

Consultation and notification summary

Kepler Peninsula operation 2018-19

This document provides a summary of the consultation and notification process undertaken by the Department of Conservation (“DOC”) and its contractor, EcoFX Ltd (“EcoFX”), in respect of the pest control operation that was completed in the Kepler Peninsula.

Consultation on possible pest control methods

The proposed operation consisted of two treatment blocks. It was proposed that one treatment block (“treatment block 1”) should be aurally treated with 1080 bait pellets and treatment block 2 should be treated using pindone pellets located in bait stations.

DOC did not consult on the possible methods of pest control for these two treatment blocks on the basis that,

- 1) treatment using aurally broadcast 1080 was the only suitable method of pest control within treatment block 1 as it was the only tool that could achieve a high operation efficacy in rat and possum kills across a landscape scale at a reasonable cost; and
- 2) treatment using pindone pellets in bait stations was considered to be the most suitable method of pest control within treatment block 2 as bait stations were already located within that treatment block and pindone pellets could be used to target rats without pre-feeding.

Consultation was therefore limited to consultation on effects.

Consultation on effects

DOC and EcoFX consulted the following parties prior to the commencement of the operation:

- Iwi
- Adjacent landowners / land occupiers
- Landowners and business located or operating near the proposed treatment area
- Hunting and fishing groups
- Sponsors, conservation groups and partners
- Concessionaires
- Recreational groups
- Local government and statutory bodies
- Aviation groups
- Airport users
- Road management groups
- Police

The following table shows the number of each type of stakeholder consulted:

Type of stakeholder	Number consulted	Consultant	Reason for consultation	Method of consultation
Iwi	4	DOC	Consultation on the effects of the operation on Rūnanga relative to cultural values and support from iwi	In-person visits, phone conversations and email correspondence
Adjacent landowners / land occupiers	2	DOC	Approval to use land as a loading site, consultation on effects of the operation and support from adjacent landowners / land occupiers	In-person visits, phone conversations and email correspondence
Landowners and business located or operating near the proposed treatment area	3	DOC	Consultation on the effects of the operation and support from landowners and businesses located or operating near the proposed treatment area	Phone conversations and email correspondence
Hunting and fishing groups	12	DOC & EcoFX	Consultation on the effects of the operation and support from hunting and fishing groups	In-person visits, phone conversations and email correspondence
Sponsors, conservation groups and partners	9	DOC	Consultation on the effects of the operation and support form concessionaires	In-person visits, phone conversations and email correspondence
Concessionaires	12	DOC & EcoFX	Consultation on effects of the operation and support from concessionaires	In-person visits, phone conversations and email correspondence
Recreational groups	4	DOC	Consultation on the effects of the operation and support from recreational groups	Phone conversations and written correspondence
Local government and statutory bodies	4	DOC & EcoFX	Assessment of environmental effects, potential impacts of the operation and	In-person visits, phone conversations and email correspondence

			conditions of the public health unit consent	
Aviation groups	12	DOC & EcoFX	Consultation on effects of the operation and support from aviation groups	In-person visits, phone conversations and email correspondence
Airport users	4	DOC	Consultation on the effects of the operation and support from airport users	Phone conversations and email correspondence
Road management groups	1	DOC	Consultation on effects of the operation and support from road management group	Phone conversations and email correspondence
Police	2	DOC	Presentation on Tiakina Nga Manu programme and briefing of the operation	In-person visits and email

Consultation outcomes

Iwi

All iwi groups that were consulted were very supportive of the operation and none raised any concerns or objections.

Adjacent landowners / land occupiers

One of the parties requested more information regarding the closure of Supply Bay Road while the operation was underway. DOC informed them that EcoFX would provide more information regarding the road closure.

DOC consulted one party to discuss the possibility of using some adjacent land as a loading site. That party informed DOC that they were happy for DOC to use that land as a loading site.

Landowners and businesses located near the treatment area

One of the parties that were consulted notified DOC that they did not support the use of 1080 and were concerned about risks to native species. None of the other parties objected to the operation or raised any concerns.

Hunting and fishing groups

One of the groups raised concerns regarding the potential impact on high profile fishing sites in Waikaia, Eyre Mountains, Kepler and Clinton. DOC explained that the sites near Waikaia and Eyre Mountains were not close to the proposed treatment area for the Fiordland operations and were not likely to be affected by the Fiordland operations. DOC also assured

that it plans to complete the Kepler and Clinton/Eglinton operations prior to the Great Walk season and fishing season.

One group also noted that they would like to have more conclusive evidence on how long 1080 lasts in trout.

None of the other groups raised any concerns or objected to the proposed operation.

Sponsors, conservation groups and partners

DOC consulted with a conservation group regarding potential visits from schoolchildren. It was agreed that DOC would work with the conservation group to identify alternative locations for school visits if any visits were scheduled to take place while the Kepler operation was underway.

One group was supportive of the operation but questioned whether the trickle sow of 1080 bait pellets by the lake edge near Pomona Island was sufficient. It was agreed that DOC would include a double trickle line near Hurricane Passage and Calm Bay to provide extra protection for Pomona Island and Rona Island.

One group informed DOC that it will support the operation provided that the group is notified of the start of the operation in advance so that it can ensure that its trapping team is not on the track when the operation is underway.

One group enquired whether wild animal recovery operations were providing a food source for kea, and DOC sent through some information on that issue.

None of the other groups raised any concerns or objected to the proposed operation.

Concessionaires

One of the concessionaires that were consulted sought some additional information regarding those parts of the Kepler Track that might be closed off while the Kepler operation was underway.

DOC also consulted with a party that had applied for a permission to conduct a sports event near the treatment area in August 2019. DOC was advised that the event was intended to be an annual event. The event was likely to coincide with the proposed Kepler operation, as well as future pest control operations that might be carried out in the Kepler Peninsula. As a result, the applicant withdrew their application to conduct the event in August.

One party that was consulted was very supportive of the operation and noted that they would like to handlay bait around areas that were excluded from the proposed treatment area. Another individual noted that they did not personally support the operation but understood DOC's position.

None of the other parties that were consulted raised any concerns or objected to the proposed operation.

Recreational groups

Three of the groups were supportive of the proposed operation and none raised any concerns or objections.

Aviation groups

None of the parties that were consulted raised any concerns or objected to the proposed operation.

Airport users

None of the parties that were consulted raised any concerns or objected to the proposed operation.

Road management groups

The group that was consulted did not raise any concerns or objections and advised that they were happy with how the operation was progressing.

Notification

The following parties were notified of the operation and provided with progress updates:

Type of stakeholder	Number notified	Notifier	Reason for notification
Iwi	5	EcoFX	Update on progress of operation
Landowners and businesses directly adjacent to the proposed treatment area	3	EcoFX	Potential impact and update on progress of operation
Landowners and businesses located or operating near the proposed treatment area	4	EcoFX	Potential impact and update on progress of operation
Te Anau residents	1	EcoFX	Providing information regarding the operation
Concessionaires	24	EcoFX	Potential impact and update on progress of operation
Hunting and fishing groups	25	EcoFX	Potential impact and update on progress of operation
Meat processing companies and WARO concessionaires	5	EcoFX	Potential impact and update on progress of operation

Local government and statutory bodies	4	EcoFX	Potential impact and update on progress
Recreational groups	5	EcoFX	Potential impact and update on progress of operation
Healthcare providers	2	EcoFX	Information to respond to possible poisoning incidents and update on progress of operation
Animal care providers	1	EcoFX	Information to respond to possible poisoning incidents and update on progress of operation
Schools and early learning centres	8	EcoFX	Potential impact and update on progress of operation
Sponsors, conservation groups and partners	13	EcoFX	Providing information regarding the operation and update on progress of operation
Aviation groups	25	EcoFX	Potential impact and update on progress of operation
Airport users	4	EcoFX	Potential impact on activities and update on progress of operation
DOC Visitor Centres	1	EcoFX	Potential impact and update on progress of operation
Police	3	EcoFX	Potential security or protest issues and update on progress of operation
Road management groups	1	EcoFX	Potential impact and update on progress of operation
Other parties	1	EcoFX	Potential impact and update on progress of operation

Copies of the following documents were provided to these parties as a part of the notification process (and are attached as appendices to this summary):

1. Template notification email regarding the Kepler operation (attached as Appendix 1);
2. Tiakina Ngā Manu – Fiordland National Park factsheet (attached as Appendix 2);
3. Tiakina Ngā Manu – Kepler Mountains 2019 factsheet (attached as Appendix 3);
4. Tiakina Ngā Manu – Predator Response factsheet (attached as Appendix 4);

5. Notification letter and email to iwi (attached as Appendix 5);
6. Notification letter to landowners (attached as Appendix 6);
7. Notification letter to concessionaires (attached as Appendix 7);
8. Notification letter to partners, sponsors and stakeholders (attached as Appendix 8);
9. Notification letter to service providers (attached as Appendix 9);
10. Public notice published in newspapers (attached as Appendix 10);
11. Tiakina Ngā Manu progress update (attached as Appendix 11);
12. Kepler pest control operation – prefeed notification (attached as Appendix 12);
13. Kepler pest control operation – 24-hour notification (attached as Appendix 13); and
14. 1080 – safety information and data sheet (attached as Appendix 14).

Released under the Official Information Act

Appendix 1

Dear [name]

The Department is expecting the beech mast and subsequent predicted predator irruption to trigger the need for an aerial predator control operation in the Kepler Mountains in spring 2019, part of the nationwide predator control project Tiakina Nga Manu/Battle For Our Birds. If rodent tracking reaches threshold levels, we plan to undertake five operations across Fiordland in 2019.

As stakeholders and members of our community with a direct interest in the Kepler and/or surrounding area I am contacting you to provide the attached factsheets (hard copy factsheets/brochures are available upon request) which outline the risks of introduced predators to native fauna and flora in the Keplers, key results from the previous two operations in 2014 and 2016, details of what is planned for 2019, and to ask if you have any questions or comments about the proposed operation or if there is anything we need to be aware of in relation to your business or interests. We would expect that if the operation goes ahead it would do so between August 1st and Oct 31st 2019, avoiding the Great Walk season where possible.

If you have any questions, comments or would like to discuss this further please feel free to contact me on this email or s 9(2)(a), 9(2)(g)(ii). Please be aware that I sometimes work away out of reception for several days at a time so if you can't get hold of me immediately please be assured I will reply on my return.

If you don't have any queries or comments at this stage please be advised that contractors EcoFX will be completing further notifications and will be in contact with you again in due course, including for notification 48 hours prior to both pre-feed and toxic application. I currently have the following contact details for you for notification;

[contact details]

It would be much appreciated if you could check these and confirm with me that they are correct/advise of any changes required so that I can pass this information onto EcoFX.

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Protect our species *in* Fiordland National Park



Pest control to protect native species from widespread predator plagues

A heavy seeding (mast) will occur in many forests this year. This natural event, that should benefit native species, will be hijacked by introduced predators as rodent and stoat numbers will skyrocket. Seedfall and rodent levels will be monitored at sites where rare and endangered native species are under greatest threat. When rodent numbers meet critical levels, that will trigger predator control. Without predator control some species such as yellowhead/mohua, kākā, orange-fronted parakeet/kākāriki karaka, rock wren/pīwauwau and bats/pekapeka will suffer heavy losses.

Predicting increased rodent populations – 2014 and 2016

A widespread heavy seedfall in South Island beech forests in early 2014 and again in 2016 led to escalating rat and mice numbers. Two events of such magnitude in quick succession was thought to be unusual. DOC, with the help of NIWA, is getting better at predicting these mast events.

Pest control works

DOC carried out aerial 1080 pest control in the winters following the prolific forest flowering over more than 600,000 hectares each season. Monitoring showed an average rat kill of about 95%, which reduced rodents to undetectable levels at most sites and stoat plagues were avoided.

Outcomes

Intensive species monitoring showed the nesting success of rock wren, mohua, robin and rifleman was significantly higher within pest control areas than outside. Go to doc.govt.nz/our-work/battle-for-our-birds.

2019 – the battle continues

Extensive seeding is occurring again in 2019 but on an even larger scale. This is likely to be the biggest mast in decades. We will have a major pest problem on our hands.

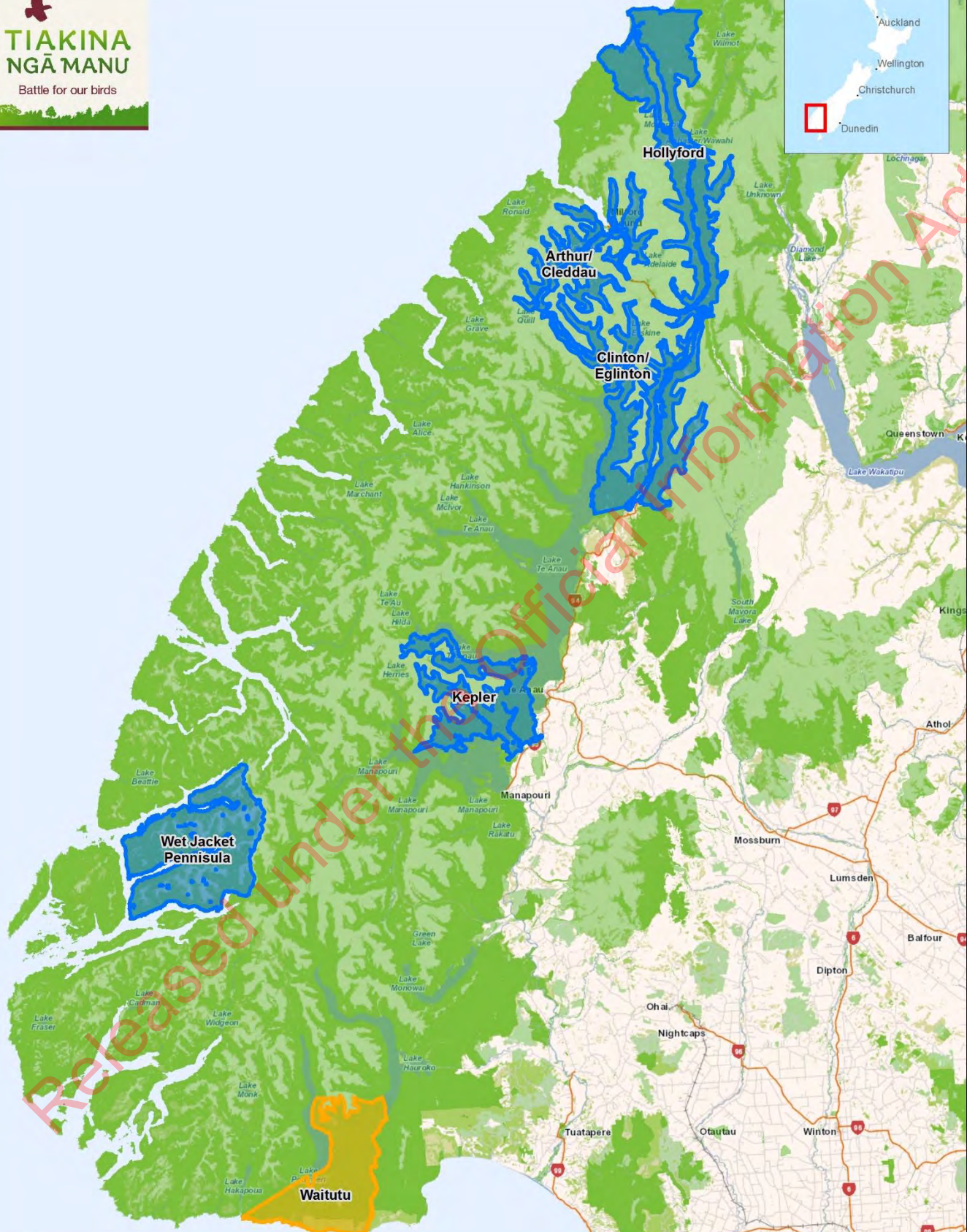


Mohua/yellowhead. Photo: Sabine Barnert



Short-tailed bat/pekapeka. Photo: Colin O'Donnell DOC





- Confirmed aerial operation
- Proposed aerial operation
- Public conservation land

Proposed treatment areas shown here are indicative only and may change after consultation

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NZGD 2000 New Zealand Transverse Mercator
Not for navigation
Crown Copyright Reserved
Base map: LINZ Topo50/250
DOC Geospatial Services
26/03/2019
File: Fiordland_FaithfulMap_Update.mxd
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Fiordland National Park
Aerial Predator Control 2019/20
Treatment areas



Fiordland National Park: sites and values

Where heavy seedfall occurs, we can expect predator numbers to soar. To be ready to protect native species at risk, DOC is planning predator control at the following sites:

Arthur/Cleddau/Sinbad

- 17,924 ha in the Arthur, Sinbad and Cleddau valleys to protect whio (blue duck) and pateke (brown teal)
- Part of northern Fiordland whio security site, one of only two sites for re-introduction of pateke in the South Island.
- Proposed timing: From Aug 1st 2019

Eglinton/Clinton

- Protection of mohua, southern tokoeka/kiwi, whio/blue duck as well as short-tailed and long-tailed bats
- 35,625 ha comprising the Eglinton and Clinton valleys along with the adjoining lake side forest
- Proposed timing: From Aug 1st 2019

Hollyford

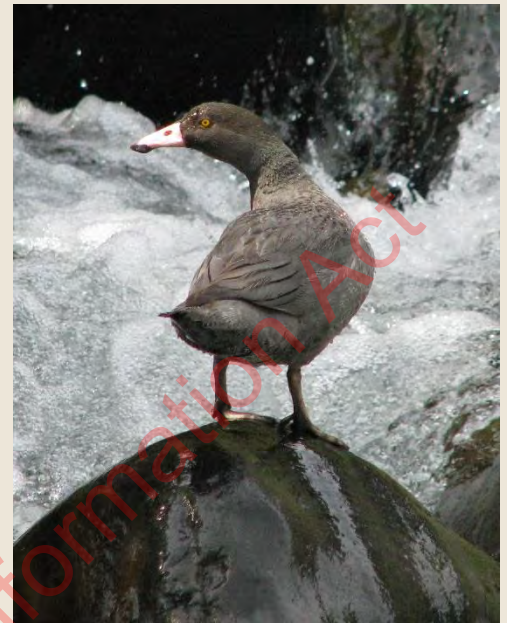
- Protection of many forest species including kaka, falcon, yellow crowned parakeets, mohua (yellowhead) and kea, as well as fernbirds and whio (blue duck) and
- 40,585 ha covering the upper and lower valley, from Martins Bay up to the Milford Highway
- Proposed timing: From Aug 1st 2019

Kepler

- Protection of pekapeka (long-tailed bats) and whio (blue duck) alongside other native forest flora & fauna
- 24,168 ha plus a 200m buffer strip of bait stations along the Kepler track/edge of Lake Te Anau
- Proposed timing: From Aug 1st 2019

Wet Jacket

- Planned aerial 1080 operation aims to reverse the decline in the Fiordland tokoeka (kiwi) population by protecting vulnerable kiwi chicks from predation
- The planned operation should also benefit kākā, kea, rock wren/pīwauwau and native vegetation vulnerable to possum browse such as rata and mistletoes
- 39,707 ha to be treated between May 2019 – April 2020



Whio. Photo: Herb Christophers



Fiordland tokoeka Photo: James Reardon

A range of pest control methods will be used including traps and toxins

Aerial application of 1080 baits is the most cost-effective predator control method over large areas. It is the only viable method in remote or rugged terrain. In more accessible areas, traps or bait stations will be laid, depending on the density of pest populations. High predator numbers can overwhelm trapping networks in some areas. In those cases, aerial 1080 pest control will supplement existing trapping.

Aerial 1080 pest control will target rats, but stoats will also be killed through eating poisoned rodent carcasses. Operations begin with an aerial pre-feed of non-toxic baits to encourage rats to eat the 1080 baits that are applied later.

Time frame

Operations will be triggered as rodent populations reach monitored thresholds. Operations, which are weather dependent, will take place when they are most effective between May and November. Dates will vary between sites and will be confirmed closer to operations taking place.

Planning

DOC is working closely with iwi and consulting with key stakeholders before finalising details. Before operations begin, DOC will contact affected neighbours, put up warning signs and advertise in local newspapers. Use of 1080 requires the consent of the Environmental Protection Authority, and permission from the Ministry of Health. The process includes an assessment of environmental effects (AEE) to safeguard the public and the environment.

What you need to know

The Department of Conservation complies with all relevant regulations and takes a precautionary approach to the aerial application of pesticides.

- *The 1080 cereal baits are about 2 cm long, cylinder-shaped and are dyed green.*
- *Non-toxic pre-feed cereal pellets are about 2 cm long, cylinder-shaped but are fawn-coloured (not dyed).*

Managing risk

Dogs, in particular, are highly susceptible to 1080. The risk to dogs from poisoned carcasses will remain until they have completely rotted, perhaps for more than 6 months.

Precautionary approach

Risks can be eliminated by following these simple rules:

- *DO NOT touch bait*
- *WATCH CHILDREN at all times*
- *DO NOT EAT animals from this area*
- *Poison baits or carcasses are DEADLY to DOGS*

Observe these rules whenever you see warning signs about pesticides. Warning signs indicate pesticide residues may still be present in baits or animals. When signs are removed, this means you can resume normal activities in the area. Please report suspected vandalism or unauthorised removal of signs. If in doubt, check with your local DOC office.

More information

s 9(2)(a), 9(2)(g)(ii)

Operations Manager
Department of Conservation Te Anau
Lakefront Drive, Te Anau 9600
Phone: s 9(2)(a), 9(2)(g)(ii)

What to do if you suspect poisoning

Contact emergency services: 111

National Poisons Centre: 0800 764 766

15/03/19

Also see doc.govt.nz/battleforourbirds



Department of
Conservation
Te Papa Atawhai

Protect our species

Kepler Mountains 2019



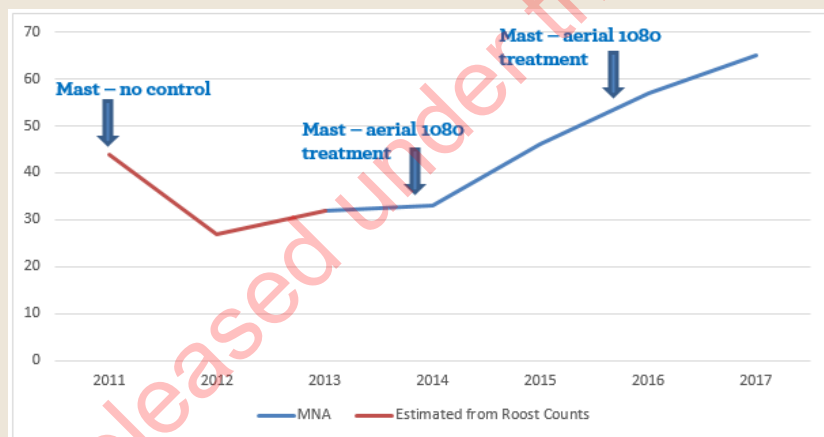
Successful pest control over recent years

Following recent predator control operations in the Kepler Mountains there are more results for the outcome benefits for several native species from the use of 1080 in the park and elsewhere including long-tailed bats and whio.

Long tailed bats / Pekapeka-tou-roa

A population of the critically endangered long tailed bat was discovered in the Iris Burn Valley in the Kepler in 2011. Annual mark-recapture surveys record the 'minimum number alive' (MNA).

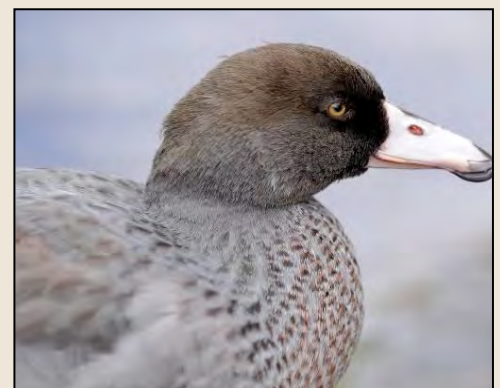
A combination of ground and aerial pest control has been instigated. Ground control via traps and bait stations keeps predators in check in non-mast years. In high risk mast and pest plague years aerial control gives greater critical protection. Since aerial predator control began in 2014 the Rocky Point long-tailed bat colony has had a steady increase, doubling the number of adult females in just 3 years.



Trend of female long-tailed bats Rocky Point Colony, Iris Burn Valley 2011-2017



The Iris Burn Valley is one of the few places long tailed bats are known to still exist Photo: James Reardon



Whio/blue duck are very vulnerable to predation, however numbers are improving in areas with effective pest control. Photo: Barry Harcourt

Whio / Blue Duck

In 2006/07 there was just one known pair of whio present in the Iris Burn Valley. Stoat trapping efforts from 2006-2014 saw that number increase to four pairs. Aerial 1080 operations began in the area in 2014. By 2017/18, survey results found whio numbers had increased to nine pairs – a dramatic increase from 2006 and in line with results from other sites.



5 km

Scale at A4 = 1:135 000
NZGD 2000 New Zealand Transverse Mercator
Not for navigation
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Basemap : LINZ Topo250 / 50
DOC Geospatial Services
27/08/2019



Kepler

Aerial Predator Control 2019

Proposed treatment area: 18,881 ha



Department of
Conservation
Te Papa Atawhai

New Zealand Government

Kepler Mountains site and values

Where heavy seed fall occurs, we can expect predator numbers to soar. To be ready to protect native species at risk, DOC is planning predator control at several Fiordland sites, including the Kepler Mountains.

The Kepler area is on the doorstep of the Te Anau community, and a site visited by many who come to Fiordland National Park. Many native species have experienced a slow decline with some becoming locally extinct from the front country of the Keplers altogether due to predation from stoats and rats.

The Kepler area contains a number of significant and threatened plants and animals that will benefit from possum and rat control. We expect the effects of secondary poisoning will also reduce the rapidly rising stoat population that normally follows a rat irruption.

South Island long-tailed bats

- South Island long-tailed bats are in decline because of introduced predators. They are particularly vulnerable in years when the beech trees mast and rat numbers reach plague proportions. The Iris Burn has been identified as one of the few viable sites in the South Island to protect long-tailed bats. Without protection, this important bat population is likely to go extinct. It is critical to protect bats in their natural environment as, unlike birds, there are currently no successful techniques to relocate them
- Stoats, possums, and cats also play a part in predation on this species
- The bat population used to be widespread throughout the Keplers, but now exist only in the Iris Burn Valley
- Since aerial 1080 operations began in 2014 the monitored bat colony has had a steady increase in population size, with the number of adult females doubling

Other threatened species in the area which benefit from predator control include: whio/blue duck, kākā, kea, ruru/morepork, Fiordland tokoeka, mōhua. These species are all vulnerable to rat and/or stoat predation and face severe declines in mast years in the absence of effective predator control.

Protection of native flora

- Possums play a huge role in damaging native vegetation in our forests, in addition to being opportunistic predators of insects, small birds, and eggs.
- Aerial 1080 control is an extremely effective method for reducing possum numbers and achieves protection of both native flora and fauna
- Rare native flora in the Kepler Mountains area vulnerable to possum browse includes scarlet, yellow, and dwarf mistletoes.

An ongoing community effort to control rats, stoats, and possums is currently in place in the area around Brod Bay, Hart's Hill, and on the Kepler Track. In years when beech forest mast, however, a larger and more intensive approach to predator control is required. Aerial 1080 control has been proven to prevent population collapses of rat and stoat vulnerable native species in mast years and allow populations to recuperate.



Whio. Photo: Herb Christophers



Fiordland tokoeka are present in the Kepler Mountains area and are often heard calling at night by trampers on the Great Walk. Photo: James Reardon

A range of pest control methods will be used including traps and toxins

Aerial application of 1080 baits is the most cost-effective predator control method over large areas. It is the only viable method in remote or rugged terrain. In more accessible areas, traps or bait stations will be laid, depending of the density of pest populations. High predator numbers can overwhelm trapping networks in some areas. In those cases, aerial 1080 pest control will supplement existing trapping.

Aerial 1080 pest control will target rats, but stoats will also be killed through eating poisoned rodent carcasses. Operations begin with an aerial pre-feed of non-toxic baits to encourage rats to eat the 1080 baits that are applied later.

Time frame

Operations will be triggered as rodent populations reach monitored thresholds. Fiordland District Operations, which are weather dependent, will take place when they are most effective between June and November. Dates will vary between sites and will be confirmed closer to operations taking place.

Planning

The management of the Kepler Mountains predator control programme has been contracted to EcoFX. Before operations begin, staff will contact affected neighbours, community groups and other interested parties, put up warning signs and advertise in local newspapers. Use of 1080 requires the consent of the Environmental Protection Authority, and permission from the Ministry of Health. The process includes an assessment of environmental effects (AEE) to safeguard the public and the environment.

What you need to know

The Department of Conservation complies with all relevant regulations and takes a precautionary approach to the aerial application of pesticides.

- *The 1080 cereal baits are about 2 cm long, cylinder-shaped and are dyed **green**.*
- *Non-toxic pre-feed cereal pellets are about 2 cm long, cylinder-shaped but are **fawn-coloured** (not dyed).*

Managing Risk

Dogs in particular are highly susceptible to 1080. The risk to dogs from poisoned carcasses will remain until they have completely rotted, perhaps for more than 6 months.

Precautionary approach

Risks can be eliminated by following these simple rules:

- *DO NOT touch bait*
- *WATCH CHILDREN at all times*
- *DO NOT EAT animals from this area*
- *Poison baits or carcasses are DEADLY to DOGS*

Observe these rules whenever you see warning signs about pesticides. Warning signs indicate pesticide residues may still be present in baits or animals. When signs are removed, this means you can resume normal activities in the area. If in doubt, check with your local DOC office.

More information

s 9(2)(a), 9(2)(g)(ii) (Operations Manager)

Phone: s 9(2)(a), 9(2)(g)(ii)

Te Anau Office, Lakefront Drive, Te Anau, 9600

What to do if you suspect poisoning

Contact emergency services: **111**

National Poisons Centre: 0800 764 766

27/03/2019

Also see www.doc.govt.nz/battleforourbirds





TIAKINA
NGĀ MANU

Battle for our birds

Predator RESPONSE

2019

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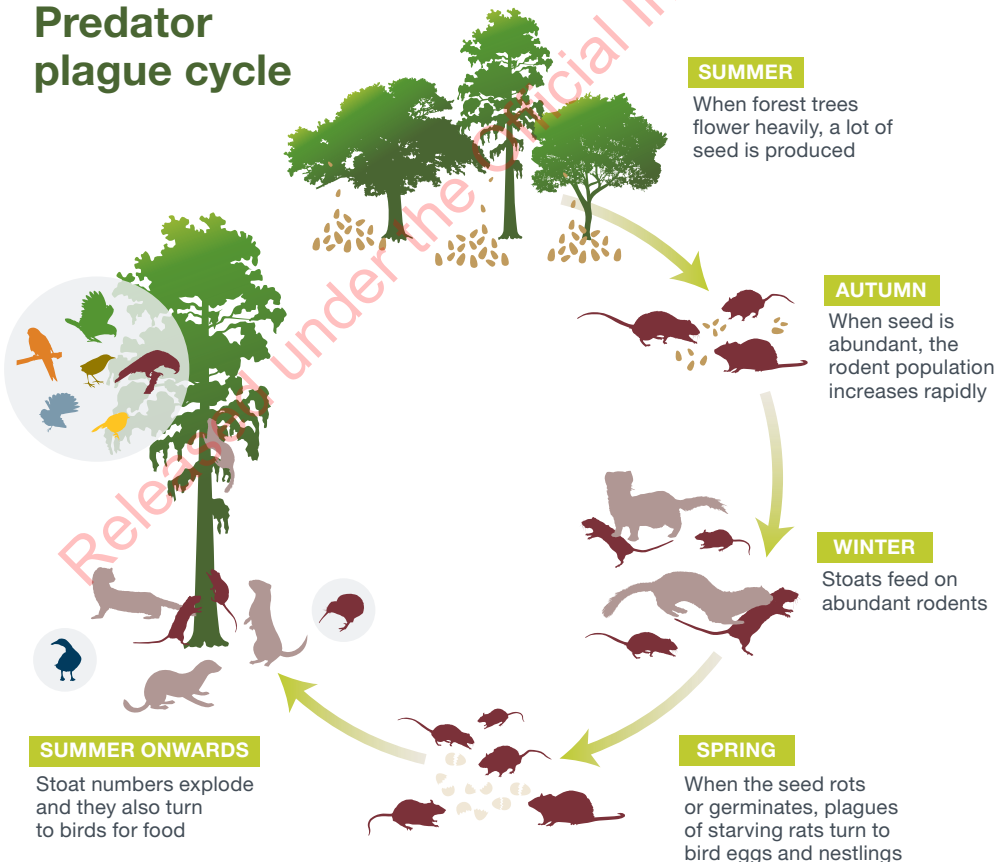
Department of
Conservation
Te Papa Atawhai

25 million native birds are killed by predators like possums, stoats and rats each year¹

Heavy seeding of trees in our native forests will drive rodent and stoat numbers higher than normal this year and those pests will prey on threatened species including birds, bats and invertebrates.

The Department of Conservation will prioritise its predator control response in key ecosystems to protect New Zealand's native wildlife.

Predator plague cycle



¹ John Innes. Landcare Research



Degrees of control

In forests in years when there is no heavy seeding or mast, many native birds can tolerate the low levels of rats and stoats present and little or no pest control is necessary.

During years when mast events occur at just a few sites, localised pest control traps and bait stations will do the trick.

When heavy seedfall is more widespread, as it is this year, rats and stoats have to be controlled over very large areas.

Who/blue duck

Status: In serious trouble (Nationally Vulnerable)

Population: More than 1000 breeding pairs

Distribution: In good numbers where conservation efforts protect populations.

Who duckling survival rates at the Tongariro Forest Security Site

Before pest control (2004)



For every 3 breeding pairs of who, 2 ducklings made it to fledging

After aerial 1080 and trapping (2011)



For every 3 breeding pairs of who, 6 ducklings made it to fledging



Photo: Alan Reith

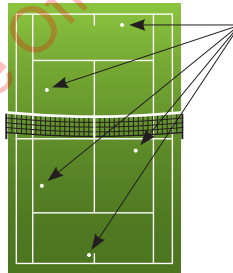
Controlling predators

The Department of Conservation uses a range of pest control tools to suit the particular need. Trapping and other ground-based predator control methods play an important part in ongoing control but cannot be easily scaled up to respond rapidly to immediate pest threats.

Biodegradable 1080 is applied by air over large areas of rugged terrain to knock down rats, stoats and possums.

Aerial 1080

1080 is biodegradable, breaks down quickly in the environment and does not leave permanent residues in water, soil, plants or animals. The active component occurs naturally in many plants found in Australia, South America and Africa as a defence against browsing animals.



4-6 baits are dropped in an area the size of a tennis court.

Approximately **12% of public conservation land** is to be treated with 1080 during this year's pest control operations.

Ground control

Conventional and re-setting traps and bait stations are used for **longer term** and **localised suppression** of pest populations.



Conventional traps



Bait stations



North Island brown kiwi

Status: In some trouble (Declining)

Population: 25,000

Distribution: Patchy throughout the northern North Island.

Without predator control:



Only **5%** of kiwi chicks hatched in the wild will make it until they are old enough to breed – their 4th birthday.

With predator control:



Up to **60%** of kiwi chicks hatched in the wild will survive to breeding age.



More than 583 kiwi have been monitored throughout 1080 operations since 1990. Over that time, not one has died as a result of 1080 poisoning.



Re-setting traps

Photo: Neil Hutton



Populations under threat

Widespread forest seeding this year will lead to an increase in rats and stoats, putting our native wildlife at risk. The highlighted areas are home to some of our most vulnerable species and have been targeted as the areas most in need of predator control.

Significant seedfall 2019

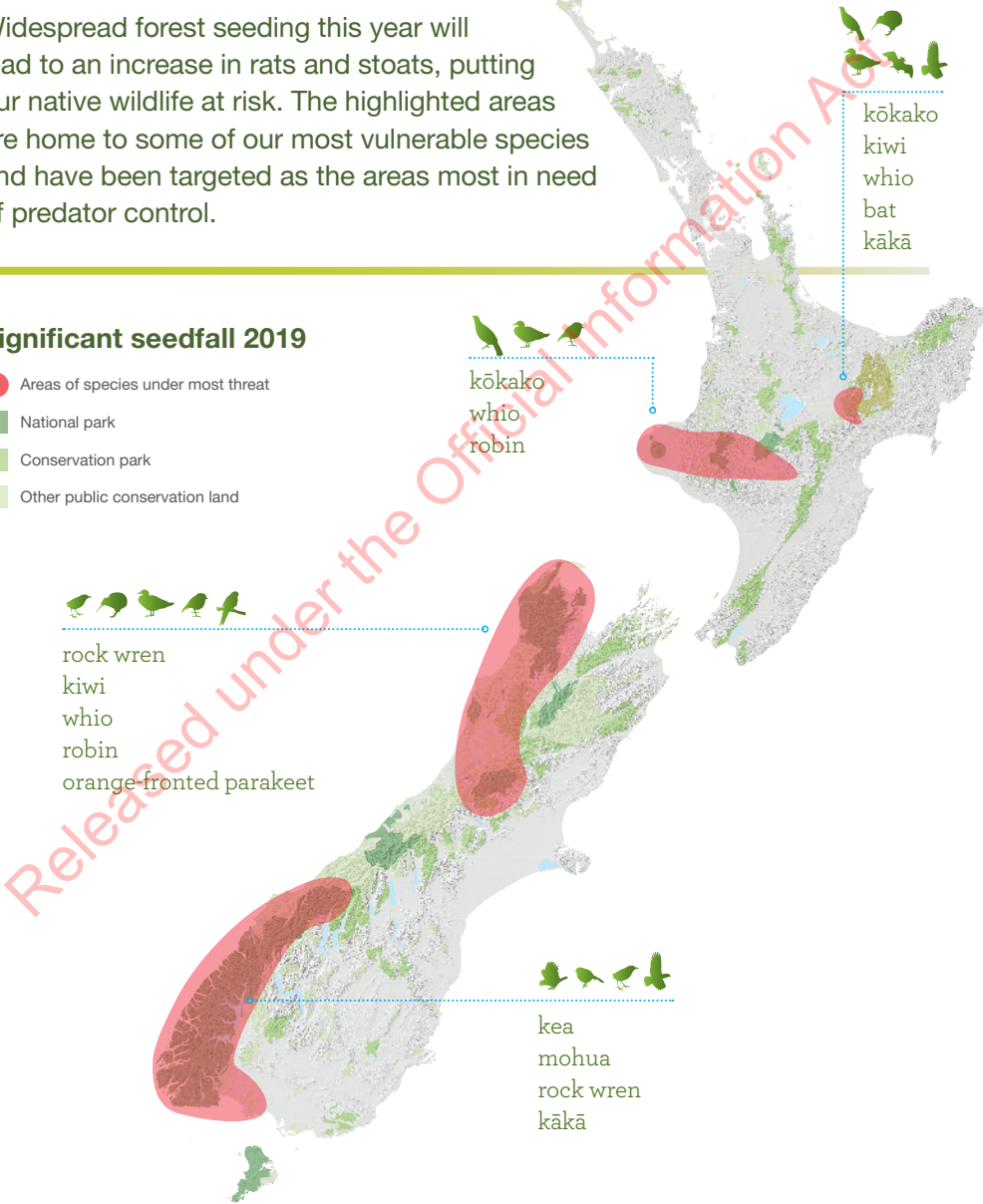
- Areas of species under most threat
- National park
- Conservation park
- Other public conservation land

- 
- rock wren
 - kiwi
 - whio
 - robin
 - orange-fronted parakeet

- 
- kōkako
 - whio
 - robin

- 
- kōkako
 - kiwi
 - whio
 - bat
 - kākā

- 
- kea
 - mohua
 - rock wren
 - kākā





Great spotted kiwi



Photo: Rod Morris

Status: In serious trouble (Nationally Vulnerable)

Population: 15,000

Distribution: Confined to three discrete populations, in northwestern Nelson, Paparoa Range and Lewis Pass to Arthur's Pass.

Powelliphanta snails



Photo: Kath Walker

Status: In serious trouble

Population: Declining

Distribution: Widely but sparsely spread throughout western South Island and lower North Island.

Rock wren



Photo: Andrew Walmsley

Status: In serious trouble (Nationally Endangered)

Population: Unknown

Distribution: Widely but patchily distributed through alpine and sub-alpine areas of the South Island, most commonly in Fiordland, South Westland, Mt Aspiring and Aoraki/Mt Cook National Parks. Transferred successfully to Secretary Island in Fiordland.

Orange-fronted parakeet



Photo: Sabine Bernert

Status: In serious trouble (Nationally Critical)

Population: Fewer than 100 mature parakeets on mainland, and perhaps 200–300 on islands

Distribution: Restricted to South Island beech forest valleys: the Hawdon, Andrews and Poulter valleys in Arthur's Pass National Park and the south branch of the Hurunui valley in Lake Sumner Forest Park.

Mohua



Photo: James Reardon

Status: In some trouble (Recovering)

Population: Approx 5,000

Distribution: Strongholds where pest control is carried out. In good numbers on some offshore islands.

Whio



Photo: Herb Christophers

Status: In serious trouble (Nationally Vulnerable)

Population: Breeding population unlikely to be more than 1000 pairs

Distribution: Forested headwater catchments along the ranges of both islands.

Released under the Official Information Act



Long-term monitoring

Doubling native bird numbers in the Landsborough valley

For 20 years our ‘bird counters’ have been going to the remote Landsborough valley in South Westland to monitor the effects of sustained predator control on bird life.

Native bird numbers have doubled since pest control began. Most of the 13 different native bird species increased.

One of the most threatened birds in the monitoring area, mohua (yellowhead), has increased in number 24-fold from 14 to 338 birds.

Monitoring outcomes is important. Standardised ‘5-minute bird counts’ have been carried out by the same

people for the past 20 years which has ensured consistency.

The results of this painstaking monitoring are impressive and highlight that where we control pests consistently over whole valleys and forests, we can turn around the fortunes of native species.

This outcome bodes well for efforts towards Predator Free 2050 as the long term goal.



Grey warbler. Photo: Janice McKenna



Rifleman/titipounamu. Photo: DOC



Tomtit/miromiro. Photo: Leon Berard

The Department of Conservation is planning to manage pests in response to a predicted predator plague this year. For more information visit www.doc.govt.nz/battlefourbirds

This publication is produced using paper sourced from well-managed, renewable and legally logged forests.

Front cover: A whio pair. Photo: Matt Binns

Published by: Department of Conservation, PO Box 10420, Wellington 6143

Editing and design: Creative Services, Conservation House, Wellington
January 2019

Archived: Friday, 27 September 2019 9:36:27 AM
From: admin
Sent: Sun, 9 Jun 2019 23:28:43 +0000Authentication
To: admin
Subject: Tiakina Nga Manu (Battle For Our Birds) Consultation
Sensitivity: Normal

Attachments:
Iwi_Tiakina Nga Manu.pdf 

Good Morning

Please find attached a letter regarding upcoming pest control operation/s we are undertaking in Fiordland this Winter/Spring as part of the Tiakina Nga Manu programme (formally Battle for our Birds), on behalf of the Department of Conservation.

If we have your current postal address in our database then you should have received an information pack in the mail last week. If you have not received one, could you please confirm your current postal address. Otherwise, all of the information can be found here: <http://www.ecofx.co.nz/tiakina-nga-manu/>

If you have any questions please contact us using the details provided in the letter.

Kind Regards,

Office Administrator
EcoFX Ltd
32 Huiputea Drive
PO Box 248
Otorohanga

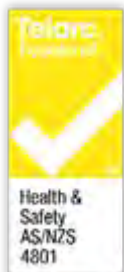
Phone 07 873 8130
Fax 07 873 6904

EcoFX, "Protecting Your Natural Heritage"

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 Please consider the environment before printing this e-mail



Released under the Official Information Act



31 May 2019

Group
Name
Address

Dear Name

Clinton-Eglinton, Kepler, Hollyford: Tiakina Ngā Manu Programme Consultation

EcoFX has been contracted by the Department of Conservation to undertake large scale aerial 1080 operations in the Clinton- Eglinton, Kepler and Upper and Lower Hollyford Valleys as part of the Department of Conservation Tiakina Ngā Manu (formerly Battle for our Birds- BFOB) programme.

EcoFX has previously delivered "Battle for our Birds" programmes in the Clinton-Eglinton and Hollyford Valley. We have attached a Department of Conservation Tiakina Ngā Manu fact sheet of the programme/s for your information. They also have operational maps included, with more detailed maps available on request. We have also supplied a comprehensive information pack with key operational information.

The Tiakina Ngā Manu programme is being undertaken as part of a larger nationwide aerial predator control programme due to a 2019 "Mega Mast" beech and podocarp seeding event. Its purpose is to protect at risk native species in the programme areas from predation from rats and other key predators such as stoats, weasels and possums. At risk species include: southern tokoeka/kiwi, whio/blue duck, yellow-crowned kākārīki, rock wren, mohua, short and long tailed bats, Fiordland crested penguin, kea and South Island kākā.

You have been identified as being an Iwi Partner for Biodiversity Programme/s to the Department of Conservation in the Kepler operational area. Part of the initial process of consultation involves personal contact with affected parties. This could involve a number of forms of contact such as meetings, letters, email, e-text or phone contact. You may have received initial communication or correspondence from the Department of Conservation Te Anau Office about these programmes.

The programme is intended to be undertaken from late July early August to mid-September 2019, but may occur as late as October if the weather is unfavourable. It is intended that the order that the programmes will be delivered is Clinton-Eglinton, Kepler and Hollyford, although this is dependant on local weather conditions and the priority of programmes being delivered by other contractors.

32 Huiputea Drive
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Otorohanga 3940
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Telephone: 07 873 8130
Facsimile: 07 873 6904
Email: admin@ecofx.co.nz
www.ecofx.co.nz

EcoFX - Protecting Your Natural Heritage

Phases for the programme are as follows:

- Non-toxic prefeed cereal baits will be sown over the treatment blocks at a rate of 1.5 kg per ha.
- Approximately 7 days later toxic baits will be sown over the treatment area at a rate of 1.5 kg/ha.
- Both phases are weather dependant requiring 2-3 fine nights with minimal rainfall.

As part of public notification, EcoFX will be placing advertisements in local and regional papers circulating in the wider area to inform the public of the operation and the risks.

EcoFX will also be obtaining requisite consents under the Environmental Protection Agency requirements from Public Health South.

We will be contacting you by email, e-text or phone contact prior to each phase of the Clinton-Eglinton, Kepler and Hollyford programme commencing.

In addition, EcoFX will be erecting signage throughout the operational areas at key points such as camping grounds, huts, tracks, jetties and public access areas.

If you wish to receive ongoing regular updates about the programmes throughout their delivery, including more specific detail on the timing of the operations, please email admin@ecofx.co.nz.

If you require further information in the meantime, please contact § 9(2)(a) or § 9(2)(a) or our office on (07) 873 8130.

Kind regards

§ 9(2)(a)

§ 9(2)(a)

Operational Controller's

Archived: Thursday, 26 September 2019 3:2 :33 M
From: admin
Sent: Sun, 9 Jun 2019 23:30:42 +0000Authentication
To: admin
Subject: Tiakina Nga Manu (Battle For Our Birds) Consultation
Sensitivity: Normal
Attachments:
 andowners_ epler_ Tiakina Nga Manu.pdf

Good Morning

Please find attached a letter regarding upcoming pest control operation/s we are undertaking in Fiordland this Winter/Spring as part of the Tiakina Nga Manu programme (formally Battle for our Birds), on behalf of the Department of Conservation.

If we have your current postal address in our database then you should have received an information pack in the mail last week. If you have not received one, could you please confirm your current postal address. Otherwise, all of the information can be found here: <http://www.ecofx.co.nz/tiakina-nga-manu/>

If you have any questions please contact us using the details provided in the letter.

Kind Regards,

Office Administrator
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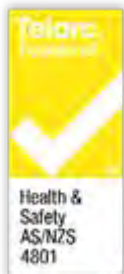
Phone 07 873 8130
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Released under the Official Information Act



31 May 2019

Group
Name
Address

Dear Name

Kepler Valley: Tiakina Ngā Manu Operation Consultation

EcoFX has been contracted by the Department of Conservation to undertake a large scale aerial 1080 operation in the Kepler Valley as part of the Department of Conservation Tiakina Ngā Manu (formerly Battle for our Birds- BFOB) programme.

EcoFX has previously delivered "Battle for our Birds" programmes in the Clinton-Eglinton and Hollyford Valley. We have attached a Department of Conservation Tiakina Ngā Manu fact sheet of the programme/s for your information. It has an operational map included, with more detailed maps available on request. We have also supplied a comprehensive information pack with key operational information.

The Tiakina Ngā Manu Kepler programme is being undertaken as part of a larger nationwide aerial predator control programme due to a 2019 "Mega Mast" beech and podocarp seeding event. Its purpose is to protect at risk native species in the programme areas from predation from rats and other key predators such as stoats, weasels and possums. At risk species include: whio /blue duck, yellow-crowned kākārīki, rock wren, mohua, short and long tailed bats, Fiordland crested penguin, kea and South Island kākā.

You have a property located directly adjacent to the operational area. Part of the initial process of consultation involves personal contact with affected parties. This could involve a number of forms of contact such as meetings, letters, email, e-text or phone contact. A representative from EcoFX will be in contacting you in the near future.

The programme is intended to be undertaken from late July early August to mid-September 2019, but may occur as late as October if the weather is unfavourable. It is intended that the order that programmes will be delivered is Clinton-Eglinton, Kepler and Hollyford, although this is dependent on local weather conditions and the priority of programmes being delivered by other contractors.

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Email: admin@ecofx.co.nz
www.ecofx.co.nz

EcoFX - Protecting Your Natural Heritage

Phases for the programme are as follows:

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- Approximately 7 days later toxic baits will be sown over the treatment area at a rate of 1.5 kg/ha.
- Both phases are weather dependant requiring 2-3 fine nights with minimal rainfall.

EcoFX will also be obtaining requisite consents under the Environmental Protection Agency requirements from Public Health South.

As part of public notification, EcoFX will be placing advertisements in local and regional papers circulating in the wider area to inform the public of the operation and the risks.

We will be contacting you by email, e-text or phone contact prior to each phase of the Kepler programme commencing.

In addition, EcoFX will be erecting signage throughout the Kepler Valley at key points such as tracks, jetties and public access areas.

If you require further information in the meantime, please contact s 9(2)(a) or s 9(2)(a) or our office on (07) 873 8130.

Kind regards

s 9(2)(a)

s 9(2)(a)

Operational Controller's

Released under the Official Information Act

Archived: Friday, 27 September 2019 9:37:33 AM
From: admin
Sent: Sun, 9 Jun 2019 23:28: 6 +0000Authentication
To: admin
Subject: Tiakina Nga Manu (Battle For Our Birds) Consultation
Sensitivity: Normal
Attachments:
Concessionaires_ epler_Tiakina Nga Manu.pdf

Good Morning

Please find attached a letter regarding upcoming pest control operation/s we are undertaking in Fiordland this Winter/Spring as part of the Tiakina Nga Manu programme (formally Battle for our Birds), on behalf of the Department of Conservation.

If we have your current postal address in our database then you should have received an information pack in the mail last week. If you have not received one, could you please confirm your current postal address. Otherwise, all of the information can be found here: <http://www.ecofx.co.nz/tiakina-nga-manu/>

If you have any questions please contact us using the details provided in the letter.

Kind Regards,

Office Administrator
EcoFX Ltd
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PO Box 248
Otorohanga

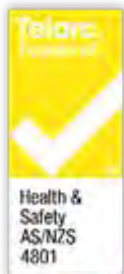
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31 May 2019

Group
Name
Address

Dear Name

Kepler: Tiakina Ngā Manu Programme Consultation

EcoFX has been contracted by the Department of Conservation to undertake large scale aerial 1080 operations in the Clinton- Eglinton, Kepler and Upper and Lower Hollyford Valleys as part of the Department of Conservation Tiakina Ngā Manu (formerly Battle for our Birds- BFOB) programme.

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You have been identified as having an interest in the Kepler operational area either as a concessionaire to the Department of Conservation or as an interested party. Part of the initial process of consultation involves personal contact with affected parties. This could involve a number of forms of contact such as meetings, letters, email, e-text or phone contact. You may have received initial communication or correspondence from the Department of Conservation Te Anau Office about these programmes.

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Kind regards

s 9(2)(a)

s 9(2)(a)

Operational Controller's

Archived: Thursday, 26 September 2019 3:21:33 M
From: admin
Sent: Sun, 9 Jun 2019 23:30:19 +0000Authentication
To: admin
Subject: Tiakina Nga Manu (Battle For Our Birds) Consultation
Sensitivity: Normal
Attachments:
Stakeholders and Sponsors_ epler Operations_ Tiakina Nga Manu.pdf

Good Morning

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Kind Regards,

Office Administrator
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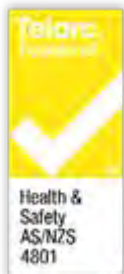
Phone 07 873 8130
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31 May 2019

Group
Name
Address

Dear Name

Clinton-Eglinton, Kepler, Hollyford: Tiakina Ngā Manu Programme Consultation

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You have been identified as being a Partner, Sponsor or Stakeholder for Biodiversity Programme/s in the Clinton-Eglinton, Kepler and Hollyford operational areas to the Department of Conservation. Part of the initial process of consultation involves contact with interested parties. This could involve a number of forms of contact such as meetings, letters, email, e-text or phone contact. You may have received initial stakeholder communication or correspondence from the Department of Conservation Te Anau Office about these programmes.

The programme is intended to be undertaken from late July early August to mid-September 2019, but may occur as late as October if the weather is unfavourable. It is intended that the order that the programmes will be delivered is Clinton-Eglinton, Kepler and Hollyford, although this is dependent on local weather conditions and the priority of programmes being delivered by other contractors.

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EcoFX - Protecting Your Natural Heritage

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If you require further information in the meantime, please contact s 9(2)(a) or s 9(2)(a) or our office on (07) 873 8130.

Kind regards

s 9(2)(a)

s 9(2)(a)

Operational Controller's

Archived: Friday, 27 September 2019 9:37: 2 AM
From: admin
Sent: Sun, 9 Jun 2019 23:27:2 +0000Authentication
To: admin
Subject: Tiakina Nga Manu (Battle For Our Birds) Consultation
Sensitivity: Normal
Attachments:
 Ser ice ro iders_Tiakina Nga Manu.pdf

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Office Administrator
EcoFX Ltd
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Otorohanga

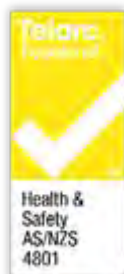
Phone 07 873 8130
Fax 07 873 6904

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Released under the Official Information Act



31 May 2019

Group
Name
Address

Dear Name

Kepler: Tiakina Ngā Manu Programme Consultation

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You have been identified as an interested party or a service provider for the Kepler operational area. Part of the initial process of consultation involves contact with interested parties. This could involve a number of forms of contact such as meetings, letters, email, e-text or phone contact. You may have received initial communication or correspondence from the Department of Conservation Te Anau Office about these programmes.

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As part of public notification, EcoFX will be placing advertisements in local and regional papers circulating in the wider area to inform the public of the operation and the risks.

EcoFX will also be obtaining requisite consents under the Environmental Protection Agency requirements from Public Health South.

We will be contacting you by email, e-text or phone contact prior to each phase of the Kepler programme commencing.

In addition, EcoFX will be erecting signage throughout the operational areas at key points such as camping grounds, huts, tracks, jetties and public access areas to warn the public of the presence of toxins. While these signs are in place, please remember the following rules:

- Do not handle bait
- Children should not be left unattended

If you wish to receive ongoing regular updates about the programmes throughout their delivery, including more specific detail on the timing of the operations, please email admin@ecofx.co.nz.

If you require further information in the meantime, please contact s 9(2)(a) or s 9(2)(a) or our office on (07) 873 8130.

Kind regards

s 9(2)(a)

s 9(2)(a)

Operational Controller's



Department of
Conservation
Te Papa Atawhai



**Kepler Fiordland National Park
Tiakina Nga Manu Battle for our Birds Pest Control**

EcoFX Ltd wishes to advise the public of its intention to aerially apply cereal baits containing the toxin Sodium Fluoroacetate (1080) in the Kepler area on or after the 1 August 2019. The actual date of the operation will be dependent on suitable weather.

This work is being conducted as part of the Department of Conservation's Tiakina Nga Manu, Battle for our Birds Programme, to protect native species from rats, stoats and possums.

Description of the Control Area:

The treatment area is approximately 24,050 ha in size – between Lakes Te Anau and Manapouri. Reaching to the eastern side of the Cathedral Peaks on Lake Manapouri and the Gorge Burn on Lake Te Anau. This area includes the Hidden Lakes, the Iris Burn and Forest Burn catchments.

Method of Control:

Cereal baits containing the pesticide 1080 will be distributed by helicopter over the described area. The 1080 baits are cylindrical pellets approximately 2-3 cm long, cinnamon lured and dyed green.

The 1080 operation will be preceded by an application of non-toxic prefeed baits. The non-toxic prefeed baits are 2 cm long and not dyed.

Always remember when in the area:

- **DO NOT** touch bait or animal carcasses
- **WATCH CHILDREN** at all times
- **DO NOT** eat animals from this area
- **DO NOT** allow **DOGS** access to this area

Observe these rules whenever you see warning signs placed at public access points to treatment areas.

The area immediately adjacent to the Kepler Track between Brod Bay and 1.5 kilometres west of Rainbow Reach will be treated using ground based methods.

Please call the National Poisons Centre for details regarding sodium fluoroacetate (1080) – ph. 0800 764766.

A detailed map of the treatment area can be viewed at the Department of Conservation Te Anau Visitor Centre 8:30am - 4:00pm. For any further information contact Operational Controller Kepler. EcoFX: phone. 07 873 8130, EcoFX Ltd, PO Box 248, Otorohanga 3940.

Archived: Monday, 23 September 2019 11:24: 0 AM
From: admin
Sent: Thu, 29 Aug 2019 23:33:39 +0000Authentication
To: admin
Subject: Tiakina Nga Manu Battle for Our Birds coF td pdate
Sensitivity: Normal

Kia Ora,

Tiakina Nga Manu – Battle for Our Birds – EcoFX Ltd Update

As you will already be aware, EcoFX Limited is undertaking three aerial 1080 pest control operations in Fiordland this Winter/Spring on behalf of the Department of Conservation. These are:

- Clinton-Eglinton Aerial
- Kepler Aerial
- Hollyford Aerial

You are receiving this notification as you are listed as either a Service Provider, Concessionaire, Private Landowner, Recreational user, Iwi Partner or Sponsor for at least one (or more) of these three operations.

On the 18th and 19th of August, the Clinton-Eglinton pre-feed was successfully completed. We are now waiting on a fine weather window to undertake the toxic phase of this operation.

The Kepler operation will likely follow once both phases of the Clinton-Eglinton operation is completed, however if there is a more suitable weather window for the Kepler pre-feed, then this will take place first.

The Hollyford operation will follow the Kepler.

A reminder to please check for signage if you are in the area. And

- **DO NOT TOUCH** poison bait
- **WATCH CHILDREN** at all times
- **DO NOT EAT** animals from the area
- Poison bait or carcasses are **DEADLY to DOGS**

We will keep you updated throughout the delivery of these programmes.

Nga Mihi,

Administrative Support

EcoFX Limited

PO Box 248 Otorohanga

EcoFX, "Protecting Your Natural Heritage"

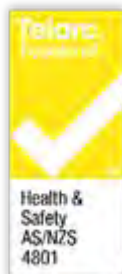
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From: admin
Sent: Sunday, 8 September 2019 10:22 AM
To: admin
Subject: Tiakina Nga Manu - Kepler Aerial Pest Control Operation - Prefeed Notification

Categories: Blue Category

Good Morning

Please be advised that the pre-feed phase of the Kepler aerial pest control operation is going ahead this Monday the 9th of September.

The toxic phase of the operation will follow in 7-10 days (in a suitable fine weather window).

Pre-feed warning signs will be put in place.

We will keep you updated if there are any changes. Can you please reply to this email to confirm receipt.

For any urgent queries you can contact our Operations Controller – Kevin Pearse – 021 052 8411.

Kind Regards,
Administrative Support
EcoFX Limited
PO Box 248 Otorohanga
EcoFX, "Protecting Your Natural Heritage"

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Released under the Official Information Act

From: admin
 Sent: Wednesday, 18 September 2019 8:51 AM
 To: admin
 Subject: 24 Hour Notification - Toxic Phase of the Kepler Aerial Pest Control Operation - Tiakina Nga Manu
 Attachments: Tiakina Nga Manu Factsheet_Kepler_Updated Map.pdf

Categories: Blue Category

Good Morning,

Please take this email as 24 hour notice for the Kepler Aerial 1080 Pest Control Operation.

Prefeed was completed on the 9th of September, the toxic phase is planned to start tomorrow the 19th of September. The operation should be completed in one day.

As a result the following tracks will be closed for the duration of the operation:

-Kepler Track

Warning signs will be put in place. A reminder to please check for signage if you are in the area. And;

- * DO NOT TOUCH poison bait
- * WATCH CHILDREN at all times
- * DO NOT EAT animals from the area
- * Poison bait or carcasses are DEADLY to DOGS

Please note: As this is the toxic phase of the operation, we will be attempting to contact you via telephone also. We would appreciate if you can reply to this email to confirm the message has been received in the event that we cannot reach you today.

If you have any further questions please contact EcoFX on admin@ecofx.co.nz or call on 07 871 8130.

Thank You,
 Administrative Support
 EcoFX Limited
 PO Box 248 Otorohanga
 EcoFX, "Protecting Your Natural Heritage"

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ORILLION



orillion

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	0.15% 1080 PELLETS
Synonyms:	1080 pellets
Supplier:	Animal Control Products Ltd trading as Orillion
Street address:	Physical address: 408 Heads Road, Whanganui 4501, New Zealand.
Postal address:	Postal address: Private Bag 3018, Whanganui 4541, New Zealand.
Telephone:	+ 64 (0) 6 344 5302
Website	www.pestoff.co.nz
After hours telephone numbers:	s 9(2)(a)
ACCIDENTAL HUMAN POISONING National Poisons Centre: Emergency phone number for spills, transport emergencies and risk mitigation:	Dial 111 and be ready to provide information from the product label to medical personnel. Free phone 0800 764 766 Dial 111

2. COMPOSITION / INFORMATION ON INGREDIENTS

Product Name:	0.15% 1080 PELLETS
Synonyms:	1080 pellets
Active Ingredient:	Sodium fluoroacetate
Other Ingredients:	Cereals, sugars and binders
Active Gas Number:	62-74-48
Molecular Weight of Active:	100.02
Molecular Formula of Active:	F C H ₂ CO ₂ Na
Recommended Use:	Pelletised bait for the control of possums
Appearance:	Cylindrical green pellets.

3. HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE: This product contains a **DEADLY POISON**.

HSNO Approval Code: HSR002424

HAZARD CLASSES:	6.1B, 6.8A, 9.1D, 9.3A
HAZARD IDENTIFIERS:	Priority Identifiers - Danger. Deadly Poison. Keep out of reach of children. Ecotoxic. Secondary Identifiers - Acutely toxic. May be fatal if swallowed, inhaled or absorbed through the skin. Repeated oral exposure may cause reproductive or developmental damage. When handling open containers or baits, wear protective equipment as indicated below. Toxic to terrestrial vertebrates. Take measures to reduce the risk of non-target animals being exposed to the toxin either through eating baits or by scavenging the carcasses of poisoned animals. Harmful to aquatic organisms. Manage bait application rates carefully and comply with any restrictions imposed on placing baits over or near waterways. Avoid pollution of any water supply with pellets or used container.
DANGEROUS GOODS CLASS:	6.1B (Packaging Group II)

GENERAL REQUIREMENTS:	Deadly Poison. Subject to tracking requirements for individual packs. Available for purchase and use only by holders of Controlled Substances Licenses. This substance must be under the control of an Approved Handler for Class 6 and Class 9 Hazardous substances at all times unless being transported by a transport operator with a Dangerous Goods License endorsement.
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SYMPTOMS OF POISONING:

Early Symptoms: Nausea, vomiting, tingling and numbness in face and hands, stomach pains, apprehension and anxiety.

Later Symptoms: Muscular twitching, blurred vision, mental confusion.

Severe Symptoms: Coma, convulsions.

4. FIRST AID MEASURES

Ingestion: **Seek immediate medical assistance in all cases where poisoning is suspected.** National Poisons Centre recommends against inducing vomiting in most cases but in particular, never use any chemical means of inducing vomiting. In areas remote from medical assistance, there may be benefit in inducing vomiting by placing a finger down the throat.

Eye Contact: Wash eyes with copious amounts of water.

Skin Contact: Wash exposed area thoroughly with soap and water, then rinse.

Contaminated Clothing: Remove contaminated clothing and wash daily before re-use. Wear rubber gloves, overalls and secure footwear when handling 1080 pellets. Check boots and the pockets of protective clothing for dust, fragments and pellets. Do not eat, drink or smoke. Clothing and gloves must be decontaminated by washing in hot soapy water. Ensure pellets are not trampled off site.

Do NOT induce vomiting or give anything by mouth if patient is unconscious or convulsing.

PROMPT MEDICAL TREATMENT IS ESSENTIAL. CALL FOR IMMEDIATE ASSISTANCE.

5. FIRE FIGHTING MEASURES

Hazchem 2XE. Emergency firefighting response for fires in enclosed spaces by should be undertaken only by trained professionals using SCBA.

For small fires in well ventilated areas, the low rate of combustion achievable, the low concentration of toxin in the bait and the effect of ingress of fresh air through convection and circulation, will result in the dilution of gases to a level unlikely to cause harm where normal precautions are taken. 1080 pellets have a low combustibility risk and have a limited ability to sustain fire unless burned in the presence of other more flammable material. The evacuation of adjacent and downwind premises within 200 metres of the fire should be considered in the case of large fires involving 1080 pellets.

6. ACCIDENTAL RELEASE MEASURES

In the event of major spills, inform the Fire Service immediately via the 111 emergency phone service, then advise local health protection officers at your District Health Board or hospital.

Isolate the spill area and exclude all bystanders. Take all practicable steps to manage any harmful effects of a spillage including preventing baits from entering streams or waterways. Scoop spilled pellets into secure containers. Recover any undamaged bait for later use by placing in appropriately labeled containers and dispose of spoiled bait as directed below. Use a broom to collect fine material and wash down the spill area with copious water only after all spilled bait has been removed. Give consideration to possible hazards arising from washing down and ensure people, pets, livestock, wildlife and fish will not be exposed to the toxic run-off.

7. HANDLING AND STORAGE

When handling open containers or baits, wear overalls worn outside rubber boots, and impervious rubber or PVC gloves. When loading aircraft or working in windy conditions, wear goggles and a dust mask as protection against dust entering the eyes or mouth. Do not eat, drink or smoke when using the product or handling open containers. Wash protective clothing and equipment daily after work. Remove protective clothing and wash hands and exposed skin thoroughly before meals and after any contact.

Store in original container, tightly closed, under lock and key and away from feed or foodstuffs. Keep out of reach of children. As far as practicable, eliminate flammable materials and ignition sources from storage areas. Do not store in direct or diffused sunlight. The storage facility must be secure, dry and will preferably be insulated to buffer the effect of ambient temperature changes likely to cause condensation forming inside packaging.

This product must always be under the control of an approved handler who holds a current test certificate endorsed for Class 6 and Class 9 substances.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits: Ministry of Health exposure limit set February 2002 is 0.015 micrograms of 1080 per ml in urine.

Tolerable Exposure Limits (TEL) : The NZ Environmental Protection Agency has prescribed the TEL_{water} for sodium fluoroacetate, expressed as the amount of sodium fluoroacetate per volume of water as 0.0035 milligrams per litre of water (0.00000035%).

Engineering Measures: Decontaminants are water (dilution), heat > 120°C (denaturing) and microbial decomposition (degradation).

Personal Protection Equipment: Operators using or handling the product in open containers must wear gloves, overalls and waterproof boots. Do not smoke, drink or eat while handling the product. Wash hands, face and any exposed areas after use. Wash protective equipment immediately after use or otherwise isolate and containerise for return to a washing facility. When working around aircraft, wear a suitable dust mask to prevent inhalation of airborne particles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: 1080 pellets in have a cylindrical form, are dyed green and may have an odour of cinnamon, fruit flavouring or fish.

Solubility in Water (g/L)	Pellets will eventually lose their form and disintegrate if immersed in water for several hours or more.
Decomposition Point (°C)	The active ingredient 1080 becomes unstable at 110 degrees Celsius and decomposes at 200 degrees Celsius.

10. STABILITY AND REACTIVITY

1080 pellets are stable and non-reactive under normal storage and use conditions.

11. TOXICOLOGICAL INFORMATION

Exposure must be kept to an absolute minimum. Sodium fluoroacetate may be absorbed through the eyes, broken skin or via the mouth. It is estimated that a lethal dose of bait for an adult human could be as little as 30 grams where the bait contains 0.15% 1080. A small dog may receive a lethal dose of 1080 from as little as 0.5 grams of bait containing 0.15% 1080.

TOXICITY DATA FOR THE ACTIVE INGREDIENT - VARIOUS SPECIES*

White laboratory rat (oral) LD ₅₀	0.2 mg/kg B/W (Body Weight)
Brush-tailed possum (oral) LD ₅₀	0.3 – 1.0 mg/kg B/W
Dog (oral) LD ₅₀	0.1 – 0.35 mg/kg B/W

Cat (oral) LD ₅₀	0.35 mg/kg B/W
Bennett's wallaby (oral) LD ₅₀	0.2 mg/kg B/W
Mule deer (oral) LD ₅₀	1.0 mg/kg B/W
Mouse (oral) LD ₅₀	5.0 – 19.3 mg/kg B/W
Human (oral) LD ₅₀ (estimated)	0.7 – 2.1 mg/kg B/W (30g-100g of bait for 70kg human)

* Data from US Department of the Interior, Biological Report No. 27 (1995); Ronald Eisler "Sodium monofluoroacetate (1080) Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review"

12. ECOLOGICAL INFORMATION

Use the pellets only for the purpose indicated and in the manner prescribed by the label. Sodium fluoroacetate may be present for many months in the carcasses of poisoned animals; thus presenting a secondary poisoning danger to carnivorous birds and mammals. Take steps to mitigate any potential non-target exposure by wildlife or domestic animals. Studies have shown that 1080 concentrations will decline within rotting carcasses through microbial degradation.

1080 wastes are ecotoxic. Improper disposal of excess pesticide is unlawful. If wastes cannot be disposed of by use according to label instructions, contact local Regional Council or a hazardous waste advisor for guidance.

13. DISPOSAL CONSIDERATIONS

The active ingredient sodium fluoroacetate is degraded through microbial activity and will decompose at temperatures above 200 degrees Celsius. It dilutes readily in water.

Bait which is surplus or spoiled should be disposed of by burying with other organic material on the active tip face of an appropriately managed landfill or buried within the biologically active layer of soil elsewhere within a secure area. Ensure that a good covering of earth is applied over the bait immediately to prevent access by scavenging birds. Avoid deep disposal or burying where groundwater contamination may occur.

Treating the baits through a sewage oxidation facility or other chemical treatment facility is also an acceptable means of disposing of unwanted bait material where this is allowed by local by-laws and regulations.

It is possible to burn unwanted 1080 pellets in a properly constructed and appropriately located incinerator but this will normally require other, more combustible material to be burned with the pellets. Any residues taken from the incinerator should be buried as above.

Do not use the empty container for any other purpose. Paper and polypropylene bags may be burned in a suitable location or buried in an approved landfill. Polypropylene when burnt, emits carbon dioxide, carbon monoxide and water but as there are no chlorines or organo-chlorines present, dioxins are not produced during combustion. Non-halogen containing polymers including polyethylene, polypropylene, polybutene, polystyrene, polymethyl methacrylate and polyvinyl acetate do not produce dioxins or furans. The burning of any chlorine or organo-chlorine based product must be avoided (e.g. PVC)

14. TRANSPORT INFORMATION

Proper Shipping Name:	Pesticide, solid, toxic, n.o.s. [contains Sodium fluoroacetate]
U.N. NO.	2588
Class:	6.1
Packaging Group /Hazchem code	/ 2XE
Maximum transport quantity as tools of trade:	50 kilograms (Placarding and DG documents not required but this Safety Data Sheet must be carried.)

15. REGULATORY INFORMATION

Deadly poison: Available only to holders of Controlled Substances Licenses or persons licensed to transport dangerous goods. Label directions are mandatory. Registered Pesticides:

0.15% 1080 PELLETS – V002848. HSNO Approval HSR002424

Packaging approvals: The packaging for these products has been tested and complies with the UN convention for transportation of dangerous goods and with HSNO controls and variations stipulated under the 1080 re-assessment decision arising from application HRE05002 and released on 10 August 2007.

16. OTHER INFORMATION

SPECIAL PRECAUTIONS & OTHER COMMENTS:

Although 1080 pellets present a relatively low risk of accidental poisoning during bait handling, loading and application by trained, certified operators, it is recommended as a precaution that operators carry communication tools for obtaining urgent medical advice and calling for assistance when using 1080 poison. Communication systems should be tested for functionality and coverage before commencing operations.

May be fatal if swallowed. Wear waterproof gloves and overalls when using 1080. Wash hands after handling pellets, equipment or animals that have been contaminated with 1080. Do not use poisoned or contaminated animals for food or feed.

This product is toxic to wildlife. Although pellet baits are not readily taken by native birds and mammals, those feeding on carcasses of contaminated animals may be fatally poisoned. Take measures, where practical and necessary, to minimise harmful effects on aquatic environments and desirable species. Apply the product only as specified by label directions and according to the conditions of any consents required.

Dehydrated carcasses may remain dangerous to dogs or cats for an indefinite period. A single mouse poisoned by 1080 may contain enough poison to kill an adult dog.

CONSULT NEAREST POISON CONTROL CENTER FOR CURRENT INFORMATION.

All information contained in this Data Sheet is as accurate and up-to-date as possible. Since Orillion cannot anticipate or control the conditions under which this information may be used, each user should review the information in the specific context of the intended application.

Revised by: s 9(2)(a)
Date of Revision: 15 March 2019