

ENVIRONMENTAL MANAGEMENT PLAN 2020-24

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Acknowledgement of Country

We acknowledge and respect the Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

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1. INTRODUCTION

Southern Alpine Resort Management Board (the Board) is established by the *Alpine Resorts (Management) Act 1997*. The Board is deemed to be the committee of management of all the Crown land within the Lake Mountain Alpine Resort (LMAR) and Mount Baw Baw Alpine Resort (MBBAR) which are deemed to be permanently reserved under the *Crown Land Reserves Act 1978*.

The function of the Board as outlined in the Act is to make provision for the development, promotion, management and use of the Resorts in a *“sustainable basis and in a manner that is compatible with the alpine environment... for the use of the Resorts primarily for alpine recreation and tourism and in all seasons of the year”*.

In collaboration with key resort stakeholders, the Board has developed strategic objectives that will enable the Resorts to transition towards 2030 and beyond. These objectives are:

- facilitate proactive adaptation to a changing climate,
- build the sustainability of the financial position of the resort,
- maximise the economic and social benefits flowing from the alpine resort to the surrounding community, and
- integrate key stakeholder and community views.

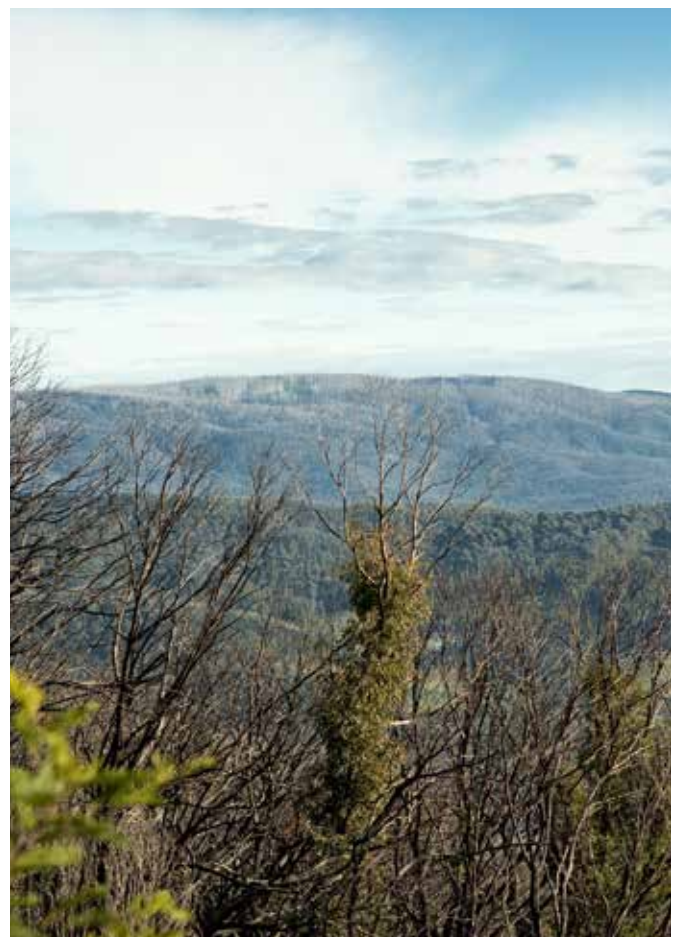
The vision for the Resorts' is to be sustainable outdoor and environmentally focused alpine destinations offering nature-based activities, appealing to educational and community groups, families and nature lovers, providing value for money that is accessible to all.

A strategic goal is to create financially and environmentally sustainable resorts measured through environmental sustainability, reduction of waste per visitor levels, success with habitat protection and via the support from Zoos Victoria, Parks Victoria and Vic Forests. One deliverable action to enable this strategic goal is engaging people in conservation challenges through school excursions, education and environmental interpretation across both sites. Of significant inclusion in this Environmental Management Plan (EnMP) is to collaborate with Traditional Custodians to develop and deliver authentic cultural experiences for both alpine resorts.

In order to achieve requirements outlined in the Act included in our Corporate Plan, we will implement the Environmental Policy and the EnMP developed with respect to Resort operations and environmental values of both Resorts.

The EnMP will review its environmental objectives annually through its Action Plan to the Strategic Environmental Committee. Key Performance Indicators (appendix 1) will be recorded and included in the Board's Annual Report.

The Resorts diverse functions as well as the nature of the sensitive alpine environment mean many aspects of daily operations impact on a variety of environmental values. The EnMP follows the values identified in the Environmental Policy (see section 2.0), guiding strategic direction, development, planning and effective management of the Alpine Resorts in partnership with stakeholders, visitors and staff. The EnMP aims to provide an understanding and outline mitigation measures for the impacts that Resort activities have on the valuable environmental assets within the Resorts.



2. ENVIRONMENTAL POLICY

2.1 Purpose

This policy outlines the commitment of the Board to manage an ecologically sustainable framework and responsibility for the protection, enhancement and restoration of the natural and cultural heritage.

2.2 Scope

This policy applies to Lake Mountain and Mount Baw Baw Alpine Resorts in their activities and dealings with stakeholders, and any other parties who undertake activities on their behalf. It applies to projects, operating procedures, including but is not limited to strategic planning, significant infrastructure projects, and planning for services.

2.3 Aim and objectives

To deliver a sustainable alpine experience that minimises the environmental impact of the Resorts and enhances environmental values in particular to sensitive areas within and adjacent landholders to the Resorts.

To achieve this aim, the Board will implement objectives to;

- Adopt, implement and review a system that complies to governmental standards;
- Assess and monitor environmental risks and impacts of the Resorts activities, operations and infrastructure;
- Mitigate risks and indirect impacts of external stakeholders, operators and visitors to the Resorts where appropriate;
- Seek to minimise consumption of water and energy and reduce waste generated from Resort activities and operations;
- Implement research and monitoring programs to develop a clear understanding of the Resorts biodiversity and ecological significance;
- Educate stakeholders, operators and visitors on the environmental significance of the Resorts;
- Ensure stakeholders and operators strive to use best practice, low impact technology to existing infrastructure and new development to consider and appropriately mitigate against risks and impacts to the environment;
- Communicate environmental performance within annual reporting and;
- Continually strive to improve environmental performance outcomes.

To fulfil this commitment, the Board will ensure it annually reviews environmental objectives through development of annual programs and actions listed in the Environmental Management Plan and undertake a systematic environmental risk assessment procedure.

2.4 Values

The diverse functions of the Board and the nature of the sensitive alpine environment mean that many aspects of operations impact on a variety of environmental values. The Environmental Management Plan will follow the classification of five themes of environmental values being:

- Water
- Waste management and resource use
- Energy and climate change
- Land management and development
- Biodiversity and threatened species (flora and fauna).



3. KEY LEGISLATION AND DOCUMENTATION

Key legislation guiding the EnMP includes:

- Alpine Resorts (Management) Act 1997
- National Strategy for Ecologically Sustainable Development
- Victorian Climate Change Adaptation Plan 2013
- Climate Change Act 2017
- Crown Land (Reserves) Act 1978
- Emergency Management Act 1986
- Road Management Act 2004
- Environment Protection and Biodiversity Conservation Act 1999
- Catchment and Land Protection Act 1994
- Conservation, Forests and Lands Act 1987
- Planning and Environment Act 1987
- Alpine Resorts Planning Scheme
- Environmental Protection Act 1970
- Flora and Fauna Guarantee Act 1988
- National Environment Protection Council (Victoria) Act 1995
- Wildlife Act 1975
- Traditional Owner Settlement Act 2010
- Aboriginal Heritage Act 2006

Key reference documents

- Southern Alpine Resort Management Corporate Plan 2020-2022
- Alpine Resorts Coordinating Council Alpine Resorts Strategic Plan 2020-2025

4. KEY STAKEHOLDERS

The relevant stakeholders for the EnMP include the following:

- Minister for Energy, Environment and Climate Change
- Department of Environment, Land, Water and Planning (DELWP)
- Parks Victoria
- Zoos Victoria
- Museums Victoria
- Alpine Resorts Co-ordinating Council (ARCC)
- Environmental Protection Authority (EPA)
- Traditional Custodians
- Goulburn Broken Catchment Management Authority
- Goulburn-Murray Water
- Mount Baw Baw Stakeholders Association
- Site Lease holders, permit holders and commercial operators
- Victorian community



5. LAKE MOUNTAIN ALPINE RESORT

5.1 Preamble

Lake Mountain Alpine Resort (LMAR) is located approximately 120km northeast of Melbourne, is the closest alpine resort to Melbourne and the premier family snow play destination in Victoria. The Resort's summit elevation is 1,433m. Located adjacent to the Yarra Ranges National Park and with 37km of groomed trails, and access to over 2,400 hectares of skiable terrain in the National Park the Resort is also one of Victoria's premier cross-country ski resorts. The Resort covers an area of 465 hectares, comprising of toboggan slopes, cross country trails, the visitor centre and administration building which are all situated at an elevation of approximately 1400m.

The Resort at peak operation during white season has 11 cross country ski trails of more than 30km and includes one purpose-built ski trail loop which can be supplemented with artificial snow. There are three toboggan slopes, one 240m flying fox, a tube run, and two recreation play areas for smaller children. Parking is available for up to 1050 cars

(around 4000 visitors), and more than 40 buses. A snow guarantee ensures that the Village toboggan run remains operational though the white season.

During the green season LMAR frequently acts as an event venue. Guides host walking tours, there is mountain biking, road cycling, Corporate events and several nature-based adventure activities within the Resort.

LMAR is located at the edge of the Yarra Valley, one of Victoria's key gourmet produce and wine regions. The Resort is close to and has a strong relationship with the town of Marysville, 22 kilometres away. Once a prospering tourism and conference hub, with a strong day visitation market, Marysville and the surrounding region continue to rebuild the tourism offer after the devastating 'Black Saturday' bushfires of early February 2009. Since then, Marysville and nearby townships such as Narbethong, Black Spur and Buxton have seen growing overnight stay visits in recent years. There is no overnight accommodation available to the public on the mountain.



5. LAKE MOUNTAIN ALPINE RESORT

5.2 Water

LMAR sources its regulated, non-potable water from the headwaters of the Taggerty river, which forms part of the Goulburn Valley water catchment. The three concrete water tanks have 800 KL capacity and are situated approximately 300m north east of the village at an altitude of 1360m. The water extraction licence is for 88 ML annually from Taggerty River.

Resort management manages all Lake Mountain area activities, development and maintenance works to conserve and enhance the catchment values and water resources of the area, and to eliminate all off-site effects.

Resort staff will endeavour to ensure stream water quality and environmental water flow requirements are taken into account in Resort planning, development and operations, including the protection of flora and fauna communities important to the maintenance of hydrological processes and catchment values.

Pollution or alteration to the landscape as a result of land use, resort works, or development are carefully monitored to ensure risk management is reduced to limit negative or harmful changes to the non-potable water supplying the Resort.

5.2.1 Target/s

- Maintain non-potable water quality within the Resort and downstream of the Resort.
- 100% compliance with EPA licence conditions and the relevant legislation to provide non-potable water to all resort users without unacceptable levels of toxicity, within the four monitoring aspects of turbidity, E. coli, chloroforms and plate counts.
- Educate visitors and staff prior to their arrival about non-potable water on mountain.
- Plan for water sourced from Taggerty River to become treated, in order to provide potable and safe for drinking.

5. LAKE MOUNTAIN ALPINE RESORT

5.2.2 Actions

Responsible Person/s	Timeframe	Responsible Person/s	Timeframe
a.	Continue with fortnightly non-potable water testing from river, tank and bistro and alert all staff if results deviate from acceptable levels.	Environment and Safety Officer/Operations team/Operations Manager	Ongoing
b.	Maintain water tank hygiene through flushing	Operations Manager	Four times annually
c.	Educate all Resort users about non-potable drinking water by signage above all water sources, ensuring water signage remains visible and intact.	Environment and Safety Officer	Ongoing
d.	Educate staff to promote minimisation and reduction of land disturbance, soil erosion or discharge of sediment and other pollutants to the catchment for works undertaken within the Resort.	Operations Manager/ Environment & Safety Officer/Operations team	Ongoing
e.	Increase catchment awareness with interpretive signage to educate and inform all Resort users.	Environment & Safety Officer/Guest Service/ Operations	White season focus, year-round
f.	Decrease consumption of single use plastic water bottles through educating staff about alternatives of potable water available.	Environment & Safety Officer	Winter 2020
g.	Staff to undertake educational training of national operator competency frameworks for water operators.	Environment and Safety Officer	2021
h.	Develop program for potable water at LMAR for Resort Management to review implementation process.	Environment & Safety Officer/Operations Manager	Summer 2021
i.	Continue with winter litter reduction education program and annual post winter 'Clean Up Our Mountain' day to reduce occurrence for entering waterways and raise litter awareness.	Environment & Safety Officer/Guest Service/ Operations	Winter/Spring annually
j.	Investigate feasibility of installing a meter to accurately record volumes of water extracted from Taggerty River.	Operations Manager	Autumn 2021

5. LAKE MOUNTAIN ALPINE RESORT

5.3 Waste Management and Resource Use

Solid waste collection and disposal, recycling collection and disposal, fuel storage and consumption, resort management vehicles and resort machinery operations are included in waste management and resource use plans for Lake Mountain Alpine Resort.

LMAR contracts Cleanaway its waste removal service from the mountain to disposal facilities via Murrumbidgee Shire Council. Under the current contract with Cleanaway, the trucks go only as far as Kelly's Paddock, which is approximately 7km below the main village area. This is problematic, as far as managing recycling effectively and efficiently. With the sensitive environment the Resort is in, it is imperative that best practice waste management systems are in place to prevent any pollution to the surrounding natural environment.

Through community awareness and education, the Resort aims to increase the percentage of recycled solid waste by 50%. When Cleanaway's contract expires in 2025, LMAR will participate in Murrumbidgee's tender process or establish a direct contract at that time.

Volumes of waste heading to landfill and amounts of diesel are the two biggest environmental issues that LMAR needs to address with the highest priority. Introducing waste recycling and investing in renewable energies will be the most successful ways in which to reduce overall consumption.

5.3.1 Target/s

- Decrease year-on-year litter source reduction in the Resort through education of staff, visitors and stakeholders.
- Decrease solid waste to landfill by 40% by 2030.
- Introduce co-mingled recycling to LMAR by 2021.



5. LAKE MOUNTAIN ALPINE RESORT

5.3.2 Actions

Action	Responsible Person/s	Timeframe
a. Actively promote, educate and engage staff and visitors on recycling efforts in the Resort.	Environment and Safety Officer/Guest Services/Operations	On going
b. Investigate options to improve storage and disposal of used cooking oil from Resort operated facilities.	Environment and Safety Officer	Winter 2020 ongoing
c. Ensure all future waste collection, disposal facilities and procedures within the Resort are carried out with minimal environmental impact.	Environment and Safety Officer/Guest Services/Operations/Cafe	2021 ongoing
d. Decrease waste to landfill by 40%.	Environment and Safety Officer /Operations	2021 ongoing
e. Decrease diesel consumption by 10%.	Environment and Safety Officer /Operations	2021 ongoing
f. Develop and implement an organics collection program.	Environment and Safety Officer	2021 ongoing
g. Introduce co-mingled and cardboard recycling.	Environment and Safety Officer	2021 ongoing
h. Create education and winter awareness campaign for cigarette butt, recycling and raise litter awareness and organics collection programs to wider community.	Environment and Safety Officer	Winter 2020 ongoing
i. Monitor and implement a source reduction education program to prevent litter from entering waterways.	Environment and Safety Officer/ Visitor Experience/Cafe	Winter 2020 ongoing
j. Ensure waste management practices are 100% compliant with the EPA.	Environment and Safety Officer	July 2021 Ongoing
k. Investigate options for closed loop composting systems within food and beverage venues & staff accommodation.	Environment and Safety Officer	Summer 20-21
l. Assess suitable upgrades to Resort owned assets to reduce existing fuel and energy consumption.	Environment and Safety Officer/Operations	Ongoing
m. Encourage cost effective upgrades to buildings to reduce energy consumption.	Environment and Safety Officer/Operations	Ongoing

5. LAKE MOUNTAIN ALPINE RESORT

5.4 Energy and Climate Change

Greenhouse gas emissions have been steadily increasing, particularly due to the purchase of two Snow Factory machines to supplement the artificial snow cover. The most effective way that resort operations can address climate change will be by way of investing in renewable energies and carbon offsets.

The Resort's electricity supply is currently produced by three generators, as Lake Mountain Alpine Resort's power is off the grid. Its main electricity supply and snowmaking is currently produced by three generators which comprises of one 700 Kva, one 450Kva diesel generator and one smaller 150Kva diesel generator. In 2020, a Remote Area Power Supply will be upgraded to reduce overall power usage and carbon emissions.

With snow-making expected to sustain the ski industry particularly at smaller resorts at lower altitudes, a more sustainable method of energy production is required to reduce the emissions causing the warming effect. The two machines forming the SF220 Snow Factory can produce up to four tonnes of snow per hour, which creates high emissions and are in frequent operation throughout the White Season.

5.4.1 Target/s

- Reduce resort heating consumption by modifying buildings to become more energy efficient by 2023
- Reduce overall diesel consumption year-on-year.
- Actively and positively respond to climate change by educating visitors and staff about the impacts and required actions.
- Reduce the output from resort operations which are negatively impacting on air quality and greenhouse gas emissions.



5. LAKE MOUNTAIN ALPINE RESORT

5.4.2 Actions

Action	Responsible Person/s	Timeframe
a. Plan for impacts of climate change adaptation and create actions.	Environment and Safety Officer	Ongoing
b. Create baseline data for carbon emissions and develop annual targets to reduce overall emissions from Resort.	Environment and Safety Officer	Winter 2020 ongoing
c. Reinstall heat transfer pipes to decrease heat loss from buildings.	Operation Manager	2021 ongoing
d. Investigate heat bank transfer for admin building to reduce chill from air.	Operation Manager	2021 ongoing
e. Create Green Purchasing Policy to educate staff about better environmental choices in product acquisition.	Environment and Safety Officer	2020 ongoing
f. Maintain soil stability reducing bare earth (excluding roads and tracks).	Operation Manager	Ongoing
g. Develop a bushfire management plan for the protection of mountain assets, flora and fauna.	Risk & Safety Manager	2021 ongoing
h. Engaging young people in conservation education through school excursions.	Environment and Safety Officer	Ongoing
i. Further investigate the possibility of solar power panel to complement the RAPS system.	Environment and Safety Officer	Ongoing
j. Installation of strategically placed meters around the Resort to measure power use.	Environment and Safety Officer	2021 Ongoing
k. Investigate the possibility of installing a wind turbine and hydro to address moving towards renewable energies and creating a hybrid renewable project.	Operations Manager	Ongoing
l. Offer shared transportation options to reduce individual travel for Resort visitors.	Environmental and Safety Officer	Winter 2022

5. LAKE MOUNTAIN ALPINE RESORT

5.5 Land Management and Development

The environmental aspects of land management and development at the Resorts include Traditional Custodians, heritage sites and culturally significant areas, stormwater drainage, track and trail development and maintenance, snow management and clearing operations, carparks and roads, and bushfire management. Under normal summer conditions the Lake Mountain area has a low to moderate fire risk, although for much of the summer the fire hazard in surrounding forest area may be high. The ongoing effects from Black Saturday include many dead trunks of Snow Gum *E.pauciflora* alongside the ski, walking and mountain bike trails, which include risks of tree fall year-round. The access roads to Lake Mountain road turnoff from both Cambarville and Marysville includes many dead Alpine Ash *E.delegatensis* which also have associated risks with unpredictable tree fall.

Soil disturbance and erosion in the Resort results from road, carpark, track and trail use and other resort infrastructure works, building site developments, landscaping and ski field development and maintenance.

5.5.1 Target/s

- Manage and protect all culturally sensitive sites within the Resort.
- Develop Taungurung educational partnership and produce indigenous educational and interpretive materials.
- Reduce risk of tree fall by eliminating high risk dead limbs altogether, as appropriate.
- Sustainably manage and conserve the soil resources of the Resort prioritising land stability issues.



5. LAKE MOUNTAIN ALPINE RESORT

5.5.2 Actions

Action	Responsible Person/s	Timeframe
a. Increase public awareness of the indigenous heritage of the Resort through integration of Taungurung cultural and educational products.	Environment and Safety Officer/General Manager	Ongoing
b. Respect and appropriately manage identified sites of indigenous and post settlement cultural heritage within the Resort.	Environment and Safety Officer	Ongoing
c. Comply with planning processes identifying, recording and assessing culturally significant sites and that Traditional Custodians are included in decision making.	Environment and Safety Officer	Ongoing
d. Development and implementation of Indigenous tourism traineeship program. Develop educationally approved Caring for Country activities.	General Manager	2021
e. Integration of Indigenous tour guides as part of the layered product development.	General Manager	2021
f. Investigate the possibility of installing a wind turbine and hydro to address moving towards renewable energies and creating a hybrid renewable project.	Operations Manager	Ongoing
g. Further mountain bike trail development in accordance with the guidelines and conditions of Yarra Ranges National Park Management Plan.	Environment and Safety Officer/Operations	Ongoing
h. Promote visitor awareness and appreciation of rare and threatened flora species and communities of the Resort.	Environment and Safety Officer	Ongoing
i. Develop and implement a Weed and Pest Control Strategy incorporating annual removal strategies.	DELWP	Winter 2021
j. Work alongside Zoos Victoria in research, monitoring and education of the and Leadbeater's Possum species.	Environment and Safety Officer	Ongoing
k. Develop educational and interpretive material (IT, brochures, educational walks) to increase awareness of Resort biodiversity.	Environment and Safety Officer	Spring 2020
l. Pursue involvement in co-managed feral animal control programs with Parks Victoria, threatening to native fauna.	Environment and Safety Officer	Winter 2020

5. LAKE MOUNTAIN ALPINE RESORT

5.6 Biodiversity and Threatened Species (flora and fauna)

Lake Mountain area is known to contain at least 265 native and 19 introduced flora species. Major vegetation communities comprise of a number of distinct vegetation communities, alpine or sub-alpine snow gum woodland, sub-alpine wetlands and montane forest. LMAR will ensure its management policies, programs and activities protect, conserve and, where possible, enhance the environment of threatened, vulnerable or rare flora species and communities within Lake Mountain.

5.6.1 Target/s

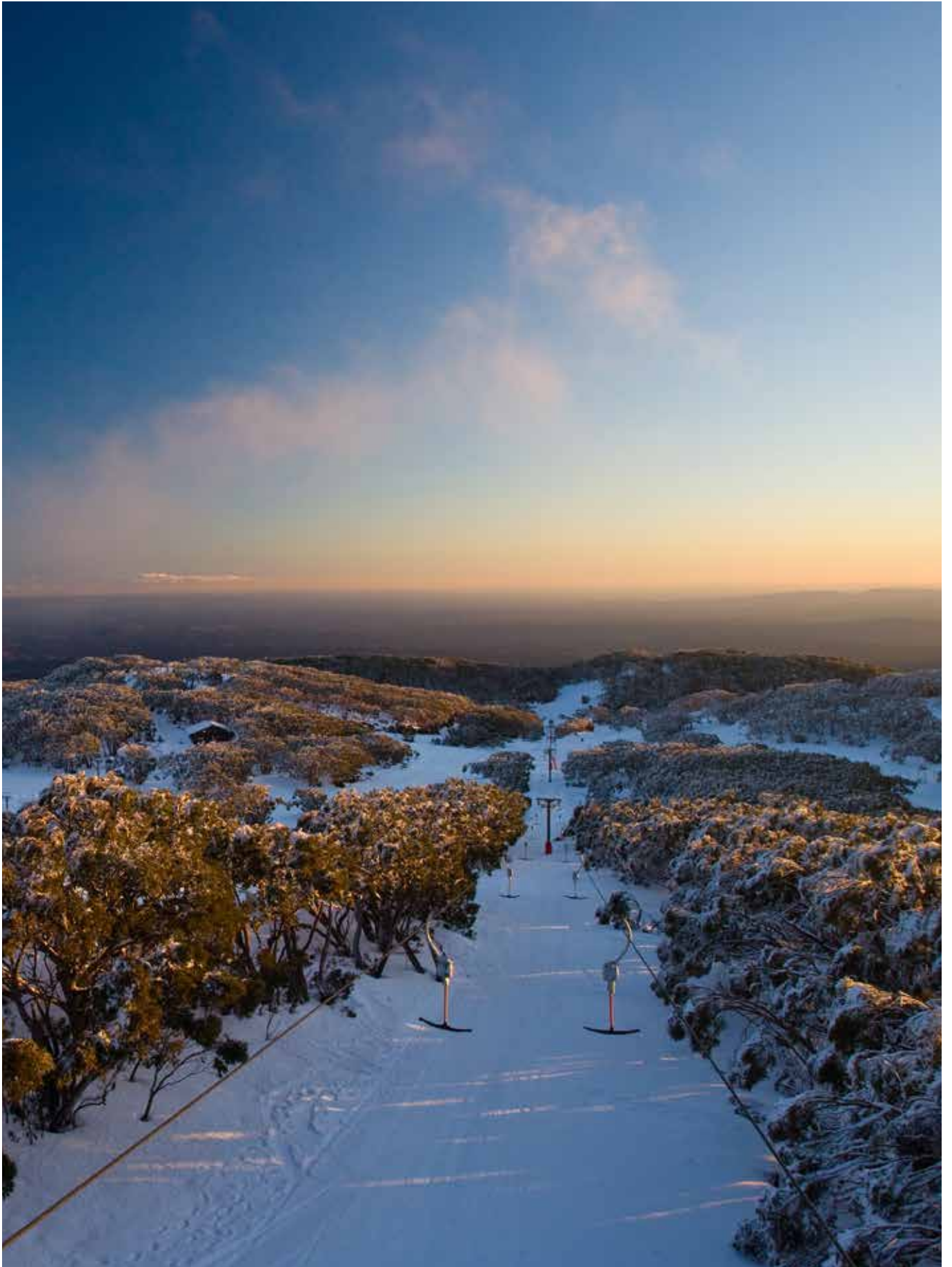
- Resort staff will eradicate priority Weeds of National Significance in accordance with regional catchment strategies.
- Resort Management will work with Goulburn Broken Catchment Management Authority, Department of Environment, Water, Land and Planning and Parks Victoria in the design and implementation of coordinated programs to prevent the introduction of, and to control or eradicate, environmental weeds within the Lake Mountain area and adjacent public lands.
- Resort staff will be trained in flora species identification, data collection and records keeping.
- LMAR will ensure its management policies, programs and activities protect, conserve and, where possible, enhance the environment of threatened, vulnerable or rare fauna species within the Lake Mountain Area.



5. LAKE MOUNTAIN ALPINE RESORT

5.6.2 Actions

Action	Responsible Person/s	Timeframe
a. Promote threatened species awareness and education to the wider public through newsletters, school presentations and publications.	Environment and Safety Officer	Autumn 2020 ongoing
b. Provide support to Zoos Victoria and Arthur Rylah Institute for threatened species programs.	Environment and Safety Officer	Ongoing
c. Develop and deliver Alpine Junior Rangers education program during school holidays for children who earn a series of badges for completing skills in the outdoors.	Environment and Safety Officer	Spring 2020 ongoing
d. Review and develop a hygiene plan to respond to heightening biosecurity threats.	Environment and Safety Officer	Spring 2020
e. Create a local seed bank and build up propagation nursery of indigenous species, under DELWP permits.	Environment and Safety Officer	Spring 2020
f. All Weeds of National Significance (WoNS) found within the Resort to reduce by 40%.	Environment and Safety Officer/Operations Team	2024
g. Increase involvement with local 'Friends of' and Landcare groups to participate in land management projects.	Environment and Safety Officer	2020-2021
h. Promote visitor awareness, education and appreciation of rare and threatened plant species and communities of the Resort.	Environment and Safety Officer	Ongoing
i. Continue to develop and implement a Weed and Pest Control Strategy incorporating annual removal strategies.	Environment and Safety Officer/ DELWP	Winter x2021
j. Eliminate single use plastic items for sale introducing reusable or biodegradable alternatives.	Environment and Safety Officer/ Retail	2021 ongoing
k. Develop educational material (IT, brochures, educational walks) to increase awareness of Resort biodiversity.	Environment and Safety Officer	Ongoing
l. Pursue involvement in co-managed feral animal control programs with Parks Victoria, minimising threats to native fauna.	Environment and Safety Officer	Ongoing
m. Forbid the presence of domestic animals within the Resort.	Authorised Officer	Ongoing



6. MOUNT BAW BAW

6.1 Preamble

Mount Baw Baw Alpine Resort (MBBAR) is located on the south west face of the Baw Baw Plateau, two and a half hours' drive east of the Melbourne CBD. MBBAR has a summit elevation of 1565 metres and gently sloping terrain with gradients of 15% to 25%. It consists of and is surrounded by a rich variety of diverse alpine and sub-alpine native vegetation. The Resort's northern and eastern boundaries are adjacent to Parks Victoria's Baw Baw National Park. The Resort's western and southern boundaries are adjacent to the DELWP managed, Tanjil State Forest.

Whilst the Resort covers 355 hectares, just 37 hectares have been developed. Developed land includes groomed ski runs, six ski lifts, several terrain parks, two toboggan runs and ten kilometres of groomed cross-country ski trails. The Resort village has 43 surveyed sites, 34 of which are developed. Land occupied by site holders is under leasehold or a licence.

The Resort at peak operation during the snow season has seven surface lifts, with a mix of terrain of for beginners, intermediate skiers and more advanced skiing, two toboggan parks, two magic carpet style conveyors, a beginner's area, a small terrain park and is home to two indigenous Alpine Dingoes. Parking is available for up to 700 cars (around 2,600 guests) and at least 20 buses at any time.

The Resort offers mountain biking trails, road cycling (including Seven Peaks), is an event venue, hosts guided walking tours and is the launch point for walks into the neighbouring state forests and national parks during the non-snow season.

The village offers almost 300 accommodation beds, with a variety of styles covering a range of budgets. Occupancy is highest in the snow season, particularly on weekends.



6. MOUNT BAW BAW

6.2 Water

Resort operational aspects relating to water include protection of quality raw water supply, treatment, supply of safe drinking water, stormwater management, construction and Resort development, vehicle and operational use and wastewater treatment and discharge.

The Resort sources its potable water from a minor tributary of the Tanjil river – Eastern Branch located within the Resort. The collection area is known as Dam Valley and is situated approximately 500m north east of the village at an altitude of 1514m.

Dam Valley catchment is in a protected valley elevated above the village covering approximately 4.5ha. The water is supplied by surface water from within the catchment by means of rain runoff and snow melt during winter months. The water running through the catchment is naturally filtered through sphagnum moss collecting suspended particulate matter and then collected in a small mountain stream – minor tributary of the headwaters of the Tanjil River – Eastern Branch.

A weir has been constructed in the stream to capture water and direct flow into two 200,000 litre concrete storage tanks which service the village. The water supply is treated by a two-stage process being chlorinated and then Ultraviolet light prior to distribution into the village.

MBBAR is a drinking water supplier as defined under the Safe Drinking Water Act 2003. As a water supplier, the Board must:

- Prepare, implement, review and revise a risk management plan in relation to its supply of drinking water and regulated water.
- Prepare for the Secretary to DHHS an Annual Report on drinking water quality.
- Monitor drinking water supply from catchment to tap (water sampling points).
- Ensure all drinking water supplied meets water quality standards.
- Notify the Secretary if non-complying water is supplied or is likely to be supplied.

Snow making facilities at the Resort utilise untreated water drawn from the same catchment pumped from a creek site downstream from the supply tanks. This water is stored in three open tanks totalling 1.8megalitres (ML). This water is used throughout the Resort across two snow factories and several snow guns, ultimately turning into snow runoff and recirculating into the system or flowing downstream from

the Resort in an effectively net neutral impact to the overall water volume.

Wastewater from the village system is directed through a pipeline 4km down the Resort road to the wastewater treatment facility. The facility incorporates two lagoons, chemical dosing units, sand filter and flow readers which assist in compliance with the Resorts EPA wastewater discharge licence.

6.2.1 Target/s

- Minimise all disturbance to catchment hydrology.
- Maintain water quality within the Resort and downstream of the Resort.
- 100% compliance with EPA licence conditions and the relevant legislation to provide safe drinking water to all Resort users.
- Annual potable water usage reduction by a total of 10% over five years.



6. MOUNT BAW BAW

6.2.2 Actions

Action	Responsible Person/s	Timeframe
a. Continue with weekly potable water testing and maintain stable chlorine residual levels through the village.	Environmental Officer/ Operations Team	Ongoing
b. Investigate village reticulation system for potential pipeline damage.	Environmental Officer/ Operations Team	Autumn 2021
c. Implement supply tank level monitoring system.	Environmental Officer	Spring 2020
d. Investigate increased village water supply capacity options in line with increasing annual visitation.	Environmental Officer/ Operations Team	Autumn 2021
e. Promote minimisation and reduction of land disturbance, soil erosion or discharge of sediment and other pollutants to the catchment for works undertaken within the Resort.	Environmental Officer/ Operations Team/ General Manager/HR Manager	Ongoing
f. Increase catchment awareness with Resort users to prevent pollution.	Environmental Officer/ Operations Team/Guest Services	White season focus, ongoing
g. Develop and implement year-round water saving plan for the Resort.	Environmental Officer	Spring 2020
h. Encourage cost effective upgrades to Resort leased buildings to reduce water consumption.	Environmental Officer	Ongoing
i. Continue with scheduled wastewater quality testing to comply with EPA licencing.	Environmental Officer/ Operations Team	Ongoing
j. Implement wastewater treatment plant improvements in line with EPA PAN 90010848 with direction from contracted water engineers.	Environmental Officer	Spring 2020
k. Propose water re-use opportunities for treated wastewater to be used as additional snowmaking resources.	Environmental Officer/ Operations Team	Spring 2021
l. Staff to undertake educational training of national operator competency frameworks for water operators.	Environmental Officer	Summer 2021

6. MOUNT BAW BAW

6.3 Waste Management and Resource Use

Solid waste collection and disposal, recycling collection and disposal, transfer station operations, fuel storage and consumption, Resort management vehicles and Resort machinery use, and maintenance are all aspects considered to be relevant to the environment.

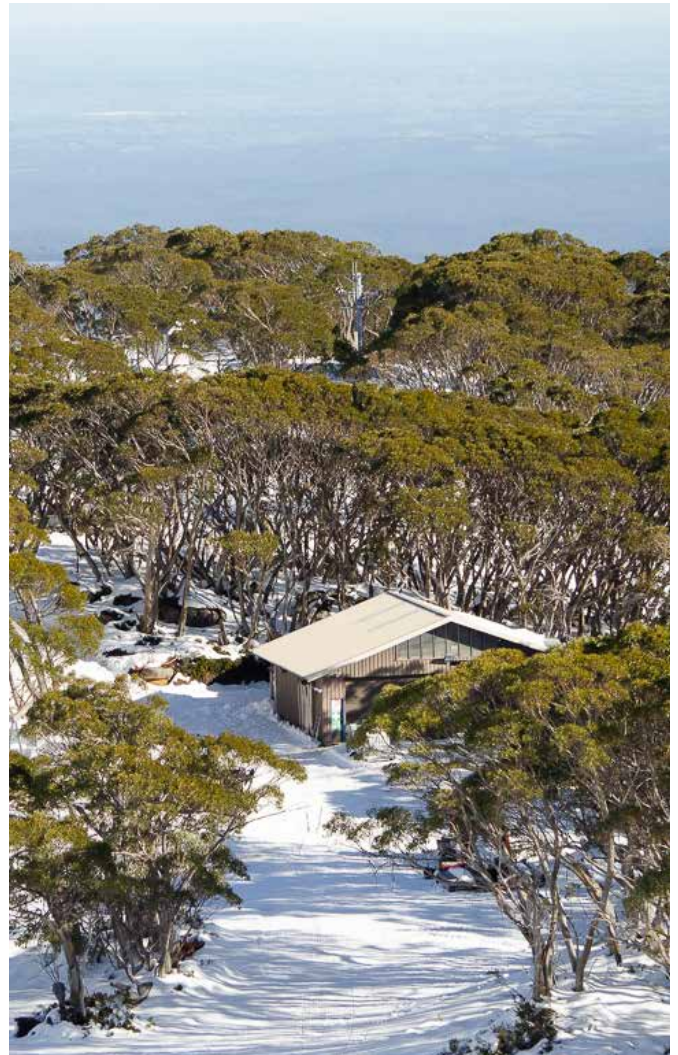
MBBAR contracts Cleanaway as its waste removal service from the mountain to disposal facilities. With the sensitive environment the Resort is in, it is imperative that best practice waste management systems are in place to prevent any pollution to the surrounding natural environment. The Resort has a transfer station at Neullynes Mill, located 4km from the Resort Village.

The current waste management system is based around the separation of domestic waste from co-mingled recyclables. Other materials such as tyres, waste oils, timber and metals that need disposal or recycling separate from the co-mingled system are stored at the transfer station and removed where possible. Through community awareness and education, the Resort hopes to increase the percentage of recycled waste by 40% and beyond.

The Resort's electricity supply is currently produced by three generators, which are driven by gas fired reciprocating engines. Snow Operations which includes snow making and all lift facilities are powered from two 220 KVA synchronized diesel generators and two 180 KVA diesel generators for a total power capacity of 800KVA. Additionally, a 22 KVA diesel generator is used to power the wastewater treatment facility.

6.3.1 Target/s

- Increased education on waste separation for staff and stakeholders to achieve waste reduction targets.
- Decrease solid waste to landfill by 40% by 2025.
- Increase percentage of co-mingled and cardboard recycling annually.



6. MOUNT BAW BAW

6.3.2 Actions

Action	Responsible Person/s	Timeframe
a. Actively promote and engage staff and visitors on recycling efforts in the Resort.	Environmental Officer/ Operations Team/Guest Services/HR Manager	Ongoing
b. Investigate options to improve storage and disposal of used cooking oil from Resort operated facilities.	Environmental Officer/ Food & Beverage Manager	Spring 2020 Ongoing
c. Investigate options for soft plastic recycling to reduce amount of waste disposed to landfill.	Environmental Officer	Summer 2021
d. Ensure all future waste collection, disposal facilities and procedures within the Resort are carried out with minimal environmental impact complying 100% with EPA requirements.	Environmental Officer/ Operations Team/ Guest Services/Food & Beverage Staff	Ongoing
e. Decrease waste to landfill by 8% per annum through improvement of sorting, recycling and composting.	Environmental Officer / Operations Team / Food & Beverage Staff	Ongoing
f. Investigate options for closed loop composting systems within all MBBAR operated food and beverage venues to reduce volumes of solid waste to landfill.	Environmental Officer / Food & Beverage Manager	Summer 2021
g. Investigate all above and below ground fuel storage tanks for potential environmental harm, removing or repairing tanks where necessary.	Environmental Officer/ Operations Team	Spring 2021
h. Complete existing village solid waste collection hutches promoting correct waste disposal behaviours with focus on increased visitation in the white season.	Environmental Officer/ Maintenance Team/ Guest Services	Winter 2020
i. Assess suitable upgrades to Resort owned assets to reduce existing fuel and energy consumption.	Environmental Officer/ Operations Team	Ongoing
j. Encourage cost effective upgrades to Resort leased buildings to reduce annual energy consumption in accord with Alpine Resorts Leasing Policy.	Environmental Officer	Ongoing
k. Implement litter reduction education programs with particular focus on post winter "Clean Up Our Mountain" initiatives.	Environmental Officer/ Operations Team/Guest Services	Spring 2020, Ongoing

6. MOUNT BAW BAW

6.4 Energy and Climate Change

The aspects of the Resort that are resulting in increased greenhouse gas emissions negatively affecting climate change include the non-renewable energy produced to power Resort operations, accommodation and water treatment facilities. Increasing visitation year-round brings larger numbers of vehicles to the Resort as a result of little to no shared transport options to the mountain.

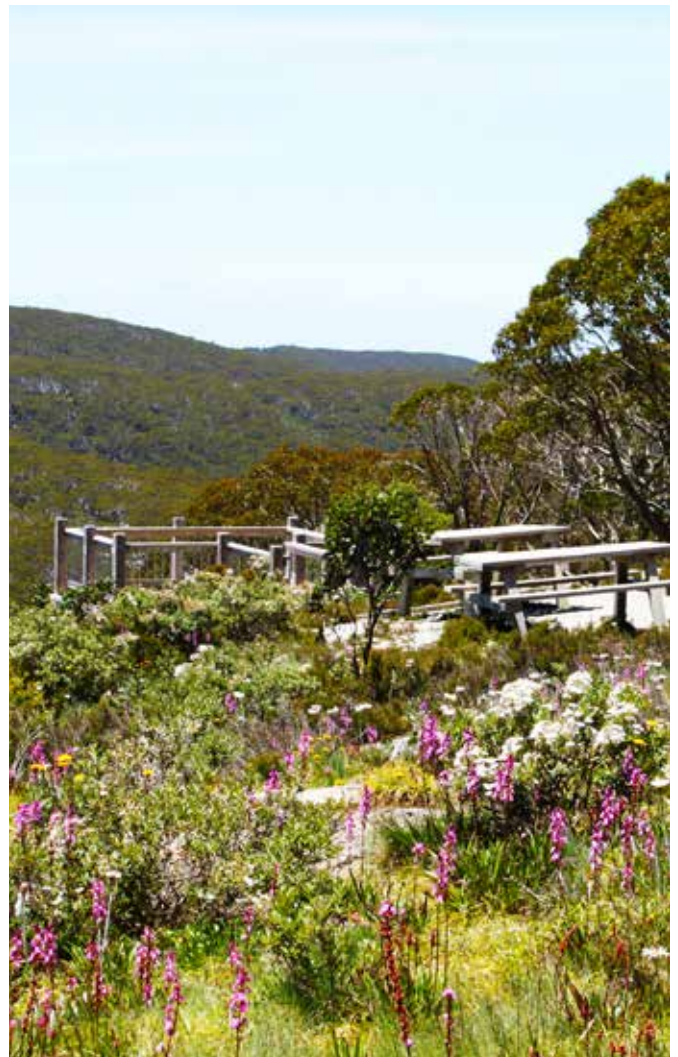
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Various activities undertaken by the Resort consume considerable amounts of energy and generate greenhouse gas emissions primarily through fossil fuel use. The main energy consuming activities that occur within the Resort include heating and lighting in Resort accommodations, lift operations and snow making. The alpine climate and relatively poor energy efficiency of Resort buildings are contributing towards higher per capita energy use, particularly with the increasing visitor numbers. Although, with the implementation of Victoria's new building regulations, which require that any new buildings must meet a 5-star energy rating, the per capita energy use of the Resort should decrease. However, significant building upgrade and construction has been limited the Resort.

With the snow making expected to help the ski industry in the short-term period in particularly for smaller Resorts at lower altitudes, a more sustainable method of energy production is required to reduce the emissions causing the warming effect.

6.4.1 Target/s

- Reduce Resort heating consumption by implementing more efficient building materials.
- Reduce fuel consumption by 20% by 2025.
- Actively and positively respond to climate change.
- Reduce the negative impact on air quality and greenhouse gasses emitted by Resort operations.
- Reduce energy consumption of snowmaking infrastructure by 20% by 2025.



6. MOUNT BAW BAW

6.4.2 Actions

Action	Responsible Person/s	Timeframe
a. Implement programs for visitor and stakeholder awareness to actively and positively respond to climate change.	Environmental Officer/ Guest Services/HR Manager	Ongoing
b. Conduct ongoing improvements to Resort owned buildings installing energy efficient appliances where possible.	Environmental Officer/ Operations Team/Guest Services	Ongoing
c. Implement the new Alpine Resorts Leasing Policy on all new buildings and renovations to improve energy efficiency.	Environmental Officer/ Operations Team/ General Manager	Ongoing
d. Work with energy supplier to ensure the Resort has an affordable and efficient capacity power source.	Environmental Officer/ Operations Team/ General Manager	Ongoing
e. Assess and implement the "Keep Winter Cool" policy at the Resort.	Environmental Officer/ Operations Team	Spring 2020, Ongoing
f. Monitor all above and below ground fuel storage tanks for potential environmental harm, removing or repairing tanks where necessary.	Environmental Officer/ Operations Team	Spring 2021
g. Implement programs to upgrade Resort owned assets to reduce existing fuel and energy consumption.	Environmental Officer/ Operations Team	Ongoing
h. Offer shared transportation options to reduce individual travel for Resort visitors.	Environmental Officer/ Visitor Experience	Winter 2022

6. MOUNT BAW BAW

6.5 Land Management and Development

The environmental aspects of land management and development within the Resort to be considered include traditional custodians, heritage sites and culturally significant areas, geotechnical and geological alterations from development and land use, stormwater drainage, track and trail development and maintenance, snow clearing operations, carparks and roads, and bushfire management.

Resort developments and operational use are the main contributors to negative environmental impacts on soil and geotechnical aspects. Increased visitation to the Resort calls for more awareness of heritage and culturally significant sites preserving them with respect to the future. Track and trail development and snow clearing along with developments are likely to have significant impacts on soil quality and erosion. Soil disturbance and erosion in the Resort results from road, carpark, track and trail use and other Resort infrastructure works, building site developments, landscaping and ski field development and maintenance.

Baw Baw Plateau is considered a site of national geological and geomorphological significance. The significant features of the Plateau can only be found elsewhere on the Australian mainland at Mt Buffalo, and are associated with the weathering of the granodiorite, including large tors, stepped valleys and peaty flats. The Resort itself is primarily situated on Late Devonian granodiorite, adamellite and hornblende porphyritic with granite outcrops common within the Resort area. The rock types and bedrock within the Resort area are generally not highly susceptible to erosion due to their high igneous origin and nature.

6.5.1 Target/s

- Sustainably manage and conserve the soil resources of the Resort prioritising land stability issues.
- Resort Management and Leaseholders to adequately address the requirements of the Erosion Management Overlay for property alterations and developments.
- Protect and improve awareness of identified and potential places, sites and objects of Aboriginal and European cultural, historical and architectural significance.
- Maintain ecological integrity of the environment while developing the Resort for future.



6. MOUNT BAW BAW

6.5.2 Actions

Action	Responsible Person/s	Timeframe
a. Increase public awareness of the indigenous heritage of the Resort through educational materials.	Environmental Officer/ Guest Services/HR Manager	Summer 2021, Ongoing
b. Partner with Traditional Custodians to deliver Caring for Country activities.	Environmental Officer	Spring 2021, Ongoing
c. Respect and appropriately manage sites of indigenous and post settlement cultural heritage within the Resort.	Environmental Officer/ Guest Services/ Operations Team	Ongoing
d. Comply with planning processes identifying, recording and assessing culturally significant sites and that consideration is given to them in decision making.	Environmental Officer/ Operations Team/ General Manager	Ongoing
e. Develop a heritage walking trail including a series of interpretation boards informing visitors of the aboriginal and historic heritage as recommended in MBBAR Cultural Heritage Assessment 2002.	Environmental Officer/ Guest Services	Summer 2022
f. Develop and implement a Resort Cultural Heritage Management Plan.	Environmental Officer	Autumn 2021
g. Develop educational material for the interpretation of Resort land heritage.	Environmental Officer/ Guest Services/ Marketing	Autumn 2021
h. Ensure geotechnical stability of new and current developments is maintained and monitored.	Environmental Officer/ Operations Team	Ongoing
i. Monitor compliance with the Alpine Resorts Planning Scheme including Overlays and Schedules for all developments and operational works by staff and stakeholders.	Environmental Officer/ Operations Team/ General Manager	Ongoing
j. Stockpile surplus topsoil excavated during approved works for use in subsequent future works, avoiding importation of soil risking the introduction of exotic flora.	Environmental Officer/ Operations Team	Ongoing
k. Develop a MBBAR bushfire management plan for the protection of mountain assets, flora and fauna.	Risk and Safety Manager	Ongoing
l. Assess options for protecting the alpine bog and heath area past of the ski bowl for biodiversity protection and visitor safety.	Environmental Officer	Spring 2020

6. MOUNT BAW BAW

6.6 Biodiversity and Threatened Species (flora and fauna)

Management aspects of the Resort that have a direct or indirect impact on biodiversity and threatened flora and faunal species include threatened species management, pest species management, construction and development, education and visitor activities and biodiversity research.

The Resort comprises of highly diverse and sensitive flora and fauna communities. Baw Baw Plateau has been recorded as a site of national botanical significance with 189 indigenous flora species present across 11 Ecological Vegetation Classes (EVCs) located within the Resort boundaries. The Resort comprises of 30 Victorian listed rare vascular plants, in addition to two plant communities listed as threatened and protected under the Flora and Fauna Guarantee Act 1988. The Alpine Leafy Liverwort (*Pseudocephalozia paludicola*) is the only EPBC listed flora species within the Resort and is classed as vulnerable both nationally and in Victoria.

Disturbances to natural vegetation communities in the Resort generate appropriate conditions for the colonisation of exotic plant species. Common disturbances within the Resort are caused by drainage lines, dumping of wood/logs, carpark run off and surface disturbance by vehicles, humans or animals. Across two previous studies completed in the Resort there have been 43 exotic species identified to be present.

There are 89 previously recorded indigenous fauna species known to, or likely to, occur within the Resort. Two significant species have a focus of research conducted by Zoos Victoria and Parks Victoria, the Leadbeater's Possum (*Gymnobelideus leadbeateri*) and Baw Baw Frog (*Philoria frosti*) however, there are six listed rare or threatened vertebrate fauna noted to be present in varying numbers.

Probable environmental impacts on biodiversity from resort operations include habitat destruction, decreasing biodiversity quality by invasive plant and exotic predator species and population loss of critical protected species. Positive impacts with appropriate environmental management are habitat and population improvement, increasing public awareness of alpine biodiversity values and the threatened species present.

6.6.1 Target/s

- Maintain native vegetation within the Resort in as healthy and robust condition as possible
- Reduce the spread of exotic flora in and around the Resort
- Provide a protected, viable habitat for both Leadbeater's Possum and Baw Baw Frog for the future
- Sustain and Protect the biodiversity of the alpine ecosystems.



6. MOUNT BAW BAW

6.6.2 Actions

Action	Responsible Person/s	Timeframe
a. Manage development/works permits to ensure protection of Native Vegetation under the Alpine Resorts Planning Scheme.	Environmental Officer	Ongoing
b. Review, maintain and monitor the Resort's Net Gain register.	Environmental Officer	Ongoing
c. Ensure guidelines of the Resorts 'skifield vegetation slashing management plan' are followed.	Environmental Officer/ Operations Team	Ongoing
d. Educate staff on the identification of native vegetation within the Resort to minimise destruction during operational works.	Environmental Officer/ Operations Team/HR Manager	Ongoing
e. Develop and implement a Rare or Threatened Flora and Fauna Protection Program.	Environmental Officer	Spring 2021
f. Assess requirement for a Native Vegetation Precinct Plan.	Environmental Officer	Winter 2021
g. Increase involvement with local 'friends of' and Landcare groups to participate in land management projects.	Environmental Officer	Spring 2021
h. Collaborate with Zoos Victoria in research, monitoring and education of the Baw Baw frog and Leadbeater's Possum species developing management plans for protection of species and habitat.	Environmental Officer/ Zoos Vic/Parks Vic	Ongoing
i. Participate in Biodiversity Response Planning to coordinate on-going actions with partner agencies. SARMB Responding to Biodiversity 2037 part 2.	Environmental Officer/ Zoos Vic/Parks Vic	Ongoing
j. Develop educational material (IT, brochures, educational walks) to increase awareness of Resort biodiversity.	Environmental Officer/ Guest Services/ Marketing	Spring 2020
k. Identify sites of high biodiversity value and ensure they are protected. SARMB Responding to Biodiversity 2037 part 3.	Environmental Officer	Ongoing
l. Plan and propose the development of a raised boardwalk through the Pudding Basin walking track to protect the endangered Baw Baw Frog habitat and re-open the walking track for visitors.	Environmental Officer	Summer 2021
m. Develop and implement a Weed and Pest Control Strategy incorporating annual removal strategies.	Environmental Officer/ Operations Team	Spring 2021
n. Actively control and eliminate Weeds of National Significance within the Resort.	Environmental Officer/ Operations Team	Spring 2020, Ongoing
o. Pursue involvement in co-managed feral animal control programs with Parks Victoria, ensuring no threats to native fauna.	Environmental Officer/ Operations Manager	Ongoing
p. Control the presence of domestic animals within the Resort.	Authorised Officer	Ongoing
q. Begin propagation of native species for revegetation purposes with the introduction of a Resort nursery to be constructed at Neulynes Mill transfer station.	Environmental Officer	Spring 2022
r. Develop and deliver Alpine Junior Rangers program during peak periods for children who earn a series of badges for completing skills in the outdoors.	Environmental Officer/ Marketing	Spring 2020, Ongoing



SOUTHERN ALPINE
Resort Management Board

The logo features a stylized white graphic of a mountain range with a spiral peak, positioned above the text 'SOUTHERN ALPINE' in a bold, sans-serif font, and 'Resort Management Board' in a smaller, lighter font below it.