

**DEVELOPMENT APPLICATION/STATEMENT OF ENVIRONMENTAL EFFECTS (SEE) FOR USE OF EXISTING MOUNTAIN BIKE TRAILS – CANNONBALL DOWNHILL AND FLOW TRAILS
 PROPONENT KOSCIUSZKO THREDBO PTY LTD (KT)**



<p>A brief description of the proposal</p>	<p>Development Application seeking Development Approval for use of the existing Cannonball and Flow mountain bike trails as recognised recreational infrastructure providing downhill mountain biking in Thredbo Resort.</p>
<p>Location</p>	<p>Cannonball and Flow mountain bike trails as shown on Attachment 1</p>
<p>History of trail development and use</p>	<p>In the 1980’S KT developed a range of gravity and cross-country trails in response to what was at the time a fledgling recreational activity with no real guidance for trail planning, construction or maintenance. In the 1990’s the sport grew rapidly with the introduction of new bike technologies and particularly suspension bikes. Thredbo became known as the premier downhill mountain bike resort in Australia due to the lift assisted access to the Cannonball Downhill trail providing repeat riding opportunities on a highly technical downhill course.</p> <p>At the same time cross-country riders were also attracted to the resort as it was the only location in Kosciuszko National Park that offered approved single track riding (NPWS visitor information centre would direct riders seeking “single track” to Thredbo). From the early 1990’s Thredbo hosted national downhill and cross-country events including a young Cadel Evans winning his first national title at Thredbo in 1996.</p> <p>Cannonball The Cannonball Downhill Trail is Thredbo’s first mountain bike trail originally following the mountain access trail from Eagles Nest to the valley floor. In its infancy mountain biking in the late 1980’s was initially a novelty activity for some staff and a small group of downhill mountain bike pioneers. It very quickly gained momentum with increasing numbers of riders seeking out the downhill adrenalin that Thredbo offered with its advantage of a lift assisted ascent. It became apparent very early on that the descent down the mountain access trails was unsafe and that instead riding down the cleared ski runs was much more fun, safer, more technically challenging and easier on the rider and bike. Various spur trails off the mountain access roads onto the cleared ski runs (and in some cases uncleared areas as well) developed through rider preference. In other words, someone rode a line off the mountain access road, someone followed and very soon thereafter a preferred trail had developed.</p>

	<p>In the early 1990's KT closed many of these spur lines, formalised a single Cannonball route and required riders to stay on the formed downhill trail and not take short cuts or create new trails. The current Cannonball alignment has been largely as it is now since summer 1995/6 with the exception of some corner re-alignments. The trail was never properly designed and pre-existed IMBA or any other design, construction and maintenance guidelines. As a result sections of the trail suffered from erosion due to its steep slope. By their very nature "downhill" trail cannot meet IMBA guidelines and still be a "downhill" trail as fall line riding goes against the key IMBA principle of avoiding steep slopes, staying below 10% grade and using regular grade reversals (uphill sections). Most of the erosion on the Cannonball occurred in the first few years and is best (or more correctly worst) identified by the deeply incised Snakes and Ladder section. Remedial maintenance work has included trail drainage, rock armouring, use of decomposed granite gravel and elevated platforms. The Cannonball in its current alignment now operates as a sustainable downhill trail with appropriate sediment control structures, maintenance regimes and continuous improvement through the bi-annual environmental assessment reporting undertaken by NPWS. The trail has not shown evidence of major erosion events or "blow outs" since the late 1990's save for expected frost heave, rider wear and deluge rain events.</p> <p>The Cannonball has hosting a range of high level race events including national and Oceania level downhill racing since 1992.</p> <p>Flow</p> <p>The flow trail is a more recent addition to the resorts trail network first established in 2005 to appeal to the "not so hard core" gravity riders aimed at families and less skilled riders still wanting a gravity experience. The trail is a flow style trail experience, with predominantly banked corners, smoother trail surface and less technical features.</p> <p>The vast majority of the Flow trail is on the cleared ski runs (considered Exempt Development consistent with Cl 9 Sch 2 of the Alpine SEPP). In 2012 KT re-aligned three sections of the trail off the ski run and into adjoining vegetation islands. This work was the subject of an investigation by the landlord NPWS resulting in the issuing of a Remediation Notice under the <i>National Parks and Wildlife Act</i> for damage to native vegetation.</p>
<p>Environmental Management</p>	<p>In the early days of mountain bike development in Thredbo it would be fair to say that trail planning and development was driven by trial and error with no real understanding of how to develop sustainable mountain biking. It is also fair to say that many of the early errors were not by intent but rather as a result of the previously mentioned "user built trails" – someone rode it, everyone followed and low and behold there was a trail. This is not unlike the early walking track experiences in Kosciuszko National Park. The Kosciuszko Walk and the Dead Horse Gap track both developed through walkers choosing the shortest easiest routes (typically fall line routes) leading to unsustainable erosive impacts that required a design solution.</p> <p>Thredbo's experience mirrors all other mountain bike destinations around the world where the growth of the sport in the early 1980's saw trails developed inappropriately and mountain bikers viewed as a maverick user group intent on causing irreparable environmental damage. As a result the first attempts to manage mountain bikes usually involved some type of ban or restriction.</p> <p>In response riders began to band together to promote themselves as legitimate respectful users. Internationally this was led by</p>

the formation of the International Mountain Bicycling Association (IMBA) in 1988 as an advocacy group focused on safety, environmental management and user conflicts. IMBA were determined to demonstrate that these issues could be mitigated through careful planning and management. This basic assessment still holds today.

KT has embraced the IMBA guidelines as the basis for planning and managing its trail network. Recent stage 1A and 1B trail developments have followed these IMBA design principles. Legacy trails have been subject to on-going trail improvements and/or hardening in line with IMBA's first step to achieving sustainable trails – use of existing trails given priority over creating new trails. In the case of the Cannonball and Flow trails compromises between the guidelines and existing trail design have had to be made given the excessive slope angles of many sections of these trails. This process has been largely driven by an agreed continuous trail improvement program stemming from the bi-annual NPWS Environmental Condition Assessment Report.

KT's mountain bike trail management program is integrated into the resorts Environmental Management System (EMS). The program is built upon the below elements in priority order:

IMBA Guidelines

KT has adopted the IMBA guidelines as the overarching principles for trail planning, design, construction and maintenance works including applicable upgrade works to the legacy trails. KT has embraced IMBA with a clear aim of creating a world class sustainable mountain bike trail network at Thredbo and to increase mountain bike visitation to the resort.

In house skill development and retention

KT has engaged preeminent trail design and construction consultancies World Trails and Dirt Art for trail planning and/or initial construction projects. We realise that the adoption of IMBA guidelines requires internal resource and skill development to achieve sustainability particularly in respect of trail maintenance. KT currently employs a total of ten trail maintenance staff - a fivefold increase from five year ago. All of these staff are trained in IMBA trail building techniques and we will continue to build and enhance our in house knowledge and skill base.

Thredbo Mountain Bike Trail Management Plan

KT has developed a network trail management plan to guide the management, monitoring and maintenance requirements of the network. The plan:

- Identifies key staff in the daily management of the network
- Sets out trail maintenance requirements and priorities
- Provides guidance for construction and maintenance activities
- Established trail opening and closing parameters
- Establishes trail monitoring and reporting requirements
- Measures conformance with IMBA guidelines

	<p>The plan while addressing specific Trail Develop Consent conditions has been developed as an overarching network plan.</p> <p>Inspection and Monitoring Plan (construction only)</p> <p>Developed in response to specific Development Consent conditions these plans articulate pre and post trail construction inspection and monitoring requirements to comply with (other) specific development consent requirements, outline agreed critical inspection time, stop work parameters and other environmental parameters.</p> <p>Ancillary Works Guidelines</p> <p>Developed in response to specific Development Consent conditions these guidelines provide agreed parameters to allow certain ancillary works to be undertaken within the agreed 20 metre wide trail corridor without further development consent. In affected these guidelines articulate a level of development/infrastructure that both KT and the Department of Planning and Environment (DPE) view as being a level of works that qualify as exempt development*</p> <p>(*noting that the NSW Alpine Resort Operators Group in August 2015 sought amendments to the SEPP including expansion to the current exempt development provisions)</p> <p>Thredbo Pest and Weed Management Programs</p> <p>KT manage a resort wide pest and weed management program addressing priority pest species across the resort integrated with adjoining NPWS programs.</p> <p>NPWS Environmental Condition Assessment</p> <p>Action 8.11.1.11 of the Kosciuszko National Park Plan of Management (KNP PoM) requires NPWS to “monitor the environmental impacts of mountain biking and manage it within the bounds of threshold limits.”</p> <p>Both the Cannonball and Flow trail are subject of bi-annual environmental condition assessment reports by NPWS. KT has and will continue to use these reports as a tool for continuous trail improvement on these legacy trails.</p>
<p>Event Management</p>	<p>Both the Cannonball and Flow Trail have traditionally been used for a range of mountain bike events. These events, like winter events are hosted by Kosciuszko Thredbo or contracted third parties (Mountain Bike Australia). The Valley Terminal finishing area is a listed site subject of Multi events Development Approval (DA 6500) allowing for event hosting and erection of temporary structures. Generally speaking mountain bike event start areas do not as a rule require temporary structures. However, as part of the Ancillary Works Guidelines KT will be seeking some flexibility to be able to erect small temporary structures (such as shade tents) at event start areas and at/near other developed areas of the trail network such as lift stations and mountain restaurants.</p>

Matter to be considered by Consent Authority under clause 14 of the Alpine Resorts State Environment Planning Policy (Alpine SEPP)	
1(a) Consistency with aim and objectives as set out in Clause 2 of the SEPP	Use of these existing trails is consistent with the aims and objectives of the Alpine SEPP to encourage resort development that does not result in adverse environmental, social or economic impacts. The current management regime ensures the trail network is managed within the established context of the Thredbo EMS, applicable IMBA guidelines and the on-going trail assessment and improvement program under the Kosciuszko PoM to monitor and manage mountain biking within the bounds of threshold limits.
1(b) the extent to which the development will achieve an appropriate balance between the conservation of the natural environment and any measures to mitigate environmental hazards (including geotechnical hazards, bush fires and flooding)	The proposal will bring these trails into Environmental Planning and Assessment Act (EPA Act) and Alpine SEPP planning control regime including accepted consent condition to enable ongoing maintenance, minor trail changes for environmental or users driven reasons, use of temporary structures, seasonal earth works and facilitate mountain bike events.
1(c) having regard to the nature and scale of the development proposed, the impacts of the development (including the cumulative impacts of development) on the following: (i) the capacity of existing transport to cater for peak days and the suitability of access to the alpine resorts to accommodate the development, (ii) the capacity of the reticulated effluent management system of the land to which this Policy applies to cater for peak loads generated by the development, (iii) the capacity of existing waste disposal facilities or transfer facilities to cater for peak loads generated by the development, (iv) the capacity of any existing water supply to cater for peak loads generated by the development	<ul style="list-style-type: none"> (i) Non winter visitation in Thredbo does not reach anywhere near winter capacities/peak days. Existing resort lifting, intra and inter resort transport services adequately cater for summer demand (ii) The Thredbo STP is designed to cope with peak winter loads of over 8000 visitors. (iii) Thredbo waste management facilities adequately cope with the non- winter waste loads (iv) Peak mountain bike loads place no pressure on the resort water supply capacity
1(d) any statement of environmental effects required to accompany the development application for the development	This document, the accompanying trail management plan and environmental management measures proposed within provide an assessment of the environmental effects of using the trail network, internationally accepted maintenance practices and continuous improvement program for these legacy trails not able to meet the IMBA construction guidelines.

<p>1(e) if the consent authority is of the opinion that the development would significantly alter the character of the alpine resort-an analysis of the existing character of the site and immediate surroundings to assist in understanding how the development will relate to the alpine resort</p>	<p>This application is seeking development approval to use the Cannonball and Flow trails for mountain biking as they have been used for the last 30+ and 5+ years respectively. Since the early 1990's mountain biking has come to define the summer character of Thredbo. Thredbo is the only summer long provider of chairlift accessible trails in Australia, and has the largest vertical elevation range of any mountain bike resort in the country. The resort is currently experiencing strong and exponentially growing visitation from a broad range of the mountain bike market, though with a distinctly gravity based focus that takes advantage of the lifting infrastructure.</p>
<p>1(f) the <i>Geotechnical Policy-Kosciuszko Alpine Resorts</i> (2003, Department of Infrastructure, Planning and Natural Resources) and any measures proposed to address any geotechnical issues arising in relation to the development</p>	<p>Use of existing – exempt under clause 3.1 of the DPE Geotechnical policy as it does not involve the erection of any buildings or carrying out of any works</p>
<p>1(g) if earthworks or excavation works are proposed-any sedimentation and erosion control measures proposed to mitigate any adverse impacts associated with those works</p>	<p>Annual construction and de-construction of the jumps parks will not involve any excavation/cutting of the natural ground levels but rather a spreading of soil material from the built jumps at the deconstruction (autumn) stage and then re-instatement of these features at the construction (spring) stage.</p> <p>All constructed features will have their side walls, batters or berms appropriately covered with matting, mulch, tacifier and chewings fescue grass seed. All reasonable efforts will be made to maintain cover on these walls, batters and berms as erosive resistant.</p>
<p>1(h) if stormwater drainage works are proposed-any measures proposed to mitigate any adverse impacts associated with those works</p>	<p>All trail drainage structures and filters will be annually inspected for functionality and cleaned as appropriate. Drainage maintenance works will be undertaken on a weekly basis throughout the season and immediately following rainfall events of more than 25mm in any 24 hour period.</p>
<p>1(i) any visual impact of the proposed development, particularly when viewed from the Main Range</p>	<p>The proposed use of the trails will not change the visual impact of the trail network.</p> <p>The trails are not visible from the Main Range.</p> <p>The main visual impact of the Cannonball and Flow trails is when viewed from central village or from the Kosciuszko Express Chairlift. The trails like ski runs have long been an accepted development impact within the alpine resorts. KT will continue where appropriate to progressively move these trails off the open ski runs into the vegetated edges to soften the visual impact (as well as improving rideability and construction standards).</p>

<p>1(j) the extent to which the development may be connected with a significant increase in activities, outside of the ski season, in the alpine resort in which the development is proposed to be carried out</p>	<p>Thredbo and the surrounding region is experiencing growth in mountain bike related visitation due to development of new trails such as the All Mountain and the Thredbo Valley trail and increased marketing and awareness of Thredbo and the region as mountain bike destinations. This increase in visitation is well below peak and average winter visitation levels.</p>
<p>1(k) if the development involves the installation of ski lifting facilities and a development control plan does not apply to the alpine resort: (i) the capacity of existing infrastructure facilities, and (ii) any adverse impact of the development on access to, from or in the alpine resort</p>	<p>NA</p>
<p>1(l) if the development is proposed to be carried out in Perisher Range Alpine Resort: (i) the document entitled <i>Perisher Range Resorts Master Plan</i> , as current at the commencement of this Policy, that is deposited in the head office of the Department, and (ii) the document entitled <i>Perisher Blue Ski Resort Ski Slope Master Plan</i> , as current at the commencement of this Policy, that is deposited in the head office of the Department</p>	<p>NA</p>
<p>1(m) if the development is proposed to be carried out on land in a riparian corridor: (i) the long term management goals for riparian land, and (ii) whether measures should be adopted in the carrying out of the development to assist in meeting those goals</p>	<p>These existing trails cross riparian corridors via established bridges and or culverts on ski runs. No further impacts on the riparian corridors are proposed.</p>
<p>2 The "long term management goals" for riparian land are as follows: (a) to maximise the protection of terrestrial and aquatic habitats of native flora and native fauna and ensure the provision of linkages, where</p>	<p>The integrity of the Thredbo riparian corridors are managed within the bounds of historic development practices and permissible development balanced against resort operations. KT is committed to ensuring the protection and improvement of the rivers and creeks within the lease area and has funded third party monitoring of water quality and macro invertebrate diversity for over thirty years. This long term monitoring program demonstrated a high level of water and aquatic fauna quality save for events and influences outside of KT's control – 2003 bushfires and up-stream wild horse impacts.</p>

possible, between such habitats on that land, (b) to ensure that the integrity of areas of conservation value and terrestrial and aquatic habitats of native flora and native fauna is maintained, (c) to minimise soil erosion and enhance the stability of the banks of watercourses where the banks have been degraded, the watercourses have been channelised, pipes have been laid and the like has occurred	
Matters to be included considered in submitting DA/SEE in the Alpine Resorts (as per "What to include with your DA – Department of Planning)	
1. Locality Plan	Attachment 1
2. Lease Survey Plan	NA
3. Site Analysis	NA
4. Shadow Analysis	NA
5. Plan and Elevations	NA
6. Notification Plans	NA
7. Landscape Concept Plans	NA
8. Stormwater Management Plans	As outlined in 1 (g), (h) and Trail Management Plan
9. Site Environmental Management Plan (SEMP)	Attachment 2 - Thredbo Mountain Bike Trail Management Plan
10. Geotechnical report/and or site classification	Use of existing – exempt under clause 3.1 of the DPE Geotechnical policy as it does not involve the erection of any buildings or carrying out of any works
11. Statement of Environmental Effects (consideration of below issues relevant to the proposal)	
Site history/suitability/present/previous uses	See above history of trail development and use
Operational Details	Refer Attachment 2 - Thredbo Mountain Bike Trail Management Plan
Building Classification	NA
Snow Deposition	NA
Engineering Details	NA
Social and economic impact	The on-going use of these trails as part of the overall Thredbo mountain bike trail network and adjoining TVT trail are considered to be of positive social and economic benefit to Thredbo and the region as it grows a reputation as a world class mountain bike destination attracting visitors to the region in the quitter non winter period.
Access and traffic	NA

Privacy views and overshadowing	NA
Air and Noise	Negligible impact – some dust raised through bike braking and minor noise as bikes move downhill
Soil, water and waste water management	<p>The development of both these trails has exposed and impacted soils along their entire route. KT has worked closely with NPWS through the bi-annual PoM monitoring program to address erosive impacts through a continuous improvement program including rock armouring, introduced gravels, bridging and measures to change rider behaviour.</p> <p>Thredbo’s resort wide water quality program through the Centre for Freshwater ecology demonstrates a largely stable water quality in accordance with AANZAS guidelines.</p> <p>The use of these trails does not direct impact on waste water management other than providing a summer base load that is beneficial to retaining STP biotic health in the low load season.</p>
Heritage	No impact
Aboriginal Cultural Heritage	An AHIMS search showed no known sites within the locality or immediate vicinity of either trail
Energy	NA
Waste	NA
Demolition	NA
12. Essential Services Location	NA
13. Colour and materials samples	NA
Other matters to be considered	
Will the proposal affect any threatened species?	Trails travers sensitive ecological communities – refer clause 3.6 Thredbo Mountain Bike Trail Management Plan
Is the proposal integrated development?	No
Conclusions	
	<p>Mountain biking has been a summer recreational activity in Thredbo since the late 1980’s following the establishment of the Cannonball downhill run leading to the network we have today. Mountain biking in Thredbo and the broader Snowy Mountains region is now recognised as a leading and growing recreational attraction and a strong contributor to the local summer tourist economy.</p> <p>Kosciuszko Thredbo have been at the forefront of mountain bike development in the region having embraced the IMBA guidelines and increased its summer mountain bike resourcing to ensure on-going and appropriate maintenance of the network.</p> <p>The Cannonball and Flow trails while not built to the IMBA guidelines have been subject to on-going continuous improvement works as a result of the KNP PoM monitoring program. These trails now sustain a high level of use with trail impacts managed so as to retain any erosive impacts within the trail drainage and stormwater structures. Potential environmental, aboriginal heritage and operational impacts of these trails are well known to KT and managed within acceptable threshold limits.</p> <p>The proposal to legitimise the on-going use of these trails through issuing of a Development Approval is considered to be of positive social and economic impact for Thredbo and the broader Snowy Mountains Regions. The environmental impacts will continue to be managed in line with the Environmental Management measures outlined above and in the Thredbo Mountain Bike Management Plan along with the entire network so as to ameliorate on-going impacts to an acceptable level.</p>