

Kunderang East Pastoral Station landscape and historic building case study

Preparing your heritage property for the impacts of climate change



Kunderang East Pastoral Station features an historic homestead and cattle yards connected to a broader cultural landscape that includes traditional Aboriginal walking tracks, historical horse trails and several huts associated with raising cattle in gorge country.

Site history and heritage

This NSW state heritage listed property was established as a pastoral run in a sheltered valley on the upper Macleay River in the 1840s. It comprises a well-maintained cedar homestead constructed from locally harvested Australian cedar, believed to have been rough sawn on site, as well as timber outbuildings, stockyards and stockmen's huts. The property is now within the

Oxley Wild Rivers National Park, which is part of the Gondwana Rainforests World Heritage Area.

The property is one of several places within the rugged gorge country where Aboriginal massacres occurred in the period before 1845, during the violent frontier wars in the region.

The property is also significant as a place of shared Aboriginal and settler heritage. Several traditional Aboriginal walking tracks are known to transect the property. The history of the pastoral station exemplifies the major contribution that Aboriginal men and women made to the pastoral industry. There were long periods when the workforce at Kunderang was almost entirely Dhan-gadi, Gumbaingirr and Aneiwani people, who were celebrated for their work and skilled horsemanship.



Challenges

The increased frequency and intensity of bushfires due to climate change are a significant challenge for the long-term management of Kunderang homestead.

The homestead is in the rain shadow of the Carrai Plateau, which traps rain coming from the east, contributing to dry vegetation and elevating bushfire risk. Water for firefighting is available from the nearby Macleay River; however, the homestead is not permanently occupied and therefore human intervention in the case of bushfire is unlikely.

The current bushfire risk is increased by the homestead's isolation among the extensive forests of the Oxley Wild Rivers National Park, with the area previously impacted by bushfires in 1994 and 2019. During the latter fire, Yousedale hut burned but has since been restored. It is predicted that by 2100 the average number of severe fire days will increase significantly.

Historically, the combination of moderate temperatures, strong winds, and comparatively low relative humidity during late winter and spring is characteristic of the fire patterns in this area, with most bushfires occurring in spring – and predicted shifts in rainfall patterns are likely to exacerbate this.

An increase in violent storms caused by climate change is likely to exacerbate bushfire risk, as many of the previous fires in the region were ignited by lightning strikes.

Floods are also a challenge for the area, with previous flooding events eroding Aboriginal sites along the riverbank, including Aboriginal ancestral remains.

Current management, future opportunities

The NSW National Parks and Wildlife Service (NPWS) works to mitigate current and potential impacts on the property in several ways. A conservation management plan is in place for the property, along with a regular maintenance plan.

A fire management plan is also in place for the Oxley Wild Rivers National Park. Bushfire protection measures for the homestead include:

- Manual removal of fuels by slashing and mowing around key assets
- Limited prescribed burning in the immediate vicinity when or if necessary
- Maintenance of pumps, tank water lines and sprinklers associated with the lawn watering system around homestead building and outbuildings
- Extension of the watering system to outbuildings
- Water tanks (rainwater and bore)
- Fire breaks.

NPWS is planning to install a weather station at the homestead which will be crucial to gather data on changes to weather patterns over the coming years.

Any future management opportunities would need to be developed in collaboration with NPWS, Aboriginal stakeholders and adjoining landowners. Opportunities to further prepare for the impacts of climate change include:

- Updating plans and policies to specifically address the future impacts of climate change
- A remote monitoring system to alert staff to potential threats
- Remotely activated sprinkler systems*.

*Alterations to State Heritage Register items (places and objects) need to meet the criteria for an exemption or be approved under the *NSW Heritage Act 1977*.



Lessons

- Preventative and regular maintenance, including fuel reduction, is the most effective way to increase the bushfire resilience of heritage buildings.
- Water supply for firefighting is crucial and can include both rain and bore water tanks.
- Climate change data can be variable and generic. Site-specific weather stations could provide valuable data for microclimates and assist with the prediction of climate change impacts.

*Approval may be required under the *National Parks and Wildlife Act 1974* and *Heritage Act 1977*.

References

Cohen B (1987) *To my delight: The autobiography of Bill Cohen, a grandson of the Gumbangari*, Aboriginal Studies Press.

Jill Shepperd and Associates (unpublished) *Kunderang East Pastoral Station – Conservation Management Plan – Oxley Wild Rivers National Park*, prepared for NSW National Parks and Wildlife Service.

National Parks and Wildlife Service (2008) *East Kunderang Homestead – Maintenance Plan – Oxley Wild Rivers National Park*.

Cover photo: East Kunderang Australian cedar homestead (M. Van Ewijk, DPE). Page 2 left to right: East Kunderang homestead in its cultural landscape (L. Pippas, DPE), historical pastoral station relic, East Kunderang pastoral station (source: M. Van Ewijk, DPE) and East Kunderang Australian cedar homestead (M. Van Ewijk, DPE).

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