IUCN Conservation Outlook Assessment 2014 **(archived)**
Finalised on 07 November 2014

Please note: this is an archived Conservation Outlook Assessment for Tasmanian Wilderness. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Tasmanian Wilderness

SITE INFORMATION

Country:
Australia
Inscribed in: 1989
Criteria:
(iii) (iv) (vi) (vii) (viii) (ix) (x)

Site description:
In a region that has been subjected to severe glaciation, these parks and reserves, with their steep gorges, covering an area of over 1 million ha, constitute one of the last expanses of temperate rainforest in the world. Remains found in limestone caves attest to the human occupation of the area for more than 20,000 years. © UNESCO

SUMMARY

2014 Conservation Outlook

Good with some concerns

Competing land-use claims along the boundaries of the Tasmanian Wilderness has been a contentious issue ever since the inscription of the property in 1982 and its further extension in 1989. The recent boundary extensions of 2010, 2012 and 2013 have contributed to the Outstanding Universal Value of the site and improved the scope for effective management of the property. Despite considerable management efforts, a high number of threats face both the initially inscribed property and areas to which it was extended. The biggest issues arise from inadequate resourcing of scientific research into WH values and monitoring; increasing pressures to allow intrusive commercial tourism which could impact heavily on key sites and WH values; protection and management of areas which have been recently added to the property. The conflict around these extensions needs to be resolved in order to ensure the long-term conservation of the property.

Current state and trend of VALUES

Low Concern
Trend: Stable

Although the Tasmanian Wilderness is a large and for the most part pristine area which has conserved a great amount of the World Heritage values for which it was inscribed, a number of threatening processes are causing the deterioration of some of its World Heritage values, including erosion of some geomorphological feratures and resultant downstream sedimentation, the extinction of the Lake Pedder Galaxias (an endemic fish) since inscription as well as the imminent extinction of the Orange-bellied Parrot despite intensive conservation measures. Some landscape and wilderness values, ecological processes, and geomorphological values have also declined in parts of the property since inscription.

Overall THREATS

High Threat

The list of current and potential threats is extremely long and detailed, in part due to the wealth of information produced by the PWS and other stakeholders. The management responses to some of these threats have reduced the likelihood of damage to the values for which the property was inscribed. However, the consequences of some of these threats might be significant and additional measures could still be taken. Potential threats include climate change, uncontrolled wildfire and new invasions of alien species and pathogens. Risk assessment plans are in place but the property remains highly threatened. This is compounded by the limited funding available to fully implement measures proposed in management plans.

Overall PROTECTION and MANAGEMENT

Mostly Effective

Protection and management in the Tasmanian Wilderness is mostly effective. However the biggest issues arise from inadequate resourcing of scientific research into WH values and monitoring; increasing pressures to allow intrusive commercial tourism which could impact heavily on key sites and WH values; protection and management of areas which have been recently added to the property.

FULL ASSESSMENT

Description of values

Values

World Heritage values

► **Undisturbed wilderness and spectacular landscapes**
Criterion:(vii)

The property is mostly undisturbed wilderness with spectacular landscapes ranging from glaciated mountains and alpine meadows to buttongrass moorlands, towering forests, untamed rivers and wild coastal scenery, the longest undisturbed stretch of temperate embayed rocky and sandy coastline in the world. The glaciated mountains of the property are aesthetically distinct and outstanding, with red and gold to dark green tones in their blanket of vegetation, the dark tones of their glacial lakes (draft SoOUV in SOC, 2010; SP report 2010).

► **World’s tallest flowering trees forming awe-inspiring forests**
Criterion:(vii)

Awe-inspiring, towering eucalyptus forests with the world’s tallest flowering trees and most of the last great temperate rain forest remaining in Australia (draft SoOUV in SOC, 2010; SP report 2010).

► **Exceptional expression, diversity and scale of karst features going back up to 400 million years**
Criterion:(viii)

The property contains an exceptional expression, extensive scale and very high diversity of ongoing and undisturbed karst processes, including palaeokarst development going back up to 400 million years, hydrothermal

karstification and glacio-karstic interactions (draft SoOUV in SOC, 2010; SP report 2010).

► **Exceptionally broad range of geomorphological phenomena and processes**
Criterion:(viii)

The area contains rocks from almost every geological period and geomorphological features from past glacial events including one of the best available global records of temperate glacial processes during the Late Cainozoic Ice Age. This exceptionally broad range of ongoing geomorphological and soil processes continue to operate in a largely unmodified fashion (draft SoOUV in SOC, 2010). Exceptional range of glacial landforms with characteristics imparted by substrates otherwise absent from southern temperate latitudes provides a record of Quaternary glacial events that is uncluttered by the tectonic instability that occurs in New Zealand and Patagonian Andes and has allowed exceptionally old late Cainozoic glacial phenomena to survive.

► **Exceptional environment for ongoing ecological processes**
Criterion:(ix)

The wide variety of undisturbed environments in the property provides for the continuance of long-ongoing ecological processes, which have resulted in an unusually high proportion of endemic flora and fauna species. The property is also
renowned internationally for the extreme longevity of some of its flora, the oldest of which has been dated as at least 43,000 years old. (draft SoOUV in SOC, 2010; SP report 2010).

► **Unique diversity of ancient taxa**
Criterion:(ix)

A unique diversity of ancient taxa, particularly relict groups with ancestry dating back to the super continent of Gondwana (draft SoOUV in SOC, 2010; SP report 2010).

► **Relict and endemic plant biodiversity**
Criterion:(x)

Exceptional relict and endemic plant species include endemic conifers (e.g. King Billy Pine Athrotaxis selaginoides, Huon Pine Lagarostrobos franklinii and Diselma, Microcachrys, Microstrobos spp.); members of the Cunoniaceae, Escalloniaceae and Winteraceae; Bellendena, Agastachys and Cenarrhenes spp.(all Proteaceae); and other plant genera with Gondwanan links (e.g. Eucryphia, Orites, Lomatia and Nothofagus). The King's Holly (Lomatia tasmanica) appears to have been in existence as a sterile triploid clone for at least 43,000 years, making it the oldest documented vascular plant clone in the world (PWS, 2004). The property also conserves many other threatened and endemic plant species as well as unique ecosystems, including the tall eucalypt forest and sphagnum bogs and fens. The largest extent of endemic Mt Mawson Pine has been included with 2013 extension to include Mt Field NP (Nomination, 1982; PWS, 1999; draft SoOUV in SOC, 2010; DSEWPC, 2012).

► Relict and endemic mammals

Criterion:(x)

Exceptional relict and endemic mammals including monotremes (e.g. Tasmanian Platypus Ornithorhynchus anatinus, Short-beaked Echidna Tachyglossus aculeatus); carnivorous marsupials (e.g. Tasmanian Devil Sarcophilus harrisii; Spotted-tail Quoll Dasyurus maculatus; Swamp Antechinus Antechinus minimus); Broad-toothed Rat (Mastacomys fuscus) and Long-tailed Rat (Pseudomys higginsi) (Nomination, 1982; PWS, 1999; SoOUV in SOC, 2010; DSEWPC, 2012).

► Relict and endemic birds

Criterion:(x)

Relict and endemic birds including parrots (e.g. Orange-bellied Parrot Neophema chrysogaster and the Ground Parrot Pezoporus wallicus) and other threatened species. The Tasmanian Wedge-tailed Eagle (Aquila audax fleayi) is an endangered subspecies endemic to the island (Nomination, 1982; PWS, 1999; SoOUV in SOC, 2010; DSEWPC, 2012).

► Relict and endemic frogs

Criterion:(x)

Seven species of frogs, 3 endemic to Tasmania, occur in the property. The endemic Tasmanian froglet Crinia (=Ranidella) tasmaniensis, Brown Froglet Crinia (=Ranidella) signifera, Brown Tree Frog Litoria ewingii and Tasmanian tree frog Litoria burrowsi, which is mainly restricted to the nominated area, are believed to have Gondwanan origins (Nomination,1982; SoOUV in SOC, 2010; DSEWPC, 2012). The Moss Froglet (Crinia (=Bryobatrachus) nimbus) is an endemic frog discovered after inscription in 1992 and restricted to the southern part of the property (Obendorf, 2005; PWS, 2012a).

► Endemic and threatened skinks

Criterion:(x)

Endemic skinks including the Mountain Skink (Niveoscincus (=Leiolopisma) orocryptus), Northern Snow Skink (Niveoscincus greeni), Southern Snow Skink (Niveoscincus microlepidotus) and the Pedra Branca Skink (Niveoscincus palfreymani, which is restricted to Pedra Branca Island which is included in the property). (Nomination, 1982; PWS, 1999; ANU, 2009; SoOUV in SOC, 2010; DSEWPC, 2012).

► Endemic and threatened freshwater fish

Criterion:(x)

There are 21 species of freshwater fish including eight endemic species. The Swamp Galaxias (Galaxias parvus) and the Clarence Galaxias (Galaxias johnstoni, both endemic to Australia) and the Western Lakes Paragalaxias (Paragalaxias julianus) and the Lake Pedder Galaxias (Galaxias pedderensis, both endemic to Tasmania with the latter endemic to Lake Pedder) are largely restricted to the nominated area (Nomination, 1982; PWS, 1999; SoOUV in SOC, 2010; DSEWPC, 2012).

► Enormous diversity of relict and endemic groups of invertebrates

Criterion:(x)

Enormous variety and diversity of relict and endemic invertebrates, including: velvet worms (Euperipatoides and Ooperipatellus spp.); the Tasmanian Cave Spider (Hickmania troglodytes); aquatic insect groups with close affinities to groups found in South America, New Zealand and Southern Africa (e.g. dragonflies, chironomid midges, stoneflies, mayflies and

caddisflies); crustaceans (e.g. Anaspidacea, Parastacidae, Phreatoicidae); primitive taxa showing links to fauna more ancient than Gondwana (e.g. Anaspids, Trogloneta (a mysmenid spider); species of alpine moths in the subfamily Archiearinae, species in the genus Sabatinca of the primitive lepidopteran sub-order Zeugloptera). (SoOUV in SOC, 2010; DSEWPC, 2012).

Assessment information

Threats

Current Threats

High Threat

The list of current threats is extremely long and detailed, in part due to the wealth of information produced by the PWS and other stakeholders. Noteworthy is that the management responses to most of these threats have reduced the likelihood of damage to the values for which the property was inscribed. However, the consequences of some of these threats might be significant and additional measures could still be taken.

▶ **Fire/ Fire Suppression**

High Threat
Inside site
Outside site

Wildfires, especially ‘landscape-scale fires’ (i.e. fires that are not stopped by normal fire boundaries such as wet forest or major rivers) and peat fires are a great threat. Arson is a primary source of ignition for wildfires and has the potential to cause large-scale major ecological impacts (PWS, 2004). Additional information about fire regimes and their ecological impacts on communities is of the most critical importance to management (PWS, 2004; Ferguson, 2009).

▶ **Logging/ Wood Harvesting**

High Threat

Outside site

Logging outside the property had left an impact on scenic values and the creation of logging tracks near the property degraded wilderness values (remoteness and lack of disturbance). Once old-growth areas of mixed forest and rainforest have been felled, they were mostly anthropogenically converted to eucalypts for increased timber yields. These more flammable young Eucalyptus increase the risk of fires occurring in these areas in the future. Roads built to undertake logging operations in proximity to the property open up vectors of disease and invasive species into wilderness area (HVEC 2007, 2009; SWST, 2008; Hitchcock, 2008; Law, 2010). In November 2012 key forestry industry, union, community and environmental groups developed the Tasmanian Forest Agreement which also included a recommendation for a minor boundary extension of the property (IUCN, 2013). A proposal for a minor boundary extension was consequently submitted for consideration by the World Heritage Committee which approved it in June 2013. However, in late 2013 the State Party submitted another proposal for minor boundary modification which would reverse the 2013 extension and thus open some of the areas for logging. Although the proposal was not approved by the World Heritage Committee (Decision 38COM 8B.47), it remains unclear how the situation with the logging in the region will evolve. Of particular concern the recent repeal of the forestry peace deal which has recently been approved by the parliament (various news sources, September 2014).

► Other

High Threat
Inside site
Outside site

Plant diseases and dieback, especially the root rot disease Phytophthora cinnamomi (PWS, 2004) is a major threat. Previously prevalent along hiking trails, roads built to undertake logging and mining operations in proximity to the property open up pathways to bring this fungus into wilderness area (HVEC 2007, 2009; SWST, 2008; Hitchcock, 2008; Law, 2010). In 2010 a significant new infestation was detected on the Loddon Plains and trial stream monitoring was conducted on the boundary for Phytophthora species. A Phytophthora cinnamomi management plan is in place to mitigate the risk of further spread and management of the pathogen, however, available

resources might be insufficient (SOC, 2012).

► Invasive Non-Native/ Alien Species

Low Threat
Inside site
Outside site

Weed species are generally a problem in areas of mechanical disturbance such as roadsides (e.g. Blackberry Rubus fruticosus agg.) with minor instances of exotic species, generally confined to river bank and littoral sites, occurring in undisturbed ecosystems (PWS, 1999). Control of species threatening coastal processes including Marram Grass (Ammophila arenaria, Pampas Grass (Cortaderia spp.) and Sea Spurge (Euphorbia paralius) are underway (SOC 2010, 2012). Other exotics reported as spreading include Gorse (Ulex europaeus), Ragwort (Senecio jacobaea), Broom (Cytisus scoparius), Canadian Pond Weed (Elodea canadensis) and Holly (Ilex spp.) (Periodic Report, 2002; PWS, 2004; Hitchcock, 2008; Ferguson, 2009).

► Invasive Non-Native/ Alien Species

High Threat
Inside site
Outside site

Alien invasive animals are a significant threat, especially established species such as trout, salmon, starlings, rabbits, European wasps and bumblebees. Illegal introduction of trout into trout-free lakes and rivers for recreational fishing (which occurred in some waterways) seriously degrades the high conservation values of these natural aquatic systems. While feral goats have been removed from the property (PWS, 2004), other species such as the European Starling (which directly impacts Orange-bellied Parrots by using tree-hollow nest sites and by killing incubating females at nest); European Wasps (predating on the endangered Ptunarra brown butterfly); Commercial honeybees (decrease nectar and pollen in leatherwood forests and in some areas may cause a decline in the abundance of native insects); rabbits and Fallow Deer (alter vegetation communities, cause erosion and hamper revegetation of native areas,) and even Superb Lyrebirds which are causing serious localised soil erosion in some sites including the Ida Bay karst where stripping of soils from sinkhole slopes and redposition in sinkhole bases threatens sediment injection into cave environments; are all serious threats

that are being managed (PWS, 2004; Locke, 2007). Management is coordinated by an integrated Invasive Species Branch http://www.dpiw.tas.gov.au/inter.nsf/WebPages/LBUN-8V38X4?open

▶ Erosion and Siltation/ Deposition

High Threat
Inside site
Outside site

Extensive erosion on the Central Plateau in the north-east and coastal erosion threatens geoconservation values (PWS, 2004). Regulation of river flows by hydroelectric power generating operations are associated with unnatural erosion of lake and river banks, and degradation of other values, including changes to flow regimes in the Gordon River since inception of the Middle Gordon power station and now compounded under Basslink hydroelectric power generation operations (PWS, 2004).

▶ Other Ecosystem Modifications

Very Low Threat
Inside site
Outside site

In 2009, Sphagnum Bogs and Associated Fens were listed as an endangered ecological community including sphagnum peatland on state forest. All sphagnum harvesting in the wild in Tasmania is now prohibited (SOC, 2012).

▶ Other

High Threat
Inside site
Outside site

Amphibian Chytrid fungus (Batrachochytrium dendrobatidis) is recognised as a major threatening process for amphibian populations worldwide. Chytrid infection has spread widely in habitats associated with human disturbance but the WH property is still largely free of disease and no further spread of Chytrid or loss of frog populations within the property has been detected since 2010 (SOC, 2012; PWS, 2012a). The fungus is mainly moved by people (by moving infected frogs and tadpoles; from water and mud on boots, camping equipment and vehicle tyres; in water used for drinking, spraying on gravel roads or for fighting fires (Allan & Gartenstein 2009; PWS, 2012a).

Management plans to stop the fungus from affecting frogs in the property are in place. The endemic Tasmanian Tree Frog L. burrowsi has disappeared from much of its former range and several important sites for this frog occur within the WH property (Oberdorf, 2005). A two year biosecurity program by the PWS with surrounding land managers (including Forestry Tasmania and Hydro Tasmania) aims to minimise the spread of diseases and pests into the property including Chytrid (SOC, 2012).

► Other

High Threat
Inside site
Outside site

The recent widespread outbreak of Devil Facial Tumour Disease in Tasmanian Devils has killed more than 90% of adults in high density areas and 40-50% in medium-low density areas. It appears that some infected animals have been found inside the WH property (http://www.tassiedevil.com.au/tasdevil.nsf/TheDisease/A140AACCA1B1F6B0CA2576CE but to date the property is largely disease-free. A major program to conserve the Tasmanian Devil is underway, see http://www.tassiedevil.com.au/tasdevil.nsf/

► Other

High Threat
Inside site
Outside site

The Critically Endangered Orange-Bellied Parrot is threatened by the Psittacine circoviral disease, although to date it has just been detected in parrots in captivity and not in the wild (PWS, 2004; HVEC 2009; SOC, 2008; SOC, 2010). It is unclear whether the disease occurs within wild populations (SOC, 2012).

► Tourism/ visitors/ recreation

High Threat
Inside site

Tourism and visitor activities, including increasing mechanised access to remote areas e.g. all terrain vehicles and quad bikes south of Macquarie Harbour and along coastal regions, increasing use of boats and aircraft flights

to access remote areas; and cruise ships, boating and diving activities in the Port Davey–Bathurst Harbour region, are threats (PWS, 2004). Ecologically unsustainable levels or types of use are being addressed in the Management Plan (PWS, 1999). New proposals to “open up” the WHA to commercial tourism developments are also a major threat. Adequate resourcing is required for effective measures to actually be implemented (IUCN Consultation, 2014).

Potential Threats

High Threat

Potential threats include the geomorpghological and ecological consequences of anthropogenic climate change, uncontrolled wildfire and new invasions of alien species and pathogens. Risk assessment plans are in place but the property remains highly threatened.

▶ Temperature changes

High Threat
Inside site
Outside site

Anthropogenic climate change may already be responsible for changing fire regimes that are resulting in increased soil and regolith erosion and resulting sediment transport along watercourses. In addition to coastal erosion, climate change is likely to include temperature rise, sea level rise, extreme weather events and flash flooding which are likely to affect rates and magnitudes of change in other landscape provinces, including fluvial systems, karst and in the extensive blanket bogs supporting buttongrass ecosystems. In montane and subalpine areas, a change in fire regimes may affect fire-sensitive conifer species—including Huon Pine, Pencil Pine and King Billy Pine—and is likely to cause a significant decline in the populations of fire-sensitive conifer species including alpine species such as Pherosphaera hookeriana, Diselma archeri and deciduous beech, and rainforest vegetation. Changes in fire frequency and intensity have also resulted in landscape changes from extensive erosion, with a particular concern in the Central Plateau and parts of SW Tasmania (eg. Davey River area). Although evaporation rates will increase, streamflow response is likely to be unpredictable, and there will be a reduction in snow cover and a rise in

the climatic treeline (ANU, 2009; Law, 2009). An active programme for monitoring the impacts of climate change on the property and incorporate this programme into a risk-reduction strategy and action plan has been implemented (SOC, 2010).

► Invasive Non-Native/ Alien Species

High Threat
Inside site

The European Fox was introduced to Tasmania in 2001 and since then a targeted campaign to eradicate this pest from the island has been undertaken, although it was still present on the island in 2012 (FEP, 2012). This species is a major threat to native wildlife and the potential establishment of foxes in the property, if they are not already there is a significant emerging threat. Great effort is being put into eradicating this threat (PWS, 2004; FEP, 2012).

► Invasive Non-Native/ Alien Species

Very Low Threat
Inside site

Myrtle rust, an introduced disease affecting Myrtaceae (Eucalyptus plant family) was discovered on mainland Australia in 2010 and is not currently present in Tasmania. The property does not fall within the current modelled climatically suitable areas for its establishment in Tasmania, and steps to mitigate the risk of myrtle rust establishing in Tasmania are being undertaken (SOC, 2012).

Protection and management

Assessing Protection and Management

► Relationships with local people

Some Concern

Local communities have some input into discussions relating to management but no direct role in management; Indigenous peoples directly contribute to some decisions relating to management but their involvement could be

improved. Cooperation with Indigenous people was rated as poor (Periodic Report, 2011). Social values of the WHA are poorly recognised and addressed apart from a few high profile lobby groups, and sense of place issues remain poorly addressed (IUCN Consultation, 2014).

► Legal framework and enforcement

Mostly Effective

National environmental law [World Heritage Properties Conservation Act 1983, Nature Conservation Act 2002, National Parks and Reserves Management Act 2002, Environment Protection and Biodiversity Conservation Act 1999 and others] forms the legislative framework that facilitates protecting the property from threats originating both inside and outside its revised boundaries (SOC, 2012). However, recent changes to national and state laws, coupled with unclear political support towards the World Heritage site are of some concern (IUCN Consultation, 2014).

► Integration into regional and national planning systems

Mostly Effective

There is excellent coordination between all bodies / levels involved in the management of the property (Periodic Report, 2011). However, the poor representation of key WH value stakeholders and lack of representation for value-oriented stakeholders are major deficiencies (IUCN Consultation, 2014).

► Management system

Mostly Effective

Statutory Management Plan (1999) was undergoing review with the intent of producing a revised plan in 2009 (WHC, 2008), which has obviously been delayed. A review of the management plan will be conducted in 2014 (SOC, 2012). Other non-statutory plans (e.g. site, zone, historic heritage, fire management and others); permits; an annual work plan and business plan; codes of practice; agreed ‘Memorandums of Understanding’; traditional use arrangements; and an evaluation and adaptive management system are in place (Periodic Report, 2011).

► Management effectiveness

Mostly Effective

There is diminishing capacity/resources to enforce legislation and/ or regulation in the World Heritage property. The second “State of the Tasmanian Wilderness World Heritage Area” report on management effectiveness is intended to feed into the Tasmanian Wilderness World Heritage Management Plan review, which will be undertaken from March 2015 (SOC, 2012).

► Implementation of Committee decisions and recommendations

Some Concern

At its 37th Session in 2013 the World Heritage Committee approved the minor extension of the site which added 172,500 ha to the total area of the site (Decision 37 COM 8B.44). However, in late 2013 the State Party submitted another proposal for minor boundary modification which would reverse by 43% the area of the 2013 extension. This reversal was, however, not approved by the World Heritage Committee (Decision 38 COM 8B.47).

► Boundaries

Mostly Effective

The boundaries of the site were changed by a series of minor extensions in 2010, 2012 and 2013. The latter added 172,500 hectares to the site and added to the integrity of the site in relation to its natural values (IUCN, 2013).

► Sustainable finance

Some Concern

The available budget is not acceptable and must be further improved to fully meet the management needs; the existing sources of funding are secure in the medium-term and planning is underway to secure funding in the long-term (Periodic Report, 2011). The federal and state governments have previously provided significant financial support ($A3.4 million per annum). However, funding has been reduced since election of new national government in late 2013 (IUCN Consultation, 2014). Additionally, a three-year Tasmanian Wilderness World Heritage Area biosecurity program and coastal weed program ($A681,615) is in place (SOC, 2012).

▶ Staff training and development

Mostly Effective

Available human resources are are below what is necessary to properly manage the World Heritage Property in a way that will protect its inscribed WH values; training opportunities were rated as low apart from risk preparedness and enforcement which was medium (Periodic Report, 2011; IUCN Consultation, 2014).

▶ Sustainable use

Mostly Effective

It seems there is limited fishing outside the property and some wood collection inside the property both of which seem to be insignificant (Periodic Report, 2011).

▶ Education and interpretation programs

Data Deficient

Data deficient

▶ Tourism and interpretation

Highly Effective

Tourism and interpretation reported as good (Periodic Report, 2011).

▶ Monitoring

Mostly Effective

A number of monitoring programmes is in place (Periodic Report, 2011). However, available resources are insufficient to ensure comprehensive monitoring of all key values (IUCN Consultation, 2014).

▶ Research

Highly Effective

There is a comprehensive, integrated programme of research, which is relevant to management needs and/or improving understanding of

Outstanding Universal Value (Periodic Report, 2011).

Overall assessment of protection and management

Mostly Effective

Protection and management in the Tasmanian Wilderness is mostly effective. However the biggest issues arise from inadequate resourcing of scientific research into WH values and monitoring; increasing pressures to allow intrusive commercial tourism which could impact heavily on key sites and WH values; protection and management of areas which have been recently added to the property.

► Assessment of the effectiveness of protection and management in addressing threats outside the site

Data Deficient

Very ambitious biosecurity plans have been proposed (Allan & Gartenstein, 2010) but whether they will be able to be implemented at a level to address biosecurity threats is unsure.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► Undisturbed wilderness and spectacular landscapes

High Concern
Trend:Deteriorating

While the wilderness and landscape value of the property remains very high, proposed new commercial tourism developments are of considerable concern (IUCN Consultation, 2014).

► World’s tallest flowering trees forming awe-inspiring forests

Low Concern
Trend:Data Deficient

The Eucalypt forests within the property appear to be largely intact and the recent extensions of the site included further areas further extensive stands of tall eucalypt forest (IUCN, 2013).

► Exceptional expression, diversity and scale of karst features going back up to 400 million years

Good
Trend:Stable

While no significant damage to the karst features in the property have been reported since inscription, potential threats which include erosion due to climate change do not augur well for the future. The most recent (2013) extension of the site also included significant karst landforms (IUCN, 2013).

► Exceptionally broad range of geomorphological phenomena and processes

Low Concern
Trend:Data Deficient

Annual reports on the impact of Basslink (a potentially threatening process on river flows of the Gordon River within the property) are provided at http://www.hydro.com.au/environment/basslink-studies. While beyond the scope of this exercise to determine what effect this has had on geomorphology, it has been reported that from 2008-2010 “there has been some improvement in bank vegetation cover and little geomorphic change. However an expected return to higher volume and more sustained discharge in 2011 is predicted to reverse those trends” (SOC, 2012). Therefore it is clear that some geomorphological processes within the property since inscription are being artificially influenced.

► Exceptional environment for ongoing ecological processes

High Concern
Trend:Deteriorating

New logging roads into wilderness areas adjacent to the property brought with them the introduction of weeds, feral animals and genetic contamination; and exacerbation of the threat to adjacent alpine vegetation and rainforests from forestry-related burns and arson (Law, 2010). Since inscription new weed infestations and in 2010 a significant new infestation of

Phytophthora was detected on the Loddon Plains (SOC, 2012). Despite management, this is an indication that ecological processes are at risk of being damaged or curtailed.

▶ Unique diversity of ancient taxa

Low Concern
Trend:Stable

No reports of ancient taxa being lost or depleted since inscription (apart from the Orange-bellied Parrot, see below) have been reported.

▶ Relict and endemic plant biodiversity

Low Concern
Trend:Stable

The property contains a number of relict and endemic plants, many of which are threatened and the property is their last stronghold. No reports on plant species becoming increasingly threatened have been reported.

▶ Relict and endemic mammals

High Concern
Trend:Stable

The property contains a number of relict and endemic mammals which appear to be stable, although there is concern about the still common Tasmanian Platypus Ornithorhynchus anatinus due to the introduction of Platypus Fungal Disease. However the charismatic Tanzanian Devil was listed as Endangered under the Threatened Species Protection Act 1995 in 2008 due to Devil Facial Tumour Disease. Efforts to prevent the disease from infecting Devil populations occurring in the property are underway (PWS, 2012b; Hawkins et al., 2008).

▶ Relict and endemic birds

Low Concern
Trend:Deteriorating

Bird species cited at inscription include Orange-bellied Parrots Neophema chrysogaster which have undergone an extremely rapid decline (Birdlife, 2012) although its greatest threats may come from outside the property when it winters on mainland Australia. The last breeding site of this species

at Melaleuca has recently been added to the property (SOC, 2012). The Ground Parrot Pezoporus wallicus, one of only three ground-dwelling parrots in the world, appears stable.

▶ Relict and endemic frogs

High Concern
Trend:Stable

Of the seven species of frogs occurring in the property including the endemic Tasmanian tree frog Litoria burrowsi which is mainly restricted to the property, none have been listed as threatened (PWS, 2012a). This is because the Chytrid fungus has still not affected frog populations in the property although more study is needed (Obendorf, 2005). Ambitious biosecurity plans have been proposed (Allan & Gartenstein, 2010) to keep Chytrid and other pathogens out of the property, but whether they will be able to be implemented at a level to address biosecurity threats is unsure.

▶ Endemic and threatened skinks

High Concern
Trend:Stable

Although not classified as threatened, the endemic Mountain Skink (Niveoscincus (=Leiolopisma) orocryptus), Northern Snow Skink (Niveoscincus greeni) and Southern Snow Skink (Niveoscincus microlepidotus) are potentially threatened by climate change. The Pedra Branca Skink (Niveoscincus palfreymani, which is restricted to Pedra Branca Island which is included in the property) is listed as Vulnerable. The population underwent a decline from 1986-1996 of 49% (from 560 to 290 individuals) when monitoring first started, but appears to have undergone a recovery by 2000 with an estimated 476 individuals (TPU, 2001). No more recent figures found.

▶ Endemic and threatened freshwater fish

High Concern
Trend:Deteriorating

Freshwater fish in Tasmania have naturally very limited distributions and have declined and/or are at risk of future decline due to introduced species and/or loss or degradation of habitat (TPS, 2006). The Lake Pedder Galaxias

Galaxias pedderensis endemic to Lake Pedder and still occurring in the property at inscription has become Extinct in the Wild, probably due to the introduction of alien trout Salmo trutta and native Climbing Galaxias G. brevipinnis, and the loss of the lake and meandering stream habitat with inundation. However two translocated populations of this species remain in Tasmania (Wager, 1996; TPS, 2006). Most of the other native Galaxias occurring in the property are also threatened with the Swamp Galaxias Galaxias parvus, facing similar threats, listed as VU, the Clarence Galaxias (Galaxias johnstoni) listed as CR and the Western Paragalaxias Paragalaxias julianus) is listed as rare (Wager, 1996; TPS, 2006).

► **Enormous diversity of relict and endemic groups of invertebrates**

Data Deficient
Trend:Data Deficient

Nearly half of the invertebrate species found within the property are endemic (PWS, 2012c). It is beyond the scope of this evaluation to examine trends in invertebrate populations in the property, although Tasmanian Devils are the sole host to the only threatened invertebrate parasite, a tapeworm, Dasyurotaenia robusta, which is currently listed as Rare under the Tasmanian Threatened Species Protection Act 1995 (Hawkins et al., 2008). So if the Tasmanian Devil declines, so does its parasite.

Summary of the Values

► **Assessment of the current state and trend of World Heritage values**

Low Concern

Trend: Stable

Although the Tasmanian Wilderness is a large and for the most part pristine area which has conserved a great amount of the World Heritage values for which it was inscribed, a number of threatening processes are causing the deterioration of some of its World Heritage values, including erosion of some geomorphological feratures and resultant downstream sedimentation, the extinction of the Lake Pedder Galaxias (an endemic fish) since inscription as well as the imminent extinction of the Orange-bellied Parrot despite intensive conservation measures. Some landscape and wilderness values, ecological processes, and geomorphological values have also declined in parts of the

property since inscription.

Additional information

Key conservation issues

▶ **Tourism**

Local

Increasing tourism will lead to increased threats to all WH values, requiring careful management, including properly informed decisions as to what developments may be permitted and where, and subsequent implementation and management of these enterprises.

▶ **Climate change**

Global

Possibly the greatest issue that should come first, but it is the least easily managed given that the drivers come from outside the property and are still unknown. However some effects from climate change have already been demonstrated and many more predicted.

▶ **Hydrological management and erosion**

Local

The Gordon River has already been dammed and the dam was excluded from the property when inscribed. Water flow issues resulting from the dam have been extensively monitored, especially due to the “Basslink” project (the exchange of off-peak electric power to and from mainland Australia). Change in water flows will have an effect on biodiversity and geomorphological values of the property.

▶ **Fire and fire regimes**

Local

Parts of the property require fire to be maintained and regenerate, and other parts do not. The ecological constraints in fire management are a key issue for

maintenance of World Heritage values.

▶ **Invasive species (animals, plants and pathogens)**
National

Current and new invasive species issues will continue to threaten the property and will always require preventive measures and management.

Benefits

Understanding Benefits

▶ **Does management of the site provide jobs (e.g. for managers or rangers)?**

Jobs in park management, species recovery and monitoring.

▶ **Outdoor recreation and tourism**

Important source of revenue and jobs

▶ **Sacred natural sites or landscapes**

One of the last great temperate wilderness left

▶ **Carbon sequestration, Soil stabilisation, Water provision (importance for water quantity and quality), Pollination**

Carbon sequestration, water purity and catchment, soil stabilisation, coastal protection, pollination

▶ **Importance for research, Contribution to education**

Great deal of research and education in the property which also creates jobs

▶ **History and tradition, Wilderness and iconic features**

Conservation of sacred sites and historical aboriginal sites

► Pollination

Reports of bee-keeping along road going through the reserve, not apparent to what extent.

Summary of benefits

Due to the large size of the property and the fact that it has been inscribed for all four natural criteria as well as three cultural criteria means that the property provides a wide array of benefits to people living outside the site (as only a few park management staff live within the site). In addition to nature conservation and conserving cultural and wilderness values, the property provides a wide range of ecosystem services, furnishes a wealth of scientific knowledge and provides jobs either through park management, tourism, research and education. Possibly some local income is gained through fishing (if it is allowed inside the property) and bee-keeping.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Australian and Tasmanian govts.		Devil Island Project, which runs devil quarantine and isolation projects
2	PWS, Wildcare etc.		Many organisations including for example WILDCARE Save the Orange-bellied parrot Fund, which supports research projects, on-ground management projects and breeding-and-release programs that will enhance the survival prospects of the orange-bellied parrot as a wild species. Wildcare also involved in coastal projects and World Heritage projects.

№	Organization/ individuals	Project duration	Brief description of Active Projects
3	PWS		A two year biosecurity program by the PWS with surrounding land managers (including Forestry Tasmania and Hydro Tasmania) aims to minimise the spread of diseases and pests into the property including Chytrid (SOC, 2012).

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	N.A.	Improved site inventory and study of WH cultural heritage values	
2	N.A.	Improved site inventory & study of WH geoheritage values	
3	N.A.	Enhanced understanding of social values of the WHA to all stakeholders in protection of its natural character and sense of place	

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