

Kauri Health in Regional Parks

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Executive Summary

This report follows a previous report and workshop in October 2011, which provided a comprehensive outline of the serious threat that kauri dieback poses to kauri and kauri ecosystems in the Auckland region. A precautionary approach is required to attempt to control the spread of the disease to currently unaffected areas in order to ensure the continuance of kauri as an iconic tree species in the region. A case for imposing protection zones in the Waitakere Ranges Regional Park is proposed with additional work required to identify protection zones in the Hunua Ranges Regional Park. A summary of recent work completed as part of the Auckland Council response to kauri dieback disease and an outline of further works required during 2012 is also provided.

Recommendation/s

- a) That the report be received.
- b) That it be a recommendation to the Regional Development and Operations Committee:
 - i) That in order to try and halt the spread of kauri dieback in the Waitakere Ranges Regional Park, that the following areas be managed as protection zones (as shown on maps in Attachments A - C) effective 1 July 2012:

- 1) Waitakere Ranges Regional Park

Protection Zone	Associated Track Closure
A Cascade Kauri	Robinsons Ridge Track
B Anawhata	Chateau Mosquito
B Anawhata	RGB Track
C Waatarua	Walker Kauri Track
D Waatarua	Dreamlands Track
E Waatarua	Taumata Track
F Piha	Lucy Cranwell Track
G Karekare	La Trobe Track
H Huia	Nuggets Track
I Parau	Crusher Pipeline Track
J Parau	Nihotupu Ridge Track
J Parau	Summit Track (Between Nihotupu ridge and Hamiltons)
K Parau	Farley Track
L Mt Donald McLean	Bob Gordon Track
M Parau	Manchester Unity Block (Between Victory Rd and Big Muddy Creek)

- ii) That a review of the effectiveness of protection zone areas be undertaken and reported back to the Parks, Recreation and Heritage Forum in June 2013, so a decision can be taken on what management actions will be taken to protect the health of kauri within these zones.

Background

A comprehensive report on kauri health in the Waitakere Ranges Regional Park was presented to the Parks, Recreation and Heritage Forum at its 18 October 2011 meeting. It outlined the serious threat to kauri and kauri ecosystems from kauri dieback (*Phytophthora taxon Agathis* or PTA) and the collaborative response by the Joint Agency for Kauri Dieback Management (MAF Biosecurity New Zealand, Department of Conservation, four regionally based councils (including Auckland Council) and iwi, referred to hereafter as the Joint Agency); to protect the integrity of kauri ecosystems, high value kauri areas and iconic kauri. A particular focus was the work done since 2008, by Auckland Council and the former Auckland Regional Council in identifying the distribution of the disease in the most significant kauri forests in the region, and subsequent actions taken to control the spread of the disease, particularly in the Waitakere and Hunua Ranges Regional Parks, which cover nearly 35,000 hectares of regional parkland.

Operational Response and Research

A surveillance programme to survey the most significant kauri forests in the region, i.e. those contained in the Waitakere and Hunua Ranges (including regional parkland and adjoining forest), was undertaken in order to quantify the extent and distribution of kauri dieback. The survey involved aerial survey, followed by field-based inspection to verify infection and the soil testing of many sites. This work was initiated in the Waitakere Ranges in 2008 and completed in 2011.

Results show that kauri dieback is widespread throughout the Waitakere Ranges and is present in most catchments, although there are a number of watersheds that either have no identified disease, or infected trees are located lower in the catchment rather than on ridge lines or high up valleys. Initial estimations are that around eight percent of the dense areas of kauri forest in the Waitakere Ranges are already infected, with an additional three percent probably affected.

Disease distribution appears to be slightly higher in areas more regularly visited by walkers, with areas such as Piha and Cascade Kauri being the most affected. There is a positive correlation between the track network and kauri dieback zones, demonstrating that humans are a significant factor in the spread of the disease. The disease may have long-term ecosystem impacts if it continues to spread unabated and uncontrolled.

A survey of kauri in the Hunua Ranges including the Hunua Ranges Regional Park has been completed. Results to date for this park indicate no signs of kauri dieback. The Hunua Ranges Regional Park is quite different botanically from the Waitakere Ranges Regional Park, with kauri forest restricted to discrete areas. Other forest types include podocarp/tawa forest and 2,240 hectares of exotic forest. Other key differences from a kauri health perspective, are that the park does not have any major public roads running through it; lower levels of recreational use (around 250,000 visits annually); less track infrastructure, particularly in the vicinity of kauri and, due to the lower visitor numbers, tracks are generally in better condition with fewer drainage issues or damage to kauri roots.

The Council's proactive response to date has included the following measures on regional parkland:

- installation of cleaning (phytosanitary) stations
- ongoing use of the phytosanitary "mats" for large events and concessionaires
- signs, interpretation and information for park visitors
- consultation with key stakeholders, visitors and public on kauri dieback measures
- training in use of phytosanitary measures for staff, contractors and volunteers
- track maintenance/upgrades and re-routing of tracks in key areas.

Further information on these areas is included in this report, together with a general update on other recent activity.

Kauri dieback workshop – October 2011

The Forum sought further information on proposed future actions for parks containing kauri. This was provided at a kauri dieback workshop for Forum and Waitakere Local Board members on 31 October 2011.

A number of areas were identified at the workshop to be reported back:

- Quarantining - recommended area and rationale
- Track improvements – drainage, tracks needing attention, protection of tree roots
- Education – message to public and park users, use of summer rangers and volunteers
- Disinfection stations – information at stations
- Local parks and biosecurity teams to talk about the Pest Management Strategy – controls over the whole region
- Engagement plan
- Updating of long-term monitoring plots
- Provision of latest research information to Councillors.

Kauri Protection Zones (Quarantine)

Survey work and other studies have identified the need for more extensive measures to contain the disease to already infected areas. Phytosanitary (Trigene) stations have been used to control the spread of the disease in regional parks.

The level of compliance with the use of these stations has been monitored and found to be moderate (30 - 50 percent), which reduces the effectiveness of these stations as a hygiene measure. Programmes to improve the level of awareness and compliance are being implemented, however stronger protection measures for areas of healthy kauri are now required.

Kauri protection zones, to isolate areas of healthy kauri, are proposed in line with best practices in other countries and by other agencies. In Australia, there are very large areas that have been quarantined, to protect against spread of bush dieback (*Phytophthora cinnamomi*). Likewise, in Europe, areas have been quarantined against spread of Sudden Oak Death (*Phytophthora ramorum*).

The Department of Conservation (DoC) has recently restricted access and closed tracks at Mataitai Reserve (near the Hunua Ranges) for a period of five years to protect healthy kauri. DoC will monitor regularly for the presence of kauri dieback and the effectiveness of the track closure. Some limited access will be permitted for neighbours, iwi and the Manukau Tramping Club under strict conditions, including the use of phytosanitary measures.

Introduction of kauri protection zones in regional parks would be achieved by closing areas containing healthy kauri within the Waitakere Ranges Regional Park and the Hunua Ranges Regional Park. The strategy of protecting areas of healthy kauri is consistent with the practice of other agencies, including DoC as outlined above, and will seek to protect the Hunua Ranges, which appear to be disease free at present, and protect uninfected areas of kauri in the Waitakere Ranges.

The alternative approach of quarantining infected areas would be far less practical, as it would restrict visitor use in heavily used recreation areas, including the Cascade Kauri and Karekare. It would also increase use of areas currently unaffected by kauri dieback. The practice of protecting disease free areas through creating exclusion zones, rather than diseased areas, has proven to be the most effective single measure in preventing disease spread in Australia.

This proposed management strategy seeks to minimise the spread of kauri dieback into these healthy kauri zone areas by:

- reduction of human activity through creating protection zones and associated track closures
- education of local communities and user groups on the risks of continued use of protection areas
- increased public awareness of the risks of disease spread and the rationale for excluding visitor use in protection zones
- establishment of phytosanitary stations, investigation of rerouting tracks away from kauri and track drainage upgrades, particularly in areas where it is not feasible to close tracks.

Most visitor activity in these healthy kauri areas of parkland is through the use of tracks, therefore a number of associated track closures will be required.

Waitakere Ranges Regional Park maps showing the location of the proposed protection zone areas in the Waitakere Ranges Regional Park, tracks to be closed and the relationship to both infected and uninfected areas will be distributed under separate cover as Attachments A, B and C.

There are around 256km of walking and tramping tracks in the Waitakere Ranges, all with a high level of recreational activity. As well as kauri health, the following factors were taken into account when determining track closures in the proposed kauri protection zones:

- linkage to other trails or routes (e.g. Hillary Trail)
- availability of alternate routes in the vicinity
- impact of displacement on other areas
- increased risk of disease spread to uninfected areas
- likely public and stakeholder adherence to closure
- uniqueness of opportunity, i.e. are there other areas that offer similar experience
- other environmental impacts
- level of visitor safety risk.

A schedule of the protection zone areas and the associated tracks proposed for closure in the Waitakere Ranges Regional Park is set out in Table 1.

Table 1: Proposed Protection Zone Areas and Associated Track Closures - Waitakere Ranges Regional Park

Protection Zone	Associated Track Closures	Track Length	
A	Cascades Kauri	Robinsons Ridge Track	2,000m
B	Anawhata	Chateau Mosquito	2,300m
B	Anawhata	RGB Track	2,000m
C	Waiatarua	Walker Kauri Track	750m
D	Waiatarua	Dreamlands Track	400m
E	Waiatarua	Taumata Track	900m
F	Piha	Lucy Cranwell Track	1,000m
G	Karekare	La Trobe Track	3,000m
H	Huia	Nuggets Track	2,000m
I	Parau	Crusher Pipeline Track	800m
J	Parau	Nihotupu Ridge Track	4,200m
J	Parau	Summit Track (Between Nihotupu ridge and Hamiltons)	2,800m
K	Parau	Farley Track	3,200m
L	Mt Donald McLean	Bob Gordon Track	1,848m
M	Parau	Manchester Unity Block (Between Victory Rd and Big Muddy Creek)	Nil

Further work is required to identify protection zones in the Hunua Ranges Regional Park. The park is disease free at present and a protection zone, quarantining the entire park, is not considered feasible or necessary. Kauri is not as widespread in the Hunua Ranges as in the Waitakere Ranges, so presents a slightly different challenge that requires further work to confirm a sustainable approach. Details of the proposed protection zones for the Hunua Ranges will be reported to the May meeting of the Forum. In the meantime, continued phytosanitary hygiene controls will continue to be implemented.

Operational Implications

The protection zones have implications for the operations of Watercare Services, which has leases covering areas in both the Waitakere and Hunua Ranges, for water supply purposes. Watercare staff and contractors will continue to require access to some of these areas for operational purposes. The risk of disease spread can be controlled through provision of strict hygiene controls, most of which are already in place and include measures such as use of Trigen, cleaning of vehicles and completing works in the Hunua Ranges prior to commencing work in the Waitakere Ranges.

Continued access to protection zone areas by Council staff, contractors and some volunteers will also be required for kauri die back monitoring, pest animal and plant control, track works, emergency access for search and rescue or fire control. Strict hygiene protocols are in place for these uses.

Protection Zone Review

It is proposed that a review of the effectiveness of the proposed protection zones be undertaken and reported back to the Parks, Recreation and Heritage Forum by June 2013, so a decision can be taken on whether to discontinue their application or to allow conditional use based on new information.

Engagement Plan

The intention to quarantine areas needs to be communicated to affected licensees, iwi, volunteer groups, contractors, concessionaires, stakeholders and Local Boards, prior to it being publically notified.

Public notification needs to be in local papers in addition to daily newspapers. Signs advising of the purpose of the protection zones and the associated restriction on use will also need to be initiated.

Compliance and Monitoring

Access to protection zones is primarily along the track network. Clear signage will be required at access points to advise of the closure of areas to protect healthy Kauri. These signs will be accompanied by physical barriers and signs on park notice boards. Some monitoring of compliance levels will be undertaken by ranger staff to ensure compliance of excluding visitors from the protection zones.

Biosecurity and parks staff will, monitor the areas for kauri dieback spread, in order to test the validity of the proposed protection zone approach.

Track Improvements

In addition to the implementation of protection zones, the programme of track drainage improvements and rerouting tracks will continue in affected zones as resources and budgets allow, in order to minimise further spread along the track network.

Waitakere Ranges Regional Park

The strategy for minimising the spread of kauri dieback identifies that where it is not practical to close tracks, other protection measures, including track upgrades and or reroutes, will be put in place over and above routine track maintenance. Several tracks have been identified for this treatment as identified in Table 2.

Table 2: Proposed Track Upgrades – Waitakere Ranges Regional Park

Track	Area	Actions
Cascade Kauri (various)	Cascade Kauri	<ul style="list-style-type: none"> isolate identified streams and watersheds in consultation with Ark in the Park
Clarkes Bush	Titirangi	<ul style="list-style-type: none"> increased maintenance boardwalk strengthen Trigene measures
Lake Wainamu	Te Henga	<ul style="list-style-type: none"> review track maintenance strengthen Trigene measures

In addition to the work completed in preparation for track closures in the proposal protection zones, a programme of priority track upgrades is underway to protect kauri tree roots and improve drainage, to reduce potential for disease spread. Over the last two years, upgrade work has been completed on the following tracks:

- Cascade Track
- Christies Track
- Gibbons Track
- Opanuku Pipeline Track
- Piha Valley Track
- Pipeline Track
- Spraggs Bush Track
- Upper Kauri Track.

As part of the annual ongoing track maintenance programme in the Waitakere Ranges Regional Park, vegetation clearance and management was completed on 180kms (70 percent) of the 256km track network. In addition, track drainage related maintenance was completed on 150km of track, and surface maintenance (involving re-metalling and some boardwalk installation) was completed for 17km of track.

Hunua Ranges Regional Park

An assessment of all walking tracks in the Hunua Ranges has been completed, to establish which tracks go directly through kauri root zones. As with the Waitakere Ranges, there are a number of recommendations for track closure but also, in a number of instances, for phytosanitary protection, diversion and upgrading of tracks.

The parks team considered the practicality and probable success of the following track management responses (Kauri Dieback Operations Plan):

- track diversion - where the track can be easily diverted away from the root zone without significant cost or ecological damage
- minor drainage works - where there are boggy/ponding areas around kauri tree roots and the works will not significantly affect the hydrology of the surrounding area
- placing an impermeable layer (geotextile and metal) over the root zone in the track, generally to minimise risk of kauri dieback being spread to uninfected trees in unaffected areas
- constructing boardwalks and/or ramps over root zones to improve kauri health - where ground condition is poor and/or there is evidence of root compaction and damage.

A summary of tracks recommended for upgrading is outlined in Table 3 below.

Table 3: Proposed Track Upgrades – Hunua Ranges Regional Park

Track	Recommendation
Waharau Yellow	Upgrade track surface (third priority of Waharau Tracks) <ul style="list-style-type: none"> • improve Trigene facilities. Phytosanitary station at pinch point • additional signs/information • new mountain bike Phytosanitary station
Waharau Red	Upgrade track surface (top priority at Waharau) <ul style="list-style-type: none"> • improve Trigene facilities • Phytofighter station at pinch point • additional signs/information
Waharau Blue	Upgrade track surface (essential) <ul style="list-style-type: none"> • improve Trigene facilities • Phytosanitary station at pinch point • additional signage • Note: retaining access important for education purposes. An upgrade of the Waharau tracks could be combined with kauri dieback information at the Waharau Hall.
Rata Ridge	Maintain access to track, divert track from a single large kauri <ul style="list-style-type: none"> • retain view of iconic tree from track • install barrier and signs to exclude access to tree
Massey	Retain access to Kauri Loop for education purposes <ul style="list-style-type: none"> • Phytosanitary stations at Hunua Falls pinch point and Cossey Dam • additional Phytosanitary station and interpretation at Kauri Loop entrance
Lower Mangatawhiri	Upgrade (part of Te Araroa Walkway) <ul style="list-style-type: none"> • additional protection around kauri roots • make Trigene stations prominent in camp ground • liaise with DoC re maintenance of station at Lyon's Rd
Whakatiwai	Manage – required for Watercare testing access <ul style="list-style-type: none"> • ensure Watercare vehicles clean prior to entry • stop pig hunter vehicle access

Current and Ongoing Programme Updates

Other areas identified at the workshop are outlined in this section, together with a general update on recent activity.

Education

There has been considerable effort placed on raising public awareness of kauri dieback and its effects on kauri. In addition to the work of the Joint Agency, Auckland Council has had an ongoing programme for several years, which has been significantly increased over the summer period and has included a range of activities, namely:

Summer Advocacy

Two kauri health advocates have been employed for the summer period 2011/12, one engaged in the Hunua Ranges Regional Park and the other in the Waitakere Ranges Regional Park. The advocates have utilised information stands to gain attention from park visitors and have engaged with them at a number of destination points in each of the parks. There has been positive feedback to this initiative from visitors. Advocates have also been spreading the message in local communities by putting up posters and attending high profile events including at the Splore Festival and the Ambury Womens Duathlon.

Staff and Contractor Education

Over 60 field workshops and lunchtime seminars to Auckland Council staff have been delivered by Biosecurity staff across the region, to increase stakeholder knowledge regarding kauri dieback. These workshops will continue and be further extended to include CCO staff particularly Watercare Services, ATEED and Auckland Transport. Workshops and seminars will also continue to be provided for Council contractors.

Engagement Plan

Community Engagement

There have been a number of in-depth articles in the print media over the summer highlighting the potential impacts of kauri dieback. These are vital in raising community awareness of the disease. Editorials have been written for Walking NZ and Professional Skipper magazines. Kauri dieback stands were set up at Ecofest, Bethells Beach Open Day, Helensville Show, three other local events and will be provided for the Kumeu Show and Bioblitz during March 2012.

Talks were recently provided for three tramping clubs, the Muriwai Environmental Action Group and the East Auckland Environmental Alliance.

Healthy Hunuas Campaign

A promotional campaign has been implemented since December 2011 involving the erection of large roadside signs at key visitor entrance points to the Hunua Ranges. These advise that the Hunua kauri are in good health and that there is a need to take precautions to protect this area to avoid kauri dieback incursion. This is consistent with the national Keep Kauri Standing campaign coordinated by the Joint Agency.

Disinfection Stations - Technology and Messaging

The current signage has been developed by the Joint Agency with key messages for park visitors and ensures that consistent information is displayed throughout New Zealand, irrespective of location, land tenure, or Kauri status. The messages are designed to ensure that park visitors are not confused by different signs or wording at different regions and locations, as many tourists and visitors travel between kauri stands. However, audits by biosecurity and parks staff have shown moderate to poor compliance at phytosanitary stations at some parks, including Waitakere Ranges Regional Park.

Independent surveys conducted by the Joint Agency throughout New Zealand have confirmed that there is moderate public awareness of kauri dieback disease and low awareness of humans as likely vectors. This issue has led to the Joint Agency reviewing its overall signage and wording. A project to improve visitor signage will be completed by May 2012, with new signs being subsequently installed at key Hunua and Waitakere track entrances.

Long-Term Monitoring Plots Update

Two long-term kauri monitoring plots have been set up within Waitakere Ranges Regional Park. Currently there are two tree health monitoring plots set up, at Huia (in 2006) and Maungaroa Ridge (in 2011) with a third to be set out at Cascade Kauri this year. Data from these plots will measure overall kauri health e.g. tree mortality, rate of infection and spread, and virulence (pathogenicity) of kauri dieback. This work will identify potential resistance and tolerance of individual trees to the disease. To date data collected from the six-year-old plot at Huia has shown kauri dieback to be spreading and virulent.

Biosecurity staff are also working with the University of Auckland to set up larger long-term ecological plots to assess wider impacts to kauri ecosystem (vegetation change, forest succession, health of kauri associated flora and fauna) and kauri survival (e.g. does kauri dieback affect seedling recruitment).

Research

A number of ongoing research objectives are being implemented in the coming 12 months:

- A field trial to treat kauri dieback infected trees with phosphite (phosphorous acid) has been implemented by Plant and Food Scientist, Dr Ian Horner (funded by the Joint Agency). Field trials on approximately 100 trees in the Auckland region have been underway since January 2012, with preliminary results expected by January 2013 and January 2014. Data sets after one and two years' application will be used to assess this method as a control tool for Auckland Council to incorporate into its management programme.
- A study to assess where kauri dieback is in an infected tree was initiated in January 2012. This study, funded by the Joint Agency and co-managed by Auckland Council, will inform land managers and the arboricultural industry as to what parts of the tree should be disposed of, and what parts of the tree (if any) could be safely recycled for timber harvest. The current tree removal Standard Operating Procedure is precautionary as it regards the entire tree as a potential biohazard to be disposed of in landfill. The increasing likelihood of diseased trees needing to be felled for safety or disease prevention reasons and the consequent demand to be able to use the timber makes this project a high priority.
- The PhD study to determine, amongst other questions, if kauri dieback is vectored by feral pigs has been completed and submitted (February 2012) to the University of Auckland for external marking. Results will be circulated to Auckland Council upon academic review and publication. Evidence suggests that soil-borne spores are likely to be vectored by feral pigs. This study was funded by University of Auckland, Landcare Research and Auckland Council.
- A further study into the relative risks of livestock vectoring kauri dieback between rural kauri fragments is being funded by the Joint Agency. The study will be commissioned in 2012, and will include kauri dieback sites within the Auckland region.
- Soil samples obtained from footwear, track surfaces intersecting infected kauri root zones, and tyres have now confirmed that soil-borne spores of kauri dieback are present in contaminated soils. Spores have been isolated and obtained from samples as small as one gram of infested soil. This testing regime was funded by the Joint Agency surveillance programme. The precautionary management approach to contain the soil-borne spread of the disease will remain in place across kauri nationally.

- Postgraduate study undertaken at the University of Auckland to determine the relative risk of water-borne spread of kauri dieback within the Waitakere Ranges Regional Park was successfully completed in 2011. The study did not detect water-borne spores of the pathogen in any of the three infected catchments studied (Cascade Kauri, Piha, Huia). Australian dieback researchers postulated that heavy clay Waitakere forest soils may significantly reduce water-borne movement of the pathogen by impeding (via binding) the spores within the clay matrix. Further research would be required to confirm this hypothesis. If proven, it would represent good news for kauri management and make management of human and animal vectors a greater priority than at present. A precautionary management approach to water-borne spread will remain in place across infested catchments.
- A three year Joint Agency funded programme underway at Landcare Research is expected to describe the origin of kauri dieback and determine its likely genetic introduction to New Zealand. This work will also answer the native versus exotic origin and formally name the taxon.

Local Parks

Kauri health surveys are currently being undertaken on local and sports parks containing kauri, with a large number of surveys already completed. Once the surveys have been completed, a strategy for the management and protection of kauri health will be initiated similar to that being provided for in regional parks.

To date, the local parks in the following areas containing kauri have been assessed for kauri health and presence of kauri dieback; all former Rodney District, North Shore City, Waitakere City, Auckland City, and Papakura District. Diagnostic results for the surveys of parks within the former Franklin District and Manukau City areas are still being finalised. Several local parks within North Shore, Rodney, Waitakere and Papakura have so far been identified with kauri dieback. A full report across all local parks is expected to be completed by 30 June 2012.

Decision Making

The Regional Parks Management Plan 2010 has several objectives and policies relevant to this report:

- Pathogens including kauri dieback (Objective 10.4.4) – requires the Council to be proactive in mitigating the spread and impacts of diseases on any susceptible host species and on park ecosystems. The ensuing policies provide for a range of techniques to be used to including temporary or long term quarantining of areas of parkland and temporary or long-term track closures.
- Policy 14.3.4 requires that track closures are approved by Council, therefore this is a matter for the Regional Development and Operations Committee.
- Objective 15.2 addresses park closures and requires maximum public access to be ensured by minimising the impact of park closures or restrictions and also provides for public notification as early as possible.

Significance of Decision

The activities in this report do not trigger the Significance Policy.

Maori Impact Statement

Maori have been engaged through the Joint Agency Tangata Whenua Roopu and through direct consultation with iwi in affected areas.

Ongoing engagement with affected iwi and hapu is planned prior to implementation of the kauri protection zones.

Consultation

To date, there has been extensive community and stakeholder consultation about the issue of kauri dieback in the Auckland region. A range of engagement and behavioral change strategies have been developed, including a communications plan to increase awareness. Further community engagement will be undertaken as part of the implementation of protection zones.

Local Board Views

This item will be presented to all affected Local Boards for their information, and will seek Local Board comment and feedback to the proposed management and results. The survey of local parks, due to be completed by June 2012, will inform the recommended management response.

Financial and Resourcing Implications

The implementation of the proposed protection zones and associated track closures will be funded from current operational budgets. Significant track upgrade works will be prioritised as part of the track development and renewals programme in the regional parks capital works budgets. Some short-term funding is currently received from the Joint Agency for signs, Trigene and other phytosanitary supplies. There is no additional funding in the Long Term Plan for kauri dieback related activities. The Joint Agency is also funding the Keep Kauri Standing initiative.

Additional resources for the management of phytosanitary stations ended in 2011/12 and is being prioritised from existing operational budgets. An assessment of long-term resources is being undertaken including track signage, public awareness, brochure and website changes and community engagement. Opportunities will be identified to integrate awareness initiatives in existing promotional material and through editorial opportunities.

Legal and Legislative Implications

There are no legal or legislative implications arising from the activities detailed in this report.

Implementation Issues

The proposed future actions related to quarantining and some track upgrades will be implemented within operational and capital budgets.

Attachments

No.	Title	Page
A	Waitakere Ranges Regional Park North - Protection Zones (<i>Under Separate Cover</i>)	
B	Waitakere Ranges Regional Park Central – Protection zones (<i>Under Separate Cover</i>)	
C	Waitakere Ranges Regional Park South – Protection zones (<i>Under Separate Cover</i>)	

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