcomed the declaration of the representative of Australia that this additional expansion would be submitted in September...

1989: WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION

From August 1989, there were significant additions to the nomination along the western boundary and in the centre ('the hole in the doughnut', or Denison-Spires area) and three minor additions along the eastern boundary (Hartz Mountains National Park, part of the Weld, and part of the Tiger Range).

These additions on the eastern boundary did not deal with the issue of integrity. However, there was understandable confusion at an international level about this issue due to the size of the other additions and the assurances of the Australian Government at the time.

This confusion was not shared by the author of the original technical evaluation, James Thorsell (see his letter to Mr G. Law of March 1994), or by the Tasmanian Dept Parks, Wildlife and Heritage – the manager of the site (see the Department's report on 'appropriate boundaries' of 1990), or by the Australian Government's Department of Environment (see the memo to the Environment Minister of November 1993). **All of these documents identified major extensions required or referred to threats to the integrity of the site from proposed logging operations.**

Outside the boundaries of the site, extractive forestry operations will occur outside the eastern boundary with clear-cutting, road-building activity, the possibility of fire escape, and reduction in visual quality and wilderness values. These will hopefully be minimised through careful management and through application of the Forestry Commission's "Forestry Practices Code".

However, the adjustments to the eastern boundary of the site made in the September 1989 revision to better follow natural features reduces the potential problem. Specific suggestions for adjustments of the eastern boundary reviewed during the IUCN field inspection have now been incorporated.

1989: Minutes of World Heritage Committee Meeting, December

Following further debate over the boundaries of the World Heritage nomination between May-September 1989, an amended World Heritage nomination was forwarded to the Committee in September 1989. Although additional areas in the Southern Forests, including part of the Tiger Range and Weld Valley, were included, many other important areas were still omitted, despite assurances given to the World Heritage Bureau by Australia.

In entering the nominated area on the World Heritage List, the World Heritage Committee still made reference to boundary inadequacies.

"The Committee noted that there were some small enclaves of publicly owned land with world heritage values currently excluded from the nomination and expressed

the hope that these could be added on in the future. As concerns the cultural values of this extension, the committee noted that research on the archaeological sites within the area had only just begun but seemed to present considerable interest and potential.”

1990: International Union for Conservation of Nature and Natural Resources (IUCN)

Resolution 18.70 at 18th session in Perth, 28th November – 5th December

International support for the extension of the TWWHA to include areas such those still under question today, continued during sessions of the IUCN – for example, the 18th general session of the IUCN in Perth, December 1990.

“Noting that the IUCN has stated that nine areas specifically, Beech Creek/Counsel River, Wyld’s Craig, Gordon and Tiger Range, Upper Florentine, Upper Styx, Middle Huon, Middle Weld, Picton Valley and Southeast Cape – suggested for adjustment of the eastern boundary of the World Heritage Site, would, if included, add further old-growth forest, contribute to integrity, and simplify management...”

Noting with concern that many of the National State forests adjacent to the current World Heritage Site and the National Estate rainforests of north west Tasmania are immediately threatened by mining, forestry and hydro-electric schemes...

The General Assembly of the IUCN:

1. Calls upon the Tasmanian State Government and the Government of Australia to move to immediately protect:

- a) all national estate areas contiguous with current Western Tasmanian Heritage Site;*
- b) the temperate rainforests of north-west Tasmania which are on the Registrar of the national Estate*

by their inclusion in national parks and World Heritage Sites where they meet the prevailing criteria...”

http://www.iucn.org/congress/2004/documents/IUCN_previous_Congress_outputs_en.pdf

1990: Tasmanian Government

Department of Parks, Wildlife and Heritage (Tasmania)

Debate about the boundaries of the World Heritage Area continued. One major development to occur was the preparation of a report by the Department of Parks, Wildlife and Heritage in June 1990. This report also called for the extension of the World Heritage Area to include many of the areas still at risk today.

“Part or all of many of the various areas considered in this report are recommended additions to the existing World Heritage Area (ie. They are incorporated within the “appropriate” boundary) for one or more of the following reasons. The areas:

- 1. satisfy one or more of the World Heritage criteria, or significantly further contribute to the World Heritage Area in terms of that criteria; and/or*
- 2. are important in terms of satisfying, or further (and better, satisfying, the conditions of integrity for one or more of the World heritage criteria; and/or*

3. *provide a more practical or logical boundary from a management perspective, which is essentially an aspect of the conditions of integrity. In some cases this could also improve the presentation of the World Heritage Area to the public. "The following areas, or parts of areas, collectively, should be nominated as additions to the existing World Heritage Area as they are incorporated within the "appropriate" boundary for a World Heritage Area in Western Tasmania:*

- Blowhole valley - Moulders Hill
- Lune River – Hastings Caves State Reserve – Upper Esperance Valley
- part of the Picton valley
- Middle Huon Valley
- part of the lower Weld valley
- slopes of the Snowy range
- part of the upper Styx Valley
- part of the Mt Wedge area
- upper Florentine valley
- part of the Coles-Blue Creek area
- Counsel-Derwent area
- Navarre Plains
- small areas on the southern Central Plateau
- part of Mother Lords Plains
- part of the Great Western Tiers
- part of the Mole Creek karst area
- part of the Mersey Valley
- Lees Plains
- Part of the Dove River area
- Black Bluff – Vale of Belvoir
- Reynolds Falls – Mt Cripps area
- Mt Romulus – Granite Tor
- Part of Tyndall Range – Mt Murchison area
- Princess-Governor area
- Part of West Coast Range – Braddon River area
- South of Macquarie Harbour
- Melaleuca – Cox Bight

...Tall forest areas not within the World Heritage Area will almost certainly be subject to forestry operations for pulp and sawlogs. Any such logging in this area has the potential to impact on parts of the existing World Heritage Area (i.e. fire escape risk, visual aspects, and reduction in wilderness quality)

(Department of Parks, Wildlife and Heritage 1990)

1990: Forests and Forest Industry Council of Tasmania

Report of the Panel of experts of the conservation technical working group-

Unresolved issues relating to the boundaries of Tasmania's World Heritage Area continued during the negotiations of the Forests and Forest Industry Council (FFIC) in 1990. The high conservation-values, many excluded forest areas, were brought to the attention of the FFIC in August 1990 by its panel of experts.

This report identified numerous areas, still under question today, as having "Integrity of World Heritage Area". These included:

- a) Clarence
- b) Navarre
- c) Blue Creek
- d) Mt Wedge
- e) East Snowy
- f) Weld
- g) Middle Huon
- h) Picton
- i) Hartz Hole
- j) South East Cape
- k) Reynolds Falls
- l) Granite Tor
- m) Tyndall
- n) Tim Shea
- o) Raminea
- p) Jackeys Marsh
- q) Little Eldons
- r) East Upper Mersey
- s) Nells Bluff/Mother Cummings
- t) Drys Bluff
- u) South of Macquarie Harbour

1993: Commonwealth Department of the Environment Sport and Territories

Briefing to Federal Environment Minister on impact of Forestry Operations on current World Heritage Area in Southern Tasmania

"The Forests in the Huon and Picton Valleys are adjacent to the boundary of the Tasmanian Wilderness World Heritage Area (TWWHA) and within the Western Tasmania National Estate Area, an extensive National Estate listing with a range of values. The area is one of the few remaining temperate wilderness areas, with rare undisturbed stands of tall open forest and areas where ecosystem processes can

continue without interference. It is an area important for its diversity of landform and vegetation, the presence of rare flora and fauna, representative forest communities and features representative of the earth's evolutionary history...

...It is the portfolio view that the proposed roads and forest harvesting operations in the Huon and Picton Valleys will have a significant adverse affect on the current TWWHA The Huon and Picton Valleys have been identified in numerous reports as contributing to the integrity of the adjacent World heritage Area and their inclusion in the TWWHA would enhance and safeguard its integrity...

...The Huon and Picton Valleys have been identified as having World heritage values which would add to those included in the existing TWWHA, including pristine catchments, glacial and karst features, important Huon pine and tall eucalypt communities and outstanding scenery. Continued forestry activities in the area, with its suits of attendant impacts, will degrade the natural values which have been identified as of World Heritage quality to an extent which may preclude any future options for adding these areas to the existing World Heritage Area...

...The Huon and Picton Valleys contain significant areas of old growth forest, the protection of which is identified as of high priority in the NFPS (National Forest Policy Statement). The NFPS included a commitment to avoid activities that may significantly affect those areas of old growth forest or wilderness that are likely to have high conservation values, until such areas have been assessed. Although Tasmania is not a signatory to the NFPS the Commonwealth can be seen as having a responsibility to ensure that it does not support activities which would undermine NFPS objectives."

(Commonwealth Department of Environment, Sport and Territories 1993)

Despite this unambiguous advice, the Commonwealth gave the go-ahead to logging in the Picton and Huon Valleys in 1993. This led to further public debate about World Heritage boundaries in the run-up to the Regional Forest Agreement (RFA) process of 1994-97.

1994: The General Assembly of IUCN - The World Conservation Union, at its 19th Session in Buenos Aires, Argentina, 17-26 January

Again, in 1994 the IUCN reconfirmed its support for extensions of the TWWHA to incorporate forest areas of significant World heritage and conservation value. This included some of their strongest language around their concern over the destruction of identified forest areas and the urgency needed to deal with the problem,

"NOTING that the General Assembly, at its 18th Session adopted Recommendation 18.70 "Forest Conservation in Tasmania" by consensus;

ALARMED that many areas covered by that Recommendation are being destroyed by logging operations;

ALARMED that the Commonwealth Government of Australia has actively approved clearfelling logging operations within forest areas covered by Recommendation 18.70 contrary to the letter and spirit of that Recommendation;

REAFFIRMS its commitment to Recommendation 18.70 and CALLS ON the Tasmanian State Government and the Commonwealth Government of Australia:

(d) immediately to protect the forest and wilderness areas covered by

Recommendation 18.70 by their inclusion in National Parks where they meet the prevailing criteria.

[http://www.iucn.org/congress/2004/documents/IUCN_previous Congress outputs en.pdf](http://www.iucn.org/congress/2004/documents/IUCN_previous_Congresses_outputs_en.pdf)

1994: Letter - James Thorsell (Senior Advisor- Natural Heritage –IUCN) to The Wilderness Society

In March 1994 James Thorsell, author of the original Technical evaluation for the IUCN and the only IUCN member to have visited Tasmania and toured the forests replied to correspondence from Geoff law from The Wilderness Society. In it he is unambiguous about the threats to the TWWHA.

This threat (logging and associated impacts) was anticipated in the 1989 IUCN evaluation and it would certainly cause us concern if it is of a serious nature...

1994: BUREAU OF THE WORLD HERITAGE COMMITTEE

Eighteenth session, Paris, 4-9 July

Tasmanian Wilderness (Australia)

“The Bureau took note that several reports have been sent to the Centre and Bureau members by the Wilderness Society concerning Tasmania World Heritage site and the impact of logging operations in areas adjacent to the current World Heritage area. By letter of 22 March 1994, the Centre informed the Permanent Delegate of Australia and requested a response from the Australian authorities regarding this matter. The Observer from Australia indicated that discussions between the Government and the State of Tasmania are taking place at the moment. The Bureau requested the Centre to follow-up and report back at its next session.”

<http://whc.unesco.org/archive/repbur94.htm>

1995: BUREAU OF THE WORLD HERITAGE COMMITTEE

Nineteenth session, Paris, 3-8 July

*The Bureau recalled that this mixed site was inscribed on the World Heritage List in 1982 and that the Bureau at its eighteenth session in July 1994, discussed reports received on logging operations in areas adjacent to the World Heritage area. IUCN gave an update on the situation and recalled two concerns which were raised: that there is forested land outside the site which may have World Heritage values, and furthermore that adverse impact on the existing World Heritage site could result from logging and roading activities adjacent to the site. IUCN noted that both the 1990 and 1994 General Assemblies of IUCN had urged *[19] Australia to evaluate the World Heritage values of these areas and that recent concerns about the impacts of forestry operations had been expressed by the Australian and New Zealand Committees for IUCN and the Wilderness Society (Tasmania).*

The Bureau asked to be kept informed of developments which should maintain the integrity of the existing site and may lead to the identification by the State Party of further World Heritage values, including possible additions to the boundaries of the Tasmanian Wilderness World Heritage site.

ICOMOS stressed that as this was a mixed site all additional information concerning this site should be referred to ICOMOS as well as to IUCN.

<http://whc.unesco.org/archive/repbu95a.htm>

1995: Letter – Dr Abdul Wichiencharoen, Chairman, World Heritage Committee to Senator John Faulkner, Minister Environment, Sport & Territories. 6th July

At the time of the meeting above, Dr Abdul Wichiencharoen, Chairman of the World Heritage Committee wrote to Senator John Faulkner, Minister Environment, Sport & Territories indicating significant correspondence with Tasmanian groups and requesting a timetable for the cessation of logging in identified areas prior to proper assessment.

...The issue of logging and roading operations in forested land in Tasmania, particularly in the vicinity of the existing Tasmania Wilderness World Heritage site, was discussed at the nineteenth session of the Bureau of the World Heritage Committee...

... Subsequent to the Bureau's discussion, I received information from Australian sourced\s suggesting that logging is ongoing in forests in the vicinity of the eastern boundary of the World Heritage site...

In the light of this, I would appreciate your advising me of the State Party's timetable for cessation of logging and roading operations in the forest areas adjacent to the World Heritage site with may have World Heritage potential pending the completion of the agreed comprehensive assessment of values...

1995: WORLD HERITAGE COMMITTEE

Nineteenth session, Berlin, 4-9 December

"The Committee recalled that this mixed site was inscribed on the World Heritage List in 1982 and that the Bureau at its eighteenth session in July 1994, discussed reports

received on logging operations in areas adjacent to the World Heritage area. It furthermore recalled that two concerns were raised: (a) that there is forested land outside the site which may have World Heritage values, and (b) that logging and roading activities adjacent to the site could have an adverse impact on the existing World Heritage site.

The Committee noted that the national authorities have provided information to the effect that negotiations to alleviate possible impacts are still underway. The Committee, took note of the action by the State Party to strengthen the protection of the site and that negotiations were still underway, and requested the Centre to contact the State Party to obtain a report on the situation as soon as possible.

<http://whc.unesco.org/archive/repcom95.htm>

2006: WORLD HERITAGE COMMITTEE, Thirtieth Session

Vilnius, Lithuania, 8-16 July

This decision came after the additions to Tasmania's reserve estate delivered via the Supplementary Regional Forest Agreement (Supp RFA). Despite the commendations in the note below, actual additions of forest that connected to the existing TWWHA were few and far between. The Supp RFA did little to satisfy the concerns of Tasmanian environment groups. Perversely, approx \$235 million of public money was given to the industry via the Supp RFA, some of which has been used to build roads into identified areas of World Heritage-value (Weld, Upper Florentine, Tarkine) and subsidised "modified" clearfell in these areas.

Commends the State Party for the implementation of a Supplementary Tasmanian Regional Forest Agreement, and recent efforts to increase the protection of old growth forests adjacent to the World Heritage property, thus increasing the buffer zone in certain areas;

Notes the concerns expressed by NGOs in relation to the impacts of logging adjacent to the World Heritage property and the potential for this activity to compromise options for future extensions to the World Heritage property;

Requests the State Party to submit a revised map of the World Heritage property, showing the areas of extended buffer zone and identifying other use zones directly adjacent to the boundary;

Notes that the World Heritage Centre has written to the State Party seeking comments on outstanding NGO concerns and that the State Party has indicated its willingness to provide a full response;

<http://whc.unesco.org/archive/2006/30com-en.htm>

2007: WORLD HERITAGE COMMITTEE, Fourteenth Session

Christchurch, New Zealand, 8-16 July

The World Heritage Committee,

3. Notes with concern the issues raised by NGOs in relation to the impacts of logging adjacent to the World Heritage property and the commencement of the North Weld Road which compromises options for future extensions to the World Heritage property;

4. Urges the State Party to consider the extension of the World Heritage property to include critical old-growth forests to the east and north of the property, or at least to manage these forests in a manner which is consistent with a potential World Heritage value;

5. Expresses its concern about the risk from fire related to forest regeneration and natural events, and its possible adverse impact on the World Heritage property, and requests the State Party to prepare a Risk Management Plan and to consider distancing the logging operations from the boundary of the property;

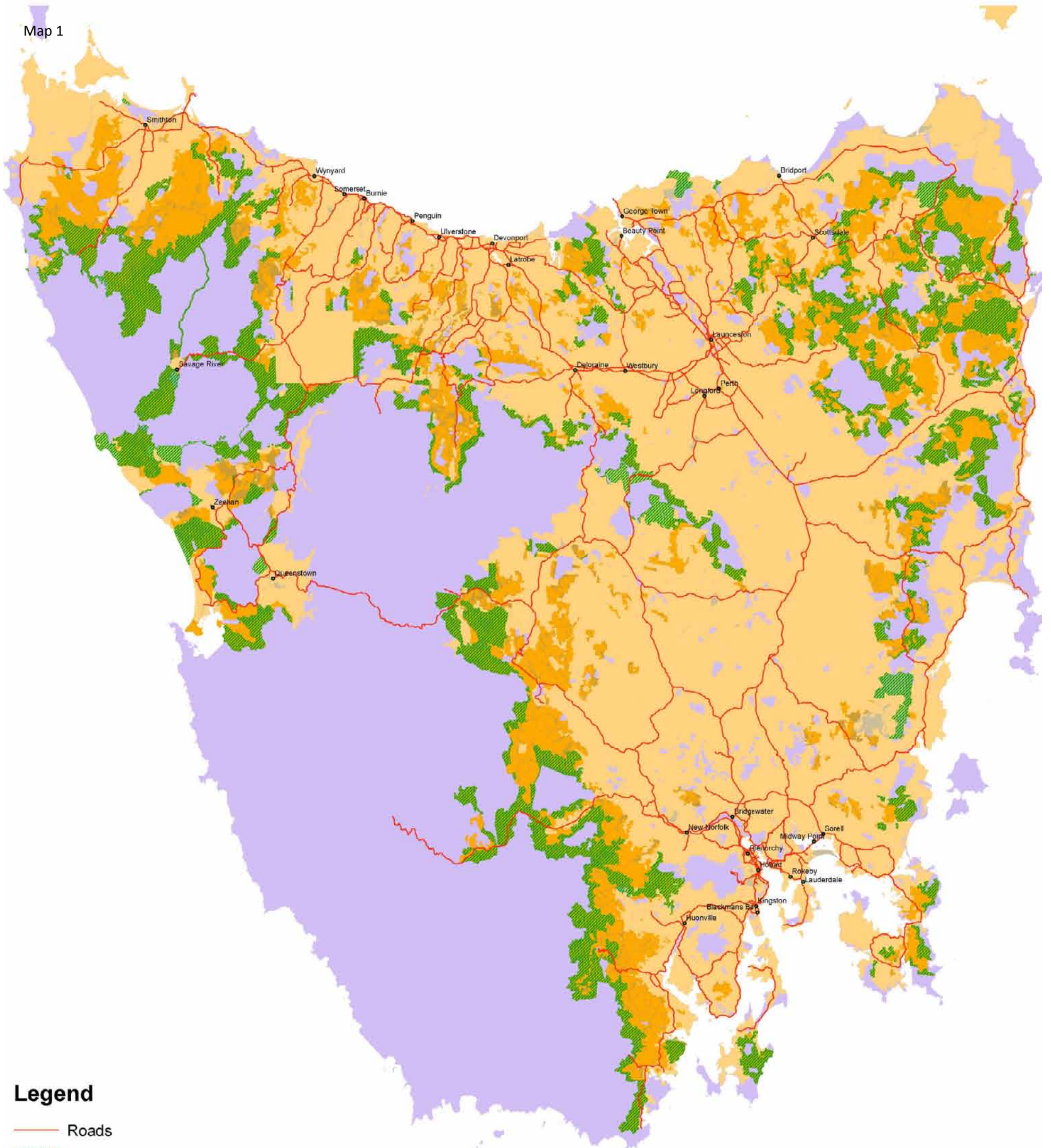
6. Taking into account the clarification provided orally by the State Party at the 31st session, also requests the State Party to invite a joint World Heritage Centre/IUCN/ICOMOS mission to assess the state of conservation of the property, focusing on:

- a) appropriate management of areas of heritage value which are currently outside the property,
- b) an assessment of the degree of risk related to regeneration fires in areas adjacent to the World Heritage property as well as of the effectiveness of the fire management system in place,
- c) impacts of proposed forestry operations (including the construction of new roads) on the outstanding universal value of the property,






<http://whc.unesco.org/archive/2007/whc07-31com-24e.pdf>

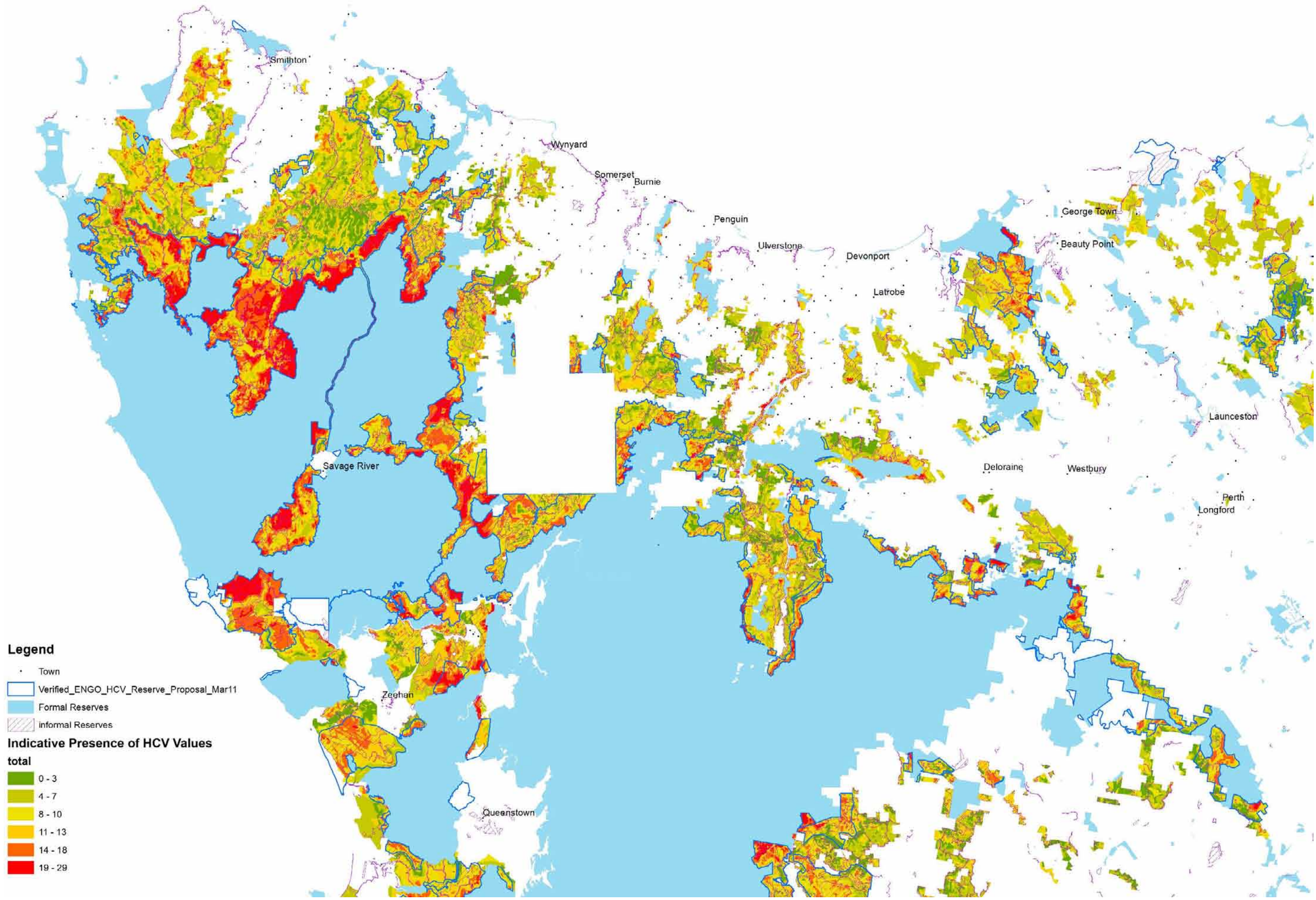
6.3. Maps

Map 1



Legend

-  Roads
-  HCV Reserve Proposals Mar2011
-  informal_reserves_2008
-  Formal Reserves
-  Other State Forest
-  Tasmania



Legend

- Town
- Verified_ENGO_HCV_Reserve_Proposal_Mar11
- Formal Reserves
- ▨ Informal Reserves

Indicative Presence of HCV Values

- total**
- 0 - 3
 - 4 - 7
 - 8 - 10
 - 11 - 13
 - 14 - 18
 - 19 - 29

Smithton

Wynyard

Somerset
Burnie

Penguin

Ulverstone

Devonport

Latrobe

George Town

Beauty Point

Savage River

Deloraine

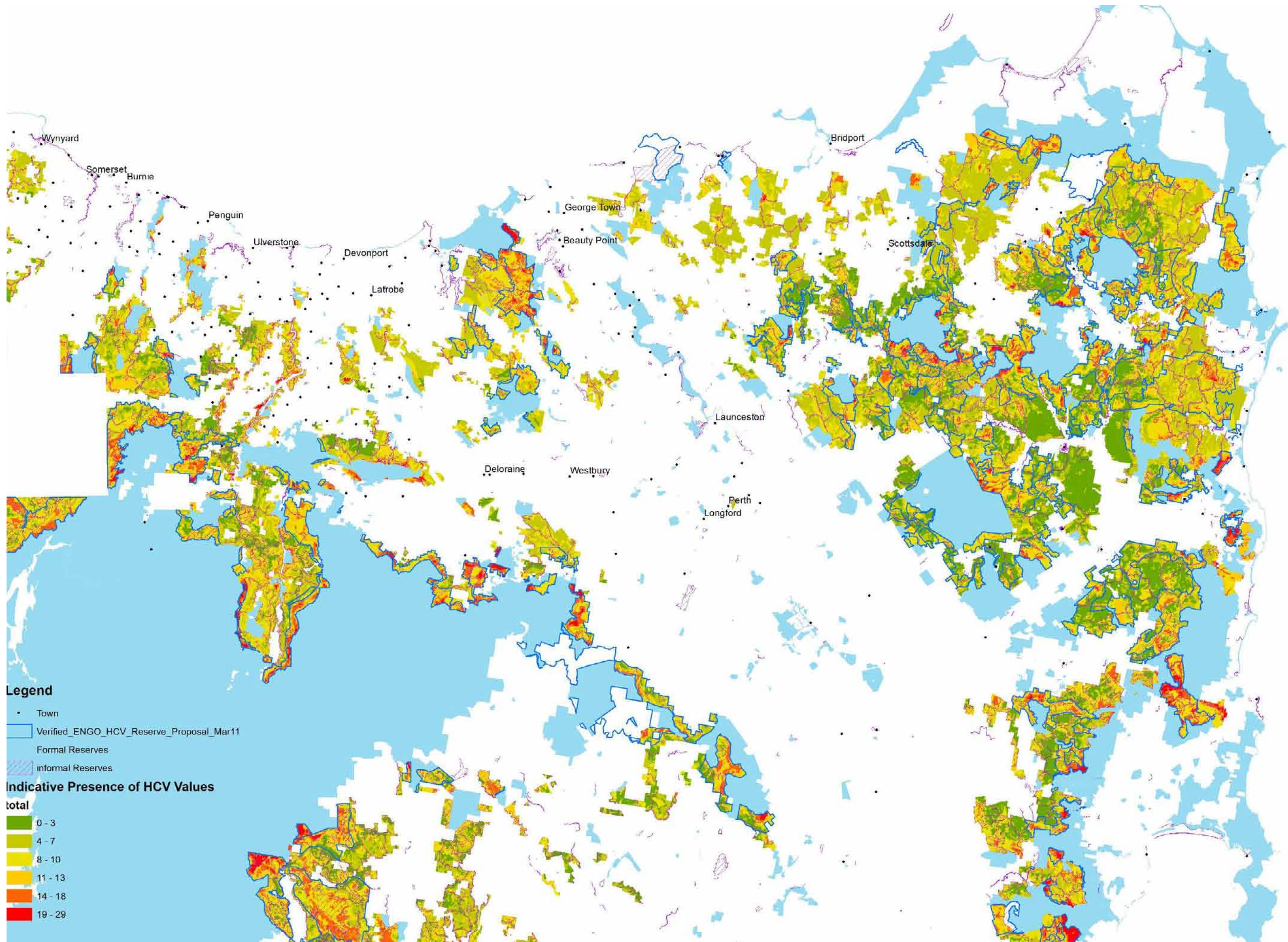
Westbury

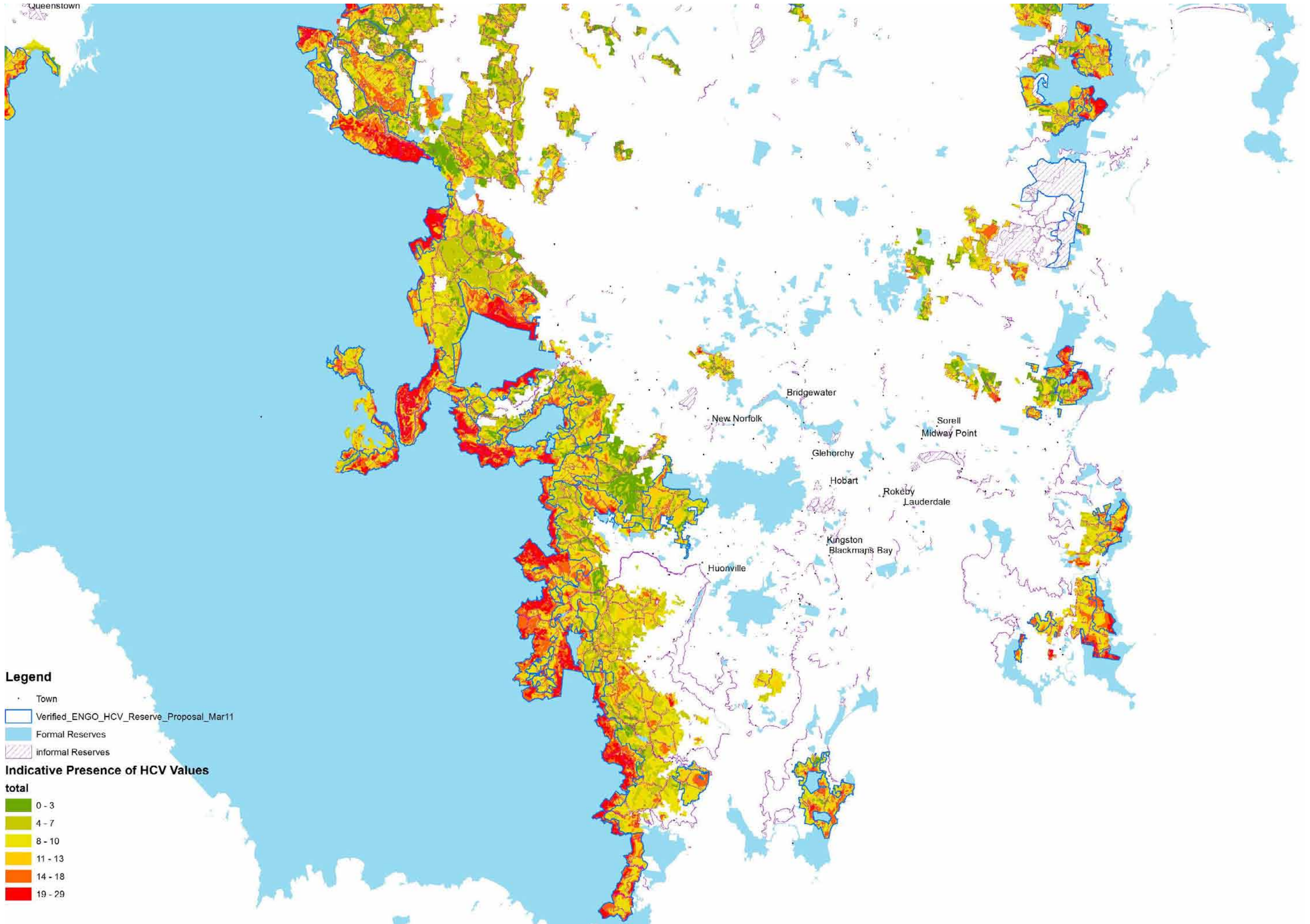
Launceston

Perth
Longford

Zeehan

Queenstown





Legend

- Town
- Verified_ENGO_HCV_Reserve_Proposal_Mar11
- Formal Reserves
- ▨ informal Reserves

Indicative Presence of HCV Values

total

0 - 3
4 - 7
8 - 10
11 - 13
14 - 18
19 - 29

6.4. ENGO and community group reserve proposals for ENGO identified High Conservation Value Forest Reserve Area.