

IN THE MATTER OF

the Resource Management Act 1991

AND

IN THE MATTER OF

the proposed Waikato District Plan (Stage
1) – Hearing 21A – Significant Natural Areas

**STATEMENT OF EVIDENCE OF ANTONY JULIAN BEAUCHAMP
ON BEHALF OF THE DIRECTOR-GENERAL OF CONSERVATION
DATED 29 October 2020**

Department of Conservation
Private Bag 3072
Hamilton 3240
Counsel acting: Troy Urlich
Telephone: 027 324 8991
Email: turlich@doc.govt.nz

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1. INTRODUCTION

- 1.1 My name is Antony Julian Beauchamp. I hold the qualification of Ph.D in Zoology and a post graduate diploma in Environmental Health. I have worked for the Department of Conservation (the Department) in Northland since 2001, firstly as Conservancy Advisory Scientist until 2008, and then as the Technical Support Officer Ecology and Environment and latterly as a Technical Advisor Threats.
- 1.2 I have worked with the plant pathologists who have worked on Kauri dieback since 2006 before the problem was formally recognised. After kauri dieback was officially declared as an unwanted organism in 2008, I was made a member of the Ministry for Primary Industry's Technical Advisory Group, and then from 2010 a member of the Planning and Intelligence group.
- 1.3 I have presented evidence on kauri dieback to the board of enquiry for the Puhoi-Warkworth highway, and the Thames-Coromandel 12 years plan and environment court hearing. I am involved in the development and the technical implementation of research to resolve issues of detection, vectoring and precautionary management.¹ I have written 5 of the guideline documents for that programme, carried out the analysis of the surveillance² and represented the planning and intelligence group at the 7th meeting of the IUFRO³ Phytophthora in forests and natural ecosystems where I presented a poster on *Phytophthora agathidicida* (PA) response⁴.

¹ The Kauri Dieback Programme is administered by MPI with partner agencies (DOC, regional councils with kauri with kauri present in the region, iwi representative) and its structure is described in https://www.facebook.com/pg/TheKauriDiebackManagementProgramme/about/?ref=page_internal. The Planning and Intelligence workgroup includes members of these agencies who plan how the science funded by the partner agencies will be delivered and contracts science expertise on behalf of the kauri dieback partners. From that research, and other independent research, it produces guidelines on behalf of the kauri dieback programme. The group undertook three surveillance rounds to perfect the methods used before handing over surveillance to the Operations workgroup that comprises other people from agencies who deal with operational matters on the ground (iwi, landowner consultation, sampling and monitoring of sites, databases etc).

² Beauchamp, A.J. 2013. The relationships between symptomology, detection probability and the detection of *Phytophthora* Taxon Agathis in the second round of surveillance sampling. Report to the Kauri Dieback Joint Agency Response. www.kauridieback.co.nz.

³ The International Union of Forest Research Organisations working party 7-02-09 Phytophthora in forests and natural ecosystems. This group meets every 2 years to exchange information on forest phytophthora science and management throughout the world.

⁴ Beauchamp, A.J.; Waipara, N. 2014. Surveillance and management of kauri dieback in New Zealand. PP 108 IUFRO 7 http://forestphytophthoras.org/sites/default/files/proceedings/IUFRO_Proceedings_2014.pdf

2. CODE OF CONDUCT

2.1 I have read and agree to comply with the Code of Conduct for Expert Witnesses produced by the Environment Court (2014). My qualifications as an expert are set out above.

2.2 Other than those matters identified within my evidence as being from other experts, I confirm that the issues addressed in this brief of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

3. SCOPE OF EVIDENCE

3.1 I have been asked to provide evidence about kauri dieback and rules to ensure land it is not spread by earthworks and vegetation clearance.

3.2 My evidence covers:

- a. Cause of Kauri Dieback biology and diagnosis of *Phytophthora agathidicida* and hosts;
- b. How Kauri Dieback is spread;
- c. The effects and consequences of kauri dieback, particularly in relation to the unregulated spread;
- d. Regulation and/or voluntary action;
- e. Section 42A report and Federated farmers submissions.

4. EXECUTIVE SUMMARY

4.1 Kauri dieback is a significant threat to the integrity of forests of northern New Zealand. It cannot be removed from infected soil and the only way to prevent further losses of trees is through management of vector in all environments, natural, rural and urban.

4.2 Kauri dieback is managed via the Biosecurity Act 1993 and Resource Management Act 1991 (the **RMA**). The Environment Court has indicated that

earthworks provisions to control kauri dieback are the responsibility of local authorities.⁵

- 4.3 There are currently no known positive sites within the Waikato District Council boundary, but transport will potentially be moving contaminated material through this site to landfills. There is the possibility that Kauri Dieback is present but not detected due to the long period of latency until the disease symptomology is expressed. Kauri dieback management needs to be part of the district plan to prevent the district's kauri from being contaminated.

5. CAUSE OF KAURI DIEBACK, BIOLOGY AND DIAGNOSIS OF *Phytophthora agathidicida* AND HOSTS

- 5.1 Kauri dieback is the disease that is killing kauri in many parts of Auckland, Northland and Coromandel. It is caused by the fungus-like organism *Phytophthora agathidicida* (PA), from the 'water mould' group.
- 5.2 PA has a complex life cycle which is completed in the soil and tree roots. The pathogen first colonises kauri feeder roots via an infective swimming zoospore when the soil is wet. The motile zoospores attach onto kauri roots, germinate, and then grow through the roots as mycelia (fungal-like threads).
- 5.3 The mycelia then spread within the feeder roots to the main roots, killing the root structure as they progress. Eventually the mycelia reach the base of the trunk, where in the larger trees, their presence is indicated by sap bleeding on the leading edge of a lesion expanding up the trunk from the ground. These infections then expand outwards to eventually ring bark⁶ the tree at the base of the trunk. As this happens the tree's canopy first thins, then loses branches, and dies. Current evidence suggests that most infected kauri of any age will die.
- 5.4 Mycelia produce at least two spore types as they grow in the tree: sporangia, which ultimately release mobile zoospores which swim in soil moisture and cause more root infections within a few centimetres of release; and resting oospores, which encapsulate and become long-term survival structures. As the

⁵ Director-General of Conservation verse Thames Coromandel District Council (ENV-2016-AKL-000149) Decision (FINAL [2019] NZEnvC 044).

⁶ The trees water and nutrient flow takes place in the areas between the bark and the wood, and this is the area that PA attacks killing the flow of water and nutrients between the roots and the trunk/leaves.

roots of infected trees rot, oospores are released into the soil where they can remain viable for years. They are triggered by unknown factors and produce sporangia and ultimately zoospores. It is possible for the oospores to outlast any visible sign of a kauri if that tree has fallen and rotted or has been removed from the site to landfill.

- 5.5 Oospores are very small (approximately 30 µm diameter) so there could be thousands of spores in any small clod of soil, or root debris, at infected sites. Theoretically, less than cubic millimetre of soil or root material deposited near a kauri tree could cause a new infection.
- 5.6 The diagnosis/identification of kauri dieback is often initially on symptomology of the trees, and this is confirmed by soil tests using an extended baiting system to extract and grow the PA. Testing only assesses a very small amount of soil from under a tree. Molecular detection techniques are under development but are not yet sufficiently rigorous for deployment.
- 5.7 At present, kauri is the only known significant host of PA. The loss of kauri has already elevated the species threat status to Nationally Vulnerable. The Kauri Dieback programme is looking for kauri that are resistant to the disease but currently there are no substantively resistant kauri detected. The programme currently assumes that the disease will kill any kauri that it infects, and that the time it takes for the disease to kill kauri depends on the size of the tree and the degree of interconnected root structure between trees in stands.
- 5.8 Laboratory work has also indicated that kauri dieback is capable of infecting and damaging the tissue of other plants. Work is underway to assess if native plants associated with kauri in the wild, can also host PA, and produce viable oospores while appearing to be asymptomatic. If this is possible, then the kauri dieback programme may find that kauri is not the only species that is being directly implicated in disease spread. It is also possible that introduced plants could host either as symptomatic or asymptomatic hosts.
- 5.9 In Argentina, a form of dieback caused by *Phytophthora austrocedri* is killing their native *Austrocedrus chilensis*. The *Phytophthora* was brought into the country to an arboretum on a non-symptomatic host or in soil. The same

Phytophthora has been introduced into Scotland where it kills a totally different host, juniper *Juniperus communis*.⁷

6. HOW KAURI DIEBACK IS SPREAD

- 6.1 Kauri dieback is a root tissue and soil-based disease. Most trees have roots that extend beyond the outermost branches (drip line), and in the case of kauri roots have been reported up to three times the distance from the drip line. This zone is the area where PA oospores can be located.⁸
- 6.2 The vectoring of kauri dieback between distant sites requires active human or animal assisted movement of root material or soil, while the movement within a site can also be passive (i.e. slips, water movement or flooding). Key active processes include the movement of contaminated plants; soil on footwear, soil on vehicles & machinery used in kauri areas; and soil movement on domestic stock and feral hooved animals. In urban areas machinery like cabling machines, and equipment associated with roadworks and underground infrastructure repair are likely to spread dieback when undertaken without adequate hygiene. Dieback is likely to have been moved to plantations in Glenbervie Forest in contaminated seedlings and soil from a nursery operated by the New Zealand Forest Service at Waipoua in the mid-1950s. Then, staff and equipment used during silviculture contaminated other kauri plantings, including those planted during the 1980s. A similar situation exists in Raetia Reserve south of Kaitaia.
- 6.3 An assessment of published literature and files had indicated that there were risky New Zealand Forest Service nursery activities at Waipoua. These included the growing and storing trees in beds that were prone to flooding from a contaminated catchment, the reuse of growing tubes that may not have been cleaned effectively, the packing of seedling distribution boxes with local soil, and the removal of leaf litter and humus from the forest for use in some seedling growing beds. Later management did not include cleaning equipment like spades.⁹ It is possible that similar practices of poor planting

⁷ <https://www.cabi.org/isc/datasheet/108927>

⁸ <https://www.kauridieback.co.nz/media/1462/best-practice-guidelines-land-disturbance-activities-around-kauri.pdf>

⁹ https://www.kauridieback.co.nz/media/1487/2017-52-the-introduction-and-spread-of-kauri-dieback-disease-in-new-zealand_final.pdf

hygiene would have continued until kauri dieback was discovered in 2009, and that contaminated soil could be being sold/exchanged with seedlings of other plants in places like Titirangi where contaminated kauri were part of private gardens.

- 6.4 There is also evidence of dieback being moved along tracks in the Waitakere Ranges by walkers. PA was recovered from the shoes of runners during and event there. Also, Dr Ian Horner, a plant pathologist at Plant and Food Research who has done a lot of kauri dieback work, has recovered PA from the few grams of scrapings of his footwear removed during cleaning at a site.
- 6.5 Targeted surveillance has also detected PA in the roots and soil from isolated kauri in fields on farms, and on stock tracks in kauri remnants.¹⁰ Considerable bush blocks were under-grazed in the winter in Northland, and there are contaminated rural properties between west Auckland and the Brynderwyn Ranges. Some of these properties are now public conservation land. The infected site in the Robert Hastie Conservation Area just south of the Whangarei District Council boarder, was a kauri remnant in farmland in the 1950s. A recent visual inspection in the regenerating forest in the area surrounding the remnant located many hundreds of kauri seedlings and saplings, indicating that vectoring was curtailed after the site was fenced and retired from farming.
- 6.6 Feral animals are also implicated as vectors. I have seen considerable pig damage under contaminated trees within some kauri forests. Experiments, and the assessment of gut contents, have shown that pigs could move dieback.¹¹
- 6.7 The relative importance of these various vector pathways now is likely to differ at each site. The mechanisms of vectoring PA to new areas could differ considerably from the mechanisms likely to vector PA within a local area. In the case of a farm, for example, the disease could be moved to the site by a digger, and then be moved by stock and farm vehicles.

¹⁰ Beauchamp, A.J. 2013, above note 2.

¹¹ Bassett, I.E.; Horner, I.J.; Hough, E.G.; Wolber, F.M.; Egeter, B.; Stanley, M.C.; Krull, C.R. 2017. Ingestion of infected roots by feral pigs provides a minor vector pathway for kauri dieback disease *Phytophthora agathidicida*. *Forestry: An International Journal of Forest Research* 90: 640–648.

- 6.8 The risk will be proportional to the volume of soil moved, the frequency of such movement and the effort and ability to clean equipment in situ and between sites. It is likely that all the above-mentioned pathways have contributed to the historical spread of kauri dieback, but there is no reason to believe that with good management and hygiene practices that these vectoring processes should remain an issue. If all equipment used near kauri is clean and free from soil when entering a zone near kauri (3 times the radius of the trees¹²) and all soil from that site was placed back in the same contamination zone, or taken to a landfill, then this should reduce the risk of spreading the disease if the material were to contain oospores of PA. Such mitigation would be enhanced if other vectors were excluded immediately from the deposition site.
- 6.9 However, to control kauri dieback actions must be precautionary. There is currently no way of determining whether a stand of kauri is clear of PA, because there is a multi-year lag phase from initial infection to the expression of any currently known physical symptoms, and at some sites we may by chance have not sampled in the right places. This lag phase is poorly understood but is in the order of 6 weeks for seedling, less than a decade of young rickers (< 50 cm girth at 2 metres up the trunk) and potentially decades of the larger trees. Thus, a kauri tree or stand could be infected but not yet be showing symptoms (likely also not sampled) or show symptoms but not yet have a positive test. Soil moved from such sites could potentially act as a source of inoculum to other sites or contaminate a wider area than just the kauri root zone on the source property.
- 6.10 As indicated in paragraph 6.2, current evidence indicates that any tools or objects that that contacts contaminated soil can potentially move dieback. This includes footwear, machinery like cable drills, diggers, and trucks, as well as small equipment like footwear, forks and spades. Some of this equipment will be easier to clean on site than others (i.e. hand saws verses chain saws, some types of digger than others).

¹² Kauri root mass will generally be captured within this area whether the kauri is young and growing or older and the crown is constricting. This area should provide sites for the safe deposition of soil without undue expansion of spread should that soil be contaminated.
<https://www.kauridieback.co.nz/media/1462/best-practice-guidelines-land-disturbance-activities-around-kauri.pdf>.

- 6.11 Similarly, vegetation cleared from within a kauri root zone could be contaminated if it is felled in such a way that it contacts soil. This applies equally to indigenous vegetation or introduced plants. Any activity that can move soil from within a kauri root zone needs to consider the hygiene practices, and locations for leaving material, or removing it to an approved landfill.
- 6.12 Properties with apparently diseased kauri need to be mindful of the long-term nature of dieback oospores in soil, and vectoring processes long after infected kauri are felled and potentially rooted away. Such sites will require long-term application of hygiene practices before entry, during any soil movement activities and upon exit, to ensure that soil that could potentially contain dieback is not moved from or with properties. Properties with dieback are required by Waikato Regional Council pest management procedures to have a Kauri dieback site management plan in place.
- 6.13 It is my opinion that the extent of kauri root zones needs to be registered on LIM and other reports.

7. THE EFFECTS AND CONSEQUENCES OF KAURI DIEBACK, PARTICULARLY IN RELATION TO UNREGULATED SPREAD

- 7.1 Contamination of kauri with PA requires a vector, contact with a host root system, and the right environment for the host to become infected. Managing any of these connections will reduce the potential for contamination and breaking them will stop the spread. We are unlikely to control the environment, so our options are to control contact with the host, and/or control the key vectors. This can be accomplished with methods to exclude all animals that move soil and making sure that all contact with kauri is only by people and equipment that has been cleaned to be totally free of soil.
- 7.2 If there is no intervention, and no actions to separate kauri from activities that can vector kauri dieback, then it is likely that kauri dieback will spread from currently contaminated areas to new areas locally and over large distances. I consider that we will lose kauri from built up areas and there will be changes in kauri's keystone ecological role as part of functioning ecosystem.

7.3 If there are no regulatory mechanism to control vectoring in all planning zones in place, we will be dependent on voluntary mechanisms based on the knowledge and buy-in from all landowners, and the services industry. In my view this will be haphazard. Unfortunately, even with knowledge some members of the public still do not use dieback cleaning stations on tracks.¹³

8. REGULATION AND/OR VOLUNTARY ACTION

8.1 Currently kauri dieback has been managed by a joint agency programme (Kauri Dieback Programme) between central government (Ministry of Primary Industries and Department of Conservation) and the northern regional councils (Northland Regional Council, Auckland City, Waikato Regional Council, Bay of Plenty Regional Council).

8.2 PA is an unwanted organism under the Biosecurity Act 1993. It is partially managed via provisions in the Biosecurity Act; however, aspects like earthworks are managed by local government via the RMA. Where dieback is confirmed on land that is associated within 3 times the radius of the drip line is deemed contaminated land. Kauri Dieback cannot be moved from contaminated land without permission from the Ministry of Primary Industries.

8.3 Waikato Regional Council have included kauri dieback in their Waikato Regional Pest and Marine Pathway Management Plan¹⁴ under the Biosecurity Act. They manage dieback by aerial surveillance and testing of sites, and then develop a site-specific management plan for infected sites. By the time that a tree is showing symptoms that could be picked up by aerial surveillance it may have been contaminated for many years.

8.4 The future of national regulation under a national Pest Management Plan is unclear. A consultation process has been completed about a “proposed National Pest Management Plan”.¹⁵ This plan includes proposed rules for conservation and rural lands to prevent the movement of kauri dieback. However, these rules do not include all activities in urban areas.

¹³ <https://www.kauridieback.co.nz/media/1388/kauri-dieback-forest-visitor-report-simon-wegner.pdf>

¹⁴ <https://www.waikatoregion.govt.nz/Council/Policy-and-plans/Regional-Pest-Management-Plan/RPMP/>

¹⁵ <https://www.kauridieback.co.nz/media/1929/22052019-npmp-proposal-final.pdf>

- 8.5 I understand that the draft plan has been signed off by the Minister of Primary Industries, but it has yet to come into effect. Money was not allocated to it in the past 2 budgets, and MPI is funding more limited dieback activity out of its baseline. It is unknown who will be the controlling management agency of the new plan; a new entity or the Ministry of Primary Industries.
- 8.6 In my view, effective buy in also means that some form of regulation is required to ensure that actions are undertaken, and records are maintained for local activities. The Auckland Unitary Authority have implemented rules in their plan and kauri dieback management policies and rules. Rules for earthworks are under consideration by Thames Coromandel District Council for their new district plan. The council has been requested by the Environment Court to extend coverage to urban zones, and matter is still not resolved.
- 8.7 Currently Waikato Regional Council is using a ‘management plan’ approach with landowners of contaminated sites. Similar processes could be expanded to deal with kauri at other sites currently not considered to be contaminated. In this way dieback hygiene control could be adapted to sites (i.e. exclude areas where it is clear root systems are not found like under rivers, beyond driveways, within dwellings) or to make the implementation of hygiene on site more appropriate for the landowner.
- 8.8 Should dieback disease be found then management of those sites will require multi-year actions, and frequently beyond any remaining obvious presence of a kauri at that site. The contamination zone associated with the previous kauri will need to be known so the site can be managed. I do not know exactly how long any contamination may last, but testing done on stored contaminated soils has extracted kauri dieback after 6 years. I consider that it is prudent to assume that a contaminated site lacking live hosts, may remain contaminated with viable oospores for 20 years.
- 8.9 The introduction of kauri dieback to a site is irreversible. Any mechanism that ensures that the people undertaking work near kauri understand the issues, have considered the best ways to avoid, or where necessary mitigate their actions, is a welcome addition to preventing the spread of kauri dieback.

9. SECTION 42A REPORT AND FEDERATED FARMERS SUBMISSIONS

- 9.1 Kauri dieback has not been confirmed in the Waikato District Council boundary. However, as set out above, there are considerable challenges in determining that dieback is absent there. Dieback is found on the boundary of the Waikato District in Auckland City, and especially the Awhitu Peninsula. If kauri dieback cannot be managed on-site, then the other option available to land-owners is to dispose of the soil and contaminated plant material in an approved landfill. There is a possibility that material would be moved through the Waikato District Council area to a tip near Paeroa.¹⁶
- 9.2 Consequently, in my opinion, the Waikato District Plan needs to include measures that will prevent kauri dieback contaminating any sites within its boundaries and provide mechanisms for documenting and managing any dieback that is found.
- 9.3 The section 42A report for Hearing 21A, Significant Natural Areas considers the rules being proposed by Thames Coromandel District Council are complex and not particularly user friendly from a user, monitoring or enforcement perspective, and rightly points out that they come from an appeal. This is an ongoing appeal to the environment court¹⁷ which is currently moving to consider the issues with rural and urban kauri.
- 9.4 The Section 42A report considers that the extent of the modification of 3.1.2 Policies when considering when to avoid, remedy or mitigate adverse effects on biodiversity are restricted to “earthworks” around kauri. As indicated above,¹⁸ the spread of kauri dieback can be associated with plantations, urban specimen trees, subdivision, vegetation clearance and rural under-grazing.
- 9.5 In my opinion, kauri dieback hygiene considerations are needed for activities like vegetation clearance, cabling, road works and mining prospecting. Kauri can be found in all zones including industrial plantings so rules should cover all zones.¹⁹ The transfer of dieback to new Kauri areas can be via very small

¹⁶ <https://www.kauridieback.co.nz/media/2024/best-practise-guideline-landfill-disposal-of-contaminate-material-031218v3.pdf>

¹⁷ Director-General of Conservation verse Thames Coromandel District Council (ENV-2016-AKL-000149) Decision (FINAL [2019] NZEnvC 044)

¹⁸ See [6.2] – [6.4] of this evidence.

¹⁹ The environment court insisted that industrial and airport zones be included at Thames.

amounts of soil and will not necessarily be restricted to area of significant biodiversity.²⁰

- 9.6 The proposed plans definition of earthworks in the proposed Waikato Council District Plan,²¹ does not include the national standard definition of earthworks,²² and all the exemption issues being considered in the Thames Coromandel District Council Plan. This includes the issues of gardening and the need to get permits for urban properties. The proposed definition of earthworks in the Waikato District Plan does not exclude gardening, cultivation or fence post installation. The Waikato District Council staff report suggested changes, if applied to urban sites, would in my opinion require a permit for all work within the kauri root zone in an urban garden.
- 9.7 The section 42A report's suggested remedy for dealing with kauri dieback is to use guidance provided in a booklet "Protecting kauri: a Rural Landowner's Guide" issued by the Kauri Dieback National Programme and endorsed by the Ministry of Primary Industries. The document has a disclaimer that it is general information and "not intended to take the place of or to represent the written law of New Zealand or other official requirement of guidelines".
- 9.8 In my opinion, other guidelines are likely to be produced if a proposed agency is created to manage the proposed National Pest Management Plan²³ for kauri dieback. The proposed rules will include regulatory not voluntary mechanisms. Rule 5 of the proposed National Pest Management plan currently only applies to earthworks and rural management plans, not to urban plans, and will only be applied if the rules in a District Plan is not equivalent.
- 9.9 The reason given for the proposed approach in the section 42A report is that district plan rules would be locked in for the life of the plan, while guidance could be updated more regularly. However, in my opinion there is no

²⁰ See [6.3] of this evidence.

²¹ *Modification of earth surfaces by blading, contouring, ripping, moving, removing, placing or replacing soil or earth, or by excavation or by cutting or filling operations.*

²² National standards definition of earthworks: "Earthworks: means the alteration or disturbance of land, including by moving, removing, placing, blading, cutting, contouring, filling or excavation of earth (or any matter constituting the land including soil, clay, sand and rock); but excludes gardening, cultivation, and disturbance of land for the installation of fence posts".

²³ <https://www.kauridieback.co.nz/media/1929/22052019-npmp-proposal-final.pdf>

guarantee that the Protecting Kauri: A rural landowner’s guide, or those other guides or guidelines referenced in that document²⁴ will be updated, and it is just as likely to be out of date as any rule in the district plan in 12 years’ time. The Planning and Intelligence workstream of the Kauri Dieback Programme, that has been responsible for the production of these guides and guidelines, is currently unfunded.

- 9.10 The section 42A report appears to consider the rural landowner’s guide to be Waikato Regional Council guidance. The guide was written by Waikato Regional Council staff, but it is a National Kauri Dieback Programme document. If updated, changes to this document may not represent Waikato Regional Council views and leave the Waikato District Council open to changes to its plan without necessarily being consulted.
- 9.11 The Protecting Kauri: A rural landowner’s guide is not a comprehensive as a set of rules. It contains the elements of a management plan, as proposed in the rules of the Thames Coromandel District Council rules²⁵, and as likely applied by Waikato Regional Council staff on known contaminated properties²⁶. However, the rural landowner’s guide does not guide how the elements should be put together or require the rigor of putting kauri dieback control formally into farm management practice.
- 9.12 The rural landowner’s guide includes the term “Kauri Areas”, which is undefined there, and refers to other guidelines for critical areas like wash-down sites and hygiene procedures, so it is not a stand-alone document. In my opinion, the references to the undefined “kauri areas” is of particular problem within the “hygiene to protect kauri” section, as the extent of these areas are undefined.
- 9.13 The checklist of on farm biosecurity measures to protect kauri provides guidance of types of issues to consider on a farm but there is no mandatory requirement to follow it. The section on legislation refers to the Thames Coromandel District Council regulatory approach, and their more comprehensive sign-off of a Kauri Dieback Risk Management Plan.

²⁴ Refer to the kauri guidelines site.

²⁵ Appendix 6 of the Section 42A report.

²⁶ <https://www.waikatoregion.govt.nz/council/policy-and-plans/regional-pest-management-plan/rpmp/> page 232.

- 9.14 There is no consideration of other zones, like urban sites.
- 9.15 In my view the Section 42A report is recommending a voluntary approach like that proposed in the Thames Coromandel District Council, which was rejected by the environment court in part because it:
- a. lacked provisions to monitor the success or failure of the proposed voluntary measures;
 - b. lacked clarity about who is responsible for preparing guidance and plans;
 - c. lacked standardised inspection and cleaning checklists to inform farmers about specific steps to be taken at kauri sites;
 - d. lacked the need for mapping of affected areas of trees; and
 - e. lacked consideration of entry and exit routes and other methods combat the disease.
- 9.16 In my opinion the section 42A report proposes to go along the same voluntary approach lines and open the kauri within the district to a greater chance of contamination.

10. FEDERATED FARMERS SUBMISSION AND FURTHER SUBMISSION

- 10.1 The section 42A Report for Hearing 18 – Rural recommends that the Director-General’s submission seeking amendment of earthworks policies to address the management of kauri dieback²⁷ is rejected. The reason for the recommendation appears to be because the author considers kauri dieback to be primarily related to land administered by the Department of Conservation or local authorities.²⁸ As indicated in paragraph 6.2, a lot of kauri dieback is on rural and urban properties. The kauri dieback distribution map produced in the section 42A report only provides the dieback sites on public land and limited private land, because at the request of district and city councils, other sites are excluded for privacy reasons.
- 10.2 Federation farmers have indicated that it is not appropriate for Waikato District Council to “implement a planning response over and above what is

²⁷ [585.5].

²⁸ Section 42A Report – Hearing 18 at [248].

being undertaken at the national and regional level". The proposed National Pest Management Plan makes it clear that an earthworks risk management plan approach is likely to be applied to earthworks on farms or other kauri areas by the agency, if equivalent rules are not included in District Plans.

10.3 In my view the submission by Federated Farmers ignores the District Councils responsibilities for earthworks and vegetation clearance rules under the RMA.²⁹ The proposed National Pest Management Plan rules do not include urban areas which the environment court considers are district councils are required to consider.³⁰ Consequently, it is not possible to manage Kauri Dieback using National and Regional rules alone.

11. CONCLUSION

11.1 Kauri dieback is not ubiquitous and there is still time to save large areas of kauri forest and to protect trees in all zones including rural, industrial and urban areas.

11.2 The Environment Court has recognised that some national regulatory processes will be carried out under the Biosecurity Act, while others are covered under the RMA by district rules on earthworks. The proposed more voluntary approach in the S42A report was not supported by the Environment Court in considering management of dieback in the Thames Coromandel District Council Plan.

11.3 Current knowledge is that PA kills all kauri it infects. Urban sites can be contaminated by any process that moves soil, and then these sites become a source of contamination. Hygiene processes are required in all planning zones regardless of the amount of kauri within them.³¹

11.4 Stopping long range spread is required to maintain kauri forests. All interventions need to be designed and carried out so they are effective, as one mistake can be irreversible.

²⁹ Director-General of Conservation verse Thames Coromandel District Council (ENV-2016-AKL-000149) Decision (FINAL [2019] NZEnvC 044).

³⁰ Director-General of Conservation verse Thames Coromandel District Council (ENV-2016-AKL-000149) Decision (FINAL [2019] NZEnvC 044).

³¹ See Note 30.

Dated 29 October 2020

A handwritten signature in black ink, appearing to read 'aj Beauchamp', followed by a long, sweeping horizontal flourish.

Antony Julian Beauchamp