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# Wilderness and wilderness management in the Tarkine region

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*Rainforest ridges in an area of high wild character within the Tarkine region. Photo: Grant Dixon*

Tasmania is the principal location of Australia's temperate wilderness areas (Lesslie *et al* 1988). Because Tasmania still retains large areas of relatively undisturbed landscapes, the opportunities for wilderness protection have been greater here than many other places throughout the world (Harries and Brown 1992; Russell *et al* 1979). While large areas of wilderness have been securely reserved in the Tasmanian Wilderness World Heritage Area (TWWHA), the same has yet to be afforded to the large areas of wilderness in the Tarkine region. The area encompassed by the proposed Tarkine National Park contains "some of the least well recognised high quality wilderness in the State" (Lesslie *et al* 1988), and this high quality wilderness has "outstanding heritage value to the nation" (DSEWPC 2012).

In Tasmania, the protection of wilderness has been at the heart of campaigns to prevent the flooding of Lake Pedder in the late 1960s and early 1970s, the nation-wide campaign in the late 1970s and early 1980s that halted construction of the Gordon-below-Franklin dam and precipitated the establishment of the TWWHA, the many protests and about forest management since the mid-1980s, and wilderness is at the core of concerns about the drafting of the new TWWHA Management Plan (DPIPWE 2016).

Wild character is a fundamental value of the Tarkine region, and the context for many of its other values. Wilderness in the Tarkine became a focus of protests in the mid-1990s. These were aimed at halting construction of a link road through country with a high degree of wild character (i.e. high quality wilderness) between Balfour and Corinna. Despite completion of the road in 1996, large tracts of high quality wilderness still exist in the region and constitute the core of the Tarkine National Park proposed by the Tarkine National Coalition, Bob Brown Foundation and other groups.

**Defining Wilderness**

There is a broad diversity of opinion about the meaning of the word 'wilderness' and about the measures that are necessary to protect wilderness. The situation has not been helped by the fact that numerous definitions of the word are in circulation, and that the word 'wilderness' is often used loosely to the point where can be virtually meaningless.

While wilderness areas have important scenic and ecological qualities, neither of these is unique to wilderness. The commonly recognized qualities of wilderness are naturalness and remoteness. The definition adopted for the management of the TWWHA (PWS 2016), and therefore being utilised in the management of the largest tracts of wilderness in Tasmania, is:

> *A wilderness area is an area of sufficient size, remoteness and naturalness to enable long-term integrity of its natural systems, diversity and processes, the maintenance of cultural landscapes and the provision of a wilderness recreational experience.*

**Mapping the wild character of the Tarkine region**

In order to produce useful data for natural resource assessment and management, wilderness must be delineated or mapped within the landscape. While the values associated with wilderness are diverse and sometimes subtle, and cannot be fully accounted for in quantitative terms (Landres *et al* 2008), it is nevertheless possible to identify some of the key physical and geographical attributes that are necessary and sufficient for an area to qualify as wilderness, and to a large extent it is possible to quantify these attributes. Naturalness (primitiveness) and remoteness are the intrinsic qualities of wilderness and these measures have been utilised in various ways by all attempts to map wilderness in the Tarkine region.

Various approaches have been used to map "wilderness" in the Tarkine region (and elsewhere). Russell *et al*. (1979) adopted a 'threshold' method for wilderness evaluation which merely identified land as either wilderness or non-wilderness. Hawes and Heatley (1985) proposed another method of delineating wilderness areas as the basis for developing a wilderness reserve system. In their study of the Tarkine region, Harries and Brown (1992) adopted the method of Kirkpatrick and Haney (1980) which, while also delineating wilderness areas, displayed a spectrum of wilderness quality within them. All these studies identified areas of high quality wilderness in the Tarkine region.

The concept of wild character (or the less-precise term "wilderness quality" used in the past) recognises a spectrum of naturalness and remoteness ranging from intensively developed to highly remote and largely pristine. The method developed by Lesslie *et al* (1988a) maps this continuum across the entire landscape. They assigned a Wilderness Quality variable (WQ) to each square in a grid covering the region of interest, with WQ being the sum of four variables: Remoteness from Settlement, Remoteness from Access, Apparent Naturalness and Biophysical Naturalness. This approach formed the basis for the National Wilderness Inventory (NWI), with Tasmania being the first State in which it was applied (Lesslie *et al* 1988b). The method is described in detail in Lesslie and Maslen (1995) but some improvements were made when wilderness in the TWWHA was re-mapped in 2005 (Hawes *et al* 2015). The mapping of wild character is also an important wilderness identification and management tool in other parts of the world (e.g. Carver *et al* 2013).

The most recent and comprehensive mapping of wild character (wilderness quality) available for the Tarkine region dates from 1995, utilised the NWI method, and was undertaken as part of the Comprehensive Regional Assessment (CRA) leading to the 1997 Regional Forest Agreement (RFA). The map below indicates the highest quality wilderness (WQ >18) in the Tarkine region is located around the southern Norfolk Range. Very high quality wilderness (WQ 14-18) also exists in the upper Savage River, Mt Bertha and Meredith Range areas.

In the context of the RFA, the wilderness quality data was assessed against threshold criteria to define areas of 'high-quality wilderness' for National Estate purposes. "High quality wilderness" areas were required to have a WQ >12, as well as be >8000 hectares in size and have a nodal area within of WQ >14 (PLUC 1997). This assessment delineated four separate large areas of high quality wilderness (Figure 1) and the proposed Tarkine National Park encompasses all of these.

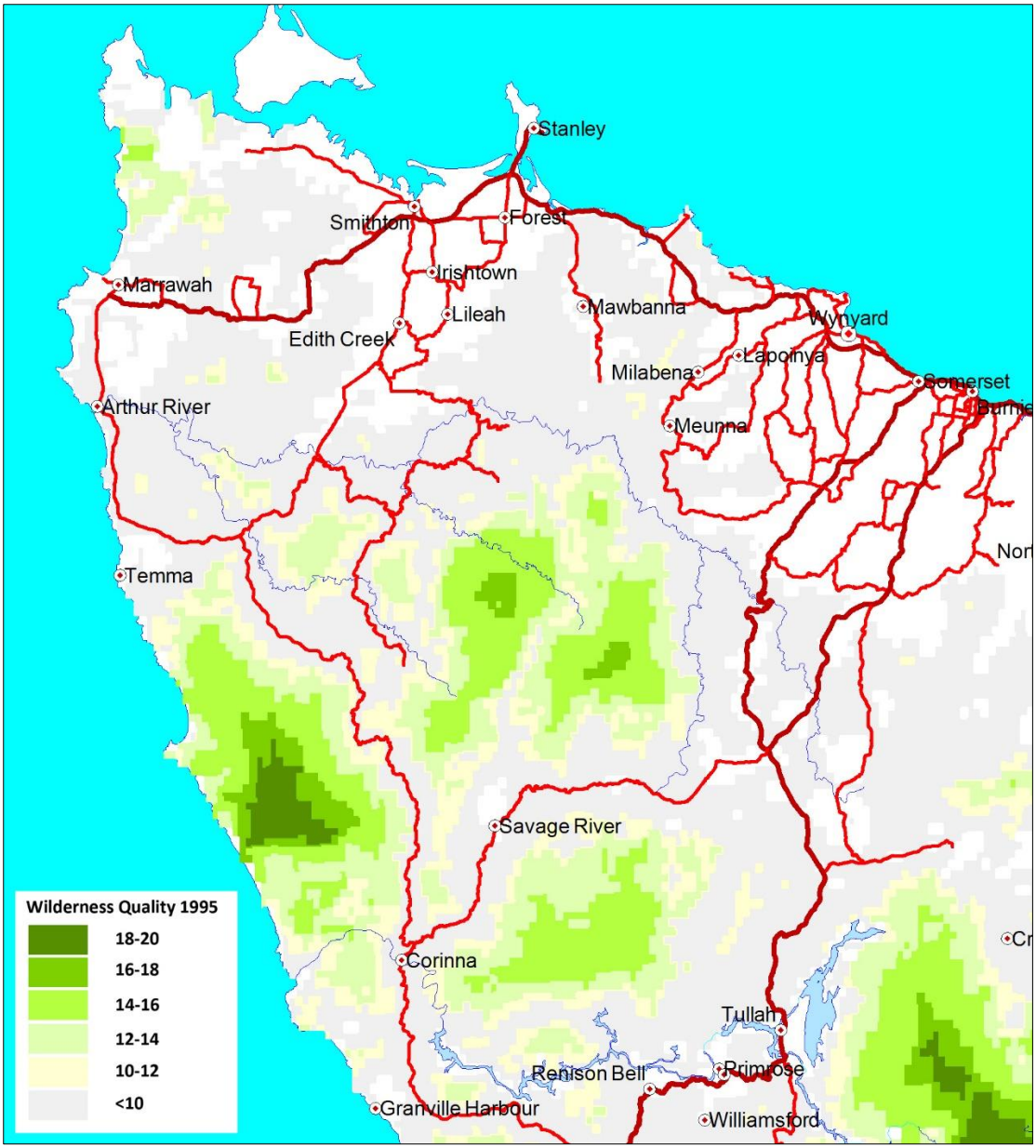


*Figure 1: Wilderness character (quality) in northwest Tasmania, mapped in 1995 as part of the Comprehensive Regional Assessment (PLUC 1997b) using the National Wilderness Inventory methodology.*

**Historic changes in wilderness quality**

Harries and Brown (1992) compared their study of wilderness in the Tarkine region with that of Kirkpatrick and Haney (1980) and found notable wilderness loss (i.e. decline in the wild character of some lands) had occurred during the intervening 12 years. Construction of the Western Explorer link

road Sumac forestry road during the early-mid 1990s further reduced wilderness quality. Hence, between 1979 and the mid-1990s:

- A small area of medium-quality wilderness inland from Nelson Bay was obliterated completely by road construction and logging activity.
- Vehicular tracks south of Balfour, as far as the Pedder River headwaters, have eroded wilderness quality northwest of Mt Norfolk.
- A large continuous area of high quality wilderness extending from the Norfolk Range to Mt Bertha and beyond was bisected, due to a combination of the construction of logging roads south from Dempster Plains, construction of the Western Explorer link road, and mineral exploration tracks near the Little Donaldson River.
- Wilderness around the upper Savage River receded on three sides due to increased road construction associated with both forestry and mineral exploration.
- Construction of the Pieman River impoundment and associated roads, and mineral exploration and other roads in the Wilson River valley and around Mt Ramsay have significantly reduced high-quality wilderness around and east of the Meredith Range.

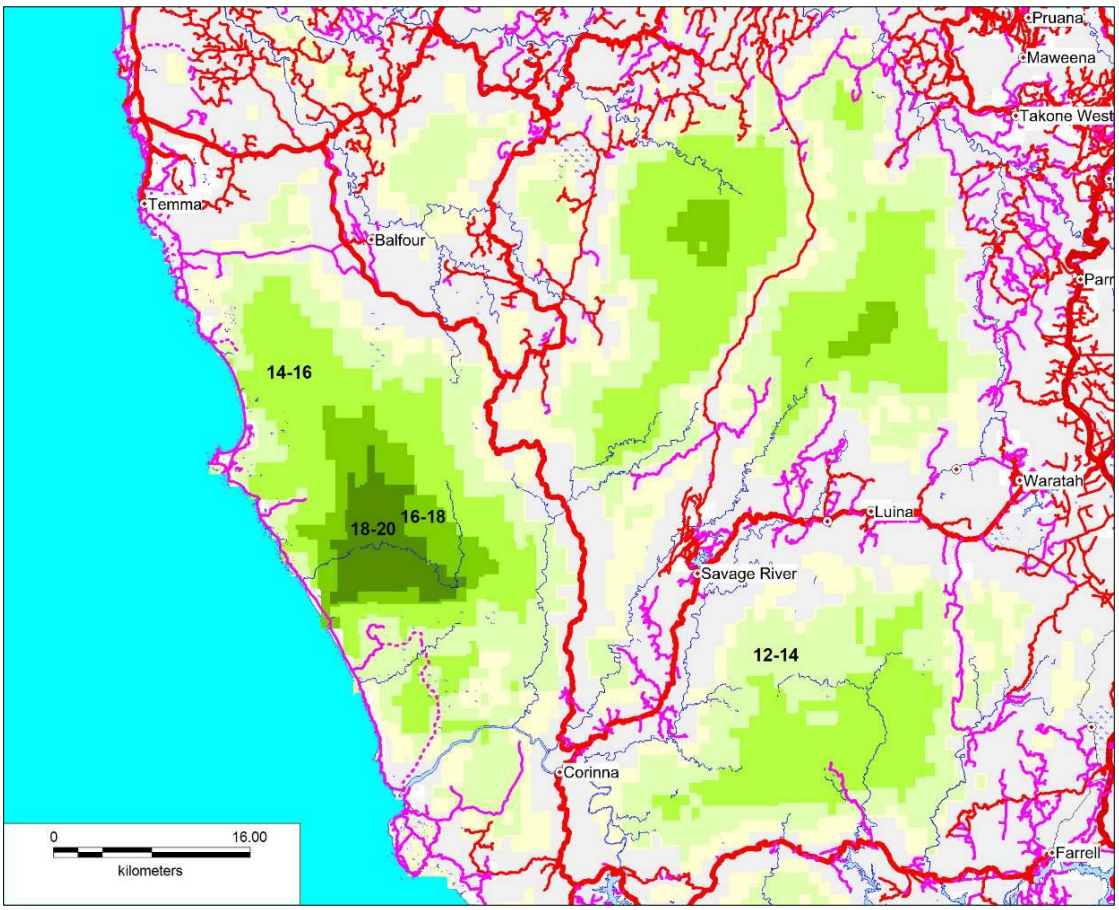


*Figure 2: Current (2015) roads data (from The List) overlain on the 1995 wilderness quality map (Figure 1), with wilderness quality values for each colour indicated. Some incursions of roads (red) into areas of higher wilderness quality are indicated.*

DSEWPC (2012) argues there has been little (further) change in the wilderness character of the Tarkine region between 1995 and 2010. However, overlaying current (2015) roads data from the Tasmanian Land Information System (The List) on the 1995 wilderness character map of the Tarkine

region suggests otherwise. The overlay (see Figure 2) shows several roads in areas mapped as wilderness quality >12 in 1995 (which could therefore not have been taken account of in the 1995 mapping and so are presumed to be more recent). Areas where there has been consequent loss of wilderness since the 1990s include the Eastons Creek area (in the northeast of the Tarkine region) and Tikkawoppa Plateau (south of the Pieman River). The road overlay also suggests wilderness loss has occurred in the Wilson River valley (southeast of the Meredith Range), and this road has certainly been upgraded for mineral exploration use during the last few years, but is known to have existed prior to 1995 (R. Blakers, pers. comm.) and hence its impact must have been overlooked in the 1995 wilderness mapping.

**Wilderness management and restoration**

With the exception of the relatively-small Savage River National Park, the current reserve tenures in the Tarkine region do not provide adequate protection for wilderness. Proclamation of the Tarkine National Park would be a significant step in ensuring the survival of high quality wilderness in the region. However, appropriate management is still required to ensure the appropriate level of wild character is maintained.

The 1999 TWWHA Management Plan (PWS 1999) embraced the concept of wilderness as a basis for management, including, “maintain or enhance wilderness quality” as a specific objective (the new 2016 management plan is less explicit in this regard). This is also an appropriate objective for the long-term management of the Tarkine region.

Remoteness is an inherent component of wilderness character. Furthermore, while maintaining or managing remoteness is integral to maintaining the integrity of wilderness, it is also the best way to maintain the integrity of many of the natural values contained therein.

An area can have a high degree of wild character (i.e. be considered “wilderness”) only if it is surrounded by areas of land or sea that are in a largely undeveloped condition (although such “remoting country” may not in itself have a similarly-high degree of wild character). Maintaining high quality wilderness therefore requires maintaining the predominantly natural and undeveloped condition of country with a high degree of wild character and its associated remoting country. In particular it requires the exclusion of roads, dams and other major artefacts from these areas, and restrictions on the development of lesser artefacts such as huts and vehicle tracks that detract from wild character. Hence a Tarkine National Park needs to include this remoting country in order to effectively protect the enclosed wilderness.

Loss of high quality wilderness in the Tarkine region during the last 15-30 years has been described previously and is considerable. But Harries and Brown (1992) argue it would be erroneous to consider such change irreversible. The wilderness estate could be enhanced by the closure to vehicular traffic and rehabilitation of some roads. In the long term (as revegetation progressed), this would significantly expand and link the areas of high quality wilderness in the Tarkine region. Once the Savage River mine has exhausted its mineral reserves, closure and rehabilitation of the Pipeline Track would also greatly enhance wilderness qualities throughout the heart of the Tarkine region. This has the potential to create a contiguous area of high wilderness quality (WQ>12) of well over 200,000 hectares.

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