Application for DOC permission to use VTAs: assessment report

Applicant name:	s 9(2)(a) [redacted] – EcoFX Ltd
Operation name:	Possum, rat and stoat control in the Clinton and Eglinton catchments, Fiordland National Park.
Approving manager:	Jacquelyn Shannon, DDG Operations (Acting)
Assessor:	s 9(2)(a), 9(2)(g)(ii) [redacted]
Date received:	29/05/2019
Overview:	It is proposed that the following pesticide uses will be applied: • Pesticide Use [1] [Sodium fluoroacetate] [1.5g/kg] [RS5 cereal pellet] [aerial] • Pesticide Use [140] [Sodium fluoroacetate] [1.5g/kg] [RS5 cereal pellet] [aerial] • Pesticide Use [116] [Pindone] [0.5g/kg] [cereal pellet] [bait stations] Permission is sought for toxic application starting on or after 15 June 2019 and ending on or before 30 May 2020. Non-toxic prefeed will be applied no earlier than 5 June 2019.
Applicant type: *Delete the incorrect options.*	DOC applicant—DOC SOPs will apply.

Step 1 Confirm application is complete *Are all documents (listed below) provided?*	
DOC Application form complete: *Are all sections of the DOC Application Form completed to a standard that you can assess them? Where are the information gaps? Is the operational information for treatment blocks clearly separated in each section of the application form where differences exist between them? Does the proposed*	DOC application complete to a standard that can be assessed. • Application (DOC-5976325) MOH application or consent missing– sent through on the 31/5/19. An AEE was completed for both 1080 and Pindone. Amendments were made to the application in respect of: • the description of the operational area (two small areas of stewardship land had been omitted) • the addition of Pestex (#140) 1.5g/kg 1080 baits to provide flexibility in terms of bait supply • a change to sowing rate of the 1080 baits from 1.5kg/ha to 2kg/ha

application meet the grouping standard (see Applying for DOC permission for external agencies or Operational planning for animal pest operations SOP ? Where required, was the AEE section completed?	
Are all the proposed pesticide use(s) accepted for use? *Check the Status List category and if any compulsory restrictions apply. If any compulsory information needs apply, consider if the operation is designed to provide the required information.*	Yes – both pesticides are accepted to control rats and meet DOC's best practice.
Performance standards sheets *Is there a performance standard sheet for each pesticide uses proposed, and trapping if applicable?*	Pesticide use #1 Pesticide use #140 Pesticide use #116
DOC permission map(s) (image file or files) *Does the map or maps meet the minimum standards (as stated in Appendix 2 of the DOC Application Form), including showing proposed warning sign locations and normal points of entry where warning signs must be A3?*	Yes
DOC Pesticide Summary shapefiles (independent groups or individuals only) *Are the control*	Yes

s 9(2)(a)

methods clearly assigned to each treatment block? Do operational boundaries and warning sign locations match the DOC permission map(s)?	
Consultation record including conditions of landowner consents *Was level of consultation adequate?* *All required owner/occupier consents obtained?* *Are conditions of consent evident in their application?*	Communications Plan DOC-5731655 Initial consultation undertaken by DOC then handed to EcoFX to be completed. EcoFX communications Plan checked on 7/06/2019. Well updated lists including iwi, concessionaires and local landowners.
Public health permission/ proof of application *Proof of application for public health permission is adequate to process the application, as long as the public health permission and associated application form is sighted prior to approval.*	Yes (1080 only) code 19/12/SEJ/DUNPH (DOC-6006180)
Other *(specify, e.g. RMA consent)*	N/A
Your confirmation email and subsequent correspondence *Include dates and nature of requests for further information.*	Confirmation email sent 29/05/2019 Request for further information was sent on 31/05/2019 asking: • Could I please get a copy of either the PHP application or consent for the operation? • Other than tracking tunnels, is there any other outcome monitoring planned for the operation? Maybe a species specific one? • Has the operational plan been peer reviewed? • Could I get a map showing landowners/tenure? • Is the 1080 bait going to be Orillian or Pestex? (might be one for s 9(2)(a), 9(2)(a)(ii) if you're not sure) • I had a look at the pesitcides app compared to the maps that you sent through. I could be wrong, but the flight corridor maps seem to be different on the map • I don't see CP Trustees on the Comms Plan – and could I see the

	EcoFX comms plan version? • I also noticed that the Kea COP std 4 mentions a 1st of July date for the toxic drop in a mast year. Could I get confirmation that there will be no toxic done till after that? (It mentions the 15th of June in the application). On the 31/5/2019 s 9(2)(a) (EcoFX) responded with: • The PHP consent • Copy of the landowners/tenure operational map • Toxic drop was confirmed to be after the 1st of August On the 31/5/2019 s 9(2)(a), 9(2)(g)(ii) (DOC) responded with: • Two operational plans were written (Clinton and Eglinton separately) and have been peer reviewed • Outcome monitoring will be done with annual short tailed bat, long tailed bat and whio monitoring • The flight corridor in the pesticides app is an old one and will be updated the following week (completed) On the 5/6/19 I asked s 9(2)(a), about adding the pindone bait stations and proposed signage to the Pesticides app. The response was; "There are no bait stations in the pest app for the Eglinton. There are over 5000 bait stations in the Eglinton there and how using the pesticide app with these bait stations could work without needing someone to spend all their time on it is something that still needs to be worked through....At the moment there is no function for people in the field to use the trapping app or anything for their data, and it would require manual inputting." EcoFX communications plan sent through on 6/06/2019 from s 9(2)(a) s 9(2)(a) Pestex vs Orillion bait not confirmed, but the application has been amended and Performance standards have been added for both. Confirmation of land tenure amounts on 22/07/2019 from s 9(2)(a) s 9(2)(a), and s 9(2)(a) These were further checked by DOC GIS on the 2/08/2019.
Step 2 Capture treatment blocks in the Pesticide Application	
Your publication of the proposed operation on the DOC Pesticide Summary (independent groups or individuals only) *Include date and note any issues.*	N/A DOC operation
Step 3 Evaluate control method *Is the proposed method suited to the pest problem, treatment*	

area and consultation outcomes?	
Your assessment of the control method *Include relevant points from the 'Choose your control method' part of Current Agreed Best Practice, where available.*	The aerial application of 1080 cereal pellets has proven to be extremely effective in reducing rodent numbers when utilised by experienced operators using currently accepted best practice methods and is suitable for the proposed control area. Section 4 of the application describes the proposed control methods and adequately justifies their use for this operation: "Aerially broadcast 1080 is the chosen control method as it is currently the only tool that is able to achieve high operation efficacy in rat and possum kills across a landscape scale, at a reasonable cost. It is also the most effective and efficient method of rat and possum control over difficult and remote terrain (for a summary of operational efficacy of aerially broadcast 1080, see Fairweather *et al.*, 2013) This method has been used successfully in the area previously. Timing of aerial 1080 treatment targeting rats can depend on multiple factors, including forest/habitat type, food availability/seed fall, and the times of heightened vulnerability to predation of the species being protected." Originally, proposed methods reflected all the current Best Practice documents for Aerial 1080 operations. • One pre-feed of 6g RS5 cereal pellets @ 1.5kg/ha. • One toxic feed of 6g RS5 cereal pellets @ 1.5kg/ha This year's unprecedented 'mega mast' has however provided abundant food for rats, making predator control more challenging. The monitoring results for the three recently completed aerial 1080 operations show nearly 20% rat survival, significantly more than hoped at less than 5%. The exceptional amount of seed from the South Island's biggest beech mast in 40 years means rats don't need to travel far for food and their home ranges. Gaps in bait coverage have left pockets of rodents that wouldn't travel far enough to be exposed to the bait. It is vital that this operation is successful in order to avoid losing local populations of vulnerable native species such as mohua, whio, and long and short tailed bats, which are vulnerable to rat plagues. The Department's technical advisory team has revised the bait application rate for Clinton/Eglinton and some other operations to ensure more even bait spread. This is at an increased rate of 2 kg per hectare, up from the usual 1.5 kg. This adjustment aims for complete bait coverage to reach all rodents, and will be applied by sowing baits

	in overlapping swathes, so that the entire area is sown with baits twice and there is no possibility of gaps. By sowing twice and achieving the same kill rate for each individual swath, the operation is expected to achieve at least a 94% mortality for rats. The proposed sowing rate at 2kg/ha exceeds the guidance in the current Method Best Practice for BFOB aerial 1080 baiting which has specified 1.5kg/ha as current guidance. A sowing rate of 2kg/ha has however been used in many past operations. The operation will continue to meet other best practice guidance and will comply with the Code of Conduct for aerial 1080 operations in Kea habitat.
Label directions *Check the product label to ensure that the proposed method detail complies with the label content.*	Both methods comply with label directions
Summary of any technical advice received on the proposed control methods.	The request to remove PS8 from Pesticide Use #116 (Pindone Bait stations) was discussed between the Te Anau team, technical advisers and the Southern regional lead for Tiakina nga Nanu. The technical advice from s 9(2)(a), 9(2)(g)(ii) is below with responses from s 9(2)(a), 9(2)(g)(ii) in blue. "To remove Performance Standard 8, the following need to be accepted: 1. That kea and weka are not present or very rarely seen foraging in roadside habitat in the area where bait stations will be used Observations from staff have confirmed that in the Eglinton area weka are barely present in the area (only 1 observed in the valley in the past 10 years). Kea are present in the area but most commonly at the divide carpark and in high altitude forest. They haven't been observed foraging on the roadside where the bait stations are. 2. That there is some risk to kea from the aerial 1080 work in the surrounding area AND this is not significantly added to by the presence of the pindone in bait stations This is a valid assumption for our site and has been accepted as a risk for the 1080 operation proceeding as Kea are much more likely to interact with the 1080 toxin than the bait stations in this area. 3. An acceptance of the 'Institutional' risk if dead kea are recovered and found to have been poisoned by pindone if a standard intended to prevent this has been removed Over the past 10 years there have been a number of pindone operations carried out in this area with this bait station type and to date no kea have been reported to have died from pindone exposure. The Operations Manager (s 9(2)(a), 9(2)) is aware of this risk and has accepted it.

	I would defer to local knowledge on the first point, and if that is the case, then 'the no significant added risk' part of the second point is definitely met. So it comes down to point 3 and balancing high potential consequences against the probability of this occurring. Again, if point 1 is met then the probability of kea accessing pindone is presumably very low. While I would still prefer to keep this standard in place, my conservatism is probably mostly due to lack of local knowledge. If the above conditions were met then it would be a justifiable decision to remove it." The full email chain can be found under DOC-6018349
Summary of any Community relations and Pou Tairangahau advice received.	Nil – communication plan shows discussion on effects with local landowners
Step 4 Identify and assess risks and adverse effects *Are you satisfied that all risks and adverse effects have been identified?*	
Are there any gaps in the applicant's assessment of these (where the AEE section was supplied)?	Risks and adverse effects are will described in the AEE (appendix 5) both for 1080 and pindone. The change from a 1.5kg/ha to 2kg/ha sowing rate for the 1080 toxic baits is considered unlikely to result in any significant increased risk to non-target species, and the information in the application and conclusion that the risks are low are still relevant. Any additional risk is also considered acceptable in light of the potential benefit of increasing the sowing rate, and the risk of an unsuccessful operation should the usual 1.5kg/ha sowing rate be used instead.
Relevant points from the DOC Pesticide Information Reviews	Both the 1080 Pesticide Information Review and the Pindone Pesticide Information Review were given as references in the AEE, however not linked to facts in the AEE.
Summary of any technical or community relations advice received	No technical or community relations advice received on the risk assessment.
Other resources consulted *(specify)*	• Robertson H, Dowding J, Elliott G, Hitchmough R, Miskelly C, O'Donnell C, Powlesland R, Sagar P, Scofield P, Taylor G 2013. New Zealand Threat Classification Series 4. 22 p. Conservation status of New Zealand birds, 2012. • s 9(2)(a) 2017, Assessment of Environmental Effects for rat control in the Kepler Mountains, Fiordland National Park. Unpublished Report Te Anau Area docdm-95676.

	• Clinton BFOB Operational Plan 2019 - DOC-5659998. • Eglinton BFOB Operational Plan 2019 - DOC-5599279.
Your assessment of technical risks and adverse effects *(e.g. the pesticide use, use pattern, site factors)*	Proposed methods comply with Current Agreed Best Practice and are suitable for the site. As noted above, risk to non-target species is considered low and all native plant and animal species and their associated ecosystem will be advantaged by a reduction in rodent, stoat and possum numbers. The treatment area is in kea habitat: (http://intmaps/richmapviewer/?Viewer=DOCgis&Project=c59a7d94-d568-495b-ab00-0016f8be2827) but is within the timeframe for standard 4 of the Kea COP.
Your assessment of non-technical risks *(e.g. high public use, consultation outcomes)*	The Clinton/Eglinton block covers a range of huts, campsites and tracks (both short walks and routes). It also covers the single access road to Milford Sound – a high profile tourist site. Signage for the operation is thorough, and the use of pindone bait stations covers the road exclusion issued by the Southland District Health Board consent. One section of the aerial operational area covers the Milford 'Great Walk' track. The Milford Track is closed to Great Walkers during the winter season (1st May to 28th October) and facilities are removed. Sowing around tracks both prior to the Great Walk season and during the Great Walk season are well covered by the Southland District Health Board consent. Consultation on effects records showed no negative outcomes. Iwi were sent a letter on the 30/5/2019
Step 5 Calculate estimated caution period and evaluate if risks and adverse effects are at an acceptable level *Will risks be managed adequately with the performance standards proposed for this operation? Include dates and outcomes of any discussion with the applicant.*	
Estimated caution period for all the pesticide use(s) *Does this differ from the recommended caution period in the Caution period calculator?*	PU#1 – Caution periods set at 9 months after bait application as recommended in the CP calculator (dry site 'No' (>600mm rainfall pa) and mean temp in the 6 months following the operation <10 degrees 'Yes'), bait and carcass monitoring is required for 1080 aerial pellets. PU#116– Caution periods set at 6 months after bait application as recommended in the CP calculator (mean temp in the 6 months following the operation <10 degrees 'Yes'), bait must be removed and carcass monitoring is required for pindone pellets. PU#140 – Caution periods set at 9 months after bait application as recommended in the CP calculator (dry site 'No' (>600mm rainfall pa) and mean temp in the 6 months following the operation <10 degrees 'Yes'), bait and carcass monitoring is required for Pestex aerial pellets.
How well does the proposed operation manage potential	The control method specifications (bait size, lure, colour, application rate) and proposed performance standards are adequate to manage risks to native fauna.

risks to native fauna? *(i.e. as proposed in the Application form or performance standards)*	
How well are other potential risks managed? *(i.e. as proposed in the Application form or performance standards)*	Landowners are being visited by EcoFX to discuss the operation. Dogs are not allowed in the National Park unless permitted. This will be discussed with local landowners during the consultation period by EcoFX. Risk to birdlife by pindone baits loosened from the bait stations are discussed in the AEE and identify as a low risk due to the low persistence of pindone compared to other anticoagulants. Risks to non-target native fauna are considered low and well discussed in the AEE and as above.
Are you satisfied with the proposed warning sign locations and normal points of entry?	Yes
Summary of any technical or community relations advice received	No community relations advice received. Technical advice has been received as summarised above.
Public health permission, including application form sighted (if not provided at time of application) *Consider if public health permission has any impact on DOC permission conditions.*	PHP code 19/12/SEJ/DUNPH
Other resources consulted *(specify)*	N/A
Which additional performance standards should be applied and why? *Consider impacts of conditions from other consents. Consider if the additional performance*	See attached performance standards sheets: PS#1 (DOC-6018664 PS#140 (DOC-6018666) PS#116 (DOC-6018665)

s 9(2)(a)

standards specific and auditable, and can be justified.	
Step 6 Make a recommendation *Should the application be approved or declined?*	
What key points should the approving manager have drawn to their attention?	After discussion with s 9(2)(a), 9(2)(g)(ii) (acting Operations Manager) on the 19/07/2019 – the Mintaro hut is looking to be replaced in Summer 2019/20. If the operation has not been completed by 1st October 2019 (both prefeed and toxic) the maps are to be rechecked to take into account the proposed hut site and exclusions zones relating to it. This would likely also be required for the MOH consent. Performance Standard 8 under Pesticide Use #116 was requested to be removed: "Bait station design must prevent access to baits by inquisitive birds (e.g. kea, weka and kaka)" After discussions with the Te Anau team, technical advisers and the Southern regional lead for Tiakina nga Nanu this was approved. The email chain can be found under DOC-6018349. Advice received from the BfoB TAG that a higher sowing rate than the applied for 1.5 kg/ha may be required for this operation to be successful due to the effect of the current mast conditions. This is summarised in the "Step 3" section (pages 5 & 6) above, and the technical advice on potential effects of the revised sowing rate is summarised in the "Step 4" section (page 7) above. The technical advisers have concluded that the revised sowing rates are likely to result in more effect results in terms of rat mortality, and any potential effects of the increase in sowing rates on non-target native species is [low] and acceptable. The revised sowing rate of 2kg/ha remains within the rate approved in the PHU consent for the operation.
Is approval or decline recommended? *If declined, summarise reasons.* *If approved, is a readiness check recommended (DOC operations only – see Pre-Operational Step 7 of the* Operational planning for animal pest operations SOP*)?*	Approval is recommended along with a readiness check.

s 9(2)(a)

Step 7 Prepare documents and advise manager	
For recommended approval: *Attached correct draft letter of permission, DOC Performance Standards sheet(s) and map(s) of operational boundaries.*	DOC Permission letter (DOC-6018669) PS#1 (DOC-6018664) PS#140 (DOC-6018666) PS#116 (DOC-6018665) Overview Map and Maps 1 to 8 (DOC-5976331) Map 2 (DOC-5976328)
For recommended decline: *Attach draft letter of decline including a summary of reasons.*	

Record of permission decisions that differ from the assessor recommendation	
Record of permission decision *Only complete this section where the manager has made a decision that differs from the assessor's recommendation. For example, where the manager decides on different operational timing or warning sign locations or rejects a recommendation to approve or decline the application.* *Where required, complete this in Section 7 (Approving or declining DOC permissions), Step 2. Record the difference between the decision and recommendation and summarise the reason(s) for the decision.*	

s 9(2)(a)