CASE STUDY

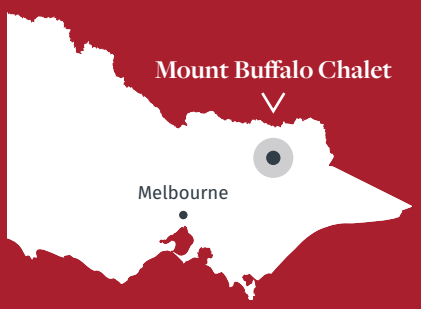
Mount Buffalo Chalet

The place

The Mount Buffalo Chalet was designed by the Victorian Public Works Department and opened in 1910 as a government-owned hotel. Situated in an extensive area of native forest in Mount Buffalo National Park in the alpine region of Victoria, the timber building is one of the largest chalet complexes in Australia.

It was in continuous use as a year-round alpine resort until 2006. Victorian Railways managed the chalet from 1924 to 1998, when Parks Victoria took over the management.

HERITAGE COUNCIL VICTORIA



Location

Mount Buffalo, Alpine Shire

Traditional Owners

Taungurung People

Main Impacts

Decline in alpine snowfall of **35–75%**

Average annual temperature **increase** of up to **2.4°c**

Type

Early 20th century alpine hotel, comprising:

- large timber building with metal roof
- historical garden
- internal collection.

Heritage Listing

Victorian Heritage Register

HERITAGE VICTORIA
HERITAGE VICTORIA
HERITAGE VICTORIA

Isolated bushland setting of Mount Buffalo Chalet.

Heritage significance

The Mount Buffalo Chalet is significant for its links with the history of leisure in Victoria and its use as a government-run tourist destination for almost 100 years. It is notable for its role in promoting the use and development of Mount Buffalo National Park, and for its association with Victorian railways. It is also important for its scale, its consistent and intact architectural style, and the horticultural significance of its gardens. The chalet's collection forms part of its significance and includes furniture, ornaments, artworks, plans, photographs, maps, uniforms and recreational equipment.

Climate change impacts

Mean annual temperatures in the Australian alps are predicted to be 4°C to 5°C higher than at present by 2100.[1] Heatwaves, drought, gales and fires in mountain forests are expected to be more frequent and more intense.

Annual rainfall and snowfall are expected to decrease by up to 20%, resulting in a change in the freezing and thawing cycle. The potential for fungal rot is likely to increase as a result.

Extreme rainfall is expected to be more frequent, and the interval between wet periods will be drier.

Site vulnerability and heritage impacts

As an isolated timber building surrounded by a garden in a native forest, Mount Buffalo Chalet is extremely vulnerable to bushfire. Firefighting is likely to be restricted to aerial bombing with water and fire retardant and the application of the site's local sprinkler system. The surrounding area will require ongoing vegetation maintenance such as tree felling and firebreak clearing, which may affect the visual setting of the place.

Trees dying because of rising temperatures, increasing drought and insect attack will leave more dry debris to burn. Dying and dead trees are more vulnerable to strong winds, increasing the likelihood of tree falls, windborne debris and subsequent structural damage to the building.

More frequent and severe storms, as well as subsequent drying, may make timber fabric, some of which is already decayed or rotting, more vulnerable to damage (e.g. warping and splitting of weatherboards). Intensified downpours could overwhelm existing roof plumbing and site drainage systems.

The furniture, ornaments, artworks and other objects in the chalet collection are at risk from fire. They are also at risk from fungal attack and general deterioration caused by both dampness resulting from water penetration and an abnormal wet–dry cycle that may affect the internal conditions in the chalet.

Damage to timber boards exacerbated by changes to the freeze–thaw cycle.

Current management for climate resilience

Parks Victoria uses a risk assessment approach to adapt park management in the face of climate change, particularly in relation to extreme weather, but its focus is largely on natural values. A heritage

1 Australian Alps National Parks 2016. *Australian Alps Climate Futures: Taking Action Now to Strengthen Resilience—Summary Report*.

An aerial tanker dropping a line of fire retardant around the chalet during the 2019–20 fires to provide a defendable line in case the nearby fire came closer.

action plan for the chalet, prepared in 2002, does not address the effects of climate change.

Bushfire preparedness, including seasonal burning for asset protection, is a strong focus of the management of the site. However, seasonal burning for bushfire protection is likely to become more problematic because the period for safe burning is predicted to shrink substantially, and there may be some years where it is not possible.

When a bushfire threatened the chalet in January 2020, the moveable collection in the building was relocated, but was returned after the threat had passed because of the primary association of the collection with the place.

A conservation management plan prepared for the chalet's heritage gardens focuses on the restoration of the gardens and does not address the potential effects of climate change.

Potential strategies for building resilience

The heritage action plan for the chalet needs to be revised to account for the predicted effects of climate change, particularly the expected increase in frequency and intensity of bushfires, extreme rainfall events and fluctuations in the freeze–thaw cycle.

Plans for aerial firefighting should be reviewed in the light of this scenario, and the ability of the existing sprinkler system to protect the chalet and garden should also be assessed.

Changes to the fabric of the building to make it less prone to damage from fires and fungal attack might be possible (e.g. replacement of timber weatherboards with fibre-cement boards), but this would be a last resort following exploration of all other options.

Immediate actions that would improve climatic resilience include:

- using non-flammable surface treatments (e.g. fire retardant coatings on timber surfaces) and walls as part of the landscape around buildings
- maintaining the landscape around the chalet to ensure the asset protection zone is kept against bushfires
- preserving defendable space around buildings to maintain asset protection zone; actions might include sustaining lawns, reducing the tree canopy close to buildings, reducing undergrowth, removing flammable materials such as stored fuel from the vicinity of buildings
- providing firefighting systems to maintain backup power and water supply for firefighting
- installing roof sprinklers to protect most important buildings if backup water is available
- installing air-conditioning to control the temperature and humidity inside the chalet.

The climate change resilience of the place would also be enhanced by developing a formal evacuation plan for the contents.

Burning of collected heavy fuels from around the Mount Buffalo Chalet to reduce the fire risk, under the control of Forest Fire Management Victoria.

View of snow coverage during the winter season.

ISBN 978-0-7311-9253-3 **(pdf/online/MS word)**
Author: GML Heritage. Design: Green Scribble.
All photographs: Parks Victoria.