WAITAHA HYDRO SCHEME: Application for Concessions and Assessment of Effects

Advice regarding conservation values and effects of proposed hydro scheme on bird and bat faunas (excluding blue duck) (Assyst request R0618)

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1. Summary

1. The applicant provides a comprehensive assessment of the bird and bat values of the area proposed for development (Wildlife Surveys Ltd 2014). The site contains significant populations of threatened and representative bird and bat species in the contexts of the West Coast Conservation Management Strategy 2010-2020 (CMS) as well as the West Coast Regional Policy Statement and District Plan.

2. In the context of Natural Heritage policies of the CMS, and as stated in the Wildlife Surveys Ltd (2014) report, the site triggers significance under all the Representativeness, Diversity, Intactness, Viability, Threatened Species and Habitat and Taonga species and Habitat criteria. Twenty-seven indigenous bird species have been recorded at the site by the applicants.

3. There are a large number of threatened species at the site. Eleven nationally threatened bird and bat species (as defined under the RMA) have been recorded recently within the project envelope. Most notable are populations of the critically endangered long-tailed bat and grey duck, nationally endangered kea and nationally vulnerable kaka and falcon (as well as blue duck). The applicant suggests only a low number of threatened species are present, an assertion I disagree with.

4. The applicant records the presence of an isolated population of western weka in the Waitaha Valley, which is also of note, as this population may be genetically distinct from other populations further north.

5. The applicant notes six negative effects of the proposal on fauna (Pp 82-83 of application). I agree with their assessment. The major impacts of the proposed development include loss of breeding and/or feeding habitats of both threatened and representative bird species and long-tailed bats through felling of trees and clearance of habitats, mainly for road development, but locally about the portal, weir and other workings.

6. The greatest impact is potential loss of bat roosting trees. Therefore, if roosts are felled during the operation, the effects will be significant rather than negligible (as was suggested in the application, P127) and if the concession was granted there may be residual negative effects that could not dealt with by conditions.

7. Although the applicant has not done sufficient work to identify if and where bat roost trees occur within the envelope, instead they have proposed aligning the road access to avoid potential roost trees. If they avoid all such bat roost trees, effects would be minor along the road corridor. However, there also appears to be potential to fell bat roosts in the vicinity of the tunnel entrance at Kiwi Flat where bat activity was highest.

8. In recent RMA cases, DOC has been developing tree felling protocols with industry for if a bat roost has to be felled, and I have outlined these in Appendices 1 & 2.

9. Large trees in the vicinity of the tunnel entrance and those along the proposed road route are likely to provide important seasonal food sources for forest birds including a number of threatened species. Flexible alignment of the road access route may avoid these, although valuable season food supplies in seral vegetation habitats are likely to be lost. If wildlife trees are felled during the operation, the effects will be significant to the local fauna rather than negligible (as suggested in the application, P127) and there are likely to be some residual negative effects.

10. If the concession were granted, specific conditions would be required to deal with protection of bat and wildlife trees, tree felling protocols, and some way to compensate for loss of season seral food sources and foraging habitats. These would need to be more prescriptive than the draft conditions proposed by the applicant.

11. Indigenous species recorded in the envelope are also Protected Species under the Wildlife Act 1953. If a concession were approved the applicant will also need to apply for Wildlife Permit to potentially kill and to disturb wildlife.

2. Conservation significance of the site for birds and bats

I agree with the major finding that the 'envelope' has significant conservation values for birds and bats:

"The survey area is considered to contain areas of significant habitat for indigenous fauna based on assessment of guidelines/criteria for significance set out in the West Coast Regional Policy Statement 2000 (the RPS) (West Coast Regional Council 2000) and the Westland District Plan 2002 (the WDP) (Westland District Council 2002). The survey area has high natural heritage values based on assessment criteria in the West Coast Conservation Management Strategy 2010-2020 (the CMS) (Department of Conservation 2010). The RPS

and WDP criteria are for the purposes of Section 6(c) of the Resource Management Act 1991 (RMA), whilst the CMS criteria are for the purposes of integrated conservation management of natural and historic resources under the Conservation Act 1987." (Wildlife Surveys Ltd 2014).

In the context of Natural Heritage policies of the CMS, and as stated in the Wildlife Surveys Ltd (2014) report, the site triggers significance under all the Representativeness, Diversity, Intactness, Viability, Threatened Species and Habitat and Taonga species and Habitat criteria.

The Wildlife Surveys Ltd report goes some way towards describing how each criterion is fulfilled in detail. For example, the gorge forests support the majority of representative bird species expected in this forest type including relatively frequent long-tailed cuckoo and brown creeper compared to some other forest sites in the region. The site is relatively intact and well connected (spatially and temporally) with other habitats, contains birdlife that is important in maintaining ecological processes, and should be viable in the long term. The area identified for road construction is the low altitude component of gorge habitats, which are required by the bird community at certain times of year (e.g., in autumn and winter, or when seasonal food supplies are present there).

Specific food sources are usually only available in certain seasons and birds that use such sources are sometimes called "sequential specialists". For example, kaka move from high and mid-altitude food sources in winter (e.g., for invertebrates and sap) to low-altitude food sources in spring and to podocarp fruit in autumn and podocarp seed in winter (O'Donnell 1993; O'Donnell & Dilks 1989, 1994). The presence of good numbers of kea (nationally endangered) at the site is an example of this phenomenon. Kea are often thought of as alpine birds, but in reality, on the West Coast they spend considerable time feeding in the forest on things like podocarp fruit, seeds and flowers (O'Donnell & Dilks 1994).

Conservation significance of the site for nationally threatened species

I use the definition of threatened species used by the Environment Court in its decision on the criteria developed for assessing ecological significance of West Coast wetlands under the West Coast Land and Riverbed Management Plan (Friends of Shearer Swamp Inc v West Coast Regional Council (2010) NZEnvC 345). That is, "Nationally threatened species" are those classed as "Threatened" or "At Risk" as defined by the current version of the New Zealand threat classification system (Townsend et al. 2008).

Wildlife Surveys Ltd (2014) record a relatively high number of threatened bird species (9 + blue duck) and 1 threatened bat species from the 'envelope'. Most notable are populations of the critically endangered long-tailed bat and grey duck, nationally endangered kea and nationally vulnerable kaka and falcon.

In addition, pied oystercatcher and black shag (already noted by Wildlife Surveys Ltd) and at least three additional threatened species are present on the Waitaha River below the 'envelope' but above the State Highway 6 bridge (Banded dotterel, Nationally Vulnerable; pied stilt, declining; variable oystercatcher, at risk – recovering; C. O'Donnell personal observations).

Wildlife Surveys Ltd highlights the relative importance of the site for the critically critical long-tailed bats, and I agree with their assessments. Bats are now rare over most of the West Coast region (O'Donnell 2000). Bats are very cryptic and the one of the few ways to find them is by using devices called bat detectors (O'Donnell & Sedgeley 1994). Unlike birds, the calls of bats are beyond the human hearing range. These detectors pick up the high frequency navigation and feeding calls that bats emit when they are flying at night – but they only detect bats when the animals are flying very close to the detectors (usually much less than 50 metres; O'Donnell et al. 2006). By the standards we use there are a relatively high number of bat records within and around the area affected by the 'envelope'.

3. Potential impacts of hydro construction

The application notes six negative effects of the proposal on fauna (Pp 82-83 of application). I agree with their assessment. The major impacts of the proposed development include loss of breeding and/or feeding habitats of both threatened and representative bird species and long-tailed bats through felling of trees and clearance of habitats, mainly for road development, but locally about the portal, weir and other workings.

The proposed development will fell trees and clear habitats, mainly for road development, but locally about the portal, weir and other workings.

Such actions may cause death of birds or bats as trees are felled and the removal of potentially important food sources.

The greatest impact overall on birds and bats is potential loss of bat roosting trees. This is because bats concentrate in social groups (colonies) to breed and the felling of individual trees could be catastrophic if a bat colony is present. Therefore, if roosts are felled during the operation, the effects will be significant rather than negligible (as was suggested in the application, P127).

However, the applicant has not done sufficient work to identify if and where bat roost trees occur within the envelope, so it is difficult to predict the actual impact of the construction on long-tailed bats, or if any roosts are present. Highest bat activity recorded by Wildlife Surveys Ltd was around the weir and portal construction site.

In addition, there are potential changes to the character of the river below the developed area either through changes in flow regimes and/or resulting from channelization or sediment changes, which potentially could affect breeding braided river birds (Table 1).

Table 1 - Areas of impact on threatened species

Threatened species	Access road	Intake area	Downstream effects
Long-tailed bat	Yes	Yes	?
Black shag		Yes	?
Grey duck		Yes	?
Banded dotterel			?
Variable oystercatcher			?
Pied oystercatcher			?
Pied stilt			?
NZ falcon	Yes		
Kaka	Yes		
Kea	Yes		
Long-tailed cuckoo	Yes		
SI Fernbird	?	?	
NZ pipit		?	?

4. Proposed mitigation

Proposed mitigation needs to deal effectively with the six negative effects of the proposal on fauna (Pp 82-83 of application).

Bats: In the first instance, bat roost trees should be avoided. This can be achieved by identification of roosts through radio tracking studies. In this case, however, such a study has not been done. Therefore, careful alignment of the access road should undertake to

avoid such trees. Potential roost trees have been defined by DOC as all live and dead standing trees > 15 cm DBH along the alignment footprint that have features that may indicate a potential roost (e.g. peeling bark; cavities, hollows, knot holes, splits, cracks etc). *Note* that the minimum DBH size of bat roost trees (lower than that suggested by the applicant) results from recent radio tracking and roosting studies from both the North and South Islands.

I note that the applicant is aware of this issue ("the final road alignment will seek to follow a route that avoids any key vegetation, large trees and potential bat roosts and to maintain at minimum a 10 m buffer between the road and both the Waitaha River and the ecologically sensitive Stable Tributary as described in Section 4.9."; P2 of application).

I have not walked through the proposed road access area but it sounds like few large trees are present – if this is the case negative effects on roost trees could be avoided with sensitive road alignment.

However, it may be more difficult to avoid impacting large trees, as suggested in the Wildlife Surveys Ltd report, around the weir and portal construction area (the area where bat activity was highest).

In recent RMA cases, where developers have not done the work to identify bat roosts, DOC has been developing standard tree felling protocols iteratively with industry via Bat Management Plans for circumstances when a bat roost has to be felled (Appendix 1). For example, see Waipa Transmission Line protocol – Appendix 2A and draft currently in discussion with the NZ Transport Authority – Appendix 2B. The intention of the protocols is, in the first instance, designed to avoid felling bat roost trees, secondarily aimed at moving roost trees, and only if unavoidable, felling roost trees (but only once vacated by bats).

DOC has been working with two scenarios:

1. Where contractors check if bats are present close to the time of felling using automatic bat detectors (Appendix 2A); and.
2. Where contractors have opted to check every tree (that has characteristics of a potential roost tree) that will be felled for presence of bats (more suitable for where trees are sparse in the landscape and/or easy to observe) (Appendix 2B).

In both cases, felling is agreed not to be undertaken in winter when bats are hibernating (in torpor) (May-September) at a time when they would not be detectable.

If the Concession were granted, then conditions pertaining to not felling in trees in winter and tree felling protocols for summer would need to be included.

Birds: Large trees in the vicinity of the tunnel entrance and those along the proposed road route are likely to provide important season food sources for forest birds including a number of threatened species. Flexible alignment of the road access route may avoid these, although valuable season food supplies in seral vegetation habitats are likely to be lost.

I support the proposed conditions to avoid clearance during the bird breeding season (P83 of application).

5. Comments on proposed conditions

If granted, conditions regarding fauna would need to be more detailed and prescriptive, especially around identification of potential bat roosts and wildlife trees (see above):

1. Conditions 1.1-1.2 need to give more detail about which specific plans are required to deal with fauna matters.

2. Condition 4.4 Needs to include DOC's definition of potential bat roost trees as well (ie all live and dead standing trees > 15 cm DBH along the alignment footprint that have features that may indicate a potential roost (e.g. peeling bark; cavities, hollows, knot holes, splits, cracks etc).

3. Condition 5.9. Would need more detail here on identification of potential bat roosts and conditions regarding tree felling protocols (see Appendices 1 & 2).

4. Condition 12.2. How long will predator control be undertaken for? What intensity of trapping etc?

6. Wildlife Act Permits

The Department administers the Wildlife Act 1953 and most bird species and all bats are Absolutely Protected Wildlife under the Act. Under Section 63 of the Act it is and offence to kill, hunt, possess, molest or disturb protected species without proper authority. Thus, if a concession were approved the applicants also need to apply for Wildlife Permit to potentially kill or disturb wildlife.

7. References

O'Donnell, C.F.J. 1993. More sap feeding by kaka. Notornis 40: 79-80.

O'Donnell C.F.J. 2000a. Conservation status and causes of decline of the threatened New Zealand Long-tailed Bat *Chalinolobus tuberculatus* (Chiroptera: Vespertilionidae). Mammal Review 30: 89–106.

O'Donnell, C.F.J.; Dilks P.J. 1989. Sap feeding by kaka (*Nestor meridionalis*) in South Westland, New Zealand. Notornis 36: 65-71.

O'Donnell, C.F.J.; Dilks, P.J. 1994. Foods and foraging of forest birds in temperate rainforest, South Westland, New Zealand. NZ Journal of Ecology 18: 87-107.

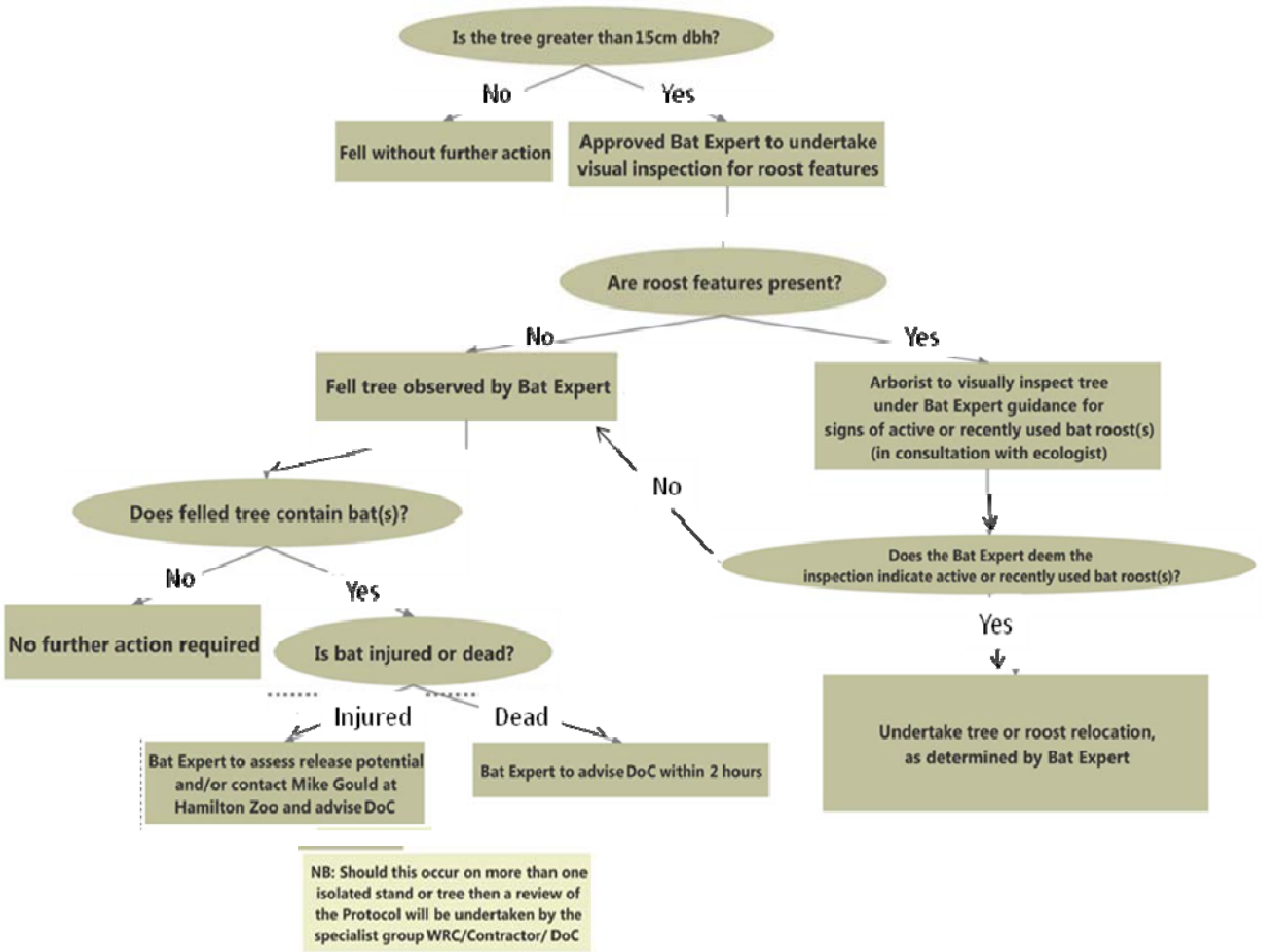
O'Donnell, C.; Sedgeley, J. 1994. An automatic monitoring system for recording bat activity. Dept. Conservation Tech. Series No.5. Dept. Conservation, Wellington.

O'Donnell, C. F. J.; Christie, J. E.; Simpson, W. 2006. Habitat use and nocturnal activity of lesser short-tailed bats (*Mystacina tuberculata*) in comparison with long-tailed bats (*Chalinolobus tuberculatus*) in temperate rainforest. New Zealand Journal of Zoology 33: 113-124.

Wildlife Surveys Ltd 2014. Assessment of the potential effects of the proposed Waitaha hydro scheme on vertebrate fauna (birds and bats). Report for Westpower Ltd, Wildlife Surveys Ltd, Mapua.

APPENDIX 1

Decision flow chart – Bat roost tree felling – Huntly Bypass (1 Oct-30 April only)



APPENDIX 2

Tree felling protocols

The aim of tree felling protocols is, in the first instance, designed to avoid felling bat roost trees, secondarily aimed at moving roost trees, and only if unavoidable, felling roost trees (but only once vacated).

This protocol; is for where contractors check if bats are present close to the time of felling using automatic bat detectors

Appendix 2A

Long-tailed bat potential roost tree felling protocols for Waipa Networks (TE AWAMUTU REINFORCEMENT TRANSMISSION LINE**)**

The aim of the tree felling protocol is, in the first instance, designed to avoid felling bat roost trees, secondarily aimed at moving roost trees, and only if unavoidable, felling roost trees (but only once vacated).

The following are the protocols for removal of any potential bat roost trees. Potential bat roost trees are defined as native or exotic trees measuring greater than 15 cm DBH (diameter at breast height) that are deemed to have roosting habitat features (hollows, cavities, knot holes, cracks and flaking bark) within the corridor of the proposed new 110kV transmission line that would run between the Hangatiki and Te Awamutu Substations and which have been identified by Dr Borkin in Figure 1 of the ECOLOGICAL MANGEMENT PLAN FOR CONSTRUCTION OF THE TE AWAMUTU REINFORCEMENT TRANSMISSION LINE

NB: for the purposes of the following protocols, Dusk and Dawn are defined as starting and ending 0.5 hr either side of official dusk and dawn times.

The protocols for tree removal are as follows:

Protocol A: Quality Assurance & Communication Procedures

1) All surveys and pre-felling checks (see Protocols B and C for details) shall be undertaken by a qualified and approved ecologist. The approved ecologists are Dr Kerry Borkin and Mr. Richard Gillies; plus any other sufficiently skilled and experienced persons nominated and/or supervised by them.

2) All Automatic Bat Monitor (ABM) data from each pre-felling survey shall be reviewed the morning following the end of the survey. All data must be reviewed by noon that day to give the tree fellers sufficient time to fell trees prior to dusk if no bats are recorded.

3) Once the results of visual surveys and ABM data have been reviewed by the approved ecologist the following communication procedures shall be implemented:

a) If no bats are sighted or detected, the ecologist will give the tree-felling supervisor permission for the affected tree(s) to be felled. In addition, an email report shall be sent to the site manager and the

Conservation Services Manager at the Te Rapa Field Base of the Department of Conservation, with details of the results of the survey, at the completion of all tree-felling.

b) If bats are sighted or detected the ecologist shall call the tree felling supervisor within 1 hr of reviewing the data and instruct that the affected tree(s) cannot be felled until the ecologist confirms otherwise.

c) A record of any trees containing bat roosts shall be kept detailing the size, location and type of tree and provided to the Department of Conservation.

Protocol B: Winter (1st May – 30th September)

Potential bat roost trees (i.e. those identified by Dr Borkin in Figure 1 of the ECOLOGICAL MANAGEMENT PLAN FOR CONSTRUCTION OF THE TE AWAMUTU REINFORCEMENT TRANSMISSION LINE) shall not be removed from 1 May to 30 September when bats are hibernating or torpid.

Protocol C: Summer (1st October – 30th April)

5) All potential roost trees to be removed under this protocol must be clearly marked by a suitably qualified ecologist and clearly distinguished from trees to be retained.

6) Each tree or group of trees to be removed must be monitored overnight (from one hour before official dusk until one hour after official dawn), for a minimum of three consecutive nights via an Automatic Bat Monitor (or multiple ABMs as required). The number and positioning of ABMs used must provide sufficient coverage to be able to determine if bat roosts are present in one or more of the trees. During the survey the temperature from dusk to dawn must remain above 7°C with little precipitation (the amount of precipitation that is acceptable is at the discretion of the approved ecologist). Monitoring during full moon should be avoided.

7) If no bat activity is recorded the tree may be removed – removal must occur the same day the survey ends. The approved ecologist(s) or their (suitably qualified) nominated representative must be on-site for the duration of all tree-felling operations to advise staff should bats be detected (leaving trees or injured) and to inspect each felled tree for signs of bat roosts. If the approved ecologist(s) nominate a representative, their names shall be provided via email to the Conservation Services Manager at the Department of Conservation Te Rapa Field Base on the day the tree is to be removed.

8) If bat activity is recorded (which indicates that the tree may be being used as a roost), each tree must be climbed and visually inspected by an arborist. The arborist will photograph/video any potential evidence of bats (staining, cavities, guano), and use a bat detector (to detect social and echolocation calls from roosting bats, which will be reviewed by the approved ecologist(s). Particular care is required where the trees carry epiphytic vegetation; both to conduct a thorough search for the bats themselves, and to move and damage the epiphytes to the minimum degree that is possible in practice, during the climbing and inspection processes.

APPENDIX 2A

DOCs suggested wording of tree felling protocol – Huntly Bypass – where the contractors have opted to check every tree that will be felled for presence of bats (16/6/15), rather than use Automatic bat monitors

Tree felling Protocol

This protocol applies to trees not previously identified as communal roosts as part of the Bat Management Plan for the Huntly Section of the Waikato Expressway.

The aim of the tree felling protocol is, in the first instance, designed to avoid felling bat roost trees, secondarily aimed at moving roost trees, and only if unavoidable, felling roost trees (but only once vacated) (See flow chart, Figure 1).

The following protocols outline the process, which must be adhered to, during inspection of the Huntly Section of the Waikato Expressway, and for the removal of any potential bat roost trees, i.e. native or exotic trees measuring greater than 15 cm DBH (diameter at breast height) affected by the Huntly Section of the Waikato Expressway.

The protocols for tree removal are as follows:

Protocol A: Tree Inspection & Communication Procedures

1) All surveys and pre-felling checks shall be undertaken by a qualified DOC permitted bat expert. The bat expert must have bat handling experience as per DOC's Bats Best Practice Manual because they may have to handle bats as well as experience at finding bat roosts. They are to be endorsed by WRC (Waikato Regional Council), Waikato District Council (WDC) and the Department of Conservation.

2) All live and dead standing trees > 15 cm DBH along the alignment footprint will be visually inspected by the approved ecologist for features that may indicate a potential roost (e.g. peeling bark; cavities, hollows, knot holes, splits, cracks etc).

3) All trees that include these features and that are therefore deemed potentially suitable for roosting bats will be climbed and visually inspected by an arborist (in consultation with, and in the presence of, the approved ecologist) for the presence of an active roost containing bats, or sign of bats (e.g. urine stains, droppings, smell).

4) The arborist will take care while climbing trees to avoid disturbing, removing or destroying tree features with bat potential such as large sections of loose bark or cavities in dead wood.

5) The arborist will photograph/video any potential evidence of bats (staining, cavities, guano), which will be reviewed by the approved bat expert.

6) The arborist will also use a hand held bat detector (listening at 25 (for social calls) and 40 kHz (for echolocation calls) to listen for bat calls, they will also need to be aware of what audible social calls of long-tailed bats sound like.

7) Once the results of visual surveys have been reviewed by the approved bat expert the following communication procedures shall be implemented:

    a. If bats are sighted or sign detected, the approved bat expert, as soon as possible, shall:
        i. Call the tree felling supervisor to inform him/her which affected tree(s) cannot be felled due to detection of bat sign.

        ii. Send an email to the site manager, and a bat expert representing WRC, WDC and the Department of Conservation (DOC) detailing the results of the survey and outlining the measures for protection or relocating the roost tree (Protocol C, below).

    b. A record (including photos) of any vegetation containing bat roosts shall be kept detailing the size, location and type of tree.

    c. If no bats or bat sign are detected, the tree can be felled (see Protocol B, below).

Protocol B: Tree removal

1) Trees shall only be removed from 1st October – 30 April and if temperatures between dusk and dawn on the previous night were > 7^{o}C (to allow any solitary bats that had been in torpor to emerge from the tree). Trees shall not be removed from 1st May – 30th September when bats are potentially hibernating or torpid.

2) All necessary approvals required under the Wildlife Act 1953 shall be obtained in advance of the tree felling season in 1) above and complied with.

3) No tree can be felled until it has been inspected and approvals given by the approved bat ecologist (Protocol A, above).

4) Tree removal must occur on the same day as the visual inspection by arborist and designated bat expert.

5) The approved bat expert must be onsite for the duration of all tree-felling operations to advise staff should bats be detected (bats leaving trees or injured bats found) and to inspect each felled tree for signs of bat roosts. If bats are found in a felled tree, the approved ecologist shall follow Protocol D.

6) Should bats be detected in a felled tree, follow Protocol D (below). Should bats be detected exiting a tree while felling is in progress, felling must stop. The approved bat expert shall consult with the bat expert representing WRC, WDC and DOC, to re-assess and consider alternative methods to progress tree felling or tree relocation based on the type of roost identified.

Protocol C: Roost tree avoidance or relocation

1) If bats are seen leaving or entering the tree, or are found to be living in the tree after visual inspection (based on evidence of bat sign; Protocol A), then the tree will need to be avoided or relocated.

2) If a roost tree cannot be avoided during construction, it should be relocated.

3) The tree to be relocated (or if deemed appropriate by the bat expert, the roost on the tree) should be translocated (including roost) to a new position as close as possible to its original site and as determined by the appointed bat expert, arborist and tree relocation contractor.

4) Tree relocation shall be undertaken at night when the bat roost(s) have been vacated. The bat expert will need to watch the roost with a hand held bat detector at dawn and dusk for three days prior to relocation to ensure bats have left the tree.

5) Relocated tree(s) shall be visually inspected by an arborist in consultation with the approved bat expert annually (within the October – April period) for three years following relocation to determine if the tree is used for bat roosting (noting that rates of roost reuse can be low so failure to find evidence of bat roosting in a relocated tree does not necessarily constitute a failure).

Protocol D: Dead or Injured Bats

1) The Department of Conservation (DOC) have requested that the following procedures are implemented in the event for finding dead or injured bats:
    a. Injured bats should be immediately taken to a vet for assessment. Bats should be placed in a cool dark material-lined box/bag by or under the direction of the bat expert to ensure the animal is handled appropriately. The Hamilton Zoo should be the initial contact organisation for this.

        Mike Gould
        Hamilton Zoo
        Brymer Road
        Hamilton
        07 838 6720

    b. DOC (Waikato Area Office (WAO) or DOC hotline if after hours) should be contacted no longer than 2 hours after an injured or dead bat is found.

    Waikato Area Office - 07 858 1000

    After Hours - 0800 DOCHOTline (0800 362 468)

    c. Any bat that is found dead or injured and subsequently euthanized will be returned to the Waikato Area Office.

    d. Any bats found during felling (dead, injured or otherwise) will be inspected by the approved bat expert should handling and short-term retention be required. The approved bat expert shall determine on site if the bat is able to be released

immediately or the most appropriate method for the safe dispersal of the animal. DOC shall be notified immediately of each such event.

e. DOC advice should be sought with regards to the rehabilitation requirements of any injured bats (for example legislative requirements will need to be considered). f) Healthy bats should be released in a safe location (i.e., away from the area of works) as close to the site of capture as possible, as soon as possible after capture. Bats should be released within the first hour after dusk to maximise foraging time. If possible, bats should be given food (e.g. mealworms) and water each day they are kept captive in a relatively cool, dark location.