

Memo



To:	Blair Devlin, Senior Policy Analyst
From:	Briana Pringle, District Forester
Date:	Wednesday, 23 January 2013
cc:	
Subject:	Review of the Queenstown Lakes District Plan including rules relating to forestry and wilding spread.

Dear Blair,

In response to your memo dated 29 November 2012;

I have reviewed the list of tree species and support retaining the tree types identified in the list below as (a) – (h), and (k) - (m), as wilding spread from these trees is well documented and can have an adverse effect on the environment of the Queenstown Lakes District.

I have also reconciled this list against the list in the '*Wilding Conifers in New Zealand: Beyond the status report*' commissioned by MAF and have added the following species (i) and (j) contained in this report.

Item (i) on the list is Mountain Pine/Dwarf Mountain pine (*Pinus mugo*), which is spreading up in Muddy Creek and poses a wilding threat to the surrounding landscape. Item (j) on the list, Maritime pine (*Pinus pinaster*) is also recorded in the National Status report as having moderate spreading vigour recorded within New Zealand.

- (a) Contorta or lodgepole pine (*Pinus contorta*)
- (b) Scots pine (*Pinus sylvestris*)
- (c) Douglas fir (*Pseudotsuga menziesii*)
- (d) European larch (*Larix decidua*)
- (e) Corsican pine (*Pinus nigra*)
- (f) Radiata Pine (*Pinus radiata*)
- (g) Bishops pine (*Pinus muricata*)
- (h) Ponderosa pine (*Pinus ponderosa*)
- (i) Mountain Pine/Dwarf Mountain pine (*Pinus mugo*)
- (j) Maritime pine (*Pinus pinaster*)
- (k) Sycamore
- (l) Hawthorn
- (m) Boxthorn

I recommend removing from the list the following species from the list:

- All Eucalyptus varieties – Eucalyptus have low spreading vigour and are not a wilding issue in the Lakes District, Eucalyptus should be allowed as a plantation species within the Wakatipu.
- Gorse - this is not a wilding tree and is dealt with under the Otago Regional Council (ORC) Regional Pest Management Strategy.

- (b) Volume and disposal of hazardous waste, and hazardous substances*
- (c) Production of noise and odour;*
- (d) Associated earthworks, and potential effects on water quality*
- (1) In considering whether the forestry activity will adversely affect the ecological values of the surrounding environment, the following matters shall be taken into account:*
 - (a) Current and future demand on water resources.*

Under assessment matter 5.4.2.3 **xxx Site Standard – Planting of tree species with wilding potential**– the following will not be addressed under the DSS tool.

- 2. In considering whether the proposed planting will cause adverse effects on landscape values, the following matters shall be taken into account:*
 - (a) The existing character of the surrounding landscape, having particular regard to whether it has an open character at present;*
 - (b) The potential for the planting to block important views from roads and other public places;*
 - (c) The proximity of the planting to neighbouring properties, and the potential to shade and/or block views from neighbouring residences*

In terms of confirmation that wilding spread will arise from new planation forestry, below are a couple of examples of wilding spread from mature trees, photos and map examples attached as **Appendix B**.

- Long Gully – spread past 1.5 km
- Lower Shotover – spread past 2.5 km

Yours sincerely



Briana Pringle
District Forester
Queenstown Lakes District Council

DSS 1. CALCULATING WILDING SPREAD RISK FROM NEW PLANTINGS^{a,b}*(Select score applicable for each of the five categories)***Version_07011; Issue date: June 2012****1. SPECIES – GROWTH** *(score for one species only)***Spreading vigour varies with species**

- Redwoods, Leyland cypresses, cedars and spruces (very low risk – no need to proceed further) 0
- Radiata (*P. radiata*) and ponderosa (*P. ponderosa*) pine, Lawsons cypress (*C. lawsoniana*) 1
- Muricata (*P. muricata*) and maritime (*P. pinaster*) pine and larches (*Larix* spp) 2
- Corsican (*P. nigra*) and mountain/dwarf mountain (*P. uncinata/mugo*) pine 3
- Douglas-fir^g (*Ps. menziesii*), Scots pine (*P. sylvestris*) 4^g
- Lodgepole/contorta pine (*P. contorta*) 5

*Enter score (0, 1, 2, 3, 4 or 5) here***2. SPECIES – PALATABILITY****Palatability varies with species**

- Radiata, maritime and ponderosa pine 1
- Lodgepole and muricata pine and European larch 2
- Scots and mountain/dwarf mountain pine and Douglas-fir 3
- Corsican pine 4

*Enter score (0, 1, 2, 3 or 4) here***3. SITING OF NEW PLANTING^{c,d}****Trees are located on**

- Sites well sheltered from prevalent and strong winds 0
- Flat sites (<10°), partially exposed to strong/prevalent winds 1
- Lea slopes where strong eddy gusts are likely 2
- Flat sites (<10°), fully exposed to strong/prevalent winds 3
- Either elevated 'take-off' sites, (ridge-tops, or base of exposed slopes >10°) 4
- or sloping land, fully exposed to strong/prevalent winds

*Enter score (0, 1, 2, 3 or 4) here***4. DOWNWIND LANDUSE – GRAZING****Wilding establishment influenced by grazing (particularly with sheep)**

- Intensive grazing on developed pasture 0^d
- Regular mob stocking with sheep^e 1^d
- Semi-improved grazing (sheep/cattle)/ occasional mob stocking with sheep 2^d
- Extensive grazing only^e 3^d
- No grazing 4^d

*Enter score (0, 1, 2, 3 or 4) here***5. DOWNWIND VEGETATION COVER** *(if Douglas-fir involved see^g in Notes)***Wilding establishment influenced by competition from existing vegetation**

- Plantation forest, developed pasture (intensive grazing) 0^d
- Native forest^h, shrubland/tussock/grassland with a continuous and dense vegetation cover 1^d
- Forest/shrubland/tussock/grassland with few gaps 2^d
- Open forest and/or scattered patches of dense shrubland/tussock/grassland with many gaps 3^d
- Open slips/rockland and/or light, low-stature shrubland/tussock/grassland 4^d

*Enter score (0, 1, 2, 3 or 4) here***TOTAL SCORE***(See Assessment below for interpretation)*

DSS 2. CALCULATING RISK OF WILDING TREE SPREAD INTO/WITHIN NEW SITES ^{1,7}

(Select score applicable for each of the six categories)

Version 07011; Issue date: June 2012

1). SPECIES PROVIDING SEED SOURCE (score for one species only)

Spreading vigour varies with species

- Redwoods, Leyland cypresses, cedars and spruces 0
- Radiata (*P. radiata*) and ponderosa (*P. ponderosa*) pine, Lawsons cypress (*C. lawsoniana*) 1
- Muricata (*P. muricata*) and maritime (*P. pinaster*) pine and larches (*Larix* spp) 2
- Corsican (*P. nigra*) and mountain/dwarf mountain (*P. uncinata/mugo*) pine 3
- Douglas-fir ⁶ (*Ps. menziesii*), Scots (*P. sylvestris*) pine 4 ⁶
- Lodgepole/contorta (*P. contorta*) pine 5

Enter score (0, 1, 2, 3 or 4) here

2). SITING OF SOURCE TREES ^{2,3}

Source trees are on....

- Sites well sheltered from prevalent and strong winds 0
- Flat sites (<10°), partially exposed to strong/prevalent winds 1
- Lea slopes where strong eddy gusts are likely 2
- Flat sites (<10°), fully exposed to strong/prevalent winds 3
- Either elevated 'take-off' sites, (ridge-tops, or base of exposed slopes >10°) or sloping land, fully exposed to strong/prevalent winds 4

Enter score (0, 1, 2, 3 or 4) here

3). SITING OF SAMPLE SITE RELATIVE TO SOURCE TREES

Location relative to seed-dispersing winds

- Up-wind relative to prevalent or strong winds (If upwind and >1km distant - score 0) 1 (0)
- Subject to cross-winds and/or wind-eddies relative to prevalent or strong winds 2
- Down-wind relative to prevalent and strong winds (often from N and W) 3

Enter score (0/1, 2 or 3) here

4). DISTANCE OF SAMPLE SITE FROM SOURCE TREES ³

Spread risk decreases with distance from seed source

- Greater than 5km 0 ³
- 1-5km 1
- 200m – 1km 3
- 0-200m 4

Enter score (0, 1, 3 or 4) here

5). GRAZING WITHIN SAMPLE AREA

Wilding establishment influenced by grazing (particularly with sheep)

- Intensive grazing on developed pasture 0
- Regular mob stocking with sheep ⁴ 1 ⁴
- Semi-improved grazing (sheep/cattle)/ occasional mob stocking with sheep 2
- Extensive grazing only ⁵ 3
- No grazing 4

Enter score (0, 1, 2, 3 or 4) here

6). VEGETATION OF SAMPLE SITE (if Douglas-fir involved see ⁶ below)

Wilding establishment influenced by competition from existing vegetation

- Developed pasture, rank grass, plantation forest (no gaps) ⁸ 0
- Native forest ⁸, shrubland/tussock/grassland with a continuous and heavy vegetation cover 1
- Forest/shrubland/tussock/grassland with few gaps 2
- Open forest and/or scattered patches of dense shrubland/tussock/grassland with many gaps 3
- Open slips/rockland and/or light, low-stature shrubland/tussock/grassland 4

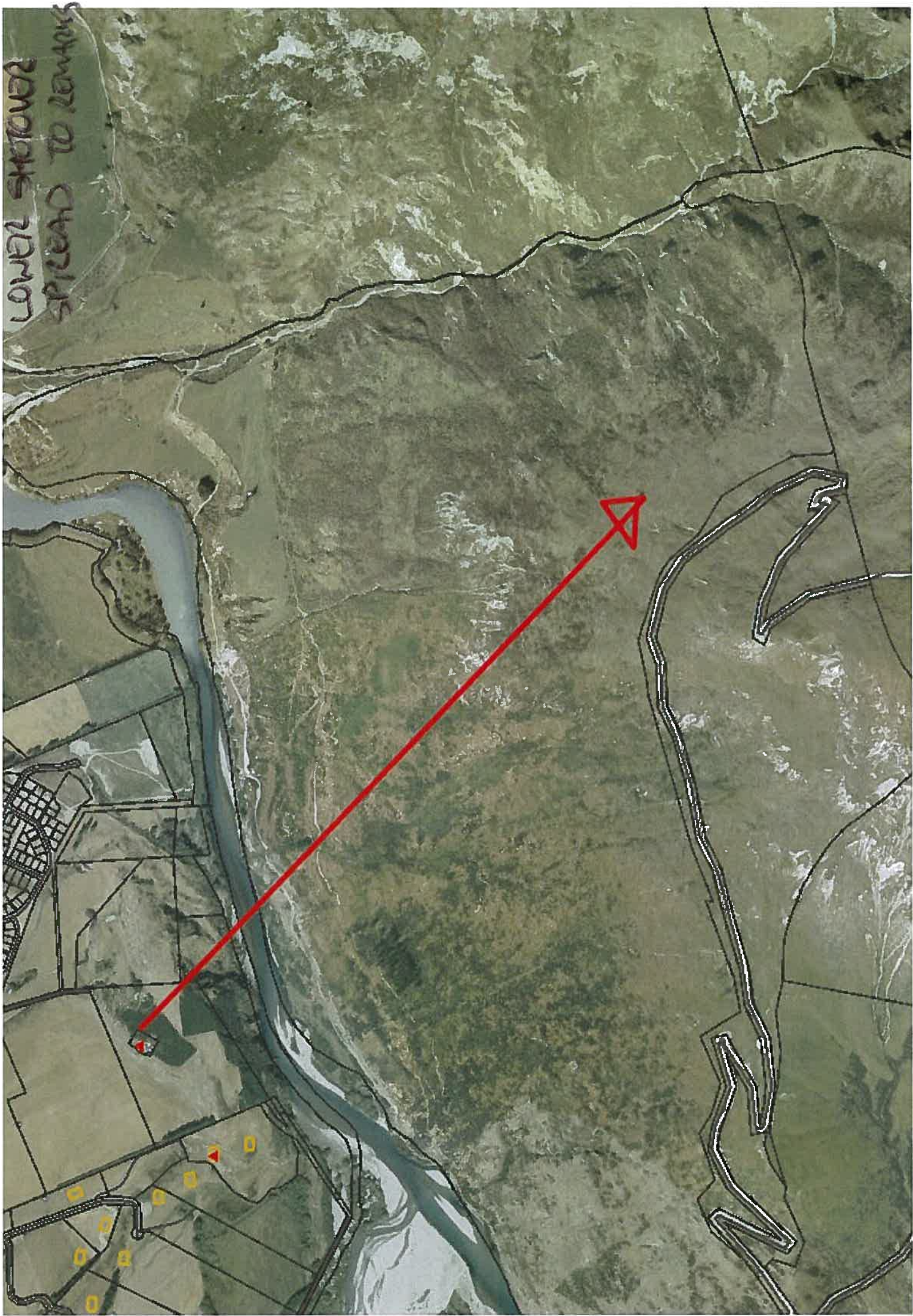
Enter score (0, 1, 2, 3 or 4) here

TOTAL SCORE:

(See Assessment below for interpretation)

LONG GULLY

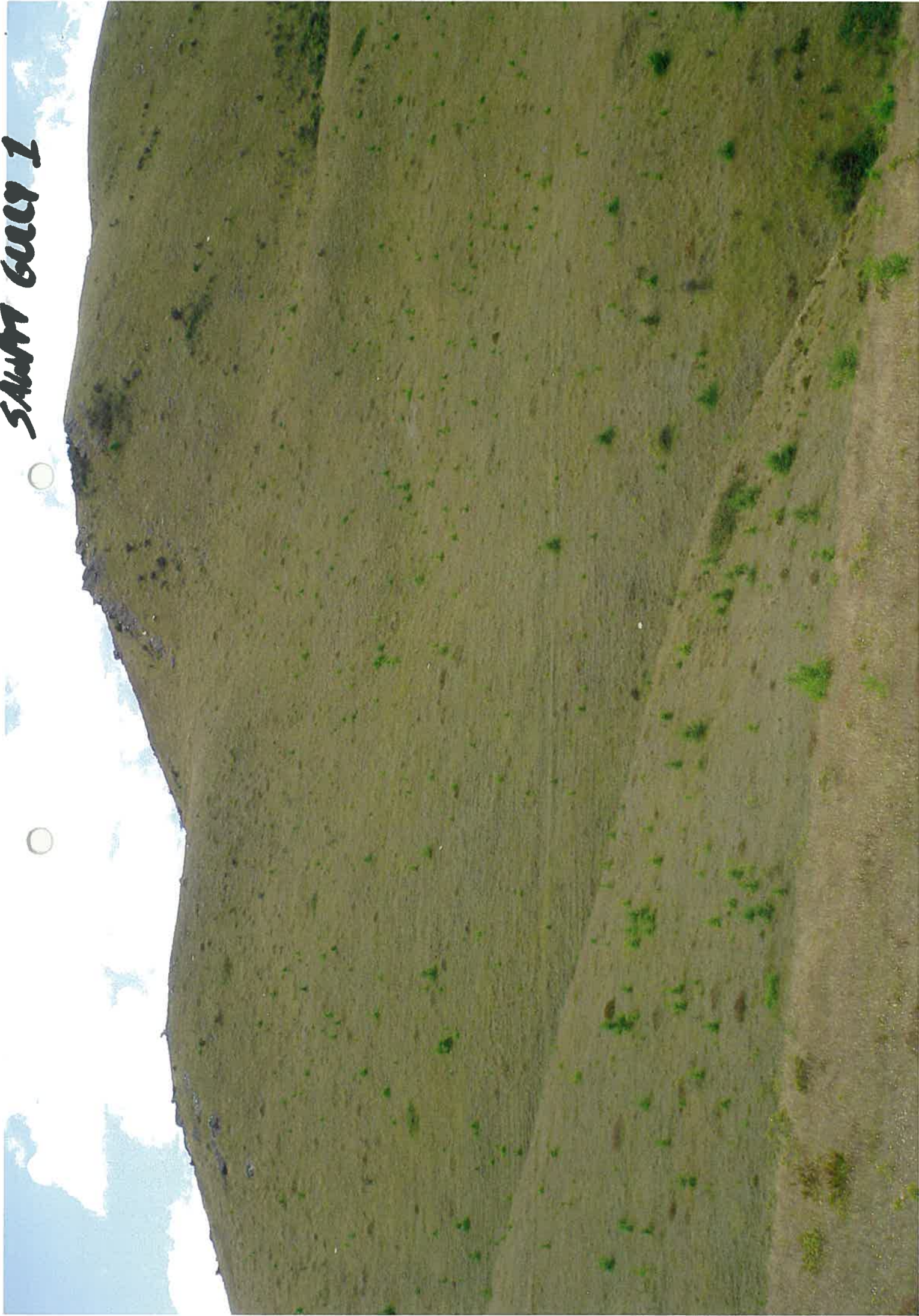




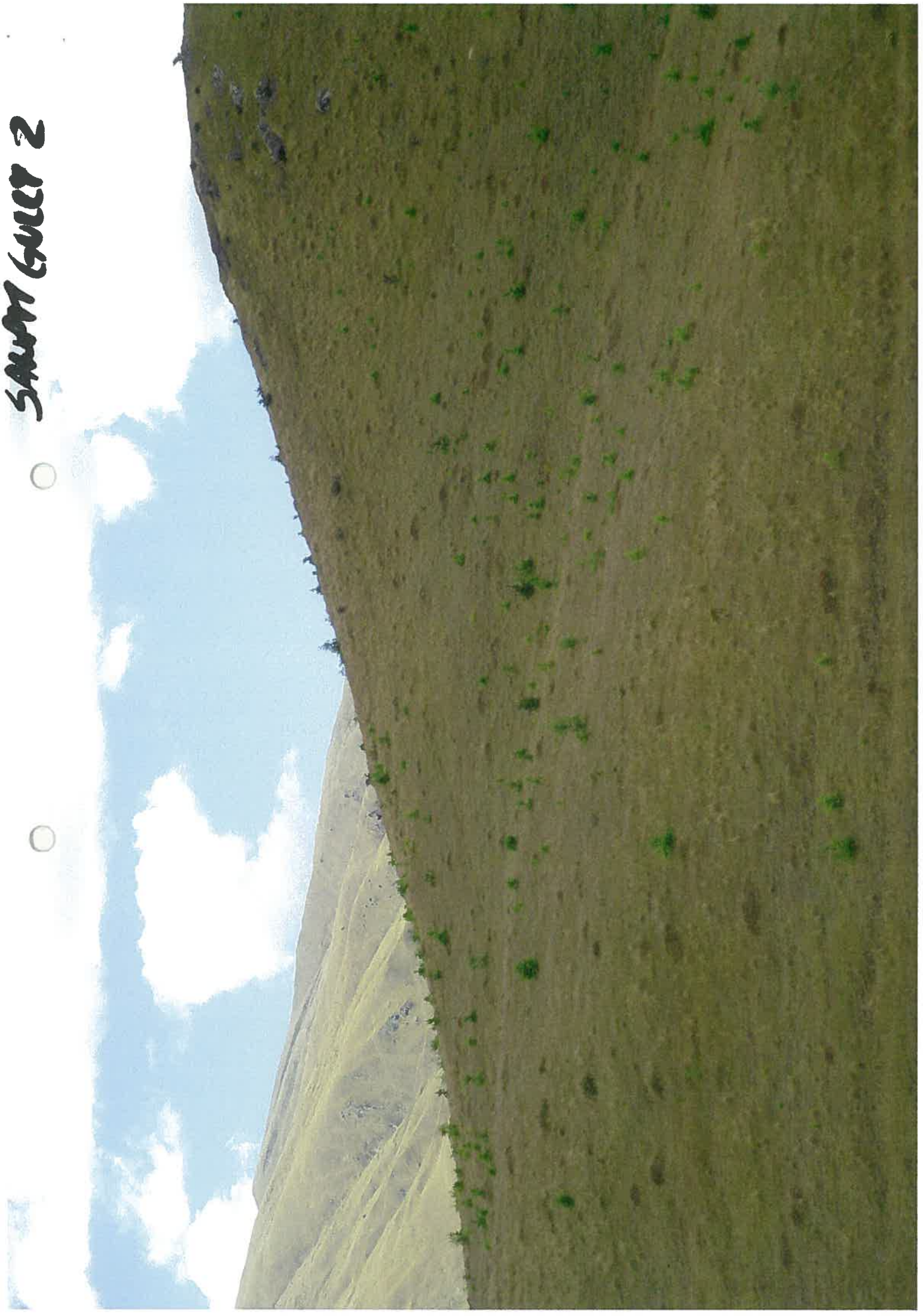
SPREAD ON REMARKABLES



SALT GULL 1



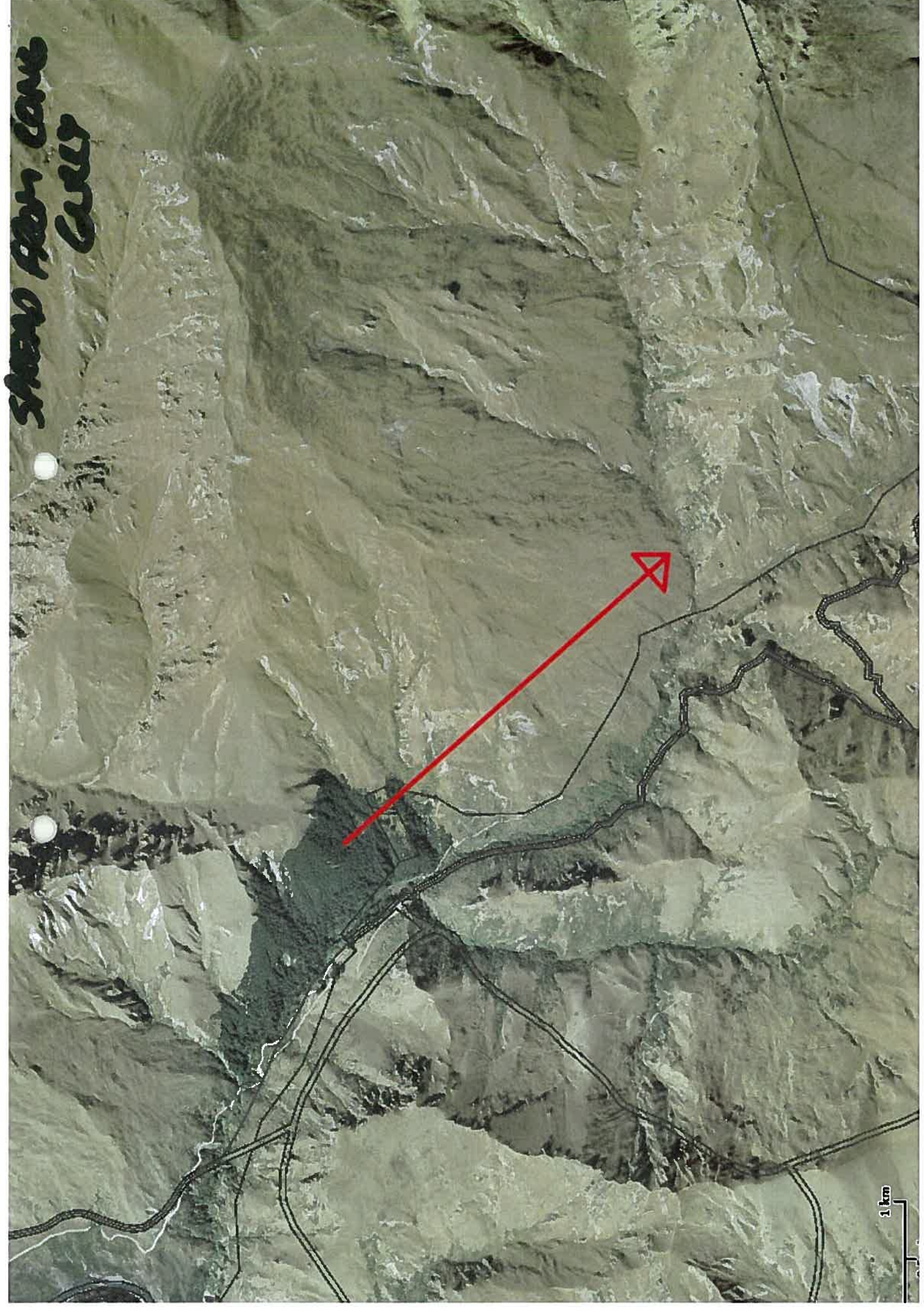
SAVANNA GULL 2



Shed from coast
Falls



1 km
0.5 mi



Sheep from cave
Cave

1 km