



Draft Walking Tracks Strategy

Kosciuszko Summit Precinct



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Cover photo: Buttercups along Thredbo to Mount Kosciuszko walk. E Sheargold/OEH

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ISBN 978-1-925755-22-0
OEH 2018/0642
January 2019

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Executive summary

The 2006 Kosciuszko National Park (KNP) Plan of Management (PoM) recommended that a park-wide walking track strategy be developed. This strategy is the first of multiple KNP precinct walking track strategies which will eventually cover the entire park.

The precinct that this strategy covers is in the southern end of KNP and includes the areas around Mount Kosciuszko, Thredbo, Charlotte Pass, Guthega, Perisher, Crackenback and Sawpit Creek.

The precinct is subject to quite high visitation by walkers. For example, more than 100,000 people walk to Mount Kosciuszko each year. The area contains fragile alpine and subalpine ecosystems. High visitor numbers in the fragile environment mean that the walking tracks and associated infrastructure need to be at a standard that can protect the environment against damage.

The strategy provides management guidance for each track as well as ways to improve walking experiences, including better dispersal of visitation to reduce overcrowding issues around Rawson Pass and the summit of Mount Kosciuszko.

The strategy enables the concept of the Snowies Iconic Walk. This walk could be created by expanding the network of walking tracks around Charlotte Pass, Perisher, Guthega and Bullocks Flat to create a four to five day walk from Thredbo to the other resorts and then to Bullocks Flat. The walk could use the existing ski resort lodge accommodation and would meet the warrants to be listed as a 'Great Walk' under the Tourism Australia Great Walks program. The Great Walk status would position the walk as a flagship asset that would promote KNP as an exceptional summer destination.

The strategy also highlights the opportunity to improve access for people with disabilities and mobility restrictions. There are currently very few all-access tracks in KNP and this restricts many people from being able to venture far from their vehicles.



Figure 1 View from Porcupine Rocks. Photo: Chris Darlington/NPWS

1. Introduction

This strategy is being developed to assist National Parks and Wildlife Service (NPWS) to manage the existing walking tracks and trails located within the vicinity of Mount Kosciuszko, Thredbo, Charlotte Pass, Guthega, Perisher, Crackenback and Sawpit Creek (See Figure 1). The strategy also guides decisions about new track proposals that could be developed in the future.

The economy in the Snowy Mountains is heavily reliant on tourism. KNP is the key destination for many of the visitors who come to enjoy recreational activities in the Snowy Mountains region. The expansion of non-winter visitation is essential for the viability of many businesses in the Snowy Mountains and can enhance year-round employment opportunities. Climate change is likely to impact the reliability of snow-based tourism in the long-term and this issue reinforces the need to have less reliance on the snow season for economic security. Walking is one of multiple activities that can be used to attract more visitors to KNP outside of winter.

Our vision for walking in KNP is that by 2030 Kosciuszko National Park will be recognised as the premier destination for walking in Australia, with world-class sustainable facilities that encourage visitors to reflect on experiences, value and advocate for Kosciuszko National Park and natural area conservation.

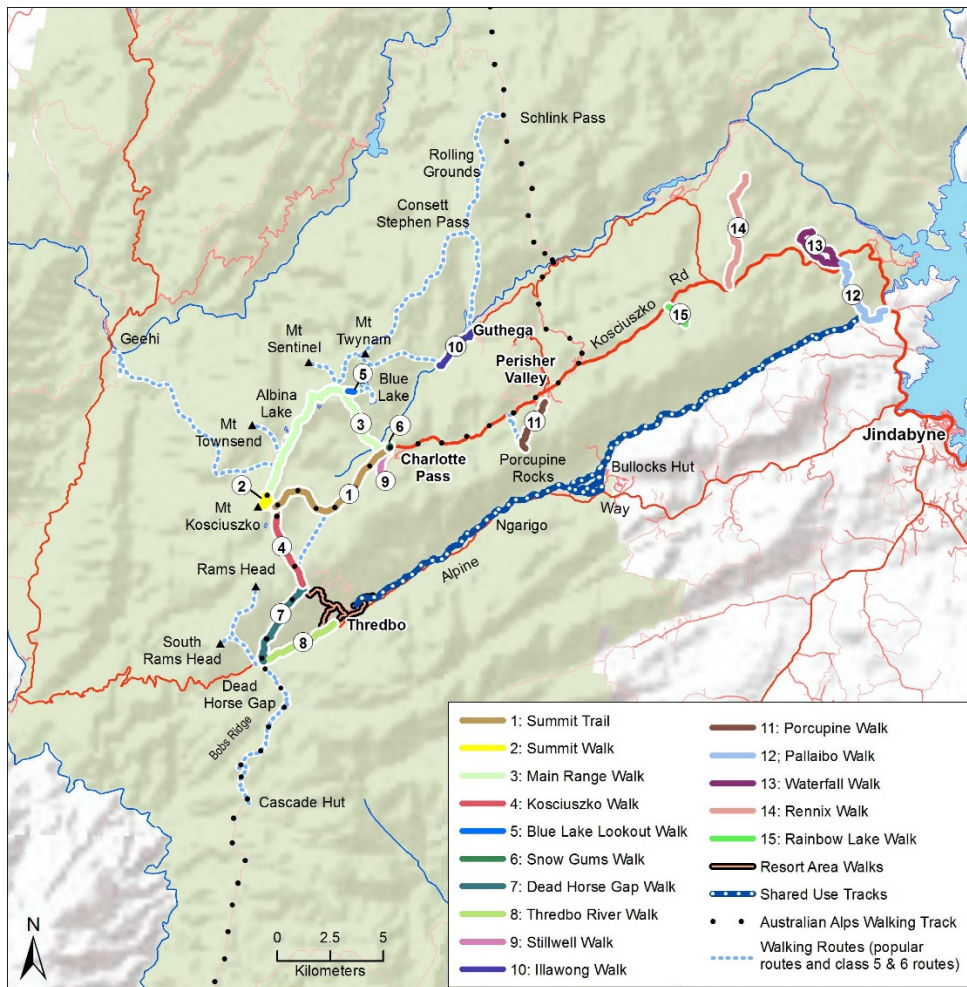


Figure 2 Map of the precinct that this plan covers

1.1 Objectives of the strategy

This strategy will guide the managers of Kosciuszko National Park when making decisions about how to manage the existing tracks and any future new walking track developments. Well-considered inputs should result in outcomes that create positive impacts.

Inputs (detailed in this strategy)

- Guide investment and minimum standards for new walking infrastructure.
- Prioritise and guide investment for maintenance and upgrades of existing walks.
- Rationalise the existing walks.

Outcomes

- Increased visitation.
- Protection of Endangered Ecological Communities by realigning tracks to avoid these areas.
- Dispersed visitation across the park and throughout the year with less overcrowding.
- Visitors have better experiences.
- Visitors appreciate the natural values of Kosciuszko National Park.
- Sustainable tracks, which results in minimising erosion and lower maintenance.
- Improved cost efficiency for investment into track construction and maintenance due to more informed decision making.

Impact

- The environment is appropriately protected from walking-related impacts.
- Improved economic health in the Snowy Mountains region, particularly during the walking season.
- An increasing number of visitors will become advocates for the future protection of Kosciuszko National Park and other similar alpine areas in Australia.
- The ongoing maintenance liabilities can be managed.
- The vision of this strategy is achieved, which contributes to the NPWS corporate vision, to 'inspire everyone to love their national parks'.

1.2 Background and policy context

Walking is the most popular recreation activity in KNP outside of the winter snow-sports season with approximately 76%¹ of all non-winter visitors engaging in some walking, whether it be a short walk to a lookout or a longer hike.

Findings from Roy Morgan Research shows that between October 2010 and September 2015, the proportion of the population over the age of 14 who reported going bushwalking at least occasionally has almost doubled from 15.6% to 27.3% – a total of 5.3 million Australians. This trend is expected to persist into the future².

The statewide corporate vision for NPWS is to 'inspire everyone to love their national parks'.

¹ Get Smart 2015

² Wild Magazine, 2016, February

There are four principles which underpin the vision:

1. conservation
2. culture and heritage
3. communities
4. experiences.

A summary of how this strategy contributes toward the vision is included below.

Table 1 Summary of how this strategy links to the NPWS corporate vision

Principle	Key contributing factor
Conservation	Managing the impacts from walking
Culture and heritage	Providing facilities that foster education, awareness and respect for the Aboriginal and European culture and heritage in the Snowy Mountains
Communities	Enhancing the economy by increasing visitation and local jobs through new walking track projects
Experiences	Providing high-quality tracks and facilities in exceptional natural environments

The strategy is compliant with the OEH Walking Track Policy. Tracks (including interpretation) will be managed in accordance with the Australian Walking Track Grading System.

The 2006 KNP Plan of Management (PoM) includes a priority to develop a strategy for walking tracks for the entire park that will guide maintenance and standards, investigate new walks and consider closure or rationalisation of existing walks. This strategy will be the first of multiple walking track precinct strategies that will eventually cover the whole of KNP. The Kosciuszko Summit Precinct has been prioritised for the development of a strategy because it receives high levels of visitation, contains fragile alpine environments with outstanding natural values and potentially will be the subject of major capital projects in the short to medium term.

The PoM is currently under review and may be subject to amendments while a new PoM is developed. This strategy will guide amendments to the PoM as there are some concepts and actions within this strategy that are not permissible under the current PoM. Due process will be taken to ensure that any amendments to the PoM are appropriately considered, including stakeholder consultation.

NPWS has a duty to maintain its walking tracks and other facilities to an appropriate standard. In accordance with the *National Parks and Wildlife Act 1974*, the primary responsibility of NPWS is to protect and maintain the natural and cultural values and to foster the public's appreciation, understanding and enjoyment of those values³.

³ KNP PoM 2006, P. 14

1.3 Visitation

The footpads, tracks and trails of Kosciuszko National Park (KNP) lead thousands of people through Australia's highest and arguably most fragile and beautiful environment each year. Less than 0.001% of Australia is 'alpine'⁴, which means that the impacts from walking need to be carefully managed.

Non-winter (summer) visitation to the NSW Alpine Area continues to grow. The data below confirms that annual visitation rates have risen by approximately 80,000 between 1978 and 2005 and more than 35,000 between 2000 and 2005.

The non-winter alpine area visitation statistics between 1978 and 2016 are listed below.

- Summer visitation was estimated at 20,000 in 1978 and 64,000 in the summer of 1999–2000⁵
- In 1990–91 43,000 people spent at least half a day walking in the alpine area and they walked at least as far as Rawson Pass or Blue Lake, with thousands more spending shorter times in the area⁶
- By 2005 annual summer visitation to the Main Range had expanded to 102,500⁷
- In the 2017–18 walking season, more than 100,000 people walked to the summit of Mount Kosciuszko⁸.



Figure 3 Visitors waiting to use the toilet at Rawson Pass. Photo: Tim Greville/NPWS

⁴ Worboys & Pickering 2002, P. 1; KNP POM 2006, P. 150

⁵ Worboys & Pickering 2002, P. 22

⁶ Virtanen, 1993. P. iii

⁷ Johnstone & Growcock, 2005

⁸ NPWS infrared track counters

1.4 Management of existing tracks

Managing tracks and trails in Australian alpine and subalpine areas is challenging and expensive for the following reasons:

- The alpine humus soils are fine and heavily prone to erosion.
- Heavy frost conditions lift soil and road base track surfaces into needle-like formations (frost-heave). This then accelerates erosion when thawed.
- Deep snow creeps across tracks, placing great force on structures such as platforms and moves gravel off the track.
- Work seasons for maintenance and construction are short, due to a long winter.
- Most of the tracks are in remote locations which increases the cost of trail construction and maintenance.
- Often materials need to be airlifted to avoid impacts to surrounding vegetation.
- Tracks are surrounded by fragile ecosystems, with many areas providing habitat for threatened or endemic plants and animals.
- Visitation numbers are relatively large, which creates high wear of tracks.
- Trampled vegetation has no opportunity to recover outside of the walking season as they are covered with snow.

Despite the above challenges, there is immense potential to enhance or rationalise existing tracks and develop new tracks. There is very limited access to tracks for people with impaired mobility, which highlights an opportunity to improve access for all.

Guidance for track standards and materials is included in Appendix 1.

1.5 Development of new tracks

With ever-increasing visitor numbers and demand for high-quality walking experiences, there are considerable opportunities for new walking tracks or routes within the Kosciuszko Summit Precinct. Any new track proposals must be considered in terms of, environmental impacts, demand, future maintenance liabilities and ability to deliver high-quality experiences. Longer routes that also make use of other existing infrastructure including accommodation and car parks could assist in managing overcrowding at some existing sites while also encouraging walkers looking for multiday experiences. Any new walk proposal could incorporate increased access for people with impaired mobility.

This plan proposes developing new tracks, which could capitalise and interlink with existing tracks to create a continuous walk of approximately 45 kilometres. The route would pass through resort areas, creating an opportunity for walkers to stay in existing comfortable commercial accommodation as an alternative to camping.

The walk would be truly iconic and when matched with appropriate eco-tourism packages would have the potential to be recognised as a 'Great Walk' under the Tourism Australia Great Walks of Australia Program. The 'Great Walk' status would not only provide an immense promotional opportunity for the walk, but it would also promote the whole of the Snowy Mountains region.

An iconic walk would expose more people to the beauty of the alpine area which would contribute to more people loving and wanting to protect Kosciuszko National Park and other Australian alpine areas.

2. Threats and opportunities

There are tremendous opportunities for enhancing the walking experiences in KNP. It is essential that appropriate strategies are implemented which can ensure the right balance between conserving natural and cultural values, repairing or decommissioning existing facilities and constructing new facilities. When evaluating investment options, management will need to ensure that new facilities do not create maintenance liabilities which will become unaffordable in the future or negatively impact on the environment.

2.1 Threats

- Erosion of tracks that are not built to an appropriate standard causes sediment and gravel to wash into pristine areas such as glacial lakes, alpine bogs and fens and the habitat of threatened species such as mountain pygmy possums.
- Inability to secure funding to maintain the tracks.
- Inability to secure capital investment to build tracks to meet climatic and environmental requirements.
- Overcrowding of some locations and the resulting impact to the environment and visitors' experience.
- Human waste can pollute waterways, glacial lakes and wetlands.
- Pressure to allow bikes on walking tracks, which impacts visitors' experience and can accelerate erosion in some areas.
- Safety issues such as; extreme weather, limited access for emergency response and sub-standard track surfaces that create trip/slip-hazards.
- Not proactively planning for increased visitation, the business opportunities and the facility requirements that could arise from the promotions of the summit precinct as a walking destination.

2.2 Opportunities

- Development of an iconic multiday walk product that is recognised as a 'Great Walk' under the Tourism Australia Great Walks of Australia Program. Being the largest alpine area in Australia, the Snowy Mountains provides an ideal location for a 'Great Walk' to showcase such a unique landscape. Extensions and connections could be added to existing tracks and the existing ski resort lodges could be used for accommodation so that visitors do not need to camp. The walk could showcase the natural endowments of the area such as:
 - stunning landscapes that are unique
 - glacial lakes and other relics from the Great Ice Age
 - a range of different vegetation types – alpine, subalpine and montane
 - a rich Aboriginal and European history
 - the highest point on the Australian mainland and magnificent views to the west and south.
- Leveraging of infrastructure grants as sources of funding for upgrades or new developments.
- Generating revenue from commercial activities can be inverted back into park operations.
- Improving accessibility to Mount Kosciuszko for people with mobility restrictions.

- Upgrading an existing track or trail to create an overnight accessible track.
- Improving and reduce the impact of existing tracks on the environment.
- Using additional opportunities with revenue generated from new tracks to repair existing tracks.
- Improving walking opportunities on the edges of the Main Range to reduce crowding at key locations such as the summit of Mount Kosciuszko.
- Improving the route of the Australian Alps Walking Track so that it does not need to follow public bitumen roads between Charlotte Pass and Guthega Power Station.
- Enabling first-class commercial operations such as hospitality, guiding and shuttle services.
- Development of the planned mountain bike track between Dead Horse Gap and Thredbo. This would need to be a new track, with the Thredbo River Walk retained as 'walk only'.
- Improving access for fishing.
- Combining walking with other activities nearby such as food and wine appreciation, fishing, cycling, rafting and abseiling.

3. Strategies to manage the existing tracks

3.1 Collection of visitation data

It is essential to monitor and record visitation statistics for all class 1 to 4 walking and shared-use tracks. High-use management trails such as the Summit Trail need to be included in the monitoring program.

The information collected can be used to measure trends, secure funding, calculate risk, manage overcrowding and to determine the appropriate track standard.

The data needs to be stored in a central, electronic location.

3.2 Track condition monitoring

3.2.1 Asset Maintenance System

The Asset Maintenance System (AMS) is the central system for recording inspections and condition of tracks. AMS also manages and measures the maintenance liability and deferred liability. Therefore, it assists management to prioritise decisions about maintenance and sets a standard and regime for the cyclic inspections of high-risk structures.

All tracks and their key structural components will continue to be itemised in AMS.

3.2.2 Response to results

Decisions of what actions will be taken in response to the results of condition assessments will be determined in consideration of the following:

1. visitor safety
2. environmental impacts
3. visitor experience
4. conflict of other priorities for resources.

If there are significant safety or environmental risks that cannot be tolerated, the risk will need to be mitigated as soon as possible, either by repairing the issue or closure of the track. Track closures can either be temporary or permanent. Decisions to close a track permanently must be endorsed by the Branch Director.

When a track's class does not meet its designated standard, it will be reviewed and may be re-classified. Rationalising tracks can ensure that maintenance resources can meet the required level.

3.2.3 Summit Trail Condition and suitability summary

The Summit Trail is one of the most popular trails to access the summit of Mount Kosciuszko. It is the least expensive option for accessing Mount Kosciuszko as it does not require a lift compared to the Kosciuszko Walk from Thredbo. Bikes are permitted on this trail. This trail also provides access to Seamans Hut which is a mountain hut and a popular photo opportunity.

Many sections of the Summit Trail are excavated to be a wide enough bench for two-way vehicle traffic. Despite the wide bench, some sections have naturally, or with some assistance, revegetated to a width just wide enough for a vehicle. Vehicle access needs to be retained for waste from the Rawson Pass toilet to continue to be pumped and removed from the park.

The surface will remain as gravel/road base (crushed Mowamba Granodiorite blended with clay) with some sections built from local non-organic soil and crushed rock. Drainage will be improved.

A toilet facility (single pump-out) is required at Seamans Hut. During the winter months, the Rawson Pass toilet is completely covered with snow, making it unusable. Although people camping in the backcountry are encouraged to manage their toilet waste appropriately, there is often toilet paper and faeces left on the ground by people camping beside Seamans Hut. This is also an issue in the summer months.

3.2.4 Actions required

- Implement the Summit Area Trails Upgrades Plan that was finalised in 2016, with key features being:
 - improve drainage by installing regular water bars and grade reversals and some new culverts
 - install rock paving where the gravel is being washed into the boulder fields which are the habitat for the endangered mountain pygmy possum
 - design and install a single pump-out toilet approximately 30 metres from Seamans Hut (the design needs to include similar aesthetics to the hut and needs to be positioned to minimise impacts to photo angles of the hut).
- Monitor and respond to impacts from camping at or near Seamans Hut and consider the hardening of the ground or the development of low-level tent platforms in response to erosion issues.
- Encouraging people to camp near the hut could reduce pollution impacts to other areas of the Main Range, as a toilet would be available.

3.3 Summit Walk

3.3.1 Condition and suitability summary

This section of track between Rawson Pass and the Mount Kosciuszko summit receives the highest use of any track in KNP, with more than 100,000 people per year walking in two directions. It provides the only access to the summit of Mount Kosciuszko and receives all pedestrian traffic from those using the Main Range Walk, Kosciuszko Walk and the Summit Trail to access Mount Kosciuszko. The width of the track is mostly 1.8 metres which is appropriate for the level of use.

Overcrowding on the summit of Mount Kosciuszko is an issue during peak periods. The vegetation and soils on the summit need to be monitored for excessive damage and responsive actions may be required, such as hardening some areas with additional rock. Activity and event consents need to continue to be considered to ensure that the impacts from overcrowding remain within an acceptable level.

The gravel surface is prone to erosion. The 'geo web' that was installed to retain the gravel is lifting and creating trip hazards.

A detailed strategic plan and scope of work has been developed to upgrade this track as funding becomes available.

3.3.2 Actions required

Implement the Summit Area Trails Upgrades Plan that was finalised in 2016, with key features being:

- Install a low-level platform of 1.8 metres width between Rawson Pass and the summit, following the existing trail alignment. Some sections where snow depths are extreme may need to be constructed of pitched rock instead of a platform if required to withstand the forces of snow-creep. The platform will need a Fibreglass Reinforced Plastic (FRP) mesh top because steel mesh would be too slippery on such a gradient. A platform is preferred over a rock surface to assist mobility limited visitation.
- Remove the rock steps that lead to the final few metres to the summit and replace with a smooth rock ramp if a platform is installed from Rawson Pass.
- The existing 200 metres of rock paving near Rawson Pass to remain intact.
- The existing rock paving mid-way up the track to remain intact.
- Remove the 20 metres trial section of imported cut rock flagstones.

3.4 Main Range Walk

3.4.1 Condition and suitability summary

This track follows spectacular ridgelines and provides exceptional views of four of the five glacial lakes. It is often walked in conjunction with the Summit Walk and the Summit Trail to create an arduous, but iconic day walk. There are substantial erosion issues and the brick pavers between Blue Lake and Charlotte Pass are breaking apart. There are some sections with good pitched rock such as near Albina Pass and on Carruthers Peak. The track dissects the Windswept Feldmark vegetation community near Mount Lee and this is impacting this Critically Endangered Ecological Community.

A detailed strategic plan and scope of work has been developed to upgrade all required sections as funding becomes available.

3.4.2 Actions required

Implement the Summit Area Trails Upgrades Plan that was finalised in 2016, with key features being:

- Realignment of a 1.5 kilometres section of the track near Mount Lee, further west to avoid Windswept Feldmark. This realignment would be constructed of elevated platform.
- Installing more pitched rock in erosion-prone areas, which is approximately 50% of the length of the track.
- Narrow the track (from 2.7m to 1.5m) between Snowy River and Carruthers Saddle to close it to vehicles but retain emergency and management access to all-terrain vehicles (ATVs).
- Install additional medium-sized boulders to increase the functionality and reduce the risks associated with the existing stepping stones across the Snowy River and Club Lake Creek. Consider a bridge over the Snowy River at a more suitable location further downstream in the future if the popularity of the walk requires this. A risk assessment of the crossing would guide this decision.

3.5 Kosciuszko Walk

3.5.1 Condition and suitability summary

This track is the second busiest track in the precinct and provides a lift assisted, relatively easy walk to Rawson Pass where visitors can then access Mount Kosciuszko. The track is largely a steel mesh raised platform which was designed to reduce the environmental impact of heavy visitation.

This route is also becoming increasingly popular in winter as one of the easiest ski routes to access Mount Kosciuszko. There have been instances of people getting lost and there has been considerable pressure to install pole lines along the track.

The steel walkway is 1.8 metres wide, which is the appropriate width for the high use. The walkway has several key issues:

- The original platform was not built strong enough to withstand snow-loadings and is slumping and failing.
- The original design contained steel mesh installed length-ways along the platform. This makes the platform slippery when wet and creates challenges for the wheels of wheelchairs and prams.
- The current alignment climbs some steep easterly slopes which are in areas of high snow-loading and creates a requirement for steps, which restricts wheelchairs.
- There are human waste issues, the worst of which are evident around the Kosciuszko Lookout.
- The walk has the potential to provide additional disabled access to the Mount Kosciuszko.

3.5.2 Actions required

- Continue to replace the entire walkway with the new improved design.

- Realign the walkway in two places for approximately 500 metres each, to avoid the steep slopes, which will reduce damage from snowdrifts and enable better access for wheelchairs. In some places, the gradient will exceed the Australian Standard for Access and Mobility (1428), which specifies a maximum slope of 1:14, but accessibility will be vastly enhanced.
- Monitor the human waste issues and consider the seasonal installation of a fly in fly out (FIFO) toilet near Kosciuszko lookout.
- Consider installing a pole line along this track to assist with navigation by cross-country skiers from Thredbo Top Station to Rawson Pass and either to Mount Kosciuszko or to Charlotte Pass along the Summit Trail which has poles. By creating a linked pole line from Top Station to Charlotte Pass, the current pole line from Top Station to the Snowy River can be removed. This should reduce the use of this environmentally sensitive area.

3.6 Blue Lake Lookout Walk

3.6.1 Condition and suitability summary

The walk extends for 350 metres from the Main Range Walk to a lookout over Blue Lake. The surface was upgraded between 2015 and 2016, to granite step-stones with drainage rock infill. It is now quite stable. The lookout structure is not compliant with Australian Standards at the time of writing this strategy.

3.6.2 Actions required

- Monitor performance of this surface type and pick up drainage rock from the low edge if it moves off the track.
- Monitor the functionality and condition of the drains, which are made from drain-cell wrapped in shade cloth.
- Replace the lookout structure with an alternative that will be lower and not require a handrail. This will make the structure comply with Australian Standards and will reduce the aesthetic intrusiveness of the current structure.
- Restrict access beyond the lookout. Refer to Blue Lake Lookout to Blue Lake outlet and Hedley Tarn section.

3.7 Snow Gums Walk

3.7.1 Condition and suitability summary

This is a short walk (400 metres return) to a lookout over the Main Range. It offers a safe, short scenic experience for visitors who may not desire a long walk. The design blends well with the surrounding environment and meets the purpose of use. The timber is rotting in some sections and the lookout at the end of the boardwalk does not meet Australian Standards due to fall heights and the current handrail system.

3.7.2 Actions required

- Replace any rotten piers or other frame sections with black/untreated steel.
- Replace rotten decking when required with similar hardwood boards, which are ethically-sourced. The current boards are recycled red gum. A 'weathered timber' finish

is the preferred decking material for this walk as it provides a natural appearance which blends with the surrounding snow gums.

3.8 Dead Horse Gap Walk

3.8.1 Condition and suitability summary

This walk provides an option for those who already walked to Mount Kosciuszko or want a more sheltered experience in on bad weather days.

The current width of less than one metre is suitable for the track. There are extensive areas that are severely eroded.

3.8.2 Actions required

- Develop and implement an upgrade plan for this track which:
 - documents the areas which contain the worst erosion or other issues
 - recommends required mitigations, which may include realignments to achieve more gradual sustainable alignments, and/or the installation of pitched rock or platforms
 - includes a priority list for the order of work.
- After most of the upgrades are complete, increase the promotion of this track as it has exceptional views and could help to alleviate overcrowding on the Main Range.

3.9 Thredbo River Walk

3.9.1 Condition and suitability summary

This is a popular walk, likely due to its proximity to Thredbo Village and to it connecting with the Dead Horse Gap Track. There are sections which are in poor condition that are eroded and can be quite wet and muddy.

The surface receives little sunlight due it being located primarily on a southerly aspect with additional shade from shrubs and trees. This contributes to the mud issue.

The Kosciuszko National Park Cycle Strategy identifies that the Thredbo Valley Track could be extended to link Dead Horse Gap to Thredbo. If this project is implemented, the Thredbo River Walk should be kept as a separate track, to retain a high-quality walking experience that is not impacted by mountain bikes.

3.9.2 Actions required

- Retain as a walking track, do not re-zone to shared-use to allow mountain bikes.
- If the Thredbo Valley Track is extended between Dead Horse Gap and Thredbo, realign the walk as required to achieve separation from cyclists.
- Respond to maintenance and erosion issues with suitable treatments including but not limited to platforms, gravel, drainage improvements, pitched rock and realignment to more sustainable gradients.

3.10 Stilwell Walk

3.10.1 Condition and suitability summary

The lower half of the track (below the viewing platform at the top of the chairlift) is in good condition with some hardened (rock and gravel) sections. The upper half has some areas with moderate erosion. The width of the track (approximately 0.5m) is suitable. This is a class 5 walk due to the upper section not being upgraded.

This walk provides the opportunity for walkers to receive elevated views of the Main Range within a short walk from Charlotte Pass. It may contribute to minimising overcrowding issues on Mount Kosciuszko, by providing an alternative walk.

3.10.2 Actions required

- Monitor the condition via photo points every three years and carry out maintenance or upgrades when required.
- Upgrade the upper half of the track to Mount Stilwell to mitigate erosion issues and to realign the track to avoid sensitive areas, this would be a lower priority than upgrading the Main Range Track and Summit Trail.
- If the multiday iconic walk project is implemented and only after the upper half has been upgraded, promote the Stilwell Walk as an optional side-trip for those that may wish to spend multiple nights at Charlotte Pass.
- Work with Charlotte Pass in summer activation opportunities.
- As with all tracks monitor and manage weed incursions.

3.11 Illawong Walk

3.11.1 Condition and suitability summary

This is a pleasant walk with nice views of the Snowy River. The track is relatively sheltered in comparison to some of the other walks around Perisher and the Main Range. The width (mostly less than 0.5m) is suitable. There are some slopes such as the first 500 metres which are prone to erosion. The walk could be significantly enhanced by realigning the south-west end of the track for approximately 800 metres to enable more views of the Snowy River. The benefits of a realignment need to be weighed against the environmental and financial cost.

The track is ideally positioned to be connected to Charlotte Pass. A walk from Charlotte Pass along the Guthrie ridgeline and then joining the Illawong Walk to Guthega would be stunning and would provide the following key benefits:

- a leg of the iconic multiday walk if the project is implemented
- a significant improvement to the Australian Alps Walking Track
- dispersal of people to minimise congestion on Mount Kosciuszko
- a popular two-day walk from Thredbo to Guthega, using existing accommodation at Charlotte Pass and the other existing walking tracks.

3.11.2 Actions required

- Consider re-routing the end of the track closest to Illawong Hut for approximately 800 metres to enable more views to the Snowy River.

- Plan and construct a new track that could link Illawong to Charlotte Pass, as part of the multiday walk. This would involve improving the track surface.
- A low priority for funding is harden step off points (milling areas) at Illawong Bridge.
- Monitor the condition via photo points every three years and carry out maintenance when required.

3.12 Porcupine Walk

3.12.1 Condition and suitability summary

The track is moderately eroded. Some sections follow the fall-line and this increases the erosion risk. The track is at an appropriate width of approximately 0.5m.

There is the opportunity for the track to be integrated with the iconic multiday walk if the project is implemented. For this to occur, the cross-country ski trail linking Perisher Gap to the Porcupine walk would need to be upgraded to a hardened walking track. Despite not being listed currently as a walking track it has a formed surface.

3.12.2 Actions required

- If part of the multiday walk project, formalise and harden the footpad that generally follows the cross-country ski trail that links Porcupine Rocks to Perisher Gap. The track may need to be re-routed to avoid the bog on Wheatley Gap and some other shorter wet sections.
- Formalise the footpad that loops around the eastern side of the Porcupine Rocks. This would likely require little or no development as the footpad is reasonably sustainable.
- Install narrow platforms over the wettest areas. These need to be low and reinforced to prevent snow groomer damage.
- Increase the promotion of this track, as it has exceptional views and could help to alleviate overcrowding on the Main Range.
- Monitor the condition via photo points every three years and carry out maintenance when required.
- As part of the multiday walk, harden the track surface.

3.13 Pallaibo Walk

3.13.1 Condition and suitability summary

The track is in quite good condition as it is well-maintained, and the soils are mostly of a stable decomposed granite.

3.13.2 Actions required

- Maintain as per the current regime with minor drainage maintenance, sleeper replacement of steps and vegetation pruning.
- If required for the Thredbo Valley Track, reclassify a portion of this track to shared-use to allow mountain bikes. The section that could be re-classified is the section between the Thredbo River Picnic Area and Collins Paddock. Do not reclassify any other sections of this walk to shared-use.

3.14 Waterfall Walk

3.14.1 Condition and suitability summary

The track is in quite good condition as it is well-maintained, and the soils are mostly of a stable decomposed granite.

3.14.2 Actions required

- Maintain as per the current regime with minor drainage maintenance, replacement of sleepers which make the steps and vegetation pruning.

3.15 Rennix Walk

3.15.1 Condition and suitability summary

This is a management trail under the lease of Snowy Hydro Ltd (SHL). It is therefore operated and maintained by SHL. However, it is also a pleasant walk that is open for public pedestrian access.

The track would be more correctly listed in the PoM as a management trail rather than a walking track as it is used by Snowy Hydro management vehicles.

3.15.2 Actions required

- Continue to maintain and replace the walking track-head signage as needed.
- Assess potential to promote it as shared-use to allow mountain biking. This would be permissible under the 2006 Plan of Management because it is a management trail, however, a correction to the Plan via an amendment should occur.
- SHL to continue to maintain and operate the trail in accordance with their lease.

3.16 Resort area walks

There are a few walks located within the Visitor Services Zone, Thredbo Management Unit. The tracks are currently operated and maintained by Kosciuszko Thredbo and interlink with the Thredbo River Walk, Dead Horse Gap Walk and the Kosciuszko Walk.

The walks include:

- Merritts Nature Track
- Merritts Traverse
- Riverside Walk
- Pipeline Path
- Bridle Trail Loop
- Meadows Nature Track.

All the above walks, except for the Merritts Nature Track and the Merritts Traverse are shared-use with mountain biking.

The Perisher Range Management Unit currently contains no dedicated walking tracks or mountain bike tracks. However, some walking is available on the management trails such as the trail from Perisher to Blue Cow Terminal.

The first portion of the Mount Stilwell Walk is located within the Charlotte Pass Village lease. This track is currently maintained by NPWS.

Actions:

- Resort lease-holders to continue to manage tracks (if any) in accordance with their lease conditions.
- Work with Charlotte Pass Village regarding options for improved walking experiences around the resort area, including a possible upgrade of Mount Stilwell Track.

3.17 Popular routes

3.17.1 Australian Alps Walking Track

This Class 5 long distance walking route traverses the park from Cowombat Flat on the Victorian Border through to the north-eastern corner of the park at Yaouk. Within the Kosciuszko Summit Precinct, the trail uses the cascades trail, then the Dead Horse Gap Track and onto the Kosciuszko Walk to Access Mount Kosciuszko. The track departs the alpine walking track system at Charlotte Pass after it follows the Summit Trail and then joins the Kosciuszko Road, Link Road and Guthega Road to then head along Schlink Pass Road from Guthega Power Station.

An opportunity exists to enhance this route by continuing it along the Main Range Walk from Mount Kosciuszko and to then follow the potential new walk from Charlotte Pass to Guthega Village via Illawong. This will remove the need for the walk to follow main roads, except for the Guthega Road between Guthega Village and Guthega Power Station. Amendments to the 2006 PoM need to be made for this track to be re-routed.

If a toilet is constructed at/near Seamans Hut, actions should be implemented to encourage walkers to camp nearby.

3.17.2 Class 5 and 6 routes

In this strategy, Class 5 and 6 routes are those identified in the PoM (2006) (Refer to Schedule 5).

Hannels Spur (Class 6)

This is the route that was used by Paul Edmund de Strzelecki and his team when they climbed to the summit of Mount Kosciuszko from the vicinity of Geehi. It ascends the Western Fall Wilderness Area and is the highest vertical relief in Australia.

This Class 6 route is extremely demanding due to the thick vegetation and the gradient.

It is not currently feasible to formalise this route into a track due to its difficulty as well as much of the track being in a wilderness area. However, it has historical significance and every effort should be made to ensure its continuing existence.

The enjoyment and safety factors of the route could be drastically improved by:

- Improved marking – Most of the markers are indistinct because they have been lost over time. Safety would be vastly improved by the installation of additional markers.
- Some pruning (not removal) of vegetation. The pruning would need to all be completed above the ground's surface so that the vegetation could continue to stabilise the surface.

Regular maintenance activities of Hannells Spur are permissible under the PoM, *Wilderness Act 1987*, NPWS Wilderness Policy and Park Facilities Manual, provided the track standard remains consistent with the track classification Unmarked Route Class 6 (AS2156)⁹.

Actions required:

- Retain as a Class 6 Walking Track.
- Assess route-markers routinely and replace as required.
- Implement maintenance ensuring no ground disturbance occurs and strict environmental guidelines are adopted. Ensure appropriate environmental assessment is carried out, given the track is in a wilderness area.

Carruthers Saddle to Mount Sentinel (Class 6)

This route takes people to some of Australia's most exposed and rugged terrain. Mount Sentinel is a prominent feature of the western side of the Main Range and developments on its ridgeline would create a detriment to its aesthetics. The informal footpad leading along the ridgeline is in good condition with minimal erosion. The saddle before the final climb to the summit contains a rock vein which exposes walkers to a real risk of dangerous falls.

The first section of this route where it departs the Main Range Walk at Carruthers Saddle traverses through Windswept Feldmark. If this walk was to be promoted, a diversion strategy would be required.

This peak should remain undeveloped.

Actions required:

- Retain as a Class 6 Track.
- Occasional monitoring of erosion via photo points every five years.

Mount Townsend (Muellers Pass to Mount Townsend summit) (class 6)

This route departs the Main Range Walk at Muellers Pass and then traverses the southern face of Muellers Peak to the summit of Mount Townsend. The relatively remote location of this route is likely the reason that it does not receive a high level of use. As a result, the footpad contains minimal erosion.

This track should remain undeveloped.

Actions required:

- Retain as a Class 6 Walking Track.
- Monitor erosion via photo points every three years.
- Consider upgrading (hardening) and formalising the route if erosion becomes significant. Note: this would not be permissible under the 2006 Kosciuszko PoM.

Dead Horse Gap to South Rams Head (class 6)

This route is most commonly used by cross-country skiers in winter but is also used by walkers in summer. South Rams Head provides excellent views in all directions, especially to the Leather Barrel valley. This route connects onward to Rams Head.

The track commences on the edge of the Alpine Way, a few hundred metres from the Thredbo River Walk and the Dead Horse Gap Walk.

⁹ Written correspondence, Cultural Values and Planning Branch, NPWS, OEH, 16-08-2017

The track is not eroded significantly, however, the fall-line alignment of the track makes it at risk of erosion if usage increases.

Actions required:

- Retain as a Class 6 Walking Track.
- Monitor erosion via photo points every three years. Respond by closing or blocking the route if required.
- If a prominent route becomes visual from the road, consider installing a sign that directs people to use the Dead Horse Gap Walk or Thredbo River Walk instead.

South Rams Head to Rams Head (class 6)

This route is an extension of the link from Dead Horse Gap to South Rams Head. This footpad is quite indistinct and currently poses little risk of erosion or other impacts.

No action is required.

Carruthers Saddle – Mount Twynam – Consett Stephen Pass – Rolling Grounds – Schlink Pass (class 6)

Much of this route follows an old vehicle trail. The section between Carruthers Saddle and Mount Twynam travels through some patches of Windswept Feldmark so a high level of use would impact this plant community.

The footpad does not contain significant erosion and is indistinct in some places.

No action is required.

Guthega Village – Mount Twynam (class 5)

This track connects the Illawong Walk with the Main Range Walk at Carruthers Saddle. The route is mostly indistinct on the upper third of the climb from the Snowy River to the summit of Mount Twynam. The footpad is quite distinct on the lower third of this climb.

Actions required:

- Monitor erosion via photo points every three years. Include the Windswept Feldmark areas between Mount Twynam and Carruthers Saddle in this monitoring.
- If erosion reaches a point that cannot be tolerated, consider management interventions such as signs at both ends of the route asking people to not walk the route.
- Reclassify the section between Illawong bridge and Mount Twynam as Class 6 rather than Class 5.

Guthega Village – Guthega Trig – Consett Stephen Pass (class 5)

This track is low use with no visible track from the tree line to Consett Stephen Pass.

Actions required:

- Reclassify to a Class 6 route.
- Monitor.

Albina Pass – Lake Albina (class 6)

The top section of this route likely evolved from the vehicle tracks that led to the former lodge site. This route is located directly in the water-catchment of Lake Albina. The funding

required and visual impacts of a formal stabilised track to the lake make it not feasible or appropriate.

Actions required:

- Retain as a Class 6 Walking Track.
- Infill the eroded vehicle treads with whole rice-straw bales to enable rehabilitation. Reapply once after two to three years after the initial application of bales has rotted down.

3.17.3 Other popular routes

Bobs Ridge and Cascades Hut

This route follows a management trail and provides for mostly low impact walking, with excellent views to Mount Pilot, The Rams Head Range and it allows people to enjoy Cascades Hut. There is a toilet located at the hut and camping is permissible.

The route forms part of the Australian Alps Walk.

Actions required:

- Promote walking on this trail. This will help to disperse people away from some of the more fragile tracks such as the Dead Horse Gap Walk.
- The route follows a management trail, so the impacts from walkers on the surface are negligible. Therefore, no trail monitoring is required as part of this strategy.
- Continue to manage the trail as a management trail.

Perisher Gap to Porcupine Rocks

This route is not listed under the 2006 PoM either as a formal or informal route. It generally follows the cross-country ski route before it joins the Porcupine Walk near Porcupine Rocks. The track is moderately eroded on some slopes. The most significant issue is that it passes over the large Alpine Bog at Wheatley Gap. The walkers are causing lineal damage to this bog.

The route is in an ideal position to be integrated with the iconic multiday walk if the project is implemented, as part of a day walk from Guthega to Perisher, via Porcupine Rocks. This also creates an opportunity for an excellent day loop from Perisher, which would further reduce overcrowding at Mount Kosciuszko's summit, while still offering great views to the Main Range. Realignment to avoid bogs or other wet areas would be required.

Actions required:

- If the iconic multiday walk project is implemented and if it includes this route, consider realigning the footpad to avoid all bogs and harden sections that are prone to erosion with pitched rock or elevated platforms.
- If the iconic multiday walk project is not implemented do not promote as a walk.

Thredbo Link – Snowy River Bridge (Summit Trail) to Thredbo Top Station

This route has possibly evolved due to the snow poles that mark the cross-country ski route from Charlotte Pass to Thredbo Top Station. The route passes through areas that have poor drainage and through some alpine bogs and other wet areas.

Actions required:

- Remove all snow poles. The temporary seasonal poles at both ends have proven to be extremely difficult to maintain and an incomplete pole line poses a significant safety risk.
- Communicate with the cross-country ski community to inform skiers that the pole line will be removed so that a situation of one becoming lost while searching for the pole line is likely to be avoided. A pole line following the Kosciuszko Walk to Rawson Pass will be considered, linking Thredbo Top Station to Rawson Pass and the connecting pole line to Charlotte Pass or Mount Kosciuszko summit.
- Monitor with photos every three years, some key reference points on the route. If rehabilitation occurs, do nothing. If damage becomes worse, consider mitigations such as signage at both ends asking people to travel via Rawson Pass instead.

Charlotte Pass to Blue Lake Lookout

This route follows the Main Range Walk and then the Blue Lake Lookout Walk. Refer to the below and to the Main Range Walk and Blue Lake Lookout Walk sections for specific management actions. Additionally, promote this walk, as it is another option to minimise overcrowding on the summit of Mount Kosciuszko.

Blue Lake Lookout to Blue Lake outlet and Hedley Tarn

This route is poorly drained. Most of it is trenched with trapped water flowing along the route. The route is in an iconic location that is listed for protection as a Ramsar wetland. At the time of writing the strategy, a concept to formalise any part of this route is not feasible, as the funds required for this would be better spent to repair existing formal tracks. If an iconic multiday walk was to use the Main Range Walk, the existing formal Blue Lake Lookout Walk (700 metre return from the Main Range Walk) would provide an excellent view of Blue Lake.

Actions required:

- Place a boulder of approximately 0.6m to 1m diameter on the route immediately below the Blue Lake Lookout. Mount a small sign to the rock, asking people to return along the Blue Lake Lookout Walk, explain that the reason is to allow for regeneration of erosion and to protect the quality of water in the lakes.
- Rehabilitate this informal route by infilling it with whole rice-straw bales, with twine made from jute, or the twine removed upon installation. This process may need to be repeated after approximately three years when the bales have mostly rotted.
- Monitor the route with photos to determine whether the above strategy enables rehabilitation.

Rainbow Lake (management trail)

This walk follows a management trail and is a good product for visitors that are seeking a short walk. It concludes at a man-made dam named 'Rainbow Lake'. It is in good condition.

No action is required.

Dead Horse gap to Teddys Hut

This seven-kilometre one-way route is becoming increasingly popular and follows an easily visible wild horse track up the Thredbo River and Boggy Plain. The route, while remote and situated in the Pilot Wilderness Area is easily navigated and could be promoted as a remote walking route.

No action required.

4. New developments

4.1 Objectives of new developments

- Foster the public's appreciation of the natural values and the importance of protecting the area.
- Reduce congestion at key locations on the Main Range such as the summit of Mount Kosciuszko by providing more walking opportunities on the edge of the Main Range.
- Increase visitation outside of the peak snow season.
- Achieve regional job and economic growth.
- Investments into infrastructure where the most benefits are obtained.
- Improve environmental outcomes for the park.

4.2 Minimum requirements for new track developments

- Contribute to the objectives listed above.
- The development, when combined with an offsets or rehabilitation program, must result in a low or positive net environmental impact.
- Environmental assessments need to be compliant with relevant legislation.
- Must be compliant with the KNP PoM, or appropriate amendments completed.
- Adequate capital funding is required to enable:
 - Protection of the surrounding environment.
 - Minimal future maintenance liabilities. For example, most new tracks in alpine or subalpine areas will need to be constructed predominantly of materials such as pitched/paved rock and platforms, to avoid erosion and minimise removal of habitat.

4.3 Snowies Iconic Walk proposal

The concept of developing a multiday iconic walk, using a combination of new and existing tracks has been the subject of significant focus by NSW National Parks and Wildlife Service (NPWS) during 2016 and 2017. In April 2018, the NSW Government announced significant funding to further plan and deliver a multiday walk around Mount Kosciuszko. This announcement is a major step toward achieving the vision of this strategy. Not only will the multiday walk further enhances the environmental and regional economic benefits, the quality of the track and the unique experiences that it provides would be such that it could later become a 'Great Walk' under the Tourism Australia Great Walks of Australia Program¹⁰.

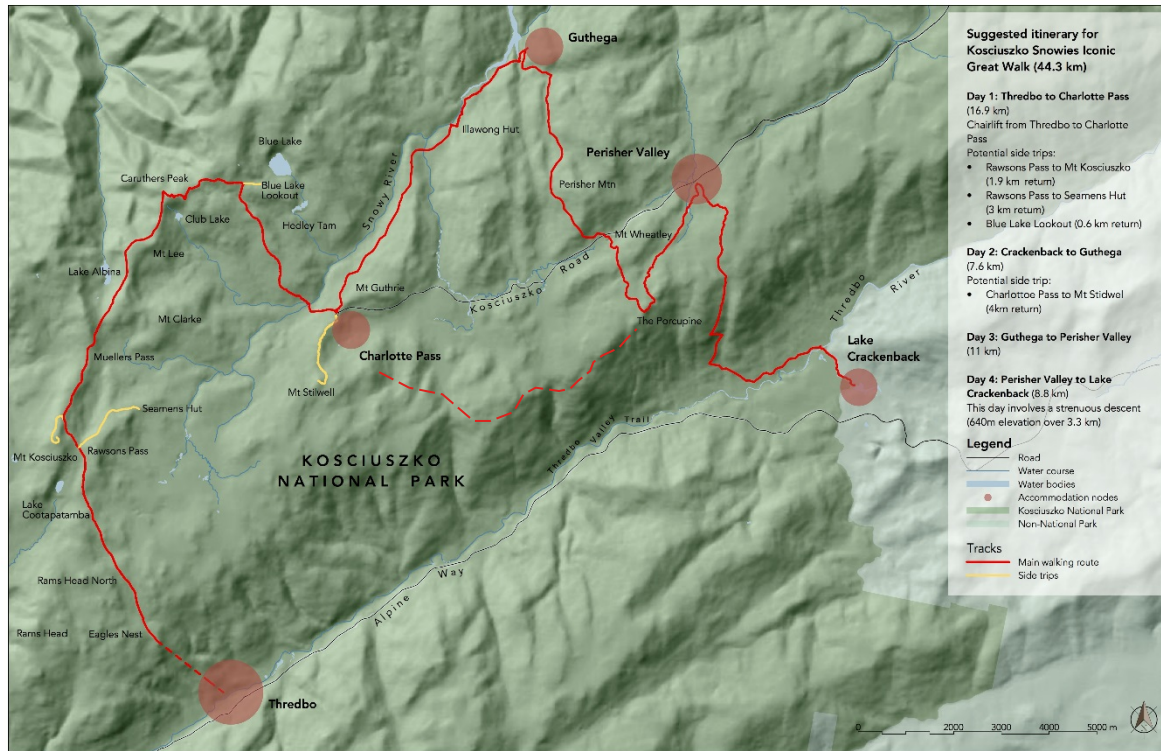
Office of Environment and Heritage (OEH) engaged a track development specialist and landscape architect to assist NPWS to develop the concept of the iconic multiday walk and to provide advice as to how a track could be developed that is likely to enable a 'Great Walk' to be created.

It has been identified that an exceptional walking route could be created by constructing new tracks between Charlotte Pass, Guthega, Perisher and Bullocks Flat (Crackenback). These new tracks would interlink with the existing tracks between Thredbo, Mount Kosciuszko and Charlotte Pass to create a walk of approximately 40 to 45 kilometres (see Figure 4).

¹⁰ Newman J, 2017

Environmental constraints are operating on the approaches to Guthega and if these cannot be overcome in the detail design stage an alternative route is planned to go directly from Charlotte Pass to Perisher.

If a track from Charlotte Pass to Perisher Gap (via Guthega) is deemed not feasible following an environmental assessment, an alternative route along the Ramshead Range from Charlotte Pass Village to Porcupine rock would be a suitable alternative. An initial assessment suggests there are few threatened species or threatened ecological communities along this route and would still provide an exceptional walking experience.



NewScape P 09326 22, E info@newscape.com.au, www.newscape.com.au
 Office of Environment & Heritage NSW National Parks & Wildlife Service
 Project: Kosciuszko Snowies Iconic Great Walk
 Drawing: Concept Overview
 Scale: 1:70,000 @ A3
 February 2017
 060.001

Figure 4 Potential locations of new tracks to create the iconic multiday walk.
 Source: NewScape Design Pty Ltd, Kosciuszko Snowies Iconic Great Walk Track and Facilities Design Concept, 2017

In addition to the outstanding natural endowments of the area, a key strength of the walk would be that the walkers would have the opportunity to stay in accommodation at resort areas, or they could choose to camp in areas where camping is permissible. It is proposed that a toilet would be constructed approximately 30 metres from Seamans Hut to provide for lower impact camping opportunities. This is quite important, as a walk from Thredbo to Charlotte Pass via Mount Kosciuszko and the Main Range Walk is too long and arduous for many people to comfortably complete in a single day. The walk would be unique, world-class and would become one of the most famous walks in Australia.

The eroded state of many sections of the existing tracks provides clear evidence that no new tracks in the alpine area and much of the subalpine areas should be constructed to a sub-optimal standard. Therefore, any new tracks will need to be primarily hardened with pitched/paved rock and elevated platforms. Significant work will need to be undertaken prior to any new tracks being developed to ensure that environmental impacts and future maintenance liabilities are minimal.

Information about the Plan of Management implications and the approvals process for this project is below. A scope of summit area walking tracks upgrades is included in Appendix 2.

4.4 Future developments and Plan of Management implications

Table 2 Future development for Snowies Iconic Walk and Plan of Management implications

Track	Management unit/s	Zone/s	Requirements	PoM implication
Realignment of Kosciuszko Walk	Main Range	Back Country	2 realignments of approx. 500m to remove steps and avoid snowdrifts	Permissible
Realignment of Main Range Walk	Main Range	Back Country	Realignment of approx. 1.5km to avoid Windswept Feldmark	Permissible
New track from Charlotte Pass to Illawong Hut	Main Range and potentially Charlotte Pass	Back Country and potentially Visitor Services	Combination of platforms and pitched rock	Permissible in Charlotte Pass Management Unit sections Amendment required to enable new track developments in the Main Range Management Unit
New track from Guthega to Perisher Gap	Main Range and Perisher Range	Back Country, Visitor Services and potentially Major Road	Combination of platforms and pitched rock generally following resort boundary	Permissible in Perisher Range Management Unit sections Amendment required to enable new track developments in the Main Range Management Unit
New track from Perisher Gap to Porcupine Rocks	Main Range	Back Country	Combination of platforms and pitched rock and some bare earth where the existing footpad is sufficiently stable	Amendment required to enable new track developments in the Main Range Management Unit
New track from Perisher to Bullocks Flat	N/A	Back Country	Combination of platforms and pitched rock and some bare earth and gravel in low elevation montane	Permissible, following finalisation of this strategy as it will alleviate congestion on the Main Range

The Main Range Management Unit sits within the Back Country Zone.

The Perisher Range and Charlotte Pass management units sit within the Visitor Services Zone.

4.4.1 Plan of Management amendments required

Planning advice is that new tracks cannot be constructed in the Main Range Management Unit without a PoM Amendment. Therefore, the following main amendments to the 2006 PoM will be required for the actions and strategies in this plan to be permissible.

Amendment 1 – Add to the PoM, a statement that clearly enables the new tracks proposed in this strategy, which are located within the Main Range Management Unit:

- A track from near the Charlotte Pass vehicle turning circle to Guthega, using a combination of a new track and the existing Illawong Walk. The track will be located between the Kosciuszko Road and the Snowy River for the section on the southern side of Spencers Creek and will make a reasonably direct line from the point where it crosses Spencers Creek to join the Illawong Walk near Illawong Hut.
- A track from Guthega to Perisher or Perisher Gap. If an environmental assessment deems this track (and the one listed above) as having too significant an impact on threatened species or ecological communities, an alternative route along the Ramshead Range linking Charlotte Pass Village and Porcupine Rocks will be investigated. It also needs to be enabled in the PoM Amendment.
- A track from Perisher Gap to Porcupine Rocks, linking to the Porcupine Walk. This track will be permitted to include a loop on the south or east side of the Porcupine Rocks. This track may utilise existing informal routes or footpads. If the alternative route along the Ramshead Range was pursued, this track would be no longer required.

Amendment 2 – Amend sections 8.6.1.9 and 9.2.1.33, which do not allow re-routing of the Australian Alps Walking Track in the Main Range, to allow re-routing to avoid Kosciuszko Road.

Amendment 3 – Update schedule 5.2 to list all the new links of this strategy and the Thredbo Valley Track.

The PoM is a large and detailed document and various minor adjustments to it and its schedules may also be required to ensure the permissibility of the walking track strategy.

The final detailed design and alignments of the main range walks cannot be determined until after environmental impact assessment.

4.5 Assessment and approvals for new tracks

The Main Range supports unique and rare biodiversity much of which is protected by law. All new track and toilet facility developments will need to be assessed in accordance with Part 5 of the *Environmental Planning and Assessment Act 1979* before construction. This will require the production and approval of a Review of Environmental Factors (REF).

For the iconic multiday walk project to proceed, the following approval pathway will be required:

- Preliminary environmental scoping assessment to identify potential impacts on Matters of National Environmental Significance (MNES) and state-listed threatened biota (completed).
- Further/targeted investigation for threatened biota to accurately describe the ecological values and determine the presence or absence of threatened biota listed under the

Environment Protection and Biodiversity Conservation Act (EPBC), Biodiversity Conservation Act (BC) and Fisheries Management Act (FM).

- Preparation of a Part 5 Assessment under the Environmental Planning and Assessment Act (REF).
- If significant impacts on a threatened species or ecological community are likely to occur a Species Impact Statement (SIS) may need to be undertaken which may invoke the use of the Biodiversity Assessment Method (BAM) under the BC Act.
- If the REF (review of environmental factors) determines that a significant impact on the environment or threatened biota is likely under the EPBC Act, referral to the Commonwealth may be required¹¹.

5. Accessibility

The quantity of low-mobility tracks is very limited. Another key problem is that the walks are extremely short. One would estimate that it could take more time to unload and load a wheelchair from a vehicle, than the time spent enjoying some of the existing walks.

Consultations with the National Parks Association have confirmed that there are many people with mobility restrictions that are seeking half day, full day and overnight walks. They have also confirmed that if tracks were developed that are generally flat, smooth and safe, many people in wheelchairs and with other restrictions would decide to use the track, even if it does not fully meet Australian Standards for access and mobility. This highlights the opportunity of improving access where possible, even when it is not feasible to meet standards.

5.1 Current accessible or low-mobility tracks

Bullocks Hut low-mobility access

This track forms part of the Thredbo Valley Track and extends approximately 500m each way from the carpark at Ski Tube to Bullocks Hut which is a popular picnic and event location. Its gradients are nearly all less than 7% and the surface is a combination of compacted gravel road base and concrete pavers. The track is approximately 1.3 metres wide. Due to the amount of bike traffic this track experiences, it can be difficult for wheelchairs to negotiate safely.

Ngarigo Campground to Creek 1

This track is interlinked with the Thredbo Valley Track and provides for a pleasant walk of a few hundred metres.

Summit Trail

The Summit Trail extends from Charlotte Pass to Rawson Pass and is 7.5 kilometres in length. It is primarily constructed of gravel and local non-organic soils. The first four kilometres of the trail from Charlotte Pass to the Snowy River is quite well suited to providing for a somewhat adventurous walk, on a reasonably smooth trail that is mostly less than 7% gradient.

¹¹ Biosis Pty Ltd, 2017 P. 21

5.2 Mobility access strategies

5.2.1 Opportunities for improving access

Realignment of the Kosciuszko Walk to remove all steps

The Kosciuszko Walk needs to be realigned in two locations for approximately 500 metres each. These realignments will avoid steep easterly slopes which will enable the track to be free of steps. The gradient will remain slightly steeper than the Australian Standard for Access and Mobility (1428) 7% in some places, however, accessibility will be significantly enhanced.

Platform from Rawson Pass to Mount Kosciuszko Summit

Most of this track should be upgraded to a low-level elevated platform. A platform may not be feasible in areas where deep snowdrifts form. The platform's gradient would be more than the Australian Standard of Access of Mobility (1428) of 7% gradient in many places. However, with assistance, many people with mobility restrictions would be able to reach the summit as the platform would provide a more efficient surface than the current gravel. If this project proceeds, the few stone steps that lead to the summit at the end of the track should either be removed, or a diversion ramp needs to be constructed to avoid the steps. The ramp could be made of flat paving rocks to retain the natural look of the summit.

An overnight accessible walk from Thredbo to Charlotte Pass via Rawson Pass

If the above opportunities are implemented, an excellent overnight walk for people with mobility restrictions would be from Thredbo to Charlotte Pass, via Rawson Pass. The trip from Rawson Pass to the Mount Kosciuszko summit would be an optional extra component. The Summit Trail from Rawson Pass to Charlotte Pass would provide some challenges due to its slightly rough gravel surface, however, the gravity would provide some assistance, as it is all downhill except for the climb out of the Snowy River.

The area surrounding Seamans Hut could be used for camping, providing appropriate facilities are installed.

There is currently an accessible toilet at Rawson Pass and the Seamans Hut toilet will be designed to be accessible within the constraints of the site and its climate.

Bullock Hut Track

It is recommended that the section of track from the Ski Tube car park to Bullock Hut be widened to accommodate both wheelchairs, pedestrians and cyclists.

5.2.2 Actions to improve access

- Actively seek funding and plan for the Kosciuszko Walk to be realigned to remove all steps.
- Actively seek funding and plan toward an overnight semi-accessible walk from Thredbo to Charlotte Pass via Rawson Pass and Mount Kosciuszko summit.
- Ensure that the design for the Seamans Hut toilet provides for some level of accessibility, even if it cannot fully meet Australian Standards for Access and Mobility.
- Ensure that the surface of the three kilometres of the Summit Trail, leading from Charlotte Pass remains as smooth as is reasonably feasible, to retain a somewhat accessible six-kilometre return journey.

- Widen and harden the section of track from the Ski Tube to Bullock Hut.

5.2.3 Limitations to improving access

Cost

The cost of building any sustainable track in the alpine or subalpine area is extremely high. The additional cost to create tracks that are wide, smooth and flat enough to meet Australian Standards for access and mobility escalates the costs. However, these additional costs may often be justifiable due to the social and economic benefits of sustainable tracks. As discussed further in this strategy, there are options available to improve accessibility without creating significant costs.

Steep terrain

The southern end of KNP is quite mountainous, meaning that many locations are not suitable for creating accessible or low-mobility tracks. There are however some areas that are sufficiently flat.

Maintenance of the surface

Due to the cost implications of platforms, many tracks need to have a surface of local soils or gravel. These surfaces are susceptible to erosion. Maintaining a surface to meet standards for access and mobility requires regular, and therefore high-cost maintenance.

Suitability of materials for the environment

Materials such as concrete and asphalt are not suitable to the local environment because:

- the lifespan is reduced due to freeze/thaw cycles
- they do not aesthetically blend to the alpine environment
- concrete leaches lime, which alters the acidity of soils, making them prone to weed infestation.

Elevated platforms are the optimal material for creating accessible tracks in the alpine and subalpine areas, where funding allows.

Fibreglass reinforced plastic (FRP) mesh is being trialled for use in alpine areas. Steel mesh is suitable and well-tested. FRP may become the preferred product after further testing.

6. Shared-use tracks and cycling

Unless there is a review of this strategy, all tracks in this strategy that are designated as walking only will remain as walking only. The only exceptions to this are discussed in the section below.

6.1 Kosciuszko National Park Cycling Strategy

A cycling strategy was developed for KNP during 2015-17. This strategy identified priorities for investment and identified existing management trails that could be promoted for cycling.

Of most relevance to this walking track strategy is that the cycling strategy recognised that mountain bikes can have a detrimental impact to the safety and enjoyment of pedestrians. It also identified that walking is a more popular activity than cycling in KNP. Therefore, the

cycling strategy recommends that existing walking tracks are not re-zoned to enable mountain biking, with the exception being the lower section of the Pallaibo Walk if the Thredbo Valley Track does not exit the park via a bridge near Gaden.

6.2 Thredbo Valley Track

The Thredbo Valley Track (TVT) is a shared-use track for cycling and walking. NPWS track-count data confirms that approximately 90% of the users are on mountain bikes. There is a real safety risk for pedestrians on some sections of the TVT.

The TVT also interconnects with shared-use tracks near Bullocks Flat including the Muzzlewood Track and the Bullocks Track. These tracks are to be managed with similar actions to those described below for the Thredbo Valley Track.

Actions recommended by this strategy are:

- Not to actively promote or encourage people to walk on the TVT between Thredbo and Bullocks Flat, as this section contains some long, fast descents.
- Actively promote walkers to choose alternative tracks that are for walking only, or management trails, where there is usually minimal conflict between cyclists and walkers.
- Reclassify the TVT (or sections of it) to 'preferred use cycling' rather than shared-use, so that the expectations of users are adjusted and better met and so that some walkers may prefer to walk on other tracks (this may require a further PoM Amendment).
- Identify the locations on the TVT where safety and enjoyment of cyclists and walkers is most compromised due to conflict of use. Develop and implement solutions to mitigate the issues in these places. Examples of possible solutions include:
 - Investigate options for additional 'walkers only' tracks along the Thredbo River valley. This may include diversions, such as short-cuts through switchbacks and avoidance of fast descents.
 - Upgrade and widen the 'all-access' section of track from the Ski Tube car park to Bullocks Hut to accommodate walkers, impaired mobility users and cyclist safely.
 - Installation of technical features such as rocks and choke-points to force cyclists to slow down.

6.3 Management trails

Management trails are trails which are closed to the public for vehicle access, that are used by NPWS and other approved agencies for management purposes in vehicles and other forms of travel. There are many management trails that provide for quite good walking experiences in the park, the Summit Trail is an example of this.

Actions:

- Continue to limit vehicle-use of management trails to what is required for management purposes.
- Narrow the Main Range Walk between the Snowy River and Carruthers Saddle (one kilometre beyond the Blue Lake Lookout Walk). This will reduce the track's width from approximately 2.7m to 1.5m. Cease access to all management vehicles except for all-terrain vehicles (ATVs). Vehicle access will need to be retained to the Snowy River, to enable vehicles with ATVs on trailers to cross the Snowy River and unload on the island between the Snowy River and Club Lake Creek.

7. Cross-country ski trails

There are numerous cross-country ski trails, particularly around the Perisher area. Many of these trails are undeveloped for walking and are simply pole lines.

Much of the vegetation and soils of the trail network is at no risk of being impacted as there are many wet areas such as alpine bogs and fens, making the trails undesirable for walking. However, some foot traffic occurs Perisher Gap to Mount Porcupine via Wheatley Gap. This route is discussed in more detail in this strategy.

Any formal non-winter use of the cross-country ski trails will be considered as new developments. Most of the existing trail network is simply pole lines over intact vegetation.

No actions are required. Do not promote walking on the cross-country ski trails.

8. Waste management

8.1 Suitability of existing facilities

There are toilet facilities located at or nearby most track heads. These facilities are clean and well-maintained. Most facilities near public vehicle access have an accessible facility.

Areas within the Kosciuszko Summit Precinct where waste has been identified as a problem include Seamans Hut, the Kosciuszko Lookout on the Kosciuszko Walk and Cootapatamba Hut.

The sections below discuss where improvements may be required.

8.2 New toilet facilities required

Seamans Hut requires a single pump-out toilet. There is regularly evidence of human waste around the hut's surroundings. This is most prominent during the winter months when the Rawson Pass toilet is covered with snow. The toilet at Seamans Hut needs to be situated in an exposed location to minimise snow accumulation so that it can be used year-round.

Further investigation is required to determine appropriate waste management options for the Kosciuszko Lookout and Cootapatamba Hut. These sites require further monitoring and consideration.

There are currently suitable toilet facilities at other key walking locations. Many places will always require visitors to self-manage their waste. This is discussed below.

Actions:

- Construct a toilet approximately 30 to 50 metres from Seamans Hut, designed to be sympathetic and non-intrusive to the aesthetics of the hut and situated to minimise impact to the most popular photographic angles.
- Monitor the condition at Cootapatamba, the Kosciuszko Lookout and other popular campsites that do not have toilet facilities.
- Implement management responses to human waste issues, which may include constructing additional facilities.

8.3 Self-management of waste – toilet and general garbage

Self-management of waste under this strategy means to appropriately dispose of waste, either by burying faecal waste if appropriate, or by carrying waste out and disposing of it appropriately.

The appropriate disposal of waste by walkers is, of course, essential, especially in areas such as Kosciuszko where visitation is relatively high and the environment is, in many places, pristine and fragile.

Park management can enhance compliance with waste management, through actions like those below:

- Provide information at key track heads about the location of any toilets and what the acceptable options are for disposing of toilet waste.
- Provide information on the NPWS website, with retailers and relevant bushwalking clubs about how to carry out toilet waste.
- Consider selling human waste carry out kits in the information centre, or through other retail outlets, or engage with the commercial market to encourage local businesses to develop, promote and sell such kits.

8.4 Commercial Tour Operators

All the walking tracks under the management of NPWS are open for consideration to enable Commercial Tour Operators (CTOs) to apply for an Eco Pass which is a licence to operate. CTOs often have the capacity to assist NPWS to better achieve its vision of encouraging everyone to love their national parks. CTOs can enhance the walking experience by improving levels of safety, comfort, education and appreciation of natural and cultural values. They can also reduce impact by ensuring that best practice concepts are followed such as 'Leave no trace'. Indeed, eco-tourism providers are an essential component of achieving Great Walk status with Tourism Australia.

Actions:

- Consult during the PoM review to ensure that opportunities for CTOs are fully considered.
- Continue to provide Eco Passes and consent for various walking-based products.
- Build the Snowies Icon Walk.
- Seek interest from potential providers of package tours that would incorporate the Snowies Icon Walk, enabling the walk to become a 'Great Walk' under the Tourism Australia Great Walks Program.

9. Consultation

This section to be finalised after consultation on the draft strategy is complete.

10. References

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11. Appendices

Appendix 1 – Guide to management

Table 3 Guidance for preferred track standards and materials

Track	Preferred class	Suitable materials	Investment priority
Summit Trail	2 with the first 3km as consistent with class 1 as possible	Gravel and local mineral soil. Short sections of pitched rock at Mountain Pygmy Possum habitat areas	Medium – with short sections near Mountain Pygmy Possum habitat being very high priority
Summit Walk	2	Pitched rock or platform	Very high
Main Range Walk	3	Mostly pitched rock. Platform for Mt Lee realignment. Short sections of local mineral soil or gravel	Very high
Kosciuszko Walk	2 with as many sections as possible consistent with 1	Elevated platform	Very high
Snow Gums Walk	1 (to base of lookout) 2 (entire walk class)	Steel frame with timber or FRP mesh top	Very high
Dead Horse Gap Walk	3	Pitched rock on steepest places. Gravel or platform in flat places	Very high

Track	Preferred class	Suitable materials	Investment priority
Thredbo River Walk	3	Local soils or gravel. Platforms in the wettest places	High
Stilwell Walk	5	Local soils where stable. Gravel in flat areas. Pitched rock on steep unstable slopes	Medium
Illawong Walk	3	Local soils where stable. Gravel in flat areas. Pitched rock or steel frame staircases on steep unstable slopes	Medium
Porcupine Walk	3		Medium
Multiday Iconic Walk	3	Mostly platforms and pitched rock on new sections	High – would likely require external funds and would unlikely compete with maintenance funds
Pallaibo Walk	3	Local mineral soils	Medium
Waterfall Walk	3	Local mineral soils	Medium
Rennix Walk	4	Determined by SHL	Determined by SHL
Rainbow Lake Walk	2	Natural surface or gravel	Low

Appendix 2 – Scope of summit area walking tracks upgrades

NPWS recently completed an upgrade plan and scope of work for the walking tracks on the Main Range, including the Summit Trail, Summit Walk and the Main Range Walk. This was in response to significant erosion issues on these tracks and the need for technical guidelines and prioritisation. This is a large technical document. An abbreviated version that summarises this plan titled ‘Kosciuszko Summit Trail Upgrade Plan Summary’ will be made available after exhibition of this draft strategy.