Community – Kea Project Plan

Aoraki/Mt Cook

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 Community – Kea Project Plans across the South Island. The Aoraki/Mt Cook 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 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.

Aoraki/Mt Cook

Aoraki/Mt Cook village is located adjacent to the National Park of the same name which covers an area of 700km^2. The NP lies on the eastern flanks of the Southern Alps in the Canterbury region and is bordered by Westland Tai Poutini National Park along the Main Divide. Together they form part of Te Wahipounamu South Westland World Heritage Site (DOC).

The area was gazetted as a national park in October 1953 and includes 19 of NZ's 20 peaks over 3,000 metres, including the tallest, Aoraki/Mt Cook at 3,753m. Glaciers (including most notably the Tasman Glacier) cover 40% of the park. Most of the area is above treeline (ie > 1300m) and as a result alpine vegetation predominates with little forest cover. In addition to native fauna (birds (such as kea, rock wren and the critically endangered kaki/black stilt), geckos and invertebrates), the area is home to introduced browsers such as red deer, chamois and tahr making it a mecca for hunters.

Over 250,000 visitors flock to the area each year (Booth and Cullen, 2001) for a range of activities including hunting in the 5 designated blocks, mountaineering, tramping, skiing, kayaking, and scenic flights to the glaciers and over the Southern Alps.

The village has around 300 residents during the summer months (Reid, 2008) and is the gateway to the National Park. It is extremely remote and can be reached by road in just under 4 hrs from Christchurch to the north east and 3 hrs from Queenstown to the south. It is not directly accessible by road from the west coast.

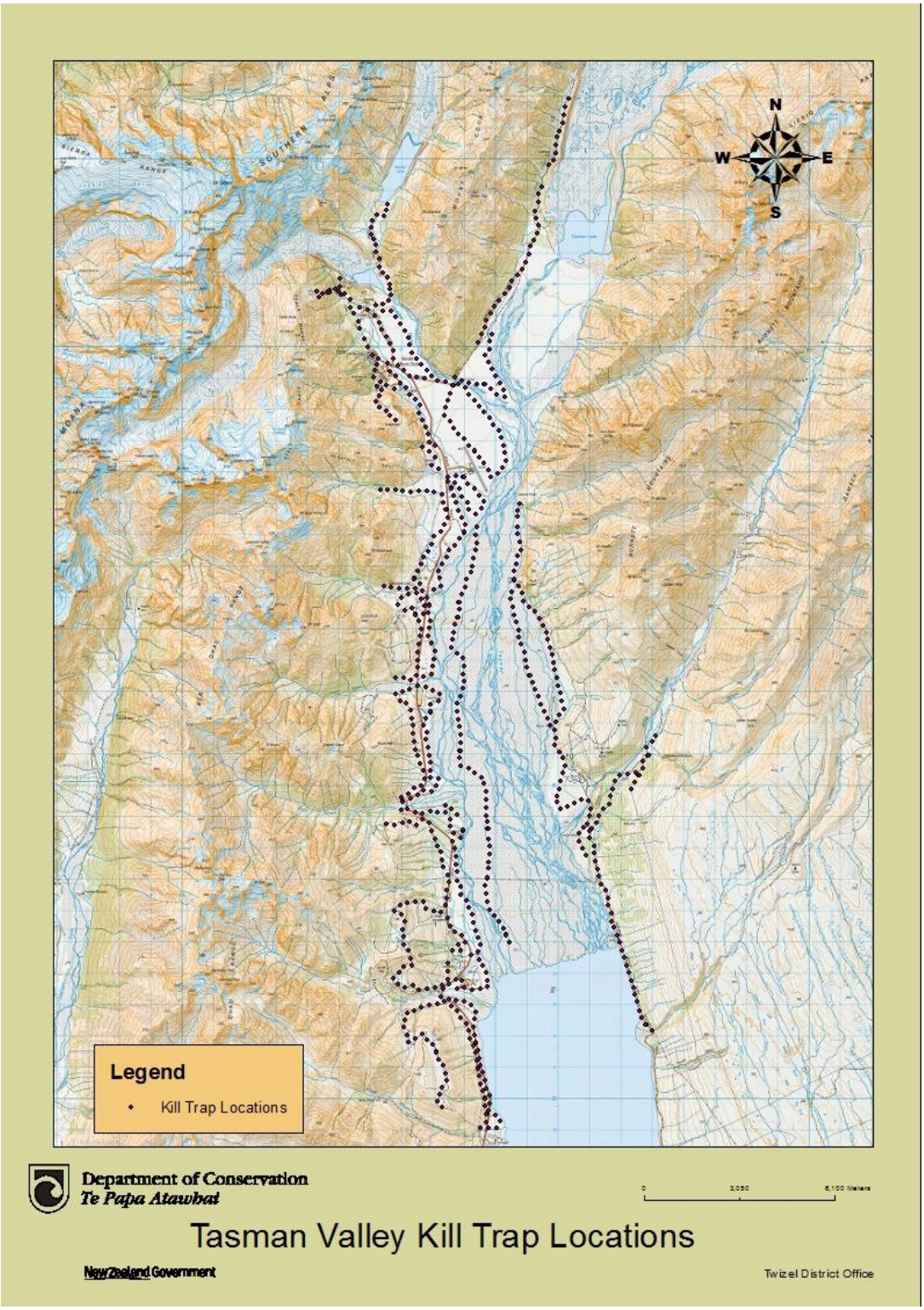
The village is geared to supporting tourism and buildings include accommodation (backpackers versus the Hermitage lodge), the DOC visitors centre and support buildings, the Sir Edmund Hillary Alpine Centre, cafes, resident accommodation, aircraft buildings and the local school (which opened in 1959). The school caters for approximately half a dozen students annually of primary school age.

Fig 1. *Aoraki/Mt Cook area in relation to the west coast and Lake Pukaki.*

Aoraki is an extremely important area to Ngai Tahu. "Aoraki represents the most sacred of ancestors, from whom Ngāi Tahu descend and who provide the iwi with its sense of communal identity, solidarity and purpose." DOC 2016. Although it is considered tapu to climb onto what is considered the head of the Ancestor, mountaineers from all around the world visit the park each year specifically to scale NZ's tallest peak. The first attempt to climb Aoraki/Mount Cook was made in 1882 by an Irishman with two Swiss guides but it was not until 1894 that the summit was reached, by three New Zealanders: Tom Fyfe, Jack Clarke and George Graham (DOC, 2016).

Local Conservation Efforts

There is extensive predator control being carried out in the area by DOC and Aoraki volunteers. These include two DOC projects - the Tasman Programme and Project River Recovery (PRR) as well as volunteer trapping in and around Aoraki Village, Red and Sealy Tarns, the Hooker and the Upper Tasman. The Tasman programme has been running for 12 years and was set up to see if trapping on a large scale (20,000 ha) could make a difference (refer map below). A total of 1,482 traps are used over this area.



In addition to predator control work, the Kaki/Black Stilt captive breeding programme is located near twizel. Kaki are listed nationally critical (23 birds in 2012) (information from Dean Nelson, DOC Twizel). The Eastern Falcoln Trust (EFT) also monitors falcon in the local area.

Table 1. Location of conservation work carried out by conservation groups around Aoraki/Mt Cook

Group	Location	Activity	Trap #s	Focal species
DOC	Twizel	Species Recovery - Kaki/Black stilt captive breeding programme	?	Kaki
Eastern Falcon Trust	Aoraki and surrounds	Monitoring programme	?	Falcon
Project River Recovery (PRR) – (DOC) funded by Meridian and Genesis	Tasman Trapping area (including Red and Sealy Tarns)	Predator control – trapping programme.	??	Protecting braided river systems
Tasman Programme	The lines up to Red and Sealy Tarns and up the Hooker to the third swingbridge	Predator control - Kill traps include DOC 150's and 250s (targeting stoats, ferrets and rats), Timms, Victor and Twizel Cat traps (all targeting cats and/or hedgehogs). Victor leg holds operational for 10 days only annually in winter.	350 (150's), 300 (250's), 77 Timms, 600 (leg hold victor 1.5 soft jaw), 155 (Twizel cat traps (conibear))	
KCT	Mt Cook Village and surrounds	Kea nest monitoring	n/a	Kea
Aoraki Volunteers	Aoraki Village, Red and Sealy Tarns, the Hooker and Upper Tasman	Predator control - community volunteer checking of traps	??	

Figure 1. Location of individual organisations carrying out predator control work

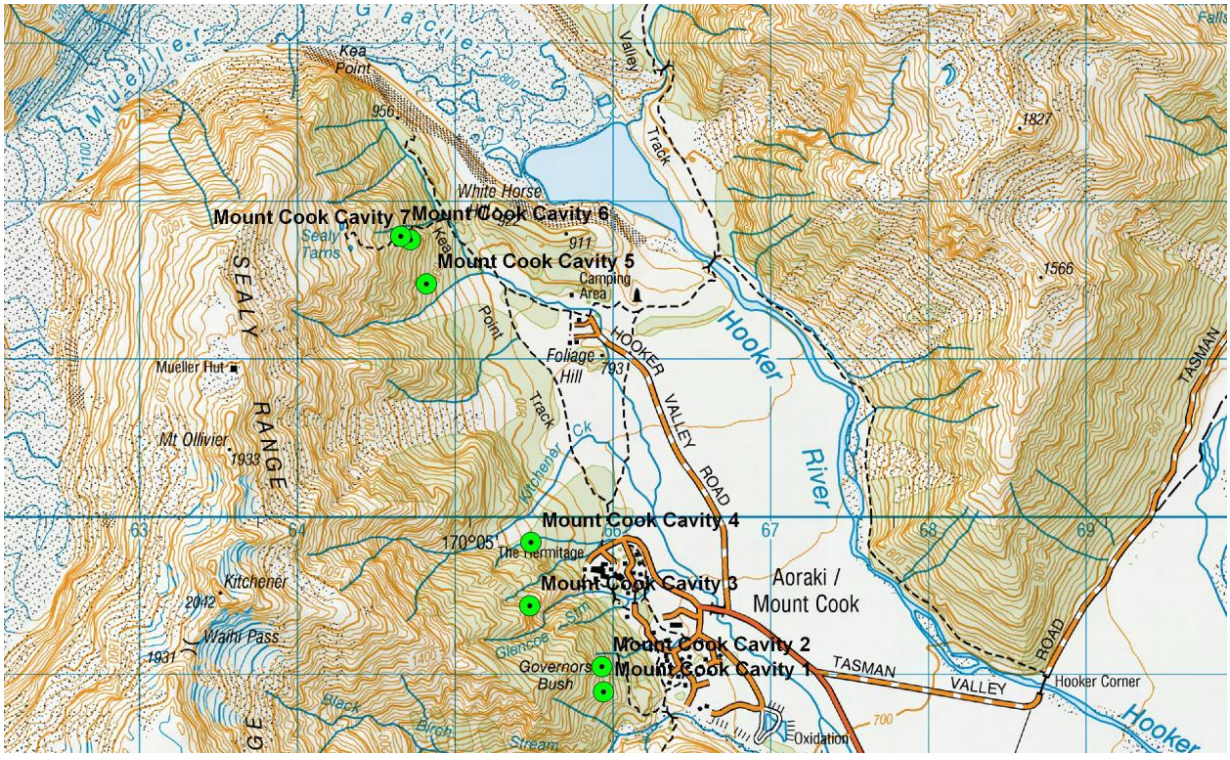
Aoraki/Mt Cook Kea

Aoraki/ Mt Cook kea have been the subjects of a number of research projects. Vienna University first began studying kea behaviour at Mt Cook village in 2002 and visited the area annually for almost a decade. 36 kea were caught and banded within the first year. Although other researchers have encountered these birds, the bands are now unreadable. Anecdotally, reports of community concerns were raised about whether this research was encouraging inappropriate kea behaviour (ie scavenging in rubbish bins) suggesting a possible conflict issue with kea in the area.

Kea were being tested for blood lead levels by Aoraki/Mt Cook DOC prior to 2006 but the severity of the issue wasn't realised until research on lead poisoning began in earnest in 2006-2010. This lead to wide spread monitoring of kea across the South Island from 2006 by DOC. At this time an investigation into sources of lead in the NP and surrounds was also initiated (DOC). A total of 42 kea

were tested for lead exposure in the NP (Reid et al. 2012). All were found to have detectable blood lead levels, 32 considered elevated (i.e. levels suggestive of lead poisoning) (K. McInnes, DOC, unpubl. data). Kea with elevated blood lead levels were also found to be more exploratory (also linked to social hierarchy and presence of conspecifics) (Reid, 2008). Additional analysis of 12 dead kea from the NP area (sent to Massey University for diagnostic pathology between 2001 and 2008) 5 were diagnosed with lead poisoning (B. Gartrell, Massey University, unpubl. data). . Lead toxicity in kea has now been found to be widespread throughout the species range in areas where kea and humans overlap (McInnes, 2010). Although an effort to remove lead materials from the village was driven by DOC, buildings containing lead nail heads and flashings have since been discovered, most recently in the school building in 2014. This has since been removed but raises the question as to whether all lead has been correctly identified and removed. As such, the status of lead in the areas buildings needs to be updated and ideally a follow up study to ascertain lead levels in kea to ensure the population is safe from this threat.

The KCT monitored 7 known kea nests around the Mt Cook Village area in November 2012. These nests had first been discovered by the Vienna Institute research team. A further nest was discovered during the monitoring effort. Cameras were set up at two cavities which showed some sign of kea visitation, however none of the monitored cavities showed any indication of breeding activity.



Kea have also been caught on film scavenging on a dead cat at an Eastern Falcon Conservation Trust (EFCT) hide. Footage showed a kea chasing away a falcon in this instance. Scavenging of carcasses which may have residual poison may be a potential issue for kea. No kea deaths have been reported as a result of predator control.

Other than lead poisoning, electrocution is known to be a threat to local kea. In January 2013, 5 kea were electrocuted at an Alpine Energy substation located at Mount Cook just behind Unwin Hut (NZ Alpine Club lodge). This is where all the power for the village goes underground. A falcon was also killed at this time. Unofficially, DOC has also received confirmation that Alpine Energy workers

previously removed 2-3 kea from inside the substation fence, but didn't notify DOC (Slatter, 2013 pers comm). The substation is due to be upgraded by 2018 but it is not known whether this will reduce the risk to kea to zero or whether the current steps to minimise risk are of any value in the meantime. Additionally it is not known if this is an isolated case or whether substations within kea territory pose a significant risk to kea (and falcon) generally.

Other causes of kea injury and death in the area are currently unknown but may include issues with predator control methods (kill traps/poisons), ingestion of other foreign materials or vehicle strike.

Project Plan Focal Areas

Discussions with the community and researchers over the years as well as recent meetings with the local community during the 2015 Winter Advocacy tour, highlighted the following areas locals wished to get involved with in regards kea conservation: i) Identification of local kea population status, ii) identification and reduction of local threats (predation, pest control, lead, electrocution and conflict etc), iii) care of injured kea (through support of local community volunteer efforts), iv) local perceptions of kea and v) and education of visitors to the area to reduce conflict and exposure of kea to dangerous situations. These focal areas may be added to in the future.

i) Identification of local kea population status

Aim: monitoring of known kea nests to ascertain population status and predation threat over years.

Method: Check known kea nests for activity and if confirmed active place cameras outside and inside nests to monitor progress. Follow up any chicks to ascertain survivorship and as funds allow, attach radio transmitters to resident adults, band all progeny prior to fledging to enable visual ID, and enter all data into the main kea database. This would be mainly done by the KCT but the community and DOC staff could support this with identification of kea nesting activity and other sightings (Nelson, DOC Twizel).

Funding: Funding to be secured for this project. Project management time will be supported via the DOC CF.

ii) Identification and reduction of local threats with particular attention to the following:

<u>Pest Control</u> –

Aim: This project will look to a) Identify level of nest predation at monitored nests, b) support and expand local pest control efforts to benefit nesting kea, and c) minimise unintentional injury and deaths to kea (both trapping and poison methods).

Method: Develop a plan to maximise the benefits of pest control to nesting kea and minimise any negative impacts on the species.

Funding: DOC CF funding to develop an initial plan to action the above project.

<u>Lead Poisoning</u> – Mt Cook kea have previously been found to have very high blood lead levels (McLelland et al. 2010, Reid et al. 2012). As a result DOC investigated lead sources in the area and began its removal. As a follow up to this work, we propose to do a survey of lead in the area and test kea for lead to confirm lead free status. This information would provide valuable follow up to the

research previously undertaken by DOC and other researchers and encourage other communities to remove lead from kea environs South Island wide.

Aim: a) confirm presence/absence of lead within Aoraki/Mt Cook village and surrounds and b) test blood lead levels in local kea.

Method: a) check DOC records for lead removal; survey non- DOC buildings for lead. Where lead is found, develop a plan for lead removal and apply for funding and community support to action this (materials and volunteer input); b) test all nesting kea and their offspring for lead (refer project i)) in collaboration with DOC vet (who has specific experience in this area).

Funding: a) initially funded through the DOC CF (CEC position); b) funding for lead testing to be secured as required.

Electrocution - due to the number of kea killed (reported and unreported) at the substation by Unwin Hut, a full analysis of risk to kea of this particular substation (and any others in the area) to be carried out. The outcomes of this project may result in a full survey of substation risk to kea across the species range.

Aim: Fully understand the risk that substations pose to Mt Cook kea.

Method: Access all records of injury/death to kea (and other birdlife) within the local area. Investigate risk minimisation actions taken by Alpine Energy and discuss with the company their policy for reporting any wildlife injuries/mortalities.

Funding: Initial investigation will be will be supported through the DOC CF Community - Kea Project Plan.

iii) Care of Injured Kea

Aims - In the first instance a fund is to be set up to take donations to support volunteer efforts to provide short term care for kea (prior to receiving specialist medical support), and to transport injured/ sick birds for medical treatment.

This will be driven by the KCT and be used for the following purposes:

- Reimbursement of travel costs (petrol) on production of receipt/s;
- Purchase of any equipment (carry cages etc), expendables (food and hydration) to support holding and transport of kea (any proposed purchases must be cleared first to ensure there are sufficient funds available);
- Process for transporting kea to specialist veterinary facilities (Massey University, The Nest (Wellington Zoo)), Vet Ent Queenstown or South Island Wildlife Hospital);
- Develop local SOP with community stakeholders for dealing with injured kea.

Funding – a crowd sourced funding page to be set up to collect funds to support volunteers transporting kea to receive medical treatment. This fund will be promoted on a regular basis throughout the year.

Development of Injured kea SOP will be supported through the DOC CCPF Strategic plan funds and DOC CF Community - Kea Project Plan.

iv) **Education of local residents and visitors** to the area 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:

- Supply of kea education resources to outdoor focused companies
- Development of appropriate resources for local towns 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.

References

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