



Falls to Hotham Alpine Crossing Summary of key findings

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Summary and key findings

Biosis was contracted by Parks Victoria to prepare an environmental and cultural heritage risk assessment to assist with the route planning for the proposed Falls to Hotham Alpine Crossing (FHAC study area). The track runs from the Rocky Valley Storage in the east to Hotham Heights in the west.

The objectives of the investigation were to:

- Undertake a desktop analysis of existing known information to identify environmental and cultural values within the Greater Alpine National Park (GANP) and within the study area to identify potential threats to environmental and cultural values resulting from the proposed FHAC study area and quantify the likely impacts of the FHAC study area on environmental and cultural values.
- Provide recommendations for options to mitigate risks and minimise impacts.
- Provide statutory and environmental planning advice to Parks Victoria in relation to:
 - *any significant issues or obstacles which must be considered if the project is to proceed;*
 - *processes which Parks Victoria should follow in order to ensure compliance with statutory planning and environmental controls; and,*
 - *compliance with, and potential appropriate amendments to, the Greater Alpine National (GANP) Management Plan 2003 which may be required in order to facilitate the development of the FHAC study area.*

The risk assessment process, undertaken in accordance with *AS/NZS ISO 31000: 2009 Risk management – principles and guidelines* and *HB 203: 2006. Environmental risk management – principles and process*, entailed:

- the identification of the environmental and cultural heritage values within the Greater Alpine National Park and within a buffer along the length of the track;
- the identification of threats to those values;
- the development of a table of consequence categories;
- the development of a risk matrix based on the likelihood and consequence of a threat occurring.

Assignment of risk categories for all identified environmental and cultural values was then undertaken by an expert panel workshop. Where appropriate, management actions to reduce risk categories to an acceptable level (residual risk) are recommended.

The risk assessment also addresses planning issues requiring consideration, including the requirements of State and Commonwealth legislation and the Local Government planning schemes.

The risk assessment was represented spatially through the development of a Geographic Information System (GIS) model which enabled specific or cumulative risks at any point along the track to be clearly displayed and the driver of the risk to be interrogated and identified. The GIS modelling approach allows iterations of the risk assessment, based on variation of parameters, to be conducted simply and explicitly. The graphic representation of the results enables managers to quickly and efficiently identify areas of risk that require decisions or further routing or design work.

The assignment of the risk category is to provide a flag to Parks Victoria that there is a **potential** risk to an environmental or cultural value. The assignment of a risk category is a trigger for further management actions, proportional to the level of risk, such as additional field-based studies, detailed management prescriptions for construction and maintenance and micro-siting of facilities.

The key findings of the risk assessment are summarised below.

Priority values and risks

- **Value: Cultural Heritage – Artefact Scatter and Scar Tree Archaeological Sites**
 - **Risk identification:** *A Cultural Heritage Management Plan (CHMP) has been prepared for the area around Tawonga Huts. However other sites for which a CHMP has not been prepared are known to exist and there is potential for additional sites along the FHAC to support cultural heritage.*
 - **Risk assessment:** *Cultural heritage sites may be impacted during the construction of the FHAC.*
 - **Management response:** *Undertake a CHMP process for all areas likely to support cultural heritage.*
 - **Residual risk:** *Low. The CHMP process will define cultural heritage values and provide management requirements to minimise risks.*

- **Value: Water quality – Declared Water catchments**
 - **Risk identification:** *The whole of the study area is within a declared water catchment.*
 - **Risk assessment:** *There is potential for contamination of waterways by human waste.*
 - **Management response:** *Prepare a waste treatment plan for the storage and disposal of human waste.*
 - **Residual risk:** *Low. The waste treatment plan will provide an operating process that will minimise the risks of contamination.*

- **Value: Ecological communities – Long Unburnt Snow Gums**
 - **Risk identification:** *Long unburnt Snow Gums were identified in the Risk Workshop as a value with limited occurrence within the GANP.*
 - **Risk assessment:** *The precise location of long unburnt patches of Snow Gum is not known but the patches are understood to occur sporadically throughout the GANP. As a precaution Long Unburnt Snow Gums were allotted an extreme risk for the overnight nodes and a high risk category for the track sections.*
 - **Management response:** *Avoid all patches of long unburnt Snow Gums during the construction of new sections of track and hiker facilities.*
 - **Residual risk:** *Low. Avoiding impacts would result in low risks to the Snow Gums from the FHAC.*

- **Value: Ecological Communities and Plants – Phytophthora specie**
 - **Risk identification:** *Various species of Phytophthora are known to occur in the GANP.*
 - **Risk assessment:** *Phytophthora has the potential to have a significant impact on ecological communities and plant species.*
 - **Management response:** *Hygiene measures be implemented for all machinery, tools and other equipment prior to entering the FHAC and foot baths for cleaning and disinfecting walkers' boots will be located at visitor entry points.*
 - **Residual risk:** *Low. The hygiene measures will minimise the risk of phytophthora species being introduced and spread within the FHAC.*

- **Value: Animals – Sooty Owl**
 - **Risk identification:** *Sooty Owl, a Flora and Fauna Guarantee Act 1988 (FFG Act) listed species, has been recorded only once within the GANP - within the Tawonga Huts – Diamantina Horse Yards section of the track.*
 - **Risk assessment:** *The species occurs widely throughout eastern Victoria but due to the single record within the GANP it is considered as a high risk in the Tawonga Huts – Diamantina Horse Yards section and low elsewhere.*
 - **Management response:** *Avoid removal of hollow-bearing trees during construction of new sections of track and other facilities.*
 - **Residual risk:** *Low. Avoiding loss of roosting and breeding habitat (hollow trees) means the species should not be impacted.*

- **Value: EPBC Act listed communities – Alpine Bogs and associated communities**
 - **Risk identification:** *Alpine Bogs and associated communities are listed under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and the FFG Act.*
 - **Risk assessment:** *The Alpine Bogs have limited distribution within Victoria and are at risk from trampling and altered hydrologic regimes.*
 - **Management response:** *Avoid locating the track on or near bog communities and ensure that the construction of the track and other facilities do not impact on drainage (increase or decrease) into the bogs.*
 - **Residual risk:** *Low. Appropriate siting of the track and facilities bogs will avoid direct impacts. Maintenance of current hydrologic regimes that drain into the bogs will avoid impacts.*

- **EPBC Act listed species – Dwarf Sedge and Snow Daphne:**
 - **Risk identification:** *Both species are known to occur in the Tawonga Huts – Wallace Huts section and there is potential for them to occur on the new sections of track and overnight nodes.*
 - **Risk assessment:** *Both species have very limited known distribution within the GANP.*
 - **Management response:** *Targeted searches for both species will be undertaken prior to construction of new sections of track and hiker facilities and along the Tawonga Huts – Wallace Huts section.*
 - **Residual risk:** *Low. Detailed understanding of the occurrence of the two species will allow appropriate siting of the track and facilities.*

- **Value: FFG Act listed plants – Mountain Daisy**
 - **Risk identification:** *Mountain Daisy is known to occur in the Tawonga Huts – Wallace Huts section of the track.*
 - **Risk assessment:** *The species has very limited known distribution within the GANP.*
 - **Management response:** *Targeted for the species will be undertaken to inform the route of the track within the Tawonga Huts – Wallace Huts section.*
 - **Residual risk:** *Low. Detailed understanding of the occurrence of the species will allow appropriate siting of the track.*

- **Bushfire Management Overlay (BMO):**

- **Risk identification:** *The BMO covers the entire length of the FHAC study area.*
- **Risk assessment:** *Compliance with the standards explicit in the BMO, in particular the defensible space, landscape situation requirements and provision of water could impact on the development of the FHAC.*
- **Management response:** *Prepare an Emergency Management Plan (EMP) for the GANP to comply with the BMO requirements.*
- **Residual risk:** *Low if it is determined that the EMP is an appropriate tool for compliance with the requirements of the BMO.*

Medium and Low risks

Areas identified as Low or Medium risk categories generally do not require specific mitigation management responses other than minimisation of disturbance to ensure the lowest level of impact results.

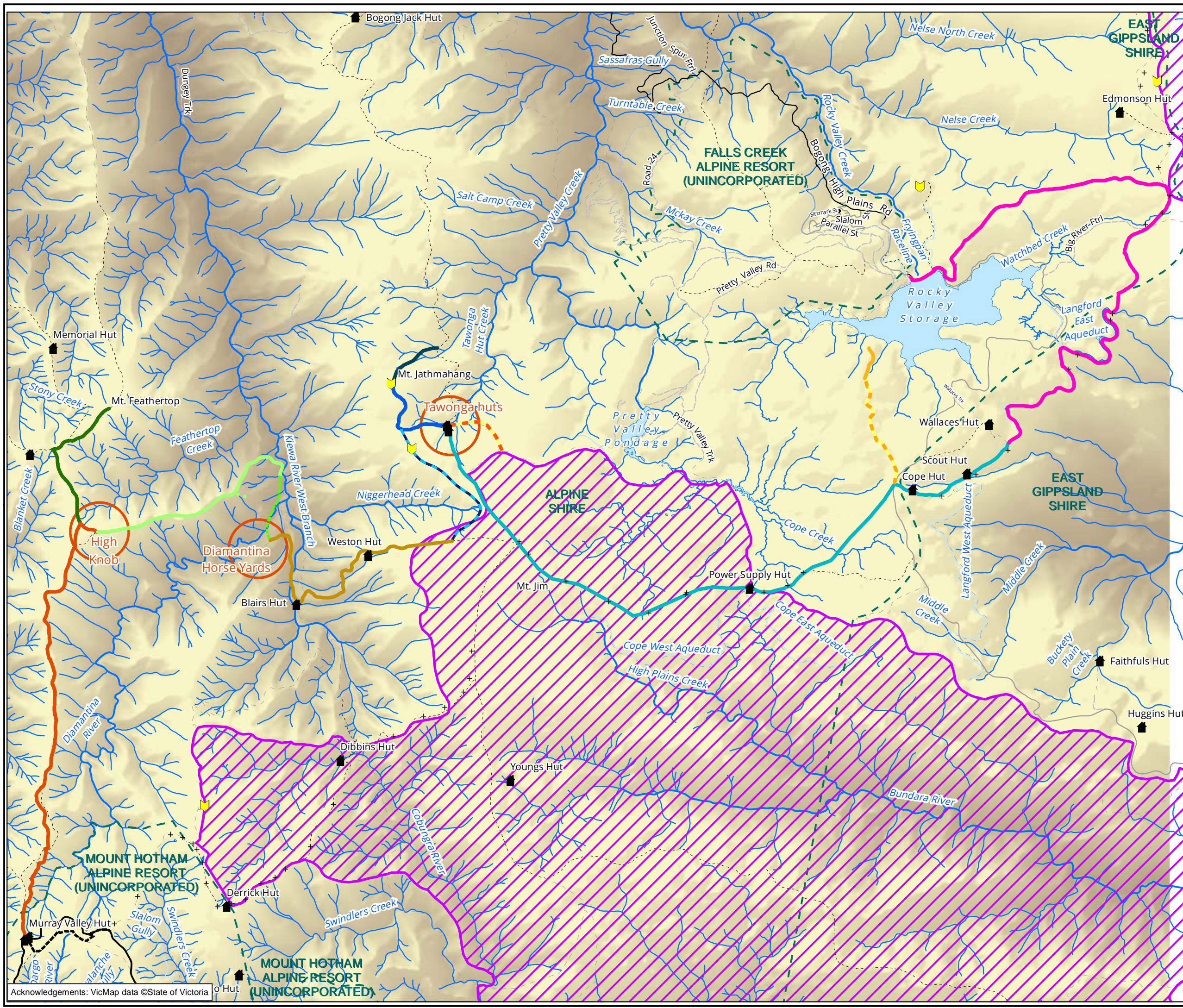
New information

This risk assessment is based only on existing information. It is quite possible that additional records of values will be found particularly along new sections of track and at the overnight node settings. New information should be included in the risk assessment as it becomes available.

Conclusion

Based on the findings of this risk assessment we conclude that:

- There is a range of ecological and cultural heritage values that are potentially at risk from the construction of the FHAC, including the installation of overnight visitor facilities.
- The Great Alpine National Park Management Plan 2016 provides the framework to which the design, construction and maintenance of the FHAC must conform.
- To ensure that the identified ecological and cultural heritage values are maintained and protected during the construction and maintenance of the FHAC a number of management actions will be required. Foremost will be the gathering of detailed information on location and extent of many of the values such as cultural heritage sites, listed plant species and significant ecological communities. This will allow appropriate micro-siting of the track and camper facilities to avoid adverse impacts to the identified values.
- It is likely that residual risks for all identified ecological and cultural heritage values would be reduced to low through detailed planning and appropriate management of the identified values.



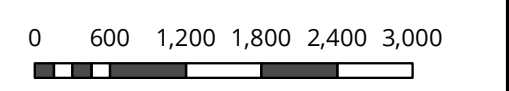
Legend

- Overnight Node setting
- Proposed alignment (new/existing)
- Cope Hut to Rocky Valley Storage, Existing
- Cope Hut to Rocky Valley Storage, New
- Diamantina Horse Yards - High Knob, Existing
- Diamantina Horse Yards - High Knob, New
- Diamantina Hut to Mt. Loch car park, Existing
- High Knob - Hotham, Existing
- High Knob - Mt. Feathertop, Existing
- Mt Jathmahang to Fainters Firetrail, New
- Overnight Node 2, Existing
- Tawonga Hut - Wallace Hut, Existing
- Tawonga Huts - Diamantina Horse Yards, Existing
- Tawonga Huts - Mt Jathmahang, Existing
- Tawonga Huts - Westons Hut, New
- Wallace Hut to Rocky Valley Storage, Existing

Features

- hut
- lookout
- snow pole
- Remote and Natural

Figure 2: FHAC study area segments, Alpine National Park, Victoria



Metres
Scale: 1:60,000 @ A3
Coordinate System: GDA 1994 MGA Zone 55

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Acknowledgements: VicMap data ©State of Victoria