Community – Kea Project Plan

Queenstown and Surrounds (Wakatipu area)

Funded by: Department of Conservation – Community Fund (DOC-CF)

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Aim

The aim of the Community – Kea Project Plan is to i) facilitate long-term community kea conservation initiatives and ii) to change the way we think, act and live with kea in our communities. This will be actioned through development of collaborative Project Plans across the South Island. Each community plan will address concerns specific to the local community and threats to the resident kea population.

Project Background

This initial project plan outline has been developed as a result of discussions with communities during the Kea Conservation Trust's (KCT) Winter Advocacy Tour - 20 July – 3 August 2015. The tour was funded by Dulux and supported by Department of Conservation (DOC). The tour theme, "Building a future with kea", aimed to promote a new MOU between communities and kea. This initiative is in line with the new Strategic Plan for Kea Conservation (refer attached draft document), objective 3: to i) increase positive perceptions of kea and reduce conflict and ii) facilitate formation of community led kea conservation initiatives.

Local Community – Kea Project Plans will be activated by two Community Engagement Coordinator's (CEC's) based in the following areas:

1) Upper half of the South Island: Northern region (Nelson/ Motueka/ Kahurangi), Central North (Nelson Lakes/ Murchison/Arthur's Pass/Christchurch/Mt Hutt) and upper West Coast (Greymouth and Hokitika). There is also the potential to include Kaikoura at a later date (the eastern most population of kea).

2) Lower half of the South Island: Lower West Coast (Franz/Fox Glaciers and Haast), Central South (Mt Cook, Wanaka/Mt Aspiring and the Routeburn/Dart/ Queenstown areas) and Fiordland (Te Anau/ Milford/Murchison mountains).

Each project plan, will be developed in detail over the next two years and will involve creation of an active volunteer network and facilitation of funding streams (external and internal). The plans will take into account eight threats, actual and potential, to the wild kea population which have been identified by kea researchers.

1) Predation by introduced mammals
2) Lead in kea habitat (e.g. flashings and lead-head nails, tyre weights, lead shot)
3) Poorly-deployed pest control devices (e.g. poison baits and traps laid for pest control and aerial 1080 operations)
4) Avian diseases
5) Climate change (e.g. changes in predator abundance, food availability and habitat quality)

6) Accidents with human objects (e.g. motor vehicles, snow groomers, rubbish bins, electricity sub-stations)
7) Destruction/removal of nuisance individuals (permitted or illegal)
8) Illicit trade in wildlife

Threat focus and mitigation will be area and resource dependant and take into account community interests, expertise and support.

Queenstown and Surrounds

Queenstown is located in the Wakatipu area, central Otago. The town itself is located on the shores of Lake Wakatipu and surrounded by The Remarkables Mountains to the east, Cecil and Walter Peaks and the Eyre Mountains to the south, Glenorchy and the Rees – Dart to the west and the Crown Range to the north. Settled by Europeans in 1860, the areas native beech forest and shrubland was extensively burned off, opening the area up for high country merino farming. The area was then replanted with exotic fir, larch, sycamore and poplar species.

In addition to farming, the area has a strong link to gold mining centred at the Arrow and Shotover rivers from the 1860's – 1930's (DOC). Road access to Glenorchy was not available until the road was completed in 1962 (NZLine, 2015).

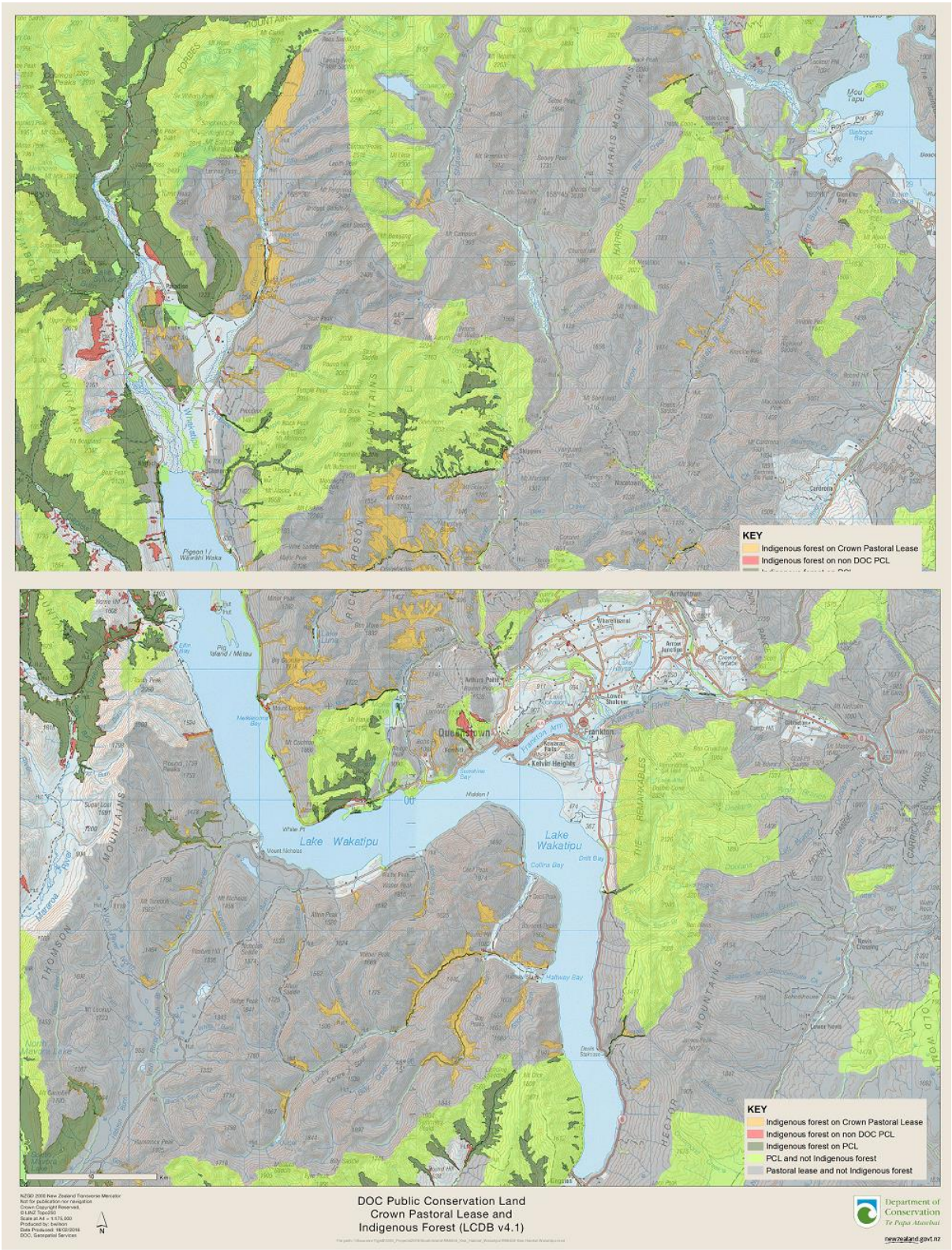
Today, much of the high country station estate has been returned to the crown and the principle income for the area (outside of agriculture), is tourism; in 2013, over 2.8 million visitor nights were recorded, 2/3rds of which were international visitors, (Statistics NZ).

In addition to increasing numbers of visitors accessing the area, the areas permanent resident numbers are also on the increase. As of the 2013 census, the local population sat at just over 28,000; an increase of 23% since the previous census (Statistics, NZ, 2016). To support this burgeoning population, numerous housing developments, schools and commercial areas east and south east of Queenstown in particular are being developed (Shotover Country, the Remarkables, 5 mile, Quail Rise, Jacks Point and Lake Hayes Estate).

Fig 1. *Queenstown (yellow circle) and Lake Wakatipu siting in relation to the National Parks (Fiordland and Aspiring).*

Pockets of beech forest still exist at Mt Crichton (2200 ha at 12 mile hunting block) and Ben Lomond while extensive native bush areas extend from the Rees – Dart through to Mt Aspiring in the north west and Fiordland in the south west (refer Fig 1). The Eyre Mountains located at the southern shore of Lake Wakatipu, contain significant beech forests, shrublands, alpine vegetation and extensive valley floor wetlands. These areas all lie within or form the boundaries of the Wakatipu area.

Fig 2. *Queenstown and surrounds showing areas of conservation estate, and forest cover (DOC, 2016).*



Local Conservation Efforts

The majority of conservation estate around the Queenstown area is centred at the western end of Lake Wakatipu which leads into the Greenstone Caples and Rees. These areas in turn back onto Fiordland and Mt Aspiring National Parks.

Several groups outside of DOC such as the Routeburn Dart Wildlife Trust (RDWT), the New Zealand Deerstalkers Association (NZDA), the Queenstown Climbing Club and local resident associations, are active in pest control initiatives to support native fauna. DOC also receives substantial assistance from Air New Zealand for predator control in the Route Burn and surrounding valleys.

The RDWT aims to 'bring back birdsong to the area by creating an Inland Conservation Sanctuary, through intensive pest control and species re-introductions.' (RWDT, 2015). Currently the trust is sponsoring an alpine trapping program on the Routeburn targeting the Rock Wren.

The Southern Lakes Chapter of the NZDA manage stoat trapping lines in Steele Creek in the Greenstone - Caples area. They also manage two ex-DOC huts (mid Greenstone and Upper Caples huts).

Closer in towards Queenstown the local residential groups (with the support of DOC Wakatipu), have initiated local predator control programs; Mt Crichton/Bobs Cove, Kelvin Peninsula Community Association, Lakeside Estates Homeowners Association and Drift Bay Residents. Jacks Point Residents Association independently fund and support their own predator control initiative.

An active trapping network at Wye Creek (Remarkables Mountains), has also been managed for several years by the Queenstown Climbing Club while the Central Otago Chapter of the NZ Alpine Club has expressed interest in conservation on the Remarkables, particularly in relation to restoring kea numbers in the area.

Other groups involved in plant pest management (and in particular invasive wilding tree species), include the Wakatipu Wilding Conifer Control Group (WWCCG), DOC and the QLDC with support from local landowners, community groups and individuals. Invasive wilding pines outcompete and suppress slower growing native plant species, reducing biodiversity and habitat for our native fauna.

Table 1. Location of conservation work carried out by conservation groups in the Queenstown area

Group	Location	Activity	Trap #s	Focal species
Routeburn Dart Wildlife Trust www.rdwt.org	Routeburn Dart Valleys (Dart Ecological Management Unit)	The Trust are sponsoring alpine trapping program on the Routeburn targeting the Rock Wren.	160	rock wren
DOC with support from Air NZ	Routeburn Dart and part Caples Valleys (Dart and Greenstone Caples Ecological Management Unit) Wilding Pine management etc	Extensive predator control Operation Ark predator control (aerial applied 1080 in rat/stoat plagues + ground based stoat trapping). ($100,000 per year contributed by Air NZ who also employ 2 rangers)	Approx 1200	Ecosystem focused - whio, rock wren, mohua, kaka and kea etc
NZDA – Southern Lakes Chapter	Greenstone/Steele Creek (Greenstone and Upper Caples)	Manage 2 ex DOC huts and trapline in Steele Creek		Mohua and general birdlife

Mt Crichton/Bobs Cove residents	Mt Crichton and Bobs Cove beech forest area	Bobs Cove Residents and potentially Closeburn Station and NZ Guided Walks are all working	25	General birdlife
Kelvin Peninsula Community Assoc, Jacks Point Res Assoc, Lakeside Estates Homeowners Assoc, Drift Bay Residents	Local pest control initiatives	Working with DOC	100	
Queenstown Climbing Club	Wye Creek (Remarkables)	Pest control (possums, stoats and wilding pines)	100	
NZ Alpine Club Central Otago Chapter/Save the Remarkables				
Wakatipu Wilding Conifer Control Group (WWCCG)	Wakatipu area	Control of wilding conifer species	X ha	Wilding conifers
KCT	High Country sheep station and Closeburn	Kea conflict resolution (sheep repellent research 2010, 2014 and residential 2015).	n/a	Kea

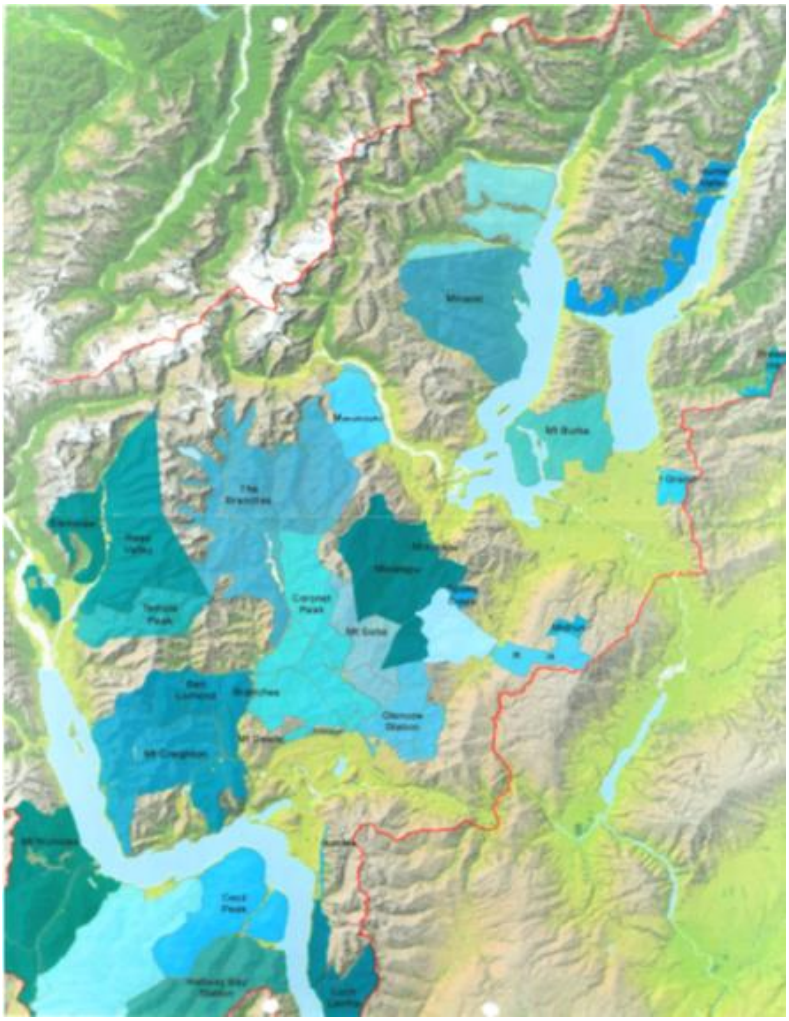
High Country Stations

The Wakatipu area has been the site of high country sheep station conflict since the late 1800's. The first reports of kea attacking sheep were on a station in neighbouring Wanaka in the mid 1860's and reports of sheep strike at local high country stations have been received as recently as 2014. High country sheep stations in the Wakatipu area include Glencoe, Motatapu, Soho and Coronet Stations (Soho Properties Ltd), Branches, Ben Lomond, Mt Creighton, Rees Valley, Earnslaw, Routeburn (includes Greenstone and Elfi Bay Stations), Mt Nicolas, Walter Peak, Cecil Peak, Halfway Bay, Kingston and Loch Linnhe Stations. Of these, Temple Peak, Rees Valley, Branches Station, Cecil Peak, Halfway Bay and Loch Linnhe Stations have reported historical issues with kea (Lawrence, 2011).

A permit to shoot a 'rogue kea' (an individual bird thought to attack sheep) was issued by DOC as recently as 2009 and a further one was applied for in 2010 but declined. In an effort to find an alternative, the KCT, working with DOC and the station farm manager, trialled a known bird repellent on sheep to prevent kea attacking high country stock, in 2011, 2012 and 2014. Kea at this site have been extremely cryptic with birds only heard by field workers and farm personnel and one brief sighting by a kea researcher of a single bird in May 2013 (Reid pers comm, 2016). No reports of kea strike have been received at this property since 2013 (although there have been informal reports of kea strike on sheep at a neighbouring property), and there has been no feedback on the status of kea interactions since mid-2014.

The prevalence of kea strike on sheep today is poorly known and relies on high country run holders to report kea issues and utilise nonlethal methods of reducing kea strike and conflict. A study is currently underway to find out the current status of kea strike and farmers perception of kea. This research will be completed and published late 2016 (Reid, pers comm, 2016).

Fig 2. *Sheep stations in the Queenstown/Wanaka area*



Queenstown Kea

Kea were once more prevalent in the Wakatipu area than they are today. The most probable reasons for the decline of the population and continued low numbers include conflict with high country sheep stations resulting in kea being culled (1860's – 2009), the lack of appropriate nesting habitat in the immediate Queenstown area and predation of nests (as evidenced at monitored kea nest sites in Arthur's Pass, Nelson Lakes, Kahurangi NP and the West Coast (2009-2015)).

Kea are now rarely seen around the Queenstown area. At local ski fields, normally a popular drawcard for local kea, the species is infrequently seen at the Remarkables and Coronet Peaks only (no kea are seen at Cardrona or the Snow Farm). During 2015, a single kea visited the Remarkables ski field (compared to 4 -6 kea visiting in previous years). A single kea was last sighted at Coronet Peak in 2012.

Even with the low numbers of local kea sightings, 2 conflict reports have been received over the past 2 years; two juvenile kea were reported causing issues at a private property at Closeburn (located adjacent to Closeburn Station – an area where kea conflict has been acknowledged as an historical issue) and 5-9 kea were reported causing damage early 2014 at the Gondola on Queenstown Hill. No kea have visited either area since. 1-2 kea have been reported visiting the Queenstown suburb of Fernhill as well as Ben Lomond in the last 2 years. These sightings are rare.

Informal reports of kea have been received from the Rees – Dart area while kea have been caught and killed in stoat traps at Steele Creek (Greenstone – Caples Valleys) and Wye Creek on the Remarkables (one in each case).

Juvenile kea on Ben Lomond February 2016. Photo by Noora Tuohimma

Project Plan Focal Areas

Discussions with the community, DOC and researchers over the years have highlighted the following areas requiring attention: i) establish baseline information on Queenstown kea, ii) identify and mitigate threats to the local kea population, iii) increase communication and awareness among local stakeholders, iv) develop local care of injured kea programme and v) education of visitors and residents to reduce conflict and exposure of kea to dangerous situations.

i) Establish baseline information on Wakatipu kea

Aims - to better understand kea populations in the Wakatipu area, including changes in kea over time, presence and location of resident breeding pairs, and breeding success.

Methods - four methods will be utilised to gather this information; a) collection of presence/absence data using acoustic recording devices and local sightings during pest control trapline maintenance, b) a presence/absence card reporting system for NZDA members in the Greenstone – Caples area and members of local rock climbing/alpine clubs and ski field summer maintenance staff, and c) location of resident kea nest cavities and d) collation of historical kea information and comparison with current records.

a) Kea presence/absence data – deploy acoustic recording devices at locations where kea have been sighted (data to be analysed through Raven by a volunteer). Contact all groups involved in pest control to encourage reporting of any kea sightings as well as to capture anecdotal information on kea visitations (or lack of) in each area (refer to table for local groups). Compare with historical kea sighting records (DOC Wakatipu, EBird and Naturewatch etc).
b) Presence/absence reporting in Greenstone/Caples Recreational Hunting Area (RHA) (NZDA kea reporting system) – develop a kea sightings card in collaboration with the NZDA, to be completed on a daily basis by hunters for both the annual roar (April/May) and June to September hunting periods. Cards to be returned to DOC with kill returns.
c) Locate resident kea territories and nest cavities – this project will necessitate attachment of radio transmitters to adult kea to locate kea nest cavities. An initial assessment and development of a project plan to be investigated.
d) Collation of historical kea information and comparison with current records – this project will involve collection of all historical kea data (bounty records, OSNZ (sightings), reports of conflict (DOC), historical writings, anecdotal info from landowners, ski fields and other operators) and comparison with the results of projects a) and b) above.

Funding – a) The KCT has a number of acoustic recorders which can be used for this project. Funding to develop a sightings group/log to be covered within this project. Funding to cover any costs associated with analysis of data (until volunteer support can be secured) to be explored.

b) A lower cost monitoring method, the annual presence/absence card for hunters, can be initiated in April 2016. Sponsorship to cover costs of card manufacture to be explored.

c) This project will require significant funds which are currently outside the scope of this project. Initial development of costings and project outline as well as support from local DOC and community to be completed as part of this project.

ii) Identify and mitigate threats to the local kea population

Aims - this project will investigate potential threats to local kea. This will include availability of lead in the environment, risk of kea nest predation, human – kea conflict, other human factors (vehicle strike, access to toxins etc).

Method – in collaboration with the local community, key stakeholder groups, DOC and conservation organisations, conduct background research on the potential impact of each where possible (using anecdotal and known data). Gathering of information will be through local meetings and discussions, access to building records, access to kea mortality reports and pest control by-kill results, and surveys of human perception of kea in the local area (particularly as it relates to high country sheep stations).

Note: The impact of nest predation is currently not within the scope of this project as there is currently no nest monitoring in place.

Funding – this project will be funded through the DOC CF – Community – Kea Project Plan. Once a review has been completed, funding will be sourced to remove or minimise threats.

iii) Increase communication and awareness among local stakeholders

Aims – to ascertain the perception and support of the local community, businesses and individual sectors for kea conservation initiatives.

Method – follow up on local contacts and meet to discuss any issues, perceptions and interest in being involved in kea conservation initiatives.

Funding - development of this project will be initially funded through the DOC CF – Community – Kea Project Plan.

iv) Develop local care of injured kea programme

Aims – support development and running of a local volunteer network to enable injured kea to access veterinary care and rehabilitation.

Method

- Development of volunteer register (list of vets able to provide initial and long-term medical support for kea and volunteers able to transport birds). Refer to the NZVA 2014 conference outcomes.
- Develop local SOP with community stakeholders for dealing with injured kea
- Process for transporting kea to specialist veterinary facilities (Massey University (Palmerston Nth), the Nest (Wellington Zoo)), Vet Ent (Queenstown) or the South Island Wildlife Hospital (ChCh));
- Set up a fund to support volunteer kea care efforts (e.g travel expenses (petrol), purchase of support equipment (carry cages etc), expendables (food and hydration) to support holding and transport of kea).

Funding – development of this project will be initially funded through the DOC CF – Community – Kea Project Plan. Funds to support the aims above will be raised through crowd sourced funding (e.g. as has been done for Arthurs Pass). Any proposed purchases must be cleared first to ensure there are sufficient funds available.

v) Education of visitors and residents to reduce conflict and exposure of kea to dangerous situations.

Aims – to increase public awareness of the endangered status and threats to kea and to reduce the incidence of inappropriate behaviour and conflict. Main education points to cover a) kea are

endangered and fully protected, b) no feeding of kea, c) conflict resolution and d) call to action. This will be achieve through the following methods:

Method

- Supply of kea education resources to outdoor focused companies and schools
- Development of appropriate resources for local ski fields where necessary
- Promotion of kea sightings reporting (via website or phone app)
- Promotion of kea proofing database and conflicts programme

Funding – this project will be funded through the DOC CF – Community – Kea Project Plan. Also the potential for volunteer involvement by local kea supporters.