

Crown Pastoral Land Tenure Review

Lease name : MT DASHER

Lease number : PO 030

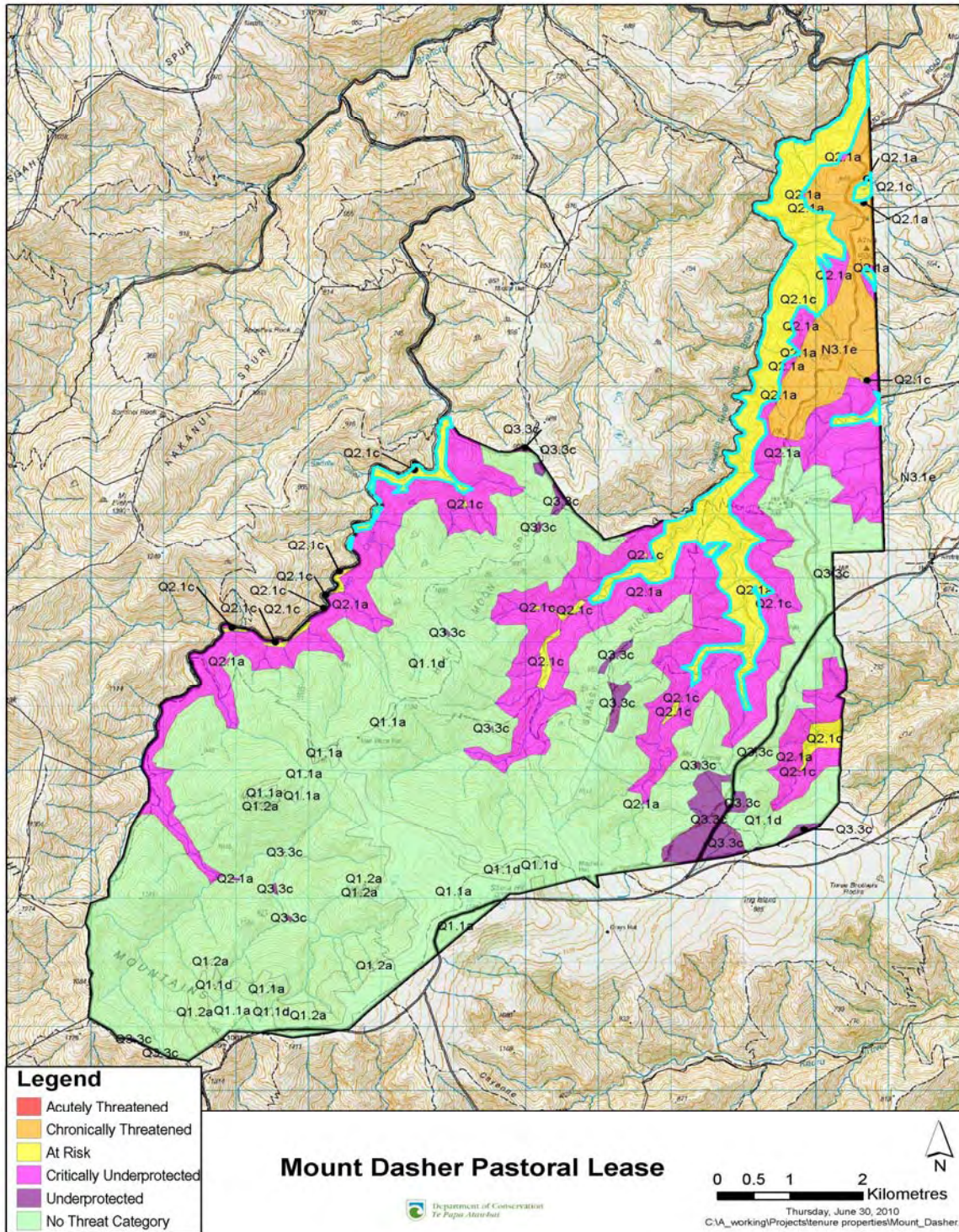
Conservation Resources Report – Part 2

As part of the process of Tenure Review, advice on significant inherent values within the pastoral lease is provided by Department of Conservation officials in the form of a Conservation Resources Report. This report is the result of outdoor survey and inspection. It is a key piece of information for the development of a preliminary consultation document.

The report attached is released under the Official Information Act 1982.

APPENDIX 1

LENZ Level IV Map



APPENDIX 2**Full List of Vascular Plant Species Recorded.**

Current name	Family (Tribe)	Threat ranking (2009)	Common name
<i>Abrotanella caespitosa</i>	Asteraceae	Not threatened	
<i>Acaena anserinifolia</i>	Rosaceae	Not threatened	bidibid
<i>Acaena caesiiglauca</i>	Rosaceae	Not threatened	bidibid
<i>Acaena inermis</i>	Rosaceae	Not threatened	bidibid
<i>Acaena novae-zelandiae</i>	Rosaceae	Not threatened	bidibid
<i>Achillea millefolium</i>	Asteraceae	Exotic	yarrow
<i>Aciphylla aurea</i>	Apiaceae	Not threatened	spaniard
<i>Aciphylla montana</i> var. <i>gracilis</i>	Apiaceae	Naturally Uncommon	
<i>Aciphylla scott-thomsonii</i>	Apiaceae	Not threatened	spaniard
<i>Acrothamnus colensoi</i>	Ericaceae	Not threatened	
<i>Agrostis capillaris</i>	Poaceae	Exotic	browntop
<i>Aira caryophyllea</i> subsp. <i>caryophyllea</i>	Poaceae	Exotic	silvery hair grass
<i>Anaphalioides bellidioides</i>	Asteraceae	Not threatened	
<i>Anemone tenuicaulis</i>	Ranunculaceae	Naturally Uncommon	
<i>Anisotome aromatica</i>	Apiaceae	Not threatened	
<i>Anisotome brevistylis</i>	Apiaceae	Not threatened	
<i>Anisotome flexuosa</i>	Apiaceae	Not threatened	
<i>Anthoxanthum odoratum</i>	Phalaridinae	Exotic	sweet vernal
<i>Arctium minus</i>	Asteraceae	Exotic	burdock
<i>Argyrotegium mackayi</i>	Asteraceae	Not threatened	
<i>Aristotelia fruticosa</i>	Elaeocarpaceae	Not threatened	small-leaved wineberry
<i>Aristotelia serrata</i>	Elaeocarpaceae	Not threatened	wineberry
<i>Asplenium appendiculatum</i> subsp. <i>appendiculatum</i>	Aspleniaceae	Not threatened	
<i>Asplenium flabellifolium</i> agg.	Aspleniaceae	Not threatened	necklace fern
<i>Asplenium hookerianum</i>	Aspleniaceae	Not threatened	Hooker's spleenwort

<i>Asplenium richardii</i>	Aspleniaceae	Not threatened	
<i>Astelia fragrans</i>	Asteliaceae	Not threatened	
<i>Astelia nervosa</i>	Asteliaceae	Not threatened	
<i>Azolla filiculoides</i>	Salvineaceae	Not threatened	Pacific azolla
<i>Blechnum chambersii</i>	Blechnaceae	Not threatened	nini
<i>Blechnum montanum</i>	Blechnaceae	Not threatened	mountain kiokio
<i>Blechnum penna- marina subsp. alpina</i>	Blechnaceae	Not threatened	
<i>Blechnum vulcanicum</i>	Blechnaceae	Not threatened	
<i>Brachyglottis bellidioides var. bellidioides</i>	Asteraceae	Not threatened	
<i>Brachyglottis cassinioides</i>	Asteraceae	Not threatened	
<i>Brachyscome sinclairii</i>	Asteraceae	Not threatened	
<i>Bromus hordeaceus</i>	Bromeae	Exotic	soft brome
<i>Calystegia tuguriorum</i>	Convolvulaceae	Not threatened	bindweed
<i>Capsella bursa- pastoris</i>	Brassicaceae	Exotic	shepherd's purse
<i>Carex breviculmis</i>	Cyperaceae	Not threatened	
<i>Carex buchananii</i>	Cyperaceae	Not threatened	
<i>Carex coriacea</i>	Cyperaceae	Not threatened	
<i>Carex echinata</i>	Cyperaceae	Not threatened	star sedge
<i>Carex forsteri</i>	Cyperaceae	Not threatened	
<i>Carex gaudichaudiana</i>	Cyperaceae	Not threatened	
<i>Carex ovalis</i>	Cyperaceae	Exotic	oval sedge
<i>Carex secta</i>	Cyperaceae	Not threatened	niggerhead
<i>Carex sinclairii</i>	Cyperaceae	Not threatened	
<i>Carmichaelia crassicaulis subsp. crassicaulis</i>	Fabaceae	Declining	coral broom
<i>Carmichaelia kirkii</i>	Fabaceae	Declining	climbing broom
<i>Carmichaelia petriei</i>	Fabaceae	Not threatened	Desert broom
<i>Carpodetus serratus</i>	Carpodetaceae	Not threatened	putaputaweta
<i>Celmisia alpina</i>	Asteraceae	Not threatened	
<i>Celmisia angustifolia</i>	Asteraceae	Not threatened	
<i>Celmisia densiflora</i>	Asteraceae	Not threatened	
<i>Celmisia gracilentata</i> agg.	Asteraceae	Not threatened	
<i>Celmisia haastii var. haastii</i>	Asteraceae	Not threatened	
<i>Celmisia hookeri</i>	Asteraceae	Naturally Uncommon	
<i>Celmisia lyallii</i>	Asteraceae	Not threatened	false spaniard

<i>Celmisia sessiliflora</i>	Asteraceae	Not threatened	
<i>Cerastium fontanum</i> <i>subsp. vulgare</i>	Caryophyllaceae	Exotic	mouse-ear chickweed
<i>Chaerophyllum</i> <i>colensoi</i> agg.	Apiaceae	Not threatened	
<i>Chaerophyllum</i> <i>ramosum</i>	Apiaceae	Not threatened	
<i>Chionochloa macra</i>	Gramineae (Danthonieae)	Not threatened	slim snow tussock
<i>Chionochloa rigida</i> <i>subsp. rigida</i>	Gramineae (Danthonieae)	Not threatened	narrow-leaved snow-tussock
<i>Chionochloa rubra</i> <i>subsp. cuprea</i>	Gramineae (Danthonieae)	Not threatened	copper tussock
<i>Cirsium arvense</i>	Asteraceae	Exotic	Californian thistle
<i>Clematis foetida</i>	Ranunculaceae	Not threatened	
<i>Clematis marata</i>	Ranunculaceae	Not threatened	
<i>Clematis paniculata</i>	Ranunculaceae	Not threatened	native clematis
<i>Colobanthus acicularis</i>	Caryophyllaceae	Not threatened	
<i>Colobanthus</i> <i>buchananii</i>	Caryophyllaceae	Not threatened	
<i>Colobanthus strictus</i>	Caryophyllaceae	Not threatened	
<i>Conium maculatum</i>	Apiaceae	Exotic	hemlock
<i>Coprosma</i> <i>atropurpurea</i>	Rubiaceae	Not threatened	
<i>Coprosma cheesemanii</i>	Rubiaceae	Not threatened	
<i>Coprosma colensoi</i>	Rubiaceae	Not threatened	
<i>Coprosma crassifolia</i>	Rubiaceae	Not threatened	
<i>Coprosma dumosa</i>	Rubiaceae	Not threatened	
<i>Coprosma fowerakeri</i>	Rubiaceae	Not threatened	
<i>Coprosma intertexta</i>	Rubiaceae	Relict	
<i>Coprosma linariifolia</i>	Rubiaceae	Not threatened	yellow wood
<i>Coprosma perpusilla</i> <i>subsp. perpusilla</i>	Rubiaceae	Not threatened	creeping coprosma
<i>Coprosma propinqua</i> <i>var. propinqua</i>	Rubiaceae	Not threatened	
<i>Coprosma</i> <i>pseudocuneata</i>	Rubiaceae	Not threatened	
<i>Coprosma rotundifolia</i>	Rubiaceae	Not threatened	
<i>Coprosma rugosa</i>	Rubiaceae	Not threatened	
<i>Coprosma serrulata</i>	Rubiaceae	Not threatened	
<i>Coprosma tayloriae</i>	Rubiaceae	Not threatened	
<i>Cordyline australis</i>	Laxmanniaceae	Not threatened	cabbage tree, ti
<i>Cordyline australis</i>	Laxmanniaceae	Not threatened	cabbage tree, ti
<i>Coriaria plumosa</i>	Coriariaceae	Not threatened	feathery tutu
<i>Coriaria sarmentosa</i>	Coriariaceae	Not threatened	tutu

<i>Corokia cotoneaster</i>	Escalloniaceae	Not threatened	corokia
<i>Cortaderia richardii</i>	Gramineae (Cortaderiinae)	Not threatened	South Island toetoe
<i>Craspedia sp.</i>	Asteraceae	Not threatened	
<i>Crassula colligata</i> subsp. <i>colligata</i>	Crassulaceae	Not threatened	
<i>Critesion murinum</i>	Hordeae	Exotic	barley grass
<i>Cystopteris tasmanica</i>	Dryopteridaceae	Not threatened	bladder fern
<i>Dichondra repens</i> agg.	Convolvulaceae	Not threatened	Mercury Bay weed
<i>Digitalis purpurea</i>	Scrophulariaceae	Exotic	foxglove
<i>Discaria toumatou</i>	Rhamnaceae	Not threatened	matagouri
<i>Dolichoglottis lyallii</i>	Asteraceae	Not threatened	groundsel
<i>Dracophyllum muscoides</i>	Ericaceae	Not threatened	prostrate inaka
<i>Dracophyllum rosmarinifolium</i>	Ericaceae	Not threatened	
<i>Einadia allanii</i>	Chenopodiaceae	Naturally Uncommon	parahia
<i>Epilobium chionanthum</i>	Onagraceae	Not threatened	marsh willowherb
<i>Epilobium komarovianum</i>	Onagraceae	Not threatened	
<i>Epilobium pubens</i>	Onagraceae	Not threatened	
<i>Erodium cicutarium</i>	Geraniaceae	Exotic	storksbill
<i>Euchiton traversii</i>	Asteraceae	Not threatened	
<i>Festuca novae-zelandiae</i>	Gramineae (Poeae)	Not threatened	hard tussock
<i>Festuca rubra</i> subsp.	Poeae	Exotic	red fescue
<i>Fuchsia perscandens</i>	Onagraceae	Not Threatened	creeping fuchsia
<i>Galium aparine</i>	Rubiaceae	Exotic	cleavers
<i>Galium perpusillum</i>	Rubiaceae	Not threatened	
<i>Galium propinquum</i>	Rubiaceae	Not threatened	mawe
<i>Gaultheria (a) (G. depressa var. novae-zelandiae)</i>	Ericaceae	Not threatened	snowberry
<i>Gaultheria antipoda</i>	Ericaceae	Not threatened	snowberry
<i>Gaultheria crassa</i>	Ericaceae	Not threatened	snowberry
<i>Gaultheria macrostigma</i>	Ericaceae	Not threatened	prostrate snowberry
<i>Gentianella amabilis</i>	Gentianaceae	Not threatened	
<i>Gentianella bellidifolia</i>	Gentianaceae	Not threatened	
<i>Geranium (d) (aff. G. microphyllum; "mainland")</i>	Geraniaceae	Not threatened	

<i>Geranium brevicaule</i>	Geraniaceae	Not threatened	
<i>Geum cockaynei</i>	Rosaceae	Not threatened	
<i>Geum leiospermum</i>	Rosaceae	Not threatened	
<i>Gonocarpus aggregatus</i>	Haloragaceae	Not threatened	
<i>Gonocarpus micranthus</i>	Haloragaceae	Not threatened	
<i>Griselinia littoralis</i>	Griselinaceae	Not threatened	broadleaf
<i>Haloragis erecta</i> subsp. <i>erecta</i>	Haloragaceae	Not threatened	haloragis
<i>Hebe buchananii</i>	Plantaginaceae	Not threatened	
<i>Hebe odora</i>	Plantaginaceae	Not threatened	
<i>Hebe pinguifolia</i>	Plantaginaceae	Not threatened	
<i>Hebe propinqua</i>	Plantaginaceae	Not threatened	
<i>Hebe rakaiensis</i>	Plantaginaceae	Not threatened	
<i>Hebe salicifolia</i>	Plantaginaceae	Not threatened	koromiko
<i>Helichrysum filicaule</i>	Asteraceae	Not threatened	
<i>Helichrysum intermedium</i>	Asteraceae	Not threatened	
<i>Helichrysum lanceolatum</i>	Asteraceae	Not threatened	niniaio
<i>Hieracium lepidulum</i>	Asteraceae	Exotic	tussock hawkweed
<i>Holcus lanatus</i>	Poaceae	Exotic	Yorkshire fog
<i>Huperzia australiana</i>	Lycopodiaceae	Not threatened	
<i>Hydrocotyle (a) (H. novae-zeelandiae</i> var. <i>montana)</i>	Araliaceae	Not threatened	
<i>Hydrocotyle novae-zeelandiae</i>	Araliaceae	Not threatened	
<i>Hydrocotyle sulcata</i>	Araliaceae	Not threatened	
<i>Hypochoeris radicata</i>	Asteraceae	Exotic	catsear
<i>Hypolepis millefolium</i>	Dennstaedtiaceae	Not threatened	thousand-leaved fern
<i>Juncus articulatus</i>	Juncaceae	Exotic	jointed rush
<i>Juncus edgariae</i>	Juncaceae	Not threatened	
<i>Juncus effusus</i>	Juncaceae	Exotic	soft rush
<i>Juncus novae-zeelandiae</i>	Juncaceae	Not threatened	
<i>Kelleria dieffenbachii</i>	Thymelaeaceae	Not threatened	
<i>Kelleria paludosa</i>	Thymelaeaceae	Not threatened	
<i>Kelleria villosa</i> var. <i>villosa</i>	Thymelaeaceae	Not threatened	
<i>Lagenifera petiolata</i>	Asteraceae	Not threatened	
<i>Leptinella pusilla</i>	Asteraceae	Not threatened	
<i>Leptinella squalida</i>	Asteraceae	Not threatened	

<i>Leptospermum scoparium</i> agg.	Myrtaceae	Not threatened	manuka
<i>Leucogenes grandiceps</i>	Asteraceae	Not threatened	edelweiss
<i>Leucopogon fraseri</i> complex (mountain ecotype)	Ericaceae	Not threatened	
<i>Leycesteria formosa</i>	Caprifoliaceae	Exotic	Himalayan honeysuckle
<i>Libertia ixioides</i>	Iridaceae	Not threatened	
<i>Lobelia angulata</i>	Lobeliaceae	Not threatened	
<i>Lobelia ionantha</i>	Lobeliaceae	Declining	
<i>Lolium perenne</i>	Poeae	Exotic	perennial ryegrass
<i>Lotus pedunculatus</i>	Fabaceae	Exotic	lotus
<i>Luzula leptophylla</i>	Juncaceae	Not threatened	woodrush
<i>Luzula pumila</i>	Juncaceae	Not threatened	woodrush
<i>Luzula rufa</i>	Juncaceae	Not threatened	woodrush
<i>Lycopodium fastigiatum</i>	Lycopodiaceae	Not threatened	mountain clubmoss
<i>Lycopodium scariosum</i>	Lycopodiaceae	Not threatened	
<i>Marrubium vulgare</i>	Lamiaceae	Exotic	horehound
<i>Melicytus alpinus</i> agg.	Violaceae	Not threatened	porcupine shrub
<i>Melicytus flexuosus</i>	Violaceae	Declining	leafless mahoe
<i>Microsorium pustulatum</i>	Polypodiaceae	Not threatened	hound's tongue fern
<i>Mimulus guttatus</i>	Scrophulariaceae	Exotic	monkey musk
<i>Mimulus moschatus</i>	Scrophulariaceae	Exotic	musk
<i>Montia fontana</i> subsp. <i>montana</i>	Montiaceae	Not threatened	blinks
<i>Montia sessiliflora</i>	Montiaceae	Not threatened	
<i>Muehlenbeckia australis</i>	Polygonaceae	Not threatened	large-leaved pohuehue
<i>Muehlenbeckia axillaris</i>	Polygonaceae	Not threatened	
<i>Muehlenbeckia complexa</i> agg.	Polygonaceae	Not threatened	small-leaved pohuehue
<i>Myosotis</i> (hh) (AK 7570; aff. <i>M. tenericaulis</i> ; Garvie)	Boraginaceae	Naturally Uncommon	
<i>Myosotis laxa</i>	Boraginaceae	Exotic	water forget-me-not
<i>Myriophyllum propinquum</i>	Haloragaceae	Not threatened	
<i>Myrsine divaricata</i>	Myrsinaceae	Not threatened	weeping matipo

<i>Myrsine nummularia</i>	Myrsinaceae	Not threatened	
<i>Nertera balfouriana</i>	Rubiaceae	Not threatened	
<i>Olearia bullata</i>	Asteraceae	Not threatened	
<i>Oreobolus pectinatus</i>	Cyperaceae	Not threatened	comb sedge
<i>Oreostylidium subulatum</i>	Stylidiaceae	Not threatened	
<i>Ourisia caespitosa</i>	Plantaginaceae	Not threatened	
<i>Oxalis exilis</i>	Oxalidaceae	Not threatened	creeping oxalis
<i>Oxalis magellanica</i>	Oxalidaceae	Not threatened	native oxalis
<i>Ozothamnus vauvilliersii</i>	Asteraceae	Not threatened	tauhinu
<i>Parsonsia heterophylla</i>	Apocynaceae	Not threatened	native jasmine
<i>Pellaea calidirupium</i>	Pteridaceae	Not threatened	
<i>Pentachondra pumila</i>	Ericaceae	Not threatened	
<i>Phormium cookianum subsp. cookianum</i>	Hemerocallidaceae	Not threatened	mountain flax
<i>Phyllachne colensoi</i>	Stylidiaceae	Not threatened	
<i>Phyllocladus alpinus</i>	Phyllocladaceae	Locally Notable	
<i>Pilosella officinarum</i>	Asteraceae	Exotic	mouse-eared hawkweed
<i>Pimelea oreophila</i>	Thymelaeaceae	Not threatened	alpine daphne
<i>Pimelea pseudolyallii</i>	Thymelaeaceae	Naturally Uncommon	
<i>Pimelea traversii</i>	Thymelaeaceae	Regionally Significant	
<i>Pinus contorta</i>	Pinaceae	Exotic	contorta pine
<i>Pittosporum eugenioides</i>	Pittosporaceae	Not threatened	lemonwood
<i>Pittosporum tenuifolium</i>	Pittosporaceae	Not threatened	black matipo, kohuhu
<i>Plantago lanigera</i>	Plantaginaceae	Not threatened	hairy swamp plantain
<i>Plantago triandra</i>	Plantaginaceae	Not threatened	
<i>Poa cita agg.</i>	Gramineae (Poeae)	Not threatened	silver tussock
<i>Poa colensoi s.l.</i>	Gramineae (Poeae)	Not threatened	blue tussock
<i>Poa pratense</i>	Gramineae (Poeae)	Exotic	Kentucky bluegrass
<i>Podocarpus hallii</i>	Podocarpaceae	Not threatened	Hall's totara
<i>Podocarpus nivalis</i>	Podocarpaceae	Regionally Significant	snow totara
<i>Polystichum cystostegia</i>	Dryopteridaceae	Not threatened	alpine shield fern
<i>Polystichum</i>	Dryopteridaceae	Not threatened	

<i>neozelandicum</i> subsp. <i>zerophyllum</i>				
<i>Polystichum vestitum</i>	Dryopteridaceae	Not threatened	prickly shield fern	
<i>Potamogeton cheesemanii</i>	Potamogetonaceae	Not threatened	pondweed	
<i>Pseudopanax</i> (c) (<i>P. colensoi</i> var. <i>ternatus</i>)	Araliaceae	Not threatened	threefinger	
<i>Pseudopanax crassifolius</i>	Araliaceae	Not threatened	lancewood	
<i>Psychrophila obtusa</i>	Ranunculaceae	Not threatened	white caltha	
<i>Pteridium esculentum</i>	Dennstaedtiaceae	Not threatened	bracken	
<i>Pyrrhosia eleagnifolia</i>	Polypodiaceae	Not threatened	leather-leaf fern	
<i>Ranunculus amphitrichus</i>	Ranunculaceae	Not threatened	waoriki	
<i>Ranunculus cheesemanii</i>	Ranunculaceae	Not threatened		
<i>Ranunculus ensyii</i>	Ranunculaceae	Not threatened		
<i>Ranunculus gracilipes</i>	Ranunculaceae	Not threatened		
<i>Ranunculus multiscapus</i>	Ranunculaceae	Not threatened		
<i>Raoulia glabra</i>	Asteraceae	Not threatened		
<i>Raoulia grandiflora</i>	Asteraceae	Not threatened		
<i>Raoulia subsericea</i>	Asteraceae	Not threatened		
<i>Rubus cissoides</i>	Rosaceae	Not threatened	bush lawyer	
<i>Rubus schmidelioides</i> var. <i>schmidelioides</i>	Rosaceae	Not threatened	bush lawyer	
<i>Rubus schmidelioides</i> var. <i>subpauperatus</i>	Rosaceae	Not threatened	bush lawyer	
<i>Rumex acetosella</i>	Polygonaceae	Exotic	sheep's sorrel	
<i>Rumex flexuosus</i>	Polygonaceae	Not threatened	native dock	
<i>Rumex obtusifolius</i>	Polygonaceae	Exotic	broad-leaved dock	
<i>Rytidosperma unarede</i>	Gramineae (Danthonieae)	Not threatened	cliff fairy grass	
<i>Salix cinerea</i>	Salicaceae	Exotic	grey willow	
<i>Scandia geniculata</i>	Apiaceae	Not Threatened		
<i>Schoenus pauciflorus</i>	Cyperaceae	Not threatened	bog-rush	
<i>Scleranthus brockiei</i>	Caryophyllaceae	Not threatened		
<i>Scleranthus uniflorus</i>	Caryophyllaceae	Not threatened		
<i>Senecio quadridentatus</i>	Asteraceae	Not threatened	cotton fireweed	
<i>Sophora microphylla</i>	Fabaceae	Not Threatened	kowhai	
<i>Stellaria gracilentia</i>	Caryophyllaceae	Not threatened		

<i>Taraxacum magellanicum</i>	Asteraceae	Not threatened	native dandelion
<i>Taraxacum officinale</i>	Asteraceae	Exotic	dandelion
<i>Teucrium parvifolium</i>	Verbenaceae	Declining	
<i>Thelymitra longifolia</i> agg.	Orchidaceae	Not threatened	sun orchid
<i>Trifolium arvense</i>	Fabaceae	Exotic	haresfoot trefoil
<i>Trifolium dubium</i>	Fabaceae	Exotic	suckling clover
<i>Trifolium repens</i>	Fabaceae	Exotic	white clover
<i>Urtica ferox</i>	Urticaceae	Not threatened	stinging nettle, tree nettle
<i>Urtica urens</i>	Urticaceae	Exotic	nettle
<i>Verbascum thapsus</i>	Scrophulariaceae	Exotic	woolly mullein
<i>Veronica verna</i>	Scrophulariaceae	Exotic	spring speedwell
<i>Viola arvensis</i>	Violaceae	Exotic	field pansy
<i>Viola cunninghamii</i>	Violaceae	Not threatened	
<i>Viola lyallii</i>	Violaceae	Not threatened	
<i>Wahlenbergia albomarginata</i> subsp. <i>albomarginata</i>	Campanulaceae	Not threatened	harebell
<i>Wahlenbergia rupestris</i>	Campanulaceae	Not threatened	

APPENDIX 3 **Figure 1 – 3 Historic Resources plans**

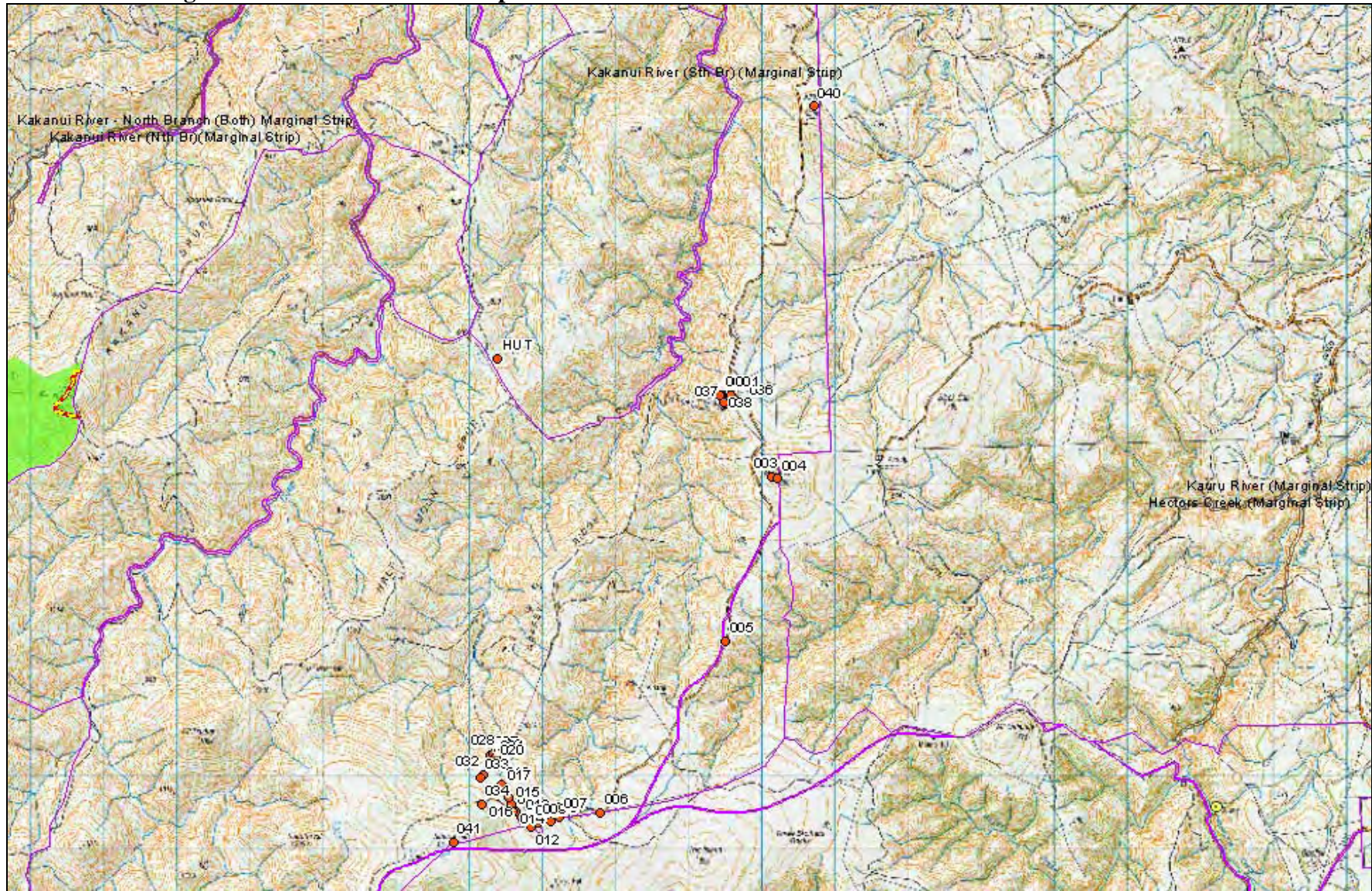


Figure 1. GPS waypoints of significant historic features and sites on Mt Dasher PL.

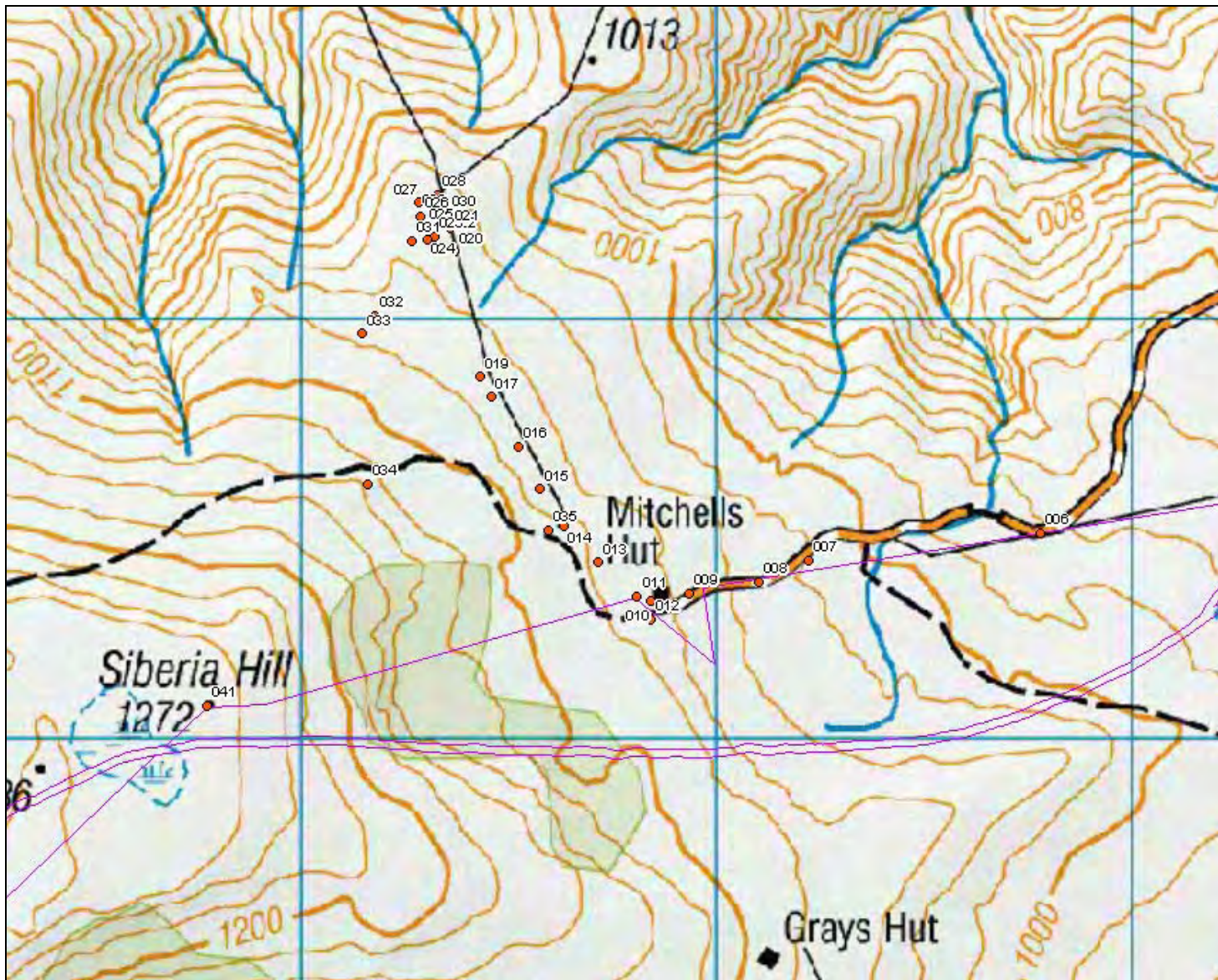


Figure 2. Close up of GPS waypoints Mitchells Hut, Mt Dasher PL.

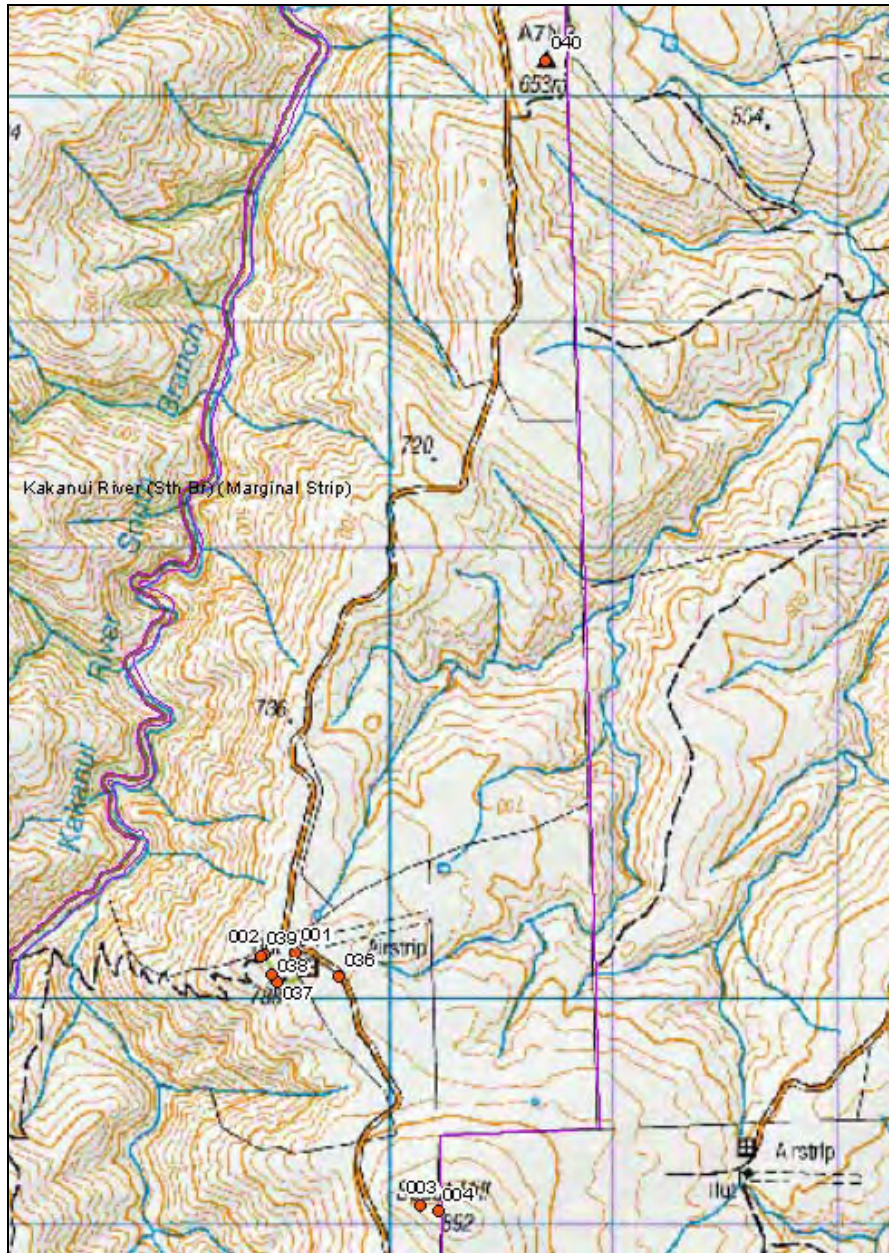


Figure 3. Close up of GPS waypoints Scout Hill, Mt Dasher PL.

APPENDIX 4

Historic Photos – Plates 1-14



Plate 1. Mitchell's hut, Siberia Hill. View northeast.



Plate 2. Triumph maker's mark on underside of corrugated iron roofing (Mitchell's hut).



Plate 3. Lysaght Orb brand corrugated iron lying in woodshed.



Plate 4. Dog kennels southeast of Mitchell's hut (Mitchell's hut to right).



Plate 5. Remnant posts of stock yards ca. 1km n/w of Mitchell's hut on Grassy Ridge. View southwest from GPS 030.



Plate 6. Modern replacement Scout Hill hut (GPS 001) and stock yards. View west.



Plate 7. View northwest to Scout Hill hut (building in centre with airstrip building to right). Modern stock yards are located behind the trees.



Plate 8. Four dog kennels at Scout Hill hut at GPS 036. View north.



Plate 9. 19th century fence line running north alongside Trig 'S' Scout Hill.



Plate 10. Trig 'N' at GPS 040. View northwest.



Plate 11. Trig 'S' Scout Hill at GPS 003. View southeast.



Plate 12. Cairn of James Wing located below Trig 'C' Siberia Hill at GPS 041.



Plate 13. Stacked cairn at GPS 003 below Trig 'S' Scout Hill. View northeast.



Plate 14. Stacked cairn at GPS 034 overlooking Mitchell's Hut and stock yards. View northeast.

APPENDIX 5

Historic Resources on Mt Dasher PL continued and Plates 15-21

Shar Briden
January 2011

History

Charles Suisted had to go thirty kilometres north to Otepopo (Wainakarua) for freehold grazing as Johnny Jones and sons had all available land near Goodwood and the Moeraki whalers had all the land south of the Waianakarua River. There were six Scottish shepherds on the Otepopo run, Louis and Duncan Stewart, John Cormack, Angus and Archie Cameron, and Robert Grieve. The manager was Thomas Ferens until 1854 (McKenzie 1989:12-13, Sinclair 1981: 181).

Edward McGlashan was Registrar of the Supreme Court for a short time (Otago Witness 1851: 1) and a Deacon at First Church from January 1852. He was a Member of the first two Provincial Councils (Dunedin) and a Representative for Roslyn. McGlashan assisted in developing Skippers Mine, leased from Valpy the first flour mill at the Water of Leith, operated a store and auction rooms in Princes St with W. Carr Young, and was involved in sawmilling in the Catlins and running the ship 'Taiaroa' in conjunction with the mill. He imported a series of Australian sheep cargoes and with financial help from Dr F.H. Richardson, took over run 12 Otepopo and run 13 Goodwood for 3-4 years. McGlashan took over run 218 Mt Stoker in 1862, and run 79 Barewood. Following the death of John Sutton, he married Sutton's widow Emma. McGlashan's fortune became depleted and he was declared bankrupt in 1887. Edward was John McGlashan's brother, the secretary of the Otago Association (Sinclair 1981: 182, Sinclair 2003: 64, Sinclair et al. 2008: 8).

The Dasher was taken up by the New Zealand and Australia Land Company in 1882 until the subdivision in 1919 when the northern part of the run was taken by Roy (Robert) Mitchell (McKenzie 1989: 26). No further information on Robert Spencer Mitchell has been forthcoming.

Pinney (1981: 68) notes the neighbouring pastoral lease, The Dasher, had musterer's huts built of stone and fences were rabbit netted. No stone huts were recorded on the Mt Dasher lease although subsurface features from earlier structures may well be present.

Pastoral

Mitchell's hut and stock yards (I42/142)

Plates 15-16 provide other views of Mitchell's hut. The internal ceiling is 90mm tongue and groove boards with a plywood covering. The plywood may be a later addition. The floorboards are 150mm wide planks. Wood sleepers (Plate 17) and a lump of concrete with four bolts embedded in it, located beside the lean to, may have been constructed to hold a portable generator (Plate 18).

A glass aqua base, 7.5 cm square, embossed with Walker Kilmarnock whiskey, the number 1851, and an X, lies outside the hut. These bottles with an X typically date to manufacture prior to 1910. The number 1851 relates to a batch number not a manufactured date.

Standing wood posts of the stock yards were recorded from GPS 21 to 30. Some of the posts were laying on the ground. Only the standing posts were recorded by GPS. A hinged gate post was noted at GPS 027 (Plate 19). A track runs above Mitchell's hut to the yards (GPS 32-35) although stock could have negotiated dropping down to follow the snowline fence from GPS 35. This enabled stock to move safely around two basalt scree flows between the yards and the hut. At GPS 033, earthen spoil has been placed over one area of the basalt flow to enable stock to safely cross using the main track. A narrow channel 1m wide at GPS 31 runs downhill from the track to the yards although it is not confirmed if this is a pack track or a cut off drain from the track.

Maintenance has occurred to the snow line fence where some of the wood posts have been turned sideways and staples used to string up the wire. A strainer post was noted at GPS 19. A new fence has been constructed alongside the earlier snow line fence. Pinney (1981: 68) notes that totara was plentiful on the hills of The Dasher. Fence posts recorded on Mt Dasher may be totara although this is not confirmed.

A wooden bridge was recorded at GPS 006 leading to Mitchell's Hut (Plate 20). The bridge supports are metal 'I' beams.

Scout Hill hut and stock yards (I41/133)

Naturally split wood posts and metal flat standards have been re-used in the fence line bordering both sides of the shelter belt at the Scout hut stock yards (Plate 21, GPS 002, 037-039).

Stacked basalt cairns

A cairn was noted at GPS 041, 10 m northeast below Trig 'C' Siberia Hill. A metal cross ca. 1.6 m tall sits in this cairn with the following words welded on to the metal, vertical arm reads IN MEMORY and horizontal arm reads JAMES WING (Plate 12).

A second stacked cairn, 1.5 m high and 1.7 m wide, is located below Trig 'S' Scout Hill at GPS 003 (Plate 13).

Trig Stations

- Trig 'N' (A7N3). Established by James Mitchell 1864 (I41/131). The trig is an iron rod, 3cm diameter, set into a stacked basalt cairn ca. 3.4 m in diameter and ca.0.5 m high (Plate 10). The rod is etched on the top with the letter 'N'. The trig is located close by the northeastern boundary of the lease at GPS 040.

- Trig 'B' Obi (code 1061). Established by Dennis and Grant 1882 (I42/144). This Trig was not inspected on the survey.

- Trig 'C' Siberia Hill (code B223). The trig is a circular iron rod set into a stacked basalt cairn ca. 2 m in diameter (I42/143, Plate 12). The cairn is ca. 1.5 m tall on the highest eastern side. The trig is located on the southern boundary of the lease at GPS 041. A wood pole sits in the iron rod.

- Trig 'S' Scout Hill (A7N4). Established by James Mitchell 1864 (I41/130). The trig is an iron rod, 3cm diameter, set into a stacked basalt cairn ca. 3.3 m in diameter and ca.0.8 m high (Plate

11). The top of the rod is etched with the letter 'S'. The trig is located close by the eastern boundary of the lease at GPS 004.

Other

Early pastoralists had a use for basalt. A chimney at Islay Downs is constructed of well trimmed basalt. There does not seem to be basalt present naturally in the upper reaches of the Shag River, the closest sources would be the basaltic boulder fields of Siberia Peak, Mt Dasher, Kattothryst, and Obi. Hamel (2000:11) noted that the Prestons of the Longlands run had used well trimmed basalt blocks for the stonework around their farmstead which is unusual. The basalt would have come from the numerous late Tertiary volcanic domes and cones of the District noted above. The Longlands 1871-1873 farm diary (Preston n.d.: cited in Hamel 2000:8) notes that stone was quarried at the end of June for the chimney, the year is not stated, although this relates to the Longlands farmstead buildings and not necessarily to the Shag River boundary riders hut (Briden 2008).

Historic resources continued and Plates 15-21

Half Moon Hut (I41/132) and possible tail race or cut off drain (Google Maps).



Plate 15. Mitchell's hut. View southwest.



Plate 16. Mitchell's hut. View east.



Plate 17. Timber sleepers beside lean to at Mitchell's hut.



Plate 18. Concrete lump with bolts embedded.



Plate 19. Hinged gate post at stock yards at GPS 027. View southwest.



Plate 20. Old wooden bridge at GPS 006 leading to Mitchell's Hut. View north (John Barkla in photo).



Plate 21. Natural split post bored 7 hole at Scout Hill stock yards (GPS 002).

APPENDIX 6

NGO Reports

- **Federated Mountain Clubs**
- **Central Otago-Lakes Branch of Royal Forest and Bird Protection Society**
- **Dunedin Branch of Royal Forest and Bird Protection Society**
- **Otago Conservation Board**
- **Central Otago Recreational Users Forum (CORUF)**
- **Alan Mark, Department of Botany, University of Otago**



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PASTORAL LEASE TENURE REVIEW

**Supplementary Report on the Recreational, Landscape
and other Conservation Values, and Recommendations
for the Outcomes of Tenure Review**

Mt DASHER

February 2011

**Compiled for Federated Mountain Clubs (FMC) of NZ (Inc.)
by Dr Michael J S Floate, High Country Consultancy,**

**SUPPLEMENTARY REPORT ON THE RECREATIONAL, LANDSCAPE,
AND OTHER CONSERVATION VALUES, AND RECOMMENDATIONS
FOR THE OUTCOMES OF TENURE REVIEW OF Mt DASHER**

**A Report to FMC to assist in the Crown Pastoral Lease Tenure Review Process
based on inspection of the property in 2011**

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LIST OF FIGURES

Fig. 1 The landscapes and views to be seen from vantage points on Mt Dasher are outstanding and add greatly to the enjoyment of traversing this property. This view shows the headwaters of the South Branch of the Kakanui River with Half Moon Spur (left) and Grassy Ridge (right) with the mountains in Oteake Conservation Park on the skyline. Much of the foreground should become Conservation Land.

Fig. 2 The generally high, rolling landscape of the Hectors Plateau includes the prominent volcanic features of Mt Dasher (D), Kattothyrst (K) and Siberia Hill which are focal points for recreation in North Otago. It is important in this tenure review to ensure public access to these outstanding settings for a variety of recreational activities, including tramping, mountain biking and, in some seasons cross country skiing.

Fig. 3 Obi, or Trig B is the highest and most southerly point on the back boundary of Mt Dasher. This vantage point can be reached from the Pigroot as well as by crossing Mt Dasher. Its commanding position provides panoramic views over the neighbouring landscapes and could become a popular destination for mountain bike enthusiasts.

Fig. 4 The high ground on the Hectors Plateau is dominated by Brown Granular Loam soils on the basalt outcrops like the one seen here at the "Stone Man" on Siberia Hill. High Country Yellow Brown Earth Steepland soils dominate the surrounding rolling plateau country. These soils are all classified LUC Class VIIe, with severe limitations for pastoral use. At about 1,200m it is almost certain that such areas cannot support ecologically sustainable pastoral use. Instead, they should become Conservation Land.

Fig. 5 Most the land below about 1,000m has been improved by fencing, oversowing and topdressing. The typical soils have been classified LUC Class VI or better, so with appropriate maintenance fertiliser to replenish nutrients removed in meat and wool and lost through burning, the land should be capable of supporting ecologically sustainable pastoral use, and be appropriate for freehold disposal.

Fig. 6 Some 1,000ha of the property, including the volcanic areas of Kattothyrst and Siberia Hill are protected under a QE II Covenant. Although the objectives include the protection of native flora (tussock grassland, shrubland and wetland) cattle grazing is currently permitted. It is submitted that management and objectives are incompatible, and that the Covenant should be revoked.

Fig. 7 There is an important track from Trig 'B' (on the Kakanuis) over Siberia Hill to Mitchells Hut and beyond to Mole Hill and the northern boundary (in the Kakanui Valley). This track could provide public access over an important crossing of the Kakanui Mountains, but it is currently legal for only short sections of its length. The section across the pastoral lease needs to be resolved through tenure review to satisfy the CPL Act, and access over neighbouring freehold will need urgent action following tenure review.

Fig. 8 Mole Hill Road crosses freehold land on both Mt Dasher and Mole Hill Downs and does not coincide with the legal alignment throughout its length, despite being maintained by the Waitaki District Council. Mole Hill Road makes the connection between Mt Dasher pastoral lease and Dunrobin Road so it is vital that public access is secure over this road in order to complete the crossing of the Kakanui Mountains from the Pigroot to the Waitaki Valley.

Fig. 9 The Hut and yards at Scout Hut could serve recreation in a number of ways: The yards could provide secure parking and the Hut, with permission from the landowner, could provide a base for a

round trip to Mt Dasher and Kattothyrst via Half Moon Spur. Part of this loop trip would require an easement for public walking access from Scout Hut to new Conservation Land on Half Moon Spur.

Fig. 10 The proposed tramping route would cross the Kakanui River below Scout Hut and climb the Half Moon Spur (M) before traversing Mt Dasher (D) and Kattothyrst, thence returning via Siberia Hill (S) to Scout Hut. This trip would then include the most interesting geological features of the plateau and provide excellent views over the surrounding landscapes.

Fig. 11 Mitchells Hut, dominated by adjacent basalt boulderfields is an historic hut, named after one of the original runholders, situated near Trig C on Siberia Hill. This hut will, hopefully, be included within the new Conservation Land and become available for public use because it is strategically placed for the recreational public to explore the Hectors Plateau and its volcanic and ecological treasures.

Fig. 12 Wayne Sim, the present lessee of Mt Dasher, looking very much at home in the historic Mitchells Hut. Despite its lack of maintenance in recent years, this hut deserves to be preserved and could provide valuable shelter in emergencies, and accommodation for those wishing to explore the Hectors Plateau.

Fig. 13 Basalt rock outcrops and boulderfields provide sites for significant biodiversity, including sub-alpine plants and shrubs, and other species which are not common in the more widespread tussock grasslands. These rocky sites provide refuges for plant survival, and are a mecca for botanists and ecologists to explore and photograph.

Fig. 14 The CRR has reported that "*The property supports some of the best examples of plant communities that are rare in the Dansey Ecological District. Wetlands are uncommon in the ecological district being recorded in just two other catchments outside this area*". This tarn is situated just below Trig B near the southern boundary of Mt Dasher. Such special features add to the list of reasons why this area should be protected by return to full Crown ownership.

SUPPLEMENTARY REPORT ON THE RECREATIONAL, LANDSCAPE AND OTHER CONSERVATION VALUES ON Mt DASHER, AND RECOMMENDATIONS FOR THE OUTCOMES OF TENURE REVIEW

INTRODUCTION

A "Preliminary Report on Recreational and Related Significant Inherent Values" on Mt Dasher was written for Federated Mountain Clubs (FMC) in 2004. Permission to inspect the property was not granted in 2004 so that Report was written without the benefit of detailed on-site knowledge, but instead was based on knowledge gained from visits to neighbouring properties, and from the other sources of information detailed in the Report.

In February 2011 representatives of a number of NGO bodies inspected the property with the kind permission of runholder Wayne Sim, who accompanied the party to Siberia Hill. It was very useful to be able to see the property at first hand. The inspection has enabled the writing of this Supplementary Report. It should be read in conjunction with the 2004 Report, much of which is still relevant and appropriate. These reports are offered as a contribution to the statutory consultation process undertaken by the Department of Conservation.

This supplementary report still focuses on those features of Mt Dasher which are important for public recreation. The report emphasises the natural values and landscapes of the property which have an important influence on its recreational value and greatly affect the quality of recreational experience enjoyed by visitors to Mt Dasher. The landscapes and views to be had from vantage points on Mt Dasher are outstanding and add greatly to the enjoyment of traversing this property (Fig. 1). A legal road across the property could provide access to the volcanic peaks of what Mason (1988) refers to as 'Hectors Plateau' and to the Kakanui Mountains.

The pastoral lease includes the prominent volcanic features of Mt Dasher and Kattothyrst (Fig. 2) which are intrusions into a gently rolling plateau, locally known as the 'Hectors Plateau'. Mt Dasher pastoral lease is located between other properties which are, or have been through the tenure review process – Balmoral to the north, The Dasher to the south, and Shingley Creek (over the Kakanui Mountains) to the west.

It is important too that a broad view of the overall outcomes of tenure review should be taken as this lease is reviewed, and consideration should be given to the emerging network of recreation opportunities including a crossing and a traverse of the Kakanui Mountains.

METHODS OF SURVEY AND ASSESSMENT

The original (2004) Report was based in part on knowledge gained from visits to neighbouring properties, and on information gathered from other sources. Those sources included publications and accounts by members of local tramping and outdoor recreation groups, a study of "Outdoor Recreation in Otago" undertaken by Mason (1988) and published by FMC, and Land Use Capability (LUC) maps. The Conservation Management Strategy (CMS) for Otago, and the Protected Natural Area (PNA) survey report on the Dansey Ecological District were also used as sources of reference. Subsequently the Conservation Resources Report (CRR) for Mt Dasher was published in March 2005, and has been used as an additional source of reference for this report.

This report complements the 2004 Report and updates the conclusions and recommendations on the basis of the CRR and the inspection of Mt Dasher in 2011.

GENERAL DESCRIPTION OF Mt. DASHER

The land resources on Mt Dasher were described in detail in the original (2004) Report. The high ground at the western end of the property (up to 1425m at Trig B, Fig. 3) including the prominent volcanic basalt features of Mt Dasher (1,304m), Kattothyrst (1,293m), and that part of Mt Dasher pastoral lease which lies northwest of Half Moon Spur, constitutes a unique landscape which provides a superb setting for recreation. Much of this area, including Mt Dasher, Kattothyrst and Siberia Hill (1286m), was recognised during the PNA Survey as a Recommended Area for Protection (Dansey RAP 5 Dasher).

A notable feature of this property is its general freedom from woody weeds, especially wilding conifers and broom and gorse. It is however, infested in places with Hieracium.

The entire area extending to the back boundary at Obi has been identified in the more recent CRR as an area with significant inherent values which should be recognised and protected. The high ground is dominated by Brown Granular Loam, Saddle Hill soils on the basalt outcrops and High Country Yellow Brown Earth, Kaikoura Steepland soils on the surrounding plateau country (Fig. 4). These soils are all classified LUC Class VIIe, with severe limitations for pastoral use. For reasons discussed in the original Report it is most unlikely that these soils would be able to support ecologically sustainable pastoral use.

On Mt Dasher pastoral lease the areas characterised by Kaikoura and Saddle Hill soils (LUC Class VIIe) are almost certainly better retained in full Crown ownership and control to be managed by the Department of Conservation for conservation and recreational purposes. This corresponds to the FMC recommendations for similar soils on the adjoining property – The Dasher

Most of the land below about 1,000m (east of a line between Half Moon Hut and Mitchells Hut) has been improved by fencing, oversowing and topdressing (Fig. 5). The typical Hurunui, Kirkliston and Kakahu soils have been classified LUC Class VI or better, so with appropriate maintenance fertiliser to replenish nutrients removed in meat and wool and lost through burning, the land should be capable of supporting ecologically sustainable pastoral use. This would appear to meet the criteria required for freehold disposal to the lessee.

FMC understands that some 1,000ha of the property, including the volcanic areas of Kattothyrst and Siberia Hill is protected under a QE II Covenant (Fig. 6). The stated objectives of the Covenant are:-

- “(a) To protect and maintain the open space values of the land*
- (b) To protect native flora and fauna on the land representative of mid to high altitude tall tussock grassland, shrubland and wetland communities with particular reference to the representative vegetation associations*
- (c) To protect and maintain landscape values of the land with particular regard to the distinctive mix of landscape and associated vegetation*
- (d) To continue the use of the land for pastoral farming, at low stocking rates, in conformity with objectives (a) to (c) above, while requiring change in management when monitoring proves it necessary”.*

We respect the objectives of the Covenant but believe that cattle grazing, even at a low stocking rate, and at an altitude of about 1200m is incompatible with the objectives. We are aware that management could be changed in response to unsatisfactory results of monitoring, but there is no indication in the Covenant as to how rigorous the monitoring would be. FMC recommends that as a condition of tenure review the Covenant should be revoked, and the land should be destocked and

returned to full Crown ownership and control. We submit that such action would much better meet the protection objectives of the Covenant.

RECREATIONAL USE AND POTENTIAL NEW OPPORTUNITIES

The recreational importance of Mt Dasher lies in its situation near the southern end of the Kakanui Mountains, and in the presence of the outstanding natural landscape features of the prominent basalt outcrops of Mt Dasher, Kattothyrst and Siberia Hill (Fig. 2).

Mason (1988) noted with respect to recreation in the Kakanui Mountains that *"over the greater area of the Kakanui Mountains there is less frequent tramping activity. Features such as the volcanic caps of Siberia Hill and Kattothyrst, and the high points of Kakanui Peak and Mt Pisgah are the more usual attractions. Winter snow cover provides another dimension, particularly for ridge climbs from the Pigroot. When snow cover is sufficient, extended ski tours on variable terrain are possible from Obi in the south along the main crest to Dansey's Pass. This is a distance of over 35 km. The crest is relatively narrow with greater variations in gradient than is found on most Central Otago ranges. The crest is suitable for both cross-country and alpine ski touring in the right conditions."*

Recreational use of Mt Dasher has been relatively light in the past although it has very considerable potential. There is significant use by local pig hunters and occasional visits by local trampers with a focus on the Hectors Plateau, Siberia Hill, Kattothyrst and Mt Dasher itself (Fig. 2). With increased knowledge of the area and improved access through tenure review, it is likely that usage particularly by mountain bike enthusiasts, will increase (Fig. 3).

There is an important track which roughly follows the southern boundary of Mt Dasher (the northern boundary of The Dasher) from Trig 'B' (on the Kakanuis) over Siberia Hill to Mitchells Hut and beyond (Fig. 7). This is an important recreational route over which public access should be secured in order to fulfil the requirements of the CPL Act 1998. The continuation traverses Scout Hill and Mole Hill and eventually connects with Mole Hill Road, and Dunrobin Road, thence leading to the Kakanui Valley near Five Forks

There are however, a number of problems with public access over this route. (i) The actual formation only coincides with the legal road in places, elsewhere it deviates from the legal alignment and occasionally crosses the boundary into The Dasher. We understand that the runholder has agreed in principle to walking, mountain bike and horse access across Mt Dasher pastoral lease. The requirement under the CPL Act to secure public access should be satisfied during tenure review by having the actual formation recognised as the legal road.

Mole Hill Road is outside the pastoral lease and crosses freehold land on both Mt Dasher and Mole Hill Downs (Fig. 8). We understand that the actual road does not coincide with the legal alignment throughout its length, despite being maintained by the Waitaki District Council. It is important to realize that Mole Hill Road makes the connection between Mt Dasher pastoral lease and Dunrobin Road and it is vital that public access is secure over this road in order to complete the crossing of the Kakanui Mountains from the Pigroot to the Waitaki Valley. We appreciate that it is outside the scope of tenure review to resolve this issue but strongly urge DOC and LINZ to address and resolve this issue as soon as possible after the completion of tenure review. An alternative to recognizing the existing formation as the legal road, would be to establish an easement for public foot, bike and horse travel throughout the entire length of the crossing, with vehicle access at the discretion of the landowners of the freehold. However, this would be a less secure and therefore less preferred alternative.

Other possible recreational routes lead across neighbouring properties, most of which are also in, or have been through, the tenure review process. The legal road from Mt Stalker, via Cayenne Spur that links with the Obi to Siberia Hill road is a good example. This highlights the importance of considering the outcomes of this tenure review in the wider context of the whole range of Kakanui Mountains and recreation opportunities generally in North Otago.

The general area of the Kakanui Mountains and the Hectors Plateau is well suited to mountain bike and horse riding, and in some seasons for cross country skiing and ski touring. It is likely that with increasing pressure and demand for new recreational areas, and increasing knowledge of this area, together with improved access, usage will increase following the completion of tenure review.

An increasing problem for people wishing to make trips involving overnight stays in the backcountry is security of car parking at road ends (Fig. 9). Consideration should be given during the tenure review process to making provision for car parking, where possible off highways, and in the most secure places possible near the start of new easements over land which becomes freehold through tenure review. In the case of Mt Dasher, it would be very helpful if off-road parking could be provided at the Hut and yards near Scout Hill (Fig. 9) as this would provide for a round trip including Half Moon Spur, Mt Dasher, Kattothyrst, and Siberia Hill, returning to Scout Hut via Mitchells Hut (Fig. 10). It would also serve longer trips along the Kakanui Range.

In summary, our inspection has confirmed that there is considerable scope for increased recreational use of the Kakanui Mountains and the Hectors Plateau if easier access over Mt Dasher becomes available through tenure review. Predominant uses would be for mountain bike trips, tramping and horse riding, and the possible use of the Kakanui Mountains for cross country skiing or ski touring in some seasons, as well as use by local pig hunters. In the longer term, the development of a classic traverse (in either summer or winter) along the range to Danseys Pass is envisaged. FMC therefore argues that ensuring public access to and across Mt Dasher, to the Hectors Plateau including Kattothyrst and Mt Dasher itself, and Kakanui Mountains beyond is the key issue in this tenure review.

The CRR reports that *“Two huts on the property are of historic interest as examples of early musterers’ huts. Mitchells Hut (Figs 11 and 12) on the northeast slopes of Siberia Hill is a six-bunk corrugated iron clad hut with a lean-to. Half Moon Hut on the northeast ridge of Mt Dasher (upper Half Moon Spur) is a small two-roomed corrugated iron-clad hut with a concrete floor and tongue-and-groove timber lining. Both huts are in good condition”*. Recreational use of these huts would be invaluable, especially in emergencies. If the recommendations regarding areas for protection are accepted then both these huts would be situated on new Conservation Land, and should become available for public use.

SIGNIFICANT INHERENT VALUES AND THEIR IMPORTANCE FOR RECREATION

This report focuses on those features of Mt Dasher which are important for public recreational interests. It should be noted that while access is important, the natural values and landscapes of the areas concerned have a fundamental impact on the recreational value of the place and greatly influence the quality of recreational experience enjoyed. It is for this reason that reference is also made to both natural and landscape values of this pastoral lease.

The most outstanding natural feature of Mt Dasher is its landscape (Figs. 1, 2, and 3). As seen from the downlands of North Otago it forms the western skyline. In winter it is covered in snow which adds to its stature. Seen from Scout Hill the panorama from Mt Difficulty in the east, the peneplain running up to Siberia Hill, and then the mostly rounded summits of the Kakanui Mountains, is a very impressive scene which is the fundamental background to any recreational experience in the

area. Landscapes (5 Landscape Units), Landforms and Geology are described in detail in the CRR so will not be repeated here.

PNAP survey recognized the high landscape and naturalness values of Dansey RAP 5 Dasher, which occupies most of 'Mt Dasher' and 'Trig C' Blocks and extends into part of The Dasher pastoral lease, and includes Siberia Hill, Kattothyrst and Mt Dasher itself (Figs 1, 2, and 6). These landscapes and geological features are of great interest to the public, and are indeed the very features which attract most recreational users to the area. It is also noteworthy that the Siberia Hill-Mt Dasher volcanic complex within RAP 5 Dasher is a listed geopreservation site (No 296 Dasher) of regional significance.

The landscapes, particularly on the Hectors Plateau including the volcanic peaks are what S.6(b) of the RMA would recognise as matters of national importance: "*Outstanding natural features and landscapes [which should be protected] from inappropriate subdivision, use and development.*" Potential development as a wind farm with consequent intrusion of turbine towers into the landscape would be a very significant threat to the landscapes and features on the Hectors Plateau. It is strongly recommended that the outcomes of this tenure review include secure landscape protection over this area.

The CRR recognized that the landscape characteristics of the RAP extend beyond this block and extend across Block 'Trig B' to the back boundary at Obi (Trig B 1,425m) and indeed cover all that land west of a line from Mitchells Hut to Half Moon Hut. This same area was recognized in the CRR as having ecological significance.

This area of landscape and its ecological significance are still largely unmodified. It is strongly influenced by the underlying basalt volcanic rock on which the Brown Granular Loam soils are developed

On the Hectors Plateau, and between the basalt outcrops is an area characterised by Kaikoura Steepland soils developed on greywacke where both landscape and inherent natural values are also significant. This area is however prone to erosion (LUC Class VIIe) and carries a depleted tussock grassland. Although depleted in terms of its tussock stature, the plant community does contain a wide range of sub-alpine species including *Drachophyllum* and *Celmisia*, together with other high altitude plants including *Coprosma* and *Luzula* spp., edelweiss which are most common on boulderfields and basalt rock outcrops, representing significant biodiversity (Fig 13).

Along the back boundary the altitude increases to 1,425m at Trig 'B' and in places, for example near the track to Trig B, and on many of the boulderfields and rocky outcrops there are superb natural rock gardens including such interesting plants as the southern edelweiss. Such natural features are not only part of the significant biodiversity, but also contribute to the value of the recreational experience of traversing the wider environs of the Kakanui Mountains. Further details of the plant communities in the following five areas are described in detail in the CRR and will not be repeated here:- Mt Dasher-Siberia Hill Volcanic Complex, Scout Hill, Upper Hectors Creek, South Branch Kakanui River, and the northern part of the pastoral lease.

The CRR concludes that "*Mt Dasher Pastoral Lease supports a comprehensive range of indigenous vegetation types present in the Dansey Ecological District. Of these, remnant. podocarp-hardwood (broadleaved) forest, boulderfield and riparian shrubland, red tussockland, cushionfield and higher altitude tall tussockland are all representative of the pre-human vegetation of the district. The extensive areas of montane and subalpine tall tussockland retain high naturalness values. Forest remnants and shrublands are also relatively intact, though substantially reduced from their original extent.*"

The property supports some of the best examples of plant communities that are rare in the Dansey Ecological District. Wetlands are uncommon in the ecological district being recorded in just two other catchments outside this area (Fig 14). Cushionfield vegetation of the volcanic complex on the property is unique in the ecological district. Likewise red tussockland communities are uncommon in the ecological district and those present on the volcanic complex are the most extensive".

The area therefore needs to be protected, not only because of its significant inherent values described above, but also because it cannot support ecologically sustainable pastoral use, and because of its recreational potential.

RECOMMENDED AREAS FOR PROTECTION (RAPs)

The PNA Programme carried out surveys of the Danseys Ecological District in the late 1989/1990 and identified two Recommended Areas for Protection identified as Danseys RAP 4 Hectors and RAP 5 Dasher. These were described in detail in our original (2004) Report.

The ecological significance of these RAP areas was confirmed in the more recent CRR. In summary, RAP 4 (only part of which is on Mt Dasher land) was ranked high or medium for the criteria representativeness, diversity, naturalness and viability. Special features and buffering are the only criteria which rank low so the area has very high inherent values and should be included in the area to be returned to full Crown ownership and should in future be managed for conservation purposes.

Dansey RAP 5 Dasher covers part of an extensive, gently inclined mountain top situated to the east of the main range of the Kakanui Mountains, described as the Hectors Plateau. Bedrock is primarily schist overlain in places by a cap of volcanic rock. Siberia Hill, on the boundary between The Dasher and Mt Dasher is one of the largest volcanic masses of the Dunedin Volcanic Group outside of the Dunedin volcano. Siberia Hill is also one of the exceptions of the East Otago peripheral vents in that it has distinct lava flows overlying one another. The small vent of Kattothyrst is more typical of the outlying vents in this group.

*"The extensive basalt boulderfields on the slopes of Mt Dasher and Siberia Hill have little vegetation apart from lichens and mosses. However, shrublands are common on the margins and in sheltered places between the boulder streams. Common shrubs are snow totara and hebe with occasional small patches of mountain toatoa on both Mt Dasher and Siberia Hill, with the locally distributed, threatened daisy *Celmisia hookeri* on the southern slopes of Siberia Hill.*

*Boulderfields are a feature of several other volcanic outcrops in eastern Otago, but the ones in this RAP, particularly those on Mt Dasher, are visually spectacular. In addition, in the Dasher RAP, there are subalpine shrub species not found in other east Otago boulderfields such as mountain toatoa and *Brachyglottis cassinioides*."*

In summary, RAP 5 was ranked high for the criteria representativeness, diversity, naturalness and viability special features, viability and buffering. Threat is the only criterion which ranks medium or low so the area has very high inherent values and should be included in the area to be returned to full Crown ownership and in future be managed for conservation purposes.

AREAS TO BE PROTECTED.

The following areas, recognised in both the PNAP Survey and the more recent CRR, are recommended for return to full Crown ownership and control, to be managed for conservation and recreation purposes.

(i) The two areas recognised by the PNA Programme (Dansey RAPs 4 Hectors and 5 Dasher) were both ranked highly for the important criteria of representativeness, diversity, naturalness and viability. As such these areas must qualify as having significant inherent values and will satisfy the government objective *"to ensure that conservation outcomes for the high country are consistent with the NZ Biodiversity Strategy"*.

(ii) That land situated to the west of RAP 5, between about 1,000m and the highest point on the property, Obi or Trig 'B' (Trig B Block) on the Kakanui Mountains should also be protected because of its own significant inherent natural and landscape values, its inability to support ecologically sustainable pastoral use, and to conform with neighbouring lands which have also been recommended for return to full Crown ownership for similar reasons.

It is also important to note that these areas are classified LUC Class VIIe and are generally on exposed ground above 1,000m. Therefore they are almost certainly incapable of supporting ecologically sustainable pastoral use in the long term. It is concluded that because of their significant inherent ecological and landscape values, and because of considerations related to ecological sustainability, they should be returned to full Crown ownership and control and be managed for conservation and recreation purposes.

These areas could be conveniently enclosed within existing fencing between Half Moon Hut and Mitchells Hut, with little new fencing required to include RAP 4.

ACCESS REQUIREMENTS

From a recreation perspective, access across Mt Dasher pastoral lease to the Kakanui Mountains and the volcanic features of the Hectors Plateau, and the opportunity to enjoy the special natural and landscape features of these areas are the most important issues in this tenure review.

The road from Mole Hill Road to Obi (or Trig 'B') is of particular importance in this regard. This has been discussed in the section above on Recreational Use. It was concluded that the best way to provide secure public access across the pastoral lease to Obi would be to recognise the existing formation as the legal alignment of the 'paper' road which does not follow the track throughout its length. This would satisfy the requirements of the CPL Act. However, we understand that the runholder has agreed in principle to walking, bike and horse access across the pastoral lease, so an easement across the land following the existing track might be an alternative, but less secure solution.

The part of the route on freehold land in Mt Dasher and Mole Hill Downs may prove more difficult to resolve. It is nevertheless critical to achieving guaranteed public use of the crossing from the Waitaki (Kakanui) valley to the Pigroot. We appreciate that it is outside the scope of tenure review to resolve this issue but strongly urge DOC and LINZ to address and resolve this issue as soon as possible after the completion of tenure review.

There is another route on Mt Dasher which could provide an excellent round trip for trampers. This would make use of the track from Scout Hut to Half Moon Spur, take in an untracked route including Mt Dasher and Kattothyrst to Mitchells Hut and return to Scout Hut down the Obi to Mt

Dasher track. It is hoped that much of this route would become Conservation Land as an outcome of this tenure review but an access easement would be required from Scout Hut, through the valley of the Kakanui River (South Branch) and up Half Moon Spur to the Conservation Land boundary.

OTAGO CONSERVATION MANAGEMENT STRATEGY

In the Conservation Management Strategy for Otago (CMS), the Kakanui Mountains are recognised as a Special Place. The objectives for this Special Place are: *"to maintain the natural resources contained within the existing protected areas on the Kakanui Mountains while taking opportunities that may arise through pastoral lease tenure review to negotiate protection of and access to areas of high natural and recreational value."*

The CMS states that these objectives will be implemented by methods including:

- *"Foot access negotiated at key points for the public to areas managed by the Department, with public vehicular access having a lower priority.*
- *Protection of key areas for natural and historic resources will be sought through pastoral lease tenure review negotiation opportunities".*

It should also be noted that the priority for the Kakanui Mountains Special Place is that *"in this Special Place, tenure review negotiations and wilding pine control will be the priority method for implementing the objective during the course of this CMS."*

It is clear from this statement of priorities that DOC is committed to achieving its objective for the Kakanui Mountains Special Place through the tenure review process, and that significant progress would be made towards the objective if these outcomes can be successfully negotiated.

CONCLUSIONS

Significant conservation and recreation gains are possible outcomes of this tenure review. FMC recommendations for outcomes from this tenure review are as follows:-

1. Although the current recreational use of the Kakanui Mountains is relatively light, there is considerable potential for increasing recreational use of the range and the Hectors Plateau by mountain bike users, trampers and horse riders, also by hunters, and in some seasons in winter by skiers along the main range, perhaps as far as Danseys Pass. Potential as well as actual use should be considered as part of this review.
2. There is a significant area of improved pasture land below about 1,000m with Hurunui Steepland and Kakahu Yellow Brown Earth soils classified as LUC Classes IV and VI on Mt Dasher which is probably capable of being managed in a way that is ecologically sustainable so it is therefore likely to be suitable for freehold disposal to the lessee..
3. Secure public access to the Hectors Plateau (including Mt Dasher and Kattothyrst) and the Kakanui Mountains over the road from Mole Hill to Obi (Trig 'B') which traverses Scout Hill and Siberia Hill needs to be negotiated and confirmed through this tenure review. The preferred solution would be formal recognition of the actual road formation as the legal alignment, and resolution of the issues related to freehold land.
4. An excellent round trip for trampers, beginning and ending at Scout Hut, would include Half Moon Spur, Mt Dasher, Kattothyrst, and Siberia Hill. To complete this loop a public access easement across probable new freehold from Scout Hut to the boundary of new Conservation

Land on Half Moon Spur would be required.

5. There is a significant area on the Hectors Plateau covering some 1,600ha which was recognised by PNA surveys as Dansey RAP 5 Dasher. Some two thirds of this area, including Kattothyrst, Siberia Hill and Mt Dasher are located within the Mt Dasher pastoral lease. The area is characterised by volcanic outcrops and basalt-derived Saddle Hill soils which are classified LUC Class VIIe. As discussed above, this area cannot be managed sustainably but it does have unique natural and landscape values. Because of its significant inherent values and in order to conform with the NZ Biodiversity Strategy, this part of the volcanic plateau should be returned to full Crown ownership and managed for conservation and recreation purposes
6. The protection of outstanding natural features and landscapes on the Hectors Plateau including the volcanic peaks are matters of national importance- RMA S.6(b) "*Outstanding natural features and landscapes* [which should be protected] *from inappropriate subdivision, use and development.*" Potential development of a wind farm with consequent intrusion of turbine towers into this landscape would be a very significant threat on Hectors Plateau. It is strongly recommended that the outcomes of tenure review include secure landscape protection over this area.
7. There is an area to the west of RAP 5 (Trig B Block) which is characterised by Kaikoura Steepland soils (Class VIIe) and which therefore has severe limitations for pastoral use. This area can almost certainly not be managed in a way that is ecologically sustainable (for reasons explained above) but it has significant inherent natural and landscape values which are worthy of protection. This area was also recognized for its significant inherent value in the more recent CRR. This area should also be returned to full Crown ownership and control and be managed for conservation and recreational purposes. The entire area south and west of the line from Mitchells Hut to Half Moon Hut should therefore be returned to full Crown ownership for public use and enjoyment. .
8. The Draft CMS for Otago states that the objective for the Kakanui Mountains Special Place is "*to maintain the natural resources contained within the existing protected areas on the Kakanui Mountains while taking opportunities that may arise through pastoral lease tenure review to negotiate protection of and access to areas of high natural and recreational value.*" This statement demonstrates DOC's commitment to tenure review and shows that the objective for the Kakanui Mountains Special Place could be significantly advanced by the negotiation of good outcomes on Mt Dasher.
9. Recreational use of the Half Moon and Mitchells historic huts would be invaluable, especially in emergencies. If the recommendations regarding areas for protection are accepted then both these huts would be situated on new Conservation Land, and should become available for public use.

ACKNOWLEDGEMENTS

FMC is grateful to the Contractor (Opus International Consultants Ltd.) for arranging contact with the runholder, Wayne Sim, and to Mr Sim for permission to inspect the property and for accompanying a party of NGO representatives to Siberia Hill on 10 February 2011.



Fig. 1 The landscapes and views to be seen from vantage points on Mt Dasher are outstanding and add greatly to the enjoyment of traversing this property. This view shows the headwaters of the South Branch of the Kakanui River with Half Moon Spur (left) and Grassy Ridge (right) with the mountains in Oteake Conservation Park on the skyline. Much of the foreground should become Conservation Land.

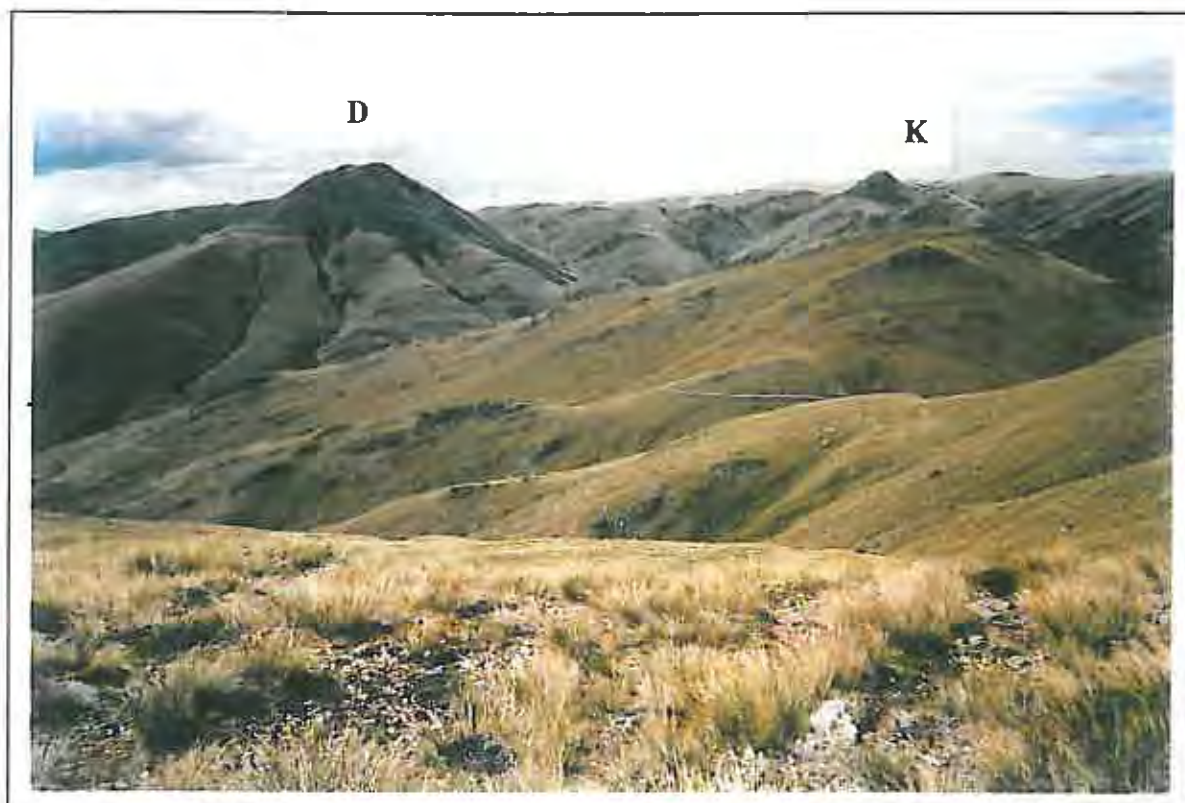


Fig. 2 The generally high, rolling landscape of the Hector's Plateau includes the prominent volcanic features of Mt Dasher (D), Kattothyrst (K) and Siberia Hill which are focal points for recreation in North Otago. It is important in this tenure review to ensure public access to these outstanding settings for a variety of recreational activities including tramping, mountain biking, and in some seasons, cross country skiing.



Fig. 3 Obi, or Trig B is the highest and most southerly point on the back boundary of Mt Dasher. This vantage point can be reached from the Pigroot as well as by crossing Mt Dasher. Its commanding position provides panoramic views over the neighbouring landscapes and could become a popular destination for mountain bike enthusiasts



Fig. 4 The high ground on the Hectors Plateau is dominated by Brown Granular Loam. soils on the basalt outcrops like the one seen here at the "Stone Man" on Siberia Hill. High Country Yellow Brown Earth Steepland soils dominate the surrounding rolling plateau country. These soils are all classified LUC Class VIIe, with severe limitations for pastoral use. At about 1200m it is almost certain that such areas cannot support ecologically sustainable pastoral use. Instead they should become Conservation Land.



Fig. 5 Most the land below about 1,000m has been improved by fencing, oversowing and topdressing. The typical soils have been classified LUC Class VI or better, so with appropriate maintenance fertiliser to replenish nutrients removed in meat and wool and lost through burning, the land should be capable of supporting ecologically sustainable pastoral use, and be appropriate for freehold disposal.



Fig. 6 Some 1,000ha of the property, including the volcanic areas of Kattothyrst and Siberia Hill are protected under a QE II Covenant. Although the objectives include the protection of native flora (tussock grassland, shrubland and wetland). Cattle grazing is currently permitted. It is submitted that management and objectives are incompatible, and that the Covenant should be revoked.



Fig. 7 There is an important track from Trig 'B' (on the Kakanuis) over Siberia Hill to Mitchells Hut and beyond to Mole Hill and the northern boundary (in the Kakanui Valley). This track could provide public access over an important crossing of the Kakanui Mountains, but it is currently legal for only short sections of its length. The section across the pastoral lease needs to be resolved through tenure review to satisfy the CPL Act, and access over neighbouring freehold will need urgent action following tenure review.



Fig. 8 Mole Hill Road crosses freehold land on both Mt Dasher and Mole Hill Downs and does not coincide with the legal alignment throughout its length, despite being maintained by the Waitaki District Council. Mole Hill Road makes the connection between Mt Dasher pastoral lease and Dunrobin Road so it is vital that public access is secure over this road in order to complete the crossing of the Kakanui Mountains from the Pigroot to the Waitaki Valley.



Fig. 9 The Hut and yards at Scout Hut could serve recreation in a number of ways: The yards could provide secure parking, and the hut, with permission from the landowner, could provide a base for a round trip the Mt Dasher and Kattothyrst via Half Moon Spur. Part of this loop trip would require an easement for public walking access from Scout Hut to new Conservation Land on Half Moon Spur.

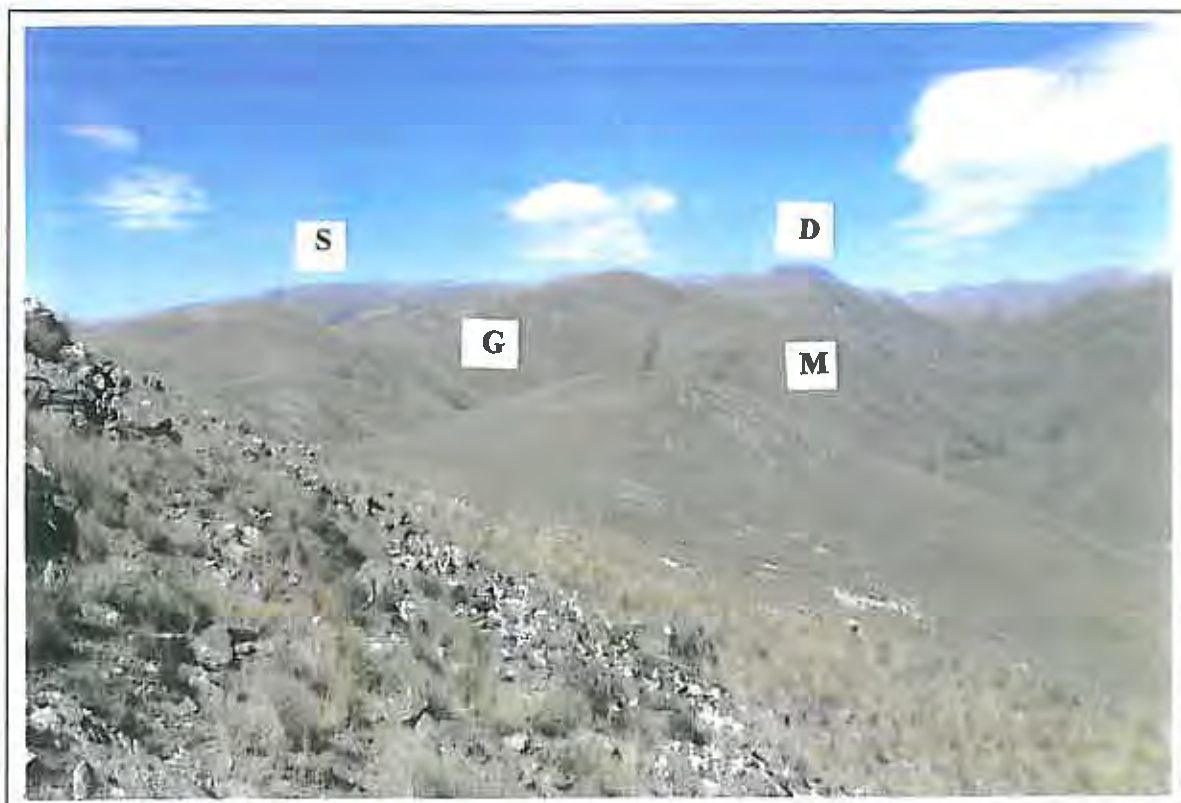


Fig. 10 The proposed tramping route would cross the Kakanui River below Scout Hut and climb the Half Moon Spur (M) before traversing Mt Dasher (D) and Kattothyrst, thence returning via Siberia Hill (S) to Scout Hut. This trip would then include the most interesting geological features of the plateau and provide excellent views over the surrounding landscapes.



Fig. 11 Mitchells Hut, dominated by adjacent basalt boulderfields is an historic hut, named after one of the original runholders, is situated near Trig C on Siberia Hill. This hut will, hopefully be included within the new Conservation Land and become available for public use because it is strategically placed for the recreational public to explore the Hectors Plateau and its volcanic and ecological treasures.



Fig. 12 Wayne Sim, the present lessee of Mt Dasher, looking very much at home in the historic Mitchells Hut. Despite its lack of maintenance in recent years, this hut deserves to be preserved and could provide valuable shelter in emergencies, and accommodation for those wishing to explore the Hectors Plateau.



Fig. 13 Basalt rock outcrops and boulderfields provide sites for significant biodiversity, including sub-alpine plants and shrubs, and other species which are not common in the more widespread tussock grasslands. These rocky sites provide refuges for plant survival, and are a mecca for botanists and ecologists to explore and photograph.



Fig. 14 The CRR has reported that *"The property supports some of the best examples of plant communities that are rare in the Dansey Ecological District. Wetlands are uncommon in the ecological district being recorded in just two other catchments outside this area. This tarn is situated just below Trig B near the southern boundary of Mt Dasher. Such special features add to the list of reasons why this area should be protected by return to full Crown ownership.*

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Royal Forest and Bird Protection Society of New Zealand Incorporated

COMS
Date

Central Otago-Lakes Branch

Denise Bruns (Secretary)
4 Stonebrook Drive
WANAKA 9305

28th February 2011

Mr Tony Perrett
Department of Conservation
77 Lower Stuart Street
Box 5244
DUNEDIN

tperrett@doc.govt.nz

Dear Tony

Tenure Review – Mt Dasher, PO 030 – An Early Report.

This property was first introduced to us at an NGO meeting held towards the end of 2000. We made an inspection of it in early 2004, but the property was then withdrawn from the process. It was re-introduced at an NGO meeting held last year, 2010. We have made another inspection of it just recently with permission of the lessee, Mr Wayne Sim, this party included a person who had been a neighbour of Mt Dasher and had worked on the property at times. We would like to take this opportunity of thanking Mr Sim for allowing us the opportunity to do so, also for accompanying us on our inspection.

We would be pleased if you would accept these comments on this property based on our two inspections and on other documentation available to us. The flora and fauna and other significant values have been extremely well documented in the conservation resources report: we can but heed them; Mt Dasher is in the Danseys Ecological District.

1.0 Introduction and Location of the Property.

1.1 Mt Dasher is situated at the south eastern end of the Kakanui Range of mountains that forms the western boundary of North Otago. *The Eastern escarpment of Siberia Hill at the back of Mt Dasher is visible from Oamaru.*

1.2 The property also has attached approximately 800has of freehold land to the east of the leasehold land. *This freehold land contains the homestead, woolshed and yards.*

1.3 The nature of this property, and the management of it, requires a good roading system. *There is a good formed road from the entrance of the property at the top of Dunrobin road out as far as the top airstrip, 4ks past Scout Hill, a total distance of 20ks. From there on to the back of the property at Trig B there is a 4WD track, a further distance of approximately 9ks. There is also a 4WD track from the Scout Hill Yards to the Half Moon Hut.*

1.4 The road formation to the airstrip generally follows the line of the legal road as shown on the cadastral maps.

1.5 The lease itself, as distinct from the freehold land, starts at the junction of both the North and South branches of the Kakanui River at an altitude of approximately 300ms, and extends in a south westerly direction to the top of the Kakanui Range at Trig B, 1425ms

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1.6 The property is distinctive in that it contains several volcanic cones both on the freehold and the leasehold land. *The soil surrounding these cones is generally better than the other soils on the Kakanui Range. It is mostly where silver tussock is seen.*

1.7 As the property stretches from the North Otago downlands to the crest of the Kakanui range at Trig B, which overlooks the Pigroot road, the rainfall can vary considerably between one end of the property and the other.

2.0 The Significant Inherent Values.

2.1 There are considerable values in the landscape on this property. As seen from about Trig N it is a tussock landscape, so too from Trig S, Scout hill. Seen from either of these to vantage points there are three main ridges, Half Moon Spur in the north, Grassy Ridge in the centre and the ridge going from Scout Hill to Siberia Hill on the south side of the lease, all leading up towards the Siberia Hill-Mt Dasher escarpment and plateau - sometimes known as the Hectors Plateau. The incised gullies between these ridges are clean tussock pretty well right to the creek beds where there is some woody vegetation, such as matagouri, coprosma and olearia, but this does not overly interfere with the colour or texture of the otherwise almost purely mid-altitude tussock landscape, typical of the Kakanui Range. The absence of sweet briar is noteworthy.

2.2 The original tall tussock has been modified by burning in the past, and more lately with over-sowing and aerial top-dressing, consequently the tussock is mostly short in stature. The tussock pasture is interspersed with sweet vernal, brown top and white clover. There are some patches of tall tussock next to the south boundary of the property between the top airstrip and Siberia Hill (Photo 1) which appear to have escaped burning, probably due to the fact that the ground is more broken here, and it is also wetter, as there are several flushes or springs in this area coming out of the volcanic boulder fields above which drain into Quinns Creek.

2.3 The volcanic boulder fields on the eastern slopes of Siberia Hill and around towards the Half-moon Spur are distinctive and add to the landscape values of the escarpment.

2.4 Siberia Hill and its several scattered volcanic outcrops and boulder- fields are a haven for a few species of celmisia, the south island edelweiss, hebes, dracophyllum and mountain totara; These areas a veritable rock gardens (Photo 2)

2.5 The two blocks of land known as Mt Dasher and Trig C containing the spectacular volcanic cones of the Kattothyrst, Mt Dasher and the extensive boulder fields extending down into the headwaters of Deep Creek, are an exceptional ecological area; the vegetation is relatively unmodified. For this reason the PNA survey conducted in 1998-1990 recommended that the larger part of the area contained many inherent significant values it should be protected; this resulted in the creation of RAP 5 (1620ha). It is a large area extending from the head waters of Deep Creek to take in the north eastern half of the plateau area extending in to the neighbouring property, The Dasher, down as far as the hut on the Cayenne Spur.

2.6 A feature of this RAP is that it contains some of the only wetlands in the Dansey Ecological District. It is an extremely valuable RAP.

2.7 There is a QEII covenant of approximately 1000ha over part of this RAP, but it seemed incongruous to us that when we visited there was a large mob of cattle grazing the wetter areas (Photo 3).

2.8 The unnamed back block behind the above two blocks has landscape values in its steeper ridges and spurs, which also contain vestiges of endangered indigenous vegetation.

2.9 There is a portion of RAP 4 at the head of Hectors Creek in the Hectors block. This RAP and the portions further down the creek contain remnants of a broadleaf podocarp

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forest. While we did not go down into the Hectors creek it has been reported to us that they are in good condition, mainly due to the steepness of the area (Photo 4).

2.10 The main threat to these remnant forests will come from wild deer and pigs.

3.0 Designations.

3.1 The two plans, in the conservation resources reports for the property, 4.2.2 (Landscape Values) and 4.2.3 (Ecological and Recreational Values) tell us that the land they indicate should most certainly be returned to the Crown for protection.

3.2 The land they indicate is mostly above 1000ms. and will not be ecologically sustainable to farm without replacing the minerals taken off the place in the way of meat and wool.

3.3 While some of the lower land at the bottom of the gullies at the head of the various creeks and rivers indicated will be Class VI, the bulk of the higher ground above will be Class VII and out at the very back could be Class VIIIe which would not be economically viable to over-sow or top-dress with phosphates.

3.4 All that land below the Mt Dasher and Trig C blocks is mostly below about 1000ms. and being Class VI, if top-dressed on a regular basis with superphosphate should be able to be managed in a manner that is ecologically sustainable. "...the main aim of the CPL Act 1998 is to manage reviewable land in a manner that is ecologically sustainable...."

3.5 A line could be drawn from about the Half Moon hut across to Mitchells hut to encompass this area. In fact there is a fence in the vicinity that could be adjusted to suit see (Photos 5 & 6).

4.0 Access and Recreation.

4.1 The Siberia Hill-Mt Dasher plateau country is unique to New Zealand, but for people to appreciate it they must have access to it. The willingness of the lessee Mr Sim to allow walking, cycling and horse riding access to via the road indicated above (1.3) is greatly appreciated. Having volcanic outcrops situated on a range of mountains such as the Kakanui Range adds greatly to its appeal for recreationalists.

4.2 While the area is relatively remote this gives it a certain attraction. It will be a must see area for botanists, photographers, trampers, cross-country skiers when conditions are right, and many other out-door people..

4.3 While most of the leases on the range have been in tenure review, and if all complete the process, there will be sufficient area to create another Conservation Area, Mt Dasher will be a valuable addition to any such Conservation Area.

4.4 If Mt Dasher finishes up as an isolated Conservation Area the significant inherent conservation values it contains, are, if it were in any other country such as the United Kingdom, make it an outstanding candidate to be a National Park.

4.5 It is noted on Plan 4.2.1 (Cadastral and Topographic and Cadastral boundaries map) that there is a legal road coming up from Fuschia Creek entering the Scout Hill block just east of that Hill and continues up the ridge to Trig C and on to Tri B, entering and exiting the property in several places.

4.6 Credit must be given to the early surveyors of the late nineteenth century who created these roads in that they had an uncanny knack of having them pointing in the right direction – they were surveying roads for the future – and now that there is now in New Zealand a Walking Access Commission charged with the task of creating public access to areas of

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public interest there is no reason why that in the future access could not be available from Fuschia Creek and exiting onto the Pig Root road via Mt Dasher and Shingley Creek for instance, which is also in tenure review.

4.7 While it is not a function of the CPL Act 1998 to create conservation parks out of tenure review it is only reasonable to expect that over time be the result could be a Kakanui Range Park coming into being..

4.8 A crossing of the Kakanui Range on foot from the Pig Root road into North Otago by whatever route could become a classic tramp.

4.9 The whole area is very popular with deer and pig shooters.

5.0 In Conclusion.

5.1 We cannot over emphasize the values contained in the three back blocks of land containing RAP 5, they are outstanding and must be returned to the Crown for protection.

5.2 The portion of RAP 4 in the Hectors block because of its steepness having a covenant over it should suffice to protect the values it contains.

5.3 If tenure review were to be completed on this property an easement should be secured for the very important Dunrobin Water Supply Incorporated to take water from the head of Quinns Creek (just behind Mitchells Hut) and to convey it to where the pipe line exits it to the east of Scout Hill. This water scheme is unique.

5.4 If any review were completed on the lines we have expressed the QEII covenant could be revoked.

5.5 Marginal Strips should be laid off where applicable.

We thank you for the opportunity to have this input into the process, we hope we have been of some assistance and look forward to seeing the outcome

Yours faithfully



JL Turnbull
For Denise Bruns (Secretary)
Central Otago Lakes Branch

Cc Photos attached



Photo # 1. This is the tall tussock, some of it red tussock, on the boundary between Mt Dasher and The Dasher in the Bridge block below Mitchells Hut. It must be 1.5 ms tall.



Photo # 2. Shows one of the volcanic out-crops which are a haven for such endangered plants as celmisia, edelweiss, hebe and others. If the Hectors Plateau were to be stocked these such havens would be a seed source to re-vegetate the rest of the plateau.



Photo # 3. This is a view of the Kattothyrst just to the right of centre, the trig B plateau in the top left is part of the main Kakanui Range. The cattle are grazing one of the wet areas.



Photo # 4. Looking into the Hectors block. Part of RAP 4 is in the steep gully below. This creek drains into the Kauru river which in turn flows into the Kakanui river. Oamaru is to the right of centre at the top of the photo.



Photo # 5. A view towards the very top end of the Half Moon Spur taken from just below Siberia Hill. This country will respond to the application of super-phosphate.



Photo # 6. A view take from just below Siberia Hill looking down on to Grassy Ridge and the ridge running down from Mitchells Hut to Scout Hill. In the very centre of the photo are the trees sheltering the Scout Hill Hut and yards. This middle distance country will be mostly Class VI which if supplied with super-phosphate should be ecologically sustainable. Therefore cane be considered suitable for becoming freehold.

Mt DASHER

Preliminary Report on the Conservation, Recreation and Historic Values and Recommendations for the Outcome of Tenure Review.

This submission is written on behalf of the **Dunedin Branch of the Royal Forest and Bird Protection Society** which has approximately 1000 members with strong interests in botany and natural history in general and in the High Country. Many of the members enjoy active recreation in the back country and are very aware of the need to ensure the protection of natural values, vegetation and landscape, historical sites and to improve public access through the tenure review process.

In making these recommendations we are mindful of the fact that under the CPLA Section 24 (b), significant inherent values must be protected by the creation of protective mechanisms (e.g. covenants) with a preference to return to full Crown ownership and control.

This submission is made on the basis of an inspection trip in February when several NGOs inspected the lease with the runholder, Wayne Sim and Laurie Ruddenklau. On that occasion we went as far as Siberia Hill. We appreciated the comments made by Wayne Sim and the discussions with both him and Laurie Ruddenklau. We have also had the opportunity to discuss the review with one of our Central Otago Branch members who is very familiar with the Mt Dasher area and wider Kakanui mountains having worked on it for some years in his younger days.

We have also consulted the Conservation Resources Report (CRR) done in 2005, the reports on the two RAPs that within the lease and the Conservation Management Strategy (CMS) for Otago.

Introduction

As described in the CRR, the Mt Dasher Lease is situated almost entirely within the Dansey Ecological District within the Kakanui Ecological Region and covers an area of approximately 7134 hectares on the Kakanui Range. It lies between the South Branch of the Kakanui River and its major tributary Deep Creek to the north and west, the summits of Obi and Siberia Hill in the south and the main north ridge of the Siberia Hill complex in the east. The PNAP survey of the Dansey Ecological District (Comrie 1989/90) recommended two areas for protection, RAP 4 Hectors (areas of broadleaf forest in the Hectors Stream catchment) and part of RAP 5 Dasher (shrubland, tussockland and cushionfield on schist and volcanic substrates).

A QEII open space covenant is in place over about 1000 hectares north of Siberia Hill and including the volcanic areas of Siberia and Kattothyrst.

The landscape with the basalt boulderfields extending down into the headwaters of Deep Creek and the caps of volcanic rock on the summits of Kattothyrst, Siberia Hill and Mt Dasher is striking.

Significant inherent values which should be protected.

The areas covered by the part of RAP 4 on the lease, forest remnants within the catchment of Hectors Creek, should be combined and returned to full Crown ownership and control as a Conservation Covenant or Area. They contain mixed broadleaf forest as described in the RAP report and are of ecological significance as remnants of the original forest cover in the region. They need to be protected from grazing and burning. Although we were unable to get down to inspect them we could see their location from the hillside above. (Figure 1) The significant inherent values as described by Comrie and noted in the CRR are of major importance. *Check with John B for new species found this year*

The rest of the lower country has been well modified by intensive farming, oversowing and topdressing and apart from a few stands of copper tussock in good condition do not warrant

protection. **One particular stand of the copper tussock close to the track should be considered for fencing and protection as a Conservation Area (Figure 2).**

RAP 5 Dasher contains a number of significant inherent values, well described in the CRR under the heading of 'Mt Dasher-Siberia Hill volcanic complex, Half Moon Spur and Upper Deep Creek catchment' as well as in the RAP description.

The landscape is outstanding and relatively unique with its volcanic landforms and relatively unmodified vegetation. It includes Siberia, Kattothyrst and Mt Dasher as well as wetlands, uncommon in the Dansey Ecological District. The geopreservation site (No 296-Dasher) at RAP 5 is of regional importance. The landforms and geology as stated in the CRR *"...represent one of the most extensive exposures of the Dunedin Volcanic Group in northeast Otago and one of the largest exposures of volcanic rock in the South Island high country. Siberia Hill is significant as a volcanic vent formed from successive basalt flows of different composition"*.

The plant communities within RAP 5 are highly representative of the pre-human vegetation. As stated in the RAP report *"Boulderfields are a feature of several other volcanic outcrops in eastern Otago, but the ones in this RAP, particularly those on Mt Dasher, are visually spectacular. In addition, in the Dasher RAP, there are subalpine shrub species not found in other east Otago basalt boulderfields such as mountain toatoa and Brachyglottis cassinioides."* (Figures 9-13)

We noted wetland areas between Mt Dasher and Kattothyrst (Figure 6) described in the CRR as *"including flushes containing sphagnum moss and sedges"*. Wetlands with associated cushionfields and sedgelands are present on Siberia Hill among the tall and copper tussock, volcanic plateau areas and broad ridge-tops and are described in the CRR.

In the short time that we had for examining the plant communities on boulderfields and a rock outcrop on Siberia Hill (Figures 9-13) it became obvious that this was a very happy hunting ground for botanical trampers, and botanists, both amateur and professional. We believe the botanical delights of Mt Dasher are not widely known and would anticipate some considerable interest from members of the public wishing to enjoy them should this RAP 5 area become a Conservation Area - as it should do. Plants seen on our brief inspection included *Aciphylla aurea* snow totara (*Podocarpus nivalis*), *Coprosma ciliata*, *Dracophyllum longifolium* and *Hebe rakaiensis* all on a boulderfield and on rock outcrops on Siberia Hill close to the track there were a highly diverse mixture of alpine plants including the orchid *Prasophyllum colensoi*, *Gaultheria crassa*, *edelweiss*, *Celmisia densiflora*, *C. lyallii*, *Aciphylla gracilis*, *A. aurea*, *Hebe buchananii*, *Brachycome haastii*, *B. bellidifolia*, *Raoulia subsericea*, and *Chionochoa rigida*.

The land above about 1000m, at about the level of the gate below Mitchells Hut, is composed of soils classified as LUC Class VIIe, with severe limitations for pastoral use and unlikely to be capable of supporting ecological sustainable pastoral use as required by the CPL Act, Section 24 (a) (i) for land to be freeholded. We therefore recommend that the land above 1000m in the Trig C, Trig B and Mt Dasher blocks be returned to Crown ownership and control as a Conservation Area incorporating the QEII covenant so that it can be better managed in a way that will protect the values as stated in the conditions of the covenant.

The stated objectives of the QEII Covenant over the area that includes the boulderfields and caps of Siberia and Kattothyrst are:-

- (a) *To protect and maintain the open space values of the land*
- (b) *To protect native flora and fauna on the land representative of mid to high altitude tall tussock grassland, shrubland and wetland communities with particular reference to the representative vegetation associations*
- (c) *To protect and maintain landscape values of the land with particular regard to the distinctive mix of landscape and associated vegetation*

(d) To continue the use of the land for pastoral farming, at low stocking rates, in conformity with objectives (a) to (c) above, while requiring change in management when monitoring proves it necessary.

We would certainly endorse the objectives of the Covenant but cannot accept that about 200 cattle grazing at an altitude of 1200m, even at a low stocking rate, will fulfil those objectives (Figure). There was obvious damage from the cattle, eg, trampling in the wetter areas.

Kakanui River

We understand that there are patches of shrubland in the South Branch of the Kakanui River (Figures 7-8) which are worthy of some form of protection. Rare plants found were *Teucrium parvifolium*, *Carmichaelis kirkii* and *Melicytus flexuosis* (John Barkla, personal communication). We suggest that one way of achieving this protection would be to enlarge the marginal strip.

Recreational opportunities and access

The securing of public access to and enjoyment of reviewable land is one of the objectives under the CPL Act Section 24 (c) (1)

We realise that public access is not straightforward given the lack of legal roading and noted that Wayne Sim is in principle sympathetic to non-motorised access. We also noted that he currently gives permission for hunters and other members of the public to take vehicles along the tracks on the lease. We do note that there is a legal road coming up from Fuschia Creek entering the Scout Hill block just east of the Hill and continues up the ridge to Trig C and on to Obi, coming in and out of the lease in several places and continuing down to the Pig Route in the Shag Valley via the Siberia catchment.

Ideally, since it is a long way for walkers/botanical trampers from the lease boundary across to Mitchells Hut and the start of the proposed Conservation Area for a day trip it would be desirable to have 4WD drive access, perhaps with the lessees permission as far as Scout Hill, so that a round trip including Mitchells Hut, Siberia Hill, Kattothyrst, Half Moon Spur and Half Moon Hut, Mt Dasher, returning to Scout Hut would be possible.

Use of Mitchells Hut (Figure 4) and Half Moon hut would make it possible for those who wished to explore the geology and vegetation to do that at leisure. We also note that since the lease borders Shingley Creek in the Pig Route it would be possible to tramp through to the Pig Route as a result of access from the outcome of that review.

The two huts are of historic interest as examples of early musterers huts and should be preserved and available for public use.

The Otago Conservation Management Strategy

The Otago CMS, recognises the Kakanui Mountains as a Special Place and states that the objectives for this Special Place are: *"to maintain the natural resources contained within the existing protected areas on the Kakanui Mountains while taking opportunities that may arise through pastoral lease tenure review to negotiate protection of and access to areas of high natural and recreational value."*

These objectives will be implemented by methods including:

- *"Foot access negotiated at key points for the public to areas managed by the Department, with public vehicular access having a lower priority.*
- *Protection of key areas for natural and historic resources will be sought through pastoral lease tenure review negotiation opportunities".*

Thus it is clear that DOC is committed to achieving its objective for the Kakanui Mountains Special

Place through the tenure review process, and that significant progress would be made towards the objective if the above outcomes can be successfully negotiated.

Summary of recommendations

- 1. That the land above about 1000m including RAP 5 and all of the Trig C, Trig B and Mt Dasher Blocks become a Conservation Area and that the QEII Covenant is revoked and included in this. This land is LUC Class LUC Class VIIe with severe limitations for pastoral use and unlikely to be capable of supporting ecological sustainable pastoral use as required by the CPL Act, Section 24 (a) (i). The significant landscape and ecological inherent values fully warrant return to full Crown ownership and control as a Conservation Area. The recreational values are also high.**
- 2. That the three areas covered by RAP 4 in the Hectors Creek catchment be included in a Conservation Covenant to protect the shrublands within them.**
- 3. That access by 4WD be available to Scout Hill at the discretion of the lessee and that non-motorised access be available along the existing track from the lease boundary to Scout Hill and on to Mitchells Hut and beyond to the back boundary of our proposed Conservation Area.**
- 4. That the rest of the lease be considered for freeholding as it is land capable of sustaining pastoral use.**

Acknowledgements

We wish to thank Opus, Dunedin for arranging our visit to the lease and Mr Wayne Sim for allowing us to inspect the lease and taking the time to come with us.

Janet Ledingham

For the Dunedin Branch of Forest and Bird

Figures



Figure 1.

Looking down into Hectors creek and the remnant broadleaf forest identified as worthy for protection as RAP 4



Figure 2. An area of copper tussock close to the track to Siberia Hill at about 750m which should be fenced and protected from grazing.



Figure 3. Extensive basalt boulderfields en route to Mitchells Hut



Figure 4. Mitchells Hut, an ideal base for botanical exploration and for trampers traversing the southern part of the lease.



Figure 5. Extensive basalt boulderfields on Siberia Hill beyond Mitchells Hut with a multitude of plants and including *Aciphylla aurea*.



Figure 6. Looking across to Kattothrust from Siberia Hill and the QEII covenant. Wetland flushes can be seen below Kattothrust. Cattle are grazing on the QEII covenant



Figure 7. Halfmoon Spur at left, South Branch of the Kakanui River, where the marginal strip needs to be increased and cattle grazing on the QEII covenant.



Figure 8. Iconic landscape with basalt boulderfields, Halfmoon Spur at left and the South Branch of the Kakanui River with Grassy Ridge at right.



Figure 9. A botanically rich rock outcrop on Siberia Hill



Figure 10. *Celmisia densiflora* on the above outcrop.



Figure 11. South Island edelweiss, *Leucogenes grandiceps* on the rock outcrop



Figure 12. A wealth of botanical delights on a boulderfield, among them *Hebe rakaiensis*, and snow totara on a boulderfield on Siberia Hill



Figure 13. Snow totara, *Podocarpus nivalis* on the above boulderfield.

CENTRAL OTAGO RECREATIONAL USERS FORUM (CORUF)

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27th February 2011

Mr Tony Perrett
Department of Conservation
77 Lower Stuart Street
Box 5244
DUNEDIN

Dear Tony

Tenure Review – Mt Dasher, PO 030 – NGO Report.

This property was first introduced to us at an NGO meeting held towards the end of 2003, we made an inspection of it in early 2004 but the property was then withdrawn from the process. It was re-introduced at an NGO meeting held last year in 2010. We made another inspection of it just recently with permission of the lessee, Mr Wayne Sim. We would like to take this opportunity of thanking him for allowing us the opportunity to do so, also for accompanying us on our inspection.

We would be pleased if you would accept these comments on this property based on our two inspections and on other documentation available to us.

The flora and fauna and other significant values have been extremely well documented in the Conservation Resources Report; we can but heed them.

Mt Dasher is in the Danseys Ecological District

1.0 Introduction and Location of the Property.

1.2 Mt Dasher is situated at the south eastern end of the Kakanui Range of mountains, which form the western boundary of North Otago. The Eastern escarpment of Siberia Hill at the back of Mt Dasher is visible from Oamaru.

1.2 The property also has attached approximately 800 hectares of freehold land to the east of the Leasehold land. This freehold land contains the homestead, woolshed and yards.

1.3 The nature of this property, and the management of it, requires a good roading system. There is a good formed road from the entrance of the property at the top of Dunrobin road out as far as the top airstrip 4km past Scout Hill, a total distance of 20km. From there on to the back of the property at Trig B there is a 4WD track, a further distance of approximately 9km. There is also a 4WD track from the Scout Hill Yards to the Half Moon Hut.

1.4 The road formation to the airstrip generally follows the line of the legal road as shown on the cadastral maps.

1.5 The lease itself, as distinct from the freehold land, starts at the junction of both the North and South branches of the Kakanui River at an altitude of approximately 300m and extends in a south westerly direction to the top of the Kakanui Range at Trig B, 1425m.

1.6 The property is distinctive in that it contains several volcanic cones both on the freehold and the leasehold land. The soil surrounding these cones is generally better than the other soils on the Kakanui Range. It is mostly where silver tussock is seen.

1.7 As the property stretches from the North Otago downlands to the crest of the Kakanui range at Trig B (which overlooks the Pigroot road), the rainfall can vary considerably between one end of the property and the other.

2.0 The Significant Inherent Values.

2.1 There are high landscape values on this property. As seen from about Trig N it is a tussock landscape, so too from Trig S, Scout hill. Seen from either of these two vantage points there are three main ridges, Half Moon Spur, Grassy Ridge in the centre and the ridge going from Scout Hill to Siberia Hill on the south side of the lease, all leading up towards the Siberia Hill - Mt Dasher escarpment and plateau - sometimes known as the Hector's Plateau.

The incised gullies between these ridges are clean tussock pretty well right to the creek beds where there is some woody vegetation, such as matagouri, coprosma and Olearia. But this does not overly interfere with the colour or texture of the otherwise almost purely mid-altitude tussock landscape, typical of the Kakanui Range. The absence of sweet briar is noteworthy.



2.2. Tall tussock near the southern boundary, below Mitchells Hut. *Photo J Turnbull.*

Recommendation: that this back (southern) block be returned to Crown control.

2.2 The original tall tussock has been modified in the past with burning, and more lately with over-sowing and aerial top-dressing, consequently the tussock is mostly short in stature, interspersed with sweet vernal, browntop and white clover. There are some patches of tall tussock next to the south boundary of the property between the top airstrip and Siberia Hill that appear to have escaped burning, probably due to the fact that the ground is more broken here, and it is also wetter, as there are several flushes or springs in this area draining into Quinns Creek.

2.3 The volcanic boulder fields on the eastern slopes of Siberia Hill and around towards the Half-moon Spur are distinctive and add high interest to the landscape values of the escarpment.

2.4 Siberia Hill and its several volcanic outcrops and boulder fields are a safe haven for species of celmisia, the south island edelweiss, hebes, dracophyllum and mountain Totara. These areas are veritable rock gardens



2.4. The volcanic rock outcrops and boulders are veritable rock gardens. *Photo J Turnbull.*

Recommendation: that all of the upland volcanic landscape be returned to Crown control.

2.5 The two blocks of land known as Mt Dasher and Trig C containing the spectacular volcanic cones of the Kattothyrst, Mt Dasher and the extensive boulder fields extending down into the headwaters of Deep Creek, are an exceptional ecological area. The vegetation is relatively unmodified.

For this reason the PNA survey conducted in 1998-1990 recommended that this area and the many significant values that it contains it should be protected. This resulted in the creation of **RAP 5** (1620ha.) It is a large area extending from the head waters of Deep Creek to take in the larger north eastern half of the plateau area extending into the neighbouring property, The Dasher, down as far as the hut on the Cayenne Spur.

2.6 A feature of this RAP is that it contains some of the only wetlands in the Dansey Ecological District. It is an extremely valuable RAP.

2.7 There is a QEII covenant of approximately 1000ha over part of this RAP, but it seemed incongruous to us that when we visited there was a large mob of cattle grazing these wet areas.



2.7. Cattle grazing the QE II covenant within RAP 5. *Photo J Turnbull*

Recommendation: that the Covenant be absorbed into the conserved area, and stock grazing prohibited, as RAP5 is returned to Crown control. A good example of the volcanic stone fields and the near-vertical outcrops can be clearly seen on Kattothyrst peak behind.

2.8 The back block, south of the above two blocks, has good landscape values in its steeper ridges and spurs, which also contain vestiges of endangered indigenous vegetation.

2.9 There is a portion of RAP 4 at the head of Hectors Creek in the Hectors block. This RAP and the portions further down the creek contain remnants of a broadleaf podocarp forest. While we did not visit this, it has been reported to us that they are in good condition, mainly due to the steepness of the area.

2.10 The main threat to these remnant forests will come from wild deer and pigs, and so hunting should be encouraged.

3.0 Designations.

3.1 The two plans, in the Conservation Resources Reports for the property, 4.2.2 (Landscape Values) and 4.2.3 (Ecological and Recreational Values) tell us that the land they indicate should most certainly be returned to the Crown for protection.

3.2 The land they indicate is mostly above 1000 metres and will not be ecologically sustainable to farm, without replacing the minerals taken off as meat and wool.

3.3 While some of the lower land at the bottom of the gullies at the head of the various creeks and rivers indicated will be Class VI, the bulk of the higher ground will be Class VII and out at the very back (south) could be Class VIIIe which would not be economically viable to over-sow or to top-dress with phosphates.

3.4 All of that land below the Mt Dasher and Trig C blocks is mostly below about 1000m. and being Class VI, if top-dressed on a regular basis should be able to be managed in a manner that is ecologically sustainable. "...the main aim of the CPL Act 1998 is to manage reviewable land in a manner that is ecologically sustainable...."

3.5 A line could be drawn from about the Half Moon hut across to Mitchells Hut to delineate this 1000 m "boundary", in fact there is a fence in the vicinity that could be adjusted to suit.

3.6 We agree with others that if tenure review were to be completed on this property, there is room to include an easement for a water-take for the Dunrobin Water Supply Inc., from the head of Quinns Creek (just behind Mitchells Hut) to where the pipe line exits to the east of Scout Hill.

4.0 Access and Recreation.

4.1 The Siberia Hill-Mt Dasher plateau country is unique to New Zealand but for people to appreciate it they must have access to it. The willingness of the lessee Mr Sim to allow walking, cycling and horse riding access to it is greatly appreciated.

Having volcanic outcrops situated on a range of mountains such as the Kakanui Range adds to its appeal for recreationalists.

4.2 While the area is relatively remote this gives it a certain attraction. It will be a must see area for walkers, trampers, bikers, horse riders, botanists, nature and landscape photographers, artists, cross-country skiers when conditions are right, hunters and many others.

4.3 Most of the leases on the range have been in tenure review, and if all complete the process there will be sufficient land area to create a sizeable and coherent Conservation Area. Mt Dasher will be a valuable addition to any such Area.

4.4 If Mt Dasher finishes up as an isolated Conservation Area, the significant inherent conservation values it contains, would, if it were in any other country such as the United Kingdom, make it an outstanding candidate to be a National Park.

4.5 While it is not a function of the CPL Act 1998 to create conservation parks out of tenure review it is only reasonable that we do not lose sight of the fact that it could over time be the result that a **Kakanui Range Park** came into being.

4.6 It is noted on Plan 4.2.1 (Cadastral and Topographic and Cadastral boundaries map) that there is a legal road coming up from Fuschia Creek entering the Scout Hill block just east of the Hill and continuing up the ridge to Trig C and on to Trig B, entering and exiting the property in several places. This route would be the logical public access to any Crown land.

4.7 Early surveyors who created these roads had an uncanny knack of having them pointing in the right direction – they were surveying roads for the future. Now that there is in New Zealand a Walking Access Commission charged with the task of creating public access to areas of interest, in the future significant public access could be available across this Lease.

4.8 A crossing of the Kakanui Range on foot from the Pig Root Road into North Otago by whatever route would become a classic tramp, and we recommend that such a route be identified and put in place for hiking, biking, and horse riding.

4.9 The existing back country huts would be retained as accommodation for hikers and bikers.

4.10 The whole area is very popular with deer and pig shooters.

5.0 In Conclusion.

5.1 We cannot over-emphasize the values contained in the three back blocks of land containing RAP 5 and all the land south of it to the boundary of The Dasher. They are all outstanding, as visual landscapes, natural landscapes, and for public recreation, and we vigorously promote their return to the Crown for full protection. A line drawn from about the Half Moon hut across to Mitchells hut divides this upland area from lower slopes, and a fence in the vicinity could be used to mark off the area.

5.2 The landscapes alone, in this whole unusual geological area of the Hectors Plateau, are a significant value in themselves.

5.3 The portion of RAP 4 in the Hectors block is steep and already has a covenant over it. This should suffice to protect the values it contains. If any review were completed on the lines we have expressed, the QEII covenant within RAP5 could be revoked.

5.4 Biking, walking, horse-riding and hunting access should be incorporated into any Proposal made, so that the Proposal fully and generously allows for future "cross-range" (NE-SW) and "length of the range" (W-E) routes on this Lease, as part of a wider, cohesive pattern of public access to and use of these extraordinary mountains.

5.5 Retaining or providing accommodation huts would be a significant part of public access provisions.

6.0 Future Development.

6.1 Any designations for the Hectors Plateau should include protection of a visual landscape which we believe to be of national importance, from inappropriate development. CORUF has argued for this elsewhere, in respect of the attempted, inappropriate siting of a wind farm on the Lammermoors, and found that the Court supported our view. One cannot have a remote natural landscape, and also incorporate into it industrial developments, the one destroys the other.

While development may not be the traditional business of Tenure Review, it has indeed been the subject of discussion in other recent Reviews (for instance in the Nevis Valley).

Thus it is important that in acknowledging the high, wild and unique geological qualities of these extraordinary ranges, by returning them to full crown ownership and control, the Crown also recognises the need to secure landscape protection for them in specific rather than in ambiguous terms.

We thank you for the opportunity to have this input into the process.

Yours faithfully

J. L. Turnbull and J. Kelly for CORUF



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25 February, 2011.

Report on the ecological values, and recommendations for the preliminary proposal for the Tenure Review of Mt Dasher P. L.

This report is based on a recent (February, 2011) visit to the property with four others and also the leasee Mr Wayne Sim and his neighbour Laurie Ruddenclau, who accompanied us out as far as the Siberia Hill block which is a registered ~1000 ha QE II Conservation Covenant. Having had a minor involvement with the Protected Natural Area (PNA) Survey of the Dansey Ecological District by Ms Joy Comrie in 1989-90, I am aware of and familiar with the two areas Recommended for Protection in her 1992 published report. One is the RAP 4 – Hectors, being 160 ha comprising three discontinuous forest remnants of about equal size within the Hectors Creek catchment, the upper one of which (~50 ha) is located within the Mt Dasher property. The second is RAP 5 – Dasher, being a 1620 ha area of the extensive gently inclined mountain top, lying to the east of the main Kakanui Mountains as an area of schist overlain by caps of volcanic rock which form the impressive summits of Mt Dasher (1304 m), Mt Kattothyrst (1293 m; with an obvious volcanic vent) and Siberia Hill (1272 m), all of which are within the pastoral lease and the latter two within the covenanted block. I complimented Mr Sim on the apparent absence of any woody weeds, particularly wilding pines, on his property and he indicated that he had made a particular effort in this regard.

Although the forest remnant stand of RAP4 could not be visited in the time available it was seen from near the main access track less than a kilometre distant, with binoculars, in the deeply incised Hectors catchment (Fig 1). These stands are clearly of 'Significant Conservation Value, being of considerable ecological significance as remnants of the pre-human-settlement forest in this Ecological District. The remnants still retain a representative biodiversity, as described in Comrie's PNA report. Being too steep for a practicable fenced boundary, a formal covenant is justified, extending down Hectors Creek to the property boundary and both upslope and upstream to contain all of the woody remnants. There should be a no-burning condition placed on this covenant which, contrary to Mr Sim's claim when discussing this issue with him on site, would not preclude burning within 1 km of the covenant boundary as he implied, but only within the actual boundary of the covenanted area. Consideration could be given to this aspect when defining the boundary of such a covenant.

The slopes surrounding the woody remnants in Hectors Creek catchment and much of the property below the lower boundary of the existing QE II Covenant appears to have been relatively intensively farmed, and apart from some local areas of good condition copper tussock (*Chionochloa rubra* ssp. *cuprea*) grassland, which has 'Significant Inherent Value'. These stands have persisted probably because of their lower palatability and attraction to stock (Fig. 2), would justify formal protection as an area of SIV for both its ecological and landscape values. One of the larger areas, such as that shown in Figure 2, close to the access track, should be fenced to secure it from further grazing and be formally protected.

The higher country to the southwest of the property, including a large part of the RAP 5 – Dasher (1620 ha: probably ~1000 ha), together with the remaining part of the property to its boundary in the southwest (which apparently already has been retired), plus the much smaller area (~100 ha) to the northwest of the RAP, to the property boundary, should all be formally protected as part of the tenure review because of its very high intrinsic (collectively ecological, biodiversity and landscape values). The ~1000 ha Open Space Covenant, executed on 1 December 2001 has, in its First Schedule, several stated objectives as follows:

- a) *To protect and maintain the open space values of the land.*

- b) *To protect native flora and fauna on the land representative of mid to high altitude tall tussock grassland, shrubland and wetland communities with particular reference to the representative vegetation associations.*
- c) *To protect and maintain landscape values of the land with particular regard to the distinctive mix of landforms and associated vegetation.*
- d) *To continue to use the land for pastoral farming, at low stocking rates, in conformity with objectives (a) to (c) above, while requiring changes in management when monitoring proves it necessary.*

These objectives appeared not to being fulfilled at the time of our visit, with some 200 cattle having been released into the covenanted area shortly before our visit and, according to the lessee, due to remain there for some two months. The impact of these cattle was already apparent in the form of trampling, particularly on the many 'soggy' areas among the snow tussocks and in the local wetlands, and also the initial grazing of the prolific tussock seed heads, this season being one of the periodic masting years for species of *Chionochloa* (Fig. 3). When questioned regarding the purpose of this Covenant the lessee responded that it was primarily to exclude a role for the Department of Conservation. Regarding the likely impact of the cattle grazing I was told that a representative of the QE II National Trust visited the area for a day about every second year and was the only person who got down on their knees to observe the plants at close quarters.

There should be no question as to the potentially very high intrinsic value of this covenanted area, which includes basalt boulderfields with distinctive shrubland communities (Fig. 4) and also outcrops of basalt and schist with their own distinctive floras (Fig. 5). I do not believe these values are being promoted or even retained with its current management as a QE II Covenant. I believe, therefore, that none of the four objectives of the covenant are being fulfilled under the present management. Cattle grazing of the current intensity and duration is, in my view, unacceptable on this high plateau where much of the land, with its very high intrinsic values, mostly exceeds 1200 m elevation and has a Land Use Classification of Class VIIe, implying very limited production potential with an erosion hazard. It is therefore, unlikely to be ecologically sustainable under the existing management in the long term.

My recommendation, therefore, is that a condition of the tenure review should be revocation of this Covenant, and that this area, together with all of the remaining land in the three top blocks of the property be destocked and returned to full Crown ownership. control and management as a single unit. In this way the many significant intrinsic values described by Comrie (1992) for the Dasher RAP: "The combination of relatively unmodified vegetation and volcanic landforms makes the Dasher RAP one of the most valuable in Dansey Ecological District", and also recognised in the Conservation Management Strategy for Otago (Special Place 14: Kakanui), and in DOC's Conservation Resources Report, and also as a recognised Geopreservation Site (No 296: Dasher), would all be adequately protected.

As is usual with tenure reviews of pastoral leases, public access is a very important aspect to consider. This is particularly important with Mt Dasher, given the location and extended shape of the property, with the area recommended for protection and, beyond this, the main axis of the Kakanui Mountains at its most remote eastern end. Mole Hill Road, which we used as access, crosses freehold land and apparently the actual road does not always coincide with the legal 'paper' road, despite it being maintained by the District Council. I understand that the lessee, Mr Sim, is agreeable in principle, to walking, mountain bike and horse access across the Mt Dasher pastoral lease. This is most commendable and hopefully, can be formalised as an aspect of tenure review, at least as far as the boundary of the land which was to be transferred to Crown ownership and control at the eastern end of the property. This track currently passes Trig B, "Obi", from where there is a continuation of the track, providing access to the highway in the Shag Valley via the Siberia catchment.

I trust you will find these comments helpful. A copy will be provided to the lessee Mr W. Sim.

Sincerely, Alan Mark, FRSNZ, Emeritus Professor.

cc. My Wayne Sim, Mt Dasher Pastoral Lease, Five Forks, RD, Palmerston.



Fig. 1. View down into Hectors Creek catchment from near the access track, showing patches of forest remnants, part of RAP 4. February, 2011.



Fig. 2. Localised areas of copper tussock (*Chionochloa rubra* ssp. *cuprea*) grassland on a poorly-drained site alongside the main track to Siberia Hill at ~700 m near Mt Difficulty. Such an area is worthy of a stock-proof fence and formal protection. February, 2011.



Fig. 3. View east from near Siberia Hill (1272 m), across the Conservation Covenant to the impressive volcanic plug of Kattothyrst, 1293 m, showing a variable cover of heavily-flowering snow tussock in the low-alpine grassland, a localised basalt boulderfield below the summit, and part of a herd of ~200 cattle which had been recently released in the Covenant and were beginning to crop the snow tussock flower heads. February, 2011.



Fig. 4. A localised basalt boulderfield on the upper slopes of Siberia Hill showing the associated shrubs of snow totara (*Podocarpus nivalis*), *Coprosma ciliata*, *Dracophyllum longifolium* and *Hebe rakaiensis*, plus golden spaniard (*Aciphylla aurea*). February, 2011.



Fig. 5. A rock outcrop near Siberia Hill with a highly diverse mixture of alpine plants including *Celmisia densiflora*, *C. lyallii*, *Aciphylla gracilis*, *A. aurea*, *Hebe buchananii*, *Gaultheria crassa*, *Leucogenes grandiceps* (S.I. Edelweiss), *Brachycome haastii*, *B. bellidifolia*, *Raoulia subsericea*, *Prasophyllum colensoi* and *Chionochloa rigida*.

AGENDA ITEM 9.1

MT DASHER – EARLY WARNING TENURE REVIEW INSPECTION



On the lower part of the access track looking south west towards Mt Domet across the property.

Inspection Report

On Thursday 10th February 2011, a visit was made to the Mt Dasher Pastoral Lease for an early warning inspection - along with Dunedin- based Sir Alan Mark and Janet Ledingham of Forest and Bird. A Central Otago representative of Federated Mountain Clubs, Mike Floate, and John Turnbull of Forest & Bird, also joined us for the trip.

Driving in via Maheno and Five Forks, we met at the farm woolshed, Wayne Sim the leaseholder, and his farming neighbour Laurie Ruddenklau, who joined in to guide us on the property field trip.

The Mt Dasher property runs from the foot hills on the Kakanui-Oamaru plains, up the north-facing slopes and valleys of the Kakanui Mountains rising to the tops of Siberia Hill (1272 m), and over to Mt Dasher (1304 m). The south branch of the Kakanui river, Mole Hill Creek, and Hectors Stream arise on the property and flow northwest and northeast in steeply incised valleys to the flats below. The south east higher part of the property lies over a volcanic dome, Siberia Hill, with its top just to the northeast of Kattothyrst hill (1293 m). This gives rise to local basalt boulder fields, with the rest being low grade schist rock. The basalt-derived soils on a lot of the higher ground are quite fertile in comparison with the schist-based soil development, and would give considerable local fertility to this area.

AGENDA ITEM 9.1

The property was included in the PNA Programme, and its geological and natural features were written up at the time in the document "Dansey Ecological District" by Joy Comrie (DOC Report 23, ISSN: 0112-9252); including areas identified for their conservation value, Dansey RAP 5- Dasher.

In convoy, we followed the leaseholder up to the track below Mole Hill, where the freehold/leasehold boundary occurs. From there we followed a track for about 18km on the ridge between Mole Hill Creek and the south branch of the Kakanui, right up to the back of the property looking over towards Mt Dasher and Kattothyrst on the leasehold back section. The track passed Scout Hut at the base of Scout Hill, Siberia Hut below the shoulder of the volcanic dome Siberia Hill, and eventually we looked down towards Half Moon Hut near Mt Dasher. On the northeast tops of the volcanic dome, the catchment supplied a water scheme piping water from below the summit down to farm properties from Kauru Hill through to behind Marakerake.

The vegetation cover lower down consisted of highly modified festuca tussock oversown with ryegrass clover. As we rose in altitude, this graded into snow tussock [*Chionochloa rigida*] cover with red tussock [*Chionochloa rubra*] on the flatter wet areas. The snow tussock cover varied in quality, with pockets of reasonably good cover running into large areas reduced through burning and grazing. It was felt, if anything, that the snow tussock cover had been reduced since that survey - a view reinforced by Alan Mark's impression since he last visited the property during the PNA survey.



Looking down the access ridge towards Scout hut to the right of the trees.

AGENDA ITEM 9.1



Looking up south across the property towards Kakanui peak.

Oversowing had occurred throughout up to 1200m and Wayne the leaseholder used the higher land for summer grazing.

In the valleys, pockets of native shrubs and trees existed, comprising broadleaf and fuchsia with *Coprosma* sp. common.

AGENDA ITEM 9.1

Looking north east down Hectors stream showing relict forest pockets of broadleaf etc.

On the boulder fields, *Hebe pinguifolia*, *Podocarpus nivalis* and *Dracophyllum uniflorum* existed - along with *Celmisia densiflora*, *Celmisia lyallii* and *Ranunculus* sp.; *Aciphylla scott-thompsonii*, *A. aurea* and *A. gracilis*; *Gaultheria crassa* and *Phormium cookianum* to name a few. The property was remarkably free of weeds. Local patches of *Hieracium* were evident, but the only gorse seen was a number of small seedlings near the track by Siberia Hut, where nearby on the side of a water course were a group of small willows.

Paradise shelducks were seen near Scout Hut on the way up the access track.

A block of higher altitude land about 1000ha canted around Siberia Hill volcanic dome was now in a Queen Elizabeth the Second Covenant, and had good to very good snow tussock cover mostly in flower at the time of our visit. However a couple of days prior to our visit, about 200+ cattle had been moved up into the area on the Trust land for summer grazing (surprisingly in terms of conservation this was allowed under the QE II Trust Covenant).

AGENDA ITEM 9.1



In the QE II covenant land looking from Siberia Hill southwest towards Mt Dasher and Kakanui peak.

Land management consisted of infrequent burning (the leaseholder said they had only burnt the property twice in the last 18 years), oversowing and topdressing. The leaseholder said that the biggest impact on the native forest pockets in the valleys was from possums, although a more recent Animal Health Board poisoning campaign (particularly based around using ferotox baits) was very successful.

The track we drove up is in good condition until the final 5 - 6 km, where it was wetter and it traversed the boulder field area where the going was rough. The leaseholder discussed access, saying that they gave permission to people who asked to walk, ride and cycle over the tracks. They said that the most frequent users were hunters who regularly gained a lot of satisfaction hunting in the area.....although they talked about an upcoming cavalcade going through, as well as local four-wheel drive club trips in the area in the past.

I asked Wayne Sim, the leaseholder, what he would like from the tenure review. He said he was willing to give up the back 1000ha that extended past the southern boundary of the QEII covenant block and which incorporated Mt Dasher itself, but he wanted to retain the property up to the QEII covenant boundary on the north slopes of the volcanic dome.

AGENDA ITEM 9.1

Summary and Recommendations

1. Most of the lower country is highly modified through past burning, grazing and oversowing. Here pockets of relict native vegetation remaining in the valley bottoms could be considered for protection consistent with the PNA Programme findings.
2. Taking in the southern back country 1000ha block into reserve, as considered by the leaseholder, would add a good area of higher altitude snow tussock grassland and its associated indigenous species for protection.
3. This reserve would be even more valuable if it included the 1000ha QE II covenant land, but with the covenant removed and the land coming under reserve status to remove grazing pressure. This would then include land on the top and flanks of Siberia Hill retaining its shoulders flanked in snow grass grasslands. Siberia Hill is one of the largest volcanic masses of the Dunedin Volcanic group, but differs in having petrographically and chemically distinct lava flows overlying one another.
4. Public vehicular access was made available up the main farm access track that we travelled, up to or close to the existing QE II boundary on the flanks of Siberia Hill.
5. North Otago-based recreational hunters are getting a lot of satisfaction gaining access on to this and neighbouring properties, and this recreational use should be encouraged and fostered in any future DOC management of the area.

David K Holdsworth

14th February 2011

APPENDIX 7

Qualifying Waterways Report



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17 January 2007

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CHRISTCHURCH

WATERWAYS ON MT DASHER STATION – INSPECTION REPORT

On Tuesday 5 December 2006 & Tuesday 16 January 2007, under instruction from Bob Webster of Opus International and under direction of Steve Copson, I undertook an inspection of waterways on Mt Dasher Station to determine stream widths. The weather had been dry in the morning of December 5 but low cloud and misty drizzle started affecting the Kakanui Mountains in the afternoon and with the cloud level dropping I was not able to complete the inspection in one day. The waterways were all running clear and within their normal flood banks on both days of inspection.

Methodology of Investigation

The streams were visually inspected to ascertain a typical section of stream over which to make the measurements. Areas where the stream was either wider than normal, such as at corners, or narrower than normal, were excluded from measurement.

Photographs were taken of each stream and waypoints taken as a reference for the photos. Some of the photos have a point of reference being a 3m pole placed in the centre of the stream to give scale to the stream.

The measurements were tallied and an average width derived.

The Waterways

Deep Creek.

This is a major tributary of the Kakanui River with headwaters in the Kakanui Mountains.

The true left bank has existing public access via a riverbank reserve as shown on SO2291. The true right bank has no existing marginal strip but is clearly shown as having a reasonable width depicted on SO702.

At waypoint 20 just downstream of the proposed conservation estate boundary the stream averaged about 5-6m. There were some very deep pools in places and ample evidence that the stream runs higher quite regularly witnessed by the smoothness of water-worn rocks in the gorge sections well above the normal water level.

Two tributaries of Deep Creek

A tributary of Deep Creek at waypoint 19 was inspected and was found to be 1.5-2m average width.

Another tributary further down stream at waypoint 21 was of a similar size.

Kakanui River.

The proposed freehold adjoins a very small section of the Kakanui River immediately downstream of the confluence of the north and south branches. As can be seen in photo 151 the river is well over the qualifying 3m.

South Branch Kakanui River.

Along with the north branch, the south branch of the Kakanui River has its headwaters in the Kakanui Mountains. Spurs and gullies extending north east of these mountains are high enough to capture coastal cloud and hence keep these streams well supplied with water.

The two branches meet at the northern most point of Mt Dasher Station and the confluence is recorded on photo 151.

Again the true left bank of the south branch has an existing riverbank reserve as shown on SO2290 & SO13236. The right bank has no existing public access protection as shown on SO702.

Measurements were taken at the confluence with Quinns Creek at waypoint 22 and downstream visually from the air until the confluence with the north branch. The upstream terminal is a confluence of two tributaries within the proposed conservation estate at waypoint 23.

Quinns Creek.

Quinns Creek is a substantial tributary of the south branch. From the confluence with the south branch at waypoint 22, Quinns Creek is very similar in size to the south branch. Measurements taken at waypoints 24 and 25 suggest that the terminal is at waypoint 25 being the confluence of two tributaries.

Hectors Creek.

Hectors Creek is contained within a very steep sided valley and has well established rocky banks. There was a considerable volume of water even at waypoint 009 considering the size of the catchment shown on the maps. I think that the flat topped ridge between Siberia Hill and Three Brothers Rocks is like a giant sponge that constantly feeds water into streams like Quinns Creek and Hectors Creek.

The upstream terminal is the confluence of two tributaries, both of which are 1.5 to 2m wide.

Summary

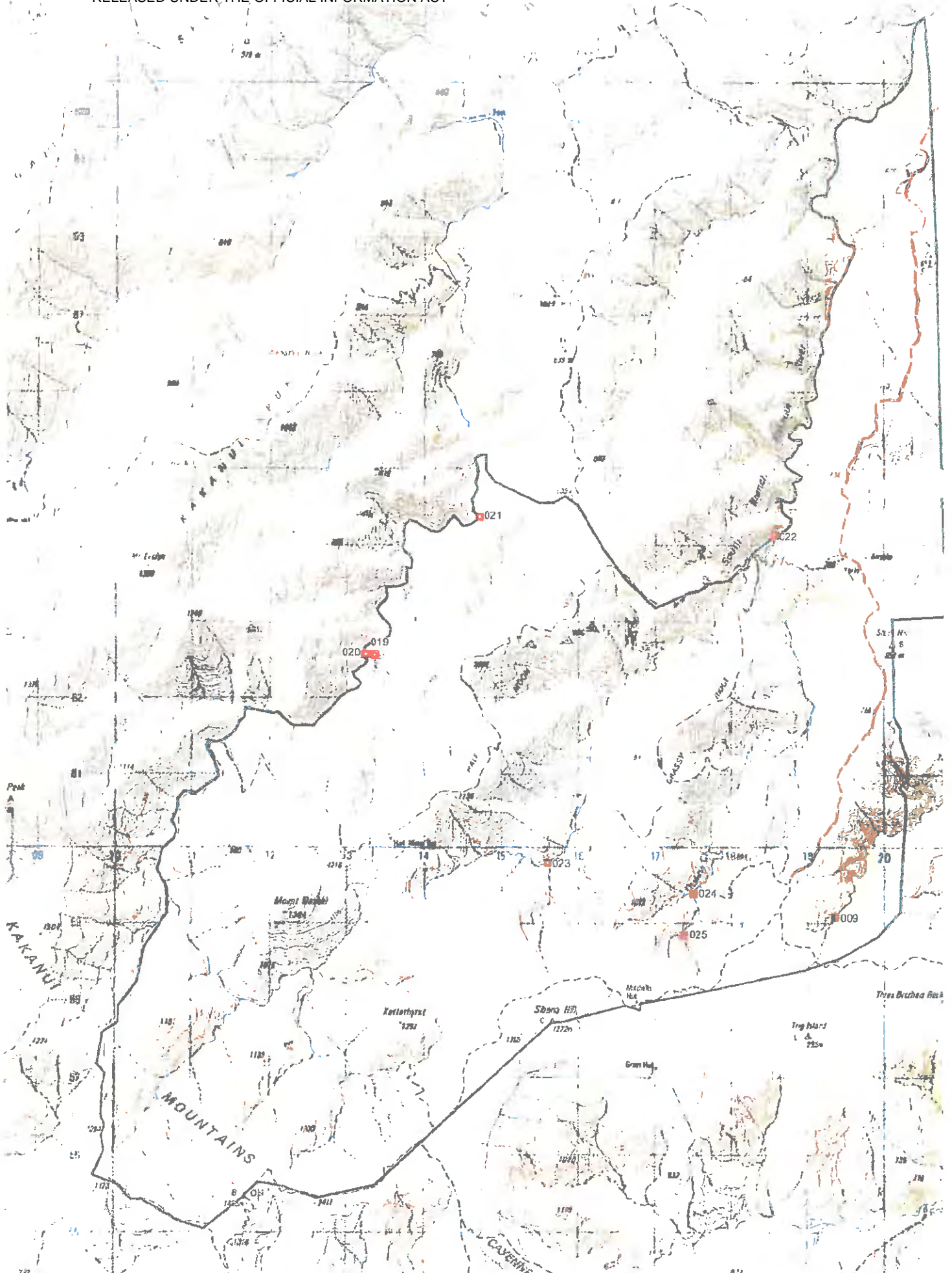
The Kakanui River, the south branch of the Kakanui River, Deep Creek, Quinns Creek and Hectors Creek all qualify and will be subject to Sec 24 of the Conservation Act upon disposition

No other streams in the proposed freehold qualify.

Yours faithfully

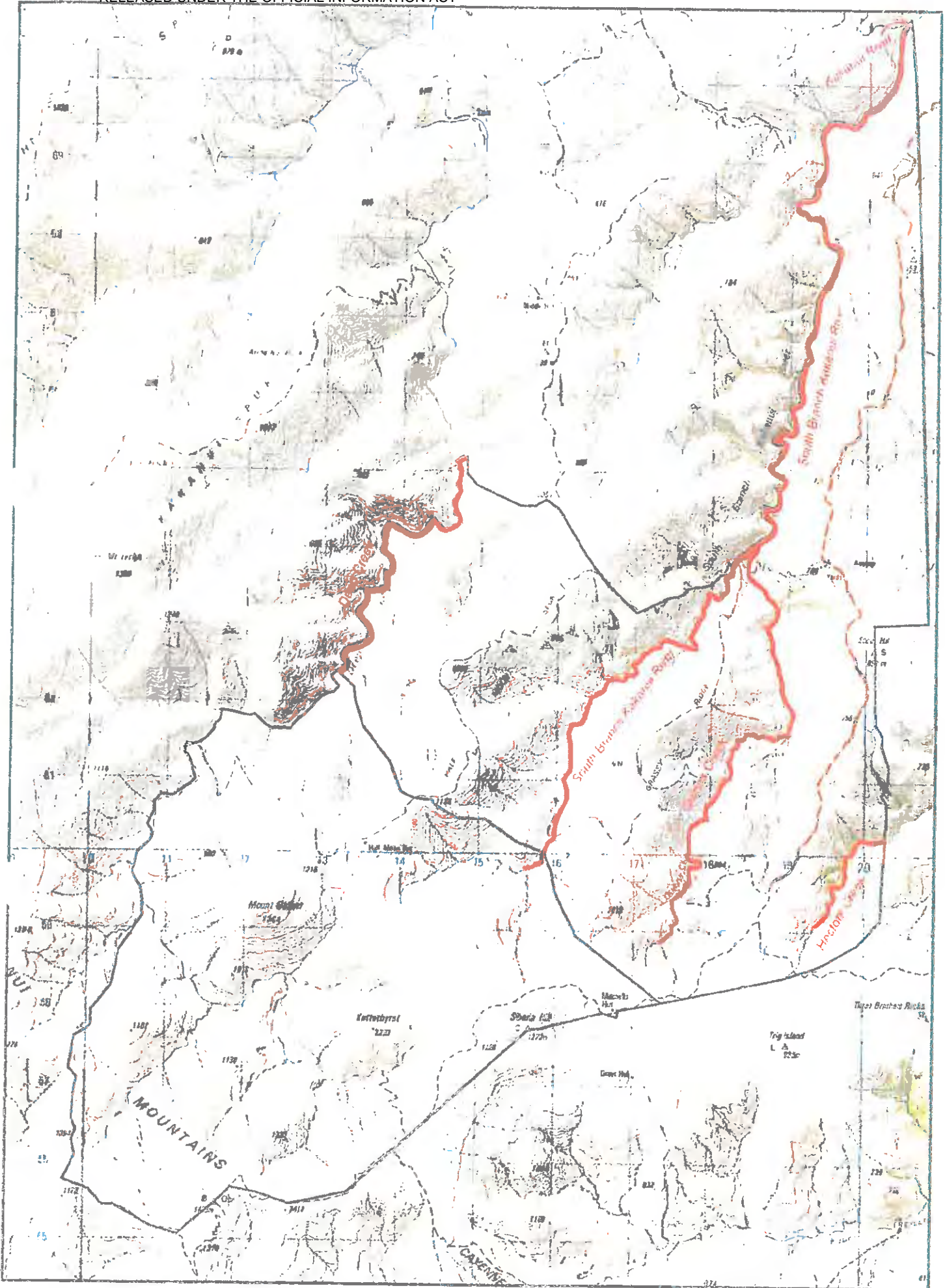


Bruce Soper
Surveyor



WAYPOINTS MAP
MT DASHER STATION

Scale 1:60000



QUALIFYING WATERWAYS PLAN
MT DASHER STATION

Scale 1:60000

Qualifying Waterway



Waterways on Mt Dasher Station



Photo 148, Waypoint 19



Photo 149, Waypoint 20



Photo 150, Waypoint 21



Photo 151
Confluence of the two branches of
the Kakanui River



Photo 152, Waypoint 22

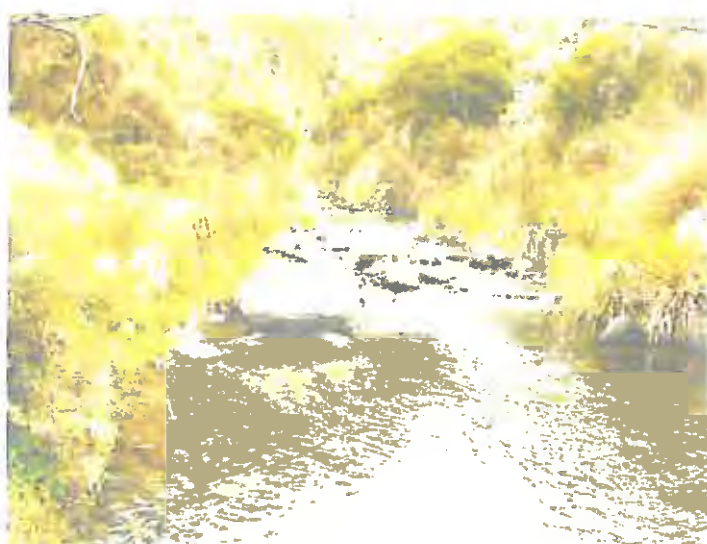


Photo 153, Near waypoint 22

Waterways on Mt Dasher Station



Photo 154, Waypoint 23

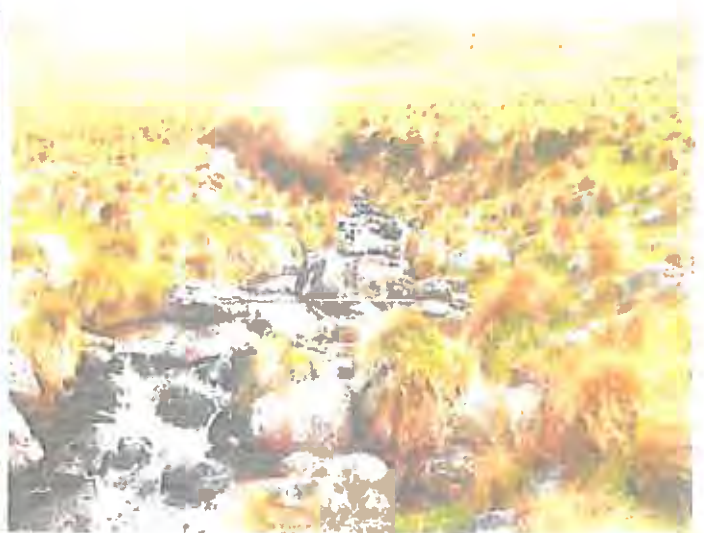


Photo 155, Waypoint 24



Photo 156, Waypoint 25



Photo 44, Waypoint 9
Upstream terminal of Hectors Creek