

Enquiries: Jane O'Malley  
Our Ref: 0042\_2016\_0511\_JO  
Your Ref:

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Ecological Communities Section  
Department of the Environment  
GPO Box 787  
Canberra ACT 2601



Sent via email to: [epbc.nominations@environment.gov.au](mailto:epbc.nominations@environment.gov.au)

Attention: Ecological Communities Section

Dear Sir/Madam

### Support for the Listing of the Banksia Woodlands of the Swan Coastal Plain as a Threatened Ecological Community

Thank you for the opportunity to provide a submission on this important proposal.

The Peel-Harvey Catchment Council (PHCC) is an incorporated, not-for-profit, community based Natural Resource Management organisation that promotes an integrated approach to catchment management and natural resources.

The PHCC values the opportunities provided through the EPBC Act to protect and better manage rare and threatened species and ecological communities of the Peel-Harvey Catchment.

Banksia Woodlands are a characteristic feature of the Swan Coastal Plain portion of the Peel-Harvey Region and have declined significantly in extent and condition since European settlement. Over recent decades they have continued to be cleared and impacted by numerous threats, and this trend appears to be continuing.

Numerous projects by the PHCC and our community improve the protection and resilience of patches of Banksia Woodland. These projects seek to address a range of threats and threatening processes which will continue to reduce the condition of the Woodlands if not actively managed. Through working with our community we have come to appreciate how challenging it is to manage and restore Banksia Woodlands.

Banksia woodlands have numerous intrinsic values and provide valuable ecosystem service functions which cannot easily be replaced. These values include providing habitat for a suite of native mammals, birds, reptiles and amphibians that are under threat on the coastal plain and a great diversity of unique species of flora. Many of the species occurring within banksia woodlands are rare and threatened, and hence are listed under the EPBC Act. Banksia Woodlands protect a substantial volume of Perth's groundwater resources, prevent erosion of poor, deeps sands and moderate the climate of the Swan Coastal Plain where most of the Perth and Peel populations reside.

58 Sutton Street, Mandurah  
Western Australia 6210

T: +61 8 6369 8800

[www.peel-harvey.org.au](http://www.peel-harvey.org.au)

*We acknowledge the Noongar people as Traditional Custodians  
of this land and pay our respects to all Elders past and present*

The PHCC supports the listing of Banksia Woodlands as Endangered under the Environment Protection and Biodiversity Conservation Act for a number of reasons as described below.

1. Remaining Banksia Woodlands are significantly reduced from their original extent in the Peel-Harvey Catchment. The nomination states that 67% of Banksia Woodlands south of Moore River have been cleared (i.e. 33% remaining). However, analysis conducted for the Peel-Harvey Catchment's regional NRM Plan indicates that only 15% of all original vegetation on the coastal plain portion of the Peel-Harvey Catchment remained as at 2014 (PHCC, 2015). Much of this vegetation is Banksia Woodland and remains within vast areas of cleared seasonally waterlogged wetland.
2. The Banksia woodlands have been significantly cleared through past land use and there is continued pressure to clear further areas. This future clearing is part of the development Classes of Action included in the Strategic Assessment of the Perth-Peel Region (SAPPR) process as well as other proposed development that will occur outside the prescribed SAPPR Classes of Action).
3. Many of the occurrences of Banksia Woodlands in the Peel-Harvey Catchment are small, isolated occurrences within expansive flat wetlands (palusplain). Some of these isolated occurrences are large and of high conservation significance, such as the Lowlands Conservation Estate, but most are small and less than 100 ha, and many less than 10 ha. This isolation and small size impacts natural area viability and resilience to threatening processes. Numerous Banksia Woodland occurrences overlay sand resources that may be commercially attractive sand resources. The potential for further development of sand quarries (existing and new) outside of the SAPPR Classes of Action remains a concern for the ongoing existence of numerous Banksia Woodland occurrences in the Catchment.
4. Banksia Woodlands in the Peel-Harvey Catchment provide valuable habitat for black cockatoos (Matters of National Environmental Significance) and other threatened species. Black Cockatoos use the Banksia Woodlands for feeding habitat and rely heavily upon these habitats for food at certain times of the year. Large occurrences of Banksia Woodlands are also likely to provide habitat for significant species such as *Tarsipes rostrum* (Honey Possum) which have become locally extinct. This has been supported by fauna surveys of some large areas of Banksia Woodland in the Peel-Harvey Catchment in recent years.
5. Of the remaining Banksia Woodlands, there is little information on the condition of individual occurrences. Figure 1 below provides an indication of vegetation trend in parts of the Swan Coastal Plain, including areas of Banksia Woodlands and associated wetlands (Landgate & PHCC, 2013). Figure 1 shows the large areas of cleared land (black) on the coastal plain and the extent of vegetation areas, many being Banksia Woodlands. Many of these remaining vegetation areas exhibit a small decreasing trend (orange) between 1990 and 2013. Also note the extent of vegetation areas on the coastal plain that exhibit a large decreasing trend (red) over the 1990 – 2013 period. This information can be used to identify areas which may be declining in condition or vegetation cover over the 1990 -2013 period for further analysis of the reasons for this decline or reduced vegetation cover.

6. Given our community's work on Banksia Woodlands and the susceptibility of Banksia Woodlands to a range of threats, the extent of the Woodlands remaining that are in Good or better condition is likely to be less than the 33% extent that is currently quoted in the nomination. This means that the actual extent of functional, resilient occurrences of Banksia Woodlands is less than the quoted 33% (67% cleared).
7. The nomination should consider the multiplicity and severity of threatening processes that are impacting on Banksia Woodlands on the coastal plain. This is compounded by the small size of many occurrences of the ecological community and the ecological community's fragmented nature. The work of the PHCC and the community demonstrates some of the broad challenges of management, including dieback disease prevention and control, altered fire regimes, especially increased fire frequency and intensity, weed invasion and the replacement of understorey by weeds following too-frequent fires. Changing climatic patterns, less rainfall and concern over levels of groundwater extraction further complicate management of the ecological community.
8. Restoration of Banksia Woodlands is technically difficult and expensive. Re-establishment of the community is generally considered to be financially prohibitive. Listing of the ecological community should increase the community's awareness of the importance of protecting and managing remaining occurrences of Banksia Woodlands rather than relying on restoration and attempts to re-establish Banksia Woodlands. It will also make available Commonwealth funding specific for the management of these important environmental assets.

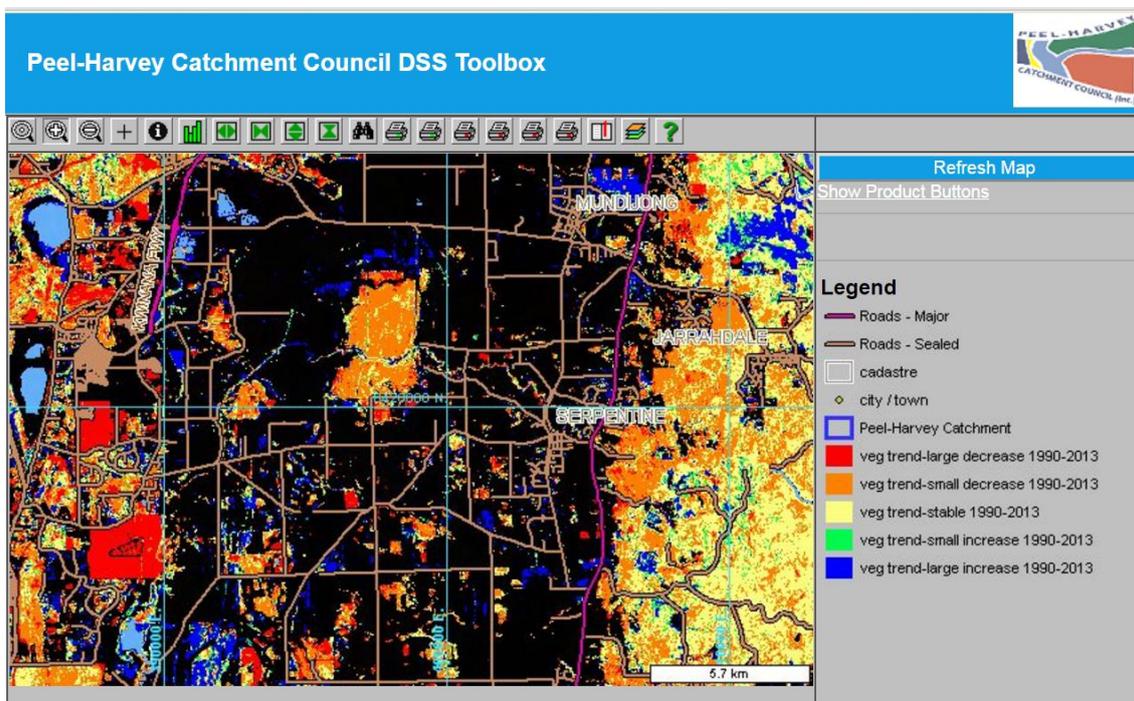


Figure 1: Map of a Coastal Plain portion of the Peel-Harvey Catchment (Landgate & PHCC, 2013).

## Notes to Figure 1

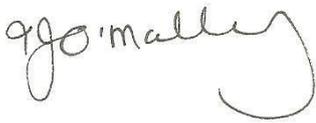
The map in Figure 1 is taken from the Peel-Harvey Catchment Council DSS Toolbox generated by Landgate, via the Land Monitor Project and satellite imagery from Geoscience Australia.

The area in black is a coastal plain area of the Peel-Harvey Catchment where remaining Banksia Woodlands and other ecological communities are found, represented by the coloured areas. The black areas are areas with no significant perennial vegetation. The map shows vegetation coloured according to vegetation trend classes, determined by changes in the vegetation's reflectance over time in satellite imagery (in this case 1990 and 2013). Areas coloured red and orange indicate a decreasing trend in vegetation over the 1990 – 2013 period. Yellow indicates stable vegetation condition, and green and dark blue indicate increases in vegetation reflectance. Light blue indicates areas of open water. Note that a decreasing vegetation trend may be caused by any one or more factors such as clearing, fire, insect attack, vegetation senescence, impact of dieback disease etc. Similarly an increasing vegetation trend may be indicative of a number of scenarios: vegetation in a regrowth phase, vegetation under rehabilitation or newly revegetated areas.

Thank you again for the opportunity to provide a submission on this important proposal.

Should you require further information, please do not hesitate to contact Jane O'Malley on (08) 6369 8800 or email [admin@peel-harvey.org.au](mailto:admin@peel-harvey.org.au).

Yours sincerely



Jane O'Malley  
Chief Executive Officer

## References

Landgate & Peel-Harvey Catchment Council (2013) Peel-Harvey Catchment Council DSS Toolbox, An initiative of Landgate and the PHCC, using satellite imagery from the Land Monitor Project and Geoscience Australia, accessed on 12 May 2016, [http://landmonitor.landgate.wa.gov.au/landgate\\_landmonitor\\_public.asp](http://landmonitor.landgate.wa.gov.au/landgate_landmonitor_public.asp)

Peel-Harvey Catchment Council (2015) *Binjareb Boodja Landscapes 2025, A Strategy for Natural Resource Management in the Peel-Harvey Region.*, A report to the Peel-Harvey Catchment Council, Jane O'Malley and Andrew Del Marco (eds.) Mandurah, Western Australia.