Appendix 7: WHA Listing Criteria for TWWHA and results from a semi-qualitative risk assessment against each criterion

Table A8.1: Preliminary Semi-qualitative Risk Assessment of World Heritage Area Values

Criteria	Comment	Detailed Risk Assessment Required?
Criterion (III) Unique cultural tradition		
The Tasmanian Wilderness bears a unique and exceptional testimony to an ancient, ice age society, represented by Pleistocene archaeological sites that are unique, of great antiquity and exceptional in nature, demonstrating the sequence of human occupation at high southern latitudes during the last ice age.	Applies to aboriginal heritage. Aboriginal Heritage Tasmania has provided preliminary advice to the Marine Farming Branch that there is unlikely to be a significant impact.	N
Criterion (IX) Outstanding examples of on-going evolution		
The Tasmanian Wilderness has outstanding examples representing significant ongoing geological processes and ongoing ecological and biological processes in the evolution and development of terrestrial, fresh water and coastal ecosystems and communities, including:		
sites where processes of geomorphological and hydrological evolution are continuing in an uninterrupted natural condition (including karst formation, periglaciation which is continuing on some higher summits (e.g. on the Boomerang, Mount La Perouse, Mount Rufus, Frenchmans Cap), fluvial deposition, evolution of spectacular gorges, marine and aeolian deposition and erosion, and development of peat soils and blanket bogs);	Unlikely to have an impact.	N
ecosystems which are relatively free of introduced plant and animal species;	Increased boat traffic and potential shoreline clean-ups in and adjacent to the WHA could increase the risk of introduced species (marine and terrestrial)	Y
coastal plant communities free of exotic sand binding grasses which show natural processes of dune formation and erosion;	Unlikely to have an impact.	N
undisturbed catchments, lakes and streams;	Increased development adjacent to the WHA has potential to impact directly and/or indirectly on this value.	Y

alpine ecosystems with high levels of endemism;	Unlikely to have an impact.	N
the unusual 'cushion plants' (bolster heaths) of the alpine ecosystems;	Unlikely to have an impact.	N
ecological transitions from moorland to rainforest;	Unlikely to have an impact.	N
pristine tall eucalypt forests;	Unlikely to have an impact.	N
examples of active speciation in the genus Eucalyptus, including sites of: hybridisation and introgression; clinal variation (e.g. *E. subcrenulata*); habitat selection (e.g. *E. gunnii*); and transition zones which include genetic exchanges between Eucalyptus species;	Unlikely to have an impact.	N
plant groups in which speciation is active (e.g. Gonocarpus, Ranunculus and Plantago);	Unlikely to have an impact.	N
conifers of extreme longevity (including Huon pine, Pencil pine and King Billy pine);	Unlikely to have an impact.	N
endemic members of large Australian plant families (e.g. heaths such as *Richea pandanifolia*, *Richea scoparia*, *Dracophyllum minimum* and *Prionotes cerinthoides*);	Unlikely to have an impact.	N
endemic members of invertebrate groups;	Unlikely to have an impact.	N
invertebrate species in isolated environments, especially mountain peaks, offshore islands and caves with high levels of genetic and phenotypic variation;	Unlikely to have an impact.	N
invertebrates of unusually large size (e.g. the giant pandini moth - Proditrix sp, several species of Neanuridae, the brightly coloured stonefly - *Eusthenia spectabilis*);	Unlikely to have an impact.	N
invertebrate groups which show extraordinary diversity (e.g. land flatworms, large amphipods, peripatus, stag beetles, stoneflies);	Unlikely to have an impact.	N
skinks in the genus *Leiolopisma* which demonstrate adaptive radiation in alpine heaths and boulder fields on mountain ranges;	Unlikely to have an impact.	N
examples of evolution in mainland mammals (e.g. sub-species of Bennett's wallaby - *Macropus rufogriseus*, swamp antechinus - *Antechinus minimus*, southern brown bandicoot - *Isodon obesulus*, common wombat - *Vombatus ursinus*, common ringtail possum - *Trichosurus vulpecula*, eastern pygmy possum - *Cercartetus nanus*, the swamp rat - *Rattus lutreolus*); in many birds (e.g. the azure kingfisher - *Alcedo azurea*) and in island faunas;	Azure Kingfisher assessed individually; unlikely to have an impact on other examples of evolution of mainland animals and birds.	N
animal and bird species whose habitat elsewhere is under threat (e.g. the spotted-	Unlikely to have an impact.	N

tail quoll - *Dasyurus maculatus*, swamp antechinus - *Antechinus minimus*, broad-toothed rat - *Mastacomys fuscus* and the ground parrot - *Pezoporus wallicus*); and		
the diversity of plant and animal species.	Threatened species to be assessed individually	N
Criterion (V) Outstanding example of traditional settlement		
The Tasmanian Wilderness provides outstanding examples of a significant, traditional human settlement that has become vulnerable under the impact of irreversible socio-cultural or economic change. The World Heritage values include archaeological sites which provide important examples of the hunting and gathering way of life, showing how people practised this way of life over long time periods, during often extreme climatic conditions and in contexts where it came under the impact of irreversible socio-cultural and economic change.	Applies to aboriginal heritage. Aboriginal Heritage Tasmania has provided preliminary advice to the Marine Farming Branch that there is unlikely to be a significant impact.	N
Criterion (VI) Directly associated with events or living traditions		
The Tasmanian Wilderness is directly associated with events of outstanding universal significance linked to the adaptation and survival of human societies to glacial climatic cycles. The World Heritage values include archaeological sites including Pleistocene sites, which demonstrate the adaptation and survival of human societies to glacial climatic cycles and periods of long isolation from other communities (e.g. the human societies in this region were the most southerly known peoples on earth during the last ice age).	Applies to aboriginal heritage. Aboriginal Heritage Tasmania has provided preliminary advice to the Marine Farming Branch that there is unlikely to be a significant impact.	N
Criterion (VII) Contains superlative natural phenomena		
The landscape of the Tasmanian Wilderness has exceptional natural beauty and aesthetic importance and contains superlative natural phenomena including view-fields and sites of exceptional natural beauty associated with:		
flowering heaths of the coastline;	Unlikely to have an impact.	N
the south and south-west coasts comprising steep headlands interspersed with sweeping beaches, rocky coves and secluded inlets;	Unlikely to have an impact.	N
eucalypt tall open forests including Eucalyptus regnans, the tallest flowering plant species in the world;	Unlikely to have an impact.	N
rainforests framing undisturbed rivers;	Development adjacent to the WHA, which may affect view-fields.	Y
buttongrass, heath and moorland extending over vast plains;	Unlikely to have an impact.	N
wind-pruned alpine vegetation;	Unlikely to have an impact.	N

sheer quartzite or dolerite capped mountains (including Cradle Mountain, Frenchmans Cap, Federation Peak and Precipitous Bluff);	Unlikely to have an impact.	N
deep, glacial lakes, tarns, cirques and pools throughout the ranges;	Unlikely to have an impact.	N
the relatively undisturbed nature of the property;	Development adjacent to the WHA.	Y
the scale of the undisturbed landscapes;	Development adjacent to the WHA.	Y
the juxtaposition of different landscapes;	Unlikely to have an impact.	N
the presence of unusual natural formations (e.g. particular types of karst features) and superlative examples of glacial landforms and other types of geomorphic features; and	Unlikely to have an impact.	N
rare or unusual flora and fauna.	Threatened species will be assessed individually.	Y
Criterion (VIII) Outstanding examples of stages of earth's history		
The Tasmanian Wilderness is an outstanding example representing major stages of the earth's evolutionary history. The World Heritage values include geological, geomorphological and physiographic features, including:		
rock formations including Precambrian rocks and Cambrian rocks;	Unlikely to have an impact.	N
Late Cambrian to Early Ordovician sequences of the Denison Range;	Unlikely to have an impact.	N
fossiliferous Ordovician limestone;	Unlikely to have an impact.	N
Permian-Triassic sediments and associated Jurassic dolerite intrusions;	Unlikely to have an impact.	N
Darwin Crater and Lake Edgar fault;	Unlikely to have an impact.	N
karst systems including glacio-karstic features;	Unlikely to have an impact.	N
karst geomorphology and karst hydrology;	Unlikely to have an impact.	N
glaciation, including glacial deposits of the Late Cainozoic, Permo-Carboniferous and Precambrian;	Unlikely to have an impact.	N
extraglacial areas (eg solifluction sheets, block streams, rock glaciers, landslip deposits);	Unlikely to have an impact.	N
periglaciation (e.g. Mt Rufus, Frenchman's Cap);	Unlikely to have an impact.	N
soils (e.g. peatlands); and	Unlikely to have an impact.	N
undisturbed river systems which show particular geomorphological processes;	Increased development adjacent to the WHA has potential to impact directly and/or indirectly on this value.	Y

relict biota which show links to ancient Gondwanan biota including: endemic conifers (including the King Billy pine Athrotaxis selaginoides, the Huon pine Lagarostrobos franklinii and the genera Diselma, Microcachrys, Microstrobos); plant species in the families Cunoniaceae, Escalloniaceae and Winteraceae;	Unlikely to have an impact.	N
the plant genera Bellendena, Agastachys and Cenarrhenes in the Proteaceae;	Unlikely to have an impact.	N
other plant genera with Gondwanan links (e.g. Eucryphia, Orites, Lomatia and Nothofagus);	Unlikely to have an impact.	N
monotremes (e.g. platypus Ornithorhynchus anatinus, short beaked echidna Tachyglossus aculeatus);	Unlikely to have an impact.	N
dasyurid species;	Unlikely to have an impact.	N
parrots (e.g. orange-bellied parrot and the ground parrot);	Orange-bellied parrot assessed individually; unlikely to have an impact on the ground parrot	N
indigenous families of frogs with Gondwanan origins (e.g. Tasmanian froglet *Ranidella tasmaniensis*, brown froglet *Ranidella signifera*, Tasmanian tree frog *Litoria burrowsi*, brown tree frog *Litoria ewingi*);	Unlikely to have an impact.	N
invertebrate species in the genera Euperipatoides and Ooperipatellus;	Unlikely to have an impact.	N
the Tasmanian cave spider (Hickmania troglodytes);	Unlikely to have an impact.	N
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);	Unlikely to have an impact.	N
crustaceans (e.g. Anaspidacea, Parastacidae, Phreatoicidae);	Unlikely to have an impact.	N
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).	Unlikely to have an impact.	N
Criterion (X) Important habitats for conservation of biological diversity		
The ecosystems of the Tasmanian Wilderness contain important and significant natural habitats where threatened species of animals and plants of outstanding universal value from the point of view of science and conservation still survive, including:		
rainforest communities;	Unlikely to have an impact.	N

alpine communities;	Unlikely to have an impact.	N
moorlands (e.g. in the far south-west);	Unlikely to have an impact.	N
riparian and lacustrine communities (including meromictic lakes).	Potential for an impact	Y
habitats which are relatively undisturbed and of sufficient size to enable survival of taxa of conservation significance including endemic taxa;	Threatened species assessed individually.	N
plant species of conservation significance	Unlikely to have an impact.	N
animal species of conservation significance, such as: spotted-tail quoll *Dasyurus maculatus;* swamp antechinus *Antechinus minimus* broad-toothed rat *Mastacomys fuscus* ground parrot *Pezoporus wallicus* orange-bellied parrot *Neophema chrysogaster* Lake Pedder galaxias *Galaxias pedderensis* Pedra Branka skink *Niveoscincus palfreymani*	Orange-bellied parrot assessed individually; unlikely to have an impact on other animal species of conservation significance.	N