




# Mt Buller Master Plan Report

Volume Two  
October 2010







# Volume 2 Appendices

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**Planning Objectives**

A review of policy, statutory and planning documents relevant to Mt Buller demonstrated the commonality of approach in many of the documents that deal with the resort.

The exercise in collating, then reviewing these policies aimed at identifying common principles and policies appropriate to new development and growth at Mt Buller.

These policies were discussed and adjusted at the Workshop and edited to form a consolidated policy statement for the Master Plan. Both the unedited (with policy citations) and edited versions are included.

They are presented as record of the Workshop outputs and not as a final policies or planning requirements.



## Mount Buller Performance Standards

### Existing Policies - 12 July 2010

#### 1. Resort

- 1.1. To provide high quality experiences, facilitating safe access to Victoria's alpine environment for recreational use through both winter and non winter seasons.<sup>1</sup>
  - Four season use will be encouraged to maximise the return on public and private investment, regardless of each resort's vulnerability to the impact of climate change.
  - Investment in winter visitation will focus on improvements to the range and quality of the visitor experience.
  - The strategies employed to attract and maintain non winter visitation will vary for each resort to encourage unique character and experiences between resorts
  - Opportunities to increase yield in both the winter and non winter seasons will be explored to underpin long term sustainability
  - Strategies to capture four season visitation will capitalise on the resorts' alpine values, targeting alpine dependent recreational opportunities.
  - The resorts will continue to provide safe access to alpine experiences.
- 1.2. To enhance the visitor experience by providing attractive, ecologically sustainable mountain townships that have local character and a distinct sense of place in the landscape<sup>2</sup>
  - Improvements to energy efficiency will be highlighted in resort environmental management plans acknowledging the high demand for energy in the resorts and their vulnerability to climate change
  - Future resort development will acknowledge the ecologically sensitive alpine environment and focus on village consolidation within the existing urban areas of each resort to reinforce nodes, minimise sprawl, improve village design, facilitate access and circulation and make efficient use of infrastructure.
  - Development will be guided by strengthened village design guidelines to improve aesthetics aiming to reinforce the character of each resort.
  - Village form and individual developments will aim to enhance the resorts' sense of place. A central node for facilities and entertainment will operate in both the winter and non winter seasons.
  - Assessments of visual intrusion and impact on and of the overall village form will include the broader landscape impacts including those vistas enjoyed from land outside the resorts.
  - All resort development will emphasise the use of the resorts as a recreational destination.
  - Resorts will be recognised for the local government functions and utility services they provide and acknowledged through broader access to infrastructure grants.
- 1.3. The resorts will have individual characters. They will be attractive destinations to both winter and non winter visitors.
- 1.4. The resorts will have individual characters. They will be attractive destinations to both winter and non winter visitors.
- 1.5. Visitors will enjoy their arrival at a resort, appreciate each mountain or village's 'sense of place', unique identity, heritage and feeling of community.
- 1.6. Resorts will be well designed, blend in with the natural environment and have aesthetic appeal.<sup>3</sup>
- 1.7. To encourage the use and development of the Resort as a year round destination capitalising on the natural beauty, environmental qualities and infrastructure of the Resort.
- 1.8. To achieve the optimum use and development of the ski-fields by ensuring that sufficient ski-field terrain, cross country trails, snow play areas and associated infrastructure are available to meet the current and future needs of the Resort.
- 1.9. To manage the ski-fields year round to optimise usage and minimise environmental impacts.
- 1.10. To provide for the development of a range of tourism and recreation opportunities and facilities that are compatible with the alpine environment of the Resort.
- 1.11. To ensure that development in the ski-fields is appropriate to its intended use and does not adversely impact upon the environmental and landscape values of the Resort.<sup>4</sup>



1.12. Benefits of trails include:<sup>5</sup>

- provision of enjoyable recreational activities
- safe settings for pursuing various individual or group activities
- developing and fostering partnerships between landowners, local government, community and user groups
- provision of a diversity of recreation and tourism opportunities
- linkages for people and places, connecting communities through recreation and tourism
- choices for people to gain access to an active lifestyle at low cost
- opportunities for social interaction.

1.13. Trails should optimise users' experience and create recreational opportunities that will satisfy community needs including exercise, health and wellbeing.<sup>6</sup>

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<sup>1</sup> Alpine Resorts Strategy 2020, 2004. Strategic direction, 5.2 Resort use and visitation, p16.

<sup>2</sup> Alpine Resorts Strategy 2020, 2004. Strategic direction, 5.3 Development of the resorts, p16.

<sup>3</sup> Alpine Resorts Planning Scheme Ordinance, LPP, 21.05-4. Mt Buller strategic statement.

<sup>4</sup> Alpine Resorts Planning Scheme Ordinance, LPP, 21.05-4. Mt Buller strategic statement

<sup>5</sup> Victorian Trails Strategy, 2005. Benefits of trails and trail use, p6.

<sup>6</sup> Victorian Trails Strategy, 2005. Benefits of trails and trail use, p6.

## 2. Economic

- 2.1. Lease proposals shall provide clear benefits to the community from a social and economic perspective while ensuring that the public land values are not diminished. The public benefit, economic and recreational benefits of the resort need to be maintained and developed while protecting the sensitive alpine environments in which the resorts operate<sup>7</sup>
- 2.2. Demonstrate that the proposed arrangement has clear public and economic benefits, is on a commercial basis, meets probity tests, avoids conflicts of interest and includes an opportunity for public comment on the proposal<sup>8</sup>
- 2.3. Be vibrant economic entities making a strong contribution to Victoria and their local regions
  - Long term viability necessitates a 52 week return on investment from the substantial public and private investment in each resort.
  - Revitalisation strategies will be employed by each resort to identify opportunities to ensure long term viability.
  - Cooperative marketing strategies will be employed across the resorts to maximise market awareness of alpine experience and product.
  - The relationship between the resorts and the sub alpine regions will be reinforced in recognition and promotion of their synergies.
  - Four season use will maximise employment opportunities and the contribution to local and regional economies and generate the necessary revenue to ensure long term viability.
  - Delivery of the long term viability of the resorts will rely on ongoing cooperation and support between the resorts, agencies and the private sector.<sup>9</sup>
- 2.4. Sites within the resorts will be leased with appropriate terms and conditions to attract ongoing investment. Leasing processes will be transparent having regard to probity, the broader public interest and competition requirements
- 2.5. Maintain cooperative and mutually beneficial relationships between Government and the Boards.
- 2.6. Protect the public interest and provide an attractive environment for long term investment in each of the resorts whilst ensuring protection of valuable assets in the Crown estate.
- 2.7. Ensure the Crown's interests are represented.<sup>10</sup>
- 2.8. Planning is to contribute to the economic well-being of communities and the State as a whole by supporting and fostering economic growth and development by providing land, facilitating decisions, and resolving land use conflicts, so that each district may build on its strengths and achieve its economic potential.<sup>11</sup>
- 2.9. To encourage the concentration of major retail, commercial, administrative, entertainment and cultural developments into activity centres (including strip shopping centres) which provide a variety of land uses and are highly accessible to the community.<sup>12</sup>
- 2.10. To encourage developments which meet community's needs for retail, entertainment, office and other commercial services and provide net community benefit in relation to accessibility, efficient infrastructure use and the aggregation and sustainability of commercial facilities.<sup>13</sup>
- 2.11. To encourage tourism development to maximise the employment and long-term economic, social and cultural benefits of developing the State as a competitive domestic and international tourist destination.<sup>14</sup>
- 2.12. To provide a range of retail, commercial, tourist, entertainment and service activities in appropriate locations in the Village catering for the needs of the visitors and permanent residents.
- 2.13. To enhance the function, visual appearance and pedestrian amenity within the Village Square.
- 2.14. To promote development in the Village Square that creates a sense of arrival and enhances its role as the primary focus of visitor activity in the Resort.
- 2.15. To protect and enhance the visual and physical linkages between the Village Square and Bourke Street ski run.
- 2.16. To ensure that the scale, intensity, bulk and appearance of any development makes a positive contribution to the identifiable individual resort character of the Village and is compatible with existing development.
- 2.17. To ensure that commercial development, if located in residential areas, does not unreasonably detract from the amenity of the neighbouring accommodation.<sup>15</sup>

2.18. Benefits of trails include:<sup>16</sup>

- the creation of employment opportunities in regional and rural Victoria through the provision of facilities and services such as food, accommodation, transport, equipment, entertainment and guided tourism products
- flow-on economic benefits to the health, tourism, retail and transport sectors
- boosting property values near trails
- creating business partnership opportunities through packaging of services and cooperative relationships
- reducing community health costs through active community participation and time spent outdoors. Examples of economic benefits of trails:
- The Murray to Mountains Rail Trail is expected to contribute \$0.5 million per annum to the local community, with a multiplying effect of up to \$1.9 million per annum (Geddes 1999)
- VTCC Stepping Out brochure evaluation (2000) indicated Victorian trip spending of between \$200 and \$1200, with an average of \$400-\$500 per trip
- Mundaring (WA) Trail Users Survey (2001) indicates that visitors from outside the shire spend an average \$11.43 per visit in the shire and \$12.28 outside the shire, which amounts to \$10 million per annum to the local economy
- Rail trails offer enormous economic, social and environmental benefits to the wider community as well as to the visitors (and other users) themselves.<sup>17</sup>

2.19. providing for longer-term leases of up to 65 years that match tenure to return on investment, excluding national parks

2.20. investigating planning mechanisms to facilitate nature-based tourism infrastructure development on private land

2.21. increasing maximum licence terms to 10 years for tour operators on public land

2.22. creating a sustainable model for private investment into public land infrastructure

2.23. developing investment guidelines for nature-based tourism

2.24. investigating new funding models for Parks Victoria and the Department of Sustainability and Environment

2.25. establishing a nature-based tourism industry advisory group.<sup>18</sup>

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<sup>7</sup> Alpine Resorts Leasing Policy, 2002. p.6

<sup>8</sup> Alpine Resorts Leasing Policy, 2002. p.6

<sup>9</sup> Alpine Resorts Strategy 2020, 2004. Strategic direction, 5.2 Stewardship of public land, p17

<sup>10</sup> Alpine Resorts Strategy 2020, 2004. Strategic direction, 6.6.5 Resort Cooperation, p35

<sup>11</sup> Alpine Resorts Planning Scheme Ordinance, LPP, 11.03-5. Economic Well Being

<sup>12</sup> Alpine Resorts Planning Scheme Ordinance, LPP, 17.01. Activity Centres

<sup>13</sup> Alpine Resorts Planning Scheme Ordinance, LPP, 17.02. Business

<sup>14</sup> Alpine Resorts Planning Scheme Ordinance, LPP, 17.04. Tourism

<sup>15</sup> Alpine Resorts Planning Scheme Ordinance, LPP, 21.05-4. Commercial and Service Activities

<sup>16</sup> Victorian Trails Strategy, 2005. Benefits of trails and trail use, p8

<sup>17</sup> Fact Sheet: An Economic Analysis of Rail Trails in Victoria, Australia. Dr. Sue Beeton, Senior Lecturer in Tourism, LaTrobe University, s.beeton@latrobe.edu.au)

<sup>18</sup> Victorias Nature Base Tourism Strategy, 2008-2012. Sec1:7, p 9, Strategic Directions



### 3. Natural Environment

- 3.1. To maintain, preserve and enhance the natural environmental features of the Resort.
- 3.2. To ensure the present diversity of species and ecological communities and their viability is maintained or improved within the Resort and within the adjoining Alpine National Park.
- 3.3. To maintain, preserve and enhance the habitat of threatened species and communities within the Resort.
- 3.4. To retain native vegetation, including trees, shrubs and ground cover, and to encourage revegetation of disturbed areas with indigenous species applying the principles of net gain.
- 3.5. To ensure development minimises environmental impact through sensitive siting and implementation of sound construction and management techniques.
- 3.6. To protect the quality and integrity of natural water systems and aquatic ecosystems.
- 3.7. To monitor environmental impacts associated with resort development and encourage research into best practice environmental management techniques.<sup>19</sup>
- 3.8. To maintain and enhance the aesthetic environment and landscape values of the Resorts.
- 3.9. To ensure that existing and future development and activities do not compromise the visual amenity of the surrounding Alpine National Park<sup>20</sup>
- 3.10. The active improvement of the quality of existing native vegetation
- 3.11. The avoidance or minimisation of further permanent losses through clearing
- 3.12. To maintain, preserve and enhance the natural environmental features of the Resort.
- 3.13. To ensure the present diversity of species and ecological communities and their viability is maintained or improved within the Resort and within the adjoining Alpine National Park.
- 3.14. To maintain, preserve and enhance the habitat of threatened species and communities within the Resort.
- 3.15. To retain native vegetation, including trees, shrubs and ground cover, and to encourage revegetation of disturbed areas with indigenous species applying the principles of net gain.
- 3.16. To ensure development minimises environmental impact through sensitive siting and implementation of sound construction and management techniques.
- 3.17. To protect the quality and integrity of natural water systems and aquatic ecosystems.
- 3.18. To monitor environmental impacts associated with resort development and encourage research into best practice environmental management techniques.<sup>21</sup>
- 3.19. To maintain and enhance the aesthetic environment and landscape values of the Resorts.
- 3.20. To ensure that existing and future development and activities do not compromise the visual amenity of the surrounding Alpine National Park<sup>22</sup>
- 3.21. The active improvement of the quality of existing native vegetation
- 3.22. The avoidance or minimisation of further permanent losses through clearing
- 3.23. To remain committed to a snow tourism industry and proactively plan for the impacts of climate change<sup>23</sup>
  - To ensure the large, high altitude resorts of Falls Creek, Mount Buller, Mount Hotham and Mount Stirling will remain viable for snow based recreation until at least the year 2020
  - Adaptive strategies will be employed by resorts to manage impacts if they become more significant over time.<sup>24</sup>
  - Mount Hotham, Falls Creek and Mount Buller will make further investment in snow making technology and infrastructure to enhance natural snow cover on ski-fields
- 3.24. The future and management and development of the resorts will be undertaken within an ecologically sustainable framework<sup>25</sup>
  - Giving further attention to water management as investment in snow making increases
  - Post alpine fire rehabilitation and risk management investment in land stability are the focus of major environmental programs in the resorts
  - The rare and fragile communities of alpine flora and fauna living in and adjacent to the resorts will be effectively managed and protected from the impact of resort use and development.
  - Pest plant and animal species will be proactively controlled and where possible eliminated, to minimise their impact on native species.
  - Soil disturbance and earthworks will be managed to maintain slope stability and minimise erosion.
  - The quality of waste water discharge and drainage from the resorts will be improved to minimise downstream impacts.

- Vegetation and revegetation programs, including habitat restoration, will be prioritised as an essential component of resort management.
- 3.25. Planning is to contribute to the protection of air, land and water quality and the conservation of natural ecosystems, resources, energy and cultural heritage. In particular, planning should:<sup>26</sup>
- Adopt a best practice environmental management and risk management approach which aims to avoid or minimise environmental degradation and hazards.
  - Prevent environmental problems created by siting incompatible land uses close together.
  - Help to protect the health of ecological systems and the biodiversity they support (including ecosystems, habitats, species and genetic diversity).
  - Protect areas and sites with significant historic, architectural, aesthetic, scientific and cultural values.
- 3.26. To assist the minimisation of risk to life, property, the natural environment and community infrastructure from wildfire.<sup>27</sup>
- 3.27. To assist the protection and conservation of biodiversity, including native vegetation retention and provision of habitats for native plants and animals and control of pest plants and animals.<sup>28</sup>
- 3.28. To protect and manage significant environmental features and ecosystems and facilitate sustainable use and development of Alpine Resorts for year round use and activity, and to provide a framework for the planning of the alpine areas.<sup>29</sup>
- 3.29. To maintain, preserve and enhance the natural environmental features of the Resort.
- 3.30. To ensure the present diversity of species and ecological communities and their viability is maintained or improved within the Resort and within the adjoining Alpine National Park.
- 3.31. To maintain, preserve and enhance the habitat of threatened species and communities within the Resort. To retain native vegetation, including trees, shrubs and ground cover, and to encourage revegetation of disturbed areas with indigenous species applying the principles of net gain.
- 3.32. To ensure development minimises environmental impact through sensitive siting and implementation of sound construction and management techniques.
- 3.33. To protect the quality and integrity of natural water systems and aquatic ecosystems.
- 3.34. To monitor environmental impacts associated with resort development and encourage research into best practice environmental management techniques.
- 3.35. To ensure development is respectful of areas of high scenic quality and visual sensitivity and complements the natural features of the Resort.<sup>30</sup>
- 3.36. To manage all ARMB activities including development and maintenance works to conserve and enhance catchment values and water resources of the Resorts.
- 3.37. To enhance the ecological integrity of natural waterways within the Resorts and adjacent land.
- 3.38. To continue to provide high quality potable water for current and projected domestic use requirements within the Resorts.
- 3.39. To treat wastewater to a very high standard and to utilise it for snowmaking.<sup>31</sup>
- 3.40. To protect and preserve all high quality indigenous flora within the Resorts and enhance all other indigenous flora.
- 3.41. To minimise impacts on indigenous flora within the Resorts.<sup>32</sup>
- 3.42. To ensure that management programs conserve and where possible, enhance the environment for rare or threatened plants and plant communities.<sup>33</sup>
- 3.43. To maintain healthy and viable populations of native fauna within the Resorts.
- 3.44. To ensure that management programs conserve and enhance the environment for indigenous fauna within the Resorts.<sup>34</sup>
- 3.45. To ensure that management programs conserve and where possible, enhance habitat for threatened fauna.
- 3.46. To implement the Recovery Plan for the Mountain Pygmy-possum.<sup>35</sup>
- 3.47. To manage fire in an ecologically sustainable manner, whilst ensuring the safety of human lives and the Resorts infrastructure.
- 3.48. To manage fire within the Resorts in an ecologically sustainable manner that ensures the diversity and abundance of indigenous flora and fauna and protects water quality and quantity.<sup>36</sup>
- 3.49. Benefits of trails include:<sup>37</sup>
- experiences that offer opportunities to understand the natural and cultural environment
  - routes that are 'green' commuter transport opportunities in a variety of Victorian landscapes and settings

- reducing fragmentation impacts on the natural environment through appropriate trail design, landscaping and habitat protection or enhancement
- managing appropriate access to sensitive areas
- reusing and maintaining existing heritage infrastructures with rail trails.

3.50. Natural and cultural heritage assets must be protected through environmentally sound conservation planning and practices.<sup>38</sup>

3.51. Biodiversity<sup>39</sup>

- The ecological processes and the biodiversity dependent on terrestrial, freshwater and marine environments are maintained and, where necessary, restored.
- The present diversity of species and ecological communities and their viability is maintained and improved across each bioregion.
- There is no further preventable decline in the viability of any rare species or of any rare ecological community.
- There is an increase of the viability of threatened species and in the extent and quality of threatened ecological communities.

3.52. Land and Water Quality<sup>40</sup>

- Improvements in land and water quality due to the restoration and protection of ecological processes within catchments.
- Reduction in the impact of secondary salinity on the State's land and water resources by increasing vegetation cover and reducing groundwater recharge.
- Improvements in water quality due to the interception of nutrients in surface runoff.

3.53. Climate Change<sup>41</sup>

- Enhanced amelioration of the impact of climate change by significantly increasing Victoria's carbon sinks through revegetation and regeneration.
- Increased carbon sinks and provision of a range of other benefits through the development and expansion of private forestry in a way that complements native vegetation retention.

<sup>19</sup> Alpine Resorts Planning Scheme, 2010. 21.05-4

<sup>20</sup> Planning and Environment Act, 1987, 6.3 p.55

<sup>21</sup> Alpine Resorts Planning Scheme, 2010. 21.05-4

<sup>22</sup> Planning and Environment Act, 1987, 6.3 p.55

<sup>23</sup> Alpine Resort Strategy 2020, 2003. P.4

<sup>24</sup> Alpine Resort Strategy 2020, 2003. P.10

<sup>25</sup> Alpine Resort Strategy 2020, 2003. P.17

<sup>26</sup> Alpine Resorts planning Scheme, 2010. 11.03-2 Environment

<sup>27</sup> Alpine Resorts planning Scheme, 2010. 15.07-1 Protection from Wildfire

<sup>28</sup> Alpine Resorts planning Scheme, 2010. 15.09-1 Conservation of native flora and fauna

<sup>29</sup> Alpine Resorts planning Scheme, 2010. 15.13-1 Alpine Areas

<sup>30</sup> Alpine Resorts planning Scheme, 2010. 21.05-4 Natural Environment

<sup>31</sup> Environmental Management Plan, 2007. 4.3 Rivers and Catchments

<sup>32</sup> Environmental Management Plan, 2007. 4.4.1 Indigenous Flora

<sup>33</sup> Environmental Management Plan, 2007. 4.4.2 Rare or threatened plants and plant communities

<sup>34</sup> Environmental Management Plan, 2007. 4.5.1 Indigenous fauna

<sup>35</sup> Environmental Management Plan, 2007. 4.5.2 Rare or threatened fauna

<sup>36</sup> Environmental Management Plan, 2007. 4.6 Fire management

<sup>37</sup> Victoria's Trails Strategy, 2005. Benefits of trails and trail use, p6.

<sup>38</sup> Victoria's Trails Strategy, 2005. The Strategy, p20.

<sup>39</sup> Victoria's native Vegetation Management, 2007. Victoria's native vegetation management goals, p15.

<sup>40</sup> Victoria's native Vegetation Management, 2007. Victoria's native vegetation management goals, p16.

<sup>41</sup> Victoria's native Vegetation Management, 2007. Victoria's native vegetation management goals, p16.



#### 4. Built Environment

- 4.1 To assist creation of a diverse and integrated network of public open space commensurate with the needs of urban communities and rural areas.<sup>42</sup>
- 4.2 To assist the conservation of places that have natural, environmental, aesthetic, historic, cultural, scientific or social significance or other special value important for scientific and research purposes, as a means of understanding our past, as well as maintaining and enhancing Victoria's image and making a contribution to the economic and cultural growth of the State.<sup>43</sup>
- 4.3 To encourage land use and development that is consistent with the efficient use of energy and the minimisation of greenhouse gas emissions.<sup>44</sup>
- 4.4 To promote the provision of renewable energy in a manner that ensures appropriate siting and design considerations are met.<sup>45</sup>
- 4.5 To assist the integration of health facilities with local and regional communities.<sup>46</sup>
- 4.6 To ensure the design of subdivisions achieves attractive, livable and sustainable neighbourhoods.
- 4.7 To control the subdivision and consolidation of land and the removal and variation of easements and restrictions through planning schemes, within the framework of the Planning and Environment Act 1987 and the Subdivision Act 1988.<sup>47</sup>
- 4.8 To achieve high quality urban design and architecture that:<sup>48</sup>
  - Reflects the particular characteristics, aspirations and cultural identity of the community.
  - Enhances livability, diversity, amenity and safety of the public realm.
  - Promotes attractiveness of towns and cities within broader strategic contexts.
- 4.9 To protect and enhance identified places, sites and objects of natural conservation and landscape significance
- 4.10 To protect and enhance identified places, sites and objects of European cultural, historical and architectural significance.
- 4.11 To protect and enhance identified significant Aboriginal places, sites and objects.<sup>49</sup>
- 4.12 To retain the integrity of the existing Village and consolidate future development within the Village.
- 4.13 To develop the Village as an attractive living place for the permanent and visitor population.
- 4.14 To develop an identifiable individual resort character for the Resort and enhance it through high quality design standards in public and private development throughout the Resort.
- 4.15 To identify commercial and residential areas within the Village which recognise the special requirements of a mixed destination and day visitor resort.
- 4.16 To provide a Village Square for the Resort that functions as a commercial and community heart for the Resort.
- 4.17 To preserve the interface between development in the Village and Bourke Street ski run.
- 4.18 To ensure that new development and redevelopment achieves high quality design standards and responds to the landscape, amenity and environmental values of the Resort.
- 4.19 To provide clear direction with regard to design elements for future development within the Resort.
- 4.20 To promote environmentally sustainable development within the Resort.
- 4.21 To ensure protection of significant vegetation on development sites.
- 4.22 To protect the amenity of existing development within the Village.
- 4.23 To encourage energy efficient building design throughout the Village.
- 4.24 To ensure new development enhances pedestrian and skier safety and access.
- 4.25 To maintain and enhance existing views from the public vantage points in the Resort.<sup>50</sup>
- 4.26 To encourage a variety of accommodation types and styles throughout the Village to meet the needs of the permanent and visitor population.
- 4.27 To facilitate the establishment of educational, religious, community and a limited range of other non-residential uses to serve the needs of the community.
- 4.28 To ensure that development makes a positive contribution to the identifiable individual resort character being created for the Village all year round.
- 4.29 To ensure that development protects the amenity of existing residential development on adjoining sites.
- 4.30 To ensure future development achieves a high level of finish and permanence to enhance the amenity of the Village.<sup>51</sup>
- 4.31 To ensure that the intensity of any development does not detrimentally affect the objectives of the State Planning Policy Framework or the other policies within the Local Planning Policy Framework.
- 4.32 To ensure that new development is assessed with proper regard to urban design principles and built form requirements.
- 4.33 To ensure the intensity of new development does not detrimentally affect the capacity of Alpine Resort infrastructure.
- 4.34 To guide the continuing development of the Alpine Resort villages in a manner that will be consistent with its function and form.
- 4.35 To provide a degree of certainty and equity in alpine planning and development in relation to the development potential of land.

- 4.36 To ensure that new development enhances the physical and social infrastructure of the Alpine Resort villages.<sup>52</sup>
- 4.37 To ensure that the intensity of any development does not detrimentally effect the objectives of the State Planning Policy Framework or the other policies within the Local Planning Policy Framework.
- 4.38 To ensure that new development is assessed with proper regard to urban design principles and built form requirements.
- 4.39 To ensure the intensity of new development does not detrimentally affect the capacity of Alpine Resort infrastructure.
- 4.40 To guide the continuing development of the Alpine Resort villages in a manner that will be consistent with its function and form.
- 4.41 To provide a degree of certainty and equity in alpine planning and development in relation to the development potential of land.
- 4.42 To ensure that new development enhances the physical and social infrastructure of the Alpine Resort villages.<sup>53</sup>
- 4.43 To protect sunlight access to key public places and open space areas.
- 4.44 To ensure that the height of new buildings reinforces the built form character of unique areas.
- 4.45 To maintain the visual dominance of prominent landmarks.
- 4.46 To maintain the natural line of the snow gums.<sup>54</sup>
- 4.47 The development of a multi-dimensional vision and strategy for each Alpine Resort will provide a vehicle for:<sup>55</sup>
- The articulation of each resort's strategic importance.
  - The rationalisation of the needs and expectations of the local community and those of the broader community.
  - The identification and coordination of disparate opportunities within the community.
  - The efficient distribution of services and resources.
  - Establishing sustainable levels of development.
- 4.48 To identify and protect all culturally significant Aboriginal and historical sites within the Resorts.
- 4.49 To improve the understanding of Aboriginal and historical use of the Resorts through increased site assessment.<sup>56</sup>
- 4.50 To appropriately and sensitively dispose of all putrescibles waste generated.
- 4.51 To actively promote and undertake a recycling program to minimise wastes sent to landfill.<sup>57</sup>
- 4.52 To improve the Resorts energy efficiency and reduce non-renewable energy consumption.
- 4.53 To minimise negative impacts on the Resorts air quality and reduce greenhouse gas emissions.<sup>58</sup>
- 4.54 To maintain and enhance the aesthetic environment and landscape values of the Resorts.
- 4.55 To ensure that existing and future development and activities do not compromise the visual amenity of the surrounding Alpine National Park.<sup>59</sup>
- 4.56 To minimise negative impacts on the Resorts by concentrated visitor numbers at a number of sites in intensive time periods.
- 4.57 To manage and improve sites considered under pressure from visitor numbers.<sup>60</sup>

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<sup>42</sup> Alpine Resorts planning Scheme, 2010. SPP Framework. 15.10-1, Open Space

<sup>43</sup> Alpine Resorts planning Scheme, 2010. SPP Framework. 15.11-1, Heritage

<sup>44</sup> Alpine Resorts planning Scheme, 2010. SPP Framework. 15.12-1, Energy Efficiency

<sup>45</sup> Alpine Resorts planning Scheme, 2010. SPP Framework. 15.14-1, Renewable Energy

<sup>46</sup> Alpine Resorts planning Scheme, 2010. SPP Framework. 18.06-1, Health Facilities

<sup>47</sup> Alpine Resorts planning Scheme, 2010. SPP Framework. 19.01-1, Subdivision

<sup>48</sup> Alpine Resorts planning Scheme, 2010. SPP Framework. 19.03-1, Design and Built Form

<sup>49</sup> Alpine Resorts planning Scheme, 2010. Local Planning Policies. 21.05-5, Heritage

<sup>50</sup> Alpine Resorts planning Scheme, 2010. Local Planning Policies. 21.05-5, Settlement

<sup>51</sup> Alpine Resorts planning Scheme, 2010. Local Planning Policies. 21.05-5, Residential Development

<sup>52</sup> Alpine Resorts planning Scheme, 2010. Local Planning Policies. 22.01-1, Plot Ratio and Site Coverage

<sup>53</sup> Alpine Resorts planning Scheme, 2010. Local Planning Policies. 22.01-1, Setback Guidelines

<sup>54</sup> Alpine Resorts planning Scheme, 2010. Local Planning Policies. 22.01-1, Height Guidelines

<sup>55</sup> Alpine Resorts planning Scheme, 2010. Local Planning Policies. 22.01-1, Urban Design

<sup>56</sup> Environmental Management Plan, 2007. 5.0 Cultural Heritage

<sup>57</sup> Environmental Management Plan, 2007. 6.1 Waste Management

<sup>58</sup> Environmental Management Plan, 2007. 6.2 Energy Efficiency and Air Quality

<sup>59</sup> Environmental Management Plan, 2007. 6.3 Visual Amenity

<sup>60</sup> Environmental Management Plan, 2007. 6.5 Visitor Capacity

## 5. Access & Movement

- 5.1. To ensure access is provided to developments in accordance with forecast demand taking advantage of all available modes of transport and to minimise impact on existing transport networks and the amenity of surrounding areas.<sup>61</sup>
- 5.2. To develop a transport system that ensures a high level of accessibility to the Resort.
- 5.3. To provide an efficient and safe public transport system during the declared ski season to meet the needs of visitors.
- 5.4. To ensure safe and efficient movement of vehicles, pedestrians and skiers throughout the Resort, particularly within the Village.
- 5.5. To improve non-vehicular movement within the Village Square and along Athletes Walk and Black Forest Walk.
- 5.6. To provide public and private car parking to meet the needs of existing and planned visitation levels to the Resort.
- 5.7. To provide vehicular, pedestrian and skier links to the Mt Stirling Alpine Resort and the surrounding Alpine National Park to optimise year round recreational experiences.
- 5.8. To provide appropriate access and facilities for emergency services.<sup>62</sup>
- 5.9. To preserve the individual character of each Alpine Resort.
- 5.10. To provide adequate car parking for each Resort.
- 5.11. To achieve balance between the demands of vehicle transport with pedestrian and skier movement.<sup>63</sup>
- 5.12. To ensure that the provision of public and private car parking meets the current and future needs of the Resort.
- 5.13. To ensure that the pedestrian feel and environmental qualities of the Village is maintained and enhanced.
- 5.14. To ensure safe and efficient movements of vehicles and pedestrians throughout the Resort.<sup>64</sup>

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<sup>61</sup> Alpine Resorts planning Scheme, 2010. SPP Framework. 18.02-1, Car Parking and Public Transport access to development

<sup>62</sup> Alpine Resorts planning Scheme, 2010. Local Planning Policies. 21.05-5, Transport and Access

<sup>63</sup> Alpine Resorts planning Scheme, 2010. Local Planning Policies. 22.01-1, Car Parking

<sup>64</sup> Alpine Resorts planning Scheme, 2010. Local Planning Policies. 22.05-1, Mt Buller Local Planning Policy – Car parking.



## Mount Buller Performance Standards

### Workshop Outcomes

#### 1. Resort

- 1.1 To provide high quality experiences, facilitating safe access to Victoria's alpine environment for recreational use through both winter and non winter seasons:
  - Four season use will be encouraged to maximise the return on public and private investment, regardless of each resort's vulnerability to the impact of climate change.
  - Investment in winter visitation will focus on improvements to the range and quality of the visitor experience.
  - The strategies employed to attract and maintain non winter visitation will vary for each resort
  - To encourage unique character and experiences between resorts
  - Opportunities to increase yield in both the winter and non winter seasons will be explored to underpin long term sustainability
  - Strategies to capture four season visitation will capitalise on the resorts' alpine values, targeting alpine dependent recreational opportunities.
  - The resorts will continue to provide safe access to alpine experiences.
- 1.2 To enhance the visitor experience by providing attractive, ecologically sustainable mountain townships that have local character and a distinct sense of place in the landscape:
  - Improvements to energy efficiency will be highlighted in resort environmental management plans acknowledging the high demand for energy in the resorts and their vulnerability to climate change
  - Future resort development will acknowledge the ecologically sensitive alpine environment and focus on village consolidation within the existing urban areas of each resort to reinforce nodes, minimise sprawl, improve village design, facilitate access and circulation and make efficient use of infrastructure.
  - Development will be guided by strengthened village design guidelines to improve aesthetics aiming to reinforce the character of each resort.
  - Village form and individual developments will aim to enhance the resorts' sense of place. A central node for facilities and entertainment will operate in both the winter and non winter seasons.
  - Assessments of visual intrusion and impact on and of the overall village form will include the broader landscape impacts including those vistas enjoyed from land outside the resorts.
  - All resort development will emphasise the use of the resorts as a recreational destination.
  - Resorts will be recognised for the local government functions and utility services they provide and acknowledged through broader access to infrastructure grants.
- 1.3 The resorts will have individual characters. They will be attractive destinations to both winter and non-winter visitors.
- 1.4 Visitors will enjoy their arrival at a resort, appreciate each mountain or village's 'sense of place', unique identity, heritage and feeling of community.
- 1.1 Resorts will be well designed, blend in with the natural environment and have aesthetic appeal.
- 1.5 To achieve the optimum use and development of the ski-fields by ensuring that sufficient ski-field terrain, cross country trails, snow play areas and associated infrastructure are available to meet the current and future needs of the Resort.
- 1.6 To manage the ski-fields year round to optimise usage and minimise environmental impacts.
- 1.7 To provide for the development of a range of tourism and recreation opportunities and facilities that are compatible with the alpine environment of the Resort.
- 1.8 To ensure that development in the ski-fields is appropriate to its intended use and does not adversely impact upon the environmental and landscape values of the Resort.
- 1.9 Benefits of trails include:
  - provision of enjoyable recreational activities
  - safe settings for pursuing various individual or group activities
  - developing and fostering partnerships between landowners, local government, community and user groups
  - provision of a diversity of recreation and tourism opportunities
  - linkages for people and places, connecting communities through recreation and tourism choices for people to gain access to an active lifestyle at low cost
  - opportunities for social interaction.
- 1.2 Trails should optimise users' experience and create recreational opportunities that will satisfy community needs including exercise, health and wellbeing.

## 2. Economic

- 2.1. Lease proposals shall provide clear benefits to the community from a social and economic perspective while ensuring that the public land values are not diminished. The public benefit, economic and recreational benefits of the resort need to be maintained and developed while protecting the sensitive alpine environments in which the resorts operate
- 2.2. Demonstrate that the proposed arrangement has clear public and economic benefits meets probity tests, avoids conflicts of interest and includes an opportunity for public comment on the proposal
- 2.3. Be vibrant economic entities making a strong contribution to Victoria and their local regions
  - Long term viability return on investment from the substantial public and private investment in each resort.
  - Revitalisation strategies will be employed by each resort to identify opportunities to ensure long term viability.
  - Cooperative marketing strategies will be employed across the resorts to maximise market awareness of alpine experience and product.
  - The relationship between the resorts and the sub alpine regions will be reinforced in recognition and promotion of their synergies.
  - Four season use will maximise employment opportunities and the contribution to local and regional economies and generate the necessary revenue to ensure long term viability.
  - Delivery of the long term viability of the resorts will rely on ongoing cooperation and support between the resorts, agencies and the private sector.
- 2.4. Sites within the resorts will be leased with appropriate terms and conditions to attract ongoing investment. Leasing processes will be transparent having regard to probity, the broader public interest and competition requirements
- 2.5. Maintain cooperative and mutually beneficial relationships between Government and the Boards.
- 2.6. Protect the public interest and provide an attractive environment for long term investment in each of the resorts whilst ensuring protection of valuable assets in the Crown estate.
- 2.7. Ensure the Crown's interests are represented.
- 2.8. Planning is to contribute to the economic well-being of communities and the State as a whole by supporting and fostering economic growth and development by providing land, facilitating decisions, and resolving land use conflicts, so that each district may build on its strengths and achieve its economic potential.
- 2.9. To encourage developments which meet community's needs for retail, entertainment, office and other commercial services and provide net community benefit in relation to accessibility, efficient infrastructure use and the aggregation and sustainability of commercial facilities.
- 2.10. To encourage tourism development to maximise the employment and long-term economic, social and cultural benefits of developing the State as a competitive domestic and international tourist destination.
- 2.11. To provide a range of retail, commercial, tourist, entertainment and service activities in appropriate locations in the Village catering for the needs of the visitors and permanent residents.
- 2.12. To enhance the function, visual appearance and pedestrian amenity within the Village Square.
- 2.13. To promote development in the Village Square that creates a sense of arrival and enhances its role as the primary focus of visitor activity in the Resort.
- 2.14. To protect and enhance the visual and physical linkages between the Village Square and Bourke Street ski run and the Mountain.
- 2.15. To ensure that the scale, intensity, bulk and appearance of any development makes a positive contribution to the identifiable individual resort character of the Village and is compatible with existing development.
- 2.16. To ensure that commercial development, if located in residential areas, does not unreasonably detract from the amenity of the neighbouring accommodation.
- 2.17. Providing for longer-term leases of up to 65 years that match tenure to return on investment, excluding national parks
- 2.18. Investigating planning mechanisms to facilitate nature-based tourism infrastructure development on private land
- 2.19. Increasing maximum licence terms to 10 years for tour operators on public land
- 2.20. Creating a sustainable model for private investment into public land infrastructure
- 2.21. Developing investment guidelines for nature-based tourism
- 2.22. Establishing a nature-based tourism industry advisory group.

### 3. Natural Environment

#### Visual Amenity

- 3.1 To maintain and enhance the aesthetic environment and landscape values of the Resorts.
- 3.2 To ensure that existing and future development and activities do not compromise the visual amenity of the surrounding Alpine National Park
- 3.3 To maintain and enhance the aesthetic environment and landscape values of the Resorts.
- 3.4 To ensure development is respectful of areas of high scenic quality and visual sensitivity and complements the natural features of the Resort.

#### Development Impact

- 3.5 To monitor environmental impacts associated with resort development and encourage research into best practice environmental management techniques.
- 3.6 To ensure development minimises environmental impact through sensitive siting and implementation of sound construction and management techniques.
- 3.7 The avoidance or minimisation of further permanent losses through clearing
- 3.8 To remain committed to a snow tourism industry and proactively plan for the impacts of climate change
  - To ensure the large, high altitude resorts of Falls Creek, Mount Buller, Mount Hotham and Mount Stirling will remain viable for snow based recreation until at least the year 2020
  - Adaptive strategies will be employed by resorts to manage impacts if they become more significant over time.
  - Mount Hotham, Falls Creek and Mount Buller will make further investment in snow making technology and infrastructure to enhance natural snow cover on ski-fields
- 3.9 The future management and development of the resorts will be undertaken within an ecologically sustainable framework.
  - Giving further attention to water management as investment in snow making increases
  - Post alpine fire rehabilitation and risk management investment in land stability are the focus of major environmental programs in the resorts
  - The rare and fragile communities of alpine flora and fauna living in and adjacent to the resorts will be effectively managed and protected from the impact of resort use and development.
  - Pest plant and animal species will be proactively controlled and where possible eliminated, to minimise their impact on native species.
  - Soil disturbance and earthworks will be managed to maintain slope stability and minimise erosion.
  - The quality of waste water discharge and drainage from the resorts will be improved to minimise downstream impacts.
  - Vegetation and revegetation programs, including habitat restoration, will be prioritized as an essential component of resort management.
- 3.10 Planning is to contribute to the protection of air, land and water quality and the conservation of natural ecosystems, resources, energy and cultural heritage. In particular, planning should:
  - Adopt a best practice environmental management and risk management approach which aims to avoid or minimise environmental degradation and hazards.
  - Prevent environmental problems created by siting incompatible land uses close together.
  - Help to protect the health of ecological systems and the biodiversity they support (including ecosystems, habitats, species and genetic diversity).
  - Protect areas and sites with significant historic, architectural, aesthetic, scientific and cultural values
- 3.11 To protect and manage significant environmental features and ecosystems and facilitate sustainable use and development of Alpine Resorts for year round use and activity, and to provide a framework for the planning of the alpine areas.
- 3.12 To manage all RMB activities including development and maintenance works to conserve and enhance catchment values and water resources of the Resorts.
- 3.13 Benefits of trails include:
  - experiences that offer opportunities to understand the natural and cultural environment
  - routes that are 'green' commuter transport opportunities in a variety of Victorian landscapes and settings
  - reducing fragmentation impacts on the natural environment through appropriate trail design, landscaping and habitat protection or enhancement
  - managing appropriate access to sensitive areas

- 3.14 Natural and cultural heritage assets must be protected through environmentally sound conservation planning and practices.

### **Biodiversity Issues**

#### ***Flora / Fauna***

- 3.15 To ensure the present diversity of species and ecological communities and their viability is maintained or improved within the Resort and within the adjoining Alpine National Park.
- 3.16 To maintain, preserve and enhance the habitat of threatened species and communities within the Resort.
- 3.17 To retain native vegetation, including trees, shrubs and ground cover, and to encourage revegetation of disturbed areas with indigenous species applying the principles of net gain.
- 3.18 The active improvement of the quality of existing native vegetation
- 3.19 To assist the protection and conservation of biodiversity, including native vegetation retention and provision of habitats for native plants and animals and control of pest plants and animals.

#### ***Water***

- 3.20 To protect the quality and integrity of natural water systems and aquatic ecosystems.
- 3.21 To enhance the ecological integrity of natural waterways within the Resorts and adjacent land.
- 3.22 To continue to provide high quality potable water for current and projected domestic use requirements within the Resorts.
- 3.23 To treat wastewater to a very high standard and to utilise it for snowmaking.

#### ***Land and Water Quality***

- 3.24 To improve land and water quality through to the restoration and protection of ecological processes within catchments.
- 3.25 To reduce the impact of secondary salinity on the State's land and water resources by increasing vegetation cover and reducing groundwater recharge.
- 3.26 To improve water quality through the interception of nutrients in surface runoff.

#### ***Fire***

- 3.27 To assist the minimisation of risk to life, property, the natural environment and community infrastructure from wildfire.
- 3.28 To manage fire in an ecologically sustainable manner, whilst ensuring the safety of human lives and the Resorts infrastructure.
- 3.29 To manage fire within the Resorts in an ecologically sustainable manner that ensures the diversity and abundance of indigenous flora and fauna and protects water quality and quantity.

#### ***Climate Change***

- 3.30 To enhance amelioration of the impact of climate change by significantly increasing Victoria's carbon sinks through revegetation and regeneration.
- 3.31 To increase carbon sinks and provision of a range of other benefits through the development and expansion of private forestry in a way that complements native vegetation retention.

## **4. Built Environment**

- 4.1 To assist creation of a diverse and integrated network of public open space commensurate with the needs of the alpine community.
- 4.2 To assist the conservation of places that have natural, environmental, aesthetic, historic, cultural, scientific or social significance or other special value important for scientific and research purposes, as a means of understanding our past, as well as maintaining and enhancing Victoria's image and making a contribution to the economic and cultural growth of the State.
- 4.3 To encourage land use and development that is consistent with the efficient use of energy and the minimisation of greenhouse gas emissions.
- 4.4 To promote the provision of renewable energy in a manner that ensures appropriate siting and design considerations are met.
- 4.5 To assist the integration of health facilities with local and regional communities.
- 4.6 To ensure the design of subdivisions achieves attractive, liveable and sustainable neighbourhoods.
- 4.7 To control the subdivision and consolidation of land and the removal and variation of easements and restrictions through planning schemes, within the framework of the Planning and Environment Act 1987 and the Subdivision Act 1988.

- 4.8 To achieve high quality alpine design and architecture that:
  - Reflects the particular characteristics, aspirations and cultural identity of the community.
  - Enhances liveability, diversity, amenity and safety of the public realm.
  - Promotes attractiveness of towns and cities within broader strategic contexts.
- 4.9 To protect and enhance identified places, sites and objects of natural conservation and landscape significance
- 4.10 To protect and enhance identified places, sites and objects of European cultural, historical and architectural significance.
- 4.11 To protect and enhance identified significant Aboriginal places, sites and objects.
- 4.12 To retain the integrity of the existing Village and consolidate future development within the Village.
- 4.13 To develop the Village as an attractive living place for the permanent and visitor population.
- 4.14 To develop an identifiable individual resort character for the Resort and enhance it through high quality design standards in public and private development throughout the Resort.
- 4.15 To identify commercial and residential areas within the Village which recognise the special requirements of a mixed destination and day visitor resort.
- 4.16 To provide a Village Square for the Resort that functions as a commercial and community heart for the Resort.
- 4.17 To reinstate the interface between development in the Village and Bourke Street ski run.
- 4.18 To ensure that new development and redevelopment achieves high quality design standards and responds to the landscape, amenity and environmental values of the Resort.
- 4.19 To provide clear direction with regard to design elements for future development within the Resort.
- 4.20 To promote environmentally sustainable development within the Resort.
- 4.21 To ensure protection of significant vegetation and threatened species habitat on development sites.
- 4.22 To protect the amenity of existing development within the Village.
- 4.23 To encourage energy efficient building design throughout the Village.
- 4.24 To ensure new development enhances pedestrian and skier safety and access.
- 4.25 To maintain and enhance existing views from the public vantage points in the Resort.
- 4.26 To encourage a variety of accommodation types and styles throughout the Village to meet the needs of the permanent and visitor population.
- 4.27 To facilitate the establishment of educational, religious, community and a limited range of other non-residential uses to serve the needs of the community.
- 4.28 To ensure that development makes a positive contribution to the identifiable individual resort character being created for the Village all year round.
- 4.29 To ensure that development protects the amenity of existing residential development on adjoining sites.
- 4.30 To ensure future development achieves a high level of finish and permanence to enhance the amenity of the Village.
- 4.31 To ensure that the intensity of any development does not detrimentally affect the objectives of the State Planning Policy Framework or the other policies within the Local Planning Policy Framework.
- 4.32 To ensure that new development is assessed with proper regard to urban design principles and built form requirements.
- 4.33 To ensure the intensity of new development does not detrimentally affect the capacity of Alpine Resort infrastructure.
- 4.34 To guide the continuing development of the Alpine Resort villages in a manner that will be consistent with its function and form.
- 4.35 To provide a degree of certainty and equity in alpine planning and development in relation to the development potential of land.
- 4.36 To ensure that new development enhances the physical and social infrastructure of the Alpine Resort villages.
- 4.37 To ensure that the intensity of any development does not detrimentally effect the objectives of the State Planning Policy Framework or the other policies within the Local Planning Policy Framework.
- 4.38 To ensure that new development is assessed with proper regard to urban design principles and built form requirements.
- 4.39 To ensure the intensity of new development does not detrimentally affect the capacity of Alpine Resort infrastructure.

- 4.40 To guide the continuing development of the Alpine Resort villages in a manner that will be consistent with its function and form.
- 4.41 To provide a degree of certainty and equity in alpine planning and development in relation to the development potential of land.
- 4.42 To ensure that new development enhances the physical and social infrastructure of the Alpine Resort villages.
- 4.43 To protect sunlight access to key public places and open space areas.
- 4.44 To ensure that the height of new buildings reinforces the built form character of unique areas.
- 4.45 To maintain the visual dominance of prominent landmarks.
- 4.46 To maintain the natural line of the snow gums.
- 4.47 The development of a multi-dimensional vision and strategy for each Alpine Resort will provide a vehicle for:
  - The articulation of each resort's strategic importance.
  - The rationalisation of the needs and expectations of the local community and those of the broader community.
  - The identification and coordination of disparate opportunities within the community.
  - The efficient distribution of services and resources.
  - Establishing sustainable levels of development.
- 4.48 To identify and protect all culturally significant Aboriginal and historical sites within the Resorts.
- 4.49 To improve the understanding of Aboriginal and historical use of the Resorts through increased site assessment.
- 4.50 To appropriately and sensitively dispose of all putrescibles waste generated.
- 4.51 To actively promote and undertake a recycling program to minimise wastes sent to landfill.
- 4.52 To improve the Resorts energy efficiency and reduce non-renewable energy consumption.
- 4.53 To minimise negative impacts on the Resorts air quality and reduce greenhouse gas emissions.
- 4.54 To maintain and enhance the aesthetic environment and landscape values of the Resorts.
- 4.55 To ensure that existing and future development and activities do not compromise the visual amenity of the surrounding Alpine National Park.
- 4.56 To minimise negative impacts on the Resorts by concentrated visitor numbers at a number of sites in intensive time periods.
- 4.57 To manage and improve sites considered under pressure from visitor numbers.

## 5. Access & Movement

- 5.1. To develop a multi-faceted transport system that ensures a high level of accessibility to the Village.
- 5.2. To provide an efficient, affordable, convenient, reliable and safe public transport system to meet the needs of visitors.
- 5.3. To ensure safe and efficient movement of vehicles, pedestrians, cyclists and skiers throughout Mt Buller, particularly within the Village.
- 5.4. To improve non-vehicular movement within the Village and particularly along Athletes Walk and Black Forest Walk.
- 5.5. To provide off-street public and private car parking to meet the needs of existing and planned visitation levels for Mt Buller.
- 5.6. To provide vehicular, pedestrian and skier links from Mt Buller to Mt Stirling and the surrounding Alpine National Park to optimise year round visitor experiences, provide alternative access routes and improve safety.
- 5.7. To provide appropriate access and facilities for emergency services.
- 5.8. To achieve balance between the demands of vehicle transport and both pedestrian and skier movement.
- 5.9. To ensure that the pedestrian feel and environmental qualities of the Village are enhanced.
- 5.10. To provide developments and infrastructure that facilitate snow farming and efficient access for snow clearing.
- 5.11. To ensure that the built environment is legible addressing issues of wayfinding for vehicles, skiers, cyclists and pedestrians.



**Numeric Standards**

A series of numeric standards for elements within Mt Buller were tabled as discussion points for the workshop. These were presented to help identify key elements in the planning of the resort and to nominate indicative sizes for these components.

These numbers were discussed and adjusted at the Workshop and helped inform the final area brief developed for Mt Buller.

They are presented as record of the Workshop outputs and not as a final design brief.



## Numeric Targets

July 2010

### Approximate Site Area

Mt Buller Alpine Resort	
- Total resort site area	2,300 Ha (ASL 1300-1350 contour)
- Village Area, Ski and Infrastructure	850 Ha
- Ski Area	300Ha
- Leased areas	38ha
Mt Stirling Alpine Resort	2,633Ha
Alpine National Park Area	646,000Ha

Winter Activity	Current	Design
Season Length	117 Days	
Average Peak Days Lost	5 Days	
Peak Ski Day Tickets (Weekend)	8,500	
Average Max. Weekday Ticket Sales	2,500	
Market Segments		
- High Involvement Families		
- New Young Actives	20%	
- Committed Skiers	40%	
Day Trippers (peak)	40%	
Sports Hall	3,000 – 5,000	
National Alpine Museum	800m2	
Other	100m2	

Summer Activity	Current	Design
Possible Activities	Mountain bike Road Cycling Spa Walking (Guided + Self guided) Summit chair Bushwalking Horse riding (no longer permitted) Rockclimbing Sightseeing Special Events Music Food + Wine 4 wheel Drive Arts Culture History National Alpine Museum	


Accommodation	Current	Design
Total accommodation	8,051	
Hotel Beds	1,464	
Lodge Beds	2,691	
Private Accommodation (Apartments)	3,241	
Staff Accommodation (BSL)	655	
Staff Accommodation (Other)	200+	

New Residential built form	- Minimum 4-star GBCA rating and sustainability benchmarks of 2.6 TCO <sub>2</sub> per person per year and 54 kL litres of water per person per year
Nett dwelling sizes housing	- 35 sq metres for bedsitter/studio unit, - 1 bedroom unit - 50 sq meters - 2 bedroom unit - 70 sq metres - 3+ bedroom unit - 95 sq meters

Parking	Current	Design
Day Parking	1,480 Cars	
- Off Street	- 1,100 cars	
- On Street	- 380 Cars	
Overnight Parking	1,400 Cars	
- Off Street	- 1,140 Cars	
- On Street	- 260Cars	
Bus Parking	70 Coaches	
	/ Mansfield	
Village Parking	820 (1,200 Permits)	

Retail	Current	Design
Mix		
- Ski Hire BSL /Sales	1200m2	
- Retail Sales BSL	200m2	
- Other Ski Hire	TBC	
- Supermarket	300m2	
- Bakery	-	
- Newsagent	-	
- Post office	1	
- Chemist	Medical Centre	

Food and Beverage	Current	Design
Restaurants	TBC	

Employment	Current	Design
Total Jobs		
- Summer	100 - 200	
- Winter	2,035	

Activity Facilities	Current	Design
Public dining/shelter – Cow Camp	300m2+150pp)	
Information Centre	30m2	

Guest Services	<i>Larger required</i>	
Short Term Locker Facilities		
- Buller Sports	40m2	
- Spurs	20m2	
- Georges	12m2	
Ski Racks	(too few)	
Toilets	277m2	
Changing Facilities	Nil	
Drying rooms	Nil	
ATMs	2	
CCTV	Nil	

Community Facilities	Current	Design
Higher education/ continuing education	4,000m2	
Child care facilities Total	180 places	
- Creche	36 places	
Community Health Care Facilities		
- summer	400m2 (part time Nurse)	
- winter	400m2	
Multipurpose civic and conference uses	300 seats	
Community Sports facilities:		
- Hall	1,600m2	
- Pool (Chalet)	Hotel pool 10m	
- Pool + Spa (Breathmaker)	20m pool + spa150m2	
- Public Pool	Nil	
- Gym	150m2	
Cinema	200 Seat Cinema	
School	40 - 100 Students	
	Varies on demand	
	Increase / Decrease as required	
Stage	20m2	
Playgrounds		
- Black Forest	50m2	
- ABOM	50m2	
Merimbah Picnic Area	2,000m2	
Kids Bike Area	Nil	
Camping Area	Nil (Some at Merimbah)	
Caravan Area	Nil	
Chapel	200m2	
Prayer room	nil	
Police Station	Existing	
CFA	Existing	

Infrastructure	Current	Design
Water Storage		
- Potable	5 Mega Litres	
- Non Potable	75 Mega Litres	
Water Recharge per day		
- Treated Effluent	2 Mega Litres	
- Boggy Creek	3 Mega Litres	
Power	22kV from Mansfield	
LPG	1,500 Tonnes pa	
Telecom	Phone/Internet/Mobile	
Alternative Energy	Nil	





**A3**

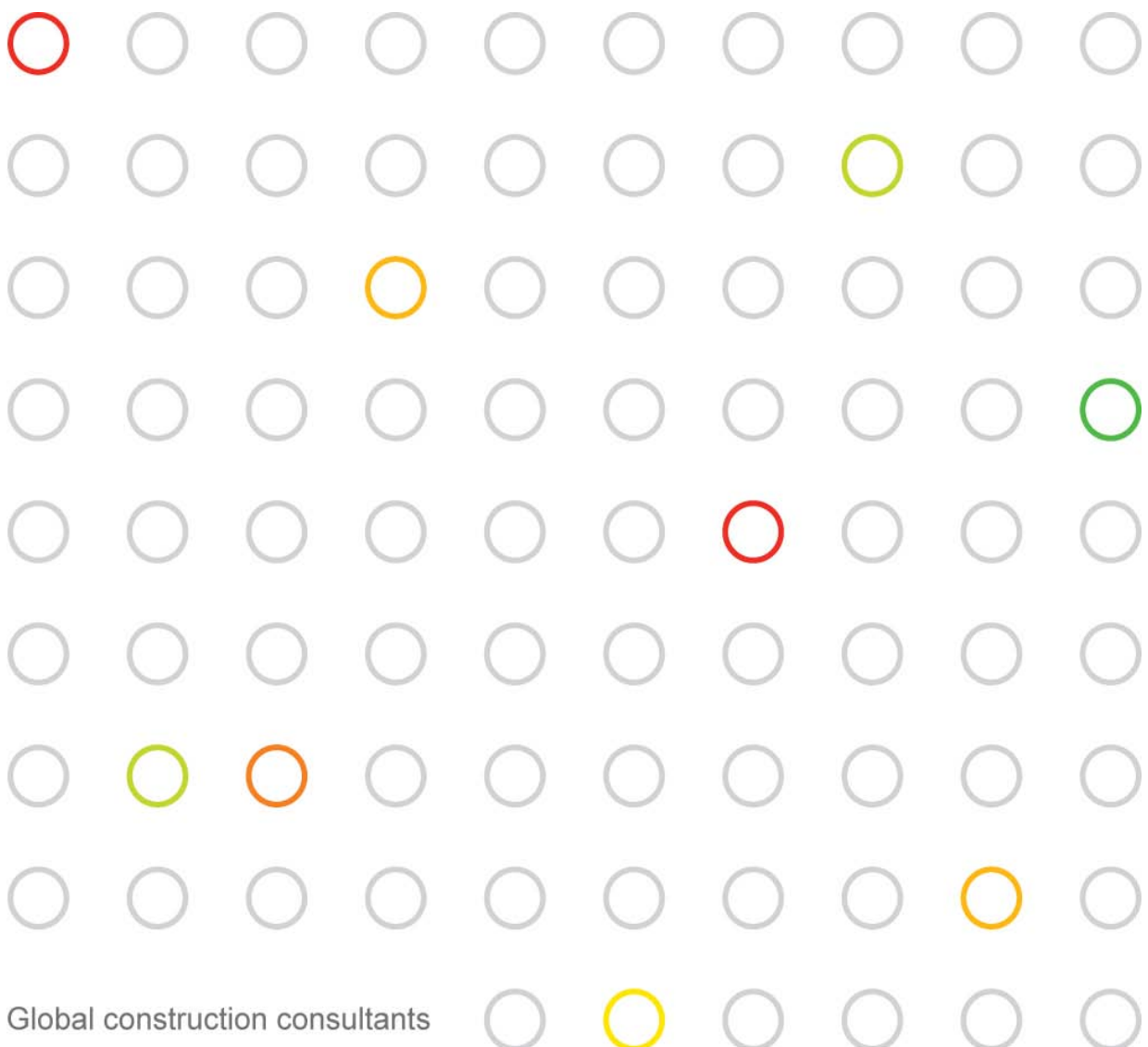
# **Planning Report**





# MOUNT BULLER MASTER PLAN

Town Planning Review | Revision 01



Project Contacts	
<b>Client:</b>	Cox Architects and Planners on behalf of ARMB
<b>Project:</b>	Mount Buller Masterplan

Path information: P:\Projects - CURRENT\115742 - Mount Buller Master Plan\Final Draft Report\_updated Dec2010.docx

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2. Planning Scheme Amendment Flowchart

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DL Quality System					
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## 1. EXECUTIVE SUMMARY

The purpose of this report is to review the proposed “masterplan” for the Mount Buller Alpine Resort and provide advice on the following:

- Key planning issues which impact current development and will impact future development/redevelopment.
- Review of current planning controls and their appropriateness.
- Review of mechanisms which will enable the eventual implementation of the plan.
- Identify areas/issues which will require further investigation to be undertaken as part of the next stage of the masterplanning process.

The masterplan in its current form is not a final document which can be incorporated into the Planning Scheme and lead future development at Mount Buller. Rather, it is a plan which will form the basis for further background investigation to be undertaken in identified areas such as vegetation offsets in the context of potential future development such as the gondola.

It is these background documents which will justify proposed future development and identify issues with specific developments proposed.

The overall intent of the masterplan is consistent with the State Planning Policy Framework and other planning controls and strategies relating to the Alpine Resorts. The content of the masterplan will need to be reviewed specifically in light of environmental considerations such as cultural heritage, flora and fauna.

### 1.1 Current Planning Issues

- *Timing* – the process needs to be “streamlined”.
- *Inflexible controls*
- *Carparking and traffic flow*
- *Vegetation* – the removal of vegetation is required to facilitate most new development.
- *Biodiversity* – the issue of growth and development versus the management of biodiversity.
- *Bushfires* – the introduction of new bushfire controls and the requirement for a bushfire attack risk assessment.
- *Aboriginal cultural heritage* – a planning permit cannot be issued until issues surrounding cultural heritage are addressed and a CHMP is approved by Aboriginal Affairs Victoria (AAV).

### 1.2 Masterplan Goals (Planning Perspective)

- Clear guidance and direction for land use and development for the Alpine Resort Management Board (ARMB) and the Minister for Planning (as the Responsible Authority) as well as residents and developers.
- Flexibility whilst ensuring they provide certainty and faster turnaround times.
- Longevity and provision of a strategic framework for future development.
- Practical, realistic and can implement outcomes the Masterplan seeks to achieve.
- Able to drive development for both private and public sector in an expedited manner.
- Remove obsolete or repetitive controls.
- Remove “hurdles” or obstacles controlling development (where possible).
- The Masterplan should seek to capitalise on the natural assets of Mt Buller, which are a primary attraction for visitors.
- All year round activities and facilities to be proposed and encouraged.



## 1.3 The Way Forward - Key Recommendations

### A. Further Background Investigations Required

The following additional reports will be required to ensure the key works proposed in the masterplan (such as the gondola) can be undertaken and any environmental impacts appropriately managed. These reports are also essential to provide justification of the masterplan will be required by the State Government before endorsing such a plan:

- Vegetation assessment including advice regarding offset requirements as a result of proposed new development. This should include development of a vegetation offset strategy and management plan.
- Fauna and biodiversity review to identify any significant habitat and threatened species and management strategies.
- Review of aboriginal cultural heritage (particularly Horse Hill and greenfield sites such as the proposed gondola route).
- Bushfire risk assessment strategy / plan.
- Economic impact assessment to justify the uses required and associated space needed.
- Geotechnical preliminary assessment of proposed development sites to identify risks and issues at this early stage.
- Review the capacity of existing infrastructure and identify if infrastructure upgrades will be required to accommodate new development. Any new infrastructure or upgrades of existing infrastructure are likely to carry substantial cost burdens.
- Traffic impact assessment to assess carparking requirements and proposed access arrangements from designated carparking areas to and around the village.
- Clarification from ARMB and DSE in regards to their ability to operate as a public land manager and whether the uses proposed at Horse Hill would breach their role (ie. food and drink premises).

It is highlighted that consultant reports are likely to “clash” and conflict on the basis that various consultants preferred objectives or outcomes will contradict other consultants. Most notably this will relate to the objective to retain vegetation and habitat with the need to remove vegetation as part of a wildfire management strategy.

A cohesive approach is required to be determined to ensure a positive outcome is achieved overall.

### B. Further Refinement of the Masterplan

- Update as required based on findings from the above reports.
- Identify built form outcomes for specific sites (ie. preferred heights and setbacks which can then be translated into the planning scheme).
- Develop “visions” for specific areas to guide development.

The more detail which can be included in the masterplan, the more effective it will be in guiding land use and development.

### C. Key Recommendations - Implementation

- Masterplan to become an incorporated document under Clause 81 of the Alpine Resorts Planning Scheme.
- Update the existing local planning policies and implement new planning policies to reflect key issues and objectives/visions identified within the masterplan such as Sustainable Development and built form.
- Revise the existing Schedule to the Design and Development Overlay for the Village to ensure key visions of the masterplan are acknowledged and addressed.
- Implement a new Schedule to the Design and Development Overlay to guide development on Horse Hill.
- Rezone the land known as Horse Hill to Comprehensive Development Zone 2 – Alpine Recreation.

- Remove obsolete and controls which duplicate existing controls or conflict with new controls such as the Comprehensive Development Plan for the Gateway Site.

#### **D. Stakeholder Engagement – Ongoing**

Consultation with key State Government Departments was undertaken as part of this process with feedback provided throughout the process both formally and informally.

Moving forward, ongoing discussions with State Government Departments including the Department of Planning and Community Development (DPCD) and the Department of Sustainability and Environment (DSE) are required to ensure there is ongoing support of the masterplan. Further, whole of government support for the masterplan is required to identify issues early and reduce risk associated with new development/redevelopment.

However, in undertaking further discussions with DSE and DPCD, the background reports as identified above should be prepared as these will form the basis for more meaningful discussions.

The role of the Masterplan is to provide a vision for the Mount Buller Alpine Resort and in effect, provide guidance as to the future planning instruments that are necessary to facilitate this vision. Whilst it is identified that existing environmental controls on the land will be retained in order to preserve the environmental significance of Mount Buller, the Masterplan can trigger the need to clarify, alter or remove existing planning instruments pertaining to the land as appropriate. Overall, the Masterplan should be informed by existing environmental constraints, however it also has the capacity to influence or improve the flexibility and relevancy of existing planning instruments.

## 2. INTRODUCTION

### 2.1 Key Considerations

As part of this planning review, the following matters were raised by the project team and key stakeholders and have been considered and subsequently influenced our findings and recommendations:

#### Current Planning Issues – General

- *Timing* – the length of time it takes to obtain planning approval (even basic applications) which subsequently impacts on the staging of construction and has cost implications. The process needs to be “streamlined”.
- *Inflexible controls* – the rigid nature of current controls requires a planning permit application to be submitted for most proposals.
- *Carparking* – there is a shortage of carparking provisions in peak periods which leads to traffic management issues.
- *Vegetation* – the removal of vegetation is required to facilitate most new development. However, the issue of offsets continually emerges with no long-term solution currently in place.
- *Biodiversity* – the issue of growth and development versus the management of biodiversity is one which will impact all future development. Similarly to the above, long term solutions are required to create certainty.
- *Bushfires* – the introduction of new bushfire controls and the requirement for a bushfire attack risk assessment of public buildings is likely to become an issue in the near future.
- *Aboriginal cultural heritage* – is a relatively new issue which needs to be responded to as a result of new legislation (2006). Any new development, on either green or brownfield sites, will need to assess the likelihood of cultural heritage and where required undertake a Cultural Heritage Management Plan. A planning permit cannot be issued until issues surrounding cultural heritage are addressed.

#### New Instruments – Requirements of the Masterplan

- Flexibility whilst ensuring they provide certainty and faster turnaround times.
- Longevity and provision of a strategic framework for future development.
- Practical, realistic and can implement outcomes the Masterplan seeks to achieve.
- Able to drive development for both private and public sector in an expedited manner.
- Remove obsolete or repetitive controls.
- Remove “hurdles” or obstacles controlling development (where possible).

#### Planning Instruments to be reviewed

- The Alpine Resorts Planning Scheme including:
  - Zones
  - Overlays – Environmental Instruments and Urban Design
  - State Planning Policies in light of amendment VC71 which update the State Planning Policy Framework
  - Local Planning Policies including the Municipal Strategic Statement
  - Particular Provisions (ie. carparking and native vegetation)
  - Site specific comprehensive development plans and incorporated plans
  - Incorporated Documents
- Other legislation as relevant including the *Aboriginal Heritage Act 2006*

#### Output

A summary of key recommendations and actions are provided in Appendix 1.

## 2.2 Purpose

Davis Langdon were engaged to review the planning controls impacting the land known as Mount Buller Alpine Village and Recreation Area including Horse Hill. The purpose of this review is to provide advice on the suitability, opportunities and constraints of existing and proposed planning controls applicable to the subject land and recommend ways forward in order to facilitate and implement the masterplan.

It is recognised that the project outcomes of the Masterplan should:

- Improve visitor amenity and commercial offer of the Mount Buller Village.
- Improve visitor access to, from and within the Mount Buller Village.
- Improve the interface between the Mount Buller Village and activity areas (existing and proposed).
- Improve access to Mount Buller and tourism links between Mount Buller and Mount Stirling area.
- Develop the required activity infrastructure to support year round visitation and further development and investment.
- Improve its functionality as a year-round destination in light of current and future economic, social and environmental issues.

In addition, through this process, it was highlighted that the current planning controls are restrictive and often the cause of extensive delays for varying reasons including the information required to be submitted as part of an application is too onerous. In addition, other factors such as native vegetation removal, bushfires, erosion management and environment and aboriginal cultural heritage matters all impact on the approval process.

It has also become evident that there were a number of existing controls which are out-of-date or duplicate existing controls. Although this is not a source of delays directly, it reduces certainty and weakens the existing controls and objectives. The need for current and effective controls is critical to ensure desired outcomes are met.

As a result, this planning review seeks to provide feedback and recommendations on the current planning controls as well as on instruments to implement the masterplan.

## 2.3 Methodology

As part of this review, the following methodology was adopted:

### Meetings and Consultation

Cox Architects and Planners were the drivers for the evolution of the masterplan and the consultation which was undertaken. Key stages in the review are as follows:

- |                                     |  |
|-------------------------------------|--|
| • Vision Workshop                   | 7 <sup>th</sup> July 2010                                |
| • 1 <sup>st</sup> Meeting with DPCD | 8 <sup>th</sup> July 2010                                |
| • Options Workshop                  | 9-11 <sup>th</sup> July 2010                             |
| • Visit to Mt Buller                | 12 <sup>th</sup> July 2010                               |
| • Charette                          | 14-16 <sup>th</sup> July 2010                            |
| • Key Directions Review             | 6 <sup>th</sup> August 2010                              |
| • Draft Masterplan Presentations    | 17-27 <sup>th</sup> August 2010                          |
| • Community Presentation            | 1 <sup>st</sup> September 2010                           |
| • Draft Masterplan Display          | 4 <sup>th</sup> September - 5 <sup>th</sup> October 2010 |
| • 2 <sup>nd</sup> Meeting with DPCD | 27 <sup>th</sup> September 2010                          |
| • Stakeholder Meeting               | 1 <sup>st</sup> October 2010                             |
| • Masterplan Concept Finalised      | 31 <sup>st</sup> October 2010                            |

Davis Langdon's role in the above has been to provide preliminary advice regarding proposed ideas and concepts and identify any matters which may be problematic from a planning perspective (ie. vegetation removal and offsets).

Further, to review the masterplan and identify further areas of investigation where required and the mechanisms and planning instruments available to enable the successful implementation of the masterplan. It is understood that the masterplan in its current form provides the general ideas for future development and will drive further investigation and background studies. These background studies will be required to justify any changes to the existing planning controls as well as to obtain whole of government support.

### **Review of Current Planning Controls**

Review of existing planning controls and assessment as to the suitability of these controls in response to the proposed Masterplan.

Zoning maps and the Alpine Resorts Planning Scheme have been accessed and form part of this report. Discussions with officer's of the Department of Planning and Community Development (DPCD) regarding current and potential controls as well as specific environmental issues impacting the land were also undertaken and form part of this report. It is also noted that officers from both the Department of Sustainability and Environment (DSE) and DPCD were involved in the evolution of the masterplan as they were involved in the charette as well as project meetings.

### **Case Studies**

- Review of other Alpine Resorts (ie. Falls Creek and Mount Hotham) and their current and future planning controls.

### **Implementation Strategy**

- Identify areas where the proposed masterplan needs to provide further justification and background work to support the proposed concepts or objectives.
- Assess the likely planning instruments which will enable the effective implementation of the masterplan.
- Identify likely issues which need further investigation prior to obtaining whole of government support for the masterplan such as native vegetation offsets.



### 3. THE SUBJECT SITE

The land comprising this review referred to as the Mount Buller Alpine Resort has been divided into the following areas for clarification purposes (see also Figure 1):

- **Alpine Village** – located to the east of Mount Buller and is characterised by its hourglass plan-form which is formed by the two residential areas at either end of a narrow central commercial area. Bourke Street is the main ski run which connects the ski field with the Alpine Village.
- **Alpine Recreation** – refers to the remaining area of the Mount Buller Alpine Resort which places the majority of recreational activity within close proximity to the Village. This includes tourist facilities and recreational activity areas.
- **Horse Hill** – located north-east of the Alpine Village and acts as the main parking area for day trippers.

*Figure 1. Aerial Image of the Mount Buller Alpine Resort*



(Source: [www.dse.vic.gov.au/planningscheme](http://www.dse.vic.gov.au/planningscheme))

**Note** - Mirimbah is located at the base of the mountain and is the entrance to the National Park. Mirimbah is within the jurisdiction of DPCD and forms part of the Alpine Resorts Planning Scheme. Although the Masterplan does make reference to Mirimbah, many of the proposals impacting Mirimbah are operational (ie. ticketing system) and are not related to planning or built form matters. Any future development at Mirimbah will be subject to the approval of DPCD.



## 4. RECOMMENDATIONS AND ACTIONS

### 4.1 Further Background Investigation Required

As alluded to above, the following background studies are required to justify any proposed development and to justify the masterplan as a whole. These reports and background documents will be requested by the Department of Planning and Community Development prior to providing support on the masterplan:

- Vegetation assessment including advice regarding offset requirements as a result of proposed new development. This should include development of a vegetation offset strategy and management plan.
- Fauna and biodiversity review to identify any significant habitat and threatened species and management strategies.
- Review of aboriginal cultural heritage (particularly Horse Hill and greenfield sites such as the proposed gondola route).
- Bushfire risk assessment strategy / plan.
- Economic impact assessment to justify the uses required and associated space needed.
- Geotechnical preliminary assessment of proposed development sites to identify risks and issues at this early stage.
- Review the capacity of existing infrastructure and identify if infrastructure upgrades will be required to accommodate new development. Any new infrastructure or upgrades of existing infrastructure are likely to carry substantial cost burdens.
- Traffic impact assessment to assess carparking requirements and proposed access arrangements.
- Clarification from ARMB and DSE in regards to their ability to operate as a public land manager and whether the uses proposed at Horse Hill would breach their role (ie. food and drink premises).

### 4.2 Recommendations

A summary table of recommendations provided throughout this report is provided as Appendix 1 of this report.

*Note – The planning scheme amendment process is outlined in Section 15 – Planning Scheme Amendment Process of this report.*

## 5. PLANNING OPPORTUNITIES

Based on discussions with the Department of Planning and Community Development (DPCD) and a review of the planning controls available, the following provides an assessment of the advantages/disadvantages of each control.

The following controls cannot be further “streamlined” and are unlikely to be removed as they relate to specific environmental issues unique to the Alpine areas:

- Erosion Management Overlay
- Wildfire Management Overlay
- Environmental Significance Overlay 1 – Mountain Pygmy Possum

### 5.1 Zoning

The purpose of zones are to guide preferred land uses whether they be “as of right”, subject to planning approval or prohibited. Zones also trigger permits for various other works such as signage, removal of vegetation, new development and general works.

#### Comprehensive Development Zone (Current Zoning)

This zone currently applies to both the village and recreation areas; however, different Schedules have been developed for each area. This zone is also applied in other alpine resorts.

*The purpose of this zone is:*

- To provide for a range of uses and/or the development of land in accordance with a comprehensive development plan incorporated in this scheme.

Advantages	Disadvantages
Currently applies to the Village and Recreation areas.	Use and development need to be included on an Incorporated Plan for the proposal to be considered “exempt” otherwise, standard controls apply
Intent is to exempt an application from notice if in accordance with an approved plan (consultation would have occurred during the plan preparation stage)	Can be onerous in what is required to be lodged with an application
Can prepare and implement the plan in stages (subject to approval by the responsible authority)	Having a different Schedule for each area makes it difficult to provide an integrated approach to planning on Mount Buller as each site is assessed independently rather than as a whole
Can prescribe both uses and development which are proposed on a site or area	Incorporated Plans can be inflexible as any changes generally require a planning scheme amendment
Requires detail to be undertaken at the start to lead to certainty – consultation at the start rather than during the planning permit process	Often, the plan can be too prescriptive which limits opportunities for development on the land
Provides certainty about the nature of the proposed use and development of the land, specified and identified by the incorporated plan (ie. YHA site or Kooroora)	Needs to be regularly review and updated

Can apply to an individual site, precinct or larger site with multiple stakeholders	
The Schedule allows variations to the usual requirements for both use and development	
Provides certainty if development is in accordance with the plan	

### Special Use Zone

*The purpose of this zone is:*

- To recognise or provide for the use and/or development of land for specific purposes as identified in a schedule in this zone.

Advantages	Disadvantages
Intent is to exempt an application from notice if in accordance with the Schedule to the Clause	Once this zone is adopted, it needs to go through a planning scheme amendment to re-zone if any changes are required to the controls prescribed
Generally applies to land which is used and developed in a unique manner ie: Tourism Area or an education facility (university)	If the zone is too general, it does not provide certainty in the planning process. However, if too specific it becomes too stringent and inflexible.
Can provide controls for both use and development	Limited in its effectiveness when applied to individual sites within an area which may have varying land use/development requirements.
Does not require any plans or other documents to be incorporated in the scheme which allows the zone to be general in its requirements	
Provides certainty if in accordance with the zone	

### Mixed Use Zone

*The purpose of this zone is:*

- To provide for a range of residential, commercial, industrial uses and other uses which complement the mixed-use function of the locality.
- To encourage residential development that respects the neighbourhood character.

Advantages	Disadvantages
Allows for a mix of uses on the land	Despite its name, applies to land which is predominantly used for residential purposes with complementary other uses
Does not require a “plan” or document to support the proposal as it relates to land use only	Is not as flexible as other zones in regard to what uses can be included or excluded
	Does not provide exemptions for notification and appeal rights which means whether an application is or isn’t notified is discretionary
	Buildings and works will require a planning permit in most instances

## Public Park and Recreation Zone

*The purpose of this zone is:*

- To recognise areas for public recreation and open space.
- To protect and conserve areas of significance where appropriate.
- To provide for commercial uses where appropriate.

Advantages	Disadvantages
The use and development of land is exempt from planning approval provided the use is conducted <i>by or on behalf of a public land manager or Parks Victoria under the relevant provisions of the Local Government Act 1989, the Reference Areas Act 1978, the National Parks Act 1975, the Fisheries Act 1995, the Wildlife Act 1975, the Forest Act 1958, the Water Industry Act 1994, the Water Act 1989, the Marine Act 1988, the Port of Melbourne Authority Act 1958, or the Crown Land (Reserves) Act 1978.</i>	Many uses including transport terminal are prohibited. Further, works are to be for or on behalf of the Public Land Manager which can often be hard to define if there are multiple land managers (ie. DSE and ARMB)
An Incorporated Plan can be provided as referenced in the Schedule to the Clause to provide certainty	Generally applies to non-developable land which is for public use

## A New 'Alpine Zone'

Given the unique nature of alpine areas and the issues they face, a new "Alpine" zone could be developed. However, this is likely to be subject to extensive review and would be a timely process as it would need to be adopted and implemented in the Victorian Planning Provisions. In addition, it may not necessarily lead to any better planning controls than what currently exists; rather it would be adapting existing controls under a new heading.

This option is not considered to be a realistic alternate at this time.

## Mix of the above

Rather than use one zone for the general area, the application of a number of zones could provide a more "fine grained" approach to land uses ie. residential area, commercial or recreational precinct. Although this would assist in allocating specific land uses to specific areas, it would become inflexible overtime as additional rezonings would be required to allow for additional land uses in specific areas. The applied zones should be regularly reviewed to ensure ongoing development/expansion on the Mountain can occur which would provide certainty and encourage appropriate development.

Including Schedules for each area would also achieve this.

## Recommendations

- Investigate rezoning the land known as Horse Hill from Public Park and Recreation Zone (PPRZ) to Comprehensive Development Zone 2 (CDZ2) – Alpine Recreation. It is highlighted that the use of the land as a transport terminal is prohibited under the PPRZ hence it is considered rezoning is required to facilitate the land uses proposed. Further the proposed land uses at Horse Hill are considered to be more appropriate and in-line with the objectives of the CDZ2 zone rather than PPRZ. This will need to be justified to DSE and DPCD based on land uses proposed. It is emphasised that rezoning land from a public zone to a development orientated zone is likely to be contentious and will need to be discussed further with ARMB and DSE.
- Investigate implementing a comprehensive development plan for both the YHA and Koorora sites to allow redevelopment to occur in the short term. This will require further investigation into preferred building heights and setbacks.

## 5.2 Overlays

Overlays generally relate to built form controls. They seek to ensure development responds to key issues (ie. erosion) and/or are undertaken in accordance with specific development criteria (ie. building heights) or an approved form development plan.

### Development Plan Overlay

*The purpose of this overlay is:*

- To identify areas which require the form and conditions of future use and development to be shown on a development plan before a permit can be granted to use or develop the land.
- To exempt an application from notice and review if it is generally in accordance with a development plan.

Advantages	Disadvantages
Intent is to exempt an application from notice if in accordance with an approved development plan (consultation would have occurred during the plan preparation stage)	To amend the approved development plan if a proposal is “generally in accordance” with the approved development plan is likely to require further community consultation (however there are no formal processes for exhibiting the plan or making submissions with the responsible authority finally approving the plan)
Can prepare and implement the plan in stages (subject to approval by the responsible authority)	Plan may be difficult to develop due to multiple lease boundaries and the fragmented nature of leases in the area
Can prescribe both uses and development which are proposed on site	A permit cannot be issued under the zone until a plan is approved by the responsible authority for the overall area affected by the DPO (however a schedule can be drafted to allow a permit to be granted before the overall plan is approved)
Requires detail to be undertaken at the start to lead to certainty – consultation at the start rather than during the planning permit process	Zone still controls the need for a permit, while the overlay can constrain what a permit may be granted for
Provides certainty about the nature of the proposed use and development of the land, specified and identified by the overall plan	NB: if a proposal is not “generally in accordance with” the DPO, then it is prohibited and can only be approved if the DPO is amended accordingly.
Can apply to an individual site, precinct or larger site with multiple stakeholders	

### Incorporated Plan Overlay

*The purpose of this overlay is:*

- To identify areas which require; the form and conditions of future use and development to be shown on an incorporated plan before a permit can be granted to use or develop the land and a planning scheme amendment before the incorporated plan can be changed
- To exempt an application from notice and review if it is generally in accordance with an incorporated plan

Advantages	Disadvantages
Intent is to exempt an application from notice if in accordance with an approved incorporated development plan (consultation would have occurred during the plan preparation stage)	To amend the approved plan is likely to require further community consultation and subsequent planning scheme amendment
Schedules to the IPO can be drafted to grant permits for proposals that are not “generally in accordance” with an approved plan.  Decision guidelines can also be introduced.	An application not in accordance with the plan is subject to third party notice and review
Can prescribe both uses and development which are preferred on site	A permit cannot be issued under the zone until a plan is approved by the responsible authority
Requires detail to be undertaken at the start to lead to certainty – consultation at the start rather during the planning permit process	Zone still controls the need for a permit, while the overlay can constrain what a permit maybe granted for
	As the approved plan is incorporated into the planning scheme, a planning scheme amendment is required to alter the plan and the amendment is likely to be exhibited Unresolved submissions will require a panel to be appointed where the Minister for Planning makes the final decision
	Does not encourage the preparation and implementation of a plan in stages (staged plan will require multiple amendments to the planning scheme)
	Plan may be difficult to develop due to multiple lease boundaries and the fragmented nature of leases in the area

### Design and Development Overlay

*The purpose of this overlay is:*

- To identify areas which are affected by specific requirements relating to the design and built form of new development

Advantages	Disadvantages
Provides for general building envelopes and development controls	Relates only to development
Can be exempt from notification if proposal is in accordance with Schedule	To vary requirements of the overlay either a planning permit is required or if variance is more substantial a planning scheme amendment is required to amend the requirements/provisions of this overlay
General overlay which can be easily applied	Becomes a guideline for assessing development which can be hard to justify if development is not in-line with the objectives/requirements of the Schedule

Schedule can include as much detail as desired. The more detail provided, the greater certainty in any future development	
A design based overlay focusing on built form and interface rather than uses	
A different Schedule or the same Schedule which identifies different precincts can apply to areas where different built form controls are proposed or which may have varying objectives and requirements	

#### **Recommendations**

- Amend and update the existing Schedules (1 and 3) to the Design and Development Overlay for both the Village and Ski Fields based on new objectives/visions of the Masterplan (ie. vision for the Village to be an active public space). In addition, existing built form outcomes should be updated to include revised maximum building heights and setbacks. Preferred materials should also be updated to take into account the new requirements for development in bushfire areas and the requirement for bushfire resistant materials to be used.
- Implement a new Design and Development Overlay which will apply to Horse Hill. The benefit of a DDO rather than an incorporated plan, is that the DDO will provide flexibility over a longer period of time whereas the incorporated plan will “lock in” the development of the land without any variances or alterations being permitted without undertaking a further planning scheme amendment process.

### 5.3 Municipal Strategic Statement – Alpine Resorts Strategic Statement

The MSS provides the strategic direction to the Alpine Resorts and it applies across all of the designated Victorian Alpine Resorts.

DPCD are currently in the process of updating the MSS, which is to occur every 3 years as a minimum. It is envisioned that the review period will conclude at the end of 2010 and will then be open for public comment during 2011.

As further background investigation and reports are required to support the Masterplan (ie. ecological assessment), it is unlikely that the key visions and dominant issues provided for in the Masterplan are able to be included as part of the existing review process due to timing issues. Notwithstanding this, a further review of the MSS can be undertaken once the Masterplan is finalised.

#### **Recommendation**

- The masterplan, once refined, should be used to inform future MSS reviews or may warrant a separate amendment process. It is considered that the vision, objectives and background rationale included in the masterplan should form the basis of an updated MSS. Further investigation into areas such as native vegetation and aboriginal cultural heritage should also feed into the MSS.

### 5.4 Local Planning Policies

When lodging an application to DPCD, both the proponent and Responsible Authority must consider the applicable local planning policies. These policies can be general or specific and they can be issue or site/location based.

Currently, the local planning policies impacting use and development on Mount Buller relate specifically to the management of geotechnical hazards (this applies to all land in Alpine areas), carparking and aboriginal heritage.



***Recommendations***

- The current carparking and aboriginal heritage policies should be updated to reflect current legislation as well as the findings/recommendations of the masterplan and subsequent studies. Further background reports will need to be prepared to justify an amendment to these policies. The masterplan has considered these issues.
- New “issue specific” policies should be developed relating to key issues which were raised during the preparation and development of the masterplan. This could include, but not be limited to, environmentally sustainable design, general objectives of the masterplan, Winter and Summer land uses, policies for specific areas ie Horse Hill and where specific land uses are encouraged ie. affordable accommodation and private housing. In addition, a local policy could be developed to guide the staging of the masterplan and provide key timelines for specific projects thereby providing certainty in patterns of development on Mount Buller.
- Once refined, the masterplan should form a reference document which both the MSS and local planning policies refer to.



## 6. KEY PLANNING ISSUES

The following is an overview of planning and general issues which need to be considered in any future development on the Mountain. In addition, a response has been provided as to how the Masterplan can address these issues.

### Masterplan Specific Issues

#### 6.1 Protection of Vegetation

##### **Issue**

As highlighted throughout this process, Mount Buller is a sensitive alpine environment with significant conservation values due its sub-alpine environment. There is a need to minimise development on the Mountain to ensure that disturbances to biodiversity are limited. Further, to understand that importance of sustainable development which is crucial to the future viability of the Resort.

Currently, planning approval is required for the removal of *any* vegetation. In addition, justification for the removal of vegetation is required and is to be accompanied by a net gain offset management plan. This plan needs to include a review against the three criteria of avoid, minimise and offset. Any offsets will need to ensure the vegetation which is to be removed, is relocated in the same biodiversity region as the vegetation which is to be removed (or as close as possible) and the vegetation which is offset is of the same significance as the vegetation to be removed.

When assessing a planning application, the responsible authority will refer the application to DSE for comment. They will assess the application based on how the proposal has responded to these criteria.

##### **Recommendations**

There is a need to reduce the loss of *any* vegetation through appropriate offsets and by developing brownfield sites, thereby achieving an appropriate balance between development and vegetation retention/biodiversity on Mount Buller.

The masterplan does note existing sites to be redeveloped whilst trying to limit the expansion of the existing Village. However for new sites, currently offsets are managed and assessed on a case by case basis. This process is likely to have adverse impacts in the future as it lacks a strategic framework for assessment. A vegetation management plan or similar strategy should be developed as a high priority as future development will not gain government support without appropriate strategic justification for the removal of vegetation. This approach is currently used by the Growth Areas Authority (GAA) and is proving successful as it creates certainty for development once an offset area is agreed.

The following is recommended to achieve the above:

- ARMB should engage an ecologist to review vegetation and biodiversity in areas where the masterplan seeks to include development. This includes Horse Hill, the access all weather road, the proposed gondola route and any snow-making locations including water storage facilities. This review should then provide recommendations on where development is preferred as well as highlight locations for offsets. It can also calculate what the likely offsets will be which are required to be in the same bioregion as the removed vegetation (ie. how much land should be allocated for offsets based on the quality of vegetation to be removed).
- Following on from the above, ARMB based on the above recommendation and in conjunction with DSE, should review potential parcels of land which could satisfy offset requirements for future development. By dedicating land solely for offsets, this will create certainty in future development and will also assist in obtaining government support for the masterplan as a whole. This should be undertaken as a priority as all future works will require offsets to be provided and are not likely to be supported unless offsets can be provided.

## 6.2 Protection of Endangered Fauna

### Issue

The Mount Buller/Mount Stirling region is the location of six nationally significant endangered species of fauna: the Caddisfly, Mountain Pygmy-Possum, Alpine Bog Skink, the Stonefly, the Barred Galaxias and the Alpine Stonefly. These species are protected pursuant to the *Federal Environment Protection and Biodiversity Conservation Act (EPBC)*.

Specifically, the Mountain Pygmy-possum (*Burramys parvus*) is listed as a threatened species in the *Flora and Fauna Guarantee Act 1988* (Schedule 2) and the *Environment Protection and Biodiversity Conservation Act 1999*. The Environmental Significance Overlay 1 is applied to land where the burramys is more prevalent. It is noted that existing lift runs and snow making areas were approved prior to the introduction of this control. As a result, new development in these areas needs to ensure impacts on burramys habitat is minimal.

Future development recommended in the masterplan has the potential to impact on the habitats of these endangered fauna, as well as numerous other vulnerable fauna on Mount Buller. Specifically, the proposed location of the gondola, re-alignment of existing ski-lifts and proposed locations of new snow-making facilities should be reviewed as they are proposed in identified burramys habitat areas.

As such, appropriate measures and management practices must be implemented and followed. It is understood that an existing “recovery plan” exists for the burramys (dated 2005).

### Recommendations

- It is recognised that an updated Mountain Pygmy-Possum Recovery Plan should be developed. All future protection strategies should be informed by the Mount Buller masterplan; with particular emphasis on integration between fauna protection strategies, Native Vegetation Management Plans and the Mount Buller masterplan.
- Similarly to vegetation, an ecological assessment should also be undertaken for land designated for future development in the Masterplan particularly the proposed location of the gondola which is located in burramys habitat.

## 6.3 Traffic Network and Carparking

### Issue

Traffic movement and carparking supply are key issues to be managed during the peak winter period. There is a significant increase in demand on the existing road and transport systems during winter and it is widely agreed that the existing systems and facilities should be logistically reorganised to promote the safe and efficient movement of vehicles, pedestrians and mountain enthusiasts.

Car parking requirements for new land uses are contained within Clause 52.06 of the Alpine Resorts Planning Scheme however this Clause only prescribes the number of car spaces required, and does not necessarily lead to the functional or safe provision of car parking. Further, a local planning policy (Clause 22.05-1) provides further rates for specific land uses.

Future development on the Mountain will lead to increased patronage to the Mountain and in turn an increase in vehicle numbers. As a result, strategies to minimise the impact of traffic and carparking need to be developed. Carparking provisions and traffic movement needs to be considered for the whole Mountain rather than just specific areas to implement a coordinated approach.

The option of a parking precinct plan has been reviewed as it can regulate the demand for, and supply of car parking, specify car parking rates to replace the rates specified in Clause 52.06 - Carparking, administer preferred parking locations and layout, control the approach to be taken to parking fees and detail requirements for applying financial measures i.e. cash-in-lieu. A parking precinct plan is limited in its ability to apply to Mount Buller as much of the Mountain is already developed and understanding the role of the ARMB in allocating carspaces.

It is noted that ARUP have provided a more detailed analysis of traffic demand and practical/operational mechanisms (ie. courtesy shuttle bus connections, automated ticketing system, changes to operating hours) to achieve this which should be read in conjunction with the below recommendations.

#### **Recommendation**

- Update the local planning policy based on the proposed uses in the masterplan and the likely carparking demand.

## 6.4 Potential/Future Horse Hill Development

### **Issue**

Horse Hill has been identified as a key site for redevelopment. As previously mentioned, the site is currently zoned Public Park and Recreation (PPRZ). The purpose of this zone is to provide areas for open space and conservation and to provide commercial uses where appropriate. The dominant use of land in this zone is for park and recreation purposes, not development per se.

The uses and development proposed at Horse Hill in the masterplan are more intensive than what currently exists onsite and involve additional development. Generally, the development proposed at Horse Hill is not considered to be in line with the objectives of the existing zone. Consequently, a more appropriate zone in this instance is considered to be the Comprehensive Development Zone 2 - Alpine Recreation.

Further, rezoning the land is also required as the use of the land as a transport terminal is prohibited under the current zone. A “transport terminal” is defined as - *‘land used to assemble and distribute goods or passengers including facilities to park and manoeuvre vehicles however does not include a tram-way’*. As per discussions with DPCD, the proposed use at Horse Hill is best defined as a ‘transport terminal’. Although this use is existing, past permits have not been sourced to confirm the existing use of the land has approval. If the use has been operating continuously for a minimum of 15 years, it is possible to establish existing use rights (in accordance with Clause 63.11 of the planning scheme). This would allow for the use to continue under the current zoning. However, the PPRZ is not considered to be the most appropriate zone understanding the use and development proposed.

It is noted there is ambiguity in regards to the PPRZ and the role of the public land manager which needs to be clarified. This is based on the role of the ARMB and whether the uses proposed at Horse Hill are *for or on behalf of the public land manager*. It is noted that under the Alpine resorts (Management) Act, the ARMB is the public land manager for certain activities undertaken on the Mountain. However, *the Minister, government department, public authority or municipal council having responsibility for the care or management of public land* can also be considered to be public land managers in certain situations. In relation to Crown land reserved under an Act and managed or controlled by a committee of management, other than Parks Victoria or a municipal council, it means the Minister administering that Act and does not include the committee of management. As a result, clarification is sought as to whether ARMB, DSE or the Minister are the public land manager in this instance.

### **Recommendation**

- Background studies required to justify any rezoning and more importantly the risks associated with further development at Horse Hill include:
  - a. Vegetation assessment
  - b. Fauna and biodiversity review to identify any significant habitat and threatened species
  - c. Review of cultural heritage (noting the site is in a significant area)
  - d. Economic impact assessment to justify uses required
  - e. Traffic impact assessment to justify carparking requirements
  - f. Geotechnical assessment to identify any constraints
  - g. Assessment of existing infrastructure provisions and identify where new infrastructure is required
  - h. Clarification from ARMB in regards to their ability to operate as a public land manager and whether the uses proposed at Horse Hill would breach their role

(ie. food and drink premises) under the recognition that the role of the Public Land Manager is to provide public facilities. This point has also been raised by DSE as the boundaries of the public land manager are not easily defined in this instance.

- i. Discussions with DSE regarding the use and development of public land and whether a rezoning would be supported on principle

## 6.5 Ski Field/Village Relationship

### Issue

The Mount Buller Resort is divided into two distinct planning zones – the Village and the ski field (recreation area). All other land outside these areas is zoned Public Park and Recreation Zone. This division can result in disconnected planning and decision making as proposals are considered in respect to their area rather than as a whole. The masterplan seeks to rectify this by providing a plan for the whole resort and by integrating the two areas.

### Recommendations

- The masterplan needs to provide guidelines and objectives for the broader Mountain before providing detailed objectives for specific areas and locations. This ensures that an overall vision is known. This can be implemented through the local planning policies for Mount Buller.
- Decision guidelines to be used to ensure that each development takes into account the broader area and its impact. This can be sourced from the masterplan. The gondola is a good example of ensuring that different precincts connect and complement each other keeping in mind that locations should not compete against one another or be treated in isolation. This can be implemented in decision guidelines and through the local planning policies.

## 6.6 Obsolete and Repetitive Controls

### Issue

It is recognised that there are a number of existing controls and policies which are out-of-date or duplications. Although this is not a direct source of development delays, it weakens the overall intent and objectives of existing controls and ultimately reduces planning certainty.

Planning certainty is further eroded by existing issues of governance, with numerous authority bodies (i.e. ARMB, DPCD, referral authorities) having conflicting interests and requirements for development. Further, additional “guidelines” which are not directly referenced in the planning scheme and therefore which have no statutory weight, reduce the effectiveness of the planning controls and make it difficult for proponents of development (ie. Mount Buller urban design guidelines).

### Recommendations

- The Planning Scheme will continue to be the primary document by which planning applications are assessed. However, the masterplan should become an incorporated document which influences development and it will also feed into the Scheme. As a result, the masterplan should take precedence over other plans including “*Mt Buller Village Design Guidelines 2005, Mt Buller and Mt Stirling Alpine Resort Management Board*”. In time, other documents should be noted as being superseded by the masterplan to avoid confusion and duplication. This will achieve consistency in processes and will enable planning matters to be dealt with in a streamlined manner.
- The existing MSS and local planning policies should be reviewed and revised as appropriate in accordance with the Mount Buller masterplan in order to provide a clear, concise vision for the Resort. Obsolete or repetitive planning controls, including incorporated plan requirements, should be amended or deleted to facilitate the Resort vision whilst ensuring an appropriate balance between diligence and efficiency is achieved.

## 6.7 Limited Range of Accommodation Types

### Issue

The Mount Buller Alpine Village offers a variety of accommodation facilities including hotels, motels, commercial lodges and chalets, commercial flats and apartments, private flats, ski clubs and some private ski lodges.

The past decade has seen development confined largely to private apartments, with many of the older club lodges struggling to maintain financial viability.

This change to the nature and form of accommodation at Mount Buller is the cause of some concern amongst stakeholders and the ARMB. These changes are largely due to a lack of differentiation in the zoning controls, whereby land used for 'accommodation' does not require a planning permit and encompasses both private dwellings and group accommodation (i.e. lodges), therefore leading to development which may be more financially viable for developers but is less aligned with the strategic vision of the Resort.

There is a need for strategic guidance regarding the type of accommodation required and the tenure range for such housing.

### Recommendations

- Consideration and resolution is required to ensure that future development at the Resort is equitable by providing a wide range of accommodation types. This will partly be achievable through the Affordable Housing Strategy which is to be implemented by ARMB, which can then feed through specific planning mechanisms.
- Planning mechanisms could include an Incorporated Plan or Design and Development Overlay which identifies and designates sites/areas/precincts for certain types of land uses and development, thereby providing guidance for these land uses which will discourage ad-hoc development.
- Implementation of leases which are administered by the ARMB and have the ability to restrict land uses. This would be able to be implemented as each lease came up for renewal and is likely to be a longer term solution.

## General Planning Issues

## 6.8 Native Title

### Issue

Native title must be considered when Government or other Crown land managers are permitting or carrying out any activity on Mount Buller, as the Alpine Resorts are permanent Crown land reserves. The *Native Title Act 1993* recognises and protects the native title rights and interest of Aboriginal and Torres Strait Islander people across Australia and as such sets out procedures that managers of Crown land must comply with.

Future development on Mount Buller may impact on native title if it is not considered to be extinguished; for instance, the construction of new facilities, extensions to existing buildings, new roads or tracks and the installation of infrastructure such as power lines.

Land that meets extinguishment criteria, such as public works having been undertaken prior to 23 December 1996, are not subject to the requirements of the Native Title Act. In addition, it is noted that all activities that involve earthworks on Crown land must be conducted in a manner consistent with the State and Commonwealth Cultural Heritage legislation.

### Recommendation

- Engage an archaeologist to review matters associated with Native Title.

## 6.9 Tourism



### Issue

The Mount Buller masterplan must address the provision of public space and community facilities necessary to establish Mount Buller as a vibrant, year round community. Currently, most recreational activity is located in close proximity to the Village with majority of winter activity utilising the lift system and ski field operated by Buller Ski Lifts.

Land use planning should facilitate the development of outdoor recreational areas including parks and ovals as well as adventure recreation such as a flying fox and mountain biking. These public spaces and recreation areas would also serve to improve year-round amenity, thereby encouraging tourism in the non-winter months. It is also envisioned that commercial and cafe precincts within the Village could take advantage of existing views and vistas to attract business in the non-winter months; however there is a need for further research into the market potential and product requirements for year-round tourism in order to inform future land uses.

### Recommendations

- The zoning of the land needs to facilitate the provision of recreational areas and activities (i.e. flying fox); however it is likely that recreational land uses will be subject to the normal planning process. Further environmental studies will be required to justify summer activities.
- With reference to the promotion of public events at Burke Street and summer activities on Horse Hill, Clause 62.03 of the Alpine Resorts Planning Scheme specifies that buildings and works relating to public events are exempt from the requirements of the planning scheme provided that the event has been authorised by the ARMB. In addition, a local policy should be introduced which would regulate public events for specific sites therefore providing more certainty in temporary land use outcomes.
- Local policies should serve to promote tourism by encouraging engaging development through complementary land uses and urban design i.e. encouraging active frontages along the Burke Street extension.

## 6.10 Aboriginal Cultural Heritage

### Issue

An Aboriginal Heritage Management Plan for the Mount Buller Alpine Village was developed and adopted in 1999. This plan indicates sensitive areas that would require further archaeological investigation if developed. It is important to note that this plan was prepared prior to the implementation of the current legislation (the *Aboriginal Heritage Act 2006*) hence has not been prepared in accordance with current requirements.

In accordance with the Environmental Management Plan 2007, it is policy to seek the advice of a qualified archaeologist wherever proposed developments or other ground disturbance activities may impact upon recorded Aboriginal archaeological sites and areas of Aboriginal archaeological potential.

Past development of accommodation and ski field infrastructure have required localised Aboriginal archaeological studies to be completed. Currently, cultural heritage impact assessment reports must be prepared for development to be located on recorded or potential Aboriginal archaeological sites.

It is not envisaged that this requirement will change in light of future development, particularly greenfield sites; indeed, it is more prudent than ever to ensure that Aboriginal heritage is protected and preserved as a result of the new Aboriginal Cultural Heritage Act 2006. In accordance with this Act, a planning permit cannot be issued for a proposal until a Cultural Heritage Management Plan has been prepared and submitted to Aboriginal Affairs Victoria (AAV) for consideration. This is the cause of delays for many existing applications.

### Recommendation

- It is strongly recommended that an archaeologist be engaged to review all sites identified for development in the masterplan. This includes new roads, proposed realignment of existing chairlifts, new water storage and snow making facilities and future development at Horse Hill. This should be activated as soon as possible as it has the potential to delay any future development significantly both in terms of time and cost.

In particular, a cultural heritage study needs to be undertaken for Horse Hill which will be necessary prior to its development, especially considering the likelihood of the extensive earthworks required to be undertaken.

## 6.11 ESD Principle Implementation

### **Issue**

The Mount Buller masterplan should balance economic, social and environmental outcomes by promoting passive and active ESD principles as well as water use reduction, retention and reuse and the use of sustainable building materials.

State Government policy is committed to attaining an environmentally sustainable future for the Mount Buller Resort and requires ESD principles remain integral to the masterplan. In particular, new public buildings should meet an agreed standard of Ecologically Sustainable performance, minimise energy use and maximise energy efficiency, reduce site waste and encourage the recycling of materials and ensure a reduction in greenhouse emissions. Similarly, it is considered that all future development – not merely public buildings – should incorporate ESD principles. The inclusion of ESD principles in the masterplan will also assist in gaining governmental support.

### **Recommendations**

- To ensure new development and redevelopment include minimum ESD principles, requirements should be provided under a revised Schedule to the Design and Development Overlay or as part of an existing or future incorporated plan.
- ESD principles should be broadly discussed through a specific local planning policy which would set the objectives and intent, whilst the overlay provides more specific requirements and decision guidelines.

## 6.12 Existing Development Sites

### **Issue**

The Alpine Resorts Planning Scheme makes provision for growth and development during 2006-2016 by identifying four key development sites within the Village Precinct: One Tree Hill, the Gateway Site, Faulty Hill and West Summit Road. Currently, only One Tree Hill and the Gateway Site have incorporated plans in the planning scheme.

The Masterplan identifies further redevelopment/development sites as well as proposing alternate uses at these locations such as the Gateway site which will accommodate the proposed gondola station.

### **Recommendation**

- The likelihood of developing these existing development sites should be reviewed in the context of the masterplan. Where these existing sites are proposed, the masterplan should make reference to them as existing redevelopment sites.

## 6.13 Bushfires

### **Issue**

Mount Buller is impacted by the Wildfire Management Overlay highlighting the vulnerability of the land to bushfire. The Resort is also governed by the Mount Buller Alpine Resort Wildfire Management Plan 2009. Planning applications for buildings and works associated with certain land uses must comply with fire-risk requirements. It is recognised that the Mount Buller Alpine Resort Wildfire Management Plan 2009 is to be reviewed in late November 2010.

Further, it is noted that new bushfire requirements are being introduced which will require new development to undertake a bushfire risk assessment.

Currently, there is ambiguity in regards to these controls at State Government level as the balancing of vegetation removal as a result of bushfire protection and maintaining biodiversity need to be assessed. This is currently being resolved.

#### **Recommendations**

- The Mount Buller Alpine Resort Wildfire Management Plan 2009 which is to be reviewed November 2010, should be reviewed based on the objectives and preliminary blueprint of the Mount Buller Masterplan. It is recommended that the vision for Mount Buller will inform wildfire management strategies, especially in consideration to bushfire preparedness for new development. The plan should be developed with cooperation from CFA, DSE and ARMB and continue to be reviewed annually. A key likely outcome will also include the designation of areas as fire refuges and potentially the development of a “bunker” or similar.
- The requirements of the wildfire management plan can be implemented through design controls (ie. requiring fire resistant materials to be used in the construction of new buildings) as well as local planning policies. Some of these requirements are currently triggered through the Wildfire Management Overlay.

## **6.14 Governance Structures**

### **Issue**

The Alpine Resorts are permanent Crown land reserves, with the Minister for Planning being the responsible authority for the Mount Buller Alpine Resort. The underlying rationale for Crown land reserves is for the land to be available for all to use and enjoy.

The Department of Planning and Community Development (DPCD) administers the Alpine Resorts Planning Scheme on behalf of the Minister for Planning.

The Mount Buller Alpine Resort is managed by the Mount Buller Alpine Resort Management Board (ARMB) who is appointed by, and responsible to, the Minister for Environment and Climate Change.

The ARMB is involved in land use planning through:

- Section 55 of the Act and their referral authorities status for service provision and site stability; and
- Section 52 of the Act which provides the ARMBs, as Crown land managers, with the powers to provide comment on development proposals.

There are a number of key stakeholders involved in decision making at Mount Buller. This is often a source of conflict and can lead to time delays in applications being assessed.

A potential solution to this issue which was raised during the masterplan process, was the introduction of a committee or panel to liaise between parties to assist in “streamlining” the process. Although a good concept, often the introduction of a new layer leads to further delays and further hurdles.

### **Recommendation**

- It is considered that the masterplan in itself will create certainty for planning outcomes on the Mountain which will result in a more streamlined approach. Particularly if the masterplan is adopted as an incorporate document in the Alpine Resorts Planning Scheme as it will then have statutory bearings.



## 7. CASE STUDIES

As part of this review, the following resorts were adopted as case studies:

- Falls Creek
- Mount Hotham
- Mount Baw Baw

The purpose of this review was to identify opportunities and constraints of the planning controls of the other resorts and to identify if the planning issues experienced were limited to Mount Buller or were experienced across the board. Discussions with DPCD included reference to these other resorts highlighting both opportunities and constraints.

### 7.1 Falls Creek

#### Existing Planning Controls

Zoning	Comprehensive Development Zone 1 & 2 Public Park and Recreation Zone
Overlays	Wildfire Management Overlay Erosion Management Overlay Environmental Significance Overlay Design and Development Overlay 2 – Falls Creek Alpine Resort Village
Local Planning Policies	Aboriginal Cultural Heritage Carparking Management of Geotechnical Hazard Local Planning Policy

#### Opportunities

- Currently reviewing their masterplan and ways in which it can be implemented
- Uses the Schedule to the Design and Development Overlay to guide development in the Village
- Uses the Schedule to the CDZ to guide use and development
- Currently undertaking vegetation mapping over a broad area to identify areas of high conservation value that would require more stringent development conditions

#### Constraints

- The overlay and zone schedules are out-of-date hence are currently being reviewed
- Currently going through masterplanning process so many of the existing controls are likely to change in the near future

#### Future Controls

An updated masterplan for the resort is currently being developed. Key themes to be addressed:

- *Reinforce existing winter activity nodes and encourage improved all season utilisation of those facilities.*
- *Build on and compliment momentum of current development at Slalom Plaza initiated in response to the previous Masterplan and ski field development studies, thereby gaining added value from past R&D investment.*
- *Create a sense of arrival at the village and encourage development of an all season town centre and village square.*
- *Enhance and rehabilitate existing natural and man-made attributes of the resort, including topography, views and the Rocky Valley Dam.*
- *Concentrate new development on and around 'brown field' sites in order to address issues of reduced environmental impact, access, sustainability and infrastructure capacity.*
- *Identify a number of localities or 'precincts' with distinct yet complimentary features which will allow appropriate and varied future development of the resort.*
- *Incorporate wherever possible best practice urban design principles of pedestrian prioritization and vehicle management.*

DPCD have advised that they are currently working with the architects and consultant team for Falls Creek in developing an implementation strategy. Currently undertaking background reviews to identify likely issues (ie. native vegetation).

At this stage, how the above will be implemented is not clear as they are currently working through an implementation strategy.

## 7.2 Mount Hotham

### Existing Planning Controls

Zoning	Comprehensive Development Zone 1 & 2 Public Park and Recreation Zone
Overlays	Wildfire Management Overlay Erosion Management Overlay Environmental Significance Overlay Heritage Overlay
Local Planning Policies	Carparking Management of Geotechnical Hazard Local Planning Policy
Incorporated Documents	Mt Hotham Comprehensive Development Plan 1 – Hotham Village (2007) Mt Hotham Comprehensive Development Plan 2 – Interurban Break Mt Hotham Comprehensive Development Plan 3 – Davenport Road Frontage Mt Hotham Comprehensive Development Plan 4 – Davenport Oversnow

### Opportunities

- Uses the Schedule to the CDZ to guide use and development
- All developable land falls within one of the four Comprehensive Development Plans areas i.e. the Hotham Village CDP guides development for the whole village, rather than key priority sites
- Areas of natural or cultural heritage can be identified and preserved via the Heritage Overlay

### Constraints

- Uses Incorporated Documents to control development in separate “areas” which may result in incompatible development
- No other planning controls regulating built form (i.e. DDO) which creates uncertainty and leads to poor urban design

## 7.3 Mount Baw Baw

### Existing Planning Controls

Zoning	Comprehensive Development Zone 1 & 2 Public Park and Recreation Zone
Overlays	Wildfire Management Overlay Erosion Management Overlay
Local Planning Policies	Management of Geotechnical Hazard Local Planning Policy

### Opportunities

- Uses the Schedule to the CDZ to guide use and development
- Currently undertaking a native vegetation assessment of the Resort to inform a framework for revegetation and rehabilitation

### **Constraints**

- Lack of stringent controls may result in ad-hoc development, poor urban design and built form, loss of the environment and other elements significant to Mount Baw Baw.

## **7.4 Summary of Case Studies**

- The Falls Creek masterplanning process highlights that appropriate studies and mapping should be undertaken to inform a realistic vision for the Resort.
- The Mount Hotham incorporated documents encompass a wider area than that of Mount Buller, whereby all developable land is included in one of the four comprehensive development plan areas. This serves to create additional certainty for proponents, guides future development and facilitate development in the Resort overall rather than concentrate development at certain priority sites. However, care must be taken to ensure that planning within certain areas is not treated in isolation from Mount Hotham as a whole particularly understanding the environmental issues which impact the Resort.
- Mount Baw Baw does not contain as many stringent controls as the other Resorts reviewed, including Mount Buller. However, Resort Management has taken a “pro-active” approach to future development, as it is noted that an ecological consultant is currently undertaking research on native vegetation on Mount Baw Baw in order to inform a framework for re-vegetation and rehabilitation. This is a key inhibitor of future development which is being addressed now to reduce risk later on.
- In relation to Mount Buller, many of the opportunities identified are similar. However, there appears to be a lack of up-to-date ecological and cultural heritage studies being undertaken on Mount Buller to inform the masterplan and gain governmental support for future amendments. In addition, comprehensive development plans should be devised which would cater to the Alpine Village as a whole, as well as focusing on specific priority sites for development.

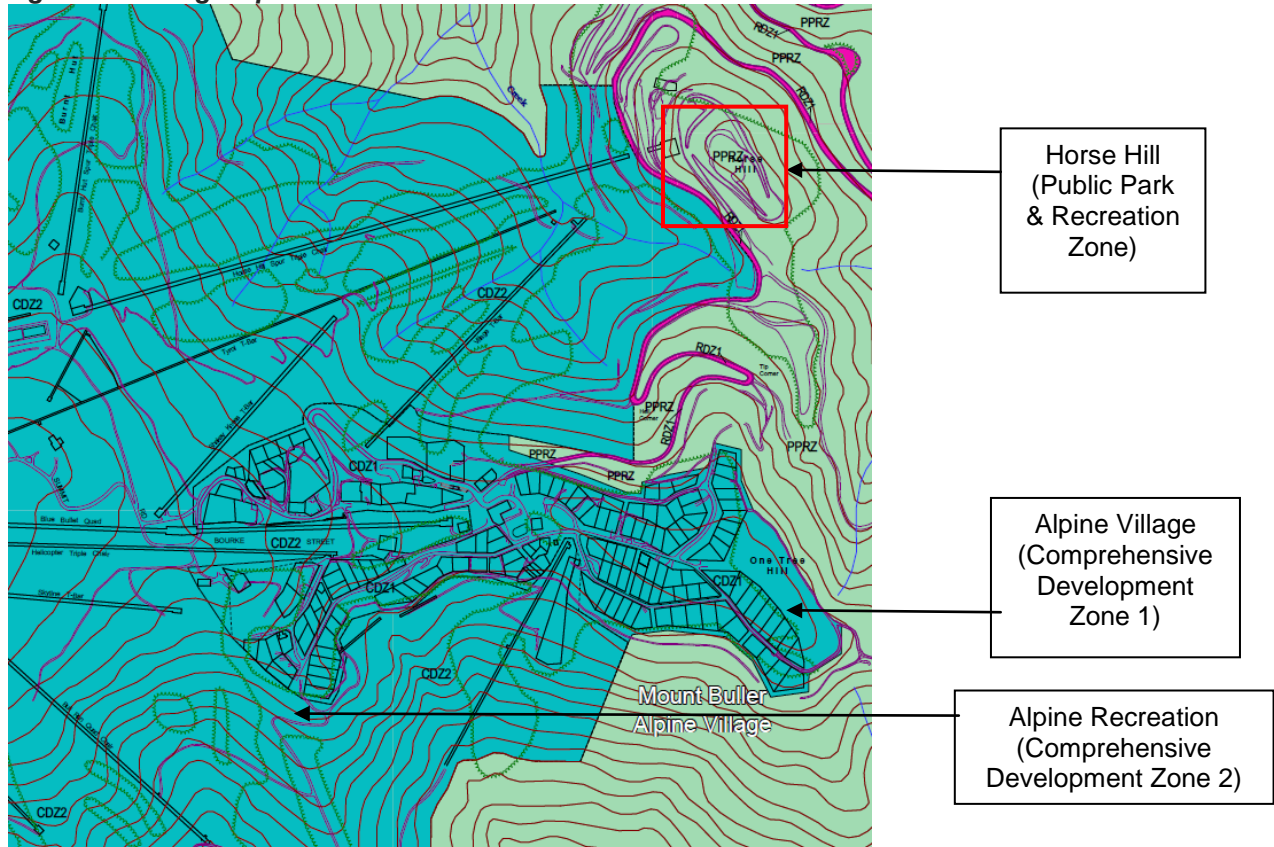
## 8. CURRENT PLANNING CONTROLS

This section provides a review of the current planning controls impacting the land.

### 8.1 Zoning

Each precinct is located in its own zone which has its own individual requirements relating to use and development pursuant to the Alpine Resorts Planning Scheme;

**Figure 2. Zoning Map**



Source: [www.dse.vic.gov.au/planningscheme](http://www.dse.vic.gov.au/planningscheme)

#### Comprehensive Development Zone – Schedule 1

##### Objectives

The Alpine Village is zoned Comprehensive Development Zone – Schedule 1. The purpose of the Schedule to the zone is:

- To **encourage development and year round use** of land for a commercially orientated, alpine resort.
- To **provide for residential development** in a variety of forms in an alpine environment.
- To encourage development and the use of the land which is in accordance with sound environmental management and land capability practices, and which takes into account the significance of the environmental resources.
- To provide for the **integrated development of land** in accordance with a comprehensive development plan incorporated into this scheme.

##### Triggers

- The use of the subject land for accommodation (other than camping and caravan park and corrective institution), car park, leisure and recreation (other than a motor racing track), office, retail premises and road does not require a planning permit within this zone.
- The use of land for accommodation must comply with certain requirements, being:

- each accommodation unit must be connected to reticulated sewerage, connected to a reticulated potable water supply or have an alternative potable water supply
- must be connected to a reticulated electricity supply and an alternative energy supply and all services must be underground.
- Failure to comply with the requirements will trigger the need for a planning permit for the use of land for accommodation purposes.
- A permit is required to subdivide land and must comply with the conditions listed under Clause 3.1 of the Schedule to the Zone. In addition, all applications to subdivide land will be referred to the relevant utility service providers.
- A permit is required to construct a fence.
- A permit is required to construct a building or construct or carry out works unless the buildings and works are exempt under Clause 4.1-1 or are in accordance with an approved site development plan. Further details regarding this Clause are provided in the following section.
- It is noted that a Site Environmental Management Plan is required for all applications for buildings and works including native vegetation removal.
- In addition, any use or development that requires connection to reticulated services and involves alteration to the topography of the land, including native vegetation removal, will be referred to the relevant utility service providers and the Secretary of the Department of Sustainability and Environment, respectively.

## **Comprehensive Development Zone – Schedule 2.**

### **Objectives**

The Alpine Recreation area is zoned Comprehensive Development Zone – Schedule 2. The purpose of the Schedule to the zone is:

- *To identify areas associated with the development and use of an alpine resort on which passive and active recreation occur.*
- *To enable the development and the use of the land which is in accordance with sound environmental management and land capability practices, and which takes into account the significance of the environmental resources.*
- *To minimise impacts on significant landscapes.*
- *To minimise impacts on areas of significant vegetation.*
- *To minimise impacts on habitat and habitat corridors for indigenous fauna.*

### **Triggers**

- The use of the subject land for leisure and recreation (subject to certain land use exclusions as per the schedule to the zone), industry (must be for the manufacture of snow), education centre (must be teaching of alpine activities), road and car park does not require a planning permit within this zone.
- Most land uses require a planning permit under the schedule to the zone.
- A permit is required to subdivide land and must comply with the conditions listed under Clause 2.1 of the Schedule to the Zone. In addition, all applications to subdivide land will be referred to the relevant utility service providers.
- A permit is required to construct a fence.
- A permit is required to construct a building or construct or carry out works unless the buildings and works are exempt under Clause 3.1-1 or are in accordance with an approved site development plan. Further details regarding this Clause are provided in the following section.
- It is noted that a Site Environmental Management Plan is required for all applications for buildings and works including native vegetation removal.
- In addition, any use or development that requires connection to reticulated services and involves alteration to the topography of the land, not including native vegetation removal, will be referred to the relevant utility service providers and the Secretary of the Department of Sustainability and Environment, respectively.

Pursuant to Clauses 4.1-1 and 3.1-1 of Schedules 1 and 2 of the Comprehensive Development Zone respectively, buildings and works do not require a planning permit when:



- Materials and finishes for any new development meet the requirements of the relevant schedule to the Design and Development Overlay or Comprehensive Development Plan incorporated into the planning scheme and are to the satisfaction of the responsible authority; and
  - A Site Environmental Management Plan has been prepared and implemented in accordance with the requirements of Clauses 4.3-3 and 3.3-3 of Schedules 1 and 2 of the Comprehensive Development Zone respectively.
  - Minor buildings and works including building and essential service alterations, minor services and earthworks, and minor buildings or works undertaken by or on behalf of an Alpine Resort Management Board does not require a planning permit or site development plan approval.
  - However, it is noted that materials and finishes that are exempt from requiring a planning permit under the Comprehensive Development Plan still triggers the requirement for a site development plan approval application.
- The Comprehensive Development Plans incorporated into the Alpine Resorts Planning Scheme are as follows:
    - **One Tree Hill – Mount Buller – Comprehensive Development Plan**
    - **Buller Gateway Comprehensive Development Plan**
  - A site development plan approval application can be submitted to the Responsible Authority if the proposed buildings and works are generally in accordance with the requirements of the relevant Comprehensive Development Plan.
  - When a site development plan application is not generally in accordance with the requirements of the relevant Comprehensive Development Plan, a planning permit is required under Clauses 4.1 and 3.1 of Schedules 1 and 2 of the Comprehensive Development Zone respectively.
  - An application to subdivide land, construct a building, or construct or carry out works (including the removal, destruction or lopping of native vegetation) which is consistent with a comprehensive development plan is exempt from notice requirements and appeal rights.

## **Public Park And Recreation Zone**

### **Objectives**

Horse Hill is zoned Public Park and Recreation Zone as is the general National Park (excluding the village centre and recreation area). The purpose of this zone is:

- **To recognise areas for public recreation and open space.**
- **To protect and conserve areas of significance where appropriate.**
- **To provide for commercial uses where appropriate.**

### **Triggers**

- Most land uses are planning permit required unless the use is undertaken by or on behalf of the public land manager.
- Heliport – permit required unless by or on behalf of public land manager.
- Transport terminal is a prohibited use.
- Can implement an Incorporated Document under the provisions of this zone – supersedes requirements of the zone.

### **Response**

- The Masterplan may influence or trigger the need for changes to be made to the existing zoning of the land in order to better facilitate the vision for the Mountain. However, it is considered that apart from Horse Hill, most land uses proposed in the Alpine Village and Recreation Areas are permissible under the current zones.
- Given that the Masterplan does not provide specific details regarding built form, comment cannot be made regarding compliance of the masterplan against built form requirements.

## 8.2 Overlays

The land comprising the Mount Buller Alpine Village and Recreation Areas are impacted by the following overlays:

- Design and Development Overlay 1 – Mount Buller Alpine Resort Village
- Design and Development Overlay 3 - Mount Buller Ski Fields
- Environmental Significance Overlay 1 – Mountain Pygmy - Possum
- Erosion Management Overlay 1 - Management of Geotechnical Hazard
- Wildfire Management Overlay

Horse Hill is impacted by the following overlays:

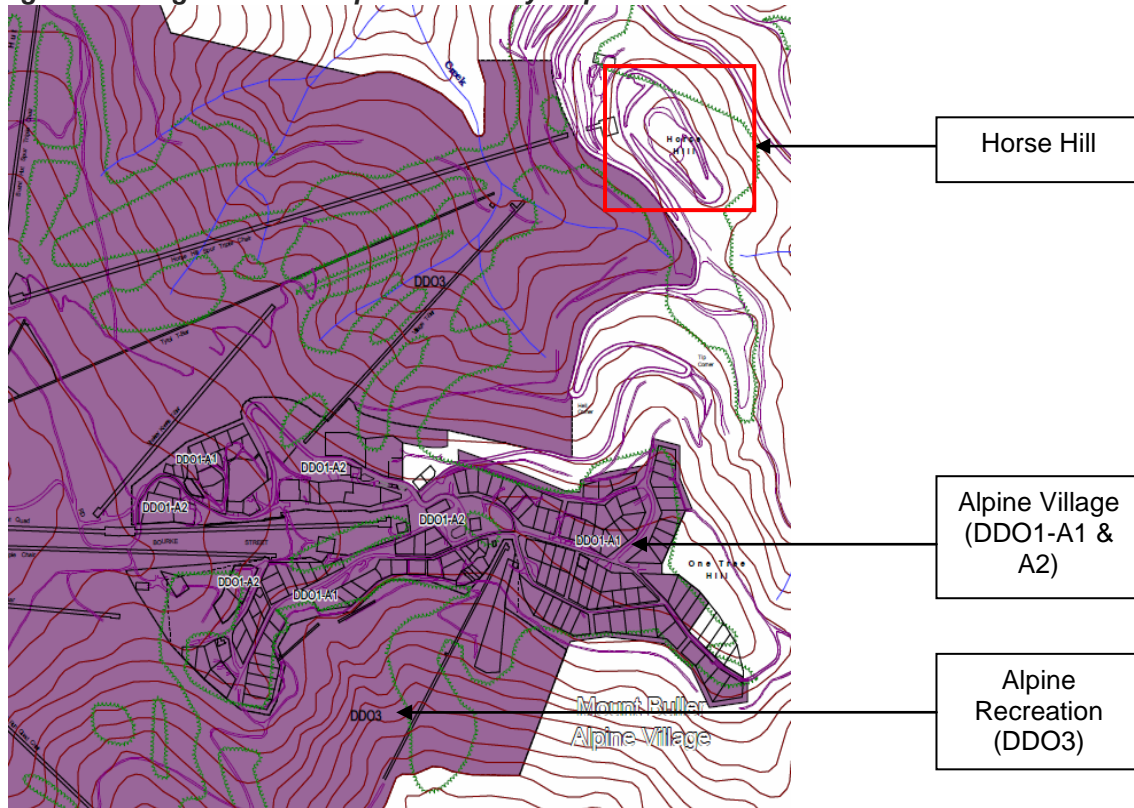
- Erosion Management Overlay 1 - Management of Geotechnical Hazard
- Wildfire Management Overlay

### **Response**

- Generally, the overlays impacting the Mount Buller Alpine Village and Recreation Areas relate to future buildings and works on site and how they respond to or address a specific issue (ie. wildfire and high quality urban design).
- Although the masterplan is aware of these issues, an assessment of the masterplan against the objectives of these overlays cannot be undertaken until further details regarding built form are known.

### 8.3 Design and Development Overlay

**Figure 3. Design and Development Overlay Map**



Source: [www.dse.vic.gov.au/planningscheme](http://www.dse.vic.gov.au/planningscheme)

#### Objectives

The Alpine Village is impacted by the **Design and Development Overlay – Schedule 1 (Mount Buller Alpine Resort Village)**. The purpose of the Design and Development Overlay – Schedule 1 is:

- To ensure that development within the Mount Buller Village creates and enhances the identifiable individual resort character through built form, visual amenity, retaining vegetation where possible and giving consideration to natural features.
- To ensure building design provides a visually attractive and functionally effective interface with the public domain, particularly within the Village Square and Bourke Street ski run.
- To ensure that development is visually attractive all year round.
- To ensure view corridors are protected between buildings and provide opportunities for view sharing where reasonable and practical.
- To provide safe pedestrian and skier access and linkages within the Village to the ski fields.

#### Triggers

- A permit is required to subdivide land.
- A permit is required for all buildings and works unless the proposed buildings or works are building alterations, minor services or earthworks, alterations to essential services, installation of an automatic teller machine or minor buildings or works undertaken by or on behalf of an Alpine Resort Management board in accordance with Clause 2.0 of the Schedule to the Overlay.
- The Schedule to the Overlay specifies different building and design requirements for land designated **DDO1-A1** and **DDO1-A2**.
- The requirements of **DDO1-A1** are as follows:
  - The maximum height of any part of a building is 3 storeys or 11 metres above natural ground level, whichever is the lesser height. A permit may be granted to



- increase the height of any roof structure or chimney by 1.5 metres provided no more than 20% of the roof area exceeds 11 metres in height.*
  - *A building must be setback in accordance with the requirements of Clause 2.1 of the Schedule to the Overlay. A permit may be granted to vary setbacks.*
  - *The maximum site coverage is 60% of the total site area. A permit may be granted to vary site coverage.*
- The requirements of **DDO1-A2** are as follows:
    - *The maximum height of any part of a building is 4 storeys or 15 metres above natural ground level, whichever is the lesser height. A permit may be granted to increase the height of any roof structure or chimney by 1.5 metres provided no more than 20% of the roof area exceeds 15 metres in height.*
    - *A building must be setback in accordance with the requirements of Clause 2.1 of the Schedule to the Overlay. A permit may be granted to vary setbacks.*
    - *The maximum site coverage is 75% of the total site area. A permit may be granted to vary site coverage.*
  - In addition, development should not cast a shadow over the Village Square, Athletes Walk, Summit Road or Bourke Street ski run for more than two hours in the period 10.00 am to 3.00 pm on June 2<sup>nd</sup>.
  - New development also needs to meet specified materials and finishes requirements in accordance with Clause 2.3 of the Schedule to the Overlay.
  - The Schedule to the Overlay provides guidelines for the management of native vegetation. In particular, it is recognised that new development should not be visually intrusive and be generally level or below the top of the existing tree canopy, development should promote the principles of net gain of native vegetation, emphasis should be given to retaining vegetation where possible and development proposals should include provision for revegetation on the site (or on a designated offsite).
  - An application to construct a building or construct or carry out any works must be accompanied by the following information, as appropriate:
    1. *Urban design impact statement*
    2. *Design response*
    3. *Roof plan*
    4. *Landscape concept plan*

### **Objectives**

The Alpine Recreation Areas are impacted by the **Design and Development Overlay – Schedule 3 (Mount Buller Ski fields)**. The purpose of the Design and Development Overlay – Schedule 3 is:

- *To ensure that development within the Mount Buller ski fields creates and enhances the identifiable individual resort character through siting and built form.*
- *To ensure development is not visually intrusive when viewed from key public vantage points within the Village, from Mount Buller Access Road and surrounding ski fields.*
- *To ensure buildings within the ski fields are visually attractive and functionally effective all year round, particularly at key interfaces within the Village such as the Village Square, Helicopter Flat and in proximity to lease sites having frontage to the ski fields.*
- *To minimise the visual impact of snowfield infrastructure and facilities upon the landscape values of the Resort.*
- *To ensure development avoids and minimises impacts upon indigenous vegetation, fauna and natural features.*
- *To ensure that development is visually attractive all year round.*

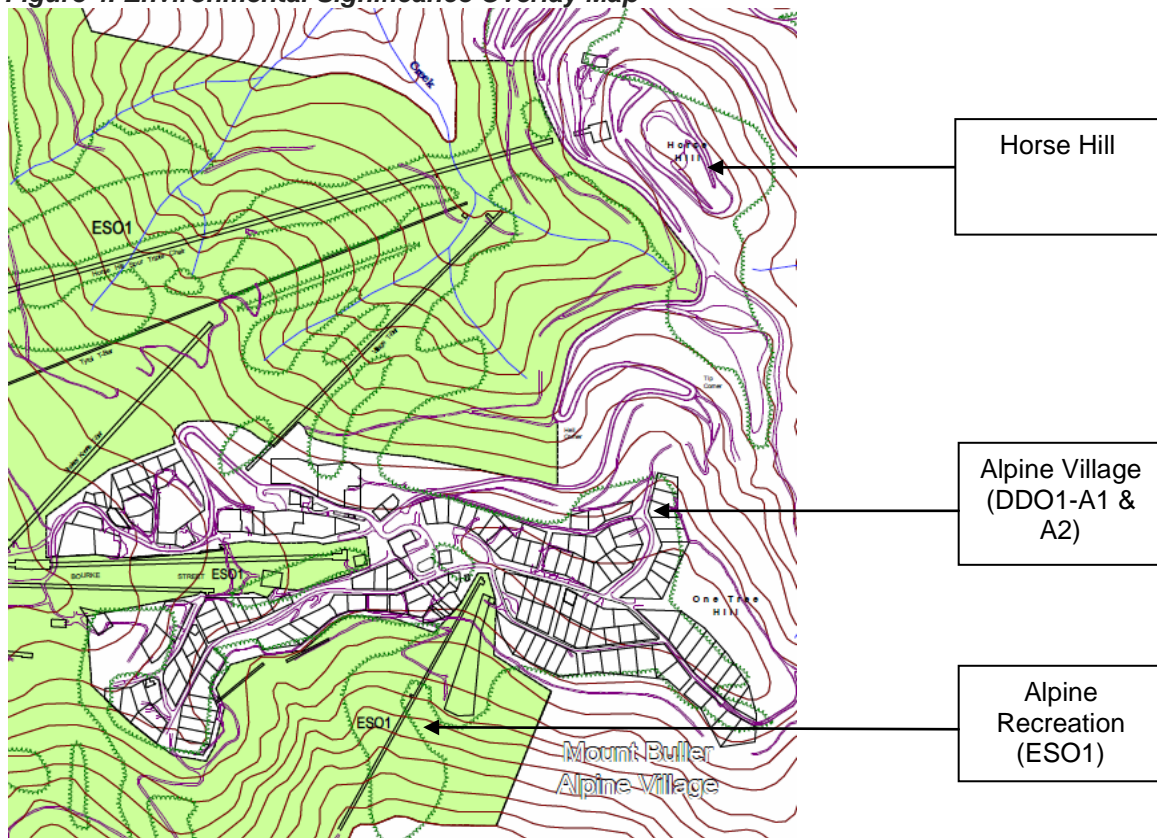
### **Triggers**

- A permit is required to subdivide land.
- A permit is required for all buildings and works unless the proposed buildings or works are building alterations, minor services or earthworks, alterations to essential services or minor buildings or works undertaken by or on behalf of an Alpine Resort Management board in accordance with Clause 2.0 of the Schedule to the Overlay.

- Development that is not for the purpose of ski field operations should not exceed a height of 11 metres above natural ground level for any part of a building.
- Development for the purpose of ski field operations should not exceed a height of 15 metres above natural ground level for any part of a building.
- It is noted that height requirements do not apply to telecommunications towers and lift tower infrastructure.
- New development also needs to meet specified materials and finishes requirements in accordance with Clause 2.3 of the Schedule to the Overlay.
- The Schedule to the Overlay provides guidelines for the management of native vegetation. In particular, it is recognised that new development should promote the principles of net gain of native vegetation and development proposals should include provision for revegetation on the site (or on a designated offsite).
- An application to construct a building or construct or carry out any works must be accompanied by the following information, as appropriate:
  - *Design response*
  - *Plan providing for the management of native vegetation*

## 8.4 Environmental Significance Overlay 1 – Mountain Pygmy Possum

Figure 4. Environmental Significance Overlay Map



Source: [www.dse.vic.gov.au/planningscheme](http://www.dse.vic.gov.au/planningscheme)

### Objectives

The Alpine Recreation Areas are impacted by the **Environmental Significance Overlay – Schedule 1 (Mountain Pygmy-possum)**. The environmental objectives of the Environmental Significance Overlay – Schedule 1 are:

- To preserve and enhance Mountain Pygmy-possum habitat and identified linkages.
- To prevent the destruction and fragmentation of the existing Mountain Pygmy-possum habitat.
- To provide movement corridors for the Mountain Pygmy-possum.
- To ensure development does not have an adverse impact upon Mountain Pygmy-possum habitat.

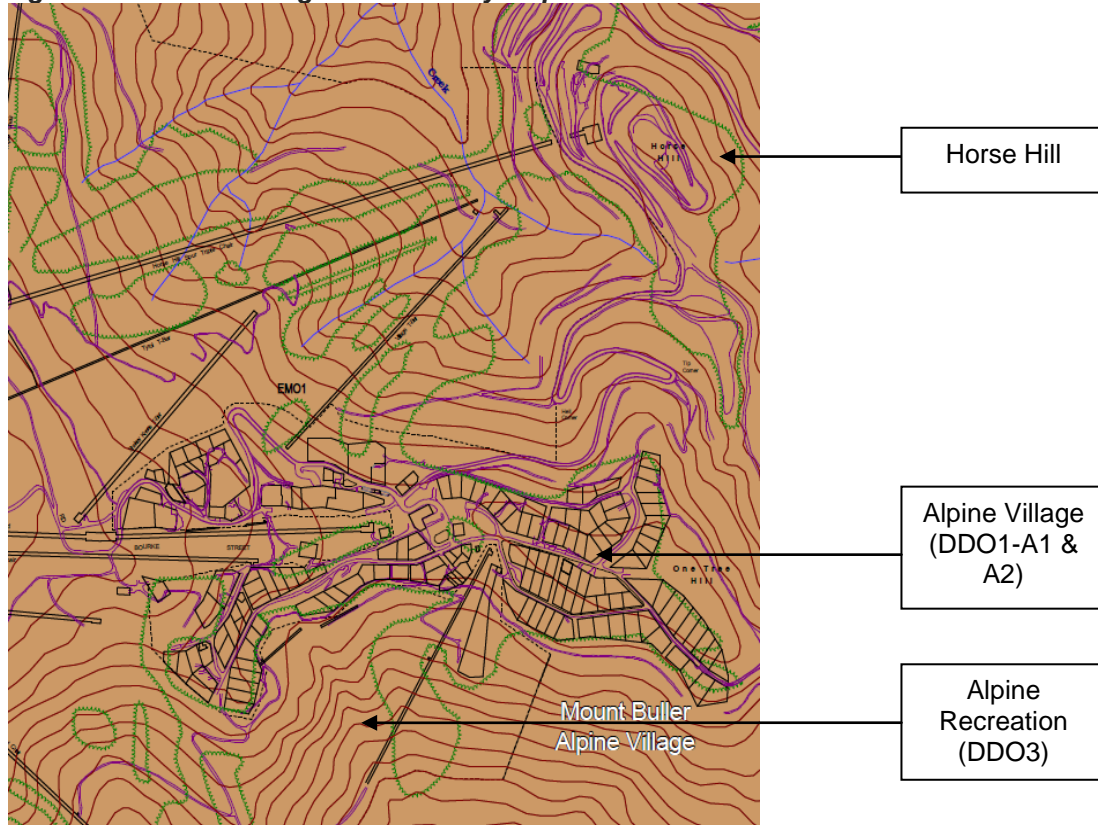
### Triggers

- A planning permit is required to:
  - Construct a building or construct or carry out works
  - Construct bicycle pathways and trails
  - Construct a fence
  - Remove, destroy or lop any vegetation, including dead vegetation, unless listed in the table of exemptions under Clause 42.01-3
  - Subdivide land
- It is noted that an application to construct a building or construct or carry out works that is consistent with a comprehensive development plan is exempt from appeal rights.

- All applications will be referred to the Department of Sustainability and Environment (DSE) pursuant to Clause 66.04.

## 8.5 Erosion Management Overlay

**Figure 5. Erosion Management Overlay Map**



Source: [www.dse.vic.gov.au/planningscheme](http://www.dse.vic.gov.au/planningscheme)

### Objectives

The Alpine Village, Recreation Areas and Horse Hill are impacted by the **Erosion Management Overlay – Schedule 1 (Management of Geotechnical Hazard)**. The purpose of the Erosion Management Overlay – Schedule 1 is:

- To ensure that applications for development are supported by adequate investigation and documentation of geotechnical and related structural matters.
- To ensure that development is appropriate to be carried out either conditionally or unconditionally, having regard to the results of those geotechnical and related structural investigations.
- To ensure that development is only carried out if identified geotechnical and related structural engineering risks are effectively assessed.

### Triggers

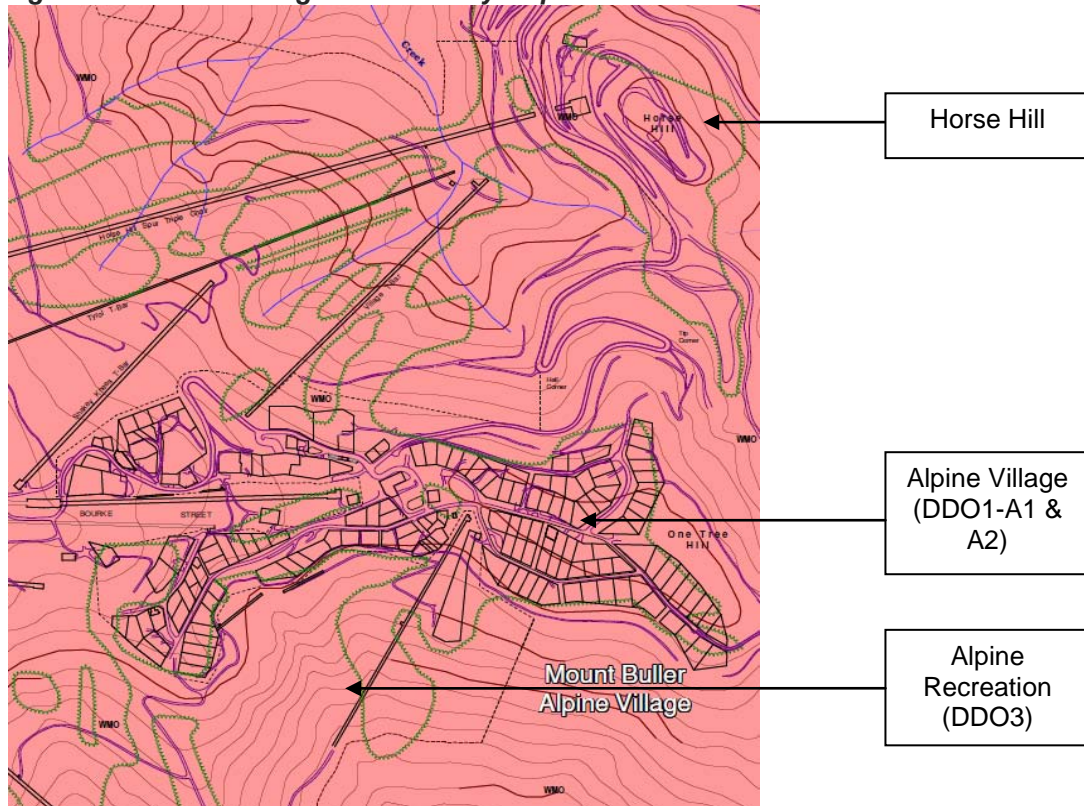
- A planning permit is required to:
  - Construct a building or construct or carry out works
  - Remove, destroy or lop any vegetation, including dead vegetation, unless listed in the table of exemptions under Clause 44.01-3
  - Subdivide land
- However, a permit is not required to construct a building or construct or carry out works (including the lopping, destruction or removal of vegetation) if a site development plan showing the

- proposed buildings and works is prepared and is generally in accordance with a comprehensive development plan incorporated into the Alpine Resorts Planning Scheme.
- A permit or site development plan approval is not required for the following buildings and works (excluding the removal, lopping or destruction of vegetation):
    - Non-structural building alterations
    - Non-structural repairs to or maintenance of an existing building or the erection of an advertising structure within an existing allotment
    - Minor earthworks
    - Minor building alterations
    - Minor services to a building
    - Minor buildings or works undertaken by or on behalf of an Alpine Resort Management Board associated with the provision of essential resort infrastructure
    - Installation of an automatic teller machine
    - Alterations to essential services of an existing building
  - It is noted that a site development plan or an application for a planning permit must be accompanied by a Preliminary Geotechnical Assessment that has been prepared or technically verified by a suitably qualified and experienced geotechnical practitioner.
  - Where a Preliminary Geotechnical Assessment identifies risk to property or persons as greater than low, a Quantitative or Semi Quantitative Risk Assessment prepared by a suitably qualified geotechnical practitioner is required.
  - An application must also be accompanied by the following information showing:
    - *The existing site conditions, including land gradient and the extent of any existing*
    - *erosion, landslip or other land degradation.*
    - *The extent of any proposed earthworks.*
    - *The means proposed to stabilise disturbed areas.*
  - An application under this overlay is exempt from notice requirements and review rights.
  - All applications will be referred to the relevant Alpine Resort Management Board pursuant to Clause 66.04.



## 8.6 Wildfire Management Overlay

**Figure 6. Wildfire Management Overlay Map**



Source: [www.dse.vic.gov.au/planningscheme](http://www.dse.vic.gov.au/planningscheme)

### Objectives

The Alpine Village, Recreation Areas and Horse Hill are impacted by the **Wildfire Management Overlay**. The purpose of the Wildfire Management Overlay is:

- To identify areas where the intensity of wildfire is significant and likely to pose a threat to life and property.
- To ensure that development which is likely to increase the number of people in the overlay area satisfies the specified fire protection objectives and does not significantly increase the threat to life and surrounding property from wildfire.
- To detail the minimum fire protection outcomes that will assist to protect life and property from the threat of wildfire.

### Triggers

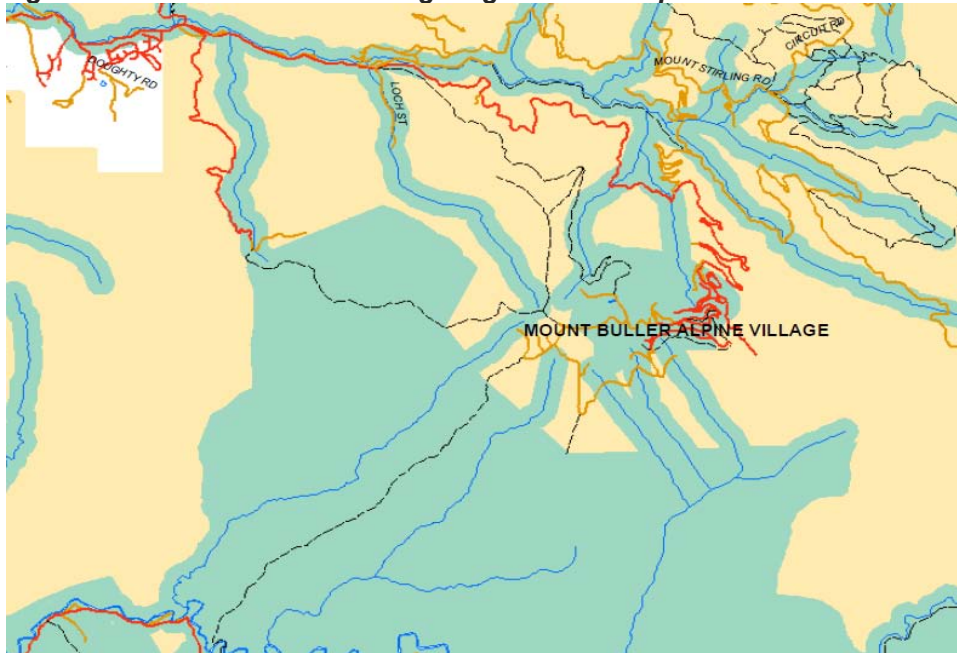
- A permit is required to subdivide land.
- A permit is required to construct a building or construct or carry out works associated with the following uses:
  - Accommodation
  - Child care centre
  - Education centre
  - Hospital
  - Industry
  - Place of assembly
  - Retail premises
  - Timber production

- However, this does not apply to buildings or works consistent with a fire risk management plan (i.e. Mount Buller Alpine Resort – Wildfire Management Plan 2009) or associated with a dwelling that is sited in the same location on the land as a dwelling that was damaged or destroyed by bushfire, alterations or extensions to existing buildings used for accommodation, and buildings or works with a floor area of less than 100 square metres ancillary to a dwelling not used for accommodation.
- An application to subdivide land, construct a building or construct or carry out works must be accompanied by a statement which demonstrates that all fire protection requirements for water supply, access, buildings and works, vegetation and any other relevant matter have been considered and incorporated.
- An application under this overlay is exempt from notice requirements and review rights.
- All applications will be referred to the relevant fire authority pursuant to Clause 44.06-3.

## 9. CULTURAL HERITAGE MANAGEMENT PLAN

As per the map below, parts of the Alpine Village and Recreation Areas fall within areas of high cultural heritage sensitivity. The development of this land will require a due diligence report prepared by a suitably qualified archaeologist to determine whether a Cultural Heritage Management Plan is required.

**Figure 7. Areas of Cultural Heritage Significance Map**



Source: [www.aboriginalaffairs.vic.gov.au](http://www.aboriginalaffairs.vic.gov.au)

A planning permit cannot be issued until a Cultural Heritage Management Plan has been prepared and approved.



## 10. STATE PLANNING POLICY FRAMEWORK

The State Planning Policy Framework sets out the broad planning policies that apply to all land in Victoria. It is noted that the recent introduction of Amendment VC71 includes the revision of the SPPF and applies to all planning schemes. Accordingly, a summary of relevant Clauses impacting Mount Buller are outlined below:

### 10.1 Clause 12 - Environmental and Landscape Values

#### **Clause 12.01 Biodiversity**

Generally, this Clause seeks to protect Alpine areas including native vegetation and habitat.

#### **Clause 12.03 Alpine Areas**

The objective of this Clause is to *protect and manage significant environmental features and ecosystems and facilitate sustainable use and development of Alpine Resorts for year round use and activity, and to provide a framework for the planning of alpine areas.*

#### **Clause 12.04 Significant environments and landscapes**

As emphasised in previous sections of this Clause, it is of the utmost importance to protect Alpine areas including native vegetation and habitat.

With reference to these Clauses, we note the following:

- The Mount Buller masterplan seeks to review the efficiency of the existing Alpine Resort Environmental Management Plan and Comprehensive Development Plans in order to facilitate land use and development that is consistent with changing economic, social and environmental conditions.
- The proposed revitalisation of Horse Hill, Alpine Village and surrounds seeks to promote development for year long active recreation on Mount Buller.

### 10.2 Clause 13 - Environmental Risks

#### **Clause 13.03-2 Erosion and Landslip**

This Clause seeks to protect areas prone to erosion, landslip or other land degradation processes by limiting inappropriate development in unstable areas and promoting vegetation retention, planting and rehabilitation in areas prone to erosion and land instability.

#### **Clause 13.05-1 Wildfire Risk**

This Clause seeks to ensure the appropriate location and design of development in order to minimise the risk to life, property, the natural environment and community infrastructure from wildfire.

- In relation to both Clauses, it is noted that the land is encumbered by the Erosion Management Overlay and Wildfire Management Overlay. These Overlays set out the necessary requirements and permit triggers to promote the appropriate development of land with consideration to erosion and wildfire risks.

### 10.3 Clause 14 - Natural Resource Management

*Planning is to assist in the conservation and wise use of natural resources including energy, water, land, stone and minerals to support both environmental quality and sustainable development.*

#### **Clause 14.02-1 Catchment planning and management**

The objective of this Clause is *to assist the protection and, where possible, restoration of catchments, waterways, water bodies, groundwater, and the marine environment.*

- The Mount Buller masterplan seeks to facilitate sustainable land use and development that is considerate of existing catchments and waterways on Mount Buller.

## 10.4 Clause 15 - Built Environment and Heritage

### **Clause 15.03-2 Aboriginal Cultural Heritage**

The objective of this Clause is to 'protect and conserve places of Aboriginal cultural heritage significance'. This is an area for further investigation as aboriginal cultural heritage is likely to impact all future development.

## 10.5 Clause 17 - Economic Development

### **Clause 17.03 Tourism**

The objective of this Clause is *to encourage tourism development to maximise the employment and long-term economic, social and cultural benefits of developing the State as a competitive domestic and international tourist destination*. In response:

- The Mount Buller Alpine Village and surrounding areas are already generally complemented with suitable facilities and is in a key strategic position to serve the tourist market due to its proximity to Melbourne.
- The Mount Buller masterplan will enhance the objectives of this Clause given that the redevelopment of the Alpine areas will serve to promote the Resort as a year round visitor destination and generate greater economic spill over effects.

## 11. LOCAL PLANNING POLICY FRAMEWORK

The following is a summary of local planning policies which impact Mount Buller. These policies provide broad guidance regarding land use and development in the Alpine Village and surrounding ski fields and highlight the importance of Mount Buller in the social, environmental and economic context of regional Victoria. However, it is highlighted that these policies are overdue for a review and therefore have a capacity to be updated in accordance with the objectives of the Mount Buller masterplan. We understand that DPCD are currently undertaking a review of the Municipal Strategic Statement which is expected to be exhibited late 2010-early 2011.

### 11.1 Clause 21.05 - Mt Buller Strategic Statement

**Clause 21.05-1 Resort Profile** This policy identifies the Mt Buller Alpine Resort (the Resort) as a contributor to the tourism sector of the State and region and a key destination for active and passive alpine recreation experiences all year round.

This policy provides a broad outline of the influences and issues that should inform future development in this area, as identified in **Clause 21.05-2 Key Influences**. In particular, the following influences are identified:

- **Significant flora and fauna communities** – integrity of flora, fauna and biodiversity values may be threatened by pressure for development
- **Ground cover and vegetation** – new development should be sited appropriately to minimise threats to existing ground cover and vegetation
- **Water catchment** – the provision of service infrastructure and the siting of buildings and works need to take into account waterways and water quality
- **Water supply** – the responsible management of water and the identification of safe and environmentally sensitive snow making opportunities is important
- **Management of geotechnical hazard** – the location and siting of buildings need to have regard to drainage lines, subterranean water levels and movement and to ensure no increased threat to ground stability within the Resort
- **Climate** – facilities, land use and building and infrastructure design should address the safety and protection of residents and visitors in all climatic conditions
- **Boundary interfaces** – a sensitive transition between the Alpine National Park and the Resort needs to be maintained and preserved
- **Population** – there is a need to provide for a suitable range of accommodation and associated amenities to cater for diverse requirements
- **All seasons resort** – consideration should be given to active and passive recreation developments that add value to year round use of the Resort
- **Containment of growth** – it is crucial to consolidate the Village within its existing boundaries to maintain cohesive growth patterns
- **Built form** – identifiable individual resort character should be enhanced and strengthened through urban design, architecture and landscape components
- **Aboriginal Heritage** – future location, siting and design of development should ensure that historic places are preserved through appropriate management techniques
- **Native Title** – due consideration is required for the notification requirements of the Commonwealth *Native Title Act 1993* in association with the *Planning and Environment Act 1987*
- **Access** – Careful and effective management of vehicles and the road network is imperative for future operations and development within the Village and Resort
- **Car parking** – the provision of car parking needs ensure ease of access and minimise congestion and conflicts within the Village
- **Infrastructure** – appropriate infrastructure provisions are required to ensure the existing and future functionality of the Resort

These influences and issues are important to understand when assessing land use options.

**Clause 21.05-3 Vision – Strategic Framework** It is identified that the *Mount Buller Resort Management Corporate Plan 2003-2006* is no longer a current document, however many key points continue to be relevant in the future development of the Resort.

In particular, the vision for future land use planning and development for Mount Buller is expressed around a number of key themes as follows:

- *Environment*
- *Settlement – Village Development, Residential Development, Commercial and Service Activities*
- *Tourism and Recreation*
- *Movement*
- *Infrastructure*

It is envisaged that the Mount Buller masterplan will support the key objectives of this Clause by identifying locations where specific land use outcomes will be supported and facilitated. Moreover, the Mount Buller masterplan will investigate avenues to cut planning 'red tape' to facilitate appropriate development that is a reflection of the strategic vision for the Resort.

**Clause 21.05-4 Objectives – Strategies – Implementation** The purpose of this Clause is to identify key issues for consideration and highlight preferred strategies and methods for implementation.

These issues are recognised throughout the planning scheme and are recommended to be implemented in various ways as follows:

#### ***Natural Environment***

- *Strategies* – Ensure that nominated areas are appropriately managed and protected whilst making certain that all development is undertaken in a manner that minimises impacts on significant native vegetation, fauna or environmental resources.
- *Implementation* – All environmental impacts will have effect through the Comprehensive Development Zone or relevant overlays. In addition, all applications require a Site Environmental Management Plan.

#### ***Heritage***

- *Strategies* – Identify and protect the Resort's heritage elements whilst requiring the appraisal of impacts on heritage interest when determining planning permits for use or development in places of cultural or historical significance.
- *Implementation* – All heritage impacts will have effect through a local policy.

#### ***Village Development***

- *Strategies* – Consolidation of the Village is encouraged, as well as improvements to visual amenity to enhance an identifiable individual resort character.
- *Implementation* – Future development within the boundaries of the Alpine Village will be impacted by the Comprehensive Development Plans, Design and Development Overlay and all permit applications are required to submit an Urban Design Impact Statement.

#### ***Residential Development***

- *Strategies* – A range of residential accommodation types at varying densities will be encouraged whilst provision of commercial and other non-residential activities in residential areas will only be supported if it can be demonstrated that the use will not result in any adverse impacts on residents.
- *Implementation* – Future residential development will have regard to the existing zoning and overlays applicable to the land; and it is noted that existing and future Comprehensive Development Plans (One Tree Hill, Standard Lane, the Gateway Site and the land to the west of the Mount Buller Community Centre) will identify and encourage desirable land use and development.

#### ***Commercial and Service Activities***

- *Strategies* – Focus commercial activities in accordance with the Strategic Land Use Framework Plans and encourage mixed use development in commercial areas.

- *Implementation* – Comprehensive Development Plans will provide requirements for land uses in the Village whereas the Design and Development Overlay will provide requirements for development.

#### **Tourism and Recreation**

- *Strategies* – Encourage and support year round development whilst having regard to environmental, ecological, economic, aesthetic and safety considerations.
- *Implementation* – Comprehensive Management Plans, a Ski field Management Plan, Strategic Management Plan and other opportunities as to be investigated by the Resort Management Board will manage the development of the ski fields, surrounding area and connections to the Village.

#### **Transport and Access**

- *Strategies* – The transport and access system for the Resort will be continually improved through infrastructure works and management arrangements, with respect to accommodating a planned visitor level of 15,000 people per day.
- *Implementation* – A Transport Strategy and various incorporated plans to facilitate the development of infrastructure and management practices for the operation of existing and planned transport and access system to and within the Resort.

#### **Infrastructure**

- *Strategies* – Physical infrastructure and services will be appropriately located, and the provision of additional water supply and storage facilities for snow making purposes will be encouraged within the Resort.
- *Implementation* – Waste water treatment facilities and underground reticulated electricity supply system will be augmented and implemented to meet existing and future requirements of the Resort.

**Clause 21.05-5 Monitoring and Review** A review of the Alpine Resorts Planning Scheme will occur **at least once every three years** whereby the effectiveness of strategic policy directions will be evaluated through a range of performance monitoring elements and targets.

## **11.2 Clause 22.05 - Local Planning Policies**

**Clause 22.05-1 Mount Buller Local Planning Policy – Car Parking** seeks to ensure that the provision of car parking in the Mount Buller Alpine Resort Village meets the current and future needs of the Resort whilst preserving the amenity and safety of pedestrian and skier movements within the Village.

The policies that are currently in effect in relation to car parking within the Mount Buller Alpine Resort Village can be summarised as follows:

- Provision of on-street car parking will be prohibited
- A car parking and access limitation strategy will apply to the Village during the declared snow season
- The Resort Management Board will control access to the Resort
- The existing four wheel drive access and parking permit system within the Village will be retained with a maximum of 1,000 permits issued during the declared snow season
- If development proposals, which involve comprehensive new site development or refurbishment and extensions to existing development, include the provision of car parking it should be provided at a rate of 1 car space per 140 square metres gross floor area
- The provision of car parking and accessways should adhere to the requirements as set out in the Clause
- Opportunities to provide car parking on a site that is intended to service the needs of surrounding accommodation or commercial activities will be supported provided they are in accordance with any requirements of any relevant overlays and do not adversely affect the amenity of the site or surrounding area

The masterplan has identified locations for increased carparking provisions and transport “hubs”. ARUP have been engaged to review the adequacy of carparking provisions and appropriate locations for carparking.

**Clause 22.05-2 Mount Buller Local Planning Policy – Aboriginal Heritage** seeks to identify areas of sensitive areas to ensure that development respects and preserves Aboriginal Heritage. The Mount Buller Alpine Resort is part of the traditional lands of the Taungurong people.

The study undertaken by Austral Heritage Consultants (2005) on behalf of the Mount Buller Alpine Resort Management Board, concludes that there are no areas of high archaeological sensitivity, five areas of medium archaeological sensitivity and five areas of low archaeological sensitivity of the area surveyed. Correspondingly, it is policy that:

- *An Aboriginal cultural heritage impact statement report must be prepared for any major development in areas of medium archaeological sensitivity*
- *Minor development proposed in areas of low or medium archaeological significance will require no further Aboriginal survey or assessment*
- *Major development is defined as buildings or works involving the disturbance of an area greater than 5000 square metres*

However, it is noted that a new study should be undertaken in light of the development proposed in the masterplan; particularly at Horse Hill, gondola route, the new roads and snow making facilities. The new study should also give consideration to the current legislation which was adopted after the Austral Heritage Study 2005 was undertaken.



## 12. PARTICULAR PROVISIONS

Particular provisions are standard planning requirements which are included in all planning schemes. They relate to specific requirements for development to address.

The following Particular Provisions apply to future development and land uses:

### **Clause 52.05 – Advertising**

- Signage provisions for the Alpine Village and Alpine Recreation are in Category 3 – High amenity areas.
- Signage provisions for the Public Park and Recreation Zone (Horse Hill) are in Category 4 – Sensitive areas.
- Both of the above signage categories are restrictive in terms of signage permitted on the land. Signage that is not in accordance with conditions of this Clause are prohibited.
- A comprehensive signage plan should be developed outlining general criteria for signage and the type of signage which is encouraged within the Village and surrounds. This should make reference to signage types and preferred sizes. This plan would then be adopted and would be part of the planning scheme as an incorporated document.

### **Clause 52.06 – Carparking**

- This Clause prescribes the minimum amount of carparking spaces to be provided for a use. Where the prescribed rate cannot be met, a planning permit for dispensation is required. Consideration must also be given to the requirements of *Clause 22.05-1 Mount Buller Local Planning Policy – Car Parking* where applicable.
- If no rate is identified for the proposed use of land, a traffic impact assessment report prepared by a traffic engineer will be required to be submitted with any application to DPCD. The report will need to justify the proposed carparking rates for this particular use.
- It is noted that the use and development of land that requires the preparation of a site development plan application will require a traffic impact assessment report regardless of whether the proposed carparking rates comply with the requirements of this Clause.

### **Clause 52.15 Heliport**

- Accordingly, *a permit is required to use or develop any land for a heliport or helipad even if it is ancillary to another use on the land.*

### **Clause 52.17 – Native Vegetation**

- A planning permit is required to remove, lop or destroy native vegetation. In addition, depending on the extent and quality of vegetation on site, appropriate offsets maybe required.

### **Clause 52.29 – Land Adjacent to a Road Zone, Category 1, or a Public Acquisition Overlay for a Category 1 Road**

- It is recognised that Mount Buller Road which provides access to Horse Hill is zoned Road Zone Category 1 whereby a permit is required to create or alter access to this road.
- In addition, an application to create or alter access to Mount Buller road will require referral to the Roads Corporation (VicRoads).

### **Clause 52.34 – Bicycle Facilities**

- This Clause prescribes the facilities and minimum number of bicycle spaces to be provided for a particular use. Where the prescribed rate cannot be met, a planning permit for dispensation is required.
- If no prescribed rate is identified for the proposed use of land, a traffic impact assessment report prepared by a traffic engineer will be required to be submitted with any application to DPCD. The report will need to justify the proposed bicycle rates for this particular use.



## 13. OTHER – INCORPORATED PLANS

### 13.1 One Tree Hill Comprehensive Development Plan, December 1999

The *One Tree Hill Comprehensive Development Plan* (One Tree Hill CDP) is an incorporated document that applies to the area nominated as One Tree Hill on the Strategic Land Use Framework Plan – Village Precinct.

The purpose of the plan is to facilitate the use and development of One Tree Hill for dwellings and residential buildings which will provide accommodation for permanent residents. The plan will also serve to ensure that development minimises adverse impacts upon the environment, responds to the landscape character and amenity of the area and results in no net loss of indigenous vegetation.

The One Tree Hill CDP provides mandatory subdivision requirements and seeks to ensure that new development includes appropriate linkages to surrounding areas whilst providing opportunities for alpine recreation through the provision of ski trails, walking tracks and other appropriate features. Moreover, buildings and works should adhere to the preferred building form, materials and finishes as outlined in the One Tree Hill CDP.

In light of this incorporated plan, the ARMB recognises that One Tree Hill should continue to be developed for residential accommodation however consideration should be given to consolidating residential development, improving connections between One Tree Hill, the Village and recreation areas and ensuring that future development is respectful of the site and its context.

#### **Recommendation**

- One Tree Hill is yet to be developed due to a number of environmental constraints. The ARMB should review the likelihood of developing the site based on a review of the overall masterplan and whether there is still a need for this site to provide additional housing and accommodation.

### 13.2 Mount Buller Gateway Comprehensive Development Plan

The *Mount Buller Gateway Comprehensive Development Plan* (Mount Buller Gateway CDP) is an incorporated document that applies to the area identified as Comprehensive Development Plan No. 2 on the Strategic Land Use Framework Plan – Village Precinct. The purpose of the plan is to facilitate the staged development of the Gateway Site for mixed uses including office, residential, retail, museum, hotel, community service and car parking. One of the key outcomes of the redevelopment will be to achieve the establishment of improved facilities for the Village administration activities and community services.

The Mount Buller Gateway CDP encourages provision of floor space for certain land use activities and provides development guidelines for building height, bulk, visual impact, setbacks, overshadowing, materials and finishes, vegetation retention and traffic and car parking arrangements, as well as outlining the requirements of a Site Development Plan application. The ARMB recognises there is potential to re-evaluate the parameters of the existing Mount Buller Gateway CDP subject to the objectives of the overall vision of the Mount Buller Masterplan; in particular, there is capacity to amend the Mount Buller Gateway CDP to facilitate additional land use and development in light of existing and anticipated social, environmental and economic issues and therefore create certainty in planning outcomes.

#### **Recommendation**

- As the masterplan proposes to use and develop the “Gateway Site” as the general area for the gondola, this plan should be removed from the planning scheme as the site will not be developed in accordance with this plan.

## 14. EXISTING POLICY REVIEW

The following seeks to review existing policies which impact the land. Although not directly referred to in the planning scheme, these documents are of relevance to future development of Mount Buller in various capacities.

The masterplan should take into consideration the overall objectives of these policies, though general in nature.

### Mount Buller

#### 14.1 Mount Buller and Mount Stirling Alpine Resorts Environmental Management Plan 2007

The Environmental Management Plan (EMP) has been prepared by the Mount Buller and Mount Stirling Alpine Resort Management Board to guide the long term planning and management of Victoria's alpine resorts. The strategy identifies that the future management and development of alpine resorts must be undertaken within an ecologically sustainable framework; with the EMP identifying key natural and cultural heritage values and sustainability components within the Resorts and subsequently defining the key environmental performance targets, objectives and actions for each value identified.

##### **Environmental Policy**

It is identified that the ARMB is committed to sustainable management practices which achieve compatibility between the operation and development of the Resorts and the natural and culturally significant values of the local environment. Therefore proper consideration will be given to the care and protection of the flora and fauna, land, water, air, cultural and landscape values of the Resorts by;

- Implementation – *Continually improving environmental performance through the implementation of the EMP.*
- Review – *Applying a systematic environmental risk assessment procedure and developing annual programs in order to annually review environmental objectives and actions and implement those objectives and actions.*
- Compliance – *Complying with all relevant environmental legislation and regulations and with other requirements to which the ARMB formally subscribes.*
- Awareness – *Promoting environmental awareness and improved performance by ensuring all ARMB personnel and contractors are aware of this policy and the actions outlined in the EMP.*
- Partnerships – *Incorporating environmental provisions into business, planning and operating procedures and ensuring all costs associated with meeting environmental objectives and implementing actions are budgeted.*
- Consultation – *Fostering partnerships with all stakeholders to ensure that the community is involved in the environmental management of the Resorts*
- Communication – *Communicating environmental programs to stakeholders by publishing and promoting this policy and annual objectives and actions.*
- Promotion – *Promoting a greater understanding of the values of the Resorts through education and support of research.*

These strategies will underpin the development and practices of the Resorts whereas the following sections will guide and facilitate the sustainable management of the Resorts:

##### **Natural Heritage**

The objectives of this policy are to:

- *Protect sites of geological and geomorphic interest within the Resorts.*
- *Maintain natural rates and magnitudes of change in geological and geomorphological features.*
- *Conserve and manage the soil resources of the Resorts.*

- *Manage all ARMB activities including development and maintenance works to conserve and enhance catchment values and water resources of the Resorts.*
- *Enhance the ecological integrity of natural waterways within the Resorts and adjacent land.*
- *Continue to provide high quality potable water for current and projected domestic use requirements within the Resorts.*
- *Treat wastewater to a very high standard and to utilise it for snowmaking.*
- *Protect and preserve all high quality indigenous flora within the Resorts and enhance all other indigenous flora.*
- *Minimise impacts on indigenous flora within the Resorts.*
- *Ensure that management programs conserve and where possible, enhance the environment for rare or threatened plants and plant communities.*
- *Limit the extent and spread of all non-indigenous flora within the Resorts.*
- *Use appropriate indigenous flora in all revegetation projects within the Resorts.*
- *Maintain healthy and viable populations of native fauna within the Resorts.*
- *Ensure that management programs conserve and enhance the environment for indigenous fauna within the Resorts.*
- *Ensure that management programs conserve and where possible, enhance habitat for threatened fauna.*
- *Implement the Recovery Plan for the Mountain Pygmy-possum.*
- *Minimise the impact and distribution of all introduced fauna within the Resorts.*
- *Manage fire in an ecologically sustainable manner, whilst ensuring the safety of human lives and the Resorts infrastructure.*
- *Manage fire within the Resorts in an ecologically sustainable manner that ensure the diversity and abundance of indigenous flora and fauna and protects water quality and quantity.*

### **Cultural Heritage**

The objectives of this policy are to:

- *Identify and protect all culturally significant Aboriginal and historical sites within the Resorts.*
- *Improve the understanding of Aboriginal and historical use of the Resorts through increased site assessment.*

It is identified that the Alpine Resorts lie in the traditional territory of the *Daung wurrung* (also spelt *Taungarung*) language group, with one of the clans of this group having occupied land around Mount Buller and Mount Stirling. Accordingly, an Aboriginal Heritage Management Study for the Mount Buller Alpine Village was devised; indicating sensitive areas that would require further archaeological investigation if developed. Other localised Aboriginal archaeological studies have been conducted within the Mount Buller Alpine Resort overall with areas of Aboriginal archaeological potential having been identified. It is noted that there are no historical archaeological sites that have been registered at Mount Buller on the Heritage Victoria Inventory or the Heritage Register at Heritage Victoria at Mount Buller. Future development on Mount Buller must give consideration to the Aboriginal Heritage Management Study and adhere to the requirements of land located within areas of high cultural heritage sensitivity as per the Cultural Heritage Management Maps.

### **Sustainability**

The objectives of this policy are to:

- *To appropriately and sensitively dispose of all putrescible waste generated,*
- *To actively promote and undertake a recycling program to minimise wastes sent to landfill,*
- *To improve the Resorts energy efficiency and reduce non-renewable energy consumption,*
- *To minimise negative impacts on the Resorts air quality and reduce greenhouse gas emissions,*
- *To maintain and enhance the aesthetic environment and landscape values of the Resorts,*
- *To ensure that existing and future development and activities do not compromise the visual amenity of the surrounding Alpine National Park,*
- *To preserve the natural ambience of the alpine environment,*
- *To limit the impact of industrial and recreational noise within the Resorts,*

- *To minimise negative impacts on the Resorts by concentrated visitor numbers at a number of sites in intensive time periods,*
- *To manage and improve sites considered under pressure from visitor numbers.*

Although waste management practices and noise amenity are broadly a function of alpine management, many of the abovementioned objectives are capable of being facilitated through the careful consideration of design, built form, orientation and the incorporation of ESD principles. As such, future development can be guided to adhere to mandatory energy efficiency and design standards through the implementation of appropriate planning instruments.

### **Community Awareness and Involvement**

The objectives of this policy are to:

- *To provide suitable opportunities for environmental training,*
- *To create a vibrant and ecologically aware community within the Resorts.*

It is acknowledged that the continued education and awareness of the community will support the intent and implementation of the Mount Buller Masterplan.

## **14.2 Mount Buller Brand Audit 2008**

In 2008 the ARMB commissioned Traffic Pty Ltd to conduct a Mount Buller Brand Audit, the key findings of which will be addressed as a priority through the Mount Buller masterplan. Stakeholder consultation involved meetings with focus groups and one-on-one consultation with Mount Buller stakeholders, with the result being a high degree of agreement across all stakeholder groups regarding major themes and key messages to be referenced in the development of a Resort Masterplan as follows:

- *Environment – Consideration of seasonal changes and the protection of vistas and views of the surrounding landscape*
- *Snow – Valuing the unique character of the ski fields and aesthetic appeal of the Village*
- *Proximity to Melbourne – Capitalise on Mount Buller's proximity to Melbourne*
- *Community – Support the strong sense of community of various users and residents*

Based on these major themes and key messages to be conveyed, stakeholders highlighted the following issues and targets to be addressed through the Mount Buller masterplan:

- *Transport and access – Gateway entry arrangements, access road, complexity in existing car parking arrangements and poor location of the bus terminal*
- *Day visitor experience – improving the day visitor market, expansion of basic amenities and a sense of arrival and connection to core activities*
- *Summer activity – A diverse set of activities that would appeal to a wide set of markets, commercial support for non-peak season commercial operators and a year round sustained flow of business*
- *Village – Improving village connections and environment, exploiting potential for views and vistas and the promotion of Mount Buller as a pedestrian village*

In response to the Mount Buller Brand Audit, future development at the Mount Buller Alpine Resort precinct should be capable of providing for a range of complementary land uses and investment opportunities that address the abovementioned themes and concerns through the utilisation of appropriate planning controls.

### 14.3 Transport Strategy, October 2004, Mount Buller and Mount Stirling ARMB

The Transport Strategy could not be sourced however it is considered that issues regarding existing transport policies and an analysis of anticipated traffic demand will be addressed within the masterplan.

### 14.4 Mount Buller Village Design Guidelines 2005

The Mount Buller Village Design Guidelines 2005 provides a comprehensive overview of desired built form and materials to create a trademark image for the Alpine Village. Overall, the purpose of the Design Guidelines is to define acceptable urban design, architecture and landscape architectural components, which will assist to create the trademark image of the Village and influence future development to enhance its continued appeal for visitors year round. The Village Design Guidelines relate to building siting, form, height, roof design, materials and finishes, parking and pedestrian movement, snow management and vegetation.

It is considered that these guidelines should be removed to reduce duplication and their content be included within the masterplan, schedules to design and development overlays and in the local planning policies. This will also assist in providing certainty to proponents as the key document to review is the planning scheme which is how any application will be assessed.

### 14.5 Mount Buller Alpine Village Heritage Management Plan by Austral Heritage Consultants

The Mount Buller Alpine Village Heritage Management Plan could not be sourced however it is considered that the Cultural Heritage component of the Mount Buller and Mount Stirling Alpine Resorts Environmental Management Plan 2007 was informed by the Heritage Management Plan and adequately discusses the objectives and broad strategies for the management of heritage on Mount Buller.

### 14.6 Mount Buller Alpine Resort – Wildfire Management Plan 2009

The purpose of this plan is to ensure that the Mount Buller Alpine Resort is:

- *Prepared for the threat of bushfire in a way that minimises the risk of impact of the fire upon the people in the resort, the man made assets of the resort and upon the environmental values and in particular the natural flora and fauna of the Resort;*
- *Prepared with an effective response to any bushfire threat to the Resort;*
- *Prepared with a recovery program in place that mitigates the impact of the fires should the bushfire impact upon the Resort or its people.*

In recognition of Mount Buller's vulnerability to bushfire during the summer season, the land comprising the Mount Buller Alpine Resort is currently encumbered by the Wildfire Management Overlay whereby applications for buildings and works associated with certain land uses must comply with application requirements, including referral to the relevant fire authority. It is considered that this Plan and associated Overlay are necessary to manage the threat of bushfires and therefore should continue to be implemented for future development of the Resort.

However, it is recognised that the Mount Buller Alpine Resort Wildfire Management Plan 2009 is to be reviewed in late November 2010 and as such should be guided by the objectives and preliminary blueprint of the Mount Buller masterplan. This will ensure that all strategies and plans are integrated and supportive of the vision for the Resort.



## 14.7 Recovery Plan for the Mountain Pygmy-Possum on Mount Buller – December 2005

The Recovery Plan for the Mountain Pygmy-possum on Mount Buller recognises that the Mount Buller Alpine Resort contains the entire known habitat for the Mountain Pygmy-possum and as such will guide all stakeholders in ensuring the long term survival of the Mountain Pygmy-possum on Mount Buller. The Mountain Pygmy-possum is listed as endangered in Victoria at both the State and National levels as it is restricted to alpine habitats in Victoria and New South Wales. The Recovery Plan provides a brief overview of the species on Mount Buller, sets recovery goals and sets out the actions that will be required to reach these goals. However, the Recovery Plan will lapse at the end of 2010 and an updated Plan will be required after this period.

Any action that has the potential to impact directly or indirectly on the Mountain Pygmy-possum habitat at Mount Buller will be referred to the Minister for Environment and Heritage given that the population of Mountain Pygmy-possum on Mount Buller has declined. The largest impact on the known population has been the loss, degradation and fragmentation of habitat on the southern slopes associated with the development of these areas for skiing. The population at Mount Buller is now at critically low levels and urgent management action is required to address this situation.

A review of identified Mountain Pygmy-possum habitat should be undertaken in light of the current masterplan and subsequent new development (ie. proposed gondola route).

### Alpine Policies

## 14.8 Alpine Resorts Reform Package

The Alpine Resorts Reform Package 2003 seeks to complement the Alpine Resorts 2010 Strategy by including new sustainability initiatives.

The reforms related to management arrangements of the Resorts as well as financial reporting and recommendations.

It is not considered that the reforms proposed impact planning.

## 14.9 Sustainable Alpine Resorts - A Framework for Discussion

The Sustainable Alpine Resort – A Framework for Discussion was developed after considering the State Services Authority review of the institutional and governance arrangements of Victoria's alpine resorts and information from a range of other people and organisations. The State Services Authority alpine areas review was the first examination of the institutional arrangements governing the alpine resorts in more than 10 years.

The document was released in May 2009 by the Minister for Environment and Climate Change. The intent was for the document to be used as an outline of the goals and directions needed to achieve the vision of the Alpine Resorts 2020 Strategy. The key goals of the Strategy are:

- 1. Protecting our unique alpine environment*
- 2. Driving financial efficiency and sustained contribution to regional economies*
- 3. Building resilience to climate change*
- 4. Providing access to the alpine environment for all Victorians*
- 5. Increasing community satisfaction and participation in the resorts*
- 6. Ensuring integrated and transparent planning and leasing processes*
- 7. Strengthening the market position of the resorts*
- 8. Ensuring sound governance and clear roles and responsibilities*

The Framework for Discussion document was developed after considering the State Services Authority review of the institutional and governance arrangements of Victoria's alpine resorts and information from a range of other people and organisations. These goals are the underlying themes for the creation of the masterplan and its implementation.

## 14.10 Alpine Resorts (Management) Act 1997

The purpose of the *Alpine Resort (Management) Act 1997* is to establish the administrative and governance arrangements for the management of the alpine resort areas.

The Act establishes the ARCC and the five ARMBs, sets out their statutory functions, outlines their governance and reporting arrangements, and sets out powers in relation to the leasing of Crown land within the resorts. The objects of the Act are:

*a) for the development, promotion, management and use of the resorts on a sustainable basis and in a manner that is compatible with the alpine environment, having regard to:*

- i. environmental and ecological considerations, in particular, climate change; and*
- ii. economic considerations; and*
- iii. cultural heritage considerations, in particular, Indigenous cultural heritage considerations; and*

*b) for the use of the resorts:*

- i. primarily for alpine recreation and tourism; and*
- ii. in all seasons of the year; and*
- iii. by persons from varied cultural and economic groups.*

## 14.11 Crown Land – Committees of Management

In addition to their functions under the Alpine Resorts (Management) Act, each ARMB is deemed to be a Committee of Management for all Crown Land within their resort area. As such, they are responsible for managing Crown Land on behalf of the Minister for Environment and Climate Change and have the authority to manage, improve, maintain and control the land.

In this capacity, the ARMBs have the power under section 15 of the *Crown Land (Reserve) Act 1978* to:

- *manage and develop the reserve;*
- *undertake financial transactions, including borrowing money (with the Treasurer's consent) and entering into contracts;*
- *enter tenure arrangements, such as leasing and licensing, for part or all of the reserve, subject to the Minister's approval;*
- *employ people; and*
- *enforce regulations.*

From a planning perspective, the ARMB is also a Section 55 referral and Section 52 notification requirement under the *Planning and Environment Act 1987*.

Both of these roles provide the ARMB with the ability to approve, approve subject to conditions or refuse a planning application made to the responsible authority. However, its scope to review an application can only be on those grounds/matters/issues which the application was lodged and must be from a planning perspective.

## 14.12 Alpine Resorts 2020 Strategy

The Victorian *Alpine Resorts 2020 Strategy* provides guidelines relating to the sustainable long term planning and management and to assist in investment attraction in Victoria's six alpine resorts: Falls Creek, Lake Mountain, Mount Baw Baw, Mount Buller, Mount Hotham and Mount Stirling. The Strategy identifies these resorts as unique assets and key economic drivers in their regions, with the



understanding that careful and sustainable management of the Resorts can make a greater contribution to Victoria's economic health and growth in the future.

The strategic directions contained within this Strategy relate to:

- Climate change
- Resort use and visitation
- Development of the resorts
- Vibrant resorts
- Environmental Management
- Stewardship of public land

These complementary strategic directions will serve to ensure that the Alpine Resorts are responsive to economic, social and environmental issues and that future development is respectful of the natural surrounds and its context. In particular, it is identified that Mount Buller Alpine Resort is at a mature stage of development and as such focus should be given to enhancing the quality of existing facilities in order to increase visitor numbers and yield. Some of the identified future opportunities for Mount Buller are:

- *Redevelopment of accommodation within village limits to provide a greater variety of accommodation types and quality and improved energy efficiency*
- *Pursue the opportunity of providing an easily accessible walking and ski touring trail between Mount Buller and Mount Stirling*
- *Enhancement of village character with particular emphasis on the attractiveness of the village in summer*
- *Increased emphasis on ensuring that a range of facilities and services are available for summer visitors by offering incentives for businesses to remain open*
- *Provision of adventure activities*
- *Marketing non winter recreation, highlighting the diverse range of activities and events already available.*
- *Further consolidation of the downhill lifting system within the existing ski field*

It is the intent of the Mount Buller masterplan to build upon the abovementioned opportunities by providing guidance for future development to increase the economic, social and environmental prosperity of the Resort. As such, it is acknowledged that land use planning is paramount to the feasibility of future development, with this report serving to inform the Mount Buller masterplan by recommending potential planning instruments to facilitate the desired future development of the Resort.

This Strategy addresses the objectives of sustainable use and management of the alpine resorts with the visions of "four season, vibrant, sustainable resorts". Further, the plan identifies resort viability as a major challenge moving forward in the context of climate change. The masterplan seeks to respond and implement strategies to overcome this challenge.

## State Government

### 14.13 Victoria's Native Vegetation Management – A Framework for Action

*Victoria's Native Vegetation Management – A Framework for Action* establishes the strategic direction for the protection, enhancement and revegetation of native vegetation across the State. In particular, the goal of net gain is strongly encouraged whereby the overall gains of native vegetation are greater than overall losses. An estimated 66% of Victoria's native vegetation has been cleared as a result of growth and economic development of the State and in light of this, it is identified that there is an increased need to balance economic development and protect vegetation that provides important habitats for rare and threatened native fauna.

## 14.14 Victoria's Nature Based Tourism Strategy 2008 – 2012

Victoria's Nature Based Tourism Strategy 2008 – 2012 is an inter-agency strategy for nature-based tourism, where nature-based tourism is defined as any tourism that relies on experiences directly related to natural attractions. It is recognised that interest in nature-based tourism is growing, with the Victorian Government striving to coordinate the development and planning of new projects through the Strategy which will recommend a long-term approach to destination planning, development and management by focusing on key nature-based tourism destinations. The Alpine regions are identified as currently having a wealth of opportunities for self-reliant nature-based tourism visitors but limited experiences for high yield nature-based tourism visitors, including accommodation, activities and amenities. In particular, the following issues and strategies have been identified:

- *Implementation of Alpine mountain biking infrastructure*
- *Identify new and existing Alpine Resorts accommodation suitable for attracting summer nature-based tourism visitors*
- *Increase the offering of summer products and activities which will increase summer visitation*
- *Potential to develop a world-class adrenalin activity centre in the Alpine Resorts including bungy jumping, zorbing and other activities*
- *Enhance, develop and increase visitor facilities and services*
- *Facilitate the development of bushwalking infrastructure*
- *Protection of natural assets such as the Alpine National Park*

In this instance, appropriate planning controls would realise strategic directions for the land and serve to facilitate investment opportunities for recreation and tourism purposes in the Alpine region.

## 14.15 Other Policies Relevant to Alpine Resorts

The following is a list of policies relevant to Alpine Resorts:

- Growing Victoria Together
- Our Environment Our Future
- Our Water Our Future
- A Fairer Victoria
- 10 Year Tourism and Events Industry Strategy
- Nature-Based Tourism Strategy 2007-2011
- Victoria's Native Vegetation Management – A Framework for Action
- Regional Catchment Strategies
- Indigenous Partnership Framework 2007-2010
- White Paper on Climate Change
- Land and Biodiversity Green Paper (to be followed by a White Paper)

## 15. PLANNING SCHEME AMENDMENT PROCESS

To implement the statutory planning changes recommended in the earlier sections of this report, the Alpine Resorts Planning Scheme will need to be amended. These amendments may include the rezoning of land and/or the revision, addition or deletion of written components of the Scheme, which can be undertaken in stages or as a larger concurrent process.

### 15.1 Process

The *Planning & Environment Act 1987* establishes the planning scheme amendment process. In this case, the process will require the involvement of several different organisations and is likely to be a complex procedure given the scope of the changes proposed, the number of stakeholders involved and the various Acts that impact any development within the planning scheme boundaries.

An application to amend the Scheme will require justification against Ministerial Direction No. 11 relating to social, economic and environmental effects of the proposal. A number of reports will be required to justify any amendment including, but not limited to the following specialist reports:

- Flora and fauna ecological assessments
- Fire risk and management
- Aboriginal cultural heritage
- Traffic impact assessment
- Economic impact assessment
- Native Vegetation
- Environmental (including soil erosion)

Evidence of discussions with various agencies such as CFA, DSE, Vic Roads, utility service providers and the ARMB will also be required.

In addition, depending on the changes proposed, an economic impact assessment and architectural statement may also be required.

A break-down of the planning scheme amendment process is provided in Appendix 1.

### 15.2 Timing

The timing of the planning scheme amendment or a number of smaller amendments, will rest on the adequacy of the information provided, the complexity of the proposals, the time allocated for public exhibition, the extent and nature of submissions and the necessity for an Independent Panel Hearing to be appointed and consider submissions.

There is no statutory timeframe for an amendment to be undertaken within (Note – the Minister for Planning is currently undertaking a review of the Act which proposes to streamline the amendment process and may possibly reduce timelines for key steps).

Given the complexity of the changes proposed for Mount Buller it is difficult to provide an indication of timing. Specifically, there will be extensive lead time to prepare all the necessary documentation to accompany any amendment process. This is likely to be in excess of 12 months depending on the level of detail and research required to be undertaken. It is further noted, that a review of consultant reports is likely to result in conflicting reports specifically in regards to wildfire risk management and the retention of native vegetation.

Consideration must also be given as to whether the multiple amendments required will be undertaken in stages or as a larger concurrent process. A concurrent amendment process would take a considerably lengthier amount of time and is only recommended if there is planning certainty at the pre-preparation stage and timing is not a crucial factor.

## 15.3 Risks

The following is a summary of general risks relating to each key stage of the amendment process;

Stage of the Amendment Process	Risk
Initiation	<ul style="list-style-type: none"> <li>• Need to obtain ARMB and whole of Government support (specifically DPCD and the various divisions within DSE) from the outset</li> <li>• If Government support is lacking, the amendment may not proceed to the next stage</li> </ul>
Preparation	<ul style="list-style-type: none"> <li>• Lengthy process including receiving feedback from referral authorities</li> <li>• Consultant findings/referral authority requirements may conflict with the intent of the amendments</li> <li>• Various consultants preferred objectives or outcomes may clash with other consultants (ie. native vegetation removal and wildfire management). A cohesive approach is required to be determined prior to any amendment process being undertaken.</li> </ul>
Notice (minimum 28 days)	<ul style="list-style-type: none"> <li>• An extended exhibition period will invite more submissions; adding to the difficulty of resolving outstanding issues</li> </ul>
Submissions	<ul style="list-style-type: none"> <li>• Unresolved submissions will require the appointment of an independent panel to review</li> <li>• Timing delays</li> </ul>
Assessment	<ul style="list-style-type: none"> <li>• Revision of amendment could weaken the overall intent</li> <li>• Panel has 6-8 weeks following the hearing to provide a report with recommendations. This contributes to timing delays.</li> </ul>
Adoption	<ul style="list-style-type: none"> <li>• Decision to modify the amendment could weaken the overall intent</li> <li>• Decision to adopt without panel's recommendations requires justification by the Minister</li> </ul>
Approval	<ul style="list-style-type: none"> <li>• If amendment is undertaken in stages, Minister may decide to approve some amendments and not others – this could lead to repetitive or conflicting planning controls</li> </ul>
Gazettal	

It is noted that the risks at varying stages will be reduced through comprehensive background studies being undertaken at an early stage and subsequent issues being raised early in the process. Ongoing consultation with both DSE and DPCD is also considered to be important as it will build government support for the masterplan.

# **Appendix 1**

## **Summary of Recommendations**

## RECOMMENDATIONS SUMMARY

**High** Commence within 2 years

**Medium** 2-5 years

**Low** 5 plus years

Recommendation/Tool	Action/Implementation Mechanism	Priority
<b>Ongoing Stakeholder Liaison</b>		
➤ As the masterplan is refined and additional background investigations are undertaken, ongoing discussions with both DSE and DPCD should be undertaken to ensure continued support for the masterplan itself and the process. This will also assist in minimising risk as issues and potential “road blocks” can be identified early and measures developed and put in place to minimise and/or overcome risks.	<ul style="list-style-type: none"> <li>Ongoing meetings to update DSE and DPCD on the progress of the masterplan and to identify issues and potential solutions</li> </ul>	High
<b>Zoning</b>		
➤ Investigate rezoning the land known as Horse Hill from Public Park and Recreation Zone (PPRZ) to Comprehensive Development Zone 2 (CDZ2) – Alpine Recreation. <ol style="list-style-type: none"> <li>The use of the land as a transport terminal is prohibited under the PPRZ hence it is considered rezoning is required to facilitate the land uses proposed.</li> <li>The proposed land uses at Horse Hill are considered to be more appropriate and in-line with the objectives of the CDZ2 – Alpine Recreation rather than PPRZ.</li> <li>Any rezoning will need to be justified to DSE and DPCD based on land uses proposed. It is emphasised that rezoning land from a public zone to a development orientated zone is likely to be contentious and will need to be discussed further with ARMB and DSE as the public land managers. There is also ambiguity regarding who is the public land manager which should be discussed further between the two parties.</li> </ol>	<ul style="list-style-type: none"> <li>Further background reports required to justify rezoning including aboriginal cultural heritage and a flora and fauna assessment</li> <li>Planning scheme amendment to rezone land</li> </ul>	Medium

➤ Investigate implementing a comprehensive development plan for both the YHA and Koorora sites to allow redevelopment to occur in the short term. a. This will require further investigation into preferred building heights and setbacks as well as floor areas and specific land uses for future development in these locations.	<ul style="list-style-type: none"> <li>Detailed review of land uses and built form proposed for YHA and Koorora site</li> <li>Planning scheme amendment to implement plans</li> </ul>	Medium
<b>Overlays</b>		
➤ Amend and update the existing Schedules (1 and 3) to the Design and Development Overlay for both the Village and Ski Fields based on new objectives/visions of the Masterplan (ie. vision for the Village to be an active public space). a. Existing built form outcomes should be updated to include revised maximum building heights and setbacks. b. Preferred materials should also be updated to take into account the new requirements for development in bushfire areas and the requirement for bushfire resistant materials to be used.	<ul style="list-style-type: none"> <li>Planning scheme amendment</li> </ul>	Medium
➤ Implement a new Design and Development Overlay which will apply to Horse Hill. The benefit of a DDO rather than an incorporated plan, is that the DDO will provide flexibility over a longer period of time whereas the incorporated plan will “lock in” the development of the land without any variances or alterations being permitted without undertaking a further planning scheme amendment process. a. The new DDO should provide guidance regarding key objectives for the precinct as well as future built form and land uses required.	<ul style="list-style-type: none"> <li>Planning scheme amendment</li> <li>Investigate desired built form and maximum floor areas to apply</li> </ul>	Medium
<b>Municipal Strategic Statement</b>		
➤ The masterplan, once refined, should be used to inform future MSS reviews. a. The vision, objectives and background rationale included in the masterplan should form the basis of an updated MSS. b. Further investigation into areas such as native vegetation and aboriginal cultural heritage should also feed into the MSS.	<ul style="list-style-type: none"> <li>Planning scheme amendment</li> </ul>	Low
<b>Local Planning Policy Framework</b>		



➤ The current carparking and aboriginal heritage policies should be updated to reflect current legislation as well as the findings and recommendations of the masterplan and subsequent studies. a. Further background reports will need to be prepared to justify an amendment to these policies.	<ul style="list-style-type: none"> <li>• Background reports to be prepared in relation to carparking and aboriginal heritage</li> <li>• Planning scheme amendment</li> </ul>	Low
➤ New “issue specific” policies should be developed relating to key issues which were raised during the preparation and development of the masterplan. This could include, but not be limited to, environmentally sustainable design, general objectives of the masterplan, Winter and Summer land uses, policies for specific areas ie Horse Hill and where specific land uses are encouraged ie. affordable accommodation and private housing.  Develop a local policy to guide the staging of the masterplan and provide key timelines for specific projects thereby providing certainty in patterns of development on Mount Buller.	<ul style="list-style-type: none"> <li>• Planning scheme amendment</li> <li>• Local policies to be developed based on key themes contained in the masterplan such as sustainability</li> </ul>	Low
➤ Once refined, the masterplan should form an Incorporated Document which both the MSS and local planning policies refer to.	<ul style="list-style-type: none"> <li>• Planning scheme amendment</li> </ul>	High
<b>Infrastructure</b>		
➤ Review the capacity and condition of existing infrastructure and identify if infrastructure upgrades will be required to accommodate new development  This is likely to have considerable cost implications hence it should be undertaken as a priority.	<ul style="list-style-type: none"> <li>• Consultant to be engaged to review adequacy of existing infrastructure in light of future development potential</li> </ul>	High

<b>Protection of Vegetation</b>		
<p>➤ ARMB need to engage an ecologist to review vegetation and biodiversity in areas where the masterplan seeks to include redevelopment/development.</p> <p style="margin-left: 20px;">a. This includes Horse Hill, the access all weather road, the proposed gondola route and any snow-making locations including water storage facilities.</p> <p style="margin-left: 20px;">b. This review should then provide recommendations on where development is preferred as well as highlight locations for offsets. It can also calculate what the likely offsets will be which are required to be in the same bioregion as the removed vegetation (ie. how much land should be allocated for offsets based on the quality of vegetation to be removed).</p>	<ul style="list-style-type: none"> <li>Consultants findings to become background justification for planning scheme amendment as well as new planning applications for development</li> <li>This report will also be required to justify any development to both DPCD and DSE</li> </ul>	High
<p>➤ Following on from the above, ARMB based on the above recommendation and in conjunction with DSE, should review potential parcels of land which could satisfy offset requirements for future development. By dedicating land solely for offsets, this will create certainty in future development and will also assist in obtaining government support for the masterplan as a whole. This should be undertaken as a priority as all future works will require offsets to be provided and are not likely to be supported unless offsets can be provided.</p>	<ul style="list-style-type: none"> <li>Consultants findings to become background justification for planning scheme amendment</li> </ul>	High
<b>Protection of Fauna</b>		
<p>➤ All future protection strategies should be informed by the Mount Buller masterplan, with particular emphasis on integration between fauna protection strategies, Native Vegetation Management Plans and the Mount Buller masterplan.</p> <p>An ecologist should review all fauna and flora within the masterplan area to identify the risks associated with developing land and to identify strategies to overcome these risks.</p>	<ul style="list-style-type: none"> <li>Engage an ecologist to undertake further background studies</li> <li>Consultant findings to become background justification for planning scheme amendment as well as new planning applications</li> </ul>	High
<p>➤ It is recognised that an updated Mountain Pygmy-Possum Recovery Plan should be developed noting that any future development on Mount Buller will impact on Pygmy Possum habitat. It is also noted that Horse Hill was not originally reviewed and will need to be included in an updated Recovery Plan in order to obtain government support for future works on Horse Hill.</p>	<ul style="list-style-type: none"> <li>Ecologist to update existing plan in light of the current masterplan.</li> </ul>	High

Traffic Network and Carparking		
➤ Update the local planning policy based on the proposed new uses identified in the Masterplan and the likely carparking demand.	<ul style="list-style-type: none"> <li>• Further background research required on carparking numbers and the details of future development and likely demand</li> <li>• Planning scheme amendment</li> </ul>	Medium

<b>Horse Hill Development</b>		
<p>➤ Background studies required to justify any rezoning and more importantly the risks associated with further development at Horse Hill include:</p> <ul style="list-style-type: none"> <li>a. Vegetation assessment</li> <li>b. Fauna and biodiversity review to identify any significant habitat and threatened species</li> <li>c. Review of cultural heritage (noting the site is in a significant area)</li> <li>d. Economic impact assessment to justify uses required</li> <li>e. Geotechnical engineer</li> <li>f. Traffic impact assessment to justify carparking requirements</li> <li>g. Clarification from ARMB in regards to their ability to operate as a public land manager and whether the uses proposed at Horse Hill would breach their role (ie. food and drink premises)</li> <li>h. Discussions with DSE regarding the use and development of public land and whether rezoning would be supported on principle</li> </ul>	<ul style="list-style-type: none"> <li>• Further background research required to justify a planning scheme amendment to rezone the land based on confirmation of uses proposed and desired built form</li> <li>• This should be a priority noting Horse Hill has been identified as one of the first sites to be developed.</li> </ul>	High
<b>Ski field/Village Relationship</b>		
<p>➤ The masterplan needs to provide guidelines and objectives for the broader Mountain before providing detailed objectives for specific areas and locations. This ensures that an overall vision is known. This can be implemented through the local planning policies for Mount Buller.</p>	<ul style="list-style-type: none"> <li>• Planning scheme amendment</li> </ul>	Low
<p>➤ Decision guidelines to be used to ensure that each development takes into account the broader area and its impact. This can be sourced from the masterplan. The gondola is a good example of ensuring that different precincts connect and complement each other keeping in mind that locations should not compete against one another or be treated in isolation. This can implemented in decision guidelines and through the local planning policies.</p>	<ul style="list-style-type: none"> <li>• Planning scheme amendment</li> </ul>	Low

<b>Obsolete and Repetitive Controls</b>		
➤ The planning scheme will continue to be the primary document by which planning applications are assessed. However, the masterplan should become an incorporated document which influences development and it will also feed into the Scheme.	<ul style="list-style-type: none"> <li>• Planning scheme amendment</li> <li>• However, further background studies are required to justify any planning scheme amendment as well as to ensure the environmental impacts of any future works are known. The background studies which support the masterplan are also required to gain government support.</li> </ul>	High
a. The masterplan should take precedence over other plans/documents including “ <i>Mt Buller Village Design Guidelines 2005, Mt Buller and Mt Stirling Alpine Resort Management Board</i> ” which are not part of the planning scheme and are administered by the ARMB. b. In time, other documents should be noted as being superseded by the masterplan to avoid confusion and duplication. This will achieve consistency in processes and will enable planning matters to be dealt with in a streamlined manner.		
➤ The existing MSS and local planning policies should be reviewed and revised as appropriate in accordance with the Mount Buller masterplan in order to provide a clear, concise vision for the Resort.	<ul style="list-style-type: none"> <li>• Planning scheme amendment</li> </ul>	Low
a. Obsolete or repetitive planning controls, including incorporated plan requirements, should be amended or deleted to facilitate the Mount Buller vision whilst ensuring an appropriate balance between diligence and efficiency is achieved.		
<b>Limited Range of Accommodation Types</b>		
➤ Consideration and resolution is required to ensure that future development at Mount Buller is equitable by providing a wide range of accommodation types. This will partly be achievable through the proposed Accommodation Strategy informed by a review of bed numbers required during Winter and Summer periods which is to be implemented by ARMB and will filter through specific planning mechanisms.	<ul style="list-style-type: none"> <li>• Develop an Accommodation Strategy</li> </ul>	Low
➤ Planning mechanisms could include an Incorporated Plan or Design and Development Overlay which identifies and designates sites/areas/precincts for certain types of land uses and development, thereby providing guidance for these land uses which will discourage ad-hoc development.	<ul style="list-style-type: none"> <li>• Dependent on findings of above strategy</li> </ul>	Low

➤ Implementation of leases which are administered by the ARMB and have the ability to restrict land uses. This would be able to be implemented as each lease came up for renewal and is likely to be a longer term solution.	• ARMB to review leases	Low
<b>Native Title</b>		
➤ Engage an archaeologist regarding a review of matters associated with Native Title in light of new development and areas designated for redevelopment by the masterplan which will result in extensive earth works and excavation. <ul style="list-style-type: none"> <li>Background investigations should be undertaken now to minimise risk and timing issues in the future thereby increasing certainty.</li> </ul>	• An archaeologist is required to be engaged to undertake background investigation	High
<b>Tourism</b>		
➤ The zoning of the land needs to facilitate the provision of recreational areas and activities (i.e. flying fox); however it is likely that recreational land uses will be subject to the normal planning process. <ul style="list-style-type: none"> <li>The master plan references a myriad of Summer activities which could occur at the Mountain. These uses should be prioritised and reviewed based on their viability.</li> <li>Further environmental studies will be required to justify summer activities and the impact they will have on the surrounds particularly biodiversity.</li> </ul>	<ul style="list-style-type: none"> <li>Background studies such as flora and fauna are required to justify the development of facilities for Summer activities</li> <li>Further investigation should also be undertaken regarding the viability of Summer activities and what specific facilities are proposed as a priority.</li> </ul>	Medium
➤ With reference to the promotion of public events at Burke Street and summer activities on Horse Hill, Clause 62.03 of the Alpine Resorts Planning Scheme specifies that buildings and works relating to public events are exempt from the requirements of the planning scheme provided that the event has been authorised by the ARMB.	• Note	N/A
➤ Local policies should serve to promote tourism by encouraging engaging development through complementary land uses and urban design i.e. encouraging active frontages along the Burke Street extension.	<ul style="list-style-type: none"> <li>Further investigation is required into what land uses are needed in the Village as well as space requirements.</li> <li>Further investigation is also required regarding desired built form outcomes for the village.</li> </ul>	N/A



<b>Aboriginal Cultural Heritage</b>		
➤ It is strongly recommended that an archaeologist be engaged to review all sites identified for development in the masterplan. This includes new roads, proposed realignment of existing chairlifts, new water storage areas and snow making facilities. This should be activated as soon as possible as it has the potential to delay any future development significantly both in terms of time and cost. <ul style="list-style-type: none"> <li>○ In particular, a cultural heritage study needs to be undertaken for Horse Hill which will be necessary prior to its development, especially considering the extensive earthworks required to be undertaken.</li> <li>○ Future development is likely to require a Cultural Heritage Management Plan hence background investigations should be undertaken now to minimise risk and timing issues in the future thereby increasing certainty.</li> </ul>	<ul style="list-style-type: none"> <li>• An archaeologist is required to be engaged to undertake background investigation</li> </ul>	High
<b>ESD Implementation</b>		
➤ A key underlying theme of the masterplan is for long term sustainable development. To ensure new development and redevelopment includes minimum ESD principles, requirements should be provided under a revised Schedule to the Design and Development Overlay or as part of an existing or future incorporated plan.	<ul style="list-style-type: none"> <li>• It is understood that ARUP are preparing a sustainable policy review for the Mountain. Key elements of this review can feed into the planning scheme.</li> <li>• Planning scheme amendment</li> </ul>	Medium
➤ ESD principles should be broadly discussed through a specific local planning policy which would set the objectives and intent, whilst the overlay provides more specific requirements and decision guidelines.	<ul style="list-style-type: none"> <li>• Planning scheme amendment</li> </ul>	Low

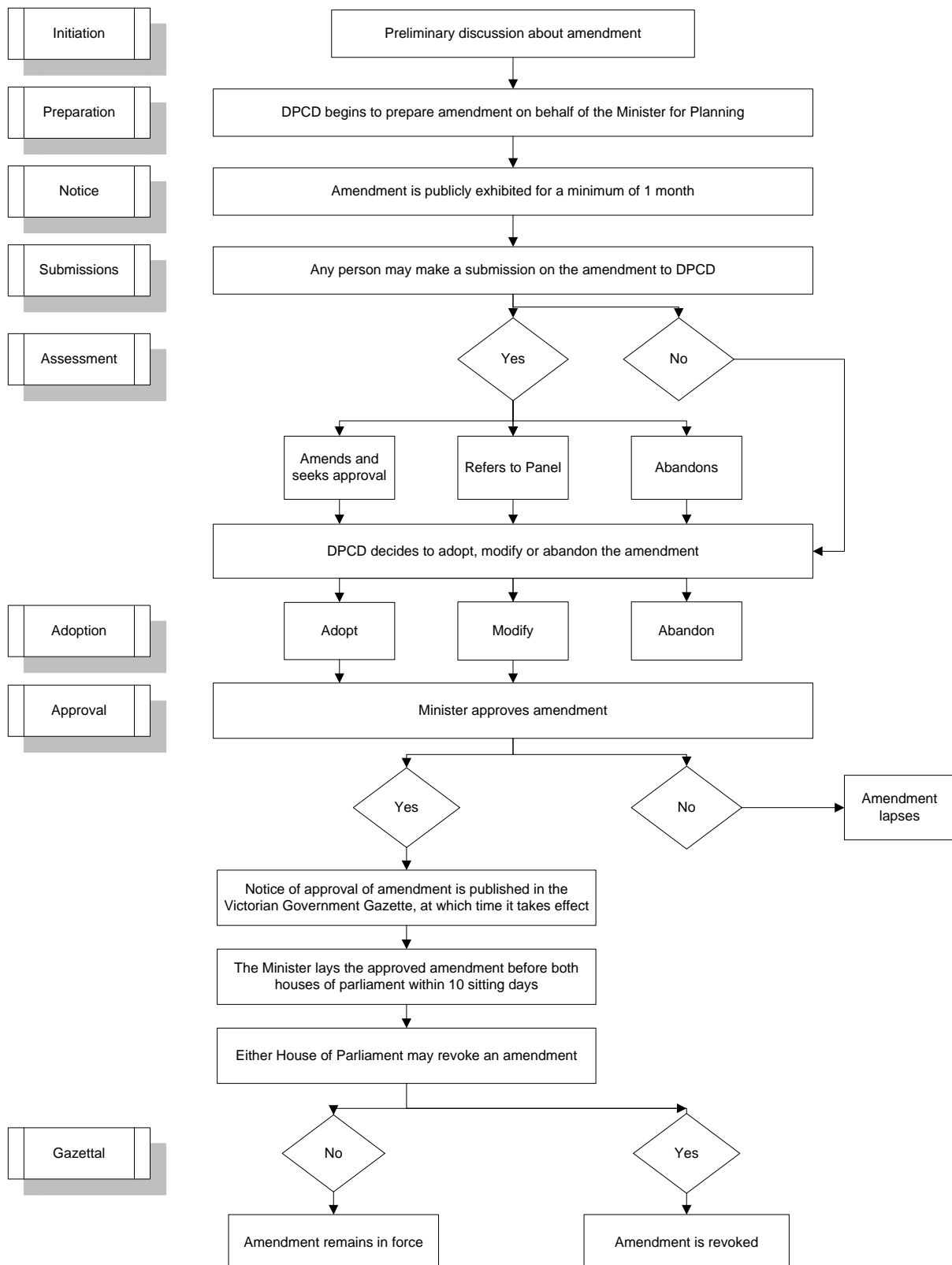
<b>Bushfires</b>		
<p>➤ The Mount Buller Alpine Resort Wildfire Management Plan 2009 which is to be reviewed November 2010, should be reviewed based on the objectives and preliminary blueprint of the Mount Buller Masterplan.</p> <ul style="list-style-type: none"> <li>○ It is recommended that the vision for Mount Buller will inform wildfire management strategies, especially in consideration to bushfire preparedness for new development.</li> <li>○ The plan should be developed with cooperation from CFA, DSE and ARMB and continue to be reviewed annually.</li> <li>○ A key likely outcome will also include the designation of areas as fire refuges and potentially the development of a “bunker” or similar.</li> </ul> <p>➤ The requirements of the wildfire management plan can be implemented through design controls (ie. requiring fire resistant materials to be used in the construction of new buildings) as well as local planning policies. Some of these requirements are currently triggered through the Wildfire Management Overlay.</p>	<ul style="list-style-type: none"> <li>• Update Mount Buller Alpine Resort Wildfire Management Plan in-line with the current masterplan blueprint</li> </ul>	High
<p>➤ The requirements of the wildfire management plan can be implemented through design controls (ie. requiring fire resistant materials to be used in the construction of new buildings) as well as local planning policies. Some of these requirements are currently triggered through the Wildfire Management Overlay.</p>	<ul style="list-style-type: none"> <li>• Note</li> </ul>	N/A
<b>Signage</b>		
<p>➤ A comprehensive signage plan should be developed outlining general criteria for signage and the type of signage which is encouraged within the Village and surrounds. This plan should make reference to signage types and preferred sizes. This plan would then be adopted and would be part of the planning scheme as an incorporated document.</p>	<ul style="list-style-type: none"> <li>• Background review to be undertaken to ascertain what the approach to signage will be in the Village.</li> </ul>	Low
<b>One Tree Hill Comprehensive Development Plan, December 1999</b>		
<p>➤ One Tree Hill is yet to be developed due to a number of environmental constraints. The ARMB should review the likelihood of developing the site based on a review of the overall masterplan and whether there is still a need for this site to provide additional housing and accommodation.</p> <ul style="list-style-type: none"> <li>○ As part of the masterplanning process, a review of all sites was undertaken to identify sites which were appropriate for redevelopment and those which we “non-negotiable”. Numerous sites have been identified for redevelopment and maybe more appropriate for residential development than One Tree Hill.</li> </ul>	<ul style="list-style-type: none"> <li>• To be reviewed</li> </ul>	Low

Mount Buller Gateway Comprehensive Development Plan		
➤	As the masterplan proposes to use and the develop the “Gateway Site” as the general area for the gondola, this plan should be removed from the planning scheme as the site will not be developed in accordance with this plan.	<div> <div> <ul style="list-style-type: none"> <li>To be removed once the masterplan is adopted.</li> </ul> </div> <div>Low</div> </div>

Note – The planning scheme amendment process is outlined in Section 14 – Planning Scheme Amendment Process of the body of the report.

## **Appendix 2**

### **Planning Scheme Amendment Process**



## Davis Langdon, An AECOM Company

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**A4**

# **Traffic Report**



Cox Architecture  
**Mt Buller Master Plan**  
Transport Planning Report

220665-00

Issue

Arup  
Arup Pty Ltd ABN 18 000 966 165



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This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 220665-00

**ARUP**

# Document Verification

ARUP

<b>Job title</b>		Mt Buller Master Plan		<b>Job number</b>	
				220665-00	
<b>Document title</b>		Transport Planning Report		<b>File reference</b>	
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Draft 1	20/10/10	<b>Description</b>	Working draft		
			Prepared by	Checked by	Approved by
		Name	Hugh Gardner	Paul Carter	Paul Stanley
		Signature			
Issue		<b>Filename</b>	Issue Transport Planning Report.docx		
		<b>Description</b>	Final report incorporating comments		
			Prepared by	Checked by	Approved by
		Name	Hugh Gardner	Paul Carter	Paul Stanley
		Signature	PP Paul Gardner	Paul Carter	Paul Stanley
		<b>Filename</b>			
		<b>Description</b>			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
		<b>Filename</b>			
		<b>Description</b>			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
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## Executive Summary

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Access and mobility are key factors to the success of any township and is a fundamental feature of the experience at Mt Buller. The Mt Buller master plan provides the opportunity to identify and plan for the implementation of transport improvements for both visitors as well as the broader Mt Buller community. The transport system needs to be developed by not just considering access from the village to the ski slopes but based on the journey to Mt Buller from entry to the national park to the ultimate participation in a variety of both summer and winter activities. This requires consideration of the movement of pedestrians, cyclists and vehicles, parking requirements and the ways in which these users connect to and interchange between the different modes throughout Mt Buller.

Transport data outlining the car parking supply and demand, daily vehicle entries and movements has been reviewed to understand the current transport challenge and opportunities at Mt Buller. Similarly, the existing transport operations and infrastructure have been observed during both the winter and non-winter periods to inform this baseline. Separate consultation and a workshop session have also been held in July 2010 to establish the vision for Mt Buller as well as the objectives of the master plan; including specific transport objectives.

The transport objectives have been initially based on existing policy but then extended to capture the aspirations for Mt Buller as determined through the workshop process. A total of eleven transport objectives have been identified for Mt Buller and are broadly summarised as follows:

*To develop a multi-modal transport system that is affordable, convenient and reliable and provides for the safe and efficient movement of people seeking to connect to Mt Buller as well as the surrounding national park. This system should enhance the pedestrian feel of Mt Buller by achieving a balance between pedestrian and vehicle movement. The transport systems should meet the existing and planned visitation levels whilst appropriately responding to the unique and sensitive challenges presented by an Alpine environment.*

The transport objectives, the review of the existing conditions and the stakeholder and community feedback (gathered through consultation) have been used to drive the transport concepts for Mt Buller. The key concepts are as follows:

- Continue to limit vehicular movement to the village in order to maintain the walkability of the village and to provide a safe environment for pedestrians.
- Increase permeability of village buildings to facilitate direct pedestrian and cycling access.
- Develop a Pedestrian and Cycling Wayfinding Strategy to inform built form design and provide a framework to guide the design and provision of both signage and information at key decision points.
- Improve access along the key pedestrian links within the village, particularly Athletes walk and Black Forest Walk, as well as the connection between the Village, day car parking facilities and Horse Hill.

- Consolidate existing interchange movements to key transport hubs at Horse Hill and Mt Buller Village to allow convenient interchange between transport modes and the provision of improved facilities for waiting passengers including shelter, arrival and departure information, amenities, facilities services and staff assistance.
- Implementation of a gondola link between Horse Hill and the Village to improve connections between these two transport hubs, provide more intuitive wayfinding and reduce passenger congestion and queuing associated with bus services that currently travel between the Village and Horse Hill.
- Provision of transport links between Horse Hill, the Village and Spurs. This system would relieve congestion issues on Bourke Street and at Helicopter Flat and allow convenient and flexible access to and from the mountain during peak demand periods.
- Provision of a bus interchange and amenities building at Horse Hill which can provide for the safe, convenient and comfortable drop-off and pick-up of bus passengers travelling to/from Melbourne etc.
- Adjust the existing car parking supply to provide a net gain of total car parking and the conversion of existing overnight parking that is in close proximity to Horse Hill to day parking. These changes better reflect the current and forecast parking demands whilst allowing for growth in day and overnight visitation.
- Create new car parking facilities the Skating Rink and the existing workshops below Horse Hill with pedestrian connection to Horse Hill.
- Reduce the supply of car parking at Horse Hill car park to provide for a bus interchange, snow play area, bottom station of the Village gondola link and amenities building at Horse Hill.
- Provision of a two wheel drive connection between Mt Buller and Mt Stirling to improve the integration of the two mountains and also and reduce the risks associated with only one road link to Mt Buller.
- Improve vehicle capacity through the gate entry at Mirimbah (e.g. automated vehicle entry to reduce reliance on manual system).

Following endorsement of the master plan, it is expected that further investigation would be undertaken of the individual transport concepts focusing on design outcome, staging and implementation.

The concepts that form part of the master plan provide a coordinated approach to the delivery of transport operations and infrastructure for Mt Buller. This approach provides the framework that is needed to deliver a safe, efficient and flexible transport system for visitors and residents of Mt Buller that is capable of meeting the mobility and access needs in the long term.

# 1 Introduction

---

Arup has been engaged by Cox Architecture (Cox) to provide transport planning advice and input to inform the Mt Buller master planning process being undertaken by Cox for the Alpine Resort Management Board.

The purpose of this report is to provide an overview of the outcomes of the master planning process from a transport planning perspective. This includes a summary of the transport objectives developed for Mt Buller, a review of the existing conditions and opportunities, the transport concepts developed as part of the master plan and the next steps in progressing the transport elements of the master plan for Mt Buller.

## 2 Setting the Scene

---

### 2.1 Mt Buller Overview

Mount Buller is approximately three and a half hours drive from Melbourne and is considered to be very accessible relative to other major Victorian Alpine Resorts. Access to the mountain and mobility varies between the winter and non winter periods as described below.

#### 2.1.1 Winter Access and Mobility

Access to Mt Buller is critical to its operation during the declared snow season. Entry to Mt Buller resort during the snow season is controlled at the Mirimbah gate where visitors arriving by car pay a per vehicle entry charge based on the intended duration of their stay in the Village. Bus passengers are charged on a per person basis.

Currently the only access route to Mount Buller is via the Mount Buller Tourist Road – a winding 16km road rising from Mirimbah to Mount Buller Village. All overnight visitors to the Village are required to carry chains and in extreme weather conditions visitors to the mountain are required to fit chains as a condition of Resort entry in response to road conditions. The two-way single-lane road has a series of chain fitting bays between Mirimbah and the Horse Hill car park however there are no overtaking lanes.

Visitors can access the mountain during winter in three ways:

- Bus transport, mostly from Melbourne, to Mansfield, & on to Mt Buller;
- Park off the mountain in Mansfield or at the Mirimbah gate and be transported by bus to the Village; or
- Drive to the short or long-term car parks located at points along the Mount Buller Tourist Road.

A transport system provides a ‘free’ day shuttle service for day visitors between the car parks and the Village. The car park to village shuttle service does not cater for luggage so overnight visitors are required to use the mountain taxi service to transport their luggage and equipment to their ski lodge, apartment or hotel, at an additional charge. Within the Village, a free shuttle bus operates from 8am-6pm during winter. There is no public transport outside of the snow season. A school bus operates year round based on resident student demand.

A limited amount of public car parking is available within the Village and private car parking is also available in association with accommodation. The ARMB controls parking within the Village during the ski season through a paid permit system, available only to 4WD vehicles. ARMB’s policy is to encourage off street parking within the village and discourages unnecessary driving of vehicles within the village.

During winter the circulation of village traffic, pedestrians and skiers is managed by a range of measures including the provision of a free intra-village shuttle bus service, the limiting of private vehicles by the issue of permits, and the marking out of specific paths and routes for pedestrians and skiers. Ski fields are accessible via the Village or direct from day car park by quad chair from Horse Hill lift station.

## 2.1.2 Non-winter Access and Mobility

Outside of the snow season, there is no entry fee for access to the Resort and private vehicles are free to enter the Village and park at kerbside parking zones. The winter day and overnight parking areas have limited use during the non-winter months.

Streets, tracks, ski trails and walking trails in the Resort are used as walking and bicycle trails, and there are links to further trails on Mount Stirling and beyond. There are plans, subject to additional government funding and planning assessment, to construct a 2WD link road between Mount Buller and Mount Stirling, to create a touring route that links Mt Buller Village with the surrounding high country on a through route and provides alternative emergency access.

The current transport and access arrangement represent a vast improvement on the trying conditions that faced visitors during the first decades of the ski resort's existence.

ARMB has identified that there is a clear need to radically improve and streamline the journey to the resort such that bottlenecks, compromise of safety, indeterminate waiting and discomfort are eliminated while value for money (paid for entry and transit) is provided in the form of a smooth, 'hassle-free' journey terminating in a welcoming sense of arrival in the Village.

## 2.2 Background Information

A key step in a master plan process is to understand the context in which the master plan will be developed. As part of this process, site inspections were undertaken at Mt Buller on 1 June 2010 (to represent the non-winter period) and also from 10-12 July during the winter peak school holiday period. An overview of conditions as observed during both the non-winter and winter site inspections are shown in Figure 1 and Figure 2.



Figure 1 Mt Buller non-winter site inspection





Figure 2 Mt Buller winter site inspection

The site inspections during July also included discussions with numerous key stakeholders which provided further in depth understanding of the existing transport operations, opportunities and constraints at Mt Buller. In addition, the July inspections also included visioning and workshop sessions with key community, industry and government stakeholders.

To supplement the site inspection and discussions with key stakeholders, the following data was provided by Mt Buller and reviewed:

- Number of resort entries per week from 1999 to 2009 to establish an appropriate year for review;
- Gate entry information from winter 2009 categorising the number of persons and vehicle type, length of stay for recorded entries at Mirimbah gate;
- Traffic volumes for 2008-2009 non winter period including identification of key peaks in traffic volumes (e.g. All Tomorrows Parties Festival).
- Parking capacity data indicating the maximum capacity of the on-street and off-street car parking at Mt Buller (not including car parking within the Village) as well as the capacity for the storage of buses at Mt Buller.
- Overnight parking survey data which includes the total number of vehicles parked in each car park for each night of the 2009 winter season;

In addition to the above, crash statistics data was sourced from VicRoads for the most recent available five year period 2004 to 2008.

The data from the site inspection has been collated to summarise the existing conditions and opportunities under the key themes of pedestrian movements, interchange, parking and traffic movement.

## 2.3 Transport Objectives

In order to inform the development of transport concepts, it is necessary to establish the key transport objectives for the master plan.

At the visioning workshop held in July 2010, the transport objectives for the master plan were discussed. Existing government strategy documents outlining policy relating to transport was used as an initial base for the discussion then extended to capture the aspirational objectives for Mt Buller as determined through the workshop process. These transport objectives as established during the workshop process are outlined as follows:

- To develop a multi-faceted transport system that ensures a high level of accessibility to the Village.
- To provide an efficient, affordable, convenient, reliable and safe public transport system to meet the needs of visitors.
- To ensure safe and efficient movement of vehicles, pedestrians, cyclists and skiers throughout Mt Buller, particularly within the Village.
- To improve non-vehicular movement within the Village and particularly along Athletes Walk and Black Forest Walk.
- To provide off-street public and private car parking to meet the needs of existing and planned visitation levels for Mt Buller.
- To provide vehicular, pedestrian and skier links from Mt Buller to Mt Stirling and the surrounding Alpine National Park to optimise year round visitor experiences, provide alternative access routes and improve safety.
- To provide appropriate access and facilities for emergency services.
- To achieve balance between the demands of vehicle transport and both pedestrian and skier movement.
- To ensure that the pedestrian feel and environmental qualities of the Village are enhanced.
- To provide developments and infrastructure that facilitate snow farming and efficient access for snow clearing.
- To ensure that the built environment is legible addressing issues of wayfinding for vehicles, skiers, cyclists and pedestrians.

These objectives are fundamental to informing the access and mobility concepts for the master plan.

## 2.4 Existing Conditions and Opportunities

### 2.4.1 Pedestrians and Cycling

The consideration of pedestrian movement within the village is key to developing a safe, accessible and vibrant village environment. Pedestrian access within the village benefits from a generally low speed environment where pedestrians and vehicles share road space. The restrictions on vehicle access to the village centre are a key feature in limiting vehicle movements within the village and maintaining a walkable environment.

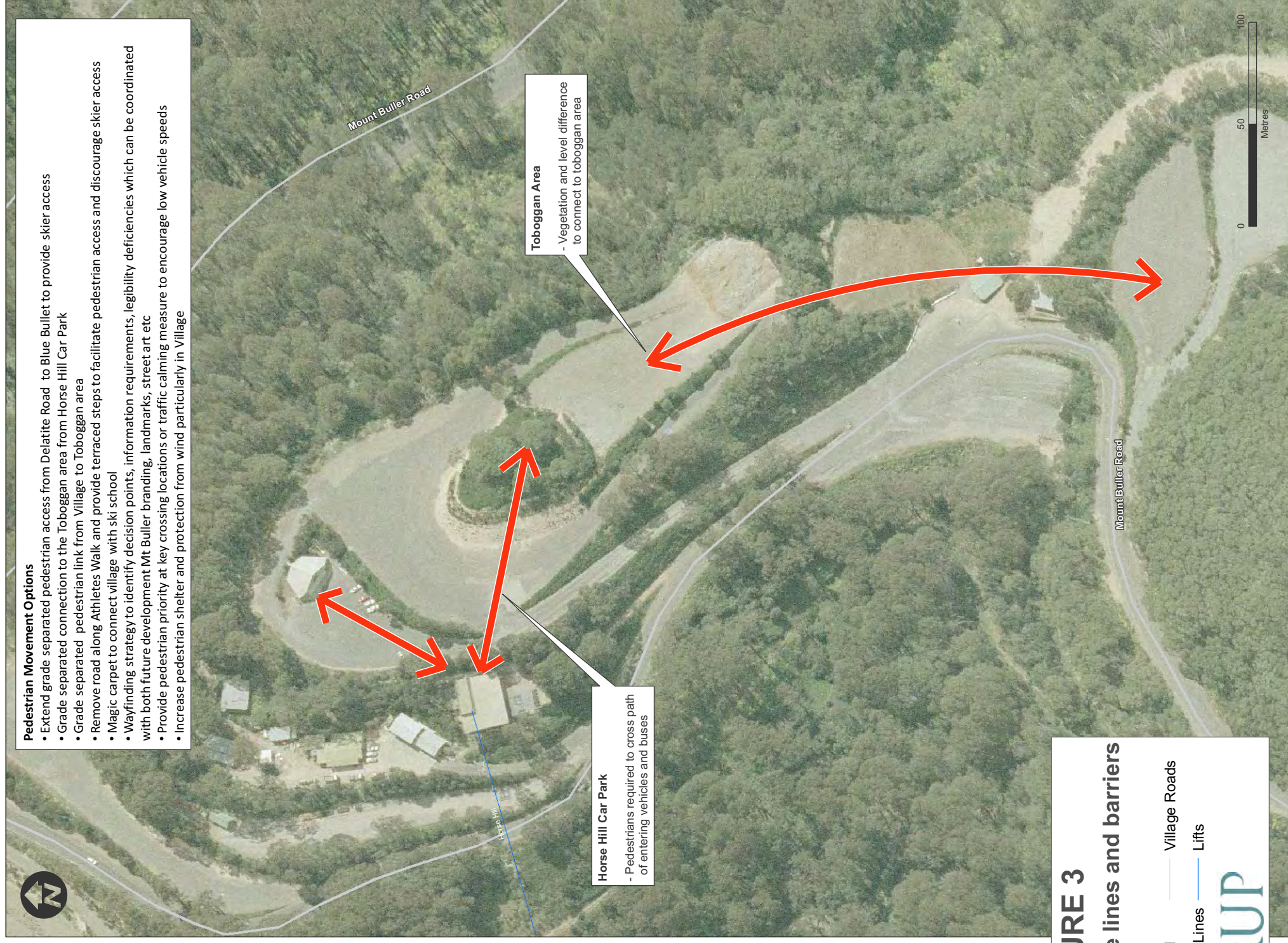
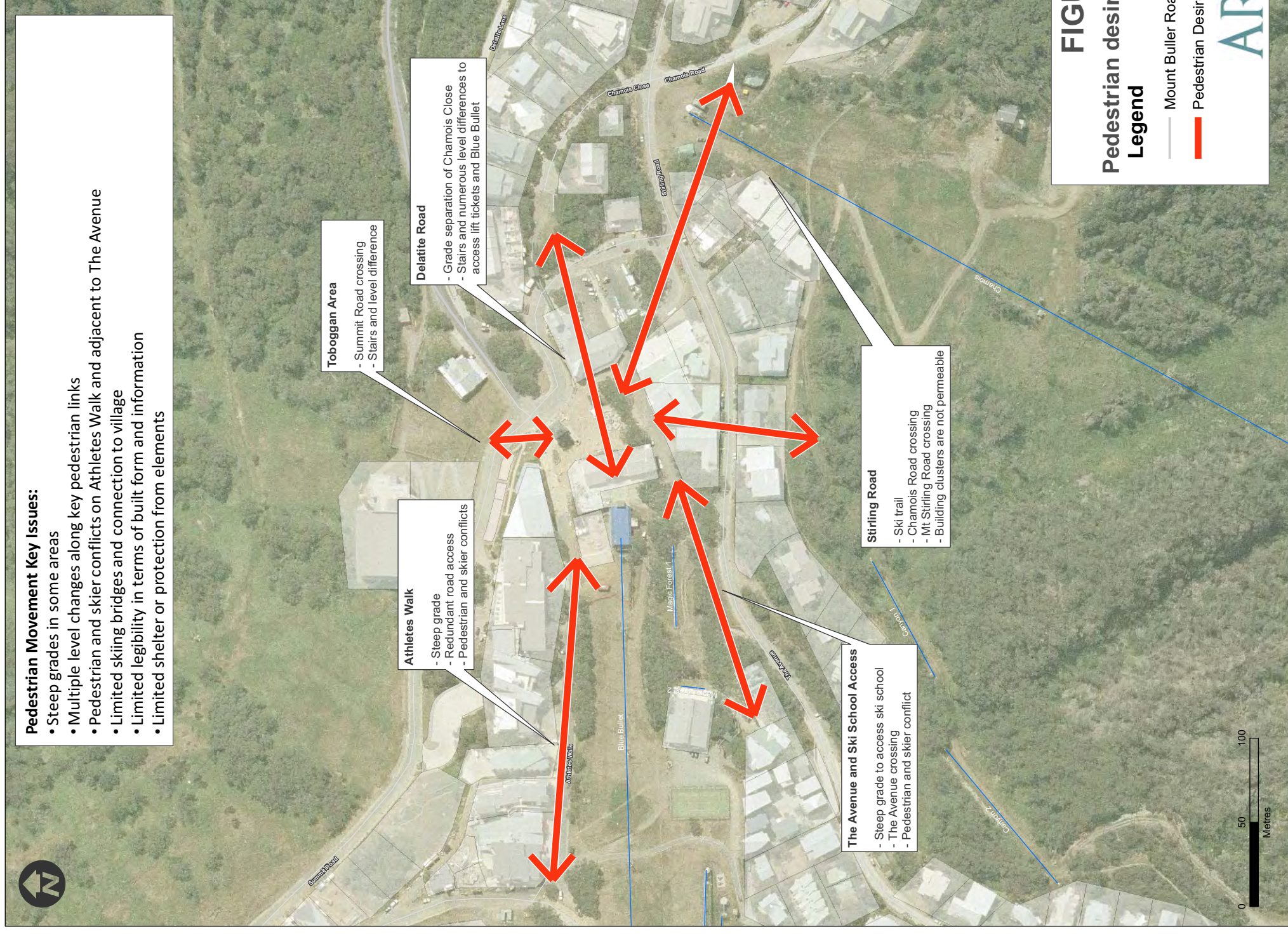
In order to understand the key issues for pedestrian movements within the village and also at Horse Hill, the desire lines and barriers have been mapped and are shown in Figure 3.

Based on the consultation activities, as well as the observations from the site inspections, it is considered that there are a number of key opportunities for pedestrian movements at Mt Buller, which are described as follows:

- Improve the permeability of building clusters, particularly around the village to allow direct and convenient pedestrian connection between the village and surrounding areas.
- Provide a strategic approach to pedestrian wayfinding that allow pedestrians to find their way intuitively (e.g. based on the built form, marker points etc), with signage and information provided at key decision points.
- Improve access along the key pedestrian links of Athletes walk and Black Forest Walk which have areas of steep terrain, commonly covered in ice or snow and are subject to conflicts between pedestrians snow users (e.g. skier, snowboarders, toboggans).
- Encourage reduced vehicle speeds particularly at key pedestrian crossing locations and continue to limit vehicle access within the Village in order to provide a walkable environment for pedestrians.
- Improve the pedestrian connections between the Village and Horse Hill (including the surrounding day car parking). This required in order to reduce the occurrences of pedestrians walking from the Village to Horse Hill along the shoulder of Mt Buller Road.
- Minimise the challenges that steep topography and large level changes present to pedestrians (e.g. access to the bottom station of Blue Bullet 1 Chair Lift from the Village below).

Similarly, the consideration of cycling access is also important for promoting cycling both as a form of recreation and mode of transport; most notably in the summer periods. There is a considerable opportunity to improve cycling navigation from the village to mountain biking and downhill trail heads with improved signage. Also, the provision bicycle storage, continuous bicycle linkages and a permeable built form would assist in encourage cycling as a form of summer transport within the village as well as facilitating better access for recreational cyclists.







## 2.4.2 Interchange

The concept of interchange is fundamental to the experience within any Alpine environment and particularly at Mt Buller as visitors, residents, staff and other members of the Mt Buller community transfer between being pedestrians, cyclists, motorists, taxi passengers, bus passengers, skiers etc. Based on the existing conditions, the key locations of interchange movements include:

- Mirimbah:
  - Car-bus for travel between Mirimbah and the village.
- Horse Hill:
  - Car-bus for travel between Horse Hill and the village
  - Car-chairlift for access to the ski area via Horse Hill chairlift
  - Bus-chairlift for travel between Horse Hill and either the village or Skating Rink via Horse Hill chairlift.
- Skating rink:
  - Bus-bus for Melbourne to Mt Buller bus passengers interchanging to Mt Buller Village buses to access Horse Hill or the village
- Mt Buller Village Bus Interchange:
  - Skiers and pedestrians interchanging to and from Village-Horse Hill buses.
  - Skiers and pedestrians interchanging to and from the intra-village buses.
- Overnight car parking:
  - Car-taxi for travel to the village from the overnight car parking areas.

It is considered that there are a number of opportunities for improving interchange movements, described as follows:

- Consolidate interchange movements to key locations (e.g. Mirimbah, Horse Hill and Village) to provide efficient and comfortable interchange between the various modes of transport.
- Improve the waiting facilities at all points of interchange within the transport system (e.g. Skating Rink, overnight car parking, Village Bus Interchange). This can be achieved through the provision of weather protection, amenities, transport information etc.
- Minimise the need for interchanging passengers to cross the paths of vehicles. This is particularly relevant for access from the Horse Hill car park to Horse Hill chairlift as well as for bus passenger interchanging between Melbourne-Mt Buller buses and village bus at the Skating Rink.
- Improve the capacity of the transport link between the village and both Horse Hill and the Mt-Buller to Melbourne bus interchange (current at Skating Rink). The current bus interchange operation does not accommodate the demand for passengers leaving the village in the PM peak period with significant queuing observed.
- Provide additional clarity to distinguish between Village to Horse Hill buses and intra-village bus services as they are commonly confused by waiting passengers.

### 2.4.3 Car Parking

The two main components of car parking at Mt Buller include parking for day visitors as well as overnight car parking. The existing car parking supply for the two predominate visitor types is shown in Table 1. In addition, a separate summary showing the split between on-street and off-street car parking is shown in Table 2.

It is noted that the car parking supply changes on any particular day given that vehicles are manually parked to maximise the car parking yield. Similarly, the snow accumulation may affect the parking supply from time to time.

Table 1 - Existing car parking supply

Location	Car Parking Supply	
Roadside below Andrews	50	
Andrews	60	
Roadside Andrews to Caravan	40	
Caravan	70	
Roadside Caravan to Chalet	60	Overnight Parking
Tyrol	560	1,590
Chalet	180	
Walkers	100	
Roadside Tyrol to Skating Rink	80	
Horse Hill	850	Total Day Parking
Roadside Corn Hill Road	320	1,410
CSIR Lower	160	
CSIR Upper	330	
Roadside CSIR to Hell Corner	80	
Roadside Hell Corner to Tip Corner	60	

In addition to the data shown below, information provided by ARMB suggests that there are approximately 830 car spaces provided either on-street along the village roads (approximately 210 spaces) or within private developments within the village (approximately 680 spaces).



Table 2 – Summary of on-street and off-street car parking supply

Day Parking		Supply
-	On-street	400
-	Off-street	1,010
-	Sub-total	1,410
Overnight Parking		
-	On-street	290
-	Off-street	1,300
-	Sub-total	1,590
Total		3,000

In order to understand the profile of the demand for car parking, 2009 parking survey data was provided by ARMB and reviewed. The 2009 car parking demand has been identified as reasonable year for assessment following review of gate entry data for 1999 to 2009. A comparison of the parking demand relative to the parking supply is summarised in Figure 4. It is noted that the day parking demand has been estimated based on gate entries information. While this data provides a broad estimate of demand, it is understood that the gate entries information alone is an underestimate of parking demand as this data set does not include some car park users (e.g. seasons pass holders).

With regards to parking for new developments, it is noted that there are existing local car parking policy provisions for Mt Buller within the Alpine Resort Planning Scheme. Amongst other elements, the policy indicates that requirements for car parking within new development or refurbishment to existing development is 1 car space per 140m<sup>2</sup> gross floor area. The transport and parking considerations outlined within the Planning Scheme are further discussed within the Town Planning Review undertaken by Davis Langdon.

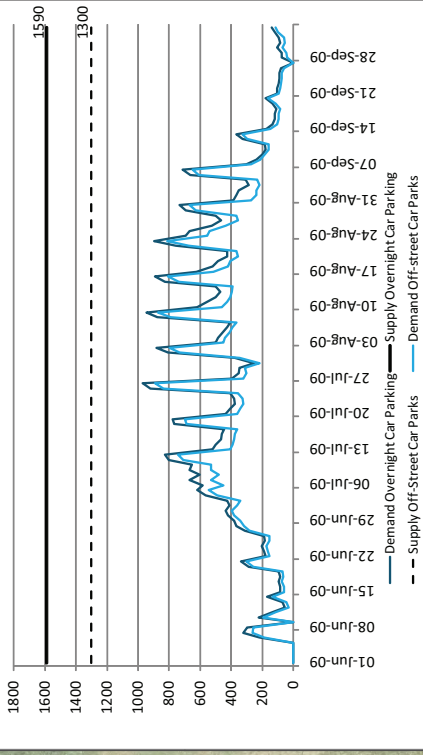
It is considered that there are a number of key opportunities for car parking at Mt Buller, which are described as follows:

- Increase the supply of car parking for day trips during the winter period as the winter day car parking demand exceeds capacity within the off-street car parks on peak weekends.
- Improve the pedestrian connectivity between day parking areas and Horse Hill chairlift. This is particularly the case for the overflow parking area of Lower CSIR.
- Consider a change in balance of overnight car parking and day car parking as the overnight car parking does not reach capacity (maximum observed demand of 970 spaces during 2009, total supply 1,590 spaces).
- Reduce the reliance on on-street parking for either overnight or day parking given that it is undesirable for loading and unloading activities to occur in close proximity to an active traffic lane. In the context of day parking, on-street parking is undesirable given that it is generally disconnected from Horse Hill (particularly, on-street parking on Corn Hill Road).

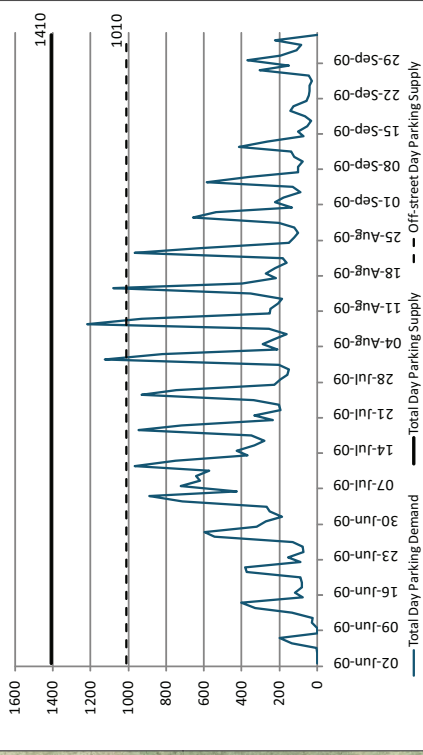




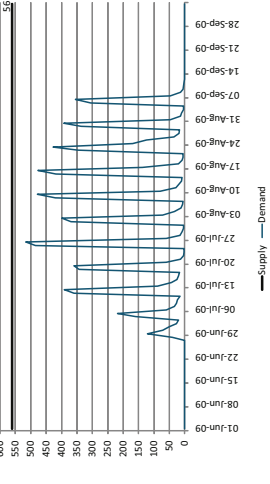
Total Overnight Parking Demand



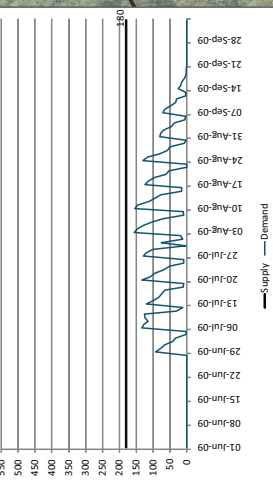
Total Day Parking Demand



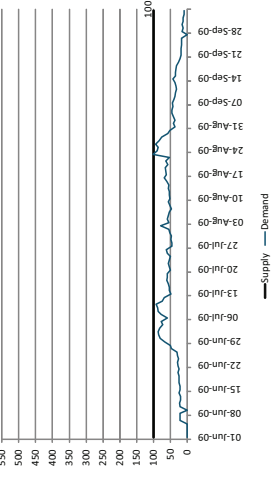
Tyrol Car Park - Overnight Parking Demand



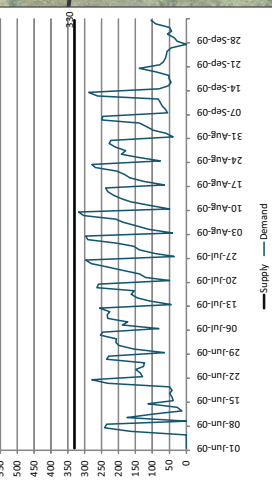
Chalet Car Park - Overnight Parking Demand



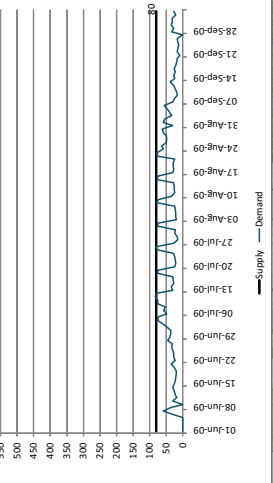
Walkers Car Park - Overnight Parking Demand



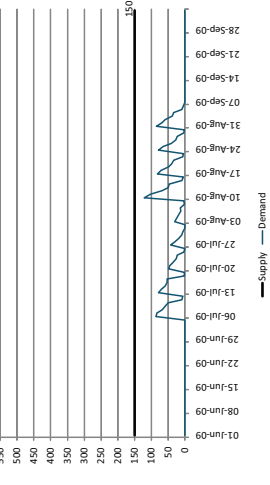
CSIR Upper Car Park - Overnight Parking Demand



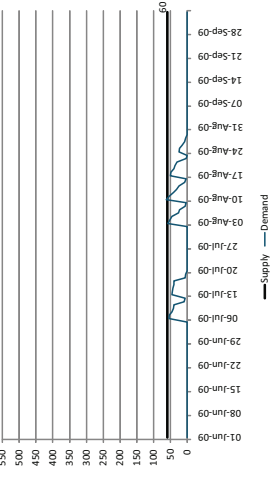
Hell Corner - Overnight Parking Demand



Roadside Below Horsehill - Overnight Parking Demand



Andrews Car Park - Overnight Parking Demand



Caravan Car Park - Overnight Parking Demand

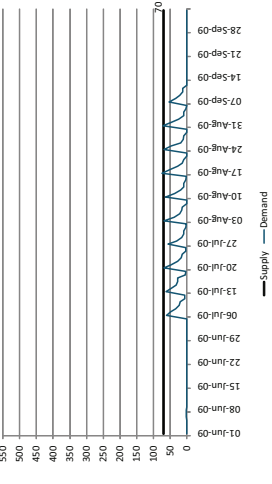
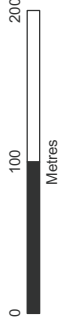


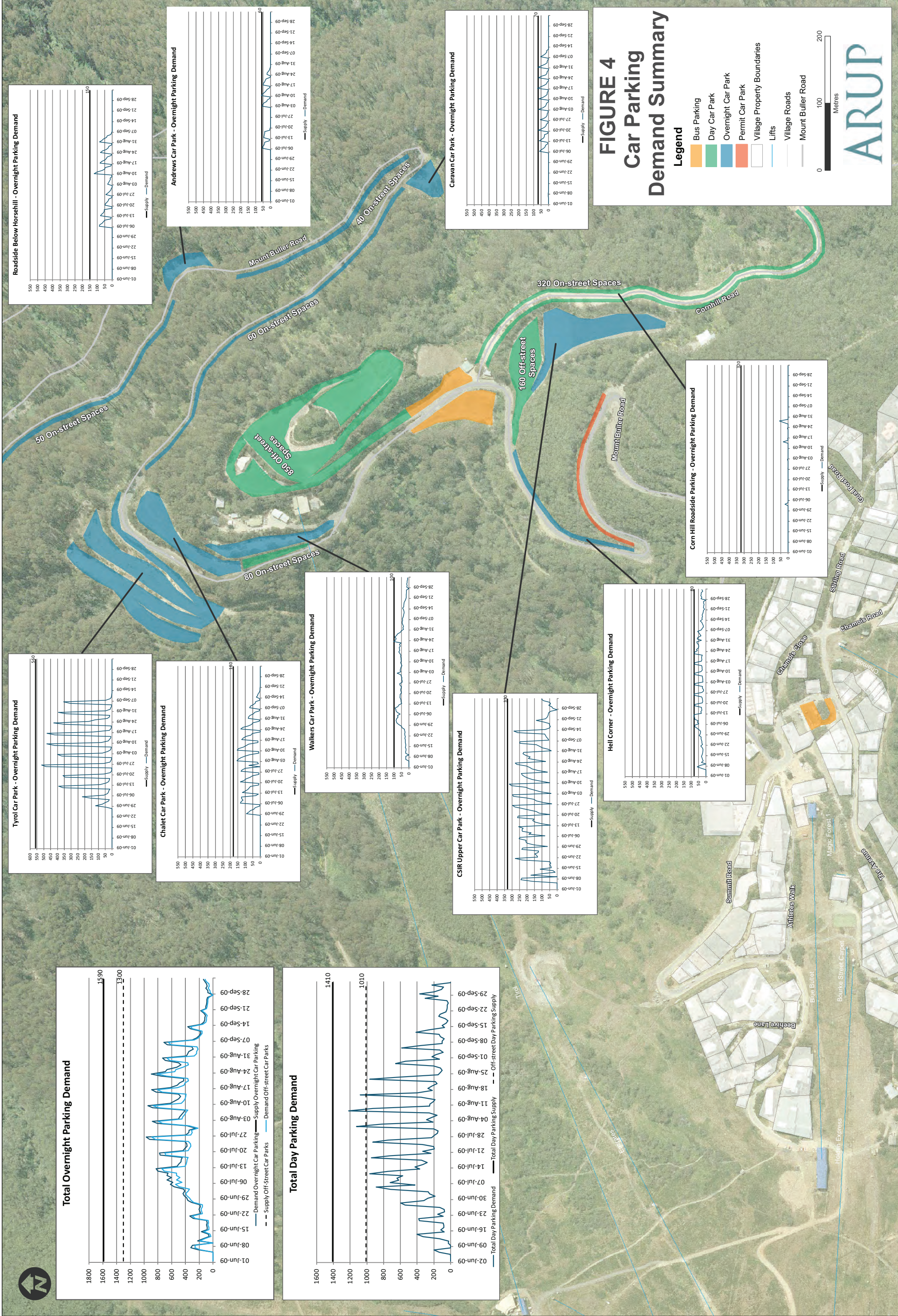
FIGURE 4  
Car Parking  
Demand Summary

Legend

- Bus Parking
- Day Car Park
- Overnight Car Park
- Permit Car Park
- Village Property Boundaries
- Lifts
- Village Roads
- Mount Buller Road



ARUP





## 2.4.4 Traffic Movement and Access

Traffic movement and access are critical considerations for Mt Buller as vehicle access, either by bus or private vehicle, are the dominate forms of transport.

Mt Buller Road provides access in and out of Mt Buller and is approximately 16km in length measured from Mirimbah to Mt Buller Village. Mt Buller Road is a sealed two-lane two way road with intermittent sealed and unsealed shoulders. Safety barrier fencing is provided at key locations (e.g. on the outside of curves) to protect motorists from the steep embankments. In addition, chain fitting bays are provided, however there are very limited opportunities for safe overtaking. As Mt Buller Road approaches the Horse Hill area and Mt Buller Village, on-street car parking is permitted as discussed in Section 2.4.3.

Given the accessibility of Mt Buller to Melbourne, there are a wide range of motorists with differing levels of experience in driving in Alpine conditions. Accordingly, VicRoads crash data was reviewed for the most recent available five year period (2004 to 2008) to identify existing road safety issues for access to the mountain. The data indicates that there have been 14 reported casualty crashes (2 serious, 12 other injury) as shown in Figure 5.

Based on gate entry data from the winter period, it is estimated that Mt Buller Road carries up to 2,800 vehicles per day which predominately occurs on weekends during the winter season. While no specific survey data is available to understand the daily profile of vehicle movements, it is estimated that these vehicle movements primarily occur in the peak hours for the mountain. Given the dominate peak period traffic movements, it is considered that the capacity of Mt Buller Road is approximately 2000-4000 vehicles per day. It is understood that Mt Buller Road reaches capacity at peak times which partly is driven by the steep grades, winding geometry and snow conditions but also by the gate entry ticketing arrangements at Mirimbah and the manual direction and parking of vehicles at Horse Hill.

Traffic volumes during the summer period are considerably reduced with notable daily peaks during particular events at Mt Buller. While there are some issues with access to Mt Buller (as highlighted below), generally it is considered that Mt Buller Road provides reasonable access to the mountain.

The remaining roads within Mt Buller are generally provided within the village and provide access to local property. The traffic volumes along these roads are low given that vehicle access to the village is limited to buses, taxis and small number of permit holders. The significant majority of motorists park within the car parks below the Village and access taxis, buses or utilise Horse Hill chairlift to reach their destination. Accordingly, the local streets within Mt Buller village are commonly shared by pedestrians, vehicles, skiers and snowboarders. While there are areas for improvement, the low speed nature and shared environment should be encouraged with vehicle movements in the village continuing to be limited. During the summer period, the local road network provides access to downhill mountain biking and the cross country mountain biking trail heads.

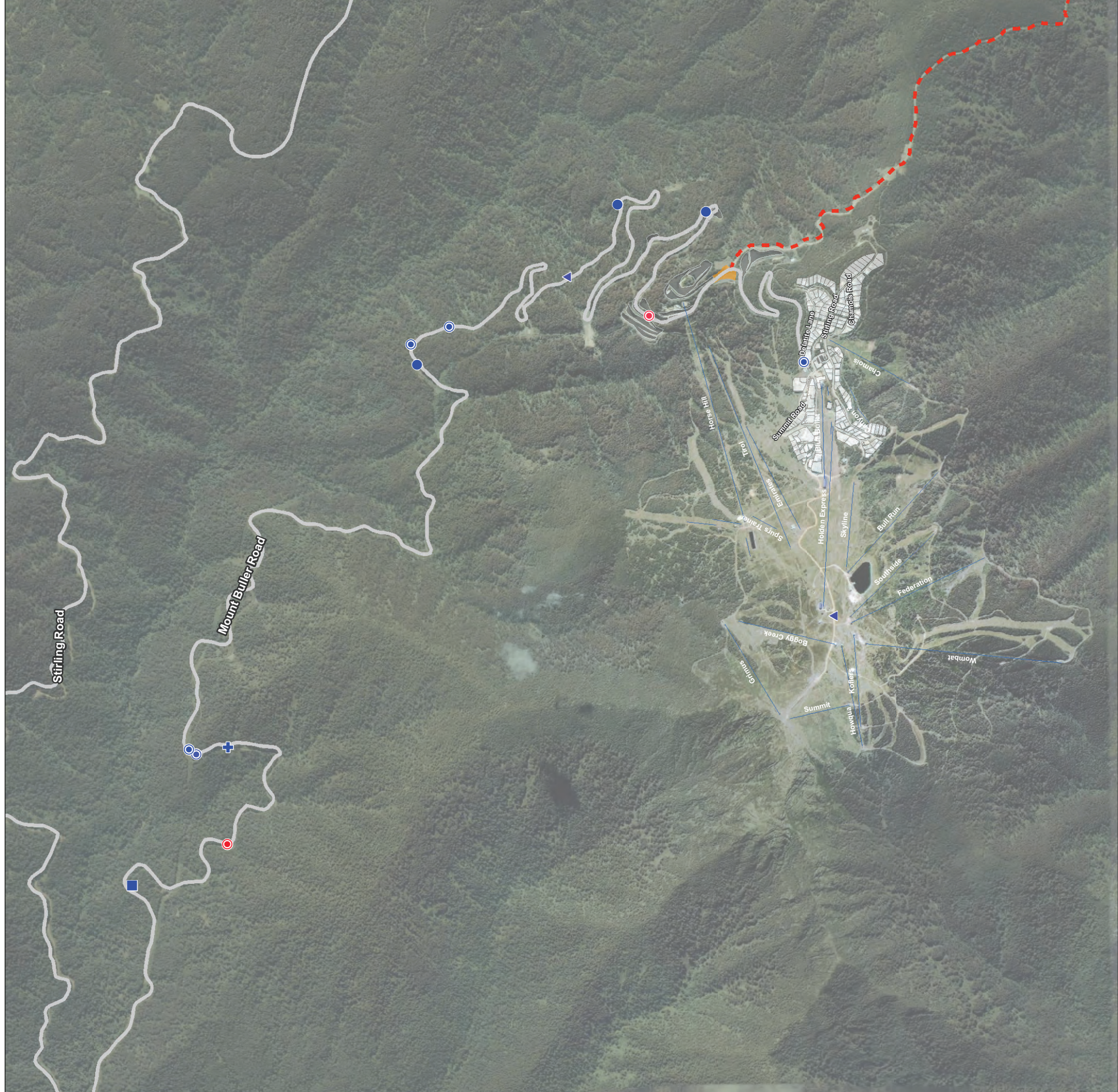
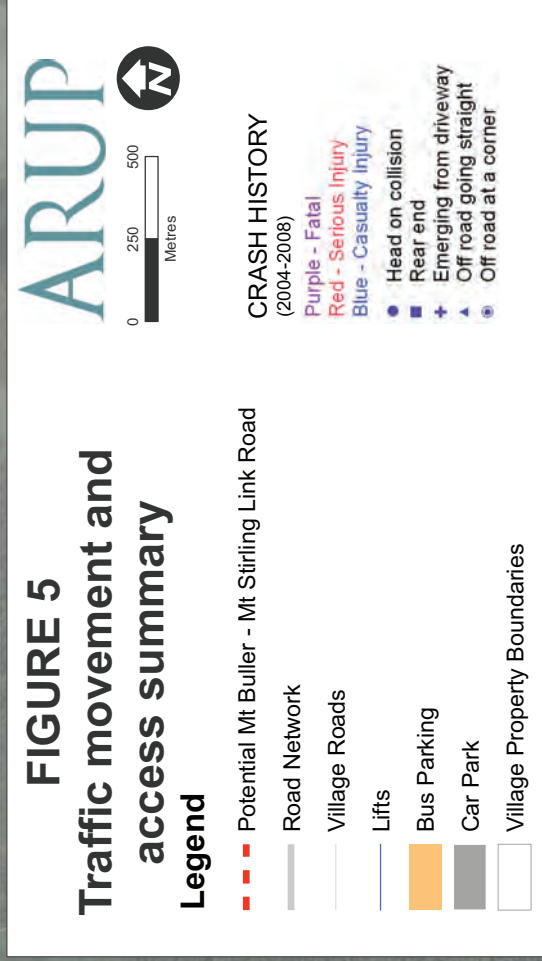
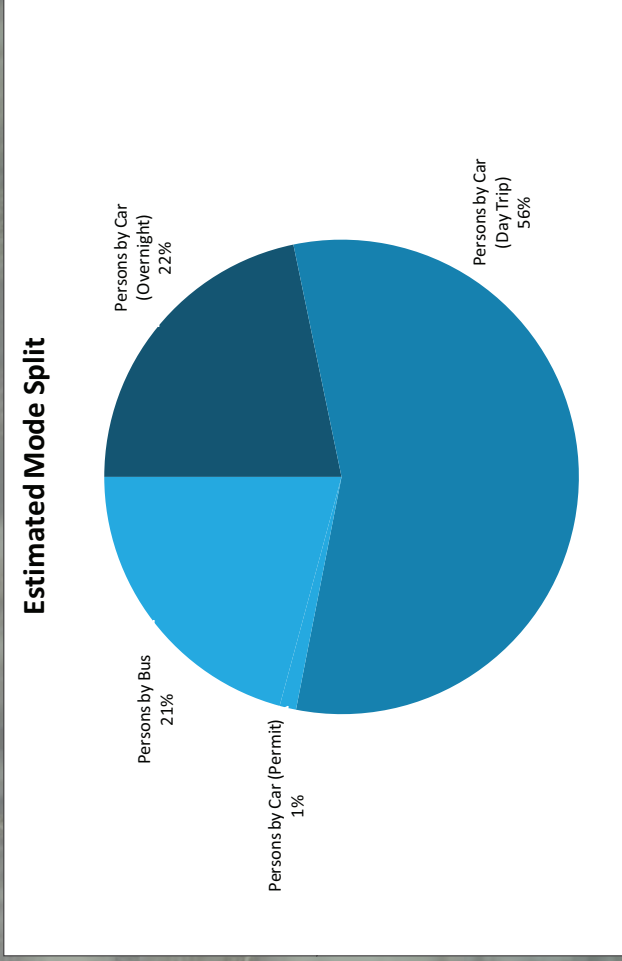
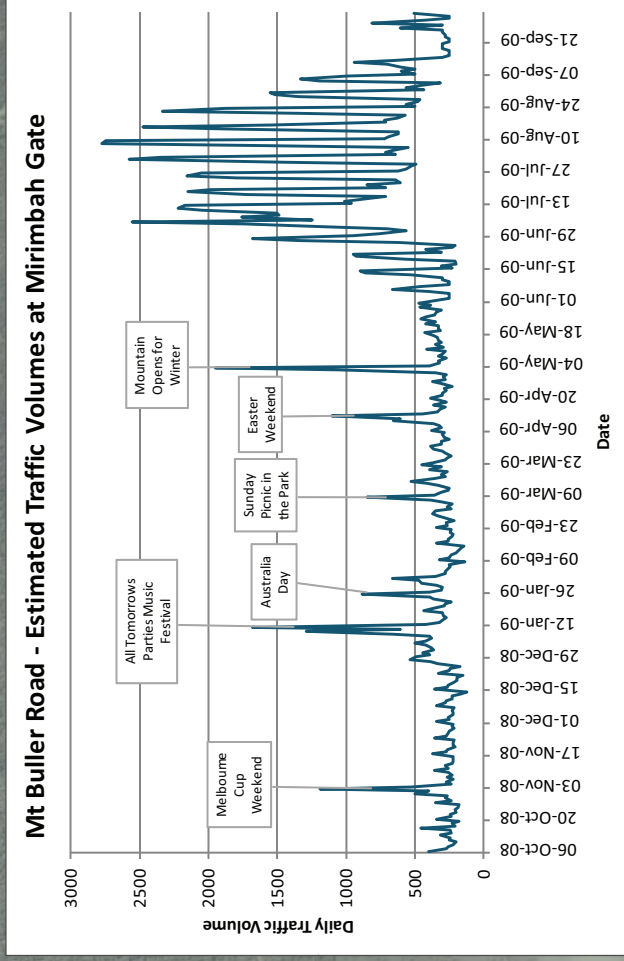
An overview of traffic movement and access is shown in Figure 5.

It is considered that there are a number of opportunities regarding traffic movement and access to Mt Buller, which can be summarised as follows:

- Provide two wheel drive connection between Mt Buller and Mt Stirling to increase connectivity between the two areas and reduce the risks associated with only one road link to Mt Buller during an emergency situation.
- Improve vehicle capacity through the gate entry at Mirimbah (e.g. automated vehicle entry to reduce reliance on manual system).
- Improve traffic direction and signage particularly at the skating rink and intersection of Mt Buller Road with Summit Road.
- Reduce the need for manual control to direct vehicles at the Skating Rink.
- Improve connection (either vehicular or non-vehicular) between the Village and the Spurs precinct to increase the utilisation of the Horse Hill chairlift and Burnt Hut beginner area.
- Investigate the two separate clusters of three reported casualty crashes along Mt Buller Road.

These opportunities have been used to inform the transport concepts that have been developed for the master plan as described in Section 3.







### 3 Mt Buller Transport Concepts

Building from the review of the existing conditions and recognising the opportunities, the conceptual elements of the master plan for Mt Buller have been developed. The features are described under the themes of pedestrians and cyclists, interchange, car parking and traffic movements. The outcomes that are discussed within this section are intended to articulate the transport concepts (rather than particular designs) that should be achieved by the master plan.

#### 3.1 Pedestrians and Cyclists

Building upon the opportunities discussed in Section 2.4.1, the key pedestrian links for Horse Hill and the Village are shown in Figure 6 and Figure 7, respectively with further discussion of the supporting concepts provided below.

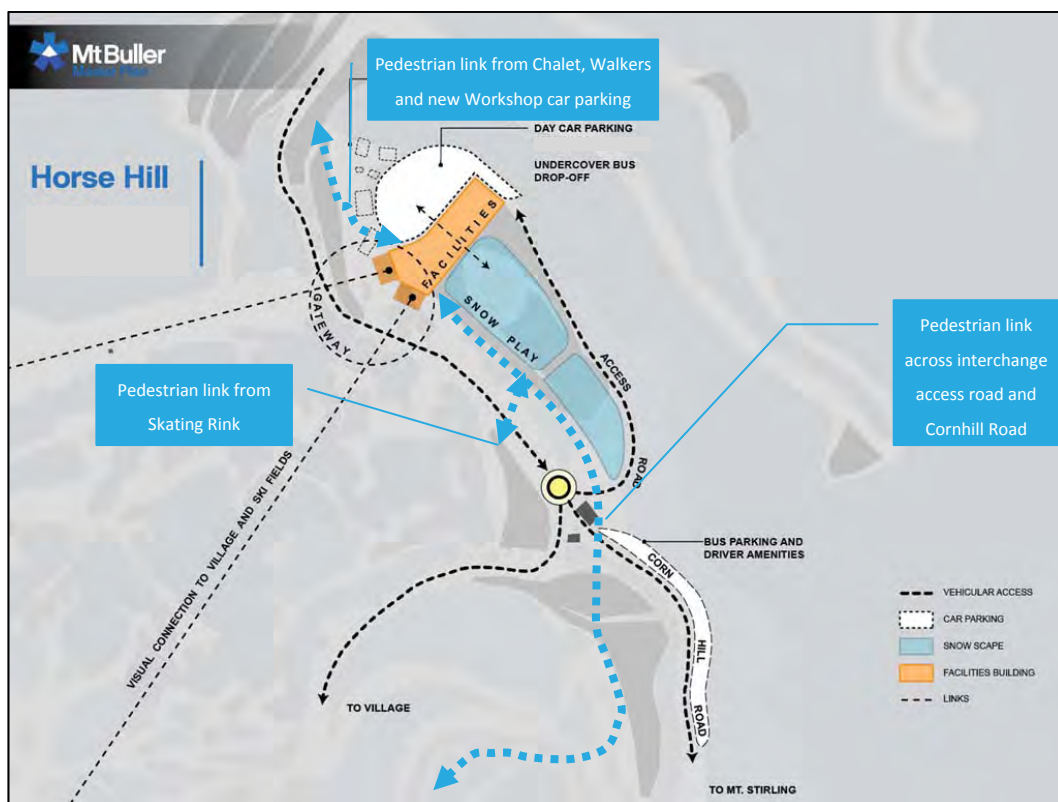


Figure 6 Concept pedestrian links at Horse Hill connecting day car parks and Village

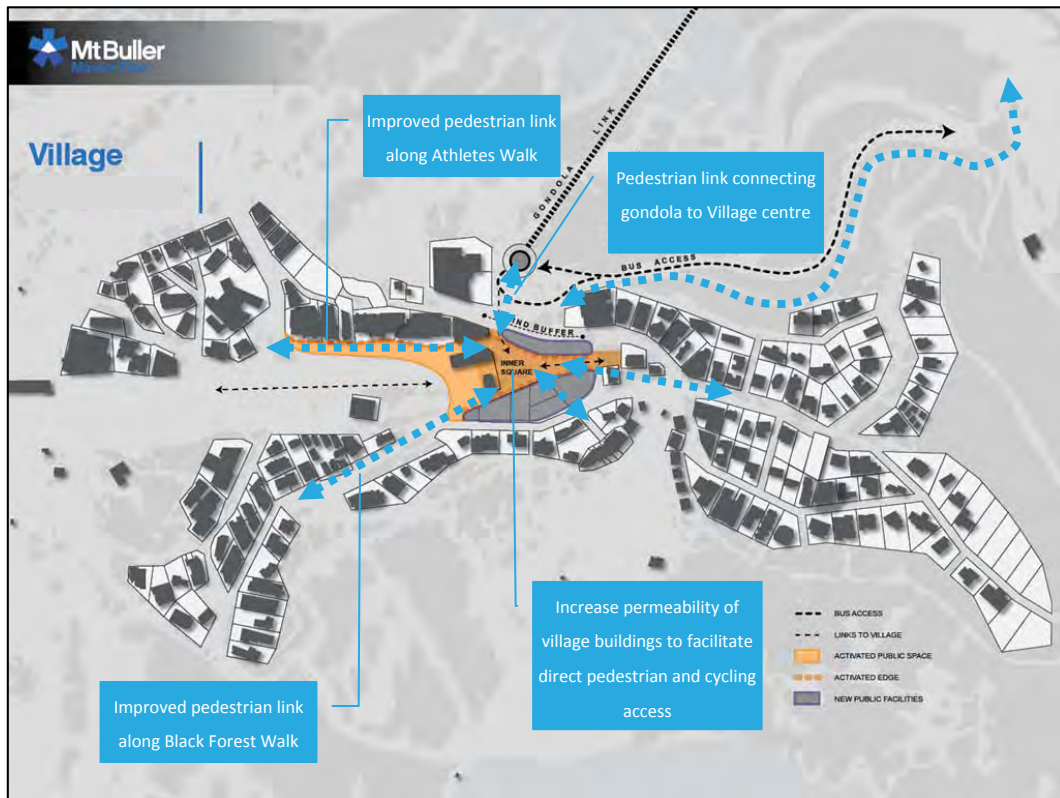


Figure 7 Concept pedestrian links within the Village

The links identified in the above figures will require a variety of treatments to provide safe, legible and direct connection for pedestrians and could be supplemented through the following initiatives:

- Develop a Pedestrian and Cycling Wayfinding Strategy to inform built form design and provide a framework to guide the design and provision of both signage and information at key decision points.
- Improve access along the key pedestrian links of Athletes walk and Black Forest Walk. This may require consideration of terraced facilities, hand rails and landscaping treatments to improve pedestrian access whilst discouraging use by skiers, snow boarders or toboggans.
- Encourage reduced vehicle speeds particularly at key pedestrian crossing locations along the links shown above with consideration given to pedestrian/vehicle separation (overpass/underpass) at critical locations (e.g. access across Corn Hill Road and the proposed interchange access road).
- Continue to limit vehicular movement to the village in order to maintain the walkability of the village and to provide a safe environment for pedestrians. Where vehicle access is required, the trip length and frequency should be minimised.
- Minimise the challenges that steep topography and large level changes present to pedestrians travelling to the village. This could be achieved through raising the level of the existing village square to achieve better linkages to Blue Bullet 1 as well and the proposed Village gondola.



## 3.2 Interchange

The opportunities for improved interchanges at Mt Buller were discussed in Section 2.4.2. On this basis and having regard to the key transport objectives of safety, convenience and efficiency, a concept interchange network has been developed. The concept for improved interchange at Mt Buller is shown in Figure 8.

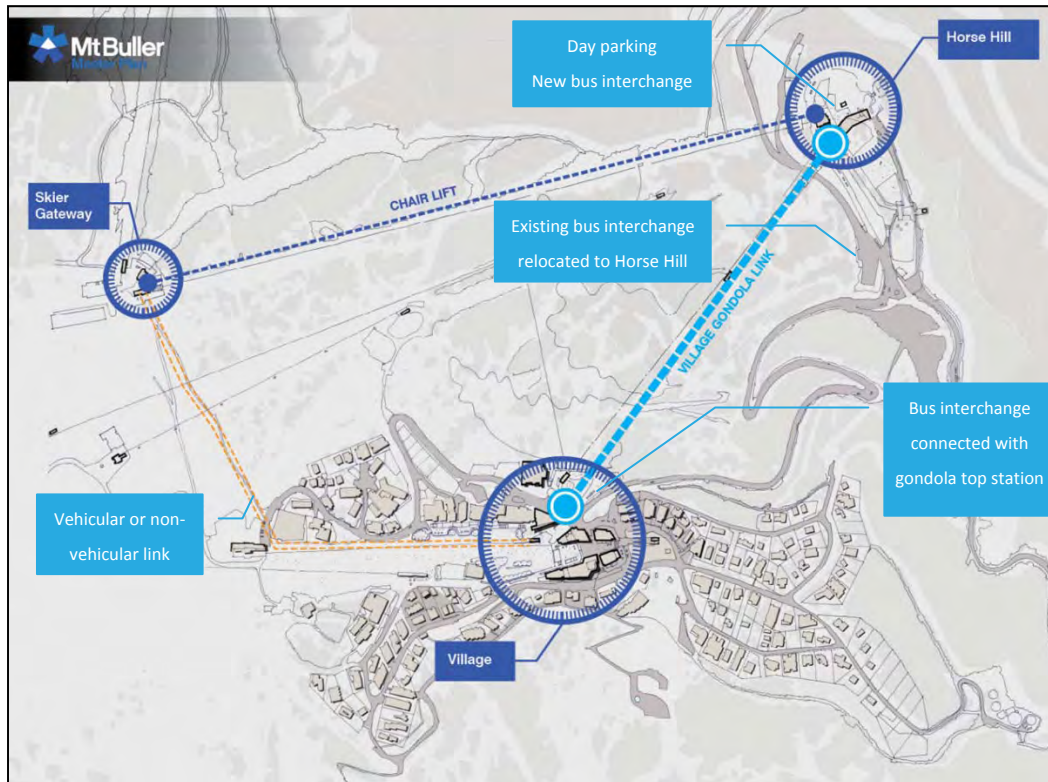


Figure 8 Concept interchange network based on key transport nodes

The key elements associated with this concept for interchanges are discussed below:

- Development of a nodal solution that consolidates interchange movements that are currently somewhat scattered to key transport hubs at Horse Hill and Mt Buller Village. This would allow convenient interchange between transport modes and the provision of improved facilities for waiting passengers including shelter, arrival and departure information, amenities, facilities services and staff assistance.
- Implementation of a gondola link between Horse Hill and the Village which would allow:
  - Improved connections between these two transport hubs.
  - Reduction in passenger congestion and queuing associated with bus services that currently travel between the Village and Horse Hill.
  - More intuitive wayfinding and clear choice of ski area or village for visitors arriving at Horse Hill.

- Provision of transport links between Horse Hill, the Village and Spurs. The connection from the Village to Spurs could be in the form of a vehicular access (with a cut and cover tunnel to maintain connectivity of Shakey Knees and Tirol ski run), lift assisted or skier/pedestrian access only. This connected system would allow:
  - Increased utilisation of Horse Hill chairlift and Burnt Hut beginner terrain to relieve congestion issues on Bourke Street and at Helicopter Flat.
  - Convenient and flexible access to and from the mountain during peak arrival and departure periods;
  - Improved integration between the village and the Spurs area.
  - Improved flexibility for access to and from the mountain in the event of an incident (e.g. fallen trees, land slip, vehicle collision) along Mt Buller Road between Horse Hill and the Village.
- New bus interchange at Horse Hill which can accommodate drop-off and pick-up of bus passengers travelling from Mt Buller-Melbourne. This will also provide interchanges between the village bus, car parking and ski area access. Initial estimates suggest that this area should accommodate up to 12 buses for drop off and pick-up during peak periods. Between these periods buses would store off site (e.g. along Corn Hill Road). Buses would be 'called' to the interchange to collect passengers prior to their scheduled departure. This arrangement would require staggering of the arrival and departure of buses.
- New interchange at Horse Hill should be connected with the proposed amenities building to provide improved shelter, information etc for waiting passengers, as well as safe and convenient connections to the village and Horse Hill. The improvement of interchange arrangements for passengers arriving by bus will make travel by bus more attractive, potentially increasing the number of bus passengers travelling to the mountain and reducing the reliance on day trip car parking.
- Removal of the reliance on the Skating Rink for drop-off and pick-up of bus passengers. Associated with this is an option to relocate bus storage to Corn Hill Road (turnaround facility provided near existing mountain bike skills park) to free up this land for alternative land uses.
- Provision of weather protection and improved information to assist passengers awaiting taxi collection from the overnight car parks.

### 3.3 Car Parking

The concept for adjustments to existing parking arrangements to improve the balance of car parking at Mt Buller is shown in Table 3 and Table 4. The areas where there is a change to the provision of car parking are highlighted in black. These arrangements are conceptual to provide an overview of an option to redistribute car parking as a result of the master plan. Under day to day operations, it is expected that the car parking will be utilised as day or overnight car parking depending of the peak requirements of the day.

Table 3 Master plan car parking supply concept

Location	Car Parking Supply	
Roadside below Andrews	50	
Andrews	60	
Roadside Andrews to Caravan	40	
Caravan	70	Overnight Parking
Roadside Caravan to Chalet	60	1,380
Tyrol	560	
Chalet (convert to day parking)	180	
Walkers (convert to day parking)	100	
Roadside Tyrol to Skating Rink	80	
Horse Hill (- 200 spaces)	650	Total Day Parking
Roadside Corn Hill Road (-320 spaces)	0	1,680
CSIR Lower	160	
CSIR Upper (convert to day parking)	330	
Workshop (new)	70	
Skating Rink (new)	110	
Roadside CSIR to Hell Corner	80	
Roadside Hell Corner to Tip Corner	60	
Off-street parking in village (new)	400	

Table 4 Summary of change in existing and concept car parking supply

Day Parking	Existing Supply	Master Plan Supply	Change
- On-street	400	80	-320
- Off-street	1,010	1,600	+590
- Sub-total	1,410	1,680	+270
<b>Overnight Parking</b>			
- On-street	290	290	0
- Off-street	1,300	1,090	-210
- Sub-total	1,590	1,380	-210
<b>Total</b>	<b>3,000</b>	<b>3,060</b>	<b>+60</b>

The key elements associated with these conceptual arrangements are discussed below:

- An increase in day car parking supply is provided to allow for growth in day trip visitation to Mt Buller.
- Overnight car parking is rebalanced to facilitate an increase in day car parking supply and better reflect the existing demand (maximum of 970 spaces during 2009). The proposed overnight parking supply of 1,380 spaces continues to accommodate the maximum demand, whilst allowing flexibility for snow clearing, growth in overnight visitation without regularly relying on on-street car parking to meet the peak demands.
- The existing overnight car parking that is located in reasonable proximity to Horse Hill is converted to day car parking (Chalet, Walkers and CSIR Upper).
- New car parking facilities are established at the Skating Rink and the existing workshops which would need to be relocated.
- The reliance for overflow day car parking along Corn Hill Road is removed which facilitates the potential relocation of bus storage to Corn Hill Road (including turnaround area near existing mountain bike skills park).
- Additional pedestrian linkages would be required to connect Skating Rink, Lower CSIR, Upper CSIR, Workshop, Chalet, Walkers to Horse Hill. These linkages may be in the form of at-grade, overbridge or lift assisted options (e.g. magic carpet).
- The supply of car parking at Horse Hill car park is reduced to facilitate the creation of a bus interchange, snow play area and amenities building at Horse Hill. Depending on the size of the snow play area at Horse Hill, there may be a need to consider the provision of multi-level car parking.
- Additional overnight car parking is created off-street within the village. This additional car parking should be provided at the periphery of the village (e.g. proposed Gateway Site on Mt Buller Road at site of existing snow play area) to minimise the need for additional vehicle movements through the village.
- The parking requirements for new development as outlined within the existing Alpine Resort master plan should be reviewed and potentially updated in the context of the objectives of the master plan with consideration of maximum parking limits.

### 3.4 Traffic movement

The concept for traffic movement as part of the master plan is shown in Figure 9 which have been developed to recognising the opportunities outlined in Section 2.4.4 but also having regard to the change in access and mobility that is required as result of the interchange and car parking concepts.

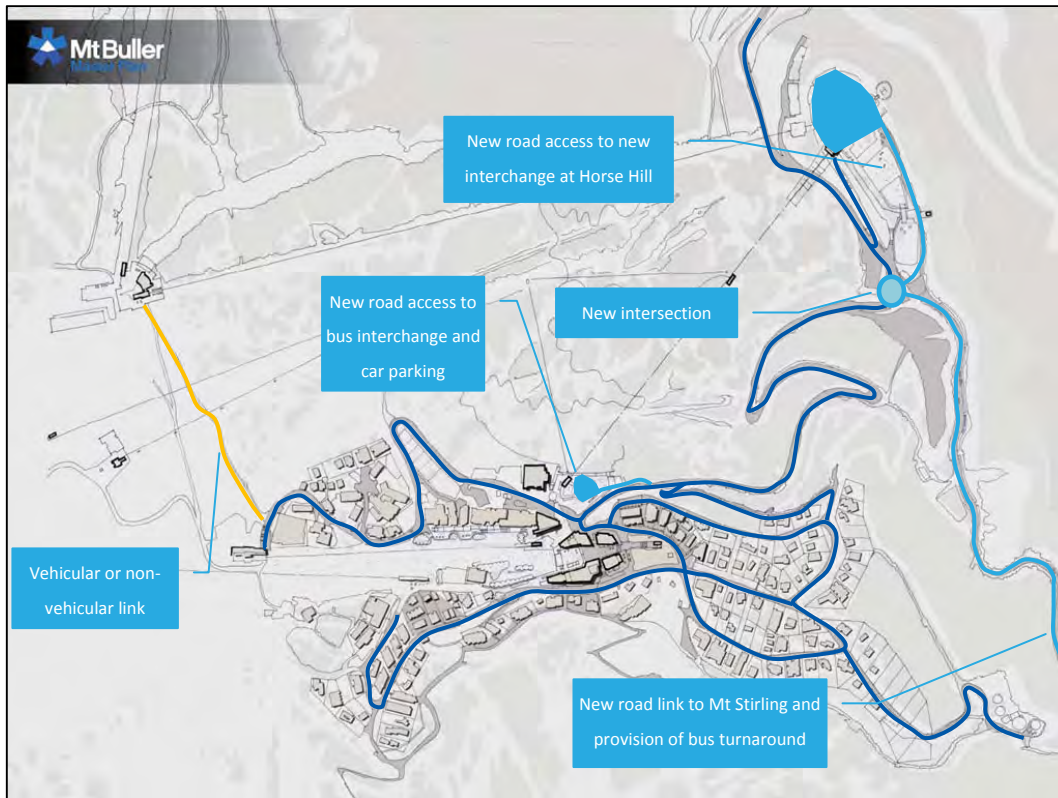


Figure 9 Traffic Movement Key Concepts

In addition to the concepts presented above, the following key concepts are noted.

- Two wheel drive connection is required between Mt Buller and Mt Stirling to improve the integration of the two mountains and also reduce the risks associated with only one road link to Mt Buller.
- Improve vehicle capacity through the gate entry at Mirimbah (e.g. automated vehicle entry to reduce reliance on manual system). It is understood that options for improved capacity are currently being investigated by ARMB.
- There is an option to provide bus storage on Corn Hill Road. Initial traffic engineering analysis has been undertaken to test the required swept paths to allow buses to turnaround on Corn Hill Road. Initial investigations indicate that this is feasible where Corn Hill Road widens near the existing mountain bike skills park. It is noted however, that further investigation is required to understand the constraints (environmental, civil engineering etc) and necessary works associated with this concept. It is noted that the turnaround facility is also dependent on the upgrade of Corn Hill Road to provide adequate width for the safe storage of buses.
- Road safety investigation is recommended to identify necessary improvements along Mt Buller Road particularly at two clusters of three reported casualty crashes outlined in Section 2.4.4.

## 4 Next Steps

---

Thus far, the master planning process has established the following key transport issues and challenges which should be addressed through further investigation:

- Confirmation of existing parking supply and demand for each of the parking areas both within the village and below the village.
- Further data collection to understand the arrival profile to Mt Buller. This data would be used to inform the bus storage and interchange arrangements.
- Horse Hill feasibility study to assess concept design alternatives at this critical location. This is expected to require consideration of car parking, new bus interchange, pedestrian linkages and vehicle access arrangements to Horse Hill in order to facilitate an increase in snow play activity and amenities.
- Village Gondola feasibility study to understand the impacts of alternate alignments as well as the integration of the top and bottom gondola station with new buildings at Horse Hill and the village.
- Further analysis of the village arrangements including pedestrian and vehicle access arrangements and the related changes to the intra-village bus network.
- Development of a Wayfinding Strategy to identify when, where and how guidance is provided for travel to Mt Buller.
- Development of Corn Hill Road bus turnaround concept to further identify the impacts and necessary works that would be required to consider the relocation of bus storage to Corn Hill Road.
- Review of Mt Buller local policy provisions within the Alpine Resort Planning Scheme to update the rate of car parking supply and the design objectives that should apply to new and refurbishing development at Mt Buller.





**A5**

# **Landscape Report**







# MT BULLER MASTER PLAN

## LANDSCAPE RESPONSE REPORT

### ISSUE: REVISION 01

PREPARED BY:

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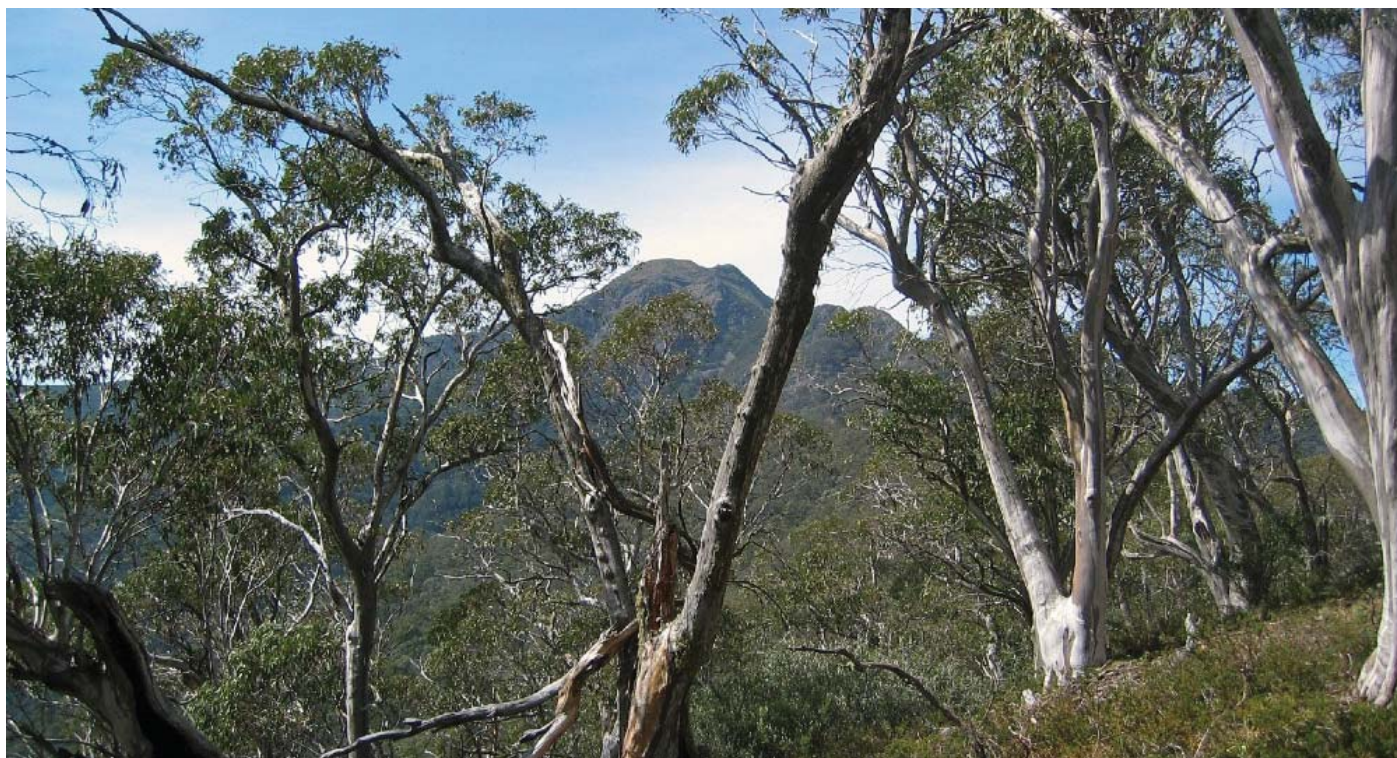
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## **1.0 INTRODUCTION**

OCULUS (as part of the Cox Architects project team) have been engaged to develop a Landscape Response Report as part of the Mt Buller Master Plan Project. As outlined in the Mt Buller Alpine Resort Masterplan Brief, the Master Plan Project recognises the need to improve:

- Mt Buller Village visitor amenity;
- Visitor access to, from, and within the Village;
- The interface between the Village and activity areas (both existing and proposed);
- Access to Mount Buller;
- Tourism links between the Mount Buller and Mount Stirling area; and
- The required infrastructure to support year round visitation and further development and investment.

## **1.1 MT BULLER BACKGROUND**

The Mt Buller Alpine Resort is located in the Great Dividing Range, approximately 250 kilometers north east of Melbourne. Mt Buller was established by members of the Melbourne Walking Club in the 1920's. The centre of the Village was developed around a highland grazing campsite prior to the mid 1960's and there remains evidence of earlier aboriginal occupation. The area has long been a popular passive and active recreation area. One of the largest of Victoria's six alpine resorts, Buller offers a unique alpine experience and is home to nearly 200 local residents and, during winter, thousands of visitors daily. Mt Buller has a distinctive landscape character with over 180 hectares of ski trails and open space, combining winter sports with a number of growing adventure activities including bushwalking, camping, mountain biking, horse riding and 4WD touring. Mt Buller increasingly hosts events, conferences and education programs.

## **1.2 PURPOSE OF THE LANDSCAPE RESPONSE REPORT**

The Landscape Response is intended to support the Mt Buller Masterplan Project and provide ARMB and stakeholders with a conceptual design framework for the future enhancement of the Mt Buller site. It is to be used in conjunction with further site investigation and detailed design work, to achieve the best quality outcome for the site, its users and to ensure its status as the regions premier recreational destination.



The purpose of the Landscape Response Report is to:

- Provide an outline for the future landscape character, enhancement and/or development of Mt Buller, achievable within the resources available to the funding partners and in response to the issues identified in the Mt Buller Alpine Resort Masterplan Brief;
- Appraise the issues identified in the brief and the opportunities to resolve or mitigate those issues;
- Make best use of the land available at Mt Buller for the all year round enjoyment of residents and visitors, through the better arrangement and enhanced provision of facilities and amenities, improved interfaces, improved access to and from the Village, as well as improved connections to other attractions and areas of interest within the alpine resort area; and
- To protect environmental and cultural values through the sensitive and sustainable design and development of Mt Buller whilst meeting the challenges of climate.

### 1.3 APPROACH

The development of the Landscape Response Report for Mt Buller has involved 6 main stages:

1. Project start up including reviewing the core brief and relevant background material (including previous reports, and base plan information) and reviewing the consultation program;
2. Identification of the vision policy objective, opportunities and constraints, further review of all background information; a site visit, and field investigations;
3. Involvement in a 3 day design charette;
4. Contribution to key directions workshop;
5. Contribution to the public exhibition and community presentations of the Mt Buller Master Plan;
6. Finalisation of the Mt Buller Landscape Response Report forming part of the Mt Buller Master Plan, incorporating amendments arising from the public exhibition.





## 1.4 REPORT STRUCTURE

The Landscape Response Report is comprised of three main sections:

- An introduction to the project and to Mt Buller (Section 1);
- An overview of the Mt Buller Masterplan Design Brief, and a summary of the key issues, opportunities and proposed recommendations relevant to the development of the Landscape Response Report (Section 2);
- A summary of the Mt Buller Landscape Response, including a vision and objectives (Section 3); and
- An implementation strategy (Section 4).

## 2.0 MASTER PLAN VISION AND OBJECTIVES

The vision for Mt Buller is for a welcoming and accessible Australian alpine village set within a strong and legible native landscape. Its unique environment, history and its sense of community will create great mountain adventures and experiences. The Mt Buller Master Plan will be a catalyst for the ongoing winter growth of the Mt Buller as well as for the development of a sustainable year-round economy. The vision and objectives will be achieved through the application of sustainable principles that will underpin all landscape practices, with a focus on environmental best practice and the preservation, enhancement and showcasing of local ecological biodiversity. Mt Buller will be the premier Victorian Alpine resort, catering for a diversity of all year round recreational and social activities, enhancing both resident and visitor use and enjoyment of Mt Buller. The broad objectives of the Mt Buller Master Plan include:

- Improve visitor amenity and commercial offer of the Village;
- Improve visitor access within the Village and to the Village;
- Improve the interface between the Village and activity areas (existing and proposed);
- Improve access to Mount Buller and links to Mount Stirling area;
- Improve accessibility and reducing conflict and establishing strong physical and visual connections to snow;
- Creating an arrival experience;
- Reinforcing identity and character; and
- Developing the required activity infrastructure to support year round visitation and further development and investment.





## 2.1 LANDSCAPE RESPONSE AIM AND PRINCIPLES

The aim of Landscape Response is to outline an ARMB policy for landscape throughout the Mt Buller Alpine Resort. The following principles will underpin all future planning initiatives relating to landscapes within the Mt Buller Alpine Resort, while also addressing the key drivers for change. These principles include:

- Provide an image for Mt Buller showcasing the biodiversity of the Mt Buller region;
- Increase active and passive recreational opportunities within attractive and functional landscapes incorporating public open space, maintained native constructed landscapes and remnant vegetated ecosystems, and the rehabilitating of bushland areas;
- Provide an effective response to the issue of climate change through an emphasis on all year around landscape amenity and engagement and through best practice design principles;
- Provide attractive constructed landscapes and maintained local indigenous planting around key facilities and amenities;
- Provide a range of purpose built recreational areas, events and play spaces, sporting facilities and trails where resident and visitor utilisation can be maximised;
- Provide attractive and functional streetscapes ;
- Ensure that ARMB and stakeholders' development plans for development reflect the principles of The Master Plan;
- Ensure permanent resident awareness and engagement occurs during planning and implementation processes.
- Promote support for a diversity of all year round community and recreational activities;
- Ensure that safe access and safe facilities are provided;
- Ensure that Mt Buller Alpine Resort is sustainably managed, and that the capacity of the resort to absorb increasing levels of use is improved through sustainable design principles - in consideration of environmental , social, cultural (including governance) and economic factors.
- Improve the user experience through quality site planning, design, construction, and maintenance, and through the interpretation of environmental, cultural and social values;
- Capitalise on the environmental assets of Mt Buller which are a primary attraction for visitors;
- Provide improved connections between Mt Buller's snow fields, Horse Hill, The Village and broader environmental attractions.



## 2.2 THEMES

The Landscape Response as part of Mt Buller Master Plan and in support of the Alpine Resorts 2020 Strategy draws high-level themes from the adopted principles that resonate within the outlined key actions and focus areas:

- Improved visitor amenity and local and regional access;
- The further development of all year round, diverse and high-quality active and passive recreational opportunities;
- Protection and promotion of biodiversity;
- Representing Mt Buller Alpine Resort through a consistent and iconic landscape image; and
- Utilising resident consultation and education opportunities.

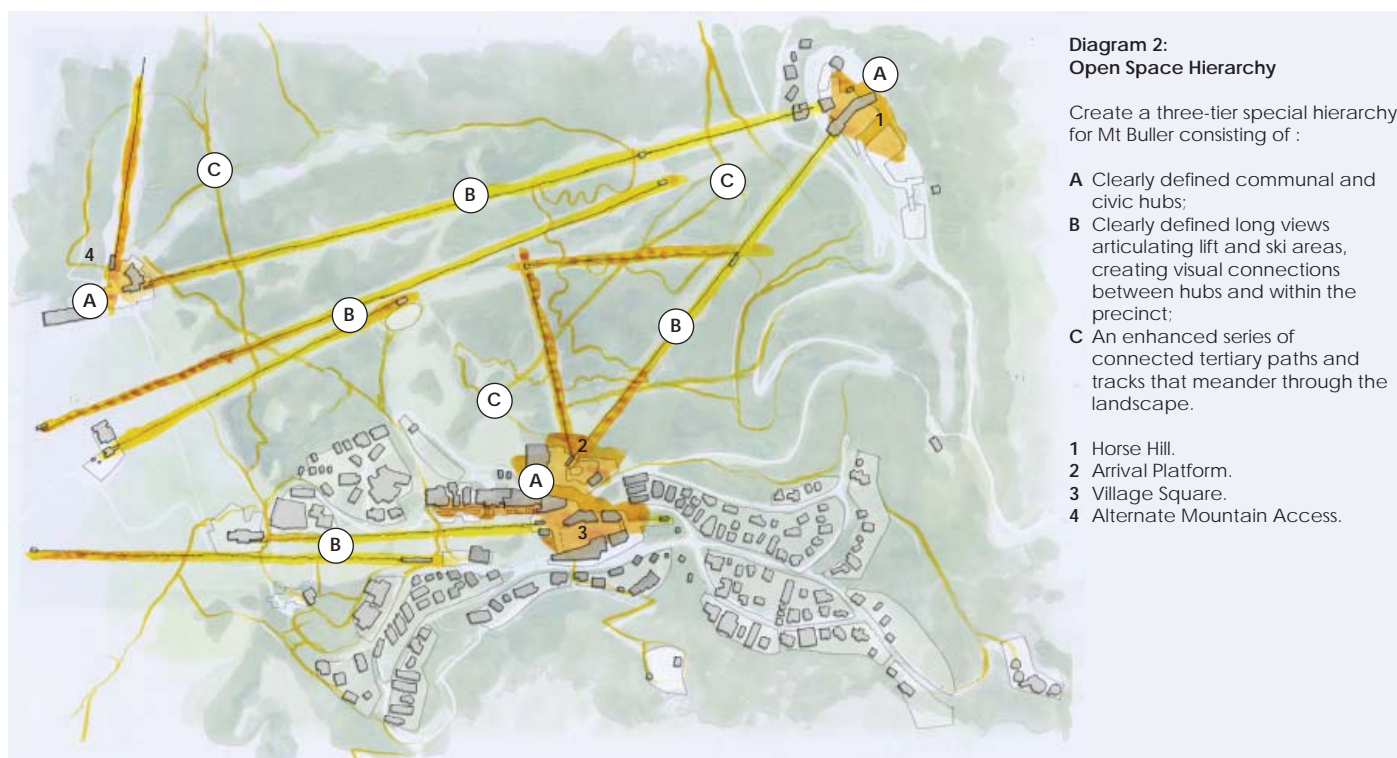
## 3.0 LANDSCAPE RESPONSE OVERVIEW

Mt Buller currently has a good standard of facilities and amenities that can be both maintained as they are or upgraded to a higher standard. New amenity will be provided, largely within the existing footprint, with a contemporary design utilising many of the same materials to complement and key into some of the other Alpine Resort features and materials. They will be designed to maximise solar orientation and minimise the effects of wind, and enhancing scenic views. The surrounding dramatic landscape of Mt Buller and Mt Stirling is both scenographic and operative. Opportunities exist for interpretive installations that provide a means of enhancing the 'Mt Buller experience', and provide an arrival point for visitors

The Landscape Response, represented in **Diagram 1: Landscape Structure**, seeks to:

- Provide increased amenity and accessibility whilst protecting and conserving areas of existing vegetation and significance;
- Generate a sense arrival by reinforcing place and exploring thresholds;
- Increase all year round activation with landscape;
- Improve visitor orientation through visual and physical connections ;
- Create an improved interface with snow areas; and
- Reduce conflict between snow play and skier/boarders, through improved wayfinding, better connections and enhanced outdoor amenity.





### 3.1 KEY ISSUES AND OPPORTUNITIES

This section provides an overview of the key issues and opportunities arising from the design charrette, key directions workshop, the community presentations, field investigations and background research. The issues have been grouped into four categories. Each category includes a description of the key issues, a discussion of the opportunities and a set of recommendations, forming a basis for the development of the Landscape Response.

The four issue categories are:

- Open space hierarchy;
- Pedestrian/skier and boarder access;
- Materials;
- Vegetation and environmental considerations.

### 3.2 OPEN SPACE HIERARCHY

#### ISSUES IDENTIFIED

- A poor sense of place, a lack of legibility, poor visitor amenity, a lack of weather protection and poor visual connection to snow areas and insufficient snow play areas;
- No defined sense of arrival to the precinct;
- A diffuse sense of civic heart, with poor spatial definition of communal and event spaces;
- Ambiguous relationship between public and private / semi-public spaces, creating anxiety about permission, ownership and use.

#### RECOMMENDATIONS

- Create a three-tier special hierarchy for Mt Buller (see **Diagram 2: Open Space Hierarchy**) consisting of :
  - o Clearly defined communal and civic hubs;
  - o Clearly defined long views articulating lift and ski areas, creating visual connections between hubs and within the precinct;
  - o An enhanced series of connected tertiary paths and tracks that meander through the landscape.
- Develop Village Square as the clear civic and event heart of Mt Buller;
- Develop Village Active events platform as a focus for programmed and ephemeral events;



- Develop a summer sports hub;
- Develop Horse Hill as a year round gateway to the Mountain and proposed, expanded snow play facilities;
- Increase a unified public realm to connect between facilities and to make way finding easier;
- Upgrade and enhance existing open spaces to reiterate the sense of place;
- Develop hard-paved spaces and seating opening out onto the snow play areas. Seating creates an invitation to linger, occupy and be spectators. These areas should be of a consistent design and material selection that is complimentary to the existing facilities but which has its own singularity and legibility;
- Investigate the opportunities along pedestrian and recreation pathways for thematic interpretive material that can be installed in areas of ecological /biodiversity interest. Increased awareness of the biological diversity of the site will foster a sense of collective responsibility for its longevity.
- o The overall landscape design will enhance amenity and change the perception of the open spaces better connecting the resort;
- o The landscape design will maintain an openness, with clear view lines into, from and through spaces, supporting visual and spatial legibility;

### 3.3 PEDESTRIAN ACCESS

#### ISSUES IDENTIFIED

- A lack of legibility, poor visitor amenity, difficult pedestrian connections, movement bottlenecks and the need to reduce snow play / skier conflict.

#### RECOMMENDATIONS

- Create axial links to church and ski fields. Axial links create clear views both to and from destinations as well as minimising conflicts through considering long and medium range views;
- Improved ski linkages;
- Improved summer trails;
- Pedestrian walkways/access between accommodation, village and ski area, particularly the eastern village;
- Improved way finding from gondola to ski hire outlets. Explore possibilities for the use of a singular material condition to act as a carpet between key destinations;
- Identify plan to improve pedestrian and skier access from east village to village square





**Diagram 3:  
Materials Palette**

Pavements, walls and furniture elements will incorporate materials carefully selected in consideration of the sustainable principles outlined above, the materials employed across Mt Buller and the value they bring to reinforcing place, and their comfort and durability properties. Materials such as the natural stone and timber used in the construction of a number of the existing landscape elements provide strong design elements that can be utilised in new landscape features and furniture, resulting in a cohesive design language for Mt Buller.

- New pedestrian links from CSIR to Horse Hill snow play and from workshop/walkers to Horse Hill snow play;
- Manage all pedestrian and snow play access to minimise conflicts between other users of the resort;
- New routes to be provided to ensure better connectivity when high levels of activity occur;
- Improved wayfinding and signage - the legibility of the landscape design will be engineered through improved signage and surface, material transitions to indicate to both pedestrians and skiers/boarders their intended direction of travel and changing conditions.

### 3.4 MATERIALS

The principles relative to material selection, procurement and construction will emphasise responsible Environmental Resource Management of water, land, stone and minerals, as well as a consideration of the ecological sensitivity of the context, including but not limited to:

- Resource Conservation. Ensure material selection manages the use of resources by prioritising:
  - o Recycled, re-used and sustainable materials;
  - o Environmentally preferable materials;
  - o Low Volatile Organic Compound (VOC) materials;
  - o Bushfire resistant materials.
- Sustainable procurement;
- Locally sourced product;
- Prefabricated construction.

Pavements, walls and furniture elements will incorporate materials carefully selected in consideration of the sustainable principles outlined above, the materials employed across Mt Buller and the value they bring to reinforcing place, and their comfort and durability properties. Materials such as the natural stone and timber used in the construction of a number of the existing landscape elements provide strong design elements that can be utilised in new landscape features and furniture, resulting in a cohesive design language for Mt Buller (refer **Diagram 3: Materials Palette**).

Careful consideration should be given to the use of a distinct and singular material in the key civic hub spaces, particularly those linked to and including the Village Square. Such a material definition will help establish an open space hierarchy and function as a passive way finding device linking key public and recreational venues in the precinct.





### 3.5 VEGETATION AND ENVIRONMENTAL CONSIDERATIONS

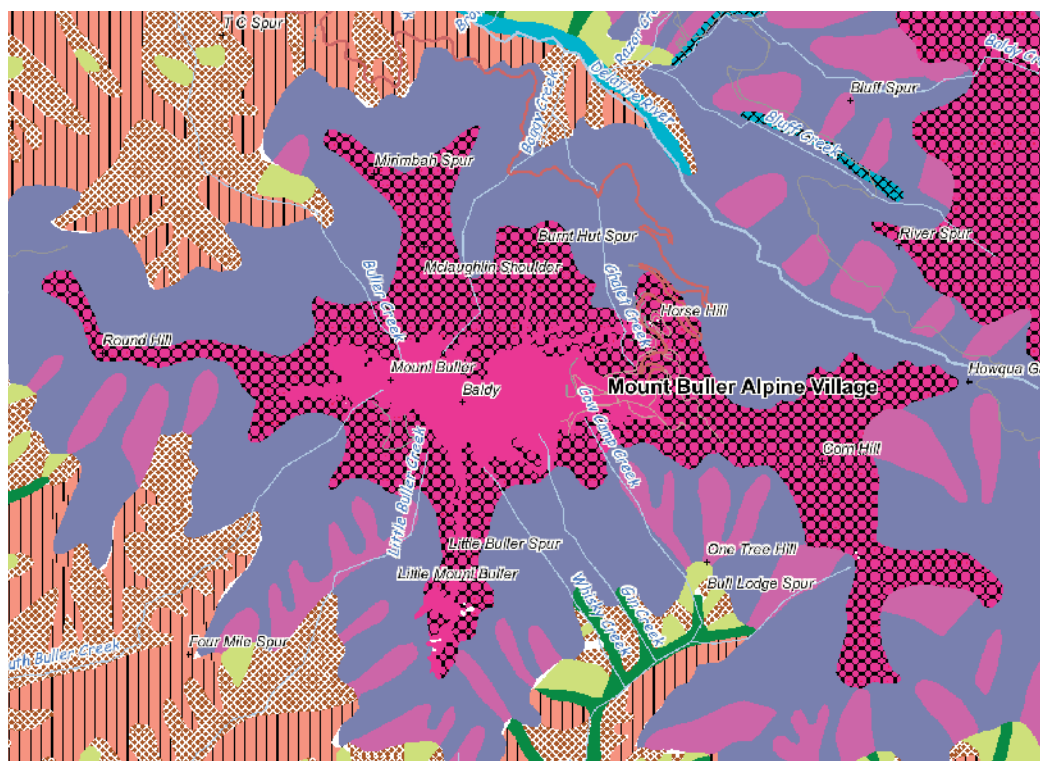
Mount Buller Alpine Resort is part of a unique alpine environment containing rare flora, fauna and geology. The vegetation and environmental objectives outlined in the Landscape Response Report are consistent with and in consideration of the Mount Buller Environmental Management Plan as well as the directions under Victoria's "Native Vegetation Management – A Framework for Action" – namely to protect and preserve all high quality indigenous flora within the resort and enhance all other indigenous flora and to minimise impacts on indigenous flora within the resort.

Broad scale vegetation mapping by DSE has identified ten Ecological Vegetation Classes (EVCs) and one mosaic within the resort Refer **Diagram 4: Ecological Vegetation Classification of Areas of Impact**. These species occur within a range of vegetation communities typical of the broad scale altitudes of the Victorian Alps bioregion. The EVC's within the anticipated Master Plan areas of impact combine the Sub-alpine Treeless Mosaic, categorised as Vulnerable, and the sub-alpine Woodland, categorised as of least concern. The Sub-alpine Treeless Mosaic occurs on the summit areas of Mt Buller, where tree growth is limited by climatic extremes. This mosaic is composed of a range of treeless EVCs including Alpine Coniferous Shrubland, Sub-alpine Wet Heathland, Sub-alpine Wet Sedgeland, Alpine Grassland, Sub-alpine Shrubland, Alpine Rocky Outcrop Heathland and Alpine Grassy Heathland.

Mapping and/or identification of these EVCs has not yet been completed. The current Mt Buller Environmental Management Plan notes that the status of rare or threatened plants within the Resorts is not well known. Future environmental management actions are designed to increase the ARMB's knowledge and understanding of these plants and plant communities.

The Mount Buller/Mount Stirling region is the location of six nationally significant endangered species of fauna: the Caddisfly; Mountain Pygmy-Possum; Alpine Bog Skink; the Stonefly; the Barred Galaxias; and the Alpine Stonefly. These species are protected pursuant to the Federal Environment Protection and Biodiversity Conservation Act (EPBC). Alpine Coniferous Shrubland, formerly known as Podocarpus Heathland, is the preferred habitat of the Burramys parvus Mountain Pygmy Possum.

Development within the resort must consider the Mount Buller Environmental Management Plan as well as the directions under Victoria's "Native Vegetation



**Diagram 4: DSE Ecological Vegetation Classification Map Areas of Impact**

The DSE has identified ten Ecological Vegetation Classes (EVCs) and one mosaic within the resort. These species occur within a range of vegetation communities typical of the broad scale altitudes of the Victorian Alps bioregion. The EVC's within the anticipated Master Plan areas of impact combine the Sub-alpine Treeless Mosaic, categorised as Vulnerable, and the sub-alpine Woodland, categorised as of least concern.

Management A Framework for Action" which will establish the principles of 'net gain' in native vegetation when considering the possible expansion of the resort and the existing precincts. The vegetation and environmental response will:

1. Explore options to avoid adverse impacts;
2. If there are no options to avoid impacts, explore options to minimise impacts through appropriate consideration in planning processes and expert input to project design or management; and
3. Only after steps 1 and 2, identify appropriate offsets.

Mt Buller is a unique alpine place with a distinctive landscape character, well loved by local residents and appreciated by visitors. Both environment and landscape are key attributes of the Mount Buller Resort and have a key appeal to visitors year round. All of these elements are to be maintained and/or strengthened in the proposed Landscape Response.

The recommendations outlined below are intended to provide pragmatic improvements to the visual and physical amenity of the Mt Buller Alpine Resort, whilst maintaining the existing feel and character of the resort, and its relationship to the broader natural and cultural landscape of Mt Buller and Mt Stirling.

#### RECOMMENDATIONS

- Use of vegetation to reinforce the figure ground of the proposed open space hierarchy for Mt Buller. Refer **Diagram 5: Key Planting Figure Ground**;
- Use of vegetation to reinforce a sense of arrival, ideas of invitation and occupation, park and edge activation, visitor orientation and a sense of play;
- Retention of snow gums will be maintained wherever possible;
- Ecologist to undertake a Flora and Fauna Assessment;
- Ecologist to review the "Mount Buller and Mount Stirling Alpine Resorts: Environmental Management Plan" based on above assessment;
- Ecologist to Produce a Net Gain Offset Management Plan (if necessary) and Ecological Landscape Rehabilitation Plan with preferred locations for development and location offsets;
- Australian Standard tree protection management policies to be developed and maintained to ensure the protection of native vegetation during the construction period;





**Diagram 5:**  
**Key Planting Figure Ground**

**A** Use of vegetation to reinforce the figure ground of the proposed open space hierarchy for Mt Buller. Use of vegetation to reinforce a sense of arrival, ideas of invitation and occupation, park and edge activation, visitor orientation and a sense of play.

- Rehabilitation of native vegetation to aid bank stabilisation, where appropriate;
- Minimise impacts on significant areas of landscape habitat and habitat corridors for indigenous fauna;
- Preserve and enhance possum habitat;
- Maintain natural rates of change in relation to proposed species;
- Programs for limiting the extent and spread of all non indigenous flora;
- Vegetation retention, planting and rehabilitation to aid the reduction of lands slips;
- Maintain and enhance environmental and landscape values;
- Prevent the destruction and defragmentation of landscapes. Where vegetation is to be removed, avoid the creation of individual or isolated trees. Habitat will be maintained only where clusters or connected canopy is maintained ;
- Maintain fire protection objectives;
- Character analysis environment natural and constructed including geological and geomorphological features and vistas to ensure the protection and enhancement of views and vistas;
- Removal of vegetation to facilitate new development to be minimised. (Refer over **Diagram 6: Areas of Impact on Existing Vegetation**);
- Incorporate interpretive information relating to the natural environment, e.g. the sensitivity of the Alpine Ecology and biodiversity, geological and geomorphological features;
- Build resilience to, rather than mitigation of climate change.

## 4.0 LANDSCAPE IMPLEMENTATION STRATEGY

This section sets out a strategy for further investigation, design and documentation that will be required prior to the construction of the elements outlined in the Landscape Response, including but not limited to:

- A Flora and Fauna Assessment;
- A review and update of the Mount Buller and Mount Stirling Alpine Resorts: Environmental Management Plan and the Recovery Plan for the Mountain Pygmy-Possum on Mt Buller, Victoria;
- A Net Gain Offset Management Plan and Ecological Landscape Rehabilitation Plan;
- A reassessment of the Bushfire Assessment and Strategy;
- A geotechnical survey;
- A feature survey; and
- Detailed design and documentation of new landscape elements and facilities.



**Diagram 6: Areas of Impact on Existing Vegetation**

**A** The removal of vegetation to facilitate new development is to be minimised. The retention of snow gums will be maintained wherever possible. Impacts on significant areas of landscape habitat and habitat corridors for indigenous fauna to be minimised. Possum habitat to be preserved and enhanced. Natural rates of change are to be maintained. The destruction and defragmentation of landscapes will be prevented. Interpretive information relating to the natural environment, e.g. the sensitivity of the Alpine Ecology and biodiversity, geological and geomorphological features is to be incorporated. Resilience to, rather than mitigation of climate change will be fostered.

High priorities (Category 1 priorities) are considered to be those recommendations that require completion to assist the planning process, including further site investigations. The remainder of the recommendations fall into either the Moderate-High (category 2), Moderate or Low (category 3) priority categories. The staging of these recommendations should be based on the funding partners' available budget, and priority.

<b>Table 1.1 Implementation Strategy</b>	
<b>Recommendation</b>	<b>Priority</b>
<b>(Stage 1) Pre-Construction Activities</b>	
Ecologist to undertake a Flora and Fauna Assessment	1
Ecologist to review the "Mount Buller and Mount Stirling Alpine Resorts: Environmental Management Plan" based on above assessment.	1
Ecologist to Produce a Net Gain Offset Management Plan (if necessary) and Ecological Landscape Rehabilitation Plan.	1
Ecologist to review and update the "Recovery Plan for the Mountain Pygmy-Possum on Mt Buller, Victoria"	1
Archaeologist to assess cultural heritage values and devise a Cultural Heritage Plan where necessary.	1
Undertake a feature survey of Mt Buller.	1
Undertake a geotechnical survey of the main development areas.	1
Undertake detailed design and documentation of the recommended works presented in the Mt Buller Masterplan , including management and establishment and maintenance.	1
Develop an estimate of probable costs for works.	1







# Mt Buller Alpine Resort Master Plan

## Best-Practice Sustainability Review

Final | July 2010



Arup

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**Mt Buller Alpine Resort  
Master Plan**

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Best-Practice  
Sustainability Review

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## **Mt Buller Alpine Resort Master Plan**

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### **Best-Practice Sustainability Review**

July 2010

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This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party

Job number 220665-03

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## Report purpose

The purpose of the Best Practice Sustainability Review is to:

- Present high level examples of national and international sustainability best practise in an alpine resort context.
- Present these examples across five sustainability themes:
  - Site and outdoor space
  - Water management
  - Built environment energy use
  - Materials selection, and
  - Waste management.
- Present these examples in such a manner that they may be utilised by project stakeholders to:
  - Assist in understanding how sustainability may be considered in a national and international alpine resort context, and
  - Assist in defining how sustainability may be considered in the context of the Mt Buller Alpine Project Master Plan.
- Provide the basis by which project stakeholders can undertake further investigations during the master plan process.
- Provide the basis by which future stakeholders may consider issues of sustainability in further iterations of the master plan.

## Target audience

- The primary target audience for the Best Practice Sustainability Review are project stakeholders directly working on the current Mt Buller Master Plan engagement.
- The secondary audience includes those stakeholders involved in other project events such as the visioning workshop and charrette.

## How to use this report

The report provides information on best-practice sustainability considerations in a number of alpine resorts from Australia, North America and Europe.

The information should be used as a basis for discussions to embed sustainability within the design and master planning of Mt Buller.

Further information is available at the links provided.



A checkbox has been provided for each sustainability consideration so report users may 'check off' any features that have been included as part of the master plan.

## 1 Introduction

In May 2010, Arup (as part of the Cox Architects project team) was engaged to provide transport, infrastructure and high level sustainability advice for the Mt Buller Alpine Master Plan project.

The scope of the sustainability advice was to develop a high level Best Practice Sustainability Review which combines the consideration of:

- National and international best practice sustainability in alpine resorts, and
- Sustainability aspects outlined in the *Mt Buller Resort Guide 2010*, and the Victoria Government *Alpine Resorts 2020 Strategy*.

In addition, where possible the review sought to include sustainability solutions from the project workshop process in mid July 2010.

## 2 Background

Mt Buller is a premium alpine resort located in Victoria, Australia. The resort provides access to over 300 hectares of skiable terrain and attracted 500,000 visitor days in 2009.

Currently, the alpine resort contains a number of slopes, a ski and snowboard school, a village square comprising of restaurants, cafes, retail stores and supermarkets, a bus depot, ski-lift, and a number of lodges, hotels and apartments for accommodation.

Mt Buller has a stated commitment to sustainable practices as part of the resort's operation and development. As stated in the Mt Buller Resort Guide 2010; *"Mt Buller is committed to preserving our precious alpine environment and maintaining its beauty for generations to come. We support, promote, and engage in resource conservation, renewable energy use, recycling, composting, and other forms of waste reduction, native fauna and flora habitat preservation and environmental education."*<sup>1</sup>

This commitment is in line with Victoria state government policy as outlined in the Alpine Resorts 2020 Strategy; *"The Victorian Government has a commitment to environmentally sustainable development in our alpine resorts whilst maintaining them in full public ownership. This Strategy seeks to secure the long term viability of the resorts by providing for long term sustainable growth within an environmentally friendly management framework."*<sup>2</sup>



<sup>1</sup> Mt Buller (2010) *Mount Buller Resort Guide 2010*, accessed from <http://www.mtbuller.com.au/Winter/Mountain/About-Mt-Buller>






<sup>2</sup> Department of Sustainability and Environment (2004) *Alpine Resorts 2020 Strategy*, The State of Victoria

### 3 Sustainability themes

As agreed with Cox Architects, Arup utilised five broad sustainability themes outlined in the initial Mt Buller Master Plan RFQ as the basis for the consideration and presentation of sustainability in an alpine resort context. These themes are outlined in Table 1.

Given the high level nature of the report, the use of this structure and associated symbols is a standard away of effectively analysing and communicating sustainability information.

**Table 1 Sustainability themes**

Themes	Description	Symbol
1. Site and Outdoor Space	Demonstration of efficient use of site space during both the on and off-peak periods. Considerations of site and outdoor space during construction.	
2. Water management	Demonstration of efficient use of water, through water re-use, harvesting and management.	
3. Built environment energy-use	Demonstration of energy-efficient design for the built-environment, including both infrastructure and buildings.	
4. Materials selection	Demonstration of the selection of sustainable materials – environmentally preferable materials and sustainable procurement.	
5. Waste management	Demonstration of responsible and environmentally-conscious waste management approaches through recycling facilities and suitable controls for pollutants.	

## 4 Review of national and international alpine resorts

A number of national and international alpine resorts were considered for their sustainability features; from. Alpine resorts from Australia, US, Europe, and Canada Resorts were reviewed on the basis of:

- Similarity to Mt Buller
- Sustainability design recognition through awards and promotion, and
- The presentation of innovative solutions.

Certain resorts have also been acknowledged by independent associations or received awards for sustainability including:

- US Green Building Council
  - Gold and Platinum Award for Neighbourhood Development PILOT
- National Ski Areas Association (NSAA) and CLIF Bar & Co.
  - Golden Eagle Award – Overall Environmental Excellence
  - Silver Eagle Award – Excellence for Water Conservation / Water Quality
  - Silver Eagle Award – Excellence for Energy Conservation
  - Sustainable Slopes Program
- US Environmental Protection Agency (US EPA)
  - Environmental Achievement Award
- MINERGIE-P® Certificate, Switzerland

Table 2 summarises the alpine resorts reviewed and the sustainability features identified in the context of the five sustainability themes outlined in Section 3 Specific sustainability features are outlined in Section 5.

**Table 2 Alpine resorts reviewed and associated sustainability features**

ALPINE RESORTS REVIEWED	SUSTAINABILITY THEME				
	1. Site & Outdoor Space	2. Water Mgt	3. Built Env. Energy Use	4. Materials Selection	5. Waste Mgt
<b>Aspen Mtn Ski Resort</b> Colorado, US					
<b>Squaw Valley</b> California, US					
<b>Hotel Terra Jackson Hole</b> Wyoming, US					
<b>Stowe Mountain Resort</b> Vermont, US					
<b>Canadian Mountain Hol.s</b> Canada					
<b>Vail Resorts</b> Colorado, US					
<b>Zermatt Matterhorn</b> Valais, Switzerland					
<b>Whistler Blackcomb</b> Whistler, Canada					
<b>Jiminy Peak Resort</b> Massachusetts, US					
<b>Obergurgl Hochgurgl</b> Tyrol, Austria					
<b>Lech am Arlberg</b> Vorarlberg, Austria					
<b>SkiWelt Wilder Kaiser</b> Tyrol, Austria					
<b>Mt Hotham</b> Victoria, Australia					



## 4.1 References, sources and links

All information included in the report for specific resorts has been obtained from the sources detailed in Table 3. Where possible, these have also been integrated into the sustainability theme tables in Sections 5.1 to 5.5.

**Table 3 Sustainability review – alpine resort references**

Resort	Links
<b>Aspen Mtn Ski Resort</b> Colorado, US	<a href="http://www.aspensnowmass.com/environment">www.aspensnowmass.com/environment</a> <a href="http://www01.aspensnowmass.com/environment/programs/green.cfm">www01.aspensnowmass.com/environment/programs/green.cfm</a> <a href="http://www01.aspensnowmass.com/environment/programs/green/snowmass.cfm">www01.aspensnowmass.com/environment/programs/green/snowmass.cfm</a>
<b>Squaw Valley</b> California, US	<a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a>
<b>Hotel Terra Jackson Hole</b> Wyoming, US	<a href="http://www.hotelterrajacksonhole.com/eco-luxury-hotels.php">www.hotelterrajacksonhole.com/eco-luxury-hotels.php</a>
<b>Stowe Mountain Resort</b> Vermont, US	<a href="http://www.stowe.com/mountain/environmental_efforts">www.stowe.com/mountain/environmental_efforts</a>
<b>Canadian Mountain Holidays</b> Canada	<a href="http://www.canadianmountainholidays.com/about/stewardship">www.canadianmountainholidays.com/about/stewardship</a> <a href="http://www.canadianmountainholidays.com/publisher_page_files/0000/0039/CMH_News_May06.pdf">www.canadianmountainholidays.com/publisher_page_files/0000/0039/CMH_News_May06.pdf</a>
<b>Vail Resorts</b> Colorado, US	<a href="http://www.vailresorts.com/Corp/info/environment.aspx">www.vailresorts.com/Corp/info/environment.aspx</a>
<b>Zermatt Matterhorn</b> Valais, Switzerland	<a href="http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506">http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506</a>
<b>Whistler Blackcomb</b> Whistler, Canada	<a href="http://www.whistlerblackcomb.com/todo/summer/index.htm">http://www.whistlerblackcomb.com/todo/summer/index.htm</a> <a href="http://www.canadianmountainholidays.com/about/stewardship">http://www.canadianmountainholidays.com/about/stewardship</a>
<b>Jiminy Peak Resort</b> Massachusetts, US	<a href="http://www.jiminypeak.com/page.php?PageID=1255&amp;PageName=Green+Jiminy">www.jiminypeak.com/page.php?PageID=1255&amp;PageName=Green+Jiminy</a> <a href="http://jiminy.lsw.com/page.php?PageID=1445&amp;PageName=Forever+Green+Magazine">http://jiminy.lsw.com/page.php?PageID=1445&amp;PageName=Forever+Green+Magazine</a>
<b>Obergurgl Hochgurgl</b> Tyrol, Austria	<a href="http://www.thecrystal.at/en/index.php?id=160">www.thecrystal.at/en/index.php?id=160</a>
<b>Lech am Arlberg</b> Vorarlberg, Austria	<a href="http://www.bios-bioenergy.at/en/references/all-projects/lech.html">www.bios-bioenergy.at/en/references/all-projects/lech.html</a> <a href="http://www.icrtourism.org/Publications/ACaseStudyofLech.pdf">www.icrtourism.org/Publications/ACaseStudyofLech.pdf</a>
<b>SkiWelt Wilder Kaiser</b> Tyrol, Austria	<a href="http://www.presse.tirol.at/xxl/en/neues-aus-tirol/_id/1176823/index.html">www.presse.tirol.at/xxl/en/neues-aus-tirol/_id/1176823/index.html</a>
<b>Mt Hotham</b> Victoria, Australia	<a href="http://www.mthotham.com.au/resort/about/corporate/publications/20095201383.asp">www.mthotham.com.au/resort/about/corporate/publications/20095201383.asp</a>

## 5 Best-practice review

Once identified, the sustainability elements for each resort were categorised in the tables within Sections 5.1 to 5.5 under the themes of:

- Site and outdoor space
- Water management
- Built environment energy use
- Materials selection, and
- Waste management.

Each sustainability feature has then assessed for:

- Overall **potential sustainability impact or benefit** of the feature as per the three-tiered ranking system in Table 4.
- The **applicability of the sustainability feature** in the Mt Buller context pending technical and commercial analysis, as per Table 5.

**Table 4 Potential sustainability impact or benefit**

Description	Ranking
Standard sustainability feature	★
Best-practice sustainability feature	★★
Highly innovative sustainability feature	★★★

**Table 5 Applicability of sustainability features**

Description	Applicability
Requires extensive technical and commercial investigation to identify applicability to Mt Buller.	?
Potentially applicable to Mt Buller, but requires further investigation of technical and commercial feasibility	✓
Directly applicable and implementable to Mt Buller	✓✓

The purpose of the analysis was to provide the project team with guidance as to which sustainability features may be considered in the context of the master plan.

5.1 Site and outdoor space



The following table presents a series of sustainability features relating to issues of **site and outdoor space** which may be considered in the Mt Buller Alpine Resort Master Plan.

Feature	Resort	Description	Ranking	Applicability
<input type="checkbox"/> <b>Green Ski Lifts</b>	SkiWelt Wilder Kaiser Brixental	An innovative solar powered conveyor belt and T-bar, powered by a PV system which has enough power (even in poor weather) to operate the lift. <a href="http://www.presse.tirol.at/xxl/en/heues-aus-tirol/_id/1176823/index.html">www.presse.tirol.at/xxl/en/heues-aus-tirol/_id/1176823/index.html</a>	★ ★	✓
<input type="checkbox"/> <b>Sustainable Construction Techniques</b>	Aspen Mountain Ski Resort	Construction of a new ski lift was completed without bulldozers or mechanized ground equipment touching the fragile tundra. Construction was stopped during critical mating and nesting periods of protected species. Heavy items such as poles and concrete were delivered by helicopter. <a href="http://www.aspensnowmass.com/environment">www.aspensnowmass.com/environment</a>	★ ★ ★	✓
<input type="checkbox"/> <b>Summer Activity: Mountain Bike Park</b>	Lech am Arlberg	Embedded ski lift construction principle of not cutting down any trees. Principle effective since the 1930s.	★ ★	✓
<input type="checkbox"/> <b>Summer Activity: Mountain Bike Park</b>	Whistler Blackcomb	Whistler Blackcomb operates a mountain bike park which is open to the public after the snow season. Trail crews can dig through snow to form paths and open trail networks for bicycles. Similar trail parks are open for hiking. <a href="http://www.whistlerblackcomb.com/todo/summer/index.htm">www.whistlerblackcomb.com/todo/summer/index.htm</a>	★	✓ ✓
<input type="checkbox"/> <b>Summer Activity: Hiking Paths, Ecology Tours, Rock Climbing</b>	Whistler Blackcomb	Day hike tours have been provided for off-season activities. This includes ecology tours and wildlife viewing. Accessibility to a number of levels of rock climbing is also provided. <a href="http://www.whistlerblackcomb.com/todo/summer/index.htm">www.whistlerblackcomb.com/todo/summer/index.htm</a>	★	✓ ✓
<input type="checkbox"/> <b>Gondola</b>	Whistler Blackcomb	Marketed as an all-year round sightseeing activity, the world-record 4.4 kilometre PEAK 2 PEAK Gondola was created. Food, BBQ and restaurant services are offered at either end of the journey, with access to hiking trails or wine tasting opportunities. <a href="http://www.whistlerblackcomb.com/todo/summer/p2padventure/index.htm">www.whistlerblackcomb.com/todo/summer/p2padventure/index.htm</a>	★ ★	✓

5.2 Water management



The following table presents a series of sustainability features relating to issues of **water management** which may be considered in the Mt Buller Alpine Resort Master Plan

Feature	Resort	Description	Ranking	Applicability
<input type="checkbox"/> Natural run-off mitigation	Stowe Mountain Resort	Stormwater runoff from the Spruce Peak project area is collected in a 110 million gallon snowmaking lake to protect a nearby stream from potentially adverse water quality impacts.  Stringent storm water management during construction.  <a href="http://www.stowe.com/mountain/environmental_efforts">www.stowe.com/mountain/environmental_efforts</a>	★ ★	✓
	Hotel Terra-Jackson Hole	Runoff water at the building site is collected in an underground tank, filtered, and slowly released back into the environment, reducing potential pollution flowing into rivers, streams, and surrounding land.  <a href="http://www.hotelterrajacksonhole.com/eco-luxury-hotels.php">www.hotelterrajacksonhole.com/eco-luxury-hotels.php</a>	★ ★	✓ ✓
	Squaw Valley	Installed numerous <i>sedimentation basins</i> where water is collected and slowed in its natural course through the valley to reduce adverse environmental impacts.  <a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a>	★ ★	✓
<input type="checkbox"/> Wastewater treatment	Zermatt Matterhorn	Waste water from the kitchen and bathroom of the tourist centre is collected and purified in a microbiological water treatment system. This is then used for toilet flushing and the unused purified water flows into the natural water cycle.  Waste from the water treatment system is taken to Zermatt's water treatment plant by cable car.  <a href="http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506">http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506</a>	★ ★	✓ ✓
	Mt Hotham	Snowmaking system utilises recycled water from the Hotham Village water treatment plant. Class A recycled treated water is used. Provides approximately 90 per cent of the water needed for snow making.  Required A\$8.4 million of investment.  <a href="http://www.mthotham.com.au/resort/about/corporate/publications/20095201383.asp">www.mthotham.com.au/resort/about/corporate/publications/20095201383.asp</a>	★ ★	✓



Feature	Resort	Description	Ranking	Applicability
<input type="checkbox"/> Centrifugal compressors	Squaw Valley	3 stage centrifugal compressors installed to reduce the number of snow-making guns required. <a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a>	★	✓✓
	Canadian Mountain Holidays	Low-flush toilets and low-flow shower heads, regulating the flow of water used by patrons and staff. <a href="http://www.canadianmountainholidays.com/about/stewardship">www.canadianmountainholidays.com/about/stewardship</a>	★	✓✓
<input type="checkbox"/> Low-flow water equipment	Hotel Terra-Jackson Hole	Dual flush toilets, low flow water fixtures, waterless urinals in men's public restrooms, solar powered faucets in public restrooms. <a href="http://www.hotelterrajacksonhole.com/eco-luxury-hotels.php">www.hotelterrajacksonhole.com/eco-luxury-hotels.php</a>	★	✓✓
	Vail Resorts	Low-flow water fixtures, showerheads, toilets, kitchen sprayers and water efficient laundry equipment. <a href="http://www.vailresorts.com/Corp/info/environment.aspx">www.vailresorts.com/Corp/info/environment.aspx</a>	★	✓✓



5.3 Built environment and energy use



The following table presents a series of sustainability features relating to issues of **built environment energy use** which may be considered in the Mt Buller Alpine Resort Master Plan

Feature	Resort	Description	Ranking	Applicability
On-site wind power	Jiminy Peak Resort	Installed a GE 1.5MW wind turbine midway up the mountain's 2000 foot peak. The turbine sits on a 263 ft tower and generates approximately 4,600,000 kWh each year. The turbine shuts down during icing periods and re-starts once ice has melted off the blades.  The installed turbine price was approximately US\$3.9 million.  <a href="http://jiminypeak.com/page.php?PageID=1255&amp;PageName=Green+Jiminy">www.jiminypeak.com/page.php?PageID=1255&amp;PageName=Green+Jiminy</a> <a href="http://jiminy.lsw.com/page.php?PageID=1445&amp;PageName=Forever+Green+Magazine">http://jiminy.lsw.com/page.php?PageID=1445&amp;PageName=Forever+Green+Magazine</a>	★ ★ ★	✓
	Aspen Mountain Ski Resort	A 115 kW micro-hydroelectric facility using snowmelt at Snowmass.  Uses water from a snowmaking pond, generating 150,000 kWh annually.  <a href="http://www.aspensnowmass.com/environment">www.aspensnowmass.com/environment</a>	★ ★ ★	✓
Hydro power	Canadian Mountain Holidays	A micro-hydropower system installed at one lodge (Galena lodge) in December 2005. The small-scale system relies on steep terrains and falling water. Total cost of the plant was approximately CAD\$500,000 with predicted annual savings of CAD\$70,000 with a seven year payback period.  Feasibility investigations for three other sites performed.  <a href="http://www.canadianmountainholidays.com/publisher_page_files/0000/0039/CMH_News_May06.pdf">www.canadianmountainholidays.com/publisher_page_files/0000/0039/CMH_News_May06.pdf</a> <a href="http://www.canadianmountainholidays.com/about/stewardship">www.canadianmountainholidays.com/about/stewardship</a>	★ ★ ★	✓
	Whistler Blackcomb	Partner of a 7.5 MW hydro project, equivalent to powering the resort's winter and summer operations including 38 lifts, 17 restaurants, and 269 snow guns.  The single turbine is located in the Fitzsimmons River, within Whistler Blackcomb under the PEAK 2 PEAK Gondola. The power generated by the turbine is sold to BC Hydro.  <a href="http://www.whistlerblackcomb.com/mountain/environment/energy.htm">www.whistlerblackcomb.com/mountain/environment/energy.htm</a>	★ ★ ★	✓

Feature	Resort	Description	Ranking	Applicability
<input type="checkbox"/> <b>Solar power</b>	Vail Resorts	Installed an 8.4-kilowatt PV system consisting of forty two 200-watt panels which power the entire building and the excess electricity lights other facilities. <a href="http://www.vailresorts.com/Corp/info/environment.aspx">www.vailresorts.com/Corp/info/environment.aspx</a>	★ ★	✓ ✓
	Aspen Mountain Ski Resort	150 kW solar PV array which produces 200,000 kWh pa. <a href="http://www.aspensnowmass.com/environment">www.aspensnowmass.com/environment</a>	★ ★	✓ ✓
	Zermatt Matterhorn	Southern façade of the tourist centre is integrated with PV panels. The system provides for all electricity energy for heating and ventilation. Excess energy is fed back into the electricity grid. Also see <i>Heat re-use</i> . <a href="http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506">http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506</a>	★ ★	✓ ✓
	The Hotel Crystal, Obergurgl Hochgurgl	300 m <sup>2</sup> solar collectors installed for the hotel. See <i>Geothermal heat pump</i> . <a href="http://www.thecrystal.at/en/index.php?id=160">www.thecrystal.at/en/index.php?id=160</a>	★ ★	✓
	Stowe Mountain Resort	On-course solar powered comfort stations with composting toilets. <a href="http://www.stowe.com/mountain/environmental_efforts">www.stowe.com/mountain/environmental_efforts</a>	★	✓ ✓
<input type="checkbox"/> <b>Geothermal heat pump</b>	The Hotel Crystal, Obergurgl Hochgurgl	5 geothermal pumps (4 low temperature pumps, 1 high temperature pump) installed for the 130 room hotel's heating requirements. Requires 76 probes (each 120m deep) and has a lifespan of approximately 12-14 years. Combined with 300 m <sup>2</sup> of solar collectors. Construction costs of the heating system were over EURO 1 million. <a href="http://www.thecrystal.at/en/index.php?id=160">www.thecrystal.at/en/index.php?id=160</a>	★ ★ ★	✓
	Squaw Valley	Geothermal heat pump system at the 12,000 square foot SquawKids Children's Center facility. <a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a>	★ ★	✓

<input type="checkbox"/>	<b>Biomass district heating plant</b>	Lech am Arlberg	<p>The district constructed 7.5 MW<sub>th</sub> biomass combustion plants and 1.5 MW<sub>th</sub> flue gas condensation unit to supply hot water for 223 customers (hotels and guesthouses) using a 17,500 heating network.</p> <p>Two fuel bunkers of capacity 5,000 m<sup>3</sup> have been constructed for bark storage and is operated using an automatic crane system. Approximately 65,000 m<sup>3</sup> of wood chips and bark have been supplied by the local sawmill and timber industry. This is equivalent to a reduction of 4 million litres of oil.</p> <p><a href="http://www.bios-bioenergy.at/en/references/all-projects/lech.html">www.bios-bioenergy.at/en/references/all-projects/lech.html</a></p> <p><a href="http://www.icrtourism.org/Publications/ACaseStudyofLech.pdf">www.icrtourism.org/Publications/ACaseStudyofLech.pdf</a></p>	★ ★ ★	✓
<input type="checkbox"/>	<b>Heat re-use</b>	Squaw Valley	<p>Heat generated as a by-product of the waste incineration process is used to heat the Gold Coast complex.</p> <p>Approximately 30,000 lbs of cardboard waste was incinerated to generate hot water for the lodge.</p> <p><a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a></p>	★ ★ ★	✓
		Zermatt Matterhorn	<p>The façade of the tourist centre also functions as a thermal air collector with the PV system. The system preheats cold air from the outside used for the restaurant and rooms to reduce heating energy requirements.</p> <p><a href="http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506">http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506</a></p>	★	✓
<input type="checkbox"/>	<b>Lighting retrofitting</b>	Squaw Valley	<p>Retrofitting incandescent bulbs with 5-watt cold cathode CFLs, heating, new insulating window panes, and power supply in all restaurants, complexes, lifts and buildings.</p> <p><a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a></p>	★ ★ ★	✓ ✓
		Aspen Mountain Ski Resort	<p>In 2000, the Aspen Skiing Company undertook a lighting retrofit program across 18 buildings within the area.</p> <p><a href="http://www01.aspensnowmass.com/environment/programs/climate.cfm">www01.aspensnowmass.com/environment/programs/climate.cfm</a></p>	★ ★ ★	✓ ✓
<input type="checkbox"/>	<b>General green building design</b>	Aspen Mountain Ski Resort	<p>In 1999, Aspen Skiing Company adopted Green Building Guidelines as company policy to implement environmentally sensitive development in the future.</p> <p>One fully certified LEED building has been built, with another to be completed.</p> <p><a href="http://www01.aspensnowmass.com/environment/programs/green.cfm">www01.aspensnowmass.com/environment/programs/green.cfm</a></p>	★ ★ ★	✓ ✓

	Stowe Mountain Resort	Cabins built to a 5-star rating of the US EPA's Home Energy Rating System. <a href="http://www.stowe.com/mountain/environmental_efforts">www.stowe.com/mountain/environmental_efforts</a>	★ ★	✓ ✓
	Hotel Terra-Jackson Hole	Energy Star approved efficient Low E windows (highly reflective coating that protects interiors from infrared light). Compact Fluorescent Light bulbs used in the majority of the hotel fixtures. <a href="http://www.hotelterrajacksonhole.com/eco-luxury-hotels.php">www.hotelterrajacksonhole.com/eco-luxury-hotels.php</a>	★ ★	✓ ✓
	Canadian Mountain Holidays	New windows installed and additional insulation added to reduce overall heat loss. <a href="http://www.canadianmountainholidays.com/about/stewardship">www.canadianmountainholidays.com/about/stewardship</a>	★	✓ ✓
Building management systems	Hotel Terra-Jackson Hole	Heating and cooling system controlled by computerized building management system that allows hotel rooms to be powered down when not in use and calibrated for specific occupancy expectations. <a href="http://www.hotelterrajacksonhole.com/eco-luxury-hotels.php">www.hotelterrajacksonhole.com/eco-luxury-hotels.php</a>	★ ★	✓ ✓
	Squaw Valley	Installed timers and variable speed motors on heating systems, cooling fans, heating fans, hot water pumps and thermostats. <a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a>	★ ★	✓ ✓
	Whistler Blackcomb	Installation of energy meters with an energy management tool to monitor real-time energy consumption. <a href="http://www.whistlerblackcomb.com/mountain/environment/index.htm">www.whistlerblackcomb.com/mountain/environment/index.htm</a>	★	✓ ✓
Small off-peak generator	Canadian Mountain Holidays	Established a tracking system to monitor energy use (including propane, diesel, jet fuel, electricity, gasoline and natural gas). <a href="http://www.canadianmountainholidays.com/about/stewardship">www.canadianmountainholidays.com/about/stewardship</a>	★	✓ ✓
	Canadian Mountain Holidays	Instead of running the larger generator, a smaller generator is operated when demand is low or during off-peak. <a href="http://www.canadianmountainholidays.com/about/stewardship">www.canadianmountainholidays.com/about/stewardship</a>	★	✓

5.4 Materials selection



The following table presents a series of sustainability features relating to issues of **materials selection** which may be considered in the Mt Buller Alpine Resort Master Plan

Feature	Resort	Description	Ranking	Applicability
<input type="checkbox"/> Locally sourced products	Squaw Valley	Restaurant constructed from 100% locally produced sustainable building materials. <a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a>	★★★	★★✓
<input type="checkbox"/> Recycled material	Aspen Mountain Ski Resort	Recycled cotton as wall insulation. Roof is structural insulated panels of R-60 insulation values. Recycled rubber product as floors. Deck made from sawdust and recycled plastic bags. <a href="http://www.aspensnowmass.com/environment">www.aspensnowmass.com/environment</a> <a href="http://www01.aspensnowmass.com/environment/programs/green/snowmass.cfm">www01.aspensnowmass.com/environment/programs/green/snowmass.cfm</a>	★★★	★★✓
	Squaw Valley	80% reclaimed and recycled wood products as building materials Rubber floors made from 100% recycled rubber tyres <a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a>	★★★	★★✓
	Hotel Terra-Jackson Hole	100% recycled "Eco Shake" roof shingles, made from reinforced vinyl and cellulose fibre. <a href="http://www.hotelterrajacksonhole.com/eco-luxury-hotels.php">www.hotelterrajacksonhole.com/eco-luxury-hotels.php</a>	★★★	★★✓
<input type="checkbox"/> Material re-use	Aspen Mountain Ski Resort	Kitchen cabinets and counter tops were salvaged from a residential demolition. <a href="http://www.aspensnowmass.com/environment">www.aspensnowmass.com/environment</a>	★★★	★★✓
<input type="checkbox"/> Low VOC materials	Squaw Valley	Water based and low VOC paints and finishes. <a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a>	★★★	★★✓
	Hotel Terra-Jackson Hole	Low VOC (Volatile Organic Compound) carpets and pads, sealants, paint, and adhesives. <a href="http://www.hotelterrajacksonhole.com/eco-luxury-hotels.php">www.hotelterrajacksonhole.com/eco-luxury-hotels.php</a>	★★★	★★✓



<input type="checkbox"/>	<b>Feature</b>	<b>Resort</b>	<b>Description</b>	<b>Ranking</b>	<b>Applicability</b>				
	<b>FSC timber or substitute timber use</b>	Aspen Mountain Ski Resort	Exterior siding and trim is a non-wood product called Hardi Plank, where material does not split, crack, rot or shrink. <a href="http://www.aspensnowmass.com/environment">www.aspensnowmass.com/environment</a>	★ ★	✓				
<input type="checkbox"/>	<b>Pre-fabricated construction materials</b>	Zermatt Matterhorn	The tourist centre building has been constructed using pre-fabricated wooden elements, only the base was made of concrete for structural reasons. <a href="http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506">http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506</a>	★	✓ ✓				

## 5.5 Waste management



The following table presents a series of sustainability features relating to issues of **waste management** which may be considered in the Mt Buller Alpine Resort Master Plan

Feature	Resort	Description	Ranking	Applicability
<input type="checkbox"/> <b>Recycling facilities</b>	Vail Resorts	Current program recycles nearly 70% of on-mountain waste. <a href="http://www.vailresorts.com/Corp/info/environment.aspx">www.vailresorts.com/Corp/info/environment.aspx</a>	★★★	✓✓
	Squaw Valley	Recycling bins (glass, aluminium) have been strategically placed in key, high traffic areas throughout the resort. <a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a>	★★★	✓✓
	Whistler Blackcomb	Recycled and compost of over 800 tonnes. Although, plastic waste is driven to a recycling plant. <a href="http://www.whistlerblackcomb.com/mountain/environment/index.htm">www.whistlerblackcomb.com/mountain/environment/index.htm</a>	★★★	✓✓
<input type="checkbox"/> <b>Construction waste management</b>	Hotel Terra-Jackson Hole	50% of construction waste was reused or recycled. <a href="http://www.hotelterrajacksonhole.com/eco-luxury-hotels.php">www.hotelterrajacksonhole.com/eco-luxury-hotels.php</a>	★★★	✓
<input type="checkbox"/> <b>Waste incineration facility</b>	Squaw Valley	Implemented an incineration process to dispose solid waste and reduce amount of landfill. Heat generated as a by-product of the process is used to heat the Gold Coast complex. Approximately 30,000 lbs of cardboard waste was incinerated to generate hot water for the Gold Coast lodge. <a href="http://www.squaw.com/environmental-programs">www.squaw.com/environmental-programs</a>	★★★	✓
<input type="checkbox"/> <b>Composting facility</b>	Aspen Mountain Ski Resort	Installed four composting toilets for guests and patrol. <a href="http://www.aspensnowmass.com/environment">www.aspensnowmass.com/environment</a>	★★★	✓✓
	Canadian Mountain Holidays	Composting systems installed in 3 lodges. <a href="http://www.canadianmountainholidays.com/about/stewardship/report">www.canadianmountainholidays.com/about/stewardship/report</a>	★★★	✓✓
	Whistler Blackcomb	Installed a composting system to reduce waste. <a href="http://www.whistlerblackcomb.com/mountain/environment/index.htm">www.whistlerblackcomb.com/mountain/environment/index.htm</a>	★★★	✓✓



Feature	Resort	Description	Ranking	Applicability
Wastewater treatment for toilet flushing	Zermatt Matterhorn	<p>Waste water from the kitchen and bathroom of the tourist centre is collected and purified in a microbiological water treatment system. This is then used for toilet flushing and the unused purified water flows into the natural water cycle of the surroundings.</p> <p>Waste from the water treatment system is taken to Zermatt's water treatment plant by cable car.</p> <p><a href="http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506">http://www.zermatt.ch/en/page.cfm/news_events/presscorner/pc_press_releases/18506</a></p>	★ ★	✓ ✓







# Mt Buller Masterplan

Preliminary Economic Assessment

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This report has been prepared for:

**Cox Architecture**  
**(on behalf of Mt Buller Alpine Resort Management Board)**

This report has been prepared by:

**SGS Economics and Planning Pty Ltd**

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## Disclaimer

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# EXECUTIVE SUMMARY

## Project Brief

SGS Economics & Planning Pty Ltd (SGS) was commissioned by Cox Architecture to provide a preliminary economic assessment of the evolving Mt Buller Masterplan. While the Masterplan is a high level, long term vision for the mountain, which inherently has significant uncertainty surrounding it, SGS has attempted to perform the assessment using 'reasonable' assumptions.

## Project Approach

Two forms of preliminary economic assessment have been performed, both from a whole of mountain perspective and both reflecting the differences brought on by Masterplan implementation compared with business as usual operations. These include:

1. Cost benefit assessment = *incremental economic, social and environmental benefits that can be monetised less implementation costs.*
2. Economic impact assessment = *incremental level of local economic activity due to Masterplan implementation (e.g. incomes and jobs).*

## Key Assumptions

Assumptions surrounding the cost and timing of capital works, and enhanced visitation levels and visitor spending drive the estimates generated. Length of stay enhancements have been incorporated into visitor spending assumptions. Key assumptions are as follows:

Capital works (\$000)	Business as usual		Masterplan implementation	
Total	\$13,720		\$48,420	
By 2020	\$7,720		\$42,420	
By 2030	\$13,720		\$48,420	
By 2040	\$13,720		\$48,420	
Visitor Numbers (000)	Winter*	Summer	Winter*	Summer
Current	245	71	245	71
By 2020	257	88	263	95
By 2030	264	97	284	128
By 2040	264	97	303	165
Daily Visitor Spend (\$2010)	Winter	Summer	Winter	Summer
Current	\$270	\$33	\$290	\$66
By 2020	\$299	\$41	\$320	\$82
By 2030	\$330	\$50	\$354	\$100
By 2040	\$365	\$61	\$391	\$122

\*based on 10yr historic average

## Key Results & Sensitivity

The results of each of the assessment frameworks are presented in the table below, i.e. under what has been labelled the 'most likely' scenario. The sensitivity of these results to changes in the underlying assumptions are also summarised with the:

- 'Worst case' scenario assuming capital costs blow out by 30% and visitation growth under Masterplan implementation is only 75% of the most likely scenario. Visitor spending is assumed to remain equivalent to that realised under the most likely scenario.
- 'Best case' scenario assuming that capital costs are 10% less and visitor spending yields are 25% better than what is forecast under the most likely scenario. Visitation levels are assumed to equate with those forecast under the most likely scenario.

Scenario		Most Likely	Worst Case	Best Case
<b>Cost benefit assessment</b>				
• Capital costs (\$000)	PV @7% real	\$27,706	\$36,018	\$24,935
• Recurrent costs (\$000)	PV @7% real	\$4,122	\$4,122	\$4,122
• Other costs	Not quantified	Not quantified	Not quantified	Not quantified
• Enhanced visitor experience (\$000)	PV @7% real	\$53,010	\$38,645	\$53,010
• Economic uplift (\$000)	PV @7% real	\$13,937	\$11,225	\$13,937
• Avoided recurrent costs (\$000)	PV @7% real	\$89	\$89	\$89
• Other benefits	Not quantified	Not quantified	Not quantified	Not quantified
Net Present Value (\$000)		\$35,208	\$9,820	\$37,979
Internal Rate of Return (%)		16%	9%	18%
Benefit Cost Ratio		2.11	1.24	2.31
<b>Economic impact assessment</b>				
Local economy				
• Income (\$000 p.a.)	30 yr average	\$25,182	\$19,251	\$24,983
• Value added (\$000 p.a.)	30 yr average	\$14,618	\$12,890	\$14,516
• FTE jobs supported	30 yr average	163	167	162
Victorian economy				
• Income (\$000 p.a.)	30 yr average	\$40,150	\$32,308	\$39,696
• Value added (\$000 p.a.)	30 yr average	\$18,093	\$14,193	\$17,900
• FTE jobs supported	30 yr average	216	164	214

The most likely results indicate that Masterplan implementation:

- Is estimated to generate benefits that outweigh costs by more than a factor of 2 when quantified economic and social benefits are incorporated into the analysis. This suggests that public subsidisation of the Masterplan may well be warranted.
- Generates significant economic activity for both the local (Mansfield Shire) and Victorian economy over the long term.



## Public Funding Programs

At this stage funding programs from federal government sources are highly uncertain but it is likely that funding for regional projects will enjoy bolstered prospects under the Gillard government.

Funding from federal sources will need to align with the objectives of the Hume Regional Development Committee's priorities, which are yet to be enunciated but which are likely to echo the priorities stipulated in the Hume Strategy for Sustainable Communities.

The most relevant of these themes and the Masterplan components with greatest alignment include:

Hume Strategy for Sustainable Communities Theme	Masterplan project
<ul style="list-style-type: none"> <li>Healthy, vibrant and resilience communities – <i>strengthening communities, increasing resilience and enhancing liveability</i></li> </ul>	Recreation facilities Stage 1 Recreation facilities Stage 2 Recreation facilities Stage 3 Day facilities – Horse Hill Day facilities - Village
<ul style="list-style-type: none"> <li>A thriving and dynamic economy – facilitating research and <i>innovation in tourism</i>, manufacturing and industry to encourage new and evolving business.</li> </ul>	Gondola Snow play
<ul style="list-style-type: none"> <li>An efficient and sustainable pattern of urban and rural land use and development – <i>maximising use of existing infrastructure and services</i> and facilitating strategic investment in future infrastructure and services.</li> </ul>	Parking stage 1 & 2 Gateway site parking structure Cornhill Road

The State funding program most linked to the Masterplan is the Regional Infrastructure Development Fund (RIDF). The RIDF has capital project categories including sustainable industries, industry investment and development, tourism, transport and access, and community and cultural infrastructure.

The most relevant RIDF categories and the masterplan components with greatest alignment include:

RIDF capital project funding	Masterplan project
<ul style="list-style-type: none"> <li><i>Sustainable Industries</i>: energy, resource and water supply and efficiency infrastructure projects that improve the productivity, sustainability and competitiveness of regional industries and communities.</li> </ul>	Water storage expansion

<ul style="list-style-type: none"><li>• <i>Industry Investment and Development:</i> infrastructure projects that facilitate new investment, job creation and retention, industry development and business expansion or relocation in regional Victoria.</li></ul>	Gondola Snow play
<ul style="list-style-type: none"><li>• <i>Tourism:</i> new tourism assets and redevelopment of existing key tourism assets with a focus on nature-based tourism infrastructure to develop key regional areas as world-class tourist destinations.</li></ul>	Recreation facilities Stage 1 Recreation facilities Stage 2 Recreation facilities Stage 3 Day facilities – Horse Hill Day facilities - Village Gondola Snow play

# 1 INTRODUCTION

## 1.1 Scope of Works

SGS Economics & Planning Pty Ltd (SGS) was commissioned by Cox Architecture to provide a preliminary economic assessment of the evolving Mt Buller Masterplan.

Given that the Masterplan is a high level vision for the whole of the mountain which is to be implemented over the long term, the uncertainty surrounding the pace and scope of implementation is acknowledged. Having said this, SGS has attempted to make reasonable assumptions to use within the economic assessment frameworks utilised.

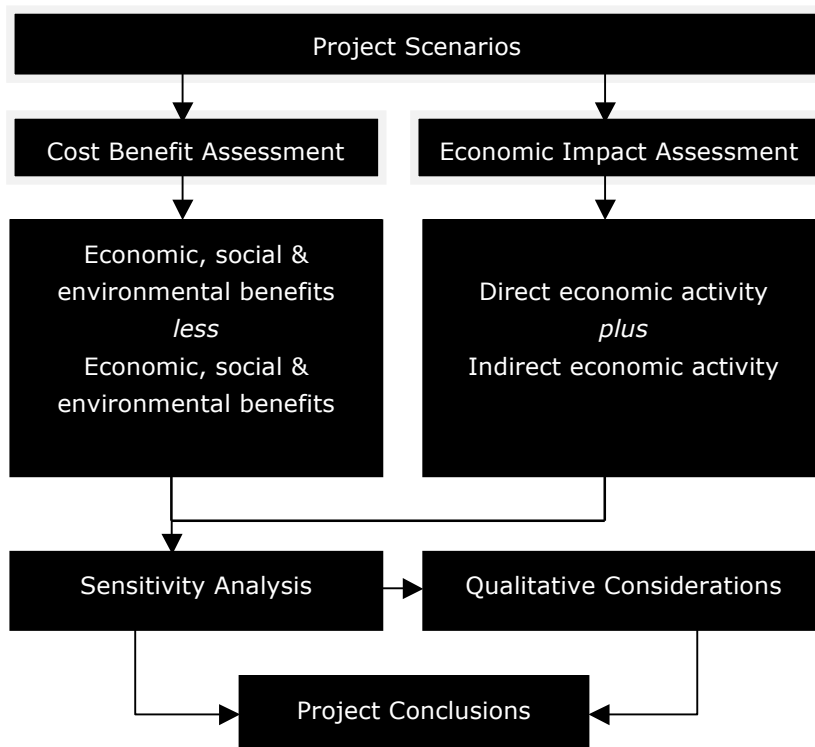
Two forms of preliminary economic assessment have been performed: a cost benefit assessment; and an economic impact assessment.

The scope also included investigating public funding options for Masterplan implementation, particularly any funding programs or grants that might be used for specific Masterplan projects.

## 1.2 Assessment Frameworks

Figure 1 outlines how each of the assessments is related and also distils the broad methodology employed.

**Figure 1 Economic Assessments**



**Cost Benefit Assessment** uses a whole of project life discounted cashflow analysis, where project benefits are contrasted with project costs for each of the years of the Masterplan (~30yrs). The assessment includes *economic, social and environmental costs and benefits*. Costs and benefits are monetised as much as possible using both market and non-market techniques, reflecting that some costs and benefits do not have observable prices attached to them. Where monetisation is not possible, qualitative considerations are also integrated into the assessment. Importantly, cost benefit assessment attempts to ascertain if a project provides a net welfare benefit and therefore represents a sound investment of community capital.

From a Mt Buller Masterplan perspective, the cost benefit assessment tells us if implementation should proceed after acknowledging factors outside of costs and revenues, and communities outside of Mt Buller. That is, even if the Masterplan doesn't pay for itself, should it be implemented anyway and subsidised from the public purse?

**Economic Impact Assessment** shares the society wide perspective of cost benefit assessment but does not help determine whether a project is worth doing from a societal perspective. Rather it traces the economic activity associated with project delivery in the host regional economy. That is, it estimates the number of *jobs* created, as well as the *economic output and value added* associated with project delivery. It does this by isolating the direct economic stimuli associated with project delivery and subsequently employing econometric models to trace how this stimuli accumulates into total induced economic activity through multiple rounds of transactions in the host economy.

From a Mt Buller Masterplan perspective, the economic impact assessment tells us how much local income, value and jobs will be generated through implementation irrespective of the merits of implementation.

## 1.3 Marginal Assessment

Each of the assessment frameworks have been scoped on a marginal basis. That is, they measure the incremental costs, revenues, benefits and impacts associated with moving from business as usual mountain operations to Masterplan implementation.

This is an important distinction with respect to the Mt Buller Masterplan, as costs that have already been sunk or which are planned under a business as usual scenario are not factored into the assessment frameworks.

## 1.4 Report Structure

The remainder of the report is structured as follows:

- |           |   |
|-----------|---|
| Section 2 | Summarises mountain operations under business as usual operating arrangements and how these will differ with Masterplan implementation. |
| Section 3 | Summarises the cost benefit assessment.   |

- Section 4        Details the economic impact assessment.
- Section 5        Tests the sensitivity of the results generated in the cost benefit and economic impact assessments to changes in the underlying assumptions.
- Section 6        Profiles public funding programs relevant to Masterplan implementation.



## 2 PROJECT SCENARIOS

### 2.1 Business As Usual

#### 2.1.1 Visitation Patterns

After reviewing numerous reports and strategies published by the Mt Buller Alpine Resort Management Board (ARMB) and the Alpine Resorts Coordinating Council (ARCC), it is clear that **visitation to Mt Buller:**

- **Is strongly focussed in the winter season**, with winter numbers averaging about 245,000 over the past 10 years and following a relatively modest growth trajectory. Mt Buller's strength is its proximity to Melbourne (~3 hrs drive), enabling snow enthusiasts to head for the mountain after good snowfalls. It should be noted that there is a possibility that winter visitor numbers may decrease slightly if the standard of the winter offer is not maintained or improved.

Summer visitation is quite low comparatively, at about 80,000 to 100,000 each year. Summer visitation growth is targeted given existing infrastructure investment, climate change forecasts and public policy imperatives. The resort has pursued this growth to date through nature based and adventure activities including bushwalking, mountain biking, 4WD touring and events, conferences and education.

- **Is dominated by short stay visitors**, with an average length of stay at ~1.8 days in winter and less in summer though detailed summer stay statistics are unavailable. The goal is to increase length of stays as this has numerous dividends including improving yields derived from visitors and helping address existing visitor congestion issues, particularly during peak winter periods.
- **Originates predominantly from the Victorian market** (80%), with other domestic tourists accounting for 18% and international guests 2%. The competitive threats posed by international locales such as in New Zealand and Japan, as well as the NSW resorts have accentuated in recent years, as consumers have enjoyed cheap air travel.
- **Revolves around beginner and intermediate level skiers and snow-boarders** in winter, with this segment making up approximately 80% of winter visitors while the balance consider themselves to be advanced skiers and snowboarders. Other Victorian alpine resorts service somewhat different markets. Lake Mountain and Mt Baw Baw are more oriented to first timers and snow players, whereas Falls Creek and Mt Hotham are more oriented towards intermediate/ advanced skiers/ boarders.

In terms of visitor yields, ARCC (2006) statistics indicate that on a per visitor basis, expenditure on the mountain (in 2006\$) totals to approx. \$245 per day, comprised by: \$120 for food & beverage,

retail merchandise, equipment hire, etc.; \$40 for lift passes; \$80 for accommodation; and \$5 gate entry.<sup>1</sup> This of course varies widely across visitor categories and applies only to the winter period. Summer spending rates are unavailable.

Servicing this tourist demand is the major focus of the resort. While there are about 200 permanent residents at Mt Buller, this swells to 2,000 in winter as the winter labour force moves in. At its peak, Mt Buller can currently cater for approximately 7,500 overnight guests, 10,000 skiers and snowboarders per day plus an undefined number of 'snow play' visitors who visit the resort for the day and do not purchase lift tickets.

## 2.1.2 Stakeholder Value

Over and above the obvious snow offer, resort stakeholders have clearly expressed their value for the:

- Vistas and views of the surrounding landscape;
- Seasonal changes in the alpine environment;
- Close proximity to Melbourne; and
- Sense of community experienced at Mt Buller.

Equally, resort stakeholders have expressed their desire for a vibrant Village in both winter and summer whilst improving operational aspects of the resort.

## 2.1.3 Operating Issues

The Mt Buller Brand Audit (Traffic Pty Ltd, 2008) identified the following key issues for Mt Buller:

- **Crowding is a major issue** with lifts, location of ski school, beginner areas, snow play and visitor areas;
- It is a **"hassle"** to get from Mirimbah gate, to car parking, to the shuttle, to the Mt Buller Village;
- **Insufficient dedicated areas for visitors seeking a snow 'experience'**, including snow play, tobogganing, etc; and
- **Limited entertainment, food and beverage and retail shopping options.**

Stakeholder consultation has also highlighted that their vision for Mt Buller is one that positions the mountain as an affordable and accessible location, with year round activity and an active village heart.

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<sup>1</sup> The report also indicates that \$40 is spent by each visitor on travel. However, travel expenses are made to get from/ to the mountain (including international travel), and are therefore, not included.

## 2.2 Mt Buller Masterplan

### 2.2.1 Objectives

The aim of the Resort Masterplan is to provide a blueprint for cohesive, economically feasible and environmentally sustainable development that will position the Mt Buller Resort beyond 2020.

The Masterplan aims to:

1. Improve **visitor amenity and commercial offer** of the Mt Buller Village;
2. Improve **visitor access** to, from, and within the Mount Buller Village;
3. Improve the **interface** between the Mt Buller Village and activity areas (existing and proposed, winter and summer);
4. Improve **access** to Mt Buller and tourism **links between** Mt Buller and Mt Stirling area; and
5. Develop the required **activity infrastructure** to support year round visitation and further development and investment.

Cox Architecture, working with the resort's stakeholders, has further refined the major issues for the Masterplan as follows:

Arrival issues	Village issues
<ul style="list-style-type: none"> <li>• Mirimbah Gate congestion</li> <li>• Exposed bus drop-off</li> <li>• Congestion</li> <li>• Insufficient &amp; labour intensive parking</li> <li>• Poor visitor amenity</li> <li>• Poor sense of arrival</li> <li>• Pedestrian/ skier/ vehicle conflicts</li> <li>• Little connection to snow</li> <li>• Lack of intuitive circulation</li> <li>• Poor linkages and flow</li> </ul>	<ul style="list-style-type: none"> <li>• Poor sense of place</li> <li>• Dispersed summer activity</li> <li>• Congested transport interchange</li> <li>• Lack of legibility</li> <li>• Poor visitor amenity</li> <li>• Lack of weather protection</li> <li>• Poor visual connection to mountain areas</li> <li>• Insufficient snow play areas</li> <li>• Difficult pedestrian connections</li> <li>• Bourke St bottle neck</li> <li>• Insufficient beginner ski area</li> </ul>

### 2.2.2 Masterplan Vision

The vision developed for the Mt Buller Resort Masterplan through the stakeholder consultation process is:

*Mt Buller is a welcoming and accessible Australian alpine village. Its unique environment, history and its sense of community create great mountain adventures and experiences all year round.*

## 2.2.3 Masterplan Projects

The Masterplan developed by Cox Architects & Planners addresses the five broad objectives reported above.

The improvements proposed are designed to integrate well with the separate Ski Area Masterplan and are phased over three stages.

Table 1 overleaf summarises the Masterplan projects, as well as their indicative costs and timing. Business As Usual (BAU) projects are also listed for reference purposes. Detailed descriptions of the projects and their context are provided in the Masterplan proper.

## 2.3 Marginal Differences

Implementation of the Masterplan is expected to improve visitor experiences and satisfaction. This will in turn better position Mt Buller's offer and will therefore enhance visitor numbers, length of stay and consequently yields, and will somewhat smooth visitation patterns within the winter season and across the winter summer divide. In particular, the Masterplan aims to improve:

- The experience of visitors generally as the difficulties in accessing the mountain are addressed, the amenity of the Village is enhanced and the capacity to handle visitor peaks is augmented.
- The experience for snow players, who are a significant segment of the winter market (~35% visitors), by providing a dedicated snow play area as well as improved day facilities. This will not only bolster repeat visitation and enhance word of mouth promotion in this currently underserved market, it will better balance the resort's product to the changing demographic.
- Summer recreation options will be expanded through the operation of the gondola and the summer activity precincts, which will introduce a more compelling fee for service experience in summer. There is also the potential for part of the snow play area to be constructed from snow-flex which will further enhance the summer visitation experience.
- The length of stay for winter day trippers as the gondola removes their premature departure times that current persist. In turn, this is likely to improve the yields derived from winter day trippers as they take up resort food & beverage offerings and other spending opportunities.
- The breadth of accommodation offerings on the mountain, as the certainty and public commitment inherent in the Masterplan will provide the confidence needed for further private sector investment (e.g. YHA development, Kooroora redevelopment).

While SGS acknowledges that long term visitor forecasts at Mt Buller need to reflect a wide variety of factors, introducing a significant degree of uncertainty, Figures 2 and 3 respectively indicate what we believe to be reasonable estimates (targets) for winter and summer visitation levels out to 2040.

**Table 1 Projects, Indicative Costs & Timing**

Location	Project	BAU Capital Cost (\$'000)	BAU Re-current Cost (\$'000 p.a.)	Master-plan Capital Cost (\$'000)	Master-plan Re-current Cost (\$'000 p.a.)	Start Year	Complete Year
<b>Overall</b>	<b>Public</b>						
	Planning Process review	Red		█		2010	2012
	Design guidelines review	Re		█		2011	2012
	Affordable housing strategy	Re		█		2012	2013
	Sustainability policy	R				2011	2012
	Water storage expansion	Reda	█	█	█	2011	2013
	Carpark shelters	R		█	█	2012	2013
	Recreation facilities Stage 1	R			█	2011	2014
	Recreation facilities Stage 2	R			█	2015	2018
	Gondola	R		█	█	2015	2016
	High altitude oval	R		█		2015	2015
	Mirimbah Gate upgrade	R		█		2015	2017
	Relocate taxi parking	R				2014	2015
	Relocate on-road parking	R				2014	2014
	Recreation facilities Stage 3	R			█	2019	2019
	<b>Subtotal</b>	<b>\$4,720</b>	<b>\$45</b>	<b>\$14,920</b>	<b>\$405</b>		
<b>Horse Hill</b>	<b>Public</b>						
	Day facilities	R		█	█	2016	2017
	Snow play	R		█	█	2015	2016
	Cornhill Road bus parks	R		█		2017	2018
	Parking Stage 1	R		█		2014	2015
	Parking Stage 2*	R		█		2025	2026
<b>Horse Hill</b>	<b>Private</b>						
	Horse Hill chair upgrade	Reda		█		2019	2020
	<b>Subtotal</b>	<b>\$3,000</b>	<b>-</b>	<b>\$19,500</b>	<b>\$100</b>		
<b>Village</b>	<b>Public</b>						
	Gateway site parking structure**	R		█	█	2012	2014
	Day facilities	R		█	█	2014	2015
	Blue Bullet frontage	R		█		2016	2016
	<b>Private</b>						
	Kooroora redevelopment***	R				-	-
	YHA development***	R				-	-
	Opportunity sites***	R				-	-
<b>Village</b>	Blue Bullet relocation	Reda		█		2021	2021
	<b>Subtotal</b>	<b>\$6,000</b>	<b>-</b>	<b>\$14,000</b>	<b>\$50</b>		
<b>GRAND TOTAL</b>		<b>\$13,720</b>	<b>\$45</b>	<b>\$48,420</b>	<b>\$555</b>		



## Notes to Table 1:

Funding has already been committed for signage upgrades, Athlete's Walk and the Post Office Interpretative Centre Stage 1. Delivery is expected this summer and is therefore considered pre-Masterplan. Consequently, these costs will be sunk costs (~\$2.5M) by the time the Masterplan is formally adopted.

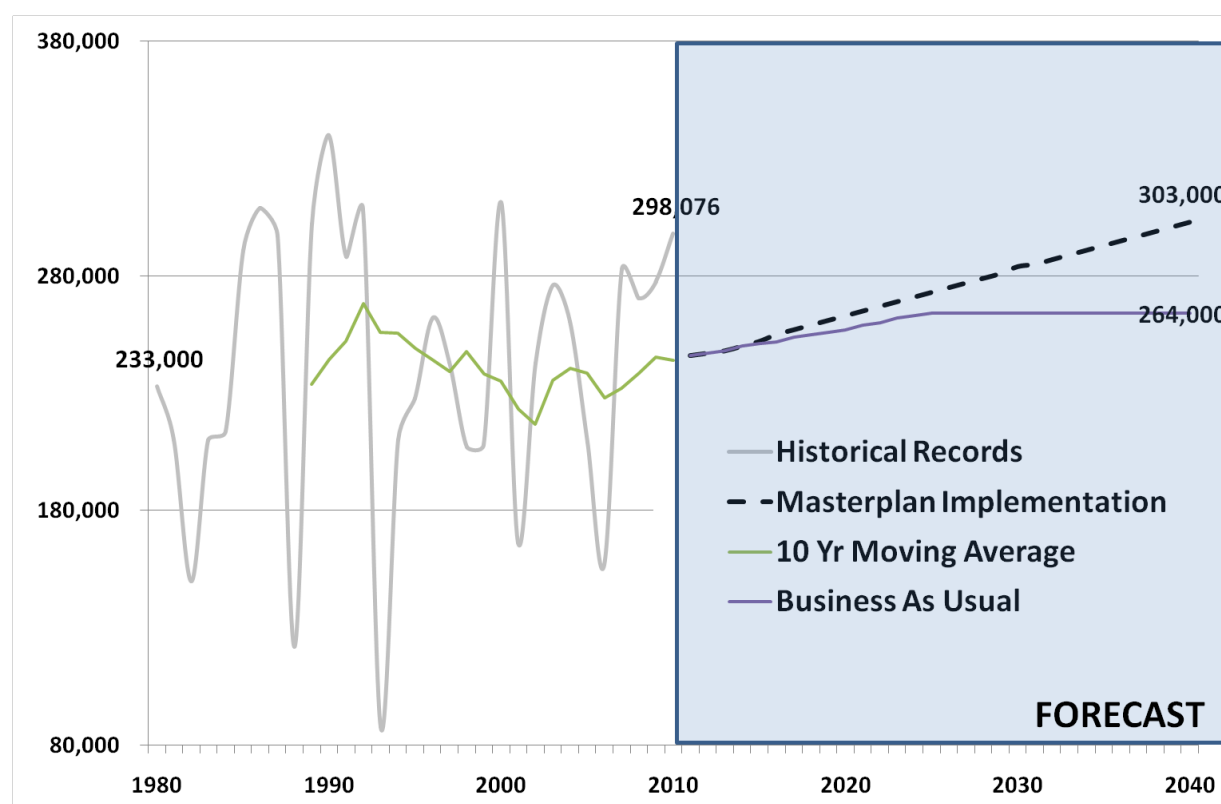
\* Parking Stage 2 will only proceed if capacity limits under the Masterplan are exceeded.

\*\* Gateway Site Parking Structure - This is a self funded project, as car-parks will be pre-sold to fund construction.

\*\*\* The private sector projects, which may well be triggered by Masterplan implementation given the certainty and public commitment afforded, are not included in the assessment frameworks, as by convention only 1<sup>st</sup> round effects are included as costs and as economic stimuli. The following table shows indicative private investment potential expected to be leveraged from the masterplan in addition to that shown on table 1.

Kooroora/YHA Redevelopment	Redacted
One Tree Hill	Redacted
Fawltly	Redacted
Other Opportunity Sites (Police Station & the land west of BCC)	Redacted
<b>TOTAL</b>	<b>\$110.5 million</b>

**Figure 2 Winter Visitation Forecasts**



Under business as usual, winter visitation is assumed to grow at 66% of the forecast population growth rate in Victoria. This is in line with the observed historical trends between winter visitation to alpine resorts and population growth rates. Under the Masterplan scenario, the rate of growth of winter visitation is assumed to equate to Victoria's population growth rate. Both the business as usual and Masterplan scenarios are forecast from the 10 year moving average (in 2010), as a starting point.

**Figure 3 Summer Visitation Forecasts**

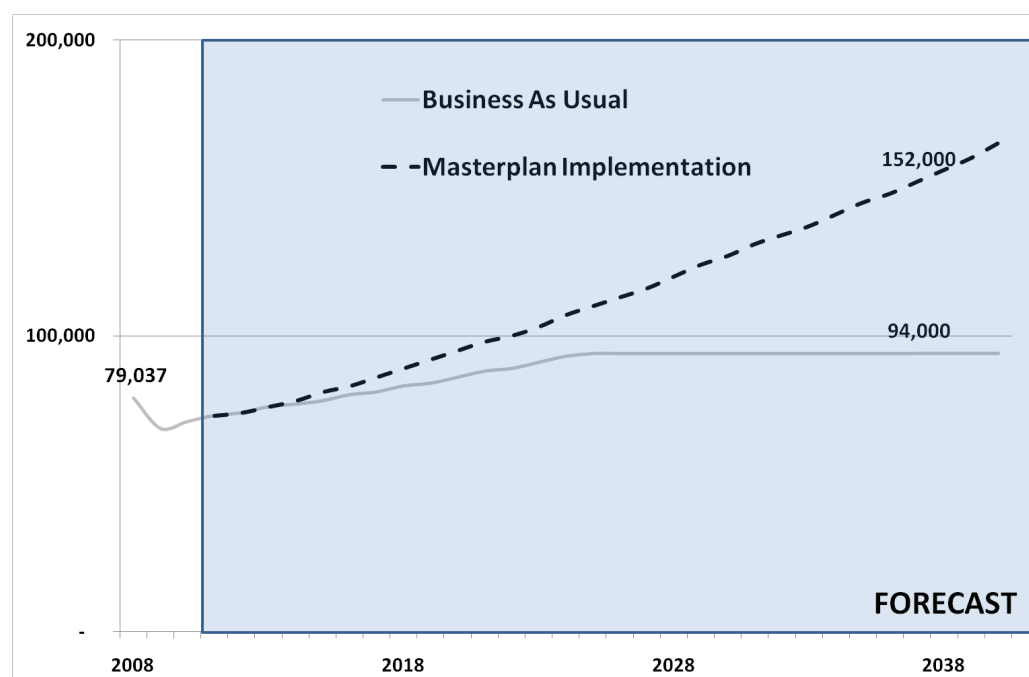


Table 2 outlines what we believe to be reasonable targets for winter and summer visitor yields, and assumes these improvements are largely realised by 2017.

**Table 2 Visitor Yield Expectations (at 2017 and subsequently)**

	Winter		Summer	
	BAU 2010\$*	Masterplan 2010\$	BAU 2010\$	Masterplan 2010\$
<b>General</b> (meals, shopping, equipment hire, localised transport, gate entry and other daily expense items)	\$138	\$158	\$33	\$62
<b>Lift passes</b> (for skiers and snowboarders)	\$44	\$44	-	-
<b>Travel</b> (the cost of travel to and from the resort area from other parts of Australia and overseas)*	-	-	-	-
<b>Accommodation</b> (for overnight visitors who stay on and off the mountain)	\$88	\$88	0	\$4
<b>Total</b>	<b>\$270</b>	<b>\$290</b>	<b>\$33</b>	<b>\$66</b>

Notes to Table 2:

\* 2010\$ winter spending has been taken from NIEIR (2006) *The Economic Significance of the Australian Alpine Resorts* and inflated using CPI to 2010 dollars. The analysis is then undertaken on a real basis using 2010 dollars with a real discount rate of 7%. NIEIR (2006) also indicates that \$40 is spent by each visitor on travel. However, travel expenses are made to get from/ to the mountain (including international travel), and are therefore, not included.

While summer estimates are not specifically available, it has been assumed that current summer visitors do not spend on gate entry, accommodation and lift passes, and their general spending is only a quarter of that of winter visitors on average. Under the Masterplan scenario, it is assumed that a proportion of summer visitors will spend on accommodation.

### 3 COST BENEFIT ASSESSMENT

The cost benefit assessment takes a whole of mountain perspective and extends over a 30 year horizon. It assesses if the project is worth doing from a broad community perspective, after attempting to account for economic, social and environmental costs and benefits associated with Masterplan implementation.

The costs include the incremental **capital and recurrent costs** of Masterplan implementation, as per Table 1. There will also be other costs such as the **nuisance** caused by the construction process to resort visitors and residents, particularly in the summer months, as well as the **environmental impacts** of development in the alpine environment. However, these have not been quantified:

- Due to the inherent difficulties in doing so;
- Because it is assumed that best practice development management techniques will be applied; and
- It is expected that referral authorities will place sufficient conditions on development applications to render environmental impacts as acceptable.

The benefits include the **improved visitor experience**<sup>2</sup> offered at Mt Buller, which is expected to translate into heightened visitor yields and, subsequently, an **uplift in the Victorian economy**.<sup>3</sup> **Avoided recurrent costs** are also relevant benefits.

Additional benefits not quantified in the assessment include the improved **sense of community** associated with improved public spaces and village integration, as well as the **benefits that non-users of the mountain derive**, i.e. in knowing that Mt Buller's visitors enjoy better experiences combined with the heightened value they place on the option to visit Mt Buller in future.

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<sup>2</sup> The improved visitor experience has been quantified for two visitor subsets.

- New visitors* over and above the business as usual visitor forecasts. This subset of benefit has been quantified using travel costs. The underlying logic to this method is that rationale visitors would not make the trip to Mt Buller if it wasn't worth it. Consequently, the benefits derived from the experience must at least equal the travel and out of pocket expenses associated with getting to/ from the mountain. We have assumed that these costs include travel time costs, vehicle operating costs and gate entry costs.
- Existing visitors* under the business as usual projections. Given that the congestion issues during winter will be addressed by the Masterplan projects, it is reasonable that winter visitors will spend more time recreating on the snow and less time queuing and in-transit. It is reasonable to assume that visitors will experience greater enjoyment for this time period, and this has been monetised by applying the premium associated with recreational over travel time.

Refer to Appendix A for detailed assumptions surrounding improved visitor experience.

<sup>3</sup> The uplift in the Victorian economy relates to the heightened expenditures made in Victoria by interstate and international (export) visitors, be they new or existing visitors. Importantly, because a significant component of this heightened visitor spending is served by imported goods and services, only the Victorian value added component is relevant to the analysis, i.e. 42.3% of spending. By convention, only first round effects are included in cost benefit assessment.

A detailed discounted cashflow spreadsheet is provided in Appendix C. Table 3 summarises the performances measures generated.

**Table 3 Summary of Cost Benefit Assessment**

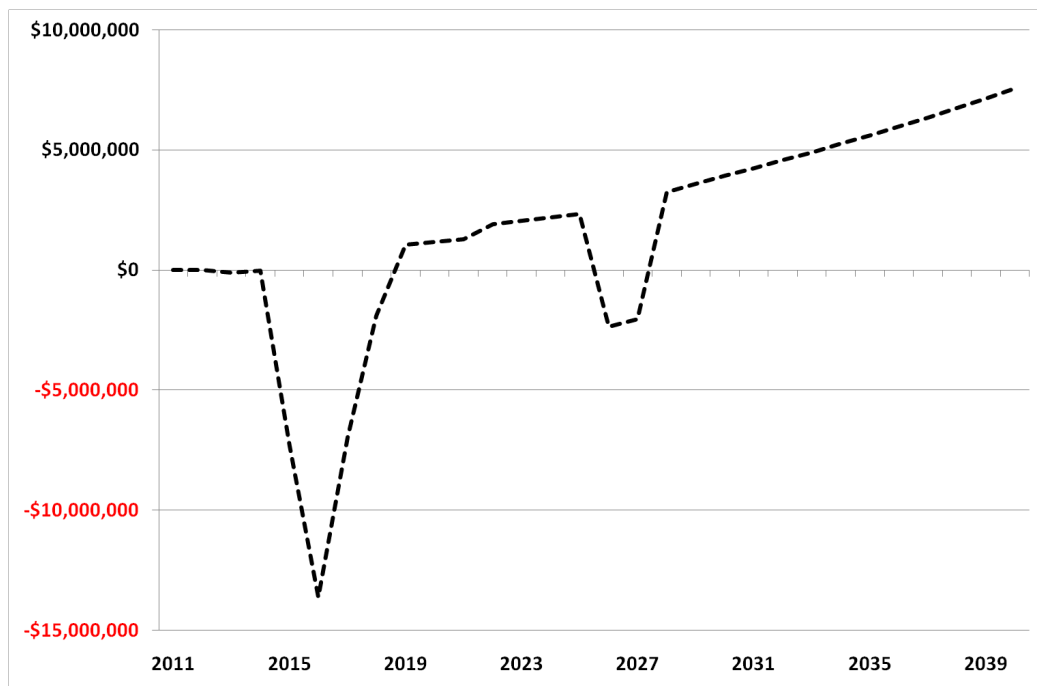
	Present Value (@ 7% real)
<b>COSTS</b>	
• Capital costs	\$27,706,000
• Recurrent costs	\$4,122,000
• Other costs	Not quantified
<b>Total Costs (A)</b>	<b>\$31,827,000</b>
<b>BENEFITS</b>	
• Enhanced visitor experience	\$53,010,000
• Economic uplift	\$13,973,000
• Avoided recurrent costs	\$89,000
• Other benefits	Not quantified
<b>Total Benefits (B)</b>	<b>\$67,035,000</b>
<b>PERFORMANCE INDICATORS</b>	
• Net Present Value	<b>\$35,208,000</b>
• Internal Rate of Return	<b>16%</b>
• Benefit Cost Ratio (B/A)	<b>2.11</b>

The net triple bottom line benefit of Masterplan implementation is estimated to be positive at \$35.2 million in present value terms over the lifetime of the project.

A positive net present value, together with a benefit cost ratio of greater than one, indicates that the societal benefits of Masterplan implementation outweigh the costs, and therefore, the Masterplan should be implemented. It also must be noted that this cost benefit assessment is based on conservative assumptions, and does not include other benefits (including social and non-user benefits).

Figure 4 details how the annual net benefit flow generated by the cost benefit assessment tracks over the 30 year time horizon.



**Figure 4      Net Benefit Flow**

Source: SGS Economics &amp; Planning

## 4 ECONOMIC IMPACT ASSESSMENT

The economic impact assessment takes two geographic perspectives over the 30 year horizon. The first is a **local economy perspective**, i.e. how much local economic activity is associated with Masterplan implementation? For this perspective it has been assumed that the Mansfield Shire boundary is a good proxy for the local economy.

The second geographic perspective taken is for **Victoria**, i.e. how much economic activity is associated with Masterplan implementation across the entire state? By its very scope, it is taken as a given that the economic activity generated from this second perspective will be greater than the first. This reflects the depth and scope of economic linkages that the more diverse Victorian economy encompasses, i.e. when compared to Mansfield Shire.

Importantly, the results from these two perspectives should not be added together. They are separate analyses from different perspective and are not additive.

Because the alpine environment is a unique development location, it is safe to assume that development facilitated at Mt Buller is new development for Victoria. However, the **stimuli** (or direct impacts) associated with Masterplan capital works and their operations are not treated equally in the local and Victorian economy impact assessments. This reflects the need to recruit external construction companies to undertake a portion of the capital works. This is likely to result in immediate leakage of the stimuli from the local economy. Likewise, recurrent expenses are expected to leak immediately into neighbouring municipalities. Similar sentiments also apply for visitor expenditures, as visitation to Mt Buller is complicated by the origin of visitors and the boundaries placed around the analyses.

Table 4 provides the assumed proportion of total capital & recurrent costs likely to be spent as initial stimuli within the two geographic locations. These proportions equate to average proportion of all local inputs sourced by these regions, as ascertained from SGS generated input-output tables.

**Table 4 Economic Stimuli Assumptions**

	Local Economy	Victoria Economy
<b>Capital costs</b>	75%	94%
<b>Recurrent costs</b>	66%	89%
<b>Visitor expenditures</b>	100% of Victorian, interstate and international visitor expenditure	20% of Victorian <sup>4</sup> and 100% of all interstate and international visitor expenditures

<sup>4</sup> This basically assumes that the spending of Victorians at Mt Buller is most likely (80%) to occur in any event, i.e. outside of Mt Buller but at another Victorian alpine resort. It assumes that 20% of all visitors would enjoy substitute experiences outside of Victoria if they didn't go to Mt Buller.

To calculate the indirect impacts or **flow on effects** associated with the introduction of these stimuli into the local and state economies, SGS has used economic multipliers generated by econometric modelling (Refer Appendix A). In essence, SGS scales down the input-output table produced by the ABS for Australia as part of the National Accounts to replicate Victorian and local area input output tables.

From these tables, multipliers are derived which distil how much total economic activity (direct + indirect) accumulates from the stimuli introduced in terms of:

- Economic output/ income;
- Economic value added; and
- FTE employment.

Table 5 shows the average annual economic impact of Masterplan implementation over the 30 year period on the local and Victorian economies in terms of output/ income, value-added and employment.

**Table 5      Economic Impact of Masterplan Implementation  
(30 Yr Annual Average)**

	Local Economy		Victorian Economy	
	Direct Impact	Total Impact	Direct Impact	Total Impact
Output/ Income (\$ Million p.a.)	\$15	\$25	\$13	\$40
Value-added (\$ Million p.a.)	\$9	\$14	\$5	\$18
FTE Employment supported	116	163	95	216

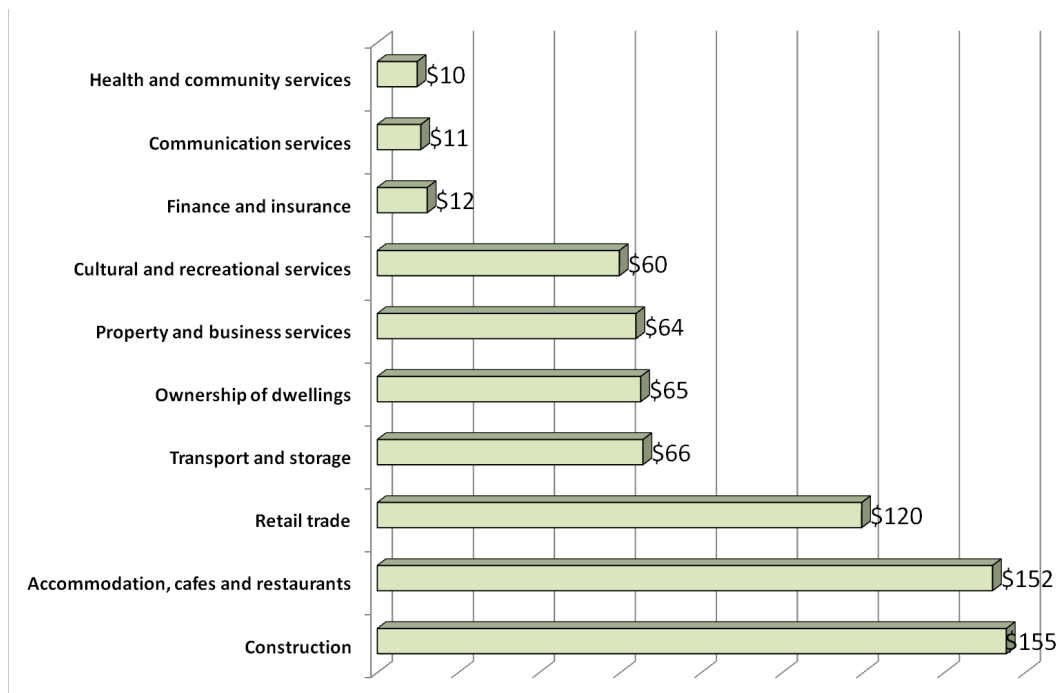
Source: SGS Economics & Planning

Notes: the direct impacts for Victoria are smaller than the local economy direct impacts because only 20% of Victorian visitor expenditure is considered new stimuli for the Victorian economy, as per the footnote above.

Figure 5 indicates how economic output/ income is likely to be split between major industry groups over the 30 years. Similar breakdowns occur for value-added and employment. The table shows that the Masterplan implementation is expected to add substantial value to the local and Victorian economy in terms of income, value added and employment.

Figure 6 in Appendix D shows how total economic output/ income associated with Masterplan implementation is manifest over the 30 year period. Figures 7 and 8 respectively show the manifestations in terms of economic value added (i.e. Gross Regional Product and Gross State Product) and full time employment supported.

**Figure 5 Induced Economic Activity at Mt Buller -Industry Breakdown (\$ Million)**



Source: SGS Economics & Planning

It should be noted that the economic impact assessment is considered conservative, as numerous private sector investment projects are expected to be triggered by the Masterplan. While this is a theoretically correct approach from a modelling perspective and the absolute causality of these projects by Masterplan implementation can always be questioned, the role that the Masterplan will play in triggering the YHA development and Kooroora redevelopment - capital investments of some \$ 55 million collectively.

## 5 SENSITIVITY ANALYSIS

The results of each of the assessment frameworks are presented in the table below, i.e. under what has been labelled the 'most likely' scenario. The sensitivity of these results to changes in the underlying assumptions are also summarised with the:

- 'Worst case' scenario assuming capital costs blow out by 30% and visitation growth under Masterplan implementation is only 75% of the most likely scenario. Visitor spending is assumed to remain equivalent to that realised under the most likely scenario.
- 'Best case' scenario assuming that capital costs are 10% less and visitor spending yields are 25% better than what is forecast under the most likely scenario. Visitation levels are assumed to equate with those forecast under the most likely scenario.

Scenario		Most Likely	Worst Case	Best Case
<b>Cost benefit assessment</b>				
• Capital costs (\$000)	PV @7% real	\$27,706	\$36,018	\$24,935
• Recurrent costs (\$000)	PV @7% real	\$4,122	\$4,122	\$4,122
• Other costs	Not quantified	Not quantified	Not quantified	Not quantified
• Enhanced visitor experience (\$000)	PV @7% real	\$53,010	\$38,645	\$53,010
• Economic uplift (\$000)	PV @7% real	\$13,937	\$11,225	\$13,937
• Avoided recurrent costs (\$000)	PV @7% real	\$89	\$89	\$89
• Other benefits	Not quantified	Not quantified	Not quantified	Not quantified
Net Present Value (\$000)		\$35,208	\$9,820	\$37,979
Internal Rate of Return (%)		16%	9%	18%
Benefit Cost Ratio		2.11	1.24	2.31
<b>Economic impact assessment</b>				
Local economy				
• Income (\$000 p.a.)	30 yr average	\$25,182	\$19,251	\$24,983
• Value added (\$000 p.a.)	30 yr average	\$14,618	\$12,890	\$14,516
• FTE jobs supported	30 yr average	163	167	162
Victorian economy				
• Income (\$000 p.a.)	30 yr average	\$40,150	\$32,308	\$39,696
• Value added (\$000 p.a.)	30 yr average	\$18,093	\$14,193	\$17,900
• FTE jobs supported	30 yr average	216	164	214

## 6 RELEVANT FUNDING PROGRAMS

This section profiles public funding programs/ grants that may be utilised for Masterplan implementation.

### 6.1 Federal Programs

Given the short time since the Labor Party has formed a government given the commitment of the regional independents, the detail surrounding regional funding programs has not yet emerged. The Prime Minister Julia Gillard nonetheless highlighted, in her 07/09/10 speech, the significance of the commitment to regional Australia:

*"...We will also dedicate \$800 million to a priority regional infrastructure program and we will ensure that \$573 million of the regional infrastructure fund works with the regional development authorities around the country to respond to local needs.*

*Of course, these commitments come on top of our general commitment to the almost \$6 billion Regional Infrastructure Fund, the tele-health measures I outlined in the campaign, and our Building Better Regional Cities measures outlined in the campaign.*

*In total, this means for regional Australia they can look forward to benefits in the order of \$9.9 billion, but that's a fair share".*

The reference to regional development authorities (RDA) is important, as the RDAs are likely to closely follow the priorities articulated in each region's regional strategic plan (RSP), which have recently been developed via the regional strategic planning initiative led by Regional Development Victoria.

The Hume RSP- *Hume Strategy for Sustainable Communities* – cover four geographic subregions, including Central Hume, which host Mt Buller. Importantly, the RSP highlights that the:

*"...sub region is renowned for its tourism industry, based on snow sports, cycling, nature based recreation, fine food and wine. The Falls Creek, Mount Hotham, Mount Buller and Mount Sterling Alpine Resorts are located in Central Hume".*

The major themes and key directions of the Hume RSP are as follows:

***Environment Theme: Natural resources protected and enhanced for current future generations***

- Anticipating and adapting to the effects of climate change.
- Managing our water resources sustainably.
- Protecting native habitat and biodiversity.
- Harnessing renewable energy sources, reducing greenhouse gas emissions and pursuing innovative waste management approaches.



***Communities Theme: Healthy, vibrant and resilient communities***

- Embracing learning for life.
- Providing appropriate and accessible social services and infrastructure.
- Developing innovative and flexible service delivery models.
- Strengthening communities, increasing resilience and enhancing liveability.

***Economic Theme: A thriving and dynamic economy***

- Strengthening a capable workforce.
- Adapting and diversifying agriculture in an environment of change.
- Facilitating research and innovation in tourism, manufacturing and industry to encourage new and evolving business.
- Developing information and communications technology (ICT) and energy infrastructure that builds on existing competitive advantages.

***Transport Theme: An integrated network of efficient and high functioning transportation systems***

- Enhancing integrated planning for mobility.
- Developing a proficient land transportation system.
- Linking communities through improved public transport and transport linkages.
- Strengthening the sustainability of the transport system.

***Land Use Theme: An efficient and sustainable pattern of urban and rural land use and development***

- Directing future population growth to settlements with the greatest capacity to accommodate it.
- Maximising use of existing infrastructure and services and facilitating strategic investment in future infrastructure and services.
- Retaining productive rural land for agriculture and other compatible rural uses.
- Ensuring efficient use of land use planning resources in the region.

**Masterplan Relevance**

Given the breadth of the themes and expanse of the Hume region, it is likely that federal funding flows will be hotly contested across the region. However, until formal guidelines are published with respect to the new and expanded federal funding programs, conclusions in this regard are only speculative.

Projects that appear to align best with each of the themes of the Hume Strategy for Sustainable Communities are listed in the table below.

Hume Strategy for Sustainable Communities Theme	Masterplan project
<ul style="list-style-type: none"> <li>Healthy, vibrant and resilience communities – <i>strengthening communities, increasing resilience and enhancing liveability</i></li> </ul>	Recreation facilities Stage 1 Recreation facilities Stage 2 Recreation facilities Stage 3 Day facilities – Horse Hill Day facilities – Village
<ul style="list-style-type: none"> <li>A thriving and dynamic economy – facilitating research and <i>innovation in tourism</i>, manufacturing and industry to encourage new and evolving business.</li> </ul>	Gondola Snow play
<ul style="list-style-type: none"> <li>An efficient and sustainable pattern of urban and rural land use and development – <i>maximising use of existing infrastructure and services</i> and facilitating strategic investment in future infrastructure and services.</li> </ul>	Parking stage 1 & 2 Gateway site parking structure Cornhill Road bus parks

## 6.2 State Programs

### 6.2.1 Regional Infrastructure Development Fund

#### Grant Description

The Regional Infrastructure Development Fund (RIDF) is managed by Regional Development Victoria with the objectives of improving the 'competitive capacity' of regional Victoria and enhancing economic development through supporting job growth.

RIDF focuses on six key sectors for investment and growth, including the following:

- Tertiary education;
- Sustainable industries;
- Industry investment and development;
- Tourism;
- Transport and access; and
- Community and cultural infrastructure.

#### Eligibility

Applications for the RIDF can be considered from a variety of organisations, including:

- Councils;
- State Government;

- Regional infrastructure providers;
- Regional organisations;
- Business groups;
- Education institutions; and
- Private sector located in regional Victoria.

## Capital Projects

A range capital projects that can be considered, as follows:

*Sustainable Industries:* energy, resource and water supply and efficiency infrastructure projects that improve the productivity, sustainability and competitiveness of regional industries and communities.

*Industry Investment and Development:* infrastructure projects that facilitate new investment, job creation and retention, industry development and business expansion or relocation in regional Victoria.

*Tourism:* new tourism assets and redevelopment of existing key tourism assets with a focus on nature-based tourism infrastructure to develop key regional areas as world-class tourist destinations.

*Transport and Access:* infrastructure projects that make jobs and services more accessible for local residents, improve supply chains, enhance the movement of goods and people, strengthen regional liveability and result in reduced carbon emissions from the transport sector.

*Community and Cultural Infrastructure:* infrastructure projects that builds on local community and cultural assets, and enhance the public amenity of regional towns, centres and cities.

## Assessment Questions

In any submission for funding key questions need to be addressed, including the reason for the project, how it will be delivered, the responsible organisations for delivery, measurement of a project's impact, and budget breakdown of where the funds will be used.

## Assessment Criteria

Assessment criteria for funding include:

- Economic benefits;
- Socio-economic benefits;
- Alignment with State and regional policies;
- Demonstration of the project feasibility;
- Compliance with Victorian Industry Participation Policy; and
- Financial viability.

## Funding Available

Funding available differs under each of the key sectors. For applications for funding over \$1 million a compliance with Victorian Industry Participation Policy is required.

## Masterplan Relevance

The Mt Buller Masterplan includes a number of potential projects that prima facie align well with the RIDF objectives. Project funding is potentially significant and appears to be available to the RMB and/ or private sector applicants. The fact that RDV has part funded the masterplanning process itself is a good sign that project funding may seriously considered.

Projects that appear to align best with each of the categories of RIDF capital funding are listed in the table below.

RIDF capital project funding	Masterplan project
<ul style="list-style-type: none"> <li><i>Sustainable Industries:</i> energy, resource and water supply and efficiency infrastructure projects that improve the productivity, sustainability and competitiveness of regional industries and communities.</li> </ul>	Water storage expansion
<ul style="list-style-type: none"> <li><i>Industry Investment and Development:</i> infrastructure projects that facilitate new investment, job creation and retention, industry development and business expansion or relocation in regional Victoria.</li> </ul>	Gondola Snow play
<ul style="list-style-type: none"> <li><i>Tourism:</i> new tourism assets and redevelopment of existing key tourism assets with a focus on nature-based tourism infrastructure to develop key regional areas as world-class tourist destinations.</li> </ul>	Recreation facilities Stage 1 Recreation facilities Stage 2 Recreation facilities Stage 3 Day facilities – Horse Hill Day facilities - Village Gondola Snow play

## 6.2.2 Other State Programs

Two other State programs appear relevant to Masterplan implementation but appear to restrict eligibility to local government only. These include:

- Community Facilities Funding Program; and
- Sustainable Small Towns Development Fund.

## APPENDIX A – Additional Assumptions

**Table 6 Estimated Visitor Origin, Travel Distance and Travel Time**

Visitor Origin		Visitor Driving From*	Travel Distance – 2 way (kms) <sup>a</sup>	Travel Time – 2 way (hrs)
Victoria				
• Melbourne	56.9%	Melbourne	528	6
• Ovens-Murray	3.1%	Ovens-Murray	1,290	16
• Barwon	3.1%	Barwon	720	10
• Goulburn	3.1%	Goulburn	280	4
• Other	13.8%	Melbourne	528	6
Inter-State				
• Sydney	4.9%	Assumed driving from Melbourne	528	6
• Adelaide	3.7%			
• Perth	3.2%			
• Other	6.2%			
International		Assumed driving from Melbourne	528	6
<i>Weighted two-way travel distance – Vehicle Kilometres Travelled</i>		550 kms		
<i>Vehicle Operating Costs (2010\$)</i>		\$0.25 per km		
<i>Weighted two-way travel time</i>		6.38 hours		
<i>Value of Travel Time (2010\$)</i>		\$12.48 per hour		
<i>Number of people per vehicle*</i>		3		
<i>Travel time saved for Base Case visitors*</i>		0.5 hour (From FY 2018 onwards)		

Source: Visitor origin data and Travel time data were sourced from the NIEIR (2006) The Economic Significance of the Australian Alpine Resorts.

Notes: \*SGS Assumption. <sup>a</sup>-Google Maps

**Table 7 Estimated Profit Margins of Industries Associated with Visitor Yield**

	Distribution of Visitor Expenditures Across Industries		Estimated Profit Margins
	Winter	Summer	
Accommodation, Cafes & Restaurants	50%	50%	16%
Retail Trade	24%	50%	15%
Health & Community Services	2%	-	13%
Cultural & Recreational Services	18%	-	10%
Transport & Storage	-	-	-
Ownership of dwellings	5%	-	69%
<b>Total</b>	<b>100%</b>	<b>100%</b>	
<b>Weighted Average of Profit Margin</b>	<b>17.28%</b>	<b>15.50%</b>	

Source: SGS Economics &amp; Planning derived from ABS National Accounts

**Table 8 Output, Value-Added and Employment Multipliers, Local Economy (Mansfield) and Victoria**

Output Multipliers	Local Economy			Victoria		
	Initial	Flow-on	Total	Initial	Flow-on	Total
Capital Costs	1.000	0.802	1.802	1.000	2.310	3.310
Recurrent Costs	1.000	0.506	1.506	1.000	2.126	3.126
Visitor Expenditure	1.000	0.600	1.600	1.000	2.110	3.110
<b>Weighted by expenditure and visitations</b>	1.000	0.650	1.650	1.000	2.167	3.167
Value Added Multipliers	Local Economy			Victoria		
	Initial	Flow-on	Total	Initial	Flow-on	Total
Capital Costs	0.441	0.450	0.891	0.307	1.037	1.343
Recurrent Costs	0.434	0.318	0.752	0.347	1.018	1.365
Visitor Expenditure	0.582	0.381	0.963	0.428	1.010	1.438
<b>Weighted by expenditure and visitation</b>	0.541	0.398	0.939	0.391	1.018	1.409
Employment Multipliers*	Local Economy			Victoria		
	Initial	Flow-on	Total	Initial	Flow-on	Total
Capital Costs	4.146	3.545	7.691	4.146	9.752	13.897
Recurrent Costs	5.558	2.422	7.981	5.558	9.630	15.189
Visitor Expenditure	8.167	2.920	11.087	8.167	9.397	17.564
<b>Weighted by expenditure and visitation</b>	7.051	3.070	10.120	6.939	9.505	16.444

Source: SGS Economics &amp; Planning

Notes: \*number of FTE employment created for every \$1 million of new output/ income created



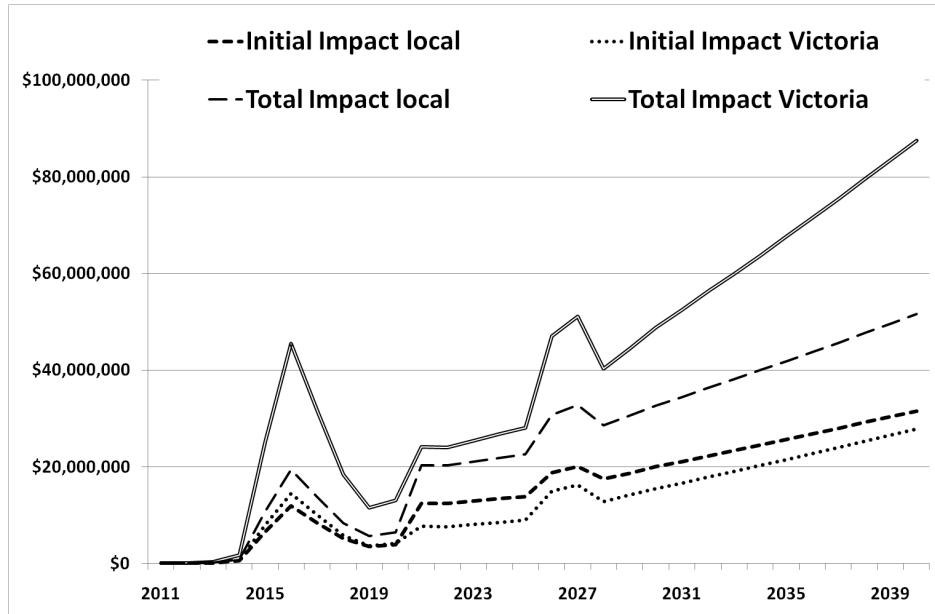
## APPENDIX B – Cost Benefit DCF

	COSTS				BENEFITS					NET BENEFITS
	Capital costs	Recurrent costs	Social/ Environmental costs	Total economic costs	Enhanced visitor experience	Victorian economic uplift	Recurrent cost savings elsewhere	Other Benefits	Total economic benefits	
2011	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0
2012	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0
2013	\$100,000	\$0	\$0	\$100,000	\$0	\$0	\$0		\$0	-\$100,000
2014	\$100,000	\$10,000	\$0	\$110,000	\$231,000	\$40,000	\$0		\$271,000	\$161,000
2015	\$7,500,000	\$20,000	\$0	\$7,520,000	\$462,000	\$81,000	\$0		\$543,000	-\$6,977,000
2016	\$13,833,000	\$70,000	\$0	\$13,903,000	\$693,000	\$123,000	\$10,000		\$826,000	-\$13,077,000
2017	\$8,333,000	\$390,000	\$0	\$8,723,000	\$937,000	\$885,000	\$10,000		\$1,832,000	-\$6,891,000
2018	\$3,333,000	\$470,000	\$0	\$3,803,000	\$3,290,000	\$941,000	\$10,000		\$4,242,000	\$438,000
2019	\$500,000	\$480,000	\$0	\$980,000	\$3,566,000	\$999,000	\$10,000		\$4,575,000	\$3,595,000
2020	\$500,000	\$510,000	\$0	\$1,010,000	\$3,854,000	\$1,059,000	\$10,000		\$4,923,000	\$3,913,000
2021	\$500,000	\$510,000	\$0	\$1,010,000	\$4,091,000	\$1,135,000	\$10,000		\$5,236,000	\$4,226,000
2022	\$0	\$510,000	\$0	\$510,000	\$4,328,000	\$1,189,000	\$10,000		\$5,527,000	\$5,017,000
2023	\$0	\$510,000	\$0	\$510,000	\$4,591,000	\$1,250,000	\$10,000		\$5,851,000	\$5,341,000
2024	\$0	\$510,000	\$0	\$510,000	\$4,855,000	\$1,312,000	\$10,000		\$6,177,000	\$5,667,000
2025	\$0	\$510,000	\$0	\$510,000	\$5,106,000	\$1,371,000	\$10,000	None quantified	\$6,486,000	\$5,976,000
2026	\$5,000,000	\$510,000	\$0	\$5,510,000	\$5,810,000	\$1,520,000	\$10,000		\$7,339,000	\$1,829,000
2027	\$5,000,000	\$510,000	\$0	\$5,510,000	\$6,514,000	\$1,672,000	\$10,000		\$8,195,000	\$2,685,000
2028	\$0	\$510,000	\$0	\$510,000	\$7,218,000	\$1,822,000	\$10,000		\$9,050,000	\$8,540,000
2029	\$0	\$510,000	\$0	\$510,000	\$7,947,000	\$1,983,000	\$10,000		\$9,940,000	\$9,430,000
2030	\$0	\$510,000	\$0	\$510,000	\$8,702,000	\$2,153,000	\$10,000		\$10,865,000	\$10,355,000
2031	\$0	\$510,000	\$0	\$510,000	\$9,367,000	\$2,303,000	\$10,000		\$11,680,000	\$11,170,000
2032	\$0	\$510,000	\$0	\$510,000	\$10,045,000	\$2,462,000	\$10,000		\$12,516,000	\$12,006,000
2033	\$0	\$510,000	\$0	\$510,000	\$10,722,000	\$2,619,000	\$10,000		\$13,351,000	\$12,841,000
2034	\$0	\$510,000	\$0	\$510,000	\$11,425,000	\$2,787,000	\$10,000		\$14,222,000	\$13,712,000
2035	\$0	\$510,000	\$0	\$510,000	\$12,141,000	\$2,959,000	\$10,000		\$15,110,000	\$14,600,000
2036	\$0	\$510,000	\$0	\$510,000	\$12,856,000	\$3,135,000	\$10,000		\$16,002,000	\$15,492,000
2037	\$0	\$510,000	\$0	\$510,000	\$13,597,000	\$3,317,000	\$10,000		\$16,924,000	\$16,414,000
2038	\$0	\$510,000	\$0	\$510,000	\$14,364,000	\$3,510,000	\$10,000		\$17,884,000	\$17,374,000
2039	\$0	\$510,000	\$0	\$510,000	\$15,130,000	\$3,702,000	\$10,000		\$18,842,000	\$18,332,000
2040	\$0	\$510,000	\$0	\$510,000	\$15,922,000	\$3,905,000	\$10,000		\$19,837,000	\$19,327,000
<b>Total</b>	<b>\$44,700,000</b>	<b>\$12,150,000</b>	<b>\$0</b>	<b>\$56,850,000</b>	<b>\$197,763,000</b>	<b>\$50,235,000</b>	<b>\$250,000</b>	<b>\$0</b>	<b>\$248,248,000</b>	<b>\$191,398,000</b>

Real Discount Rate	7%
PERFORMANCE INDICATORS	
Net Present Value	\$35,208,000
Internal Rate of Return	16%
Benefit Cost Ratio	2.11
<u>Discounted values</u>	
Capital costs	\$27,705,000
Recurrent costs	\$4,122,000
Other costs	\$0
<b>Total Costs</b>	<b>\$31,827,000</b>
Enhanced visitor experience	\$53,010,000
Economic uplift	\$13,936,000
Avoided recurrent costs	\$89,000
<b>Total benefits</b>	<b>\$67,034,000</b>

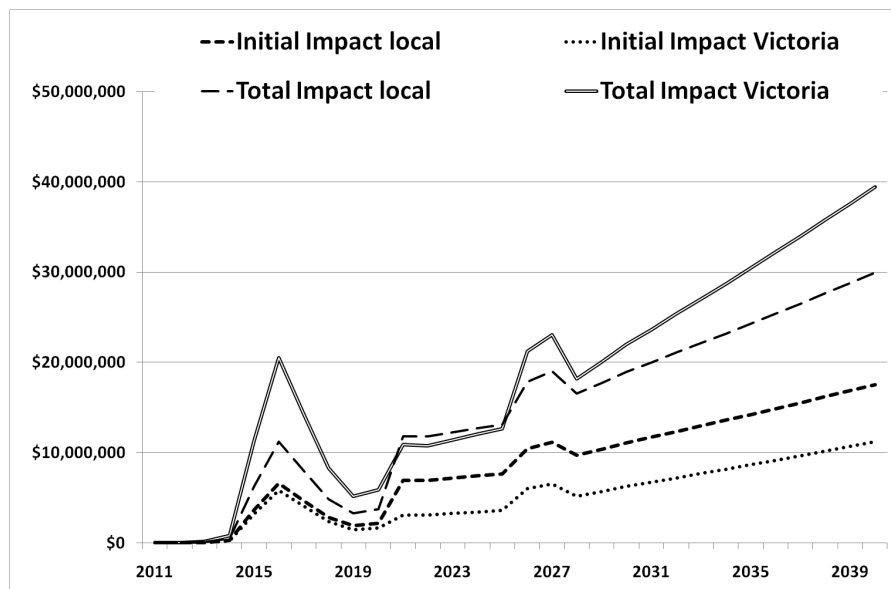
## APPENDIX C – Economic Impact Time Series

**Figure 6 Economic Output/ Income**



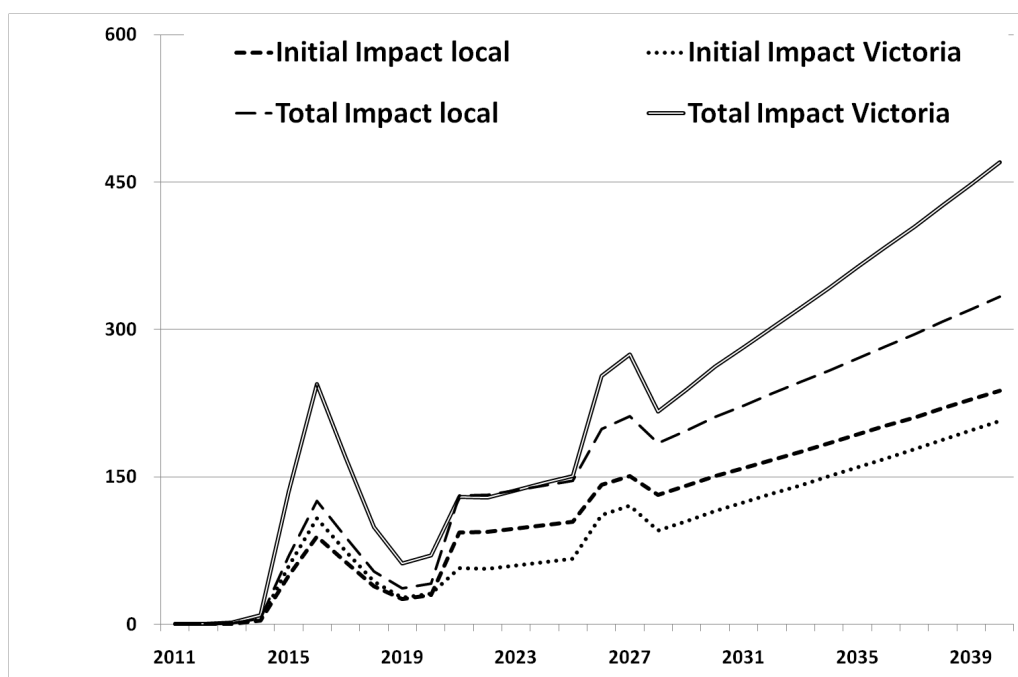
Source: SGS Economics & Planning

**Figure 7 Economic Value Added**



Source: SGS Economics & Planning



**Figure 8 FTE Employment Supported**

Source: SGS Economics & Planning

Notes: Includes both employees and employers

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