THREDBO

ENVIRONMENTAL SUSTAINABILITY

Destination Action Plan

Kosciuszko Thredbo Pty Ltd.

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1 Introduction

The Thredbo Environmental Sustainability Destination Action Plan outlines the targets, objectives, and procedures to be undertaken in order to improve Thredbo's environmental sustainability. This action plan also aims to detail the link between Thredbo's environmental management system (EMS) and the EarthCheck program.

1.1 Location

Thredbo resort is located in the southern ranges region of New South Wales, occupying an area of 960 ha within the southern portion of the Kosciuszko National Park, approximately 35km from Jindabyne (figure 1). The resort area spans montane, sub-alpine and alpine bio-geographic regions ranging from 1375m to 2037m.

Figure 1 - Location of Thredbo Village

1.2 Background

Kosciuszko Thredbo (KT) operates Thredbo Village as a year-round tourist destination, offering snow sports in winter and various activities through summer including mountain biking, bushwalking, golf, tennis and fishing. These activities are supported by a hotel complex including shopping and restaurant options and leisure centre. KT also acts as the de-facto local council of Thredbo Village, providing municipal services to local residents and businesses. These services include potable water supply, removal and treatment of wastewater, waste and recycling collection and road service and maintenance. Given the diverse range of activities that the resort provides, Thredbo's operation is divided into 13 sectors:

- Administration
- Alpine Hotel
- Food and Beverage
- Leisure Centre
- Lifts and Slopes
- Parks, Gardens and Golf
- Resort Construction
- Roads
- Sewerage Treatment
- Snowmaking
- Waste Management
- Water Supply
- Workshops

2 Our Sustainability

The sustainability of our operation is based around a quadruple bottom line approach. This approach incorporates Environmental, Cultural, Social, and Economic considerations (ECSE) with the aim to achieve positive results across all areas. Through the EarthCheck program these sustainability considerations are linked to specific issues within the hospitality and tourism industry. These ECSE issues specific to tourism operations are identified as the following:

- Greenhouse gas emissions;
- Energy efficiency, conservation and management;
- Management of freshwater resources;
- Ecosystem conservation and management;
- Management of social and cultural issues;
- Land use planning and management;
- Air quality protection and noise control;
- Waste water management, and;
- Waste minimisation, reuse and recycling.

We address these sustainability considerations through our EMS, with targeted strategies detailed in a Significant Aspect Management Plan (SAMPs) for each operational sector of Thredbo and the EarthCheck program.

2.1 Key Performance Areas

EarthCheck's Destination Standard identifies sustainability performance areas relating to tourism operations. The key performance areas identified by EarthCheck coupled with criteria developed by KT enable the identification and categorisation of performance goals into areas relevant to the various operational sectors within Thredbo.

The key performance areas allow sustainability targets to be set and Thredbo's performance to be measured against the targets. The key performance areas identified for Thredbo's operation are as follows;

- Energy efficiency, conservation and management
- Greenhouse gas emissions
- Management of freshwater resources
- Waste Water Management, drainage and streams
- Ecosystem conservation and management
- Land use planning and development
- Transport
- Solid Waste Management
- Management of environmentally harmful substances
- Cultural and Social Management
- Economic Management

EarthCheck's Destination Standard and the identified key performance areas have been incorporated into Thredbo's EMS.

3 Action Plan

Thredbo's EMS facilitates a continual improvement approach to environmental aspects within the multiple operational sectors of Thredbo. This continual improvement approach is enabled through monitoring and measurement of our environmental performance.

3.1 Sustainability Targets

Sustainability targets are an essential tool for managing the long-term sustainability of Thredbo, providing high level goals to guide the actions set out in our EMS. The actions required to work towards meeting the sustainability targets are set out within the SAMPs as part of the EMS. These management plans are specific to each operational sector of Thredbo's business and provide a targeted approach to meeting the long-term sustainability targets.

The targets are set with a 5-year achievement timeframe, and feature in KT's Environmental and Social Sustainability Policy-. These targets are as follows;

- Divert 50% of waste from landfill by 2023.
- Offset 100% of the greenhouse gas emissions caused by the generation of electricity used in the resort operations by using an officially recognised and certified carbon abatement scheme by 2023.
- Reduce water use by 25% over 2011–12 levels (excluding snow making) by 2023.

3.2 Sector Benchmarking Indicators

Sector Benchmarking Indicators identified in EarthCheck's Destination Standard set the framework for the monitoring, measurement and subsequent improvement of Thredbo's environmental performance. The Benchmarking indicators are as follows;

Core Area	Indicator
Destination Performance	
Sustainability Policy	Policy produced and in place
Energy	Energy Consumption
Greenhouse Gas Emissions	Scope 1 & 2 Emissions
	Scope 3 Emissions (Optional)
Water	Potable Water Consumption
Waste	Waste sent to Landfill
Air Quality	Nitrous Oxides (NOX)
	Sulphur Dioxide (SO2)
	Particulate Matter (PM10)
Waterways	Waterways Quality
Biodiversity	Habitat Conservation
	Green Space
Significant Cultural Sites	Destination Budget Allocation
Destination Safety	Destination Recorded Crime Rates
Socio–Economic Benefit	Unemployment Rates
Travel and Tourism	Travel and Tourism Accreditation
Destination Authority Performance	
Water	Water Saving
Waste	Waste Recycling
Paper	Paper Products
Cleaning	Cleaning Products
Pesticides	Pesticide Products

EarthCheck has set Baseline and Best Practice levels for all benchmarking indicators. If a Baseline level is exceeded for an indicator, this demonstrates that the organisation is achieving sound Environmental, Cultural, Social and Economic performance. If an organisation achieves Best Practice level for an EarthCheck indicator, that demonstrates the organisation is achieving exemplary performance. Our aim is to be performing at best practice level across all indicators.

3.3 Sustainability Actions

The sustainability actions identified within the SAMPS and Thredbo's EMS aim to address the key performance areas and assist in meeting the Best Practice level of each benchmarking indicator.

3.3.1 Greenhouse Gas Emissions

Activities	Actions	Timing	Responsibility
Use of Vehicles	• Offset CO2 emissions	Annually	Environmental
	• Phase in more efficient vehicles	Ongoing	Engineering
	• Operate courtesy buses more efficiently		Environmental
	• Operate grooming fleet more efficiently		Mountain
	• Maintain vehicles effectively to ensure efficient operation		Engineering
Lawn mowing	• Operate lawn mowing equipment efficiently	Ongoing	Environmental Mountain
	• Maintain mowers effectively to ensure efficient operation		Engineering
General	• Reduce transport emissions	Ongoing	All Departments
	• Continue to promote carpooling		Sustainability Team
	• Continue to promote offsetting vehicle emissions		Sustainability Team Environmental

3.3.2 Energy Efficiency, Conservation and Management

Activities	Actions	Timing	Responsibility
Heating and cooling of buildings	• Reduce unnecessary heating/cooling • Improve efficiency of heaters.	Ongoing	All Departments
Provision of lighting	• Reduce unnecessary lighting • Increase efficiency of lighting	2019/20	All Departments
Water heating	• Improve efficiency of boilers	Ongoing	Engineering
	• Investigate potential for the use of renewable energy in water heating		Environmental/ Engineering
	• Reduce heat loss of leisure centre pool water		Engineering
Water Supply Operations	• Improve efficiency of pumps	2019/20	
Refrigeration/freezing	• Improve efficiency of fridges/freezers	2019/20	Hotel
Cooking/food preparation	• Ensure food preparation is carried out efficiently	Ongoing	Food and Beverage
Lift and Slope Operations	• Reduce energy consumption associated with lift operations • Reduce energy consumption associated with general mountain operations • Minimise energy consumption of lighting on mountain	Ongoing	Mountain/ Engineering
	• Increase proportion of 'green' energy used	2019/20	
Snowmaking Operations	• Produce snow more efficiently – increase snow production by 20% with only 10% increase in energy consumption	2018–2020	Mountain
	• Improve efficiency of pumps	2018–2020	Engineering
Road and Carpark Maintenance and Construction	• Minimise energy demand associated with de-icing, road clearing and road maintenance	Ongoing	Environmental
	• Reduce energy consumption associated with street lighting	2018–2020	Environmental/ Engineering
Use of vehicles	• Phase in more efficient vehicles • Operate courtesy buses more efficiently	Ongoing	Engineering Environmental
	• Operate grooming fleet more efficiently		Mountain
	• Maintain vehicles effectively to ensure efficient operation		Engineering
General	• Increase proportion of renewable energy used	Ongoing	Accounts/ Environmental
	• Maintain high standard of maintenance reporting and response		Engineering
	• Reduce energy consumption		All Departments

3.3.3 Management of Freshwater Resources

Activities	Actions	Timing	Responsibility
Water Supply	• Reduce unnecessary water consumption and loss	Ongoing	Sustainability Team/ Engineering
	• Comply with water extraction licences		Environmental
Water Heating	• Reduce consumption of water.	Ongoing	Sustainability Team
Ski Slope/Mountain bike trail construction	• Minimise soil movement from sites • Ensure no increase in river turbidity	Ongoing	Mountain/ Environmental
Resort construction	• Minimise soil movement from sites • Ensure no increase in river turbidity	Ongoing	Engineering/ Environmental
Road and Carpark Maintenance and Construction	• Thredbo river not to be adversely impacted by salt application • 100% compliance with environmental safeguards during road construction and maintenance activities	Ongoing	Environmental
Snowmaking Operations	• Produce snow more efficiently • Replace/repair leaking pipe sections	2018–2020	Mountain
General	• 100% compliance with environmental safeguards during construction and maintenance activities	Ongoing	All Departments

3.3.4 Wastewater Management, Drainage and Streams

Activities	Actions	Timing	Responsibility
Ski Slope/Mountain bike trail construction	• Minimise soil movement from sites • Ensure no increase in river turbidity	Ongoing	Mountain/ Environmental
Resort construction	• Minimise soil movement from sites • Ensure no increase in river turbidity	Ongoing	Engineering/ Environmental
Road and Carpark Maintenance and Construction	• Thredbo river not to be adversely impacted by salt application • 100% compliance with environmental safeguards during road construction and maintenance activities	Ongoing	Environmental
Sewage Treatment Plant Operations	• Maintain ‘band A’ standards for Australian river water quality in ecology lab monitoring results • Comply with licence conditions	Ongoing	Environmental
General	• 100% compliance with environmental safeguards during construction and maintenance activities • Respond to incidents and emergencies appropriately	Ongoing	All Departments

3.3.5 Ecosystem Conservation and Management

Activities	Actions	Timing	Responsibility
Revegetation/rehabilitation	• Reduce the abundance of weeds	Ongoing	Mountain/ Environmental
	• Rehabilitate degraded sites	2018-2020	
	• Increase abundance of indigenous species	Ongoing	
	• Enhance natural ecology	Ongoing	
Ski slope/mountain bike trail construction Resort Construction	• 100% compliance with environmental safeguards during construction and maintenance activities • Minimise fire risk associated with any works	Ongoing	Environmental/ Mountain/ Engineering
	• 80% success of all rehabilitation associated with construction to be achieved within 2 years of completion • Weeds to be effectively managed at all construction sites • Ensure minimal impact on flora, fauna and their habitat • Enhance natural ecology where possible		Environmental/ Mountain
Sewage Treatment Plant Operations	• Maintain 'band A' standard for Australian river water quality in ecology lab monitoring results based on the Australian River Assessment System (AUSRIVAS). • Comply with licence conditions • Ensure no adverse impact on biodiversity	Ongoing	Environmental
Waste Management	• Reduce potential for pollution caused by waste • Re-use weed free green waste	Ongoing	Environmental
General	• Minimise fire risk associated with any works • 100% compliance with environmental safeguards during construction and maintenance activities	Ongoing	All Departments

3.3.6 Air Quality Protection and Noise Control

Activities	Actions	Timing	Responsibility
Use of vehicles	• Phase in more efficient vehicles • Operate courtesy buses more efficiently	Ongoing	Engineering Environmental
	• Operate grooming fleet more efficiently		Mountain
	• Maintain vehicles effectively to ensure efficient operation		Engineering
Management of air quality in pool building	• Reduce odour and eye irritation in pool building	Ongoing	
General	• Respond appropriately to emergencies	Ongoing	

3.3.7 Solid Waste Management

Activities	Actions	Timing	Responsibility
Disposal of waste	• Reduce waste generation	Ongoing	All Departments
	• Increase proportion of recyclable products used	2018–2020	
Cooking/food preparation	• Reduce the consumption of food packaging and disposable utensils	2018–2020	Food and Beverage
	• Reduce food wastage	2019/2020	
	• Increase recycling of food waste	2019/2020	Environmental
	• Recycle waste oil	Ongoing	
Hazardous materials disposal	• All potential hazardous materials are to be identified	Ongoing	All Departments
	• All potential pollutants and hazardous materials are to be disposed of appropriately	As required	Environmental/ Engineering
General	• Increase recycling rate	2018–2020	All Departments
	• Introduce additional recycling initiatives	2018–2020	Sustainability Team/ Environmental
	• Reduce waste generation	Ongoing	All Departments
	• Reduce the potential for pollution caused by waste	Ongoing	Environmental

3.3.8 Storage and use of environmentally harmful substances

Activities	Actions	Timing	Responsibility
Operation and maintenance of pool	• Comply with Australian standards for pool water quality • Use phosphate free cleaning chemicals where possible • Avoid overloading STP • Reduce consumption of CO2	Ongoing	Engineering/ Hotel Maintenance/ Leisure Centre Management
Revegetation/rehabilitation	• Minimise potential for spray drift or pollution when undertaking weed spraying activities	Ongoing	Environmental/ Engineering
Golf Course Operations	• Minimise potential for spray drift or pollution when undertaking fertiliser application/weed spraying activities	Ongoing	Environmental
General	• Comply with legal requirements regarding storage and management of hazardous materials • All staff and contractors are made adequately trained in standards for storage, transfer and disposal of hazardous materials • Respond appropriately to emergencies • Minimise potential for fuel spillage • Minimise risk associated with the use of potentially harmful substances • Minimise fire risk	Ongoing	All Departments

3.3.9 Demand for Natural Resources

Activities	Actions	Timing	Responsibility
Water Supply	• Reduce unnecessary water consumption and loss	2018–2020	Sustainability Team/ Engineering
Heating and cooling of buildings	• Reduce unnecessary heating/cooling	Ongoing	All Departments
Provision of lighting	• Reduce unnecessary lighting	2019/20	All Departments
	• Increase efficiency of lighting	2018–2020	Engineering
Water heating	• Reduce consumption of water	Ongoing	Sustainability Team
Use of paper	• Reduce wasteful practices	Ongoing	Sustainability Team
	• Use recycled paper products	2018–2020	All Departments
Use of vehicles	• Phase in more efficient vehicles	Ongoing	Engineering
	• Operate courtesy buses more efficiently		Environmental
	• Operate grooming fleet more efficiently		Mountain
	• Maintain vehicles effectively to ensure efficient operation		Engineering
Cooking/food preparation	• Reduce consumption of food packaging and disposable utensils	Ongoing	Food and Beverage/ Sustainability Team
General	• Replace consumables with recycled alternatives where possible	2018–2020	All Departments

3.3.10 Management of Social and Cultural Impacts of Tourism

Activities	Actions	Timing	Responsibility
Ski Slope/Mountain bike trail construction	• Ensure no significant impact on indigenous or non-indigenous (historic) heritage or cultural values	Ongoing	Mountain
Road and Carpark Maintenance and Construction	• Minimise impact of road construction and maintenance on village access	Ongoing	Environmental
Water Supply	• Comply with Australian Drinking Water Guidelines in regards to water quality	Ongoing	Environmental

3.3.11 Land Use Planning and Development

Activities	Actions	Timing	Responsibility
Ski Slope/Mountain bike trail construction Resort Construction	• Ensure no significant impact on indigenous or non-indigenous (historic) heritage or cultural values	Ongoing	Mountain
	• Promote development of Thredbo as an amenable resort		Marketing
Road and Carpark Maintenance and Construction	• Minimise impact of road construction and maintenance on village access	Ongoing	Environmental
	• Consider access requirements in village planning		Property

3.3.12 Local Socio-economic Benefits of Tourism

Activities	Actions	Timing	Responsibility
Administrative Services	• Increase environmental education initiatives	Ongoing	Sustainability Team/ Guest Services
	• Continue to support research where possible		Environmental

3.3.13 Cultural Heritage Conservation

Activities	Actions	Timing	Responsibility
Administrative Services	• Increase cultural education initiatives	2019/20	Guest Services
Ski Slope/Mountain bike trail construction Resort Construction Road and Carpark Maintenance and Construction	• Ensure no significant impact on indigenous or non-indigenous (historic) heritage or cultural values	Ongoing	Mountain/ Engineering/ Environmental

3.4 Leadership, Education and Training

Thredbo is uniquely placed as a leader in the ski tourism industry in Australia, providing an opportunity to further our environmental leadership within the Australian tourism industry. The stewardship of Thredbo's environmental sustainability is in the hands of the Thredbo EMS Committee and Thredbo Sustainability Team.

3.4.1 Leadership

3.4.1.1 Thredbo EMS Committee

Thredbo's EMS Committee has been formed to assist Thredbo's EMS Coordinators in the implementation and management of the EMS. The committee is comprised primarily of department managers with additional key staff included where required.
The formation of the committee allocates management level sustainability leadership across all departments within Thredbo's operation.

3.4.1.2 Thredbo Sustainability Team

The Thredbo Sustainability Team has been established to involve staff and community members in the process of improving our environmental sustainability. The opportunity to join the team has been provided to key stakeholders within the Thredbo community. The Sustainability Team is comprised of Thredbo staff members, Thredbo Chambers of Commerce members, local residents and local business owners or managers .

3.4.2 Education and Training

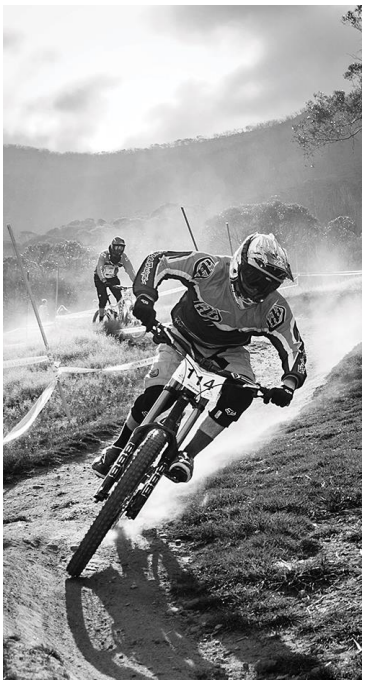
A crucial part of improving our environmental sustainability is the education of staff and the community on sustainability matters, our goals and objectives, and the process of continual improvement. All staff members participate in staff inductions at the beginning of each summer and winter season. Through these inductions staff are encouraged to actively participate in our environmental initiatives and make suggestions and give feedback through email submission. Education opportunities are provided to the community through the information provided on Thredbo's website and are encouraged to provide feedback through email submission. The EMS Committee and Sustainability Team receive additional training through an induction and training program on Thredbo's environmental management system and the EarthCheck program.

3.5 Community Involvement

A critical component of improving Thredbo's environmental performance is the involvement of all staff and key stakeholders. We will endeavour to engage with the Thredbo community and stakeholders by providing opportunities to, and encourage suggestions and feedback from the community through email submission via the Thredbo website.

4 Monitoring and Review

4.1 Performance Monitoring and Measurement



The monitoring and measurement of Thredbo's environmental performance is the key to improving our overall environmental footprint and reaching our sustainability targets. Thredbo partnering with EarthCheck enables annual tracking of our environmental performance through the use of EarthCheck's benchmarking services. A benchmarking performance report is produced annually for Thredbo in order to assess our environmental performance and to provide guidance to continue to improve the environmental performance of all areas of our operation. The benchmarking performance report is utilised in the annual review of our EMS to target key performance areas and identify actionable strategies relevant to each operational sector to improve our environmental performance.

4.2 Action Plan Review

The action plan is intended to be a working document to be reviewed and updated periodically. As such, this action plan is to be subject to annual review, in line with Thredbo's EMS.