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The Tarkine, Waratah Rd, Savage River, TAS, Australia

Photographs: None

List: National Heritage List

Class: Natural

Legal Status: [Place not included in NHL](#)

Place ID: 105751

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Nominator's Summary Statement of Significance:

Summary of National Heritage Values in the Tarkine

This summary is adapted from Draft Proposal for a Tarkine National Park (in. press)

This proposal is for a National Heritage Area in the Tarkine Wilderness in North-West Tasmania. The proposal covers an area of 447,000 ha. The word 'Tarkine' has been adopted for the region in recognition of the Tarkine (Tar.kine.ner) people who occupied the Sandy Cape region of the Tarkine' Coast for many thousands of years.

The natural and cultural values of the Tarkine are well recognised and include;

- The largest single tract of rainforest in Australia, and the largest Wilderness dominated by rainforest in Australia;
- 190,000 ha of rainforest in total;
- The northern limit of Huon Pine (*Lagarostrobos franklinii*);
- A high diversity of wet eucalypt (tall) forests including large, contiguous areas of *Eucalyptus obliqua*;
- A great diversity of other vegetation communities, such as; dry sclerophyll forest and woodland, buttongrass moorland, sandy littoral communities, wetlands, grassland, dry coastal vegetation and 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 vertebrate fauna including 28 terrestrial mammals, 111 land and freshwater birds, 11 reptiles, 8 frogs and 13 freshwater fish;
- Over 50 rare, threatened and endangered species of flora and fauna, including the

Tasmanian Wedge Tailed Eagle and Giant Freshwater Crayfish;

- A complex and diverse invertebrate fauna, including; at least 16 species found nowhere else, the largest freshwater invertebrate on earth (*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;
- 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);
- 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 retaining its original vegetation;
- Other geomorphic features such as the Bulgobac glacial end moraine and fossil sites at Marionoak and Hatfield River;
- Large areas of high quality wilderness centred on the Meredith Range and the Sumac region and three separate areas (Norfolk Range, Mt Bertha/Donaldson River and Savage/Keith River) which actually abut each other, creating a continuous stretch of wilderness covering much of the proposed National Heritage Area;
- Areas of high quality scenic value such as; Australia's largest tract of rainforest, the Meredith Range, the Norfolk Range and the coastline; and
- 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".

Official Values:

Criterion: A Events, Processes

The cool temperate rainforests of Tasmania are important as a refuge for flora species with ancient lineages and their contribution to understanding aspects of Australia's evolutionary processes. The Tarkine contains the most extensive and least fragmented areas of cool temperate rainforest in Australia (Jarman et al 1987 p9 and Read 1999 p163) and therefore is important in conserving these values.

The cool temperate rainforests of Tasmania are a reduced and derived subset of Australian flora present in the Tertiary (Read and Brown 1996 p172). They are derived in part from families that were present before and during the breakup of Gondwana (Hill 1995a p29) and are defined as forests that are dominated by species of *Nothofagus*, *Atherosperma*, *Eucryphia*, *Athrotaxis*, *Lagarostrobos*, *Phyllocladus* or *Diselma* that are capable of regenerating in the absence of large-scale events such

as fire (Jarman et al 1999 p145).

The cool temperate rainforests within the Tarkine area are significant for our understanding of evolutionary processes. Tasmania's rainforests represent a living example of one of the most primitive vegetation formations on Earth, and those species that remain have demonstrated an extraordinary ability to survive (Hill 1990 p11). Most Tasmanian rainforest tree species can clearly be demonstrated to be from around the mid Tertiary and for *Nothofagus cunninghamii*, *Eucryphia lucida*, *Phyllocladus aspleniifolius* and *Athrotaxis selaginoidea* the fossil record of their direct ancestors exceeds 40 million years (Hill 1990 p11).

Extant Tasmanian rainforests contain flora from families that were once far more diverse and widespread than they currently are (Hill 1995a p29). The fossil record shows that the extent of the original Gondwanan flora within Australia was severely reduced in the north by increasing temperatures and cycles of aridity. However, elements of early rainforest flora have survived in Tasmania largely as a result of its more stable cool temperate climate and its isolation through long periods of its history (Hill et al 1999 p43). As a result, the Tasmanian rainforest is one of the best places worldwide where the effect of climatic change on vegetation during the Cenozoic can be considered in such detail (Hill et al 1999 p43).

The fossil flora site at Little Rapid River also provides evidence of the endurance and diversity of the Tasmanian rainforest flora over time. It is one of the most important Tertiary fossil deposits in Australia (Hill 1995b p17) and is of importance for an understanding of Tertiary vegetation history in south-eastern Australia (Hill 1995b p18). The fossils are from about 35 million years ago, a period which saw climatic upheaval in Australia (Hill 1995b p4).

The fossil record provides a remarkable diversity of conifer species that no modern vegetation community approaches (Tasmanian Geodiversity Database 2000). The Little Rapid River fossil site has produced the highest diversity of species of all the Tasmanian Tertiary fossil flora sites with more than 21 species from 14 genera and 4 families having been described (Hill 1995a p26).

During the late Holocene Aboriginal people on the west coast of Tasmania and the southwestern coast of Victoria developed a specialised and more sedentary way of life based on a strikingly low level of coastal fishing and dependence on seals, shellfish and land mammals (Lourandos 1968; Bowdler and Lourandos 1982).

This way of life is represented by Aboriginal shell middens which lack the remains of bony fish, but contain 'hut depressions' which sometimes form semi-sedentary villages. Nearby some of these villages are circular pits in cobble beaches which the Aboriginal community believes are seal hunting hides (David Collett pers. comm.; Stockton and Rodgers 1979; Cane 1980; AHDB RNE Place ID 12060).

The Tarkine coast has the greatest number, diversity and density of Aboriginal hut depressions in Australia. The hut depressions together with seal hunting hides and middens lacking fish bones on the Tarkine coast (Legge 1929:325; Pulleine 1929:311-312; Hiatt 1967:191; Jones 1974:133; Bowdler 1974:18-19; Lourandos 1970:Appendix 6; Stockton and Rodgers 1979; Ranson 1980; Stockton 1984b:61;

Collett *et al* 1998a and 1998b) are a remarkable expression of the specialised and more sedentary Aboriginal way of life.

Criterion: B Rarity

The Tarkine contains extensive high-quality wilderness and natural landscape values as well as the largest tract of cool temperate rainforest in Australia. Such largely undisturbed extensive tracts of cool temperate rainforest are extremely rare worldwide, the only other remnants being in New Zealand, Chile, Siberia and western North America (TCFA 2005). The consideration of wilderness in The Tarkine as a National Heritage value must encompass all of these areas as parts of a whole, as a single wilderness region, as is traditionally done for the Tasmanian Wilderness World Heritage Area.

Lichen data indicate that the forests of the Tarkine are unique in a global context. They are a centre of distribution for many rare or unusual species, including ones that may occur in other parts of the world, but whose Southern Hemisphere, Australian or Tasmanian distributions are confined entirely to the Tarkine area. The callidendrous rainforests are particularly noteworthy for their unusual lichen floras (Kantvilas and Jarman 2006).

The magnesite karst systems near Bowry Creek-Main Rivulet, the Lyons River and the Arthur-Keith Rivers area are thought to be unique in Australia and globally rare (Sharples 1997 p118). According to the TGD (2000), the same three areas make up the best-developed magnesite karst known in Australia.

Within these systems, the areas around Bowry Cave at Bowry Creek, Pendant Cave at Main Rivulet, most of the karst in the Lyons River area, the pinnacles at Central Creek (a tributary of the Arthur River) are the most significant concentrations of magnesite karst in the area (Houshold 2004 pers. comm.). They are the only areas in Australia where the nature of the surface and underground landforms provide the opportunity to investigate ongoing natural landscape processes related to the solution of magnesium carbonate rock (Houshold 2009 pers. comm.).

Criterion: E Aesthetic characteristics

The Tarkine contains areas of a wild, undisturbed character that are remote and highly natural (Context 2007) and are highly valued by the Tasmanian community in particular and parts of the broader Australian community as evidenced by support for campaigns to protect it. It is an important symbol of the wilderness qualities of Tasmania and Australia.

‘For the modern Australian community a significant cultural value of the Tasmanian wilderness is as a place of reflection, a source of inspiration and as a symbol of untouched nature’ (Parks and Wildlife cited in Context 2007). The responses contained in the book ‘Tarkine’, which resulted from a group of 35 prominent Tasmanian photographers and writers spending two weeks in the Tarkine, ‘speak of the subtle and reflective qualities exhibited by the landscape: *The Tarkine rations nothing. It gives its all in a fury of excess that is raw coast, mountain ranges, dark gashes of gullies and the benediction of unbroken tracts of old-man forest*’ (Context 2007).

The combination of coastal, rainforest, and mountainous landscapes creates a meeting of physical characteristics, colours and textures that is appreciated and represented in photography and professional assessment, while the diverse and largely undisturbed vegetation cover ranging from large scale differences (e.g. buttongrass moor, coastal dune vegetation, rainforest and scrub) to small-scale features including ferns, majestic trees consisting of mature and older trees and associated floral species, coastal plants frequently feature in landscape photography, and other imagery.

The natural waterways of the Tarkine, including the Arthur, Pieman, Savage and Donaldson Rivers, create important visual features amongst the mountain, lowland and rainforest landscapes and are some of the most frequently depicted attributes of the place.

The importance of the Tarkine to the Australian community is demonstrated by decisions under the Tasmanian Community Forest Agreement to reserve parts of the Tarkine to enable 'future generations to enjoy and appreciate these old forests and sweeping landscapes' (TCFA 2005).

Description:

The Tarkine covers approximately 434 000 ha, an area almost twice the size of the ACT. Much of the area is remote and uninhabited with its remoteness being a significant factor in the area's relatively low level of resource use since European settlement.

The western coastline of The Tarkine is made up of Quaternary dune fields and rocky shores. A number of coastal benches and platforms are considered to record a history of changing sea levels during Tertiary and Quaternary times.

During the late Holocene, the beaches, rocky shores and coastal dune fields of western Tasmania provided the setting for a specialised and semi-sedentary Aboriginal way of life based on a strikingly low level of coastal fishing and a dependence on seals, shellfish and land mammals. Along The Tarkine coast a suite of sites including large and complex middens, stone artefact scatters, hut depressions, stone arrangements and petroglyphs provides evidence for this way of life. Aboriginal people also quarried the spongolite at Rebecca Creek (inland of the coast) to make stone tools. This source of spongolite is the only one of its kind in Tasmania and the stone was traded throughout north-western Tasmania. These cultural heritage values are important to the Tasmanian Aboriginal community.

Inland, the coastal environment gives way to vast areas of heathland and buttongrass plains, and further east to the rugged Norfolk Range and the intricate drainage patterns caused by high rainfall interacting with underlying geology over the millennia. The drainage patterns of The Tarkine have generally been characterised as a trellised pattern which reflects the structural control of the underlying folded rocks. However, many rivers and streams in the area are controlled by jointing and faulting structures, or exhibit branch-like or parallel drainage patterns in areas where structural control is less significant.

The geology of The Tarkine is in many ways a microcosm of Tasmanian geology as a

whole, containing features representative of most major stages in the geological development of Tasmania. The oldest rocks in the area are siltstones and quartzites that were deposited on what was once a quiet shallow marine shelf. With the later development of a deep water trough in the eastern half of the area, slaty mudstones and greywacke sandstones were deposited while possibly contemporaneous dolomites and volcanic rocks were deposited in the region of the Arthur Lineament, which may represent both the approximate shoreline at the time and a zone of volcanism. Earth movements then deformed parts of these rock sequences in a narrow zone, forming the metamorphic complex of the Arthur Lineament. The Arthur Lineament contains the most extensive deposits of magnesite karst in Australia. The Tarkine includes the largest area of basalt soils in Tasmania that still support undisturbed natural vegetation communities.

The varying geology, soil, topographic relief and fire frequency have created a rich tapestry of vegetation types across The Tarkine area, but particularly in the east. The temperate rainforest, eucalypt forest and buttongrass moorland occur in a mosaic of Antarctic and Australian floral elements. The Tarkine contains the largest tract of cool temperate rainforest in Australia with approximately 195 000 hectares of land covered in mostly myrtle-dominated forest. Most of this rainforest occurs on relatively fertile land, including on basalt. Rainforest on basalt is unusual in Tasmania and probably in Australia as such fertile soils are usually cleared. Sassafras, leatherwood, celery-top pine and other tree species with ancient lineages share the rainforest with a diversity of non vascular plants. Preliminary studies of lichens and bryophytes have already revealed the presence of new endemic taxa. Two hundred and thirty-nine bryophyte species representing 93 mosses and 146 liverworts have been identified in the area. There is a high diversity of rainforest communities in The Tarkine. These include implicate, thamnisc, callidendrous and intermediate rainforests.

The west coast has a wide range of plant communities peculiar to salt marsh, coastal sand dunes and sea bird breeding colonies. These offer specialised niches for rare and restricted endemic plants. Serpentine, limestone and dolomite substrates are also important habitats for restricted endemic plant species.

The area contains approximately 31 mammal species (4 species and 13 of the recognised subspecies are endemic to Tasmania), 118 bird species (including 9 of the 11 Tasmanian endemic species), 2 migratory bird species that breed only in Tasmania and 11 reptile species (of which one is endemic). In addition, 8 of Tasmania's 11 amphibian species have been recorded in the area and 13 species of freshwater fish are found there.

The wet forest invertebrate fauna is diverse. Talitrid amphipods have undergone great adaptive radiation in Tasmanian forests with at least eight species having been recorded in the area. Land snails, flatworms, onychophorans, spiders, centipedes, millipedes, collembola and beetles have been found to be well represented in these environments.

The high annual rainfall experienced in the area helps form diverse aquatic habitats in rivers, coastal lagoons, streams, and estuaries. The freshwater crustaceans are of significance as many groups such as amphipods, isopods and crayfish are relicts of the Gondwanan fauna or remnants from even earlier eras. The Arthur River catchment is

the only river system containing the giant freshwater crayfish *Astacopsis gouldi* that does not drain into Bass Strait.

History:

The Tarkine - History

The Tarkine is named after the Tarkine [Tarkiner] tribe, the traditional owners of the Sandy Cape region located on the west coast of Tasmania (McFarlane 2008:220). The northwest coast was also inhabited by three other tribes, namely the Pee.rapper (West Point), the Manegin (Arthur River mouth) and the Peternidic (Pieman River mouth) (McFarlane 2008:220). These Aboriginal tribes inhabited the coastal areas of The Tarkine for at least 4 000 years; the date for the oldest shell midden located at the mouth of the Arthur River (Stockton 1984b:61). During the last 2,000 years, Aboriginal tribes along the west coast, in particular the northwest tribes, exploited the rich and varied resources of the coast and the scrubby hinterland that fringed it. During the summer months, semi-sedentary 'villages' were established at key resource rich locations such as West Point (known as Nongor) which was located next to an elephant seal colony (Plomley 1966:184; Jones 1967). Excavation of the West Point midden has provided an important insight into Aboriginal life on the northwest Tasmanian coast (Jones 1966). During the summer months food, in particular seals and coastal birds, was available in its greatest amount leading to the development of semi-sedentary villages (Jones 1974, 1975:3, 1978:36, 1981:7/88). Winter on the other hand was a time when food was scarcer, forcing the village groups to disband into smaller groups which fanned out moving up and down the northwest coast (Jones 1978:36).

Aboriginal people also used the hinterland, an area thick with tea tree scrub in a complex of swamps, to hunt terrestrial mammals (wallabies, small marsupials), lizards and waterbirds, to gather plant foods, quarry spongolite for stone tools and to trade for ochre (Jones 1981:7/88). The Tarkine area also contains extensive scatters of stone artefacts, rockshelters, human burials, petroglyphs of geometric forms and stone arrangements which add to our knowledge of Aboriginal life during this time (Jones 1965 and 1980; Stockton and Rogers 1979; Lourandos and Bowdler 1982; Stockton 1982; Cosgrove 1983 and 1990; Flood 1983 and 1990; Richards and Sutherland-Richards 1992; Collett *et al* 1998).

The Tarkine region was first sighted by Europeans when George Bass and Matthew Flinders circumnavigated Van Dieman's Land (Tasmania) in 1798. In 1803, British settlement began in Van Dieman's Land and explorations into the traditional lands of the Tasmanian Aboriginals were initiated (Plomley 1991:3; McFarlane 2008:xi). Very quickly, Aboriginal people's land began to be acquired on the basis that Van Diemen's Land was without settled inhabitants (McFarlane 2008:xi).

James Kelly sailed up Tasmania's west coast in 1815/16 and in 1823 Captain Charles Hardwicke sailed from Launceston to the Arthur River, describing 'rich grass pasture'. Later in 1824, James Hobb landed at the Pieman River noting the stands of timber. However, the earliest European extraction of resources from The Tarkine came in the form of 'piners', who from 1816 began navigating many of the coastal rivers to collect cargoes of Huon pine.

In 1825 the Van Diemen's Land Company (VDLC) was formed and granted land in the northwest part of Tasmania for wool production. The VDLC's chief surveyor Henry Hellyer led an expedition in 1827 and mistakenly concluded that The Tarkine

was suitable for sheep grazing, an impression reiterated by John Helder Wedge after his survey of the far northwest.

By 1826, the Aboriginal resistance to dispossession had reached 'to the point of all-out war' (McFarlane 2008:xii). In 1826, Jorgen Jorgenson arrived in Hobart and was employed by the VDLC to lead expeditions into the interior, which had as their aim the opening up of stock routes (Plomely 1991:7). In 1827, he left for an expedition where he visited the west coast of Tasmania and made numerous diary entries regarding Aboriginal people's way of life (Plomely 1991). The diaries of George Augustus Robinson (Aboriginal Conciliator) also provide detailed accounts of tribes in the northwest as he conducted his 'Friendly Mission' from 1830 to 1834 (McFarlane 2008:xiii). The aim of Robinson's 'Friendly Mission' was to 'organise and effect the removal of the remaining Aboriginal inhabitants [in the northwest] from their tribal lands to permanent exile on Flinders Island' (McFarlane 2008:xiii). The ethnographic records from Jorgen Jorgenson and G.A. Robinson make numerous references to Aboriginal huts including their location, construction, size and use along the entire west coast (Plomley 1966; 1991, Mitchell 1988:14). The frames of these huts were commonly made with pliable tree stems and less commonly with whale rib bones. The frame supported walls made of bark, grass or turf:

their huts.....are in the form of a semi-circular dome and are very commodious and quite weather proof. They are called GAR.DOWN.....Some of these huts are from ten to twelve feet in diameter and eight feet in height. The door or entrance is a small hole fourteen inches wide and two feet high, and this aperture is made to answer the threefold purpose of door, window and chimney....Their huts or cottages are constructed by first placing a long stick in the ground and bending it over and forcing the other end into the ground at the distance required for the diameter of the hut....this is continued until they have a sufficient quantity to support the weight of thatch that is to be put on. After the frame or skeleton of a hut is completed they thatch.....[with] long grass which they call NEME.ME.NE.....Some of these huts are lined with the bark of tea-tree and are remarkable warm (Plomley 1966:175).

There is also a detailed account by Robinson on 28 February 1834 where the Tarkinener attacked the Tommyginny:

They told my natives that they had fought the TOMMYGINNY but a short time previous.....and that one of their people, LOETH.GIDDIC brother to HEE.DEEK, had been killed and that they the TARKINE had also killed one of the TOMMYGINNY, LIN.NER.MER.RY.ROON, a big man.....they and the TOMMYGINNY have been at amity and at war alternately for a long period; that on this occasion the TOMMYGINNY came to them on a visit and brought with them a quantity of red ochre.....They asked the TOMMYGINNY for some red ochre which they refused, which was the ground for the quarrel. It was then resolved by the TARKINENER to attack the TOMMYGINNY, and which was done accordingly and took place at the place of my encampment at Sandy Cape (Plomley 1966:854).

Other Europeans also witnessed aspects of Aboriginal way of life, in particular hunting and gathering practices. In 1921, J. Kelly reported how Aboriginal women hunted and killed seals on King George Rocks:

We gave the women each a club that we had used to kill seals with. They went to the

water's edge and wet themselves all over their head and body as they said to prevent the seals from smelling them. As they walked along the rocks they were very cautious not to (go) windward of them as they said a seal would sooner believe his nose than his eyes when a man or woman came near him. The six women walked into the water, two and two, and swam to three rocks about fifty yards from the shore. Each rock had about nine or ten seals on it. They were all laying apparently asleep. Two women went to each rock with their clubs in hand....After they had been lying on the rocks for nearly an hour the sea occasionally washing over them and they were quite naked. We could not tell their meaning for remaining so long. All of a sudden the women arose up on their seats, their clubs at arms length. Each struck a seal on the nose which killed him. And in an instant they all jumped up as if by magic and killed one more....Each of them dragged a seal into the water and swam with it to the rock where we was standing and then swam back to the rock and brought one more each which made twelve seals (Kelly 1921:177 in Hiatt 1967:207-8).

Women also dived for huge quantities of abalone (*Notohaliotis*) and warreners (*Subnivalia*) which made a large contribution to their diet (Jones 1981:7/88). There are also ethnographic accounts of shellfish collection practices.

Hitherto we had but a faint idea of the pains the women take to procure food requisite for the subsistence of their families. They each took a basket, and were followed by their daughters, who did the same. Getting on the rocks, that projected into the sea, they plunged from them to the bottom in search of shell fish....They did this repeatedly until their baskets were full. Most of the them were provided with a little bit of wood, cut into the form of a spatula...and with these they separated from beneath the rocks at great depths, very large sea ears...They also caught large lobsters which they had killed as soon as they had been caught (Labillardière 1800:309-310 in Hiatt 1967:127-8).

Even though Robinson successfully completed his mission in 1834, there was still a number of small family groups of Aboriginal people living in and around the Tarkine region (Plomley 2008:959-960). On 10 December 1842 Mr William Gibson, the newly appointed Superintendent of the VDLC, informed the Court of Directors that: the natives who had hitherto been so troublesome were captured upon the 4th instant near the River Arthur and forwarded them yesterday to Launceston, their party consisted of a middle-aged man and female, two males about 18 and 20 years of age, and three male children between 3 and 7 years old (in Murray 1993:514).

Records indicate that the man and woman were John Lanna (also spelt Lanne) and his wife Nabrunga and their five children Banna, Pieti, Albert, William and Frank (Murray 1993:514). Gibson wrote that the Aboriginal family was captured near the Arthur River by sealers and that they were the last Aboriginal people 'at large in ...[the] colony' to be removed (in Murray 1993:514). The family was removed to Flinders Island and by 1847 the removal of Aboriginal people from the Tasmanian mainland to Flinders Island ceased (Ryan 1996:199, 202). William and Banna were the only family members to survive internment at Flinders Island (Plomey 1987:882). William was moved to Oyster Cove south of Hobart with 46 other Aboriginal people (Ryan 1996:203). Lanne lived until 1869, leaving behind his wife Truganini (Petrow 1997:93, 94). At the time, William was considered to have been the last full-blood Aboriginal man to die in Tasmania (Ryan 1996:214).

The dispossession of Aboriginal people opened up The Tarkine for European use. As

early as the 1830s squatters were using parts of The Tarkine coastal region for cattle grazing. However, large-scale commercial grazing did not begin until 1875 when a contract was signed to deliver cattle to supply the Mount Bischoff mining community. The development of other mining communities in The Tarkine, such as Balfour, and at Zeehan provided impetus for stock rearing, especially in the use of the coastal region between the Pieman and Arthur Rivers as a stock route from the north. Although by 1840 Temma (Whales Head) had become established as the best landing place along the coast, the overland route between here and the Pieman River remained undeveloped. Moving cattle from this region to markets remained problematic until the late 1870s, by which time miners had cut coastal trails north and south of the Pieman River. In 1878 a punt was established at Arthur River. From this time cattle could be transported across the Arthur River, driven down the coastal route to the Pieman River, and then across the Pieman to Zeehan and elsewhere. This coastal trade peaked in the late 1880s when the Zeehan silver-lead field began to become a substantial enterprise. More than a dozen huts and/or stockyards were built by drovers using the coastal route.

Coastal droving began to be phased out in the 1890s in the face of cattle shipment by sea and increasingly by road and rail, and competition from graziers closer to markets. The decline of the Zeehan market in World War One assisted in this decrease. The last coastal drive probably took place in 1936. Increasingly the plains along the coastal route began to assume an importance for agistment, allowing graziers to move stock to the coast to allow the home pastures to recuperate. A sharp increase in this activity occurred with the formal creation of the South Arthur and Marrawah Agistment Areas in 1934. By the 1950s the coastal region between the Arthur and Pieman Rivers under Crown ownership had been divided into the Sundown Run and the Southern Run. Agistment continues to the present time, although it is now firmly regulated to ensure sustainable grazing.

The explorers and prospectors S.B. Emmett and W.R. Bell and Leopold von Bibra used information gathered by Hellyer and Wedge in expeditions during the 1860s, with the latter following rivers and streams to enter previously unvisited territory. James 'Philosopher' Smith explored the upper reaches of the Arthur River in 1871 and discovered Mount Bischoff and its tin deposits. In 1876-77 Charles Sprent discovered tin and gold near Mount Heemskirk, iron ore at Savage River, and osmiridium and copper at Whyte River. The discoveries of Smith and Sprent inspired widespread prospecting of the west coast. Alluvial gold was discovered at the Brown Plains in 1879, attracting 250 miners to the lower reaches of the Pieman and Savage Rivers. Silver-lead discoveries in the Heazlewood-Whyte River districts in 1879-90 spurred mining activity, but most of the mines in this area did not last beyond the 1890s. Only the Magnet mine managed continuous operation into the twentieth century. An unsuccessful attempt was made to employ a hydraulic boom to extract the gold deposits at Corinna in the mid 1890s, a unique adoption in The Tarkine of a technology developed in New Zealand.

The final phase of mining prior to rapid decline in the northwest occurred in the period from the late 1890s to World War One. The early 1900s witnessed a decade of intensive copper mining in the Balfour area, but shallow mineral deposits caused the field's eventual collapse. The end of the nineteenth century was the era of the horse-drawn mining tramway. Tramways connected many mines to the Waratah-Corinna

Road and one, in use until 1911, was constructed to connect Balfour to the port of Temma. In 1902 a steam tramway replaced the horse-drawn tramway at the Magnet mine, connecting the mine to the Emu Bay Railway which was constructed in 1898 to link Zeehan and Burnie. Although osmiridium mining partially offset the mining decline after World War One, only the Magnet mine carried on substantial work in The Tarkine. This mine was decommissioned in the 1930s and the invention of the ballpoint pen in 1945 killed the demand for osmiridium (used in fountain pen nibs). The Tarkine mining industry experienced rejuvenation in the 1960s. The Savage River iron ore mine was reopened in 1967 and an 83km long pipeline was constructed to carry iron ore slurry to Port Latta. This represented the first use of this technology in the world. Other mines have been developed near Corinna, on the Arthur River, and at Mount Cleveland, among other localities.

During the mining period forests were cleared to provide fuel and industrial timber, as well as to clear paths for tracks, roads and tram and railways. Piners offset some of their costs by ferrying stores to miners, before collecting timber for the return journey. The Pieman River was a main focus of the early timber trade from the 1850s, directed principally to the extraction of Huon pine, King Billy pine and Stringybark. Owing to transport difficulties and a plentiful supply, the early industry was wasteful and inefficient, with perhaps not more than one quarter of the timber removed from some logs. The mining boom in the 1870s caused a rapid increase in timber extraction, with wood required for fuel, buildings, sleepers, and shaft and adit shoring. The introduction of steam sawmills resulted in greater forest destruction and the creation of bush tramways, which enabled large logs to be hauled by bullocks to transportable sawmills that could be moved after resources became depleted. By 1910 steam locomotives had largely replaced bullocks. Demand for timber increased after the Great Depression and better communications enabled the establishment of mills in previously inaccessible places. From the 1960s millers began turning their attention to the formerly untapped resources of the Arthur River valley. The increasing use of heavy equipment in the decades after World War Two destroyed forest habitat, hindering regeneration. Improved roads and the consequent use of logging trucks saw the end of the bush mill and the centralisation of milling in Smithton on the north coast. Clear felling for the woodchip industry began in the 1970s and in the 1980s lesser quality Category 2 logs began to be used for timber. Concern over the loss of old-growth forest and decreasing biodiversity led to restrictions being placed on timber harvesting.

Throughout the period of European colonisation of Tasmania, the land and sea in and around The Tarkine have always held a special significance for Tasmanian Aboriginal people (Ryan 1996). Ever since their removal from traditional lands the Aboriginal community have maintained a strong interest in and connection to their country, actively petitioning the British and Tasmanian Governments in pursuit of the return of land and recognition of land rights. In the 1970s the Aboriginal community formed representative organisations to actively campaign for their recognition as the first Tasmanians and for their rights. In 1973 and 1976, the Tasmanian Government recognised the cultural significance of the petroglyphs at Sundown Point and the shell middens and hut depressions at West Point by declaring them State Reserves (www.parks.tas.gov.au/index.aspx?id=5718). Aboriginal people continue to play a key role in the management of these places to ensure that they are preserved for future generations.

In 1977 a petition for the recognition of prior Aboriginal ownership, return of all sacred sites, mutton bird islands and Crown land in addition to compensation was presented to Queen Elizabeth II during her visit to Tasmania (Ryan 1996:166). Another attempt for land rights was made with the Tasmanian Government in 1985 which included the request to return Mount Cameron West, just to the north of The Tarkine (Ryan 1996:275-6). It wasn't until 1995, when the Tasmanian government passed the *Aboriginal Lands Act* that Perminghana (Mount Cameron West), was returned with another 11 places across Tasmania to the Aboriginal community because of their cultural importance. The Aboriginal community continue to pursue the return of land at West Point and Sundown Point as these places have a particularly strong connection for them.

Condition and Integrity:

Most of The Tarkine is in a very 'natural' condition according to the biophysical naturalness scheme adopted in the Tasmanian Comprehensive Regional Assessment. Biophysical naturalness is an indicator of the level of disturbance to the functioning of natural systems on a scale of 0 (high disturbance) to 5 (low disturbance). Over 90% of the RNE Tarkine area was found to have a biophysical naturalness rating of 5.

Limited areas have been subjected to intensive forestry operations, small scale mining and mineral exploration as well as cattle grazing on the coastal strip. Plantations and extensive areas subjected to intensive silviculture have generally been excluded. Off road vehicle use is increasing, particularly in the coastal zone.

The condition of the Aboriginal shell middens along the west coast is varied; however the most common disturbance is related to off road vehicle and bike use, cattle grazing, development (telephone tower installation and shack construction) and deflation through exposure to wind and rain (Collett *et al* 1998a and 1998b). During inspections of some of these hut depressions sites by Collett *et al* in 1998, they found that a large number of the huts depressions and the middens were stable and in places covered by grass. Some of the hut depressions have been directly affected by the disturbance listed above (Collett *et al* 1998a and 1998b), however the current status of these sites is unknown and a source states that the middens at West Point have not been inspected since the 1990s but at the time were stable and covered in grass (O'Connor 2007). A number of hut depression sites have also been subject to archaeological excavation including a hut at Sundown Point (TASI 2421), completely excavated by Ranson in the 1970s (Jones 1980:159; Stockton 1984a:28; Richards and Sutherland-Richards 1992:28, 31) and part of a hut depression at West Point midden was excavated by Jones between 1964-5 (Jones 1965).

There are some in-holdings within The Tarkine, notably the Savage River Mine and the Reece Powerstation. Developments in or adjacent to the place referred under *the Environment Protection and Biodiversity Conservation Act 1999* include road construction, kelp collection, offshore seismic testing, the Heemskirk Windfarm and the Tarkine Road.

Although the magnesite karst features are not visually significant, and the surface landforms are of limited extent, they are sensitive to direct damage by souveniring and excavation. Karst areas are also very sensitive to fire management and other land

management practices undertaken within their catchment areas.

Location:

About 433000ha, located in north-west Tasmania, comprising an area bounded by a line commencing at the most south-western corner of Pieman River State Reserve (approximate MGA point Zone 55G CP 326670E 5383605N), then northerly via the Pieman River State Reserve boundary to the north western corner of the reserve at approximate MGA point 326565E 5385305N, then following the LWM to its intersection with the Arthur-Pieman Conservation Area boundary at approximate MGA point 306065E 5432790N, then via straight lines joining the following MGA points consecutively: 306865E 5432795N, 306397E 5434010N, then directly to the intersection of the Arthur-Pieman Conservation Area boundary with the LWM at approximate MGA point 305980E 5433760N, then northerly via the LWM to its intersection with the Arthur-Pieman Conservation Area boundary at approximate MGA point 306235E 5434320N, then via straight lines joining the following MGA points consecutively: 306270E 5434265N, 306280E 5434235N, 306290E 5434240N, 306315E 5434205N, 306495E 5434400N, then directly to the intersection of the LWM with the Pieman Conservation Area boundary at approximate MGA point 306370E 5434460N, then northerly via the LWM to its intersection with the Arthur-Pieman Conservation Area boundary at approximate MGA point 305485E 5438560N, then via straight lines joining the following MGA points consecutively: 305547E 5438827N, 305560E 5438843N, 305552E 5438851N, 305611E 5439119N, 305647E 5439096N, 305691E 5439164N, 305629E 5439204N, 305657E 5439332N, 305397E 5439778N, 305224E 5439700N, 305191E 5439710N, 305182E 5439682N, 305184E 5439682N, then directly to the intersection of the LWM with the Pieman Conservation Area boundary at approximate MGA point MGA point 305150E 5439665N, then northerly via the LWM to its intersection with the Arthur-Pieman Conservation Area boundary at approximate MGA point 304840E 5441105N, then via straight lines joining the following MGA points consecutively: 304890E 5440970N, 304865E 5440965N, 304890E 5440920N, 304910E 5440930N, 305935E 5440860N, 305165E 5440995N, 305165E 5441185N, then directly to the intersection of the LWM with the Arthur-Pieman Conservation Area boundary at approximate MGA point 304910E 5441185N, then northerly via the LWM to its intersection with the Arthur-Pieman Conservation Area boundary at approximate MGA point 304295E 5443425N, then via straight lines joining the following MGA points consecutively: 304765E 5443430N, 304765E 5444285N, then directly to the intersection of the LWM with the Arthur-Pieman Conservation Area boundary at approximate MGA point 304495E 5444285N, then northerly and easterly via the Arthur-Pieman Conservation Area boundary to its intersection with the southern bank of the Arthur River at approximate MGA point 304235E 5453125N, then upstream via the southern bank of the Arthur River to its intersection MGA easting 308930E (approximate MGA point 308930E 5452640N), then via straight lines joining the following MGA points consecutively: 308920E

5452480N, 308712E 5452484N, 308496E 5452347N,
then directly to the intersection of the boundary of the Arthur Pieman Conservation Area with MGA easting 308410E (approximate MGA point 308410E 5451850N), then easterly via the Arthur Pieman Conservation Area boundary to its intersection with MGA easting 309310E (approximate MGA point 309310E 5451885N), then via straight lines joining the following MGA points consecutively: 309418E 5451885N, 309928E 5451299N, 309860E 5451062N, 310003E 5450894N, 310029E 5450680N, 310214E 5450574N, 310412E 5450284N, 310230E 5450098N, 310234E 5449889N, 310012E 5449784N, 309800E 5449455N, 310173E 5449459N, 309133E 5448704N, 308940E 5448873N, 308627E 5448660N, 308334E 5449154N, 308145E 5449065N, 307812E 5449084N, 307221E 5449375N, 306912E 5449284N, 307000E 5448921N, 307362E 5448350N, 307812E 5448384N, 308233E 5448447N, 308474E 5448350N, 308612E 5448184N,
then directly to the intersection of MGA easting 308420E with the boundary of the Arthur Pieman Conservation Area (approximate MGA point 308420E 5447810N), then southerly via the Arthur Pieman Conservation Area boundary to its intersection with MGA easting 309415E (approximate MGA point 309415E 5445130N), then southerly directly to the intersection of the Nelson Bay River with MGA easting 309115E (approximate MGA point 309115E 5443255N), then upstream via the middle thread of the Nelson Bay River to its confluence with an unnamed creek at approximate MGA point 311105E 5441845N, then upstream via the middle thread of that creek to its intersection with MGA northing 5441065N (approximate MGA point 311965E 5441065N), then via straight lines joining the following MGA points consecutively: 312443E 5440784N, 313641E 5440784N, 313787E 5441230N, 313597E 5441476N, 313601E 5441687N, 313524E 5442011N, 313684E 5442343N, 313860E 5442460N, 314374E 5442382N, 314542E 5442443N, 314509E 5442582N, 314262E 5442670N, 314299E 5442819N, 314486E 5442934N, 314555E 5443124N, 314391E 5443392N, 314710E 5443927N, 314922E 5443802N, 314952E 5443414N, 315125E 5442973N, 315263E 5442960N, 315505E 5442740N, 315509E 5442594N, 315366E 5442499N, 315401E 5442378N, 315634E 5442507N, 315630E 5442973N, 315716E 5443185N, 315751E 5443029N, 315979E 5443073N, 316027E 5443168N, 315841E 5443228N, 315781E 5443405N, 315906E 5443534N, 316014E 5443919N, 316234E 5443927N, 315936E 5444298N, 316243E 5444272N, 316445E 5444083N, 316359E 5443681N, 316441E 5443560N, 316769E 5443517N, 317063E 5443668N, 317136E 5443893N, 317373E 5443897N, 317481E 5443772N, 317934E 5443521N, 318016E 5442952N, 318172E 5442727N, 318461E 5442080N, 318703E 5441989N, 319405E 5440319N, 319352E 5440164N, 319225E 5440099N, 319210E 5440013N, 319057E 5440033N, 318906E 5439963N, 318974E 5439672N, 319194E 5439497N, 319654E 5439532N, 319796E 5439499N, 319860E 5439420N, 319964E 5439420N, 319986E 5439504N, 320290E 5439486N, 320649E 5439676N, 320704E 5439941N, 320995E 5440700N, 321060E 5440653N, 321130E 5440453N, 321240E 5440427N, 321222E 5440321N, 321372E 5440207N, 321432E 5440053N, 321590E 5440005N, 321826E 5440118N, 321979E 5440112N, 322067E 5440199N, 321978E 5440382N, 322124E 5440613N, 322336E 5440685N, 322548E 5440899N, 322571E 5440776N, 322479E 5440614N, 322305E 5440500N, 322459E 5440257N, 322407E 5440085N, 322440E 5439933N, 322368E 5439664N, 322247E 5439531N, 322204E 5439391N, 322423E 5439321N, 322429E 5439238N, 322519E 5439248N, 322618E 5439061N, 322706E 5438968N, 322739E 5438858N, 322878E 5438780N, 322997E 5438833N, 323198E 5438812N, 323280E 5438842N, 323469E 5439459N, 323570E 5439519N, 323714E 5439358N, 323635E

5439023N, 323641E 5438808N, 323416E 5438821N, 323363E 5438757N, 323408E 5438603N, 323278E 5438554N, 323158E 5438307N, 322925E 5438161N, 322748E 5437930N, 322845E 5437729N, 322711E 5437654N, 322593E 5437689N, 322473E 5437612N, 322685E 5437289N, 323024E 5437729N, 323132E 5437508N, 323003E 5437480N, 322965E 5437364N, 323024E 5437244N, 322873E 5437169N, 323055E 5436962N, 323396E 5437002N, 323384E 5436820N, 323655E 5436738N, 323768E 5436794N, 323747E 5437056N, 323658E 5437313N, 323700E 5437614N, 323472E 5438163N, 323514E 5438177N, 323799E 5437892N, 323912E 5437082N, 324428E 5437058N, 324489E 5436898N, 324699E 5436743N, 324812E 5436825N, 324697E 5437041N, 324628E 5437199N, 324802E 5437506N, 324776E 5437711N, 324662E 5437927N, 324781E 5438161N, 324700E 5438200N, 324605E 5438766N, 324453E 5438987N, 324484E 5439356N, 324970E 5439680N, 325264E 5439423N, 325241E 5439222N, 325479E 5439211N, 325667E 5439303N, 325758E 5439500N, 325804E 5440005N, 325448E 5440504N, 324997E 5440711N, 324647E 5440687N, 324652E 5440794N, 324794E 5440912N, 325091E 5441015N, 325113E 5440957N, 325060E 5440826N, 325221E 5440722N, 325310E 5440749N, 325409E 5440687N, 325424E 5440742N, 325423E 5440923N, 325537E 5441052N, 325526E 5441214N, then northerly to the intersection of Blackwater Rivulet with MGA easting 325495E (approximate MGA point 325495E 5441355N), then upstream via middle thread of Blackwater Rivulet to its junction with an unnamed creek (approximate MGA point 325564E 5441396N), then upstream via the middle thread of the unnamed creek to its intersection with MGA northing 5441270N (approximate MGA point 326465E 5441270N), then due east to the intersection with Blackwater Road, then northerly via the eastern side of Blackwater Road to its intersection with a spur road at approximate MGA point 327890E 5444040N, then westerly via the eastern side of the spur road to its intersection with MGA northing 5444100N (approximate MGA point 327400E 5444100N) then directly to MGA point 327400E 5445800N, then due east to the intersection with Stephens Rivulet, then upstream via the middle thread of that Stephens Rivulet to its confluence with an unnamed creek at approximate MGA point 328200E 5444950N, then upstream via the middle thread of that creek to its intersection with Blackwater Road, then via straight lines joining the following MGA points consecutively: 328930E 5444628N, 329429E 5444316N, 330195E 5444437N, 330632E 5444364N, 330629E 5444531N, 330289E 5444964N, 329960E 5445134N, 330091E 5445755N, then directly to the intersection of the boundary of the Trowutta Forest Reserve with MGA easting 330420E (approximate MGA point 330420E 5446590N), then via the boundary of the Trowutta Forest Reserve as gazetted on 18 December 1998 to its intersection with the south west corner of the Roger River State Reserve (the area of Trowutta Forest Reserve gazetted on 12 July 2006 that is wholly within the area of Trowutta Forest Reserve as gazetted on 18 December 1998 is included), then northerly, easterly and southerly via the western, northern and eastern boundary of Roger River State Reserve to its intersection with the Trowutta Forest Reserve boundary, then southerly via the western boundary of the Trowutta Forest Reserve as gazetted on 18 December 1998 to its intersection with the south west corner of Land Parcel ID (LPI) 1/118507 (approximate MGA point 334860E 5446350N), then easterly via the southern boundary of LPI 1/118507 to its intersection with the

western boundary of LPI 1/237812,
then southerly and easterly via the boundary of LPI 1/237812 and its alignment to its intersection with the southern bank of the Arthur River (approximate MGA point 335680E 5446200N),
then upstream via the southern bank of the Arthur river to its confluence with the Julius River,
then upstream via the middle thread of the Julius River to its intersection with the northern most point of the boundary of the Julius River Forest Reserve,
then south easterly via the north eastern boundary of the Julius River Forest Reserve and its alignment to its intersection with Lake Chisholm Road (approximate MGA point 337970E 5442630N)
then south westerly via the western boundary of Lake Chisholm Road to its intersection with Sumac Road,
then easterly via the southern boundary of Sumac Road to its intersection with Sumac Rivulet,
then upstream via the middle thread of Sumac Rivulet to its intersection with Sumac Forest Reserve,
then south westerly and easterly via the boundary of Sumac Forest to a corner located at approximate MGA point 335640E 5436500N,
then directly to the intersection of Sumac Road with MGA northing 5436650N (approximate MGA point 335950E 5436650N),
then north easterly via the southern boundary of Sumac Road to its junction with Bertha Road,
then easterly via the southern boundary of Bertha Road to its intersection with MGA northing 5438000N (approximate MGA point 342360E 5438000N),
then directly to AMG point: 418352, then directly to the middle thread of a creek at easting: 339500mE and approximate northing: 5433900mN, then downstream via the middle thread of that creek to Trias Creek, then up stream via the middle thread of that creek to its intersection with AMG northing 5429450mN (approximate AMG point 413295), then connecting the following AMG points consecutively; 411293, 412283, 393280, 393282, 383281 and 382278, then directly to the middle thread of the Horton River at northing: 5427500mN (369275), then downstream via the middle thread of that river to easting: 332400mE (324316), then directly to the confluence of the Leigh and Lindsay Rivers, then upstream via the middle thread of the Lindsay River to easting: 5426700mN (303267), then directly to the Leigh River at easting: 332300mE (323277), then upstream via the middle thread of that river to its intersection with AMG northing 5419950mN (approximate AMG point 358199), then directly to the intersection of a watershed boundary with AMG easting 334740mE (approximate AMG point 347191), then south easterly via the watershed boundary to its intersection with AMG northing 5418410mN (approximate AMG point 353184), then directly to AMG point 360182, then directly to the confluence of a creek with Leigh River at AMG point 375184, then north easterly via the middle thread of that creek to its intersection with AMG easting: 340000mE (400195), then directly to the middle thread of the Boulder Rivulet at its confluence with the Horton River, then upstream via the middle thread of Boulder Rivulet to easting: 344000mE (440205), then via straight lines joining the latter point and following AMG points consecutively: 447237,433279, 437322,
then directly to MGA point 344900E 5436500N,
then directly to the intersection of MGA northing 5437500N with an unnamed creek (approximate MGA point 345350E 5437500N),

then downstream via the middle thread of the unnamed creek to its confluence with the Rapid River,
then upstream via the middle thread of the Rapid River to its intersection with MGA easting 346900E (approximate MGA point 346900E 5437680N),
then northerly to the intersection of an unnamed track with MGA northing 5439000N (approximate MGA point 346990E 5439000N)
then via the eastern edge of the unnamed track to its junction with Tayatea Road,
then via the southern edge of Tayatea Road to its intersection with MGA northing 5442750N (approximate MGA point 351600E 5442750N),
then via straight lines joining the following MGA points consecutively: 352128E 5443058N, 352286E 5442901N, 352398E 5442966N, 352378E 5443251N, 353678E 5443115N,
then north easterly to the junction of Providence Road with an unnamed track at approximate MGA point 354200E 5444350N,
then southerly via the western edge of the unnamed road to its intersection with MGA northing 5442600N (approximate MGA point 355120E 5442600N),
then directly to MGA point 357000E 5444100N,
then to the intersection of MGA northing 5445200N with Neasey Creek (approximate MGA point 359239E 5445200N),
then downstream via the middle thread of Neasey Creek to its confluence with the Arthur River,
then downstream via the southern bank of Arthur River to its intersection with MGA northing 5448500N (approximate MGA point 361000E 5448500N),
then directly to the intersection of an unnamed vehicular track with MGA easting 361500E (approximate MGA point 361500E 5449120N),
then north easterly via the southern boundary of the unnamed track to its junction with Rabalga Road,
then northerly via the eastern boundary of Rabalga Road to its intersection with MGA northing 5449711N (approximate MGA point 362344E 5449711N),
then via straight lines connecting the following MGA points consecutively: 362380E 5449904N, 362612E 5450001N, 362729E 5449988N, 362725E 5449869N, 362636E 5449875N, 362556E 5449589N, 362713E 5449323N, 363078E 5449699N, 363196E 5449980N, 363319E 5449927N, 363576E 5449918N, 363676E 5450048N, 363666E 5450164N, 363564E 5450255N, 363464E 5450139N, 363255E 5450241N, 363171E 5450157N, 362897E 5450160N, 362816E 5450062N, 362724E 5450042N,
then directly to the intersection of Rabalga Road with MGA northing 5450182N (approximate MGA point 362488E 5450182N),
then northerly via the eastern boundary of Rabalga Road to its intersection with MGA northing 5450581N (approximate MGA point 362428E 5450581N),
then via straight lines connecting the following MGA points consecutively: 362565E 5450641N, 362654E 5450452N, 362819E 5450377N, 363104E 5450635N, 363364E 5450704N, 363343E 5450824N, 363210E 5450828N, 363151E 5450858N, 362999E 5450850N, 362893E 5450743N, 362879E 5450810N, 362957E 5450892N, 363059E 5450897N, 363136E 5450921N, 363255E 5450861N, 363309E 5450899N, 363220E 5451066N, 363143E 5451085N, 362861E 5450985N, 362852E 5450921N, 362819E 5450925N, 362806E 5450990N, 362759E 5451029N, 362798E 5451068N, 362861E 5451040N, 363147E 5451152N, 363089E 5451245N, 362984E 5451289N, 363028E 5451394N, 362994E 5451494N, 363231E 5451657N, 363335E 5451641N, 363517E 5451806N, 363516E 5451854N, 364177E 5452658N,
then directly to the intersection of the Dip River with MGA northing 5452680N

(approximate MGA point 365270E 5452680N),
then downstream via the middle thread of Dip River to its intersection with the boundary of the Dip River Forest Reserve (approximate MGA point 364790E 5453560N),
then north easterly via the Dip River Forest Reserve to its intersection with Black River (approximate MGA point 366745E 5454545N),
then upstream via the middle thread of Black River to its intersection with MGA easting 367713E (approximate MGA point 367713E 5453541N),
then via straight lines connecting the following MGA points consecutively: 367814E 5453118N, 369460E 5451843N, 369435E 5451640N,
then westerly directly to the north west corner of LPI 1/40690,
then south westerly and easterly via the state forest boundary to its intersection with MGA easting 369800E (approximate MGA point 369800E 5450880N),
then via straight lines joining the following MGA points consecutively: 370003E 5450602N, 369057E 5449893N, 368833E 5449639N, 368451E 5449858N, 368496E 5450034N, 368302E 5450121N, 368123E 5449859N, 367973E 5450103N, 368152E 5450247N, 368079E 5450491N, 367809E 5450550N, 367695E 5450473N, 367651E 5450264N, 367626E 5449546N, 367689E 5449403N, 368010E 5449464N, 368427E 5449700N, 368801E 5449564N, 368928E 5449303N,
then southerly to the intersection of Keith River Road with MGA easting 368420E (approximate MGA point 368420E 5448080N)
then south westerly via Keith River Road to its intersection with an unnamed track at approximate MGA point 367260E 5446861N,
then westerly to the intersection of MGA northing 5446861N with the middle thread of Arthur River (approximate MGA point 366260E 5446861N),
then upstream via the middle thread of Arthur River to its confluence with Central Creek (approximate MGA point 370330E 5440910N),
then uphill via the watershed boundary of Central Creek and Northern Creek to Relapse Creek Road (approximate MGA point 370630E 5441520N),
then westerly via the southern boundary of Relapse Creek Road to its intersection with MGA northing 5441870N (approximate MGA point 369510E 5441870N),
then via straight lines joining the following MGA points consecutively: 369613E 5442001N, 369920E 5441866N, 370142E 5442042N, 370416E 5442042N, 370490E 5442595N, 370958E 5442735N, 371277E 5442440N, 371555E 5443165N, 371814E 5443054N,
then easterly to the intersection of Pruana Road with MGA easting 372344E (approximate MGA point 372344E 5443132N),
then easterly via Pruana Road to its intersection with Campbell Road,
then northerly, easterly, southerly and westerly via the Pruana Forest Reserve boundary to where it intersects with the intersection of Pruana Road and Farquhars Road (approximate MGA point 373080E 5440715N),
then westerly via Farquhars Road to its intersection with an unnamed track (approximate MGA point 372365E 5440935N),
then southerly and easterly via the unnamed track to its intersection with the boundary of the Arthur River Forest Reserve (approximate MGA point 372590E 5440550N),
then easterly via the boundary of the Arthur River Forest Reserve to its intersection with the south east corner of LPI 1/211201 (approximate MGA point 378050E 5438775N),
then northerly via the eastern boundary of LPI 1/211201 to its intersection with the southern boundary of LPI 1/15549,

then easterly via the southern boundary of LPI 1/15549 to its intersection with MGA easting 378459E (approximate MGA point 378459E 5439641N),
then south easterly to the intersection of MGA northing 5439552N with the western boundary of LPI 1/229497 (approximate MGA point 378625E 5439552N),
then southerly via the western boundary of LPI 1/229497 to its intersection with LPI 1/134960,
then southerly and westerly via the boundary LPI 1/134960 to its intersection with MGA easting 378635E (approximate MGA point 378635E 5438899N),
then via straight lines joining the following MGA points consecutively: 379000E 5438716N, 379147E 5438483N, 379365E 5438433N, 379733E 5438615N,
then north easterly to the intersection of MGA easting 379878E with the northern boundary of LPI 1/134960 (approximate MGA point 379878E 5438771N),
then easterly via the northern boundaries of LPI 1/134960 and LPI 1/130624 to its intersection with an unnamed track (approximate MGA point 382230E 5438300N),
then southerly via the western side of the track to its intersection with MGA northing 5437000N (approximate MGA point 382010E 5437000N)
then westerly directly to the intersection of MGA easting 381400E with an unnamed creek (approximate MGA point 381400E 5436970N),
then downstream via the middle thread of the unnamed creek to its junction with the Hellyer River,
then downstream via the middle thread of Hellyer River to its confluence with Arthur River,
then upstream via the middle thread of Arthur River to its junction with the Wandle River,
then upstream via the middle thread of the Wandle River to its junction with the boundary of the Deep Gully Forest Reserve (as Gazetted on 18/12/1998) at approximate MGA point 376360E 5422750N,
then easterly, southerly and westerly via the northern, eastern and southern boundaries of the Deep Gully Forest Reserve (as Gazetted on 18/12/1998) to its intersection with MGA easting 377900E (approximate MGA point 377900E 5414030N),
then southerly directly to the intersection of MGA easting 377800E with the Waratah River (approximate MGA point 377800E 5413310N),
then downstream via the middle thread of Waratah River to its confluence with Cliff Creek,
then upstream via the middle thread of Cliff Creek to its intersection with MGA northing 5413100N (approximate MGA point 375310E 5413100N)
then directly from that point to the junction of Tinstone Creek and Ritchie Creek (approximate MGA point 374880E 5412510N),
then upstream via the middle thread of Ritchie Creek to its confluence with an unnamed creek at approximate MGA point 375930E 5409170N,
then upstream the middle thread of the unnamed creek to its intersection with the western boundary of LPI 1/204125 (approximate MGA point 375700E 5408490N),
then easterly via the southern boundary of LPI 1/204125 to its intersection with Waratah Road,
then southerly via the western road reserve boundary of Waratah Road to its junction with an unnamed track at approximate MGA point 373890E 5406070N,
then easterly via the southern boundary of the unnamed track to its intersection with MGA easting 376227E (approximate MGA point 376227E 5405050N)
then via straight lines joining the following MGA points consecutively: 377777E 5404712N, 377534E 5403799N, 377603E 5403289N, 377848E 5403161N, 378212E

5403284N, 378901E 5402844N, 378668E 5401838N, 378812E 5401184N, 379161E 5400924N, 379511E 5401294N,
then directly to the intersection of the State Forest boundary with MGA northing 5401070N (approximate MGA point 380850E 5401070N),
then southerly and easterly via the State Forest boundary, Hatfield River Forest Reserve boundary and State Forest boundary to its intersection with MGA easting 387900E (approximate MGA point 387900E 5399010N),
then via straight lines joining the following MGA points consecutively: 390008E 5396565N, 390982E 5395847N, 391464E 5395691N, 391651E 5394758N, 391157E 5394259N, 391000E 5394363N, 390865E 5394256N, 391025E 5394068N, 390830E 5393873N, 391543E 5393237N, 391901E 5393313N, 392004E 5394032N, 393265E 5394574N, 393821E 5395267N, 394844E 5394812N, 395595E 5395103N, 396097E 5394633N, 396689E 5394755N, 396661E 5395208N, 397160E 5395863N, 397155E 5396091N, 397616E 5396243N, 396908E 5398185N, 398176E 5398614N,
then northerly to the intersection of MGA easting 398186E with the southern boundary of LPI 1/144941 (approximate MGA point 398186E 5399212N),
then easterly via the southern boundary of LPI 1/144941 to its intersection with MGA easting 403179E (approximate MGA point 403179E 5399264N),
then via straight lines joining the following MGA points consecutively: 402246E 5397997N, 401948E 5398129N, 400956E 5397313N, 400570E 5396575N, 400350E 5395814N, 400394E 5395219N, 400207E 5394910N, 399898E 5394745N, 400085E 5394448N, 400107E 5393511N, 399611E 5394172N, 398961E 5393444N, 398697E 5392331N, 398939E 5391119N, 398653E 5391086N, 398344E 5390204N,
then to the intersection of MGA easting 398455E with the southern boundary of Reynolds Falls Nature Recreation Area (approximate MGA point 398455E 5389314N),
then westerly and south westerly via the Reynolds Falls Nature Recreation Area boundary to its intersection with HEC land (approximate MGA point 387820E 5384860N),
then south westerly and westerly via the boundary of HEC land on the northern shoreline of Lake Rosebery and Lake Pieman to its intersection with the south west corner of Meredith Range Regional Reserve (approximate MGA point 352110E 5372440N),
then northerly along the western boundary of Meredith Range Regional Reserve to its intersection with MGA northing 5374000N (approximate MGA point 352110E 5374000N),
then via straight lines joining the following MGA points consecutively: 351512E 5374384N, 351112E 5375284N, 349512E 5375484N, 347941E 5375805N,
then directly to the intersection of Stringer Creek with MGA easting: 347450E (approximate MGA point 347450E 5376315N),
then downstream via the middle thread of Stringer Creek to its confluence with the Pieman River,
then directly to MGA point 344080E 5379320N,
then southerly to the intersection of the High Water Mark of Lake Pieman with MGA easting 344085E (approximate MGA point 344085E 5378960N)
then southerly via the western bank of Lake Pieman to its junction with an unnamed creek (approximate MGA point 345468E 5373696N),
then upstream via the eastern bank of the unnamed creek to its intersection with MGA northing 5372006N (approximate MGA point 346146E 5372006N),
then via straight lines joining the following MGA points consecutively: 345312E

5371610N, 345312E 5371186N, 344110E 5370884N,
then directly to the intersection of MGA easting 344110E with the Granville
Tramway (approximate MGA point 344110E 5370240N),
then westerly via the northern boundary of that tramway to its intersection with
Heemskirk Road (approximate MGA point 341980E 5370850N),
then northerly via the eastern boundary of that Heemskirk Road to its intersection
with Duck Creek,
then westerly via the southern boundary of Duck Creek to the coastline (Low Water
Mark),
then northerly via the LWM to its intersection with the alignment of the southern
boundary of LPI 1/238463 (approximate MGA point 326690E 5380460N),
then easterly, northerly and westerly via the southern eastern and northern boundaries
of LPI 1/238463 to its intersection with the LWM (approximate MGA point 326530E
5381290N),
then northerly via the LWM to the commencement point.

Also included are the following:

All that part of Arthur Pieman Conservation Area to the west of Arthur River Road
and to the north of Arthur River.

West Point State Reserve.

Kings Run Private Nature Reserve.

The following areas are excluded:

(1) In the Rebecca Creek area the following are excluded:

a) The area bounded by a line commencing at the intersection of the boundary of LPI
1/104427 and the Rebecca Creek Forest Reserve at approximate MGA point 311080E
5437080N, then easterly via the Rebecca Creek Forest Reserve to its intersection with
MGA easting 313330E (approximate MGA point 313330E 5435786N),
then via straight lines joining the following MGA points consecutively: 313512E
5435784N, 313696E 5435589N, 313912E 5435484N, 313812E 5435284N, 313911E
5435189N, 313812E 5435084N, 313612E 5435084N, 313612E 5434884N, 313724E
5434878N, 313569E 5434622N, 313237E 5434562N, 313239E 5434380N, 313039E
5434239N, 312674E 5434084N, 312508E 5433888N, 312385E 5433830N, ,
then southerly to the intersection of MGA easting 312372E with Little Eel Creek
(approximate MGA point 312372E 5433740N),
then easterly via the middle thread of Little Eel Creek to its intersection with the
western boundary of LPI 1/240762,
then southerly via the western boundary of LPI 1/240762 to its south west corner,
then via straight lines joining the following MGA points consecutively: 313284E
5433098N, 313370E 5433013N, 313456E 5433036N, 313480E 5432937N, 313306E
5432683N, 312979E 5432650N, 312694E 5432542N,
then southerly to the intersection of MGA easting 312688E with Big Eel Creek
(approximate MGA point 312688E 5432294N),
then westerly via the middle thread of Big Eel Creek to its intersection with MGA
easting 309966E (approximate MGA point 309966E 5432478N),
then via straight lines joining the following MGA points consecutively: 309998E
5432633N, 310049E 5433021N, 309933E 5433243N, 309895E 5433390N, 309774E
5433477N, 309518E 5434066N, 309458E 5434121N, 309245E 5434149N, 309142E
5434211N, 309079E 5434289N, 309114E 5434324N, 309168E 5434686N, 309067E
5434701N, 308970E 5434586N, 309034E 5434487N, 308965E 5434473N, 308979E
5434422N, 308433E 5434264N,

then northerly to the south east corner of LPI 1/33402 (approximate MGA point 308460E 5434422N),
then westerly, northerly and easterly via the Arthur-Pieman Conservation Area boundary to its intersection with the north west corner of LPI 1/123386,
then easterly via the Rebecca Creek Forest Reserve boundary to the point of commencement.

b) LPIs 1/240762, 1/240763, 1/240764, 1/240765, 1/240766.

c) The Temma Conservation Covenant.

d) The area bounded by a line commencing at the intersection of MGA easting 312367E and Rebecca Road (approximate MGA point 312367E 5437568N), then directly to the intersection of MGA easting 312532E with the boundary of the Arthur Pieman Conservation Area (approximate MGA point 312532E 5438078N), then north easterly via the boundary of Arthur Pieman Conservation Area to its intersection with MGA easting 315760mE (approximate MGA point 315760E 5439100N), then directly to the point on the boundary of the Arthur Pieman Conservation Area that intersects with MGA northing 5438980 (approximate MGA point 316070E 5438980N), then southerly via the boundary of the Arthur Pieman Conservation Area to its intersection with Rebecca Road, then westerly via the southern boundary of Rebecca Road to the commencement point.

(2) An area located at Balfour comprising an area bounded by a line commencing at MGA point 325291E 5430614N, then via straight lines joining the following MGA points consecutively: 324226E 5430610N, 324235E 5430451N, 323884E 5430270N, 323673E 5430542N, 323054E 5430542N, 322448E 5430090N, 323421E 5428988N, 324784E 5429295N, 325452E 5429835N then directly to the point of commencement.

(3) The area around Savage River township bounded by a line commencing at the intersection of state forest boundary and Savage River (approximate MGA point 348545E 5404430N),
then northerly via the western bank of the Savage River to its intersection with Broderick Creek,
then via straight lines joining the following MGA points consecutively: 349501E 5407070N, 349709E 5407299N, 349504E 5407705N, 349692E 5408261N, 349810E 5408389N, 349806E 5408778N, 349702E 5409087N, 350029E 5409087N, 350407E 5409178N, 350626E 5409087N, 351560E 5409084N, 351567E 5408997N, 351105E 5408299N, then directly to the intersection of the boundary of the Savage River Regional Reserve with MGA northing 5407507N (approximate MGA point 351792E 5407507N),
then southerly and easterly via the boundary of the Savage River Regional Reserve to its intersection with MGA easting 352800E (approximate MGA point 352800E 5406600N),
then directly to the intersection of MGA easting 353700E with the boundary of the Meredith Range Regional Reserve (approximate MGA point 353700E 5405860N),
then south westerly via the boundary of the Meredith Range Regional Reserve its intersection with the State Forest boundary at approximate MGA point 350400E 5402420N,
then northerly via the western boundary of LPI 100/36593 to its intersection with MGA easting 350295E (approximate MGA point 350295E 5403890N),
then via straight lines joining the following MGA points consecutively: 350159E

5404115N, 350091E 5403957N, 349975E 5403917N, 349847E 5403701N, 349670E 5403686N, 349525E 5403532N, 349166E 5403735N, 348919E 5403061N, 348592E 5403003N, 348362E 5402820N, 348159E 5402783N, 347918E 5402881N, 347905E 5403150N, 348178E 5403554N, 348298E 5403532N, 348407E 5403581N, 348345E 5403705N, 348543E 5403889N, 348735E 5403936N, 348535E 5404070N, 348697E 5404324N,

then north westerly directly to the commencement point.

(4) In the Tikkawoppa Plateau area the following lots are excluded: LPI 1/224646, 1/238462, 22/118557, 1/101724, 1/238463, 1/239443, 1/241623, 1 to 3/111147, 1/109751, 1/109376, as well as two lots of Public Land centred on MGA points 333600E 5380730N and 334550E 5380870N.

(5) The following lots located to the east of Hatfield River Forest Reserve: LPI 1/209046, 1/209045, 1/208944, 1/209880, 1/209641 and 1/209645. Also excluded are two lots located between the southern boundary of LPI 1/209641 and the northern boundary of LPI 1/209645.

(6) The following area located about 6 kilometres north east of Bulgobac comprising an area bounded by a line commencing at MGA point 386329E 5396888N, then via straight lines joining the following MGA points consecutively: 386407E 5397082N, 386813E 5397159N, 386934E 5397116N, 386924E 5396834N, 387076E 5396782N, 387140E 5396609N, 387267E 5396647N, 387419E 5396531N, 387367E 5396188N, 387468E 5396151N, 387431E 5396005N, 387509E 5395966N, 387535E 5395885N, 387724E 5395919N, 387580E 5395465N, 387149E 5395459N, 386506E 5395524N, 386233E 5396061N, 386185E 5396324N, 386269E 5396610N, 386113E 5396728N, 386212E 5396893N, then directly to the point of commencement.

(7) The following area located about 4 kilometres north west of Farrell comprising an area bounded by a line commencing at MGA point 376942E 5384532N, then via straight lines joining the following MGA points consecutively: 377807E 5384532N, 377815E 5384251N, 377776E 5384135N, 377904E 5383888N, 378014E 5383817N, 378189E 5383917N, 378493E 5383929N, 378537E 5383866N, 378487E 5383854N, 378438E 5383699N, 378552E 5383589N, 378503E 5383414N, 378458E 5383442N, 378432E 5383510N, 378332E 5383442N, 378077E 5383430N, 377917E 5383449N, 377797E 5383394N, 377562E 5383103N, 377273E 5383314N, 377202E 5383499N, 377353E 5383730N, 377261E 5383858N, 377265E 5384017N, 377373E 5384202N, 377249E 5384226N, 377208E 5384088N, 377033E 5384082N, 376946E 5384143N, then directly to the point of commencement.

(8) The following area located about 4km north west of Farrell comprising an area bounded by a line commencing at MGA point 365003E 5408299N, then via straight lines joining the following MGA points consecutively: 364175E 5407032N, 364622E 5406280N, 365365E 5406789N, 365556E 5407153N, 365916E 5408230N, 365529E 5408512N, then directly to the point of commencement.

(9) An area at Corinna comprising Mining Lease 25M/2003.

(10) An area located at Que River Mine comprising an area comprising an area bounded by a line commencing at MGA point 390830E 5393873N, then via straight

lines joining the following MGA points consecutively: 391025E 5394068N, 390865E 5394256N, 391000E 5394363N, 391157E 5394259N, 391370E 5394454N, 391959E 5394012N, 391675E 5393536N, then directly to the point of commencement.

(11) An area located 2km south west of Reece Dam comprising Mining Lease 22M/1994.

(12) An area bounded by a line commencing at MGA point 359974E 5434127N, then via straight lines joining the following MGA points consecutively: 360090E 5433971N, 360078E 5433903N, 359987E 5433935N, 359962E 5434033N, then directly to the point of commencement.

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