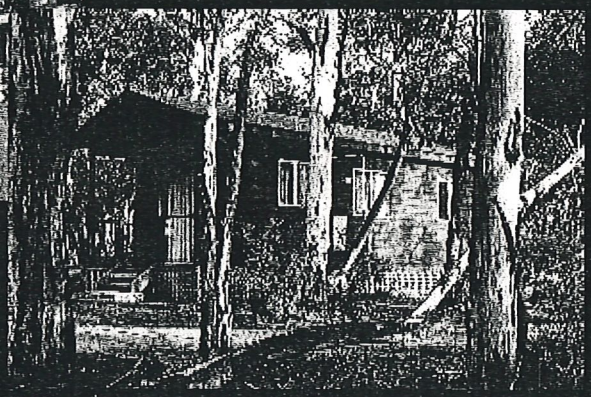
Kosciusko Mountain Retreat

SAWPIT CREEK ▸ KOSCIUSZKO NATIONAL PARK

Proposed Upgrade of Facilities, Kosciusko Mountain Retreat



Statement of Environmental Effects

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September 2004

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ATTACHMENTS

GUIDE TO ACRONYMS AND ABBREVIATIONS

AS 3959-1999	Australian Standard 3959-1999: *Construction of buildings in bushfire-prone areas.*
BASIX	Building Sustainability Index
BCA	Building Code of Australia
EP&A Act	*Environment Protection and Biodiversity Conservation Act 1979*
EPA	Environment Protection Authority (NSW)
EPBC Act	*Environment Protection and Biodiversity Conservation Act*
DA	Development Application
DEC	Department of the Environment and Conservation
DIPNR	Department of Infrastructure, Planning and Natural Resources
KNP	Kosciusko National Park
NatHERS	National Housing Energy Ratings System
NPW Act	*National Parks and Wildlife Act 1979*
NSW	New South Wales
PBP guidelines	*Planning for Bushfire Protection*, a manual produced by the NSW RFS and Planning NSW (now DIPNR).
PoM	Plan of Management
PWD	Parks and Wildlife Division of the DEC, formerly NPWS.
RF Act	*Rural Fires Act 1997*
RFS	NSW Rural Fire Service
SEE	Statement of Environmental Effects
SEPP	State Environmental Planning Policy
TSC Act	*Threatened Species Conservation Act 1995*
WARR	*Waste Avoidance and Resource Recovery Act 2001*

1 INTRODUCTION

This Statement of Environmental Effects (SEE) has been prepared for Kosciusko Mountain Retreat, an accommodation provider offering a choice of camping and chalet facilities within Kosciusko National Park (KNP). Kosciusko Mountain Retreat is located at Sawpit Creek, in the central-eastern portion of KNP, NSW (refer to figure 1.1).

This SEE relates to a proposal to upgrade facilities at Kosciusko Mountain Retreat, including the erection of new front entry signage and a camp kitchen, and alteration of 12 chalets. The proposal would improve facilities at Kosciusko Mountain Retreat to cater to school groups during the off-peak season by providing cooking facilities and space suitable for group gatherings within the camp kitchen. Furthermore, alteration of the chalets will improve their interior layout to provide three separate bedrooms rather than relying on the use the lounge area to sleep two people as currently occurs. In this way, the alterations will not increase the current bed numbers at Kosciusko Mountain Retreat. During the peak period, the facilities would provide 4 star accommodation for up to 72 people, while the chalets could accommodate school groups during the off peak period.

The purpose of this SEE, which provides for the requirements of Part IV of the Environmental Planning and Assessment (EP&A) Act, 1979, is to assess any environmental impacts that might result from the proposal. The report identifies likely social, cultural and environmental impacts and describes measures that would be put in place to mitigate potential impacts. An assessment of the overall impact of the proposal is included in the report's conclusion.

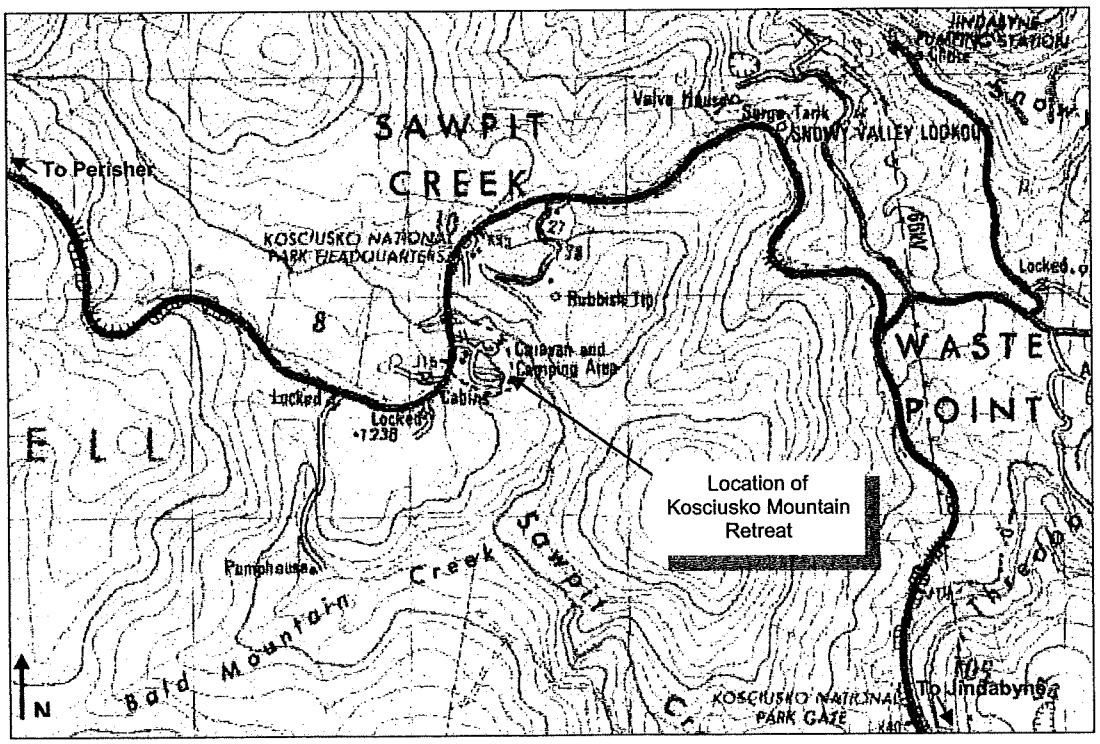

Photo 1.1 Location of Kosciusko Mountain Retreat.

2 PLANNING REQUIREMENTS

The proposed works at Kosciusko Mountain Retreat would be affected by the following planning instruments and legislation:

2.1.1 SEPP No. 73

Since the introduction of State Environmental Planing Policy No. 73 - Kosciuszko Ski Resorts (SEPP No. 73) in September 2002, the role of consent authority for all developments in the Alpine Resorts has been transferred from the Parks and Wildlife Division (PWD) of the Department of Environment and Conservation, to the NSW Minister for Infrastructure, Planning and Natural Resources (DIPNR). The Alpine Resorts Assessments Team of DIPNR now manages the development and building assessment process for Kosciusko National Park under part 4 of the EP&A Act.

The proposal site has been identified as land to which the Policy applies and therefore this SEE sets out to address all the relevant requirements within this Planning Policy so that any impacts of the proposal may be properly assessed.

The proposal to extend facilities at Kosciusko Mountain Retreat is not an advertised development under SEPP No. 73, Clause 13.

2.1.2 Environmental Planning and Assessment Act

The development of ski resorts and resort support areas within KNP is subject to the controls in Part IV of the EP&A Act, regarding developments requiring consent (SEPP 73, Clause 3). Under Part IV of the EP&A Act, the Alpine Resorts Assessments Team of DIPNR, have been appointed to manage development and building assessment within KNP.

This SEE has been prepared in line with Part IV of the EP&A Act to provide the Alpine Resorts Assessments Team with the information required to make a decision on the proposed development. Schedule 1, Part 2, Section 2 (4) of the Environmental Planning and Assessment Regulation 2000, identifies that a Statement of Environmental Effects must indicate the following matters:

- the environmental impacts of the development;
- how the environmental impacts of the development have been identified;
- the steps to be taken to protect the environment or to lessen the expected harm to the environment; and
- any matters required to be indicated by any guidelines issued by the Director-General for the purposes of this clause.

Requirement for bushfire assessment

Under section 79BA of the EP&A Act development within bushfire prone land is required to conform with the requirements of *Planning for Bushfire Protection 2001* (the *PBP guidelines)*, a document produced by the NSW Rural Fire Service (RFS). According to Bushfire Prone Land mapping carried out for the Snowy River Shire, all of KNP has been identified as bushfire prone.

Certain developments also trigger integrated development under Section 91 of the EP&A Act. These include *'hotels, motels and tourist accommodation'*. Such development is required to apply for a Bushfire Safety Authority from the RFS under section 100B of the Rural Fires Act.

A Bushfire assessment has been carried out for Kosciusko Mountain Retreat (under separate cover) by Ken Gordon.

2.1.3 Rural Fires and Environmental Assessment Legislation Amendment Act

The Rural Fires and Environmental Assessment Legislation Amendment Act of 2002 sets out the context for bushfire protection and assessment to be carried out through the EP&A Act as described above.

2.1.4 National Parks and Wildlife Act

The National Parks and Wildlife (NPW) Act of 1974 establishes the role and functions of the NSW National Parks and Wildlife Service, which is now known as the Parks and Wildlife Division (PWD), within the Department of Conservation and Environment. The role and functions of the PWD include protection of natural and cultural features (both within and outside National Parks); and the development of Plans of Management (PoMs) for each park. Development proposals within national parks areas must conform with relevant PoMs.

Kosciusko National Park National Park Plan of Management

The Kosciusko Mountain Retreat proposal area is within the 18,800ha Sawpit Creek (F4) Management Unit, of the KNP PoM. The primary management objectives of this unit are to:

- protect natural values;
- conserve wildlife;
- preserve natural features of special interest;
- prevent disturbance of important landforms, vegetation or animal communities;
- maintain the waters and aquatic communities of the stream in as natural a state as possible;
- preserve Aboriginal sites;
- protect sites of historic significance;
- encourage and control appropriate use of the areas; and
- promote an understanding of the natural and cultural values of the area.

The proposed development is consistent with the *Kosciuszko National Park Plan of Management*, (Second Edition - consolidated version, NPWS 2000), Section 5.3, which states that

> *"The cabin-caravan-camping facilities at the Sawpit Creek Accommodation Centre will be maintained at about their existing level"*, and,
>
> *"Further opportunities for individual and group camping in natural surroundings may be developed at appropriate locations within the Management Unit."*

This SEE assesses the conformity of the proposed upgrade of facilites at Kosciuszko Mountain Retreat with the management objectives for the Sawpit Creek Management Unit.

Protection of archaeological and aboriginal heritage

Part 4, Divisions 10 and 10.5, and Part 6 of the *National Parks and Wildlife Act* relate to protection of archaeological and Aboriginal sites. The disturbance of protected archaeological sites and any Aboriginal sites is prohibited. Under Part 6 of the NPW Act,

> *"a person who is aware of the location of an Aboriginal object that is the property of the Crown or, not being the property of the Crown, is real*

property, and does not, in the prescribed manner, notify the Director-General thereof within a reasonable time after the person first becomes aware of that location is guilty of an offence against this Act unless the person believes on reasonable grounds that the Director-General is aware of the location of that Aboriginal object."

2.1.5 Threatened Species Conservation Act

Consent authorities have a statutory obligation under Part 4 of the EP&A Act, to consider whether a proposal is likely to significantly affect threatened species, populations, their habitats, or ecological communities. The application of an Eight-part Test (as detailed in the Threatened Species Conservation Act of 1995 [TSC Act]) has not been undertaken as part of this assessment as the site is subject to heavy use and disturbance and the presence of threatened species is unlikely. Flora and fauna on the site have been noted and are discussed in Section 5 of this report.

2.1.6 Water Management Act

The Water Management Act 2000 (WM Act) is administered by DIPNR. The WM Act replaces the Water Act 1912 (although some parts of the Water Act remain in operation including licensing and permit provisions) and will ultimately replace the Rivers and Foreshores Improvement (RFI) Act. The WM Act repealed all aspects of the RFI Act with the exception of approvals. Once the WM Act replaces the RFI Act, it is understood that approval from DIPNR will be required for all works within 40m of a waterway. Until such time as the WM Act replaces the RFI Act, all works within 40m of a waterway continue to be subject to the RFI Act. The proposed works will not occur within 40 metres of a waterway. Measures proposed to safeguard against impacts on water quality and sedimentation have been discussed in section 4.12 of this report.

2.1.7 Soil Conservation Act

The Soil Conservation Act 1938 makes provision for the conservation of soil resources and for the mitigation of erosion. Measures that would be utilised to prevent soil loss and sedimentation as a result of the works have been detailed in a Site Environmental Management Plan (SEMP) for the proposal, which has been prepared by **ngh**environmental and is included under separate cover.

2.1.8 Waste Avoidance and Resource Recovery Act

The Waste Avoidance and Resource Recovery Act 2001 replaces the Waste Minimisation and Management Act of 1995, and is administered by the EPA. The primary objective of the Act is to achieve reductions in waste volumes disposed of in NSW and establish a hierarchy of avoidance, reuse, recycling and reprocessing and disposal. The Act contains requirements in relation to disposal and transport of waste and prevents the disposal of waste on any land unless it is an approved waste facility. Kosciusko Mountain Retreat are required to comply with the requirements of the Act in relation to waste management during construction and operation of the proposed upgraded facilities.

2.1.9 Integrated Development

The proposed extension of Kosciusko Mountain Retreat is integrated development under section 91 of the EP&A Act. This relates to the development of bushfire prone land for a *Special Fire Protection Purpose* as defined in Section 100B of the Rural Fires Act. Special fire protection purposes include tourist accommodation. The Bushfire assessment that has been prepared for this development will be used to apply for a Bushfire Safety Authority to satisfy the integrated development requirements applying to this proposal.

2.1.10 Compliance of the development with planning requirements

The proposed accommodation facility at Kosciusko Mountain Retreat will comply with all relevant planning requirements, including the KNP PoM, SEPP 73 and relevant legislation.

The key requirements for an SEE under Section IV of the EP&A Act are provided within this document. This includes details of measures that will be taken to mitigate environmental, socioeconomic and cultural impacts. The accompanying documents fulfil the requirements of:

- The TSC Act; and
- RF Act (application for a Bushfire Safety Authority);

The proposed development would be consistent with the KNP PoM, which states that *"Further opportunities for individual and group camping in natural surroundings may be developed at appropriate locations within the* [Sawpit Creek] *Management Unit."* The proposed development would also contribute to the primary management objectives of the unit as described in Section 5.1 of the PoM, in particular, the promotion of *"an understanding of the natural and cultural values of the area"* through improving facilities for school groups and thus opportunities for environmental education.

3 PROJECT DESCRIPTION

3.1 Proposal Location

Kosciusko Mountain Retreat is located at Lot 30, DP 725492 Sawpit Creek, in the central-eastern section of KNP. It is 9 km northwest of Jindabyne. The parcel of land occupied by Kosciusko Mountain Retreat is leased from the PWD. The current lease of 13.99 hectares is due to expire in 2026.

The location of Kosciusko Mountain Retreat is shown in Figure 1.1 (page 1). Details of the lease are included in the set of plans in Attachment 1.

3.2 Objectives of the Proposal

The proposal involves upgrading current accommodation facilities at Kosciusko Mountain Retreat, including alterations to 12 chalets, constructing a new camp kitchen, and also a new stone entrance to mark the entrance to Kosciusko Mountain Retreat. The objective of this work is to improve the capacity of Kosciusko Mountain Retreat to cater to school groups during the off-peak season, and provide 4 star accommodation in the chalets during the peak season.

Currently Kosciusko Mountain Retreat's capacity to accommodate school groups is limited by a lack of facilities for indoor group activities including food preparation and consumption. This obstacle would be overcome by the construction of a kitchen area for general use both by the school groups and other campers who would benefit in this upgrade of facilities.

Alterations to the chalets would involve converting the area which is now a garage into a third bedroom, as well as adding a new bathroom and airlock. The new bedroom would allow the shared living space to be more effectively utilised, rather than relying on the use of the lounge area for sleeping two guests as currently occurs. This would allow for an upgrade of the accommodation standards. The chalets would also be altered through the addition of a deck area outside the new main entry, forming a hard stand area at the entry and reducing the impact of repetitive foot traffic on local soil and plants.

3.3 Proposal Details

The proposed upgrade of facilities at Kosciusko Mountain Retreat would include:

i) The construction of a centrally located camp kitchen occupying a ground area of approximately 120 square metres. The kitchen would provide an electric barbeque as well as an electric stove top for cooking. Other facilities would include a washing up area and dining tables/chairs to seat up to 72 people. Heating would be provided by a centrally located wood heater.

ii) Expansion of 12 chalets to provide an extra bedroom and timber deck area. Plans for this proposal are included in Attachment 1. Note that there are two alternatives for the cabins. Design 'A' applies to chalets numbers 1,4,5,6,8,11 and 12. Design 'B' applies to chalets 2,3,7,9 and 10. The major difference is that Design B cabins would have a larger deck area (6.75m^2, compared to 5.25m^2 for Design A).

iii) The erection of a stone entrance and signage at the entry to Kosciusko Mountain Retreat on Kosciusko Road.

Full plans for all of the proposed works are included in Attachment 1.

3.4 Construction Details

3.4.1 Camp kitchen

The camp kitchen would be constructed over a concrete slab for which the foundations would be excavated using a backhoe. The slab would be poured on site. The building would be constructed with a timber frame that has 'Hardiplank' timber cladding and plasterboard internal lining. The ceiling would have exposed, pre-fabricated timber trusses and a 'Colourbond' roof with no gutters. 1 metre wide paving would be laid around the perimeter of the building with agricultural drainage beneath it to absorb water dripping from the roof.

Power would be supplied to the kitchen via an underground connection to a junction near camp site number 32. This would require the excavation of a trench, typical dimensions 600 x 950 mm. The excavations would be carried out using a backhoe and would be backfilled and stabilised as soon as the cable has been laid.

The water supply would also be underground, requiring a connection to the exisiting supply near site 36. This would require the excavation of a trench, typical dimensions 600 x 950 mm. The excavations would be handled in the same manner as for the installation of power cable.

3.4.2 Chalet upgrade

The chalet upgrades would involve conversion of existing garages into living space including a double bedroom, bathroom and airlock/entry area. In addition to this, a timber deck would be constructed adjacent to the entry.

Conversion of the garages would require pouring a new slab. The exterior walls of the extension would be clad with fiber cement and Colourbond steel would be used for the roofing. The extension would be insulated and the current plumbing would be replaced with new plumbing and drainage for a new bathroom which would be connected into the existing services.

3.4.3 New entry signage

Erection of the new entry stone wall and signage would involve pouring a concrete footing, requiring excavations for the footing covering an area of approximately 8.58m^2. The wall would be constructed by hand from stone and mortar and would be 1 metre high with 'gate' posts 1.8 metres high.

4 ENVIRONMENTAL EFFECTS OF THE PROPOSAL

4.1 History of the Site

The Kosciusko Mountain Retreat site has a long history, the area having been originally used by Ngarigo Aboriginal people during their summer visits to the high country. During the late 1800's a sawmill operated near Sawpit Creek and grazing occurred in the area.

A caravan park was first established at Sawpit Creek by the then NPWS (DPW) during the 1970's, although the lease was later handed over to private management. Kosciusko Mountain Retreat took over the lease in 2002. The site currently offers camping and chalet style accommodation which is predominately used by KNP visitors. The current lease area is 13.99 Hectares. It contains 17 cabins, a shop/reception area, two general amenities blocks and approximately 80 camp sites. The current lease on the site is due to expire in 2026.

The area surrounding the site is part of Kosciuszko National Park and is managed by the NSW National Parks and Wildlife Service.

4.2 Site Suitability

4.2.1 Environmental constraints

The site of the proposed facilities upgrade at Kosciusko Mountain Retreat would allow for existing facilities to be upgraded, thus avoiding the impact of constructing totally new facilities within KNP. All works would occur within the boundaries of the Kosciusko Mountain Retreat lease, in an area that has been generally disturbed and is currently managed for visitor accommodation purposes. Impact on landscape appearance or scenic quality would be minimal and no significant biological or ecological impacts are likely to occur as consequence of modifications to the site. These issues have been further addressed in the relevant sections of this report.

Constraints that may affect the site include snow fall and bushfire hazard, which have been dealt with in the bushfire assessment (under separate cover) and section 4.6 of this report. These factors should, however, be considered in terms of the small scale of the proposal and the fact that the natural features of the site that create these hazards are also a key aspect of the site's appeal to visitors. The site is not likely to be subject to flooding.

4.2.2 Adequacy of facilities

The proposed upgrade of cabins and construction of the camp kitchen and entry signage would be adequately catered for by the existing facilities. Each cabin is self contained thus existing services would be adapted to the new layout. The condition of the existing infrastructure, including power, water and sewage, is adequate for construction and utilisation of all of the proposed new facilities, including the camp kitchen.

Kosciusko Mountain Retreat have consulted with the PWD in regard to the organisation of activities for school groups and utilising existing facilities such as walking tracks and the

PWD Sawpit Creek - Kosciuszko Education Centre. The existing facilities are considered adequate to cope with any increase in use resulting from school group visitation.

4.2.3 Social and economic issues

Market research undertaken by Kosciusko Mountain Retreat predicted that there was potential for student accommodation at Kosciusko Mountain Retreat, to result in occupancy rates of between 2016 and 3816 student nights per annum. (Estimates based on analysis of schools within the Canberra and Sydney metropolitan areas, and country NSW and Victoria. Projections were based on 70%, or 37 weeks of the year). This shows that there is likely to be a demand for the new facilities at this location.

The site is close to the PWD Sawpit Creek - Kosciuszko Education Centre, as well as a variety of short walks. Kosciusko Mountain Retreat have consulted with the PWD in regard to the organisation of activities for school groups, and the PWD have not raised any objections to the proposal.

The location should be seen as suitable for the Kosciusko Mountain Retreat facilities upgrade as Furthermore, negative economic, environmental or social impacts of further development at this site would be minimal.

4.3 Present and previous uses

Modification of the chalets would entail conversion of car park space for the construction of sleeping areas, whilst the provision of decking attached to the chalets will utilise area currently utilised as recreational and transit areas by visitors. The provision of decking will reduce impact on soils and water quality by providing a hard stand area in what would be an area subject to periodic heavy foot-traffic. An image of existing cabins showing the garage area that would be converted is included in figure 4.1.

The new entry signage would be located on the road verge at the entry to the site. This site currently contains existing signage. It is shown in Figure 4.2

The proposed camp kitchen would be located on an area of land between campsite 41 and chalet 12, which is currently open space. There area has not been used previously for any specific purpose. An area further to the east was previously used as a rubbish tip and fill has been identified in this area, however, soils on the camp kitchen site were tested recently as part of a geotechnical investigation (refer to Attachment 2), but fill was not identified in the test pit.

The camp kitchen site is shown in Figures 4.3 and 4.4.

4.4 Operational Details

Facilities at Kosciusko Mountain Retreat are currently fully booked for approximately 8 weeks a year during the peak season (winter). This trend is likely to continue with the expanded accommodation facilities.

During the off peak period, Kosciusko Mountain Retreat aim to provide facilities for school groups, potentially increasing off-peak usage. Market research carried out by Kosciusko Mountain Retreat has predicted that student accommodation could provide an increase in occupancy at a rate if between 2016 and 3816 student nights per annum. No increase in staffing is anticipated to deal with additional occupancy. School groups would be self-catering, using the proposed camp kitchen for meals and some group activities.

Maintenance activities at Kosciusko Mountain Retreat would continue as currently undertaken, including daily waste collection and cleaning of vacated chalets. In addition to this routine, with the new facilities the only significant change would be the need to clean and maintain the kitchen facilities.

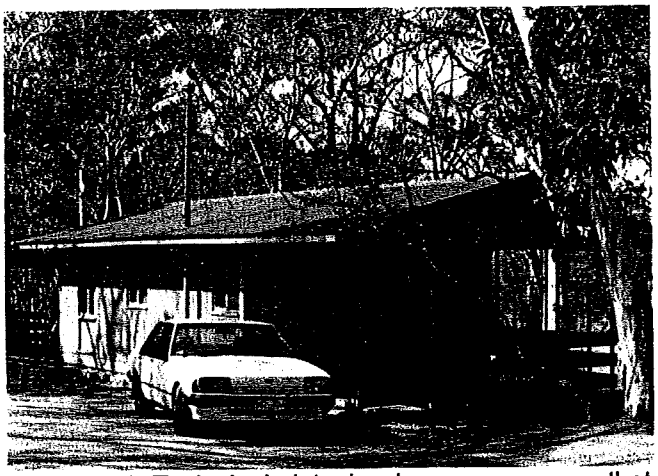

Figure 4.1 Typical chalet showing garage area that would be converted into additional interior space.

Figure 4.2 Location of proposed new entry signage (Approximate position indicated with dotted green line).

4.5 Building Classification and Building Code of Australia

4.5.1 Camp Kitchen

The proposed camp kitchen is a Class 6 building as specified in the *Building Code of Australia (BCA) – Volume One – PART A3.* Class 6 buildings include *"(b) a dining room, bar, shop or kiosk part pf a hotel or motel".*

4.5.2 Chalet Upgrading

The chalets are Class 1a buildings as specified in the *BCA – Volume One – PART A3.* A Class 1a building is classified as *"a single dwelling being - (i) a detached house."*

4.5.3 New Entry Signage

The new entry signage would be a Class 10b building as specified in the *BCA – Volume One – PART A3.*

A Class 10 building is classified as:

> *"a non-habitable building or structure ...*
>
> ***Class 10b** – a structure being a fence, mast, antenna, retaining or free- standing wall, swimming pool or the like."*

4.5.4 Fire Safety Measures

Fire safety measures have been addressed in relation to each aspect of the proposed facilities upgrade according to the relevant classes of the BCA.

4.6 Wind Classification and Snow Loading

Snow and ice action in relation to the design of the proposed facilities upgrade has been addressed in accordance with the Australian/New Zealand Standard, AS/NZS 1170.3:2003 Part 1.

In consideration of wind velocity for the proposed development, it has been determined that the accommodation facility has been designed appropriately and in accordance with AS 1170.3:2003 Part 2.

Wind classification and snow loading have been addressed fully in the structural engineer's details for the proposal.

4.7 Engineering Details

Detailed plans have been prepared for the proposed upgrade of facilities at Kosciusko Mountain Retreat. A foundation investigation for the proposed camp kitchen has been carried out by Geotechnical Consultants Pty Ltd and is included in Attachment 2. In this it was recommended that the kitchen site classification is "S". It was recommended that footings must be founded in residual soils and, if fill is found in any of the footing trenches, this must be removed or the footing deepened so that foundation loads are transferred to the natural ground. The proposal will conform with these recommendations.

4.8 Social and Economic Impact

The proposed accommodation upgrade at Sawpit Creek would be funded entirely by Kosciusko Mountain Retreat. The primary expenditure associated with the proposed development will be incurred during the planning and construction phase, when it will provide employment opportunities for local contractors. All works will be undertaken in accordance with relevant occupational health and safety (OH&S) standards, minimising risk to construction workers and the public.

During the construction period, there is likely to be a minor increase in traffic along Kosciusko Road and on access roads within the site, however, these tracks are in a reasonable condition and would allow heavy machinery to gain access to the site. The construction arrangements, including timing and duration of works, would be carried out in consultation with the DPW and DIPNR to minimise any inconveniences.

The construction period may result in minimal negative impacts, including localised modifications to the visual environment. These will be of low impact due to the minor nature of the development and the short period of time that would be required for construction. Any impact caused during the construction phase would be outweighed by the benefits the improved facilities.

The proposal would not result in a cost to the local community or the NSW National Parks and Wildlife Service, but would, in fact, bring benefits in the form of increased visitation rates and use of other facilities in the locality. Market research carried out by Kosciusko Mountain Retreat found that between 1344 and 2544 students could use Koscuisko Mountain Retreat each year. Student groups would be likely to stay for 1-2 nights per week during the 37 weeks of the off peak period.

The proposal would significantly benefit school groups visiting Kosciuszko National Park as there is currently no comparable accommodation available within the National Park

boundaries. The Kosciusko Mountain Retreat site offers the advantage of its proximity to the PWD Sawpit Creek Education Centre and local walking tracks that are suitable for use by school groups.

4.9 Access and Traffic

The site is accessed from Kosciuszko Road, with the driveway commencing approximately 50 metres west of the Sawpit Creek bridge. Kosciusko Road is sealed, whilst roads on the site itself are gravel, with the camping ground and cabins being dispersed around a central ring road. All roads would be suitable for access to the site for construction purposes.

The proposal to upgrade chalets would involve conversion of garage space into an extra bedroom, resulting in the need to allocate car parking elsewhere. The proposed parking allocations are shown in Attachment 1.

The proposal is not likely to substantially alter current access arrangements or pedestrian amenity. The major increase in visitors is expected to come from school groups, who would generally use bus transport. Access is currently adequate for buses and bus parking is provided opposite campsite 35.

The proposed development will not be a major traffic generating project, thus an access and traffic impact assessment report is not required.

4.10 Potential Impacts on Views, Privacy or Overshadowing

The Kosciusko Mountain Retreat proposal would not have a notable impact on the privacy of other visitors to the site, with chalet upgrades being contained within existing structures and the chalets themselves being well spaced with the main outlook being towards the road and areas behind the cabins rather than towards neighbouring cabins. The new bedrooms would be the only room with an outlook towards adjoining cabins, with the windows being provided primarily for light. The outlook from these windows would be towards a windowless to maintain privacy.

The proposed camp kitchen would be located, for convenience, close to camping areas and the cabins. The building would be enclosed, with windows distributed so that they do not have an overwhelming outlook towards nearby campsites.

Landscaping would be carried out according to the Landscaping and Rehabilitation Plan contained within the SEMP for the proposal (under separate cover). The landscaping proposed would further enhance privacy around the cabins and the camp kitchen area.

As the Kosciusko Mountain Retreat site has relatively low relief and is shielded by natural vegetation, it is inconspicuous from adjoining properties. The proposed modifications are minor in nature and are unlikely to have a significant impact on views and privacy from surrounding areas.

4.11 Air and Noise Emissions

4.11.1 Construction

Some noise is likely to be generated during the upgrading of facilities at Kosciusko Mountain Retreat. This would be associated with the use of machinery and equipment such as an excavator and power tools, and truck and vehicular movement. In order to minimise the impact of these activities, they would be timed to ensure minimal disturbance to visitors. Most of the works would be carried out between the hours of 7am and 7 pm daily, with particularly noisy activities being constrained between the hours of 9am and 5pm.

As there are no other residents in close proximity to the site, who are likely to be influenced by construction works on the site, consultation with adjoining leaseholders would not be necessary. A report regarding noise levels generated from the site, by a qualified acoustic consultant, is not required as noise will not be a major issue associated with this development.

It is possible that some dust would generated at the construction site during site excavation, however, the impact of this would be managed to ensure that it is limited to the construction area and topsoil loss is minimised. Dust generating works would be avoided in windy, dry conditions and, wetting down may be utilised to control excessive dust if necessary. Concrete would be stored and handled in a manner that minimises the likelihood that dust will escape. Topsoil disturbance would be minimised and any topsoil that is removed would be stockpiled as described in the SEMP for the proposal to avoid topsoil loss.

4.11.2 Use of the new Accommodation Facilities and Camp Kitchen

Once the site is in use for accommodation purposes, it may become a source of noise simply as a result of the presence of large groups of children or adults using the camp kitchen and other facilities. This is not, however, expected to greatly exceed normal camping ground noise levels and normal campground policies would apply to regulate noisy activities (lights out and noisy activities cease after 10pm). Noise transmission between buildings and throughout the site would also be buffered by the use of plantings between the camp kitchen and campsites and between chalets. Noise transfer associated with the camp kitchen would also be reduced through its construction. This would consist of insulated walls lined with plasterboard and Hardiplank exterior cladding.

Other emissions associated with use of the new facilities would include odours associated with waste disposal, and smoke from the wood heating. Waste would be stored in receptacles that are fitted with a lid and would be cleared daily as currently occurs to minimise odours and dispersal of the waste by wind or animals. Smoke associated with the wood heater would be minimised through the use of an efficient heater.

4.12 Soil, Water and Waste-water management

All works sites are located more than 100 metres from Sawpit Creek, therefore, with adequate management of the proposal impact on this waterway would be avoided. A stormwater management plan and SEMP (both under separate cover) have been prepared for the proposed works to ensure that sediment and water is managed appropriately on the construction site and in relation to the proposed new structures. The main aspects of soil and water management are summarised below.

Soils at the site consist of granite derived sandy loam which may be vulnerable to erosion, however, the site has a gentle topography with slopes generally less than 5 degrees, reducing the likelihood of severe erosion occurring if construction is managed appropriately. Permeability is moderate to rapid and structure is medium to coarse. The soil erodibility (K factor) has been assessed as 0.024, which is low. Soils of the type found on the site generally respond well to sediment control measures such as the use of silt fences and hay bales.

4.12.1 Construction phase

Construction of the proposed new facilities at Kosciusko Mountain Retreat has the potential to impact on soil and water near the site as a result of excavations and altered runoff patterns associated with new structures. There is also potential for emission of

pollutants such as concrete and hydrocarbons into local soils and water. In order to avoid these impacts, the following safeguards would be applied during construction:

Sediment Control

- Sediment controls such as sediment traps and barriers would be installed to divert clean 'run-on' water away from disturbed areas. This will minimise sediment transport and potential for erosion during the works.
- Soil stockpiles would be located on existing hard stand areas. The pile would be a low, flat, elongated mound that would be placed on geotextile matting and protected from runoff and run-on of water with appropriate sediment barriers. Stockpiled soil would be used to appropriately reshape the landscape in accordance with the landscape and rehabilitation plans.
- Vehicular movement would be confined to hardened areas where possible, or defined access routes to parts of the site that are inaccessible from the road. These areas would be clearly identified and marked out.
- Work that involves soil disturbance would be avoided during rainfall periods (other than work necessary to ensure that excavations are not left open).
- Dust and wind-born topsoil loss would be controlled as described in section 4.11.

Management of Hazardous Materials

- Contractors would have an emergency/incident procedure that includes an oil spill response plan. Contractors would also be responsible for responding to any environmental emergency, including contacting appropriate authorities.
- Staff induction would cover procedures for handling hazardous materials and emergency routines. Relevant emergency procedures would also be displayed in a prominent position.
- Stockpiles of concrete aggregate would be stored on tarpaulins and cement shall be stored and handled in a manner which minimises the likelihood of spillage or generation of dust and ensures that they are protected from weather and stormwater.
- Concrete would only be poured when sediment control measures are working effectively to avoid contamination of surface water.
- The use and storage of chemicals classified as a Dangerous Goods Class 6 Poison would be strictly in accordance with the manufacturer's instruction and the relevant Materials Safety Data Sheets (MSDS).
- Vehicles and machinery would be washed off-site, at an appropriate location and maintained in good working order. They would be inspected for oil/fuel leaks routinely.
- Care would be taken when refuelling or servicing plant to ensure containment of any spilled fuels or oils. These works would be completed in accordance with appropriate procedures, which are to be included in the Contractors EMP.
- Refuelling would not occur in the vicinity of waterways or environmentally sensitive areas. Refuelling operations would not be left unattended while in progress.
- Any oil/fuel/chemical spills or accidents on site that are likely to cause pollution, would be reported through the management in accordance with the relevant legislation and the contractor's EMP.
- Any on-site spillage of fuels or chemicals would be contained immediately and the incident shall be notified to the Project Manager. Removal and disposal of contaminated material shall be undertaken in consultation with the EPA/DPW, and the contractors EMP that would be prepared for the site.

- Any contaminated material (empty drums, rag, contaminated soil, etc.) shall be removed from the site and disposed of in accordance with the appropriate regulations.

Waste Management

- Any waste that is generated during construction would be stored in secure, covered receptacles located at clearly identified sites. The receptacles would be sealed, where appropriate, and transported from the site to an approved depot when full or as part of regular, daily waste collection.
- Existing ablution and water facilities at the Kosciusko Mountain Retreat would be available for contractors during the construction period.

Site Stabilisation and Rehabilitation

- Priority would be given to stabilisation and revegetation of excavated sites following completion of the works. This would be carried out as detailed in the Rehabilitation Plan.

Note that no critical habitat areas or threatened species have been identified in the proposal area, therefore no special management of these features will be required (refer to section 5 of this report for further detail).

4.12.2 Operation phase

The proposed Kosciusko Mountain Retreat facilities upgrade has been designed so that water use and waste water emissions are minimised and effectively managed, and there is no potential for soil contamination or erosion/sedimentation to occur.

Stormwater management has been detailed in the accompanying report (under separate cover).

4.12.3 Potential for flooding of the site

The site is not within an area likely to be subject to a 1 in 100 year flood event.

4.13 Effect on Items of Heritage Significance

The site is not of historical importance. The proposal will not impact on heritage values.

4.14 Effect on Items of Aboriginal Heritage Significance

The Kosciusko Mountain Retreat area is likely to have been used by aboriginal people, however, it has since been substantially modified by earthworks and land clearing. Consultation with PWD Aboriginal and Heritage Conservation Officer Vanessa Mason was undertaken in mid 2003, during which Kosciusko Mountain Retreat were informed that an archaeological assessment would not be necessary. While it is unlikely that the proposal would impact upon any intact archaeological sites, it is recommended that, if artefacts are unearthed during the construction phase, work should cease and the relevant Local Aboriginal Land Council and the PWD should be advised immediately. This would ensure that any identified archaeological sites can be recorded.

4.15 Energy efficiency

The proposal will endeavour to utilise resources efficiently through:

- Insulation of chalets and the camp kitchen, and the use of airlocks at the entry to the chalets;
- The use of energy efficient and water saving devices where possible, including replacing some existing appliances during the refurbishment of the chalets; and,
- The use of an efficient wood stove for heating in the camp kitchen.

4.16 Waste Minimisation

Waste generated during construction would be placed in containers fitted with lids to prevent scattering of rubbish. This waste would later be transferred to the Jindabyne Waste Transfer Station for disposal or recycling where appropriate. Any hazardous waste that is generated would be placed in sealed containers and disposed of according to the guidelines for that product.

Following construction of the new facilities, any waste generated therein would be handled through Kosciusko Mountain Retreat's routine waste management system. Kosciusko Mountain Retreat's management also intend to implement a recycling program whereby campsite and cabin waste would be sorted for recycling and stored in large rubbish bins which are cleared daily. Oily waste from the camp kitchen barbeques would be sealed and disposed of appropriately through the Jindabyne Waste Transfer Station.

5 THREATENED SPECIES ASSESSMENT

5.1 Flora

Vegetation at Kosciusko Mountain Retreat was surveyed by Jackie Miles on the 11th of September 2003. The timing of the survey was poor with respect to identifying grasses and forbs, as many species were not flowering or present only as small rosettes. As a result, many species could be identified only to genus, or tentatively to species, based on a knowledge of the vegetation of the area from previous surveys.

A report was also prepared by Alpine Tree Care (Brett McLennan) in September 4004 (referred to as 'the Arborist's Report). This has been provided under separate cover. The following information refers to both investigations.

I. Vegetation

The Kosciusko Mountain Retreat site is within an area that is characteristic of subalpine environments, however, being used for a camping ground, vegetation on the site has been substantially disturbed, particularly the ground cover and shrubs. The site mainly supports woodland, with a number of species represented in approximately equal proportions. These include Snow Gum (*Eucalyptus pauciflora*), along with Black Sallee (*E. stellulata*), Mountain Gum (*E. dalrympleana*) and Candlebark (*E rubida*). Shrubs on the site are generally limited to a few small patches and include *Ozothamnus thyrsoideus* and *Mirbelia oxylobioides*.

Much of the groundcover on the site was unidentifiable during the initial survey due to heavy grazing pressure by kangaroos and a recent drought. The dominant species, however, appeared to be the exotic grasses Browntop Bent (*Agrostis capillaries*) and Sweet Vernal Grass (*Anthoxanthum odoratum*), with small numbers of various native and exotic forbs. The most common forbs include *Stellaria pungens, Hydrocotyle laxiflora,*

Acaena novae-zelandiae, Asperula scoparia and *Hypochaeris radicata*. Only about 50 percent of the area carries any groundcover, with the remainder being gravel, bare dirt, or the surface of existing roads through the site.

A full list of vegetation found on the site is included in Attachment 3.

II. Plant Species and Vegetation types of Conservation Significance

No species listed as threatened in Schedules 1 or 2 of the Threatened Species Conservation Act 1995 were seen on the site. Nor were any species listed as being of significance within the Kosciuszko National Park Schedule of Significant Natural Features found on the site. Based on past experience in the area, and the degree of disturbance to the site, it is considered unlikely that any significant species are present or were overlooked during the site survey, despite this being undertaken in conditions that were not ideal.

Table 5.1 lists significant flora of the local area. Virtually all of the significant or threatened species which have been recorded from the Perisher Valley area are subalpine or alpine species and would be extremely unlikely to occur at Sawpit Creek. There are no threatened species which would be expected in the type of habitat present on the site.

II. Impacts and Recommendations

It is proposed that the camp kitchen would be constructed on a cleared site, and the proponents intend to keep tree clearing to the minimum necessary to accommodate the building footprint. The Arborist's Report recommends that retention of trees should be treated as a priority during construction, and the works should also take note of the requirements of the root system. It is proposed that this can be achieved by fencing off the trees. If root zones are to be impacted upon, a temporary layer of wood chip on a base of geo-fabric could be used for protection. These recommendations would be followed in respect to all works activities associated with the proposed facilities upgrade.

Impact on understorey plants and vegetation at sites other than the camp kitchen would not be significant, given that vegetation in those areas is sparse, highly disturbed and dominated by exotic grasses.

Table 5.1: Threatened and Significant Flora recorded from the Berridale 1:100,000 map sheet or in other areas of the Southern Tablelands and for which suitable habitat occurs on the site.

Family Name	*Scientific Name* (Common Name)	Category*	Habitat required
Rhamnaceae	*Discaria nitida* (Leafy Anchor Plant)	V	Shrub, 2-5m high (Rhamnaceae). "In rocky situations, usually along streams in sand or gravel, in the Snowy Mountains above 1000m" (Harden 1990). The species is not considered likely to occur on this site and was not found during the site vegetation survey.
Rhamnaceae	*Discaria pubescens* (Anchor Plant)	3RCa	Grassland or grassy woodland, often among rocks (which offer protection from browsing animals). Suitable habitat may be present, however, the site is heavily grazed by kangaroos, therefore, it is unlikely that the species would be present and the plant was not found on the site.

Family Name	*Scientific Name* (Common Name)	Category*	Habitat required
Scrophulariaceae	*Euphrasia scabra* (Rough Eyebright)	E	Erect annual forb to 50cm high (Scrophulariaceae). "Grows in open damp grassy situations south from Jenolan Caves, possibly extinct in NSW" (Harden 1990). Suitable habitat not present as the site is quite dry and exposed.
Asteraceae	*Rutidosis leiolepis*	V	Perennial tufted forb 10 to 30 cm high (Asteraceae). "Grows in higher altitude grassland of the Cooma and Kiandra districts (Harden 1990). Suitable habitat (naturally occurring grassland) not present. Secondary grassland is common on the site, but was found to be very low in native forb diversity, so the likelihood of this species occurring on the site is very low.
Santalaceae	*Thesium australe* (Australian toad-flax)	V	Sprawling perennial herb to about 40cm high (Santalaceae). *Thesium* grows in grassland and woodland, where it is parasitic on grasses, particularly kangaroo grass. It shows a preference for moist areas. The site is elevated and dry so is unlikely to provide suitable habitat.
Asteraceae	*Calotis glandulosa* (Mauve Burr-daisy)	V	Perennial forb (Asteraceae) which grows in grassland or grassy woodland on the tablelands and western slopes. Suitable habitat is present, but the disturbance history of the site suggests that the species is very unlikely to be present. It is a perennial, which should have been still visible despite the timing of the survey.

V **listed as Vulnerable in NSW in Schedule 2 of the *TSC act***

E **listed as Endangered in NSW in Schedule 1 *TSC Act,***

3RCa **ROTAP (Rare or Threatened Australian Plants, Briggs & Leigh 1995) species, with a range of >100km and at least one population adequately conserved in a reserve (Kosciuszko National Park in this instance).**

5.2 Fauna

Impacts on fauna within the development site are likely to be low as the site is highly modified and the proposal would involve removal of a very limited amount of modified vegetation. The site was examined for signs of use by fauna during the flora assessment, however, signs of use by threatened species were not observed. No foraging habitat for rare or endangered species is likely to exist on the site due to the heavy use and disturbance of the area. In view of the modified nature of the site and the limited amount of vegetation that would be removed, impact on fauna resulting from the proposal is likely to be low.

Although no significant fauna has been noted on the site, the site does provide a diverse range of potential habitat including rocks and trees. These features would be protected wherever possible.

6 CONCLUSION

This Statement of Environmental Effects has been prepared for the proposed upgrade of facilities at Kosciusko Mountain Retreat, Sawpit Creek. The proposal would be undertaken in line with the relevant policy framework, including the KNP PoM.

This SEE has found that, with the application of appropriate safeguards during construction of the new facilities, the surrounding environment would be protected and environmental impacts would be low. The Kosciusko Mountain Retreat site is suitable for such a proposal, being currently used for the provision of accommodation facilities. An upgrade of the facilities at the site would improve the general amenity of the site, increasing its appeal for visitors. It would also enabling school groups to be accommodated at Kosciusko Mountain Retreat, which is ideally suited to this purpose, being located close to the Sawpit Creek education centre, walks and within close proximity of a number of different Kosciusko environments.

7 AUTHORS

Author	Qualifications	Experience
Daniela Brozek-Cordier	Bachelor of Science Graduate Diploma of Environmental Studies (Hons) Certificate of successful completion of the course Planning for bushfire prone areas.	Daniela comes from Tasmania where she has contributed to a number of environmental management plans including a plan of management and eradication of *Spartina anglica* (Ricegrass). Daniela also specialises in environmental education and has over seven years of experience in the ecotourism industry. She has been involved in the production of interpretative materials and assessment of the environmental impacts of tourism, including assisting with the Tasmanian Tracks Inventory Project in 2000. With **ngh**environmental, Daniela has carried out a number of environmental impact assessments, including REFs, SEEs, options analyses and bushfire protection assessments for a range of proposals including SEPP 5 (Special Protection) developments, subdivisions, and home sites.
Nicholas Graham-Higgs	Bachelor of Applied Science	Nicholas has extensive experience in environmental assessment, having prepared over 100 environmental impact assessment documents, including a number of impact assessments for fuel reduction programs. He has also co-authored Fire Management Plans, and during employment with ACT Parks and Conservation and the NSW National Parks and Wildlife Service, attended a large number of wildfires.

8 REFERENCES

Harden, G.J. (ed) (1990), **Flora of New South Wales**, Vols 1-4. (1990-95). New South Wales University Press.

Land & Property Information NSW, (1978), **NSW Topographic Map Series**, LPINSW.