Vegetation and Weed Management

Falls Creek Alpine Resort Management Board ('the Board')

1. Scope

Falls Creek Alpine Resort has numerous vegetation types, ranging from high elevation treeless alpine areas to sub-alpine woodlands and lower elevation montane forest. The Village area includes both sub-alpine grasslands, shrublands and woodland complexes. Village and facility development over time has resulted in fragmentation of several key vegetation communities within the Resort area. A range of weed species have been introduced over the period of development of the resort and the Kiewa Hydro-electric scheme. Many weed species compete with native species and have a negative impact on the environment by smothering native vegetation, impacting on water quality, reducing the preferred food source of native animals, and altering the ecology of the area.

Effective weed control and revegetation programs combined with a community education program are key steps in ensuring effective vegetation management within the Falls Creek Alpine Resort. Maintaining high biodiversity by reducing weeds and introduced plants is crucial for improving and preserving the high environmental values. The Falls Creek Environmental Management Plan highlights the importance of ensuring that Falls Creek's unique and biodiverse environment is protected and enhanced.

This Vegetation and Weed Management Policy has been prepared to ensure that the Falls Creek Alpine Resort Management Board's (FCARMB) approach to ensuring its environmental objectives for vegetation and weed management, as outlined in the *Falls Creek Environmental Management Plan*, are met. Through the implementation of this policy, significant gains may be expected in the protection and enhancement of biodiversity.

The objective of this policy is:

To preserve biodiversity and maintain and enhance the environment for flora and fauna through appropriate species and habitat protection and the management of threatening processes. Note: this policy does not address native vegetation clearing, which is regulated and carries penalties for illegally clearing, lopping and removal of native vegetation.

Specific aims of the policy are:

- To protect high quality native vegetation within the Resort, in accordance with legislation and regional strategies
- To ensure the ecological character, extent and condition of ecosystems and vegetation communities is maintained
- To ensure healthy viable populations of rare, threatened and characteristic flora and fauna are maintained
- To manage, and prevent where possible, degradation of the natural environment through the invasion of environmental weeds
- To manage, and prevent where possible, landscape fragmentation of the natural environment
- To develop vegetation links between isolated remnants of critical habitat
- To manage threatening processes listed in Schedule 3 of the Flora and Fauna Guarantee Act, 1988 (Vic) and the Flora and Fauna Guarantee Amendment Act 2019 (Vic) (the Amendment Act)
- To move towards indigenous vegetation as a distinct landscape theme within the Village
- To restore damaged areas to a natural condition to achieve long term stability and sustainability

This policy is presented in two sections:

- Management of vegetation
- Management of weeds



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2. Definitions

Biodiversity – all components of the living world: the number and variety of plants, animals, and other living things, including fungi and micro-organisms. It includes the diversity of their genetic information, the habitats, and ecosystems within which they live, and their connections with other life forms and the natural world (State of Victoria DELWP 2017).

Noxious weed - In Victoria, a weed declared under the *Catchment and Land Protection Act* 1994 (Vic), and there are four categories of noxious weed.

Weed refers to an environmental weed that is any exotic or Australian native plant growing beyond its natural range that has, or has the potential to cause, a detrimental effect on natural values (DSE 2009).

Vegetation means native vegetation consisting of plants that are indigenous to Victoria, including trees, shrubs, herbs, and grasses (DELWP 2020).

3. Management of Vegetation

3.1 Status of Vegetation

Falls Creek Resort is within the Victorian Alps Bioregion with many vegetation classes that are endangered or rare in geographic occurrence and Bioregional Conservation Status. Vegetation classes include alpine grassy heathlands, alpine damp grassland, sub-alpine wet heathland/alpine valley peatland mosaic, sub-alpine shrublands and grasslands, sub-alpine woodlands, and montane dry woodland.

Alpine Bog and Alpine Snowpatch are listed communities under the *Flora and Fauna Guarantee Act* 1988 (Vic) and the *Amendment Act* 2019 (Vic). Within Falls Creek Village, there are areas of Alpine Bog, of which some of which are considered modified through altered hydrology and weed invasion. Additionally, a number of plant species in the Resort are listed under the *FFG Act* and the *Amendment Act*. This legislation emphasises the importance of cooperative approaches to biodiversity conservation and recognises that all government agencies and the community need to participate in the conservation effort (DELWP, 2020).

The Village, in addition to native species, has a range of exotic species that have been introduced historically as part of the cultural landscape of development over time (e.g. Silver Birch, Norway Spruce, Daffodils, Periwinkle, Shasta Daisy). Many of these exotic species can spread beyond the boundaries of their historical planting sites and alter the unique native ecology that the resort aims to protect. Controlling these garden escapees is costly to the Resort's environmental programs. In accordance with the *Alpine Resorts (Management) Regulations* 2020, no vegetation is to be planted or brought into the resort unless it is authorised by the Board, and must be native vegetation of local provenance from a reputable source.

In the past, disturbed areas in Falls Creek Alpine Resort have typically been revegetated with an 'alpine' mix which contains *Agrostis capillaries* (Highland Bent Grass), *Trifolium repens* (White Clover), *Festuca rubra* (Chewings's Fescue) and *Lolium perenne* (Perennial rye grass) (Papst et al., 2000). This mix does not provide adequate long-term stable vegetation and is prone to weed evasion and is also less suitable habitat for native fauna. In line with biodiversity objectives and *Alpine Resorts* (*Management*) *Regulations* 2020, native grasses of local provenance are to be used for revegetation plantings throughout the Resort.

In Victoria, a permit is usually required to remove, destroy, or lop native vegetation. These regulations are known as the native vegetation removal regulations and are primarily implemented through local planning schemes (DELWP, 2020). Falls Creek Resort Management and Falls Creek stakeholders and visitors have obligations under the relevant legislation to ensure vegetation is preserved and managed appropriately. Falls Creek Resort Management should be consulted for advice before any removal, lopping, or clearing of native vegetation.



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3.2 Approach to Management

Deterioration in vegetation can be the result of:

- Physical Disturbance (e.g. building sites, slashing of ski slopes, recreational use, fire hazard reduction activities, and past grazing of livestock)
- Degraded soil
- Changes in soil moisture regime
- Competition from weeds, pests or diseases
- Old age or a poorly structured vegetation community

The severe climatic conditions, soil acidity and lack of available nitrogen in alpine and sub alpine areas (Rowe et al., 2000) results in short growing seasons, slow plant growth and slow restoration making it even more important to ensure effective vegetation management. The growing season starts in about October (after the snow melts) and ends as heavy frosts start, usually in about April. This limits the time available for plant growth.

Indigenous mountain species are adapted to the natural mountain soil and climatic conditions. They may be relatively slow growing initially, but once established they provide large amounts of vegetative matter and provide better long-term soil protection and stability. The slow growth patterns of local provenance species assist with developing resistance to drought and frost. The adaptation of alpine plants to grow slowly under adverse conditions means few alpine species are quickly able colonise a disturbed site. Revegetation sites need to protect the soil from erosion and frost heave by using appropriate mulch or jute matting to stabilise the ground over the time it will take for native plantings to become established.

Key vegetation management principles:

- Every effort should be made to minimise vegetation loss and maximise rehabilitation of degraded vegetation within the resort.
- Carefully considered rehabilitation techniques must be implemented to ensure sustainability and success.
- Disturbance to development sites should be minimised in terms of the area, the time it is exposed, and to a scale that can be successfully rehabilitated in the short term.
- Highly sensitive areas such as deep organic soils, wetlands, mossbeds, and significant/threatened fauna habitat and steep sites should be avoided in developing new sites.
- Removal of native vegetation should be avoided, and if removal is necessary permits are required.
- Native species of local provenance <u>must</u> be used for the rehabilitation of sites (available from the Vic Alpine Nursery).
- Resources and expertise need to be allocated to manage, maintain, and monitor a rehabilitated site for several years.

3.3 Operational Considerations

For new developments or works

The following is to be completed prior to works beginning:

- 1. Implementation of the planning requirement to prepare and present a landscape site analysis management plan (Appendix 1) and/or rehabilitation/landscape plan (Appendix 1) that identifies the existing conditions of the site and the relationship with the surrounding environment, to then address the rehabilitation potential and process for the site. This is the responsibility of the proponent.
- 2. Requirement to produce a Site Environmental Management Plan (SEMP) (Appendix 2) which is aimed at outlining the management of construction/works to ensure the environmental values of the building site and surrounding landscape are maintained. This will be prepared in association with the FCRM and will include both written and illustrated components.



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For existing disturbed sites

Disturbed sites within the Resort will be identified, assessed, and prioritised on the basis of:

- · Description of disturbance including existing vegetation type and structure
- · Existing and potential environmental impact
- Visual amenity
- Estimated cost of rehabilitation.

The rehabilitation of disturbed sites will include the production and implementation of a rehabilitation plan (Appendix 1).

Rehabilitation of disturbed wetlands, bogs, or streams will be prioritised and undertaken as resources permit, following a comprehensive site investigation and analysis which will address methods to reduce water flow velocity, the location and extent of erosion control required, and planting requirements.

Other general operational considerations (including FCRM works)

The following general operational considerations apply to anyone undertaking works within the Resort:

- Removal or trimming of vegetation will only be undertaken with written approval from FCRM or consistent with an approved plan.
- Non-indigenous seeds or plants cannot be introduced or cultivated in an Alpine Resort without a permit.
- Operations within the Resort should avoid impacting on native vegetation (i.e. objects should not be parked or placed on native vegetation and should use gravel/paved areas instead)
- Sods or soil should not be placed on top of native vegetation. Sods or soil piles should either be removed immediately or held temporarily on a nearby suitable surface (e.g. tarp/trailer/wheelbarrow to be replaced after works).
- Exposed soil should be covered with seed-free mulch (such as organic sugar cane mulch, seed-free rice straw, or aged snowgum woodchips (preferably 2+ years)) or using all-natural jute matting that will breakdown over time and leave no plastic fibres (not plastic weed matting or natural fibre matting that contains embedded plastic string supports).
- Assistance regarding site rehabilitation (e.g. site considerations, planting techniques, suitable species) is available from FCRM Land Management staff and can be accessed by contacting FCRM.
- Falls Creek provenance plants grown from locally collected seed is available for purchase from the Vic Alps Nursery. Pre-ordering and planning of requirements is essential.

4. Management of weeds

4.1 Status of Weeds

The exotic flora identified at Falls Creek has been sorted into three schedules that reflect their potential to adversely impact on flora, fauna and landscape values. These schedules are available from FCRM upon request and are as follows:

- Schedule 1- Includes exotic plant species recorded within the Falls Creek Alpine Resort that have demonstrated an ability to invade alpine and sub-alpine vegetation in south-eastern Australia. Many of these plants present a significant risk to biodiversity values in the alpine region.
- Schedule 2- Includes exotic plant species recorded within the Falls Creek Alpine Resort, that have not currently exhibited an ability to invade alpine and sub-alpine vegetation in south-eastern Australia but have been assessed as having the potential to do so in the future. These plants are considered to present a potential risk to biodiversity values in the alpine region.



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• Schedule 3- Includes all non-invasive exotic plant species, cultivars and hybrid recorded within the Falls Creek Alpine Resort. These species do not present a risk to biodiversity values in the alpine region; however, they may have considerable impacts on landscape values.

No new exotic plants are to be planted within the resort. Invasion of native vegetation by 'environmental weeds' is listed as a threatening process (DELWP, 2016) in the *FFG* Act and the *Amendment* Act. All exotic plants are controlled within the Resort to prevent environmental weed damage

4.2 Approach to management

Key environmental weeds of concern for Falls Creek include English broom (*Cytisus scoparius*), blackberry (*Rubus fruticosus sp. agg*), St John's wort (*Hypericum perforatum*), soft rush (*Juncus effusus*), lodge-pole pine (*Pinus contorta*), willow (Salix spp), and orange hawkweed (*Pilosella aurantiaca*). These weeds will be given the highest priority in Village and Resort wide control programs, other weeds will be also targeted as identified in annual environmental works planning.

Key principles:

- Control of weeds by Falls Creek Resort Management will be guided by the Falls Creek Alpine Resort Weed Strategy along with addressing any newly emerging threats not identified in the strategy.
- Prior to commencing any weed management work, it is best practice to consult with the FCRM
 Land Management team to ensure weeds have been correctly identified and to discuss
 appropriate methods of control.
- Weed management works will employ low-impact techniques wherever possible to minimise offtarget impact.
- Sites that are disturbed or has soil exposed will be rehabilitated using local indigenous species.
- Exposed soil will be covered using appropriate mulching or jute netting (mentioned in vegetation section above).
- The conduct of weed control programs will consider public and occupational health and safety.

4.3 Operational considerations

- Priority in weed control programs will be given to the progressive control, containment and eradication (where possible) of environmental weeds identified as high priority.
- Annual weed control will incorporate mapping of weed infestations and subsequent control effort.
- Weed control is to be carried out by persons able to accurately identify target weed species and minimise impact to off-target native plant species.
- Only species in any current Schedule 3 will be permitted to be retained for their cultural landscape values in the Village. Schedule 3 species may alter if there is evidence of an environmental risk. Areas disturbed because of control works or construction will be revegetated where necessary with indigenous species and not with any Schedule 3 species.
- Exotic species not currently considered to be Schedule 1 environmental weeds will be monitored annually and assessed. Where necessary, control programs will be implemented.
- A high priority will be given to the eradication of any new weed species identified in the resort.
- High priority weeds identified as a risk under future climate change models using Weed Futures IBRA7: Australian Alps will be considered a priority for control efforts.

5. Implementation

Implementation of the Vegetation and Weed Management Policy will be achieved through the following:

- Comprehensive distribution of this document to village stakeholders, developers, and FCRM staff.
- Ready access to information about revegetation approaches and access to stocks of indigenous species.
- Resources committed to the ongoing control of environmental weeds in the Resort.



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- Assistance to stakeholders and developers with the preparation of site management plans by FCRM Land Management staff.
- Assistance to internal FCRM staff provided by Land Management staff to ensure FCRM operations and works align with the policy.
- Ready availability of Weed Schedules and indigenous plant lists.

6. Key legislation, regulations and standards

- Alpine Resorts (Management) Regulations 2009 & 2020
- Alpine Resorts Management Act 1997
- Catchment and Land Protection Act 1994
- Department of Environment, Land, Water & Planning (DELWP). (2016). Flora and Fauna Guarantee Act 1988 Processes List December 2016
- Department of Environment, Land, Water & Planning (DELWP). (2017). Protecting Victoria's Environment Biodiversity 2037.
- Department of Environment, Land, Water & Planning (DELWP). (2019). Flora and Fauna Guarantee Act 1988 Threatened List November 2019
- Environment Protection and Biodiversity Conservation Act 1999
- Environment Protection and Biodiversity Conservation Regulations 2000
- Flora and Fauna Guarantee Act 1988 & Flora and Fauna Guarantee Amendment Act 2019

7. Other references and related documents

DELWP. (2017). Guidelines for the removal, destruction or lopping of native vegetation.

MacPhee, L. (2013). Rehabilitation Field Guide, Australian Alps Liaison Committee, Tumut NSW.

Papst, W., Morgan, J., Wahren H., & Wilson, D. (2000) *Alpine Rehabilitation and Vegetation Management*, in Alpine Ecology Course.

Rowe, K., Gibbons, F., & Anderson, H. (2000). *High Mountains Soils,* in Alpine Ecology Course. Weed futures IBRA7: Australian Alps http://weedfutures.net/

8. Regular review of this policy

The Board will review this policy on a bi-annual basis or more frequently if required.

Authorisations and Document Parameters

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