

The analysis of the natural and cultural cover was derived from the updated PI base and expert opinion, with the Kirkpatrick and Dickinson (1984) vegetation map of Tasmania being used to assist in locating dune fields. The urban areas analysis was based on the AUSLIG 1:250 000 dataset on built-up areas. The land cover analysis is an important part of the biophysical naturalness dataset, with areas considered as cultural cover associated with cleared land or non-natural land cover being identified as biophysical naturalness class 0.

3.4 Composite disturbance layers

3.4.1 *Biophysical naturalness*

The biophysical naturalness dataset classifies natural areas (as defined by the land cover analysis) according to the intensity of timber harvesting, grazing and mining, using the biophysical rating scheme. This is a six-class rating scheme, with the classes ranging from a value of 0, which represents cleared land or non-natural land cover (for example, the cultural and reservoir areas defined in the land cover analysis), to a value of 5, representing areas that are unlogged and ungrazed.

The biophysical naturalness dataset was developed in accordance with the National Wilderness Inventory guidelines. It is based on a composite of the timber-harvesting, grazing, mining and land cover layers and uses the updated PI base, senescence, timber-harvesting history, private land disturbance, land tenure, Central Plateau erosion mapping, AUSLIG, MIRLOCH, and the assessment of disturbance at Mt Lyell mine.

Table 3.1 summarises the decision rules for assigning disturbance levels to the six classes; the rules are detailed in Appendices Q and R (in Volume II).

3.4.2 *The composite infrastructure dataset*

Linear features from the roads and infrastructure layers were combined and coded according to the National Wilderness Inventory guidelines (Lesslie & Maslen 1995). A similar process was used for the point features from the infrastructure, settlement, mining and river-flow impediments datasets.

Weightings for remoteness from settlement, remoteness from access, and apparent naturalness were applied to the features of both layers (according to the National Wilderness Inventory guidelines)—see Chapter 5.

Table 3.1 Biophysical naturalness rating scheme

Class	Generic National Wilderness Inventory class description	Class description for Tasmanian CRA
5	Unlogged and ungrazed	Unlogged and ungrazed
4	Unlogged and ungrazed for xx years; excludes clear-felled areas and intensively grazed areas	Selectively logged before 1950 or where THH records suggest logging post-1950 but the visual disturbance analysis, from the SENCODE, indicates minimal impact, and/or possible grazing , indicated by rough grazing (PI code) in 'naturally grassy areas'
3	Single selective logging or irregular grazing, or both, in preceding xx years	Lightly-logged post 1950 , indicated by selective logging post-1950 (with PI code of mature eucalypt or regrowth), PI cut-over where the THH is unknown, and/or likely grazing , indicated by evidence of pasture in 'naturally grassy' forest areas or rough grazing on the Central Plateau
2	Light to moderate grazing or repeated selective logging, or both, in preceding xx years	Heavily selectively logged post-1950 , indicated by selectively logged post-1950 (where the PI and SENCODE suggest high levels of disturbance); eucalypt regeneration with mature eucalypt or other species; or cut-over rainforest; and/or very likely grazing disturbance indicated by evidence of pasture under forest—PI code 'v'—on public land (except on the Central Plateau or in 'naturally grassy' forest areas)
1	Clear-fell logging operations or intensive grazing, or both	Eucalypt plantation or clear-felled and/or mining disturbance from Mt Lyell and/or evidence of intensive grazing assessed from SENCODE (V) or evidence of pasture —PI code 'v'—on non-'naturally grassy forest areas' on private land
0	Cleared land or non-natural land cover	Non-natural land cover Cleared land or significant evidence of grazing from PI code on non-'naturally grassy areas'

Note: In keeping with the National Wilderness Inventory guidelines, the period (xx) since selective logging ceased, which was used to distinguish between values 3 and 4, was selected to reflect regional perspectives. A period of 46 years—post-1950—has been used in this analysis. Source: Derived from Lesslie and Maslen (1995).

This information formed the basis of the wilderness and wild rivers infrastructure disturbance assessments and will contribute to the National Estate assessment.

References

- Cullen, P 1995, *Land degradation on the Central Plateau, Tasmania: the legacy of 170 years of exploitation*, Occasional paper no. 34, Tasmanian Parks and Wildlife Service, Hobart.
- Kirkpatrick, JB & Dickinson, KJM 1984, *1:500 000 vegetation map of Tasmania*, Forestry Commission, Hobart.
- Lesslie, R & Maslen, M 1995, *National Wilderness Inventory Australia: handbook of procedures, content and usage*, 2nd edn, AGPS, Canberra.
- Sulikowski, JP 1995, 'Forest resource mapping by photo-interpretation,' Forestry Tasmania, Hobart, unpub.