



<b>Significant Natural Area Assessment</b>			
Project No:  11001/028	Property Name: <i>Coronet Peak Station/QLDC</i> <b>NOTE: The proposed SNA's on Coronet Peak Station are now within QEII covenant and will not be taken forward. However, two areas within G28A_6 &amp; 7 are on QLDC owned land and are proposed for inclusion as SNAs.</b> Site Name: <i>Beech Forest Remnants SNA A</i> <i>(Station Creek, McMillan Creek, Bush Creek, Sawpit Gully, Foxes Gully/Arrow River)</i>	Ecologist: <i>Simon Beale</i>	Date: 15 May 2012
Survey Undertaken By: <i>Simon Beale and Glenn Davis</i>		Waypoint No (mid point of survey area): <i>F41</i> <i>Station Creek - E: 2173500 N:5576700</i> <i>Bush Creek - E: 2176600 N:5578700</i> <i>Sawpit Gully - E: 2180600 N:5580000</i>	
LENZ Unit: <i>Q2.2a, Q1.1c, N4.1d</i>		Photo No.(s): <i>See attached.</i>	
Ecological District: <i>Shotover Ecological District</i>			
Topography: <i>Steep to very steep forest clad hill slopes and incised gullies with rocky outcrops and scarps within headwaters.</i>	Slope: <i>&gt;20°</i>	Altitude: <i>500 – 1000 m asl</i>	Aspect: <i>South east to south</i>
Threatened Environment Status:  <i>Critically Underprotected, Underprotected &amp; Chronically Threatened.</i>		Natural Area Size (ha): <i>12.74</i>	
Representativeness: Mountain beech forest remnants exhibiting high degree of representativeness. Only remaining areas of beech forest on Coronet Peak Station and within the Shotover Ecological District surviving Polynesian and European fires.			
Are there threatened species expected in the survey area? If so, list species and threat status.			
Threatened Species		Threat Status	
<i>Falco novaezealandiae</i> “eastern” (eastern NZ Falcon)		At Risk - Recovering	
<i>Acanthisitta chloris</i> (Rifleman)		At Risk - Declining	
Provide onsite description of vegetation:			
Vegetation types: Mountain beech forest and valley floor <i>Olearia odorata</i> –matagouri shrubland towards headwaters of Bush Creek. Structural Classes: Forest and shrubland			
Forest canopy: Mountain beech, red beech. Forest understory: Wineberry, marbleleaf, broadleaf ( <i>Griselinea littoralis</i> ), kohuhu, fuchsia, pepperwood, <i>Olearia arborescens</i> , <i>Helichrysum aggregatum</i> , <i>Gaultheria antipoda</i> , <i>Coprosma ciliate</i> .			

<p>Forest ground cover: Prickly shield fern, <i>Blechnum fluvatile</i>, <i>Blechnum penna-marina</i>, <i>Microsorium pustulatum</i>.</p> <p>Forest Climbers/Vines: <i>Rubus schmidelioides</i>.</p> <p>Shrubland canopy: <i>Olearia odorata</i>, <i>Discaria toumatou</i> (matagouri).</p> <p>Shrubland sub-dominants: <i>Coprosma propinqua</i>, <i>Coprosma rugosa</i>.</p> <p>Shrubland Ground Cover: <i>Blechnum penna-marina</i>, mountain kiokio, <i>Coraria sarmentosa</i>, bracken, short tussock, tussock hawkweed.</p> <p>Shrubland Climbers/Vines: <i>Rubus schmidelioides</i>, <i>Meuhlenbeckia australis</i>, <i>Muehlenbeckia complexa</i></p> <p>Degree of Modification: The surrounding areas have experienced frequent disturbance events in the past (e.g. fire).</p> <p>Degree of Recruitment: Regeneration of mountain beech seedlings evident around forest edges and forest gaps created by wind throw and snow damage.</p> <p>Overall Health: The beech forests are of variable health with range of age classes represented. Areas dominated by older age trees showing signs of die back and prone to localised wind and snow damage.</p>
<p>Provide onsite description fauna habitat – species recorded or expected to be present: The forest provides suitable habitat for insectivorous birds (rifleman, fantail, grey warbler, tomtit), while the forest edges provide favorable hunting opportunities for Eastern falcon and Australasian harrier.</p> <p>Areas of shrubland in Bush Creek provide high quality habitat for lizards such as Cromwell gecko and are important habitat (refugia and food supply) for a range of invertebrates including various beetle and moth species.</p>
<p>Threats to vegetation and flora/fauna species? (Weeds, predators, current management practices):</p> <p>Extensive areas of Douglas fir plantings on front faces of Mt Dewar, Coronet Peak and Mt Magazine. Wilding spread evident across lower slopes of Coronet Peak and parts of the Bush Creek catchment. Cattle grazing in head of Bush Creek causing damage to forest margins.</p>
<p>Rarity:</p> <p>The beech forest is uncommon in the Shotover Ecological District but is regionally significant due to its disjunct and limited distribution in Otago away from the Main Divide. The combination of forest and shrubland and varied landforms provide suitable habitat for 'at risk' avifauna (e.g. the eastern falcon).</p>
<p>Area Shape and Area/Edge Ratio:</p> <p>The forest remnants are typically convoluted in shape and have low area/edge ratios.</p>
<p>Diversity and Pattern (is there a notable range of species and habitats, aspects, sequences?):</p> <p>The diversity of plants within the forest remnants is low. The forests generally occupy an area of variable terrain and aspect within headwater systems over an altitudinal range of approximately 500 metres.</p>

Distinctiveness/special ecological characteristics (unusual veg. & landform features, distribution limits?):

Distinctive in terms of the discrete nature of the beech forests within a landscape dominated by exotic and indigenous grassland communities. Occasional small trees of Hall's totara present within forest interior.

Connectivity (how is the site connected to surrounding communities/areas?):

Low degree of connectivity between forest communities due to disjunct nature of their locations. Moderate degree of connectivity between valley floor shrubland communities and sub-alpine *Dracophyllum*/snow tussock grassland communities especially in Bush Creek.

Sustainability (does the site possess the resilience to maintain its ecological integrity and processes?):

The absence of further human induced disturbances such as fire and cattle grazing in combination with control of wilding conifers will allow a more expansive forest and shrubland cover to develop within these catchments.

Recommendation (Accept/Decline):

We consider these areas should be designated as a Significant Indigenous Vegetation and Fauna Habitat in view of the following ecological attributes:

- The high degree of representatives of the forest remnants attributed to their rarity in the Shotover Ecological District;
- The subtle vegetation patterns;
- The variety of habitats the area affords to indigenous fauna, providing suitable habitat for 'at risk' species, e.g. NZ Falcon and rifleman.

Further Comments:

Definition of the forest remnants and Bush Creek shrubland required on the ground in conjunction with Coronet Peak Station Limited.

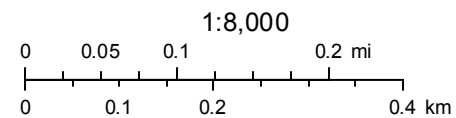
Recommendation: To liaise with the Coronet Peak Station Limited to determine the effects of the Significant Indigenous Vegetation and Fauna Habitat from a financial/farming perspective.

Figure 1: The area of potential significance - Beech Forest Remnants SNA A - G28A\_6-7.



June 23, 2015

- Proposed Significant Natural Area
- Parcels
- Proposed Significant Natural Area



Please note the area shown is indicative and only for discussion purposes.



**Figure 2.** Mountain beech forest within gully of Station Creek below Coronet Peak ski field.



**Figure 3.** Extensive *Olearia odorata* shrubland and mountain beech forest towards head of Bush Creek.