

## **Attachment 6 – Statement of Evidence Simon Miller**

**Before the Whangarei District Council Hearings Panel**

**UNDER**

The Resource Management Act 1991

**AND**

Proposed Plan Change 129 to the Whangarei District Plan  
– Notable and Public Trees

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**STATEMENT OF EVIDENCE OF SIMON PATRICK MILLER  
ON BEHALF OF WHANGAREI DISTRICT COUNCIL**

**DATED: 12 NOVEMBER 2018**

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## Introduction

- 1 My full name is Simon Patrick Miller. I have 29 years' experience as an arboriculturalist in Ireland, the UK, Germany and New Zealand, where I have lived and practised arboriculture for the past 25 years
- 2 I have been asked by Whangarei District Council (WDC) to provide evidence in support of its submission on Proposed Plan Change 129. In particular, I have been asked to evaluate a number of trees currently listed on Appendix 2, Heritage Tree List and proposed for inclusion in NPT.1.9 Schedule of Notable Trees.
- 3 I have also been asked to provide comment on a number of trees not currently listed on Appendix 2 Heritage Tree List and proposed for inclusion in NPT.1.9 Schedule of Notable Trees. In particular as to whether the subject trees should be included on the list.

## Qualifications and Experience

- 4 I have a Diploma of Arboriculture from Merrist Wood College, Guildford, Surrey which I gained in 1993. I am a registered Quantified Tree Risk Assessment (QTRA) practitioner.
- 5 I have been a director of Peers Brown Miller Ltd in Auckland for twelve years, during which time I have been involved in a wide range of arboricultural assessments, surveys and reporting throughout New Zealand, more specifically the Auckland Region, Wellington and Christchurch.
- 6 Peers Brown Miller Ltd are involved in both the direct management and/ or assessment of heritage/ scheduled tree populations such as those located within the grounds of the University of Auckland, the Waitakere Ranges, various sites throughout Auckland.
- 7 Peers Brown Miller Ltd has undertaken many STEM reviews including, but not limited to individual critiques such as Proposed Plan Change 28 – Kingseat Structure Plan Area and Other Amendments [PC28], specifically;
  - the PC28 proposal to add a number of identified trees and tree groups from that site to Schedule 8A: *Historic Buildings, Structures, Trees and Areas* of the District Plan;
  - the Kingseat Group submission for an amended schedule of heritage trees on this site, and
  - the development of the master plan for the former Kingseat Hospital site
- 8 A submission on behalf of Fulton Hogan Ltd to provide evidence in support of its submission on Stage 3 of the Proposed Christchurch Replacement District Plan. In particular, its request to have significant trees T278 – T306 located at 273 Pound Road deleted from Appendix 9.4.5.1.1, Schedule of Individual Trees.
- 9 I have read and agree to comply with the Environment Court's Code of Conduct for Expert Witnesses outlined in the Environment Court's Practice Note (2014). I have complied with this practice note in preparing this statement of evidence. I also confirm that my evidence is within my area of expertise except where I state that I am relying on what I am being told by another person. I also confirm

that I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

### **Scope of Evidence**

- 10 In my evidence I:
- 10.1 Discuss and summarise the various issues, results and recommendations arising from the assessment of a number of scheduled trees using the STEM Tree Evaluation Method on behalf of WDC. The assessments were undertaken between 11.12.17 and 14.12.17, and 03.10.18 and 05.10.18. More than sixty trees/ tree groups were assessed using the STEM system;
- 11 In undertaking my assessments and preparing my evidence I have reviewed the following documents:
- 11.1 WDC, Trees Requiring Assessment Summary, December 2017;
- 11.2 WDC, Trees with no score sheets, December 2017;
- 11.3 Copy of DRAFT - PC129 ARBORIST Summary, December 2018
- 11.4 WDC, Existing STEM assessments for scheduled trees;
- 11.5 Appendix 2, Heritage Tree List, Whangarei District Plan;
- 11.6 NPT provisions as notified
- 12 I confirm I have visited all the trees detailed in my evidence.

### **STEM Tree Evaluation Methodology**

- 13 In this part of my evidence, I discuss the STEM tree evaluation methodology.
- 14 The STEM evaluation system is composed of three sections – Condition (Health), Amenity (Community Benefit) and Notability (Distinction).
- 15 Each of the three sections is further broken into additional categories against which tree trees are assessed and scored. The rationale behind the scoring of each category is explained in the publication titled STEM - A Standard Tree Evaluation Method, by Ron Flook.<sup>1</sup> Those descriptions have been studied by Peers Brown Miller Ltd and, accordingly, our/ my evaluations reflect our understanding of the rationale relating to each of the categories.
- 16 With regards to the tree evaluations, it is my understanding that there have been a number of submissions with regards to the STEM criteria, in particular as to whether STEM should take into account the 'negative' effects of trees.
- 17 From an arboricultural perspective, I do not support the inclusion of 'negative' effects of trees into what is a tree evaluation methodology that endeavours to be as objective as possible about the value of the tree based an evidential based assessment of various criteria (e.g. form, vigour, stature, function, climate).

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<sup>1</sup> Flook, R. 1996: A Standard Tree Evaluation Method, published by Ron Flook, Lower Hutt, New Zealand.

- 18 It is my opinion that the 'negative effects of trees' relate to effects that a given tree has on people or property and are generally more subjective. This is not in any way to diminish these concerns or effects, but I would note that one person's lack of light in the house is another person's valuable shade; one person's messy leaf strewn garden is another's valuable source of compost material; one person's 'imposition' on their property is another's amenity asset or valuable habitat for birds.
- 19 Generally speaking if a tree is patently unsuitable for scheduling due to its condition the assessment should stop at that point and reasons recorded. It is therefore my professional opinion that negative effects do not have a place in the initial tree evaluation. It is also my opinion however that there should be a process by which the 'negative effects' - that are very real and valid to that particular tree owner and are visited on that particular tree owner - are taken into account after the initial evaluation has been undertaken. In my experience, this is most efficiently and effectively done through case by case consideration in a resource consent application to remove the tree for example.
- 20 With regards to the 'risk' of significant harm (or death) a tree may pose to people, the average amount of deaths caused by trees is typically in the region of one in ten million to one in twenty million. For instance, in 2005 the UK Health and Safety<sup>2</sup> executive noted that:
- "Each year between 5 and 6 people in the UK are killed when trees fall on them. Thus the risk of being struck and killed by a tree falling is extremely low – the risk of being struck and killed by a tree growing in a public space is even lower. Up to 3 people are killed each year by trees in public spaces, but as almost the entire population of the UK is exposed, the risk is about one in 20 million".
- 21 This is not meant to diminish that risk only to note that we accept much higher levels of risk daily without too much consideration e.g. driving a car.
- 22 In relation to whether a 100 STEM point threshold is the appropriate threshold limit, this is the threshold that has been in place in Whangarei since the inception of the first generation District Plan and has resulted in the scheduling of approximately 150 trees. This is a drop in the ocean when the likely number of trees worthy for scheduling in the Whangarei District is considered.
- 23 It is important to note that in the STEM system a tree does not need to be a 'specimen' or 'rare' or 'significant' to score 100 points or more. In my professional opinion this is wholly appropriate. A functioning urban forest ecosystem that provides all the arboricultural and ecosystem services that we expect, or more often take for granted (e.g. moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes) is not supported and sustained by individual 'significant' trees alone. Rather it is supported and sustained by a multitude of moderate to good, commonly occurring, useful functioning and somewhat visible trees.
- 24 With regards to STEM being an effective tree evaluation system, over 35 Councils across New Zealand use the system to evaluate trees. The Royal New Zealand Institute of Horticulture<sup>3</sup> notes that the '*consensus has been that STEM is uncomplicated by formulae or flawed by multiplications which other systems use. It is also clearer in definitions which will make it more useful at*

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<sup>2</sup> Sector Information Minute 01/2007/05 'Management of the risk from falling trees', HSE, 2005 [www.hse.gov.uk/foi/internalops/sectors/ag\\_food/1\\_07\\_05.pdf](http://www.hse.gov.uk/foi/internalops/sectors/ag_food/1_07_05.pdf)

<sup>3</sup> <http://www.rnzih.org.nz/pages/STEM.htm>

*Planning Tribunal and local authority planning hearings... In the assessment of an organic object, the essential ingredient is Objectivity. STEM is a logical method for establishing the intrinsic quality of trees.'*

**Condition (Health) (ref: pg's 17-21 STEM guidelines)**

- 25 The criteria assessed in this section comprise of the following;
- Form
  - Occurrence
  - Vigour/ Vitality
  - Function (Usefulness) i.e. is the species a source of food for birdlife/ fauna/ invertebrates? Does it provide for roosting or nesting habitat for bird species? Does it perform a useful role in terms of wind modification, shading, screening and pollution/ toxin absorption?
  - Age
- 26 The assessment of Form, Occurrence, Vigour/ Vitality and Age was found to be, in the main, broadly consistent across the original (1996) STEM assessments and the 2017/ 2018 STEM assessments.
- 27 From an arboricultural perspective these criteria are not typically contentious. While form could be said to be in the eye of the beholder, assessment of this criterion is generally based on the physical and structural integrity of the canopy (i.e. extent of fractures, defects, pruning history etc) rather than whether it's a "nice looking" tree or not.
- 28 Occurrence, Vigour and Age are all evidential based assessments.
- 29 The assessment of Function generally scored higher in the 2017 & 2018 assessments than previously. This is primarily due to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes.

**Amenity (Community Benefit) (ref: pg's 23-27 STEM guidelines)**

- 30 The criteria assessed in this section comprise of the following;
- Stature
  - Visibility
  - Proximity (to other trees)
  - Role i.e. how a particular scene or place would look without the tree; does it contribute to the setting?; does it lend serenity to an urban or rural space?; does it have an association with tradition?; is it attractive to fauna?
  - Climatic Influence
- 31 Stature, Visibility and Proximity again are generally not contentious – all are measurement based. Historically, Role and Climatic Influence may have been scored lower. As with Function in the Condition section an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes saw the trees in the 2017 and 2018 STEM assessment generally scoring higher than previously.

## Results of STEM assessments

- 32 The results and findings of the STEM assessments are detailed in the following reports appended to my evidence;
- PC129 Submission Notable Trees- STEM assessment report 07.02.18 – **Appendix 1**
  - PC129 Submission Notable Trees- STEM assessment report 12.11.18 – **Appendix 2**

## Overview of Submitters Concerns

- 33 Many submitters considered that a given scheduled tree did not meet the criteria for scheduling or was not significant. As the accompanying STEM assessment reports demonstrate however, all of the assessed trees met the criteria for scheduling (i.e. attained a score of 100 STEM points or greater). The other most common concern related to the perceived safety of the trees. During discussions with submitters and/ or tree owners on site this concern typically arose for one or all of the following reasons;
- Proximity of a tree’s canopy or scaffold stems/ branches to a dwelling;
  - A sense that nothing could be done to alter (prune) the canopy of a scheduled tree without resource consent (difficult) and costs (significant);
  - A sense that the size of the tree made it inherently unsafe and inappropriate in an urban context;
  - Root activity in a driveway or potential for roots to harm underground services
- 34 The first two points above generally led to irritation on behalf of the submitter/ tree owner and a notion that nothing could be done without encountering difficulty. Compounding this was the damage (perceived or otherwise) that the tree was doing to a roof of a dwelling or the dwelling itself. Ill will towards the tree, or its scheduled nature, tended to result with the Tree Rules and/ or the ‘Council’ in the gun.
- 35 Based on discussions during site visits, the above irritation or sense that ‘nothing can be done’ led to the third point e.g. that the size of the tree made it inherently unsafe and inappropriate in an urban context. There is no doubt that a number of the trees are very large and stand in close proximity to existing dwellings or are situated in relatively small urban gardens. From an arboricultural perspective however it is considered appropriate that these trees are included in the ‘tree protection conversation’ that a STEM assessment engenders. Landcare Research<sup>4</sup> noted in 2015 that *‘where urban forest was removed, it was generally replaced with a high proportion of impervious surfaces making urbanisation largely irreversible.’*
- 36 Similarly, Auckland Council<sup>5</sup> noted in 2018 that a *‘total of 61.23ha of tree canopy was lost from Waitematā Local Board over 10 years. The loss was made up of 12,879 different detected tree removal ‘events’; meaning a*

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<sup>4</sup>[https://www.landcareresearch.co.nz/\\_\\_data/assets/pdf\\_file/0016/101446/Policy\\_Brief\\_13\\_Protecting\\_urban\\_forest.pdf](https://www.landcareresearch.co.nz/__data/assets/pdf_file/0016/101446/Policy_Brief_13_Protecting_urban_forest.pdf)

<sup>5</sup> ‘Tree loss in the Waitematā Local Board over 10 years, 2006- 2016’

*minimum of 12,879 trees were cleared. The actual number of trees cleared is likely to be somewhat greater than this figure because the larger clearances involved the removal of multiple trees.’ The report goes on to say that more than 75 per cent of all cleared trees had no statutory protection and unprotected trees experienced higher rates of tree canopy clearance.’*

- 37 Regarding problematic root activity this was only physically apparent in a few instances, otherwise it was not a concern that was backed up with physical evidence (i.e. I was not presented with documented details or pictures of the damage to underground services).

### **Communicating/ Explaining STEM method to Stakeholders**

- 38 A number of submitters/ tree owners were met on site during the STEM assessment process. As much as was practicable the STEM method was discussed and its vagaries explained. It was generally found that once a specific cause for concern was acknowledged (e.g. a problematic branch; the extent of a canopy overhang over a roof) and a potential solution discussed (generally pruning) the overall benefits of trees (i.e. Function, Role, Climatic Influence) were agreed upon and supported.
- 39 From an arboricultural perspective, the general ‘take-away’ from the discussions was that a Tree rules environment (as per District Plan) that allowed scheduled tree owners a greater degree of latitude in the basic management of their trees without recourse to Resource Consent would engender a more positive response to the presence of a scheduled tree on their properties (Not in all cases obviously. A number of submitters just wanted the tree gone).

### **Other Matters**

- 40 Below I address a number of other matters that have been raised in submissions and within the s42A Report. I utilise the same topic headings from the s42A Report for ease of reference.

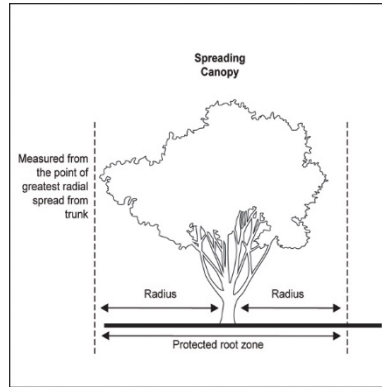
#### ***N. Definitions***

- 41 A submission from Northpower has requested specific definitions for “Dripline” and “Trimming”. These are outlined in the S42A Report.
- 42 I do not support the use of the term “trimming.” From an arboricultural perspective, “trimming” is a meaningless term. Where “trimming” is referred to in the NPT provisions, I would recommend that it is replaced with “pruning and maintenance.” These terms are more widely utilised in provisions for the management of trees. I do not consider that definitions of these terms would be required.
- 43 I do not support the use of the term “dripline”. From an arboricultural perspective, the term “root zone” is a more meaningful description of the extent of a tree’s zone of influence (in terms of root spread) and also more meaningful when trying to quantify the effects of a change in land use or development works on the growing conditions of a given tree.
- 44 In my opinion, the term “root zone” should be used in place of “dripline” throughout the proposed NPT provisions. A definition of “root zone” should also be included as follows



*'The area of ground around a tree trunk created by taking a radius equal to the greatest radial spread of the canopy/foliage of the tree, measured from the trunk and rotating that radius in a full circle around the trunk.'*

- 45 The above root zone definition should be accompanied by an image such as the one below from the Auckland Unitary Plan



#### **T. NPT.1.6 Discretionary Activities (Subdivision**

- 46 A submission from Department of Conservation (DoC) has requested that the term “dripline” in NPT.1.6.3 be removed and reliance placed solely on the term “root zone”.
- 47 As highlighted above, I agree that “root zone” is the more appropriate term and have recommended that this replace “dripline” throughout the proposed NPT provisions.

#### **Kauri Dieback Disease**

- 48 Another submission from Department of Conservation (DoC) has requested amendments to the proposed NPT provisions to include consideration of kauri dieback for any land disturbance works near kauri.
- 49 In response, I understand that Mr Badham has proposed including discretionary activity rules applicable to scheduled notable and generally protected public tree works within “three times of the radius of the canopy root zone of a New Zealand Kauri tree (*Agathis australis*)”
- 50 From an arboricultural perspective I would support the proposed rules – the Kauri hygiene zone as detailed above would be considered accepted modern arboricultural practice and a valuable tool in addressing the ecological and arboricultural crisis that is Kauri Die-back Disease.

#### **Conclusions**

- 51 The STEM system is a useful and appropriate tool for evaluating trees.
- 52 Based on my arboricultural experience, in order to maintain as much objectivity possible in the implementation of the STEM system ‘negative tree effects or values’ should not be incorporated in the STEM assessment process. These effects or values should be addressed in a resource consent process.
- 53 In my arboricultural experience, there is often a fear or a concern among those in the statutory arm of urban forest or tree management that too much latitude

in pruning rules in particular would see a wholesale desecration of the canopies and stature of scheduled trees. I do not share this opinion. Not out of an unrealistic idea of tree owners' appreciation of form or aesthetics, simply that large scale pruning is often difficult and costly.

- 54 Similarly, it is my arboricultural opinion, that the use of an arborist should not be mandated in the rules – in my experience most people simply do not want to, or are fearful of, getting more than a metre or two above ground with a saw or chainsaw. They would rather employ the services of an arborist. However, in my arboricultural experience and also as a result of talking to submitters during this process, the feeling that 'they could if they wanted to' would engender a more positive attitude towards the scheduled trees on their properties.
- 55 Once again it is my arboricultural experience that if people feel they have a degree of control over (their) scheduled trees, that they are unduly constrained by a District Plan rules process in the management of the tree standing within their property boundaries, they are less likely to seek the removal of those trees. It is my professional opinion that it is incumbent upon those of us working in the statutory arena not to make people 'hate' or become very irritated or agitated by their protected trees.
- 56 Regarding the appropriateness of large trees in an urban environment, the size or scale of trees and their proximity to structures does not make a given tree inherently unsafe, hazardous or the site itself subject to higher levels of risk than might otherwise be broadly acceptable to members of the public. There may be instances however where quantifiable and evidentially assessed arboricultural issues such as the structural condition of a Notable or protected public tree(s) and its proximity to a given target may be pertinent to whether the tree is to remain, be pruned or felled, or removed from the Schedule of Notable Trees.

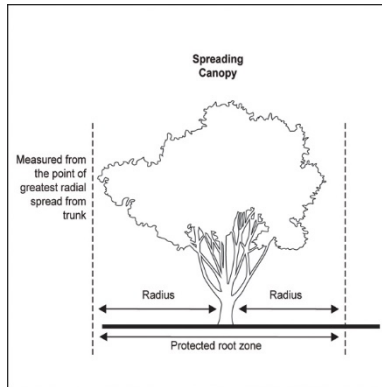
### **Recommendations**

- 57 It is recommended that the scale of controls relating to scheduled trees would range from loose control – small to mid-level pruning (i.e. Permitted up to 100mm, no more than 20% of canopy removed, no arborist required) to very tight control – tree removal; alteration of rootzone (Discretionary)
- 58 A proposal to remove a Notable or protected public Tree(s) or alter the root zone of a Notable or protected public Tree(s) should be accompanied by an arboricultural assessment of the proposed works. The assessment should be undertaken by a qualified arborist with proven experience in the assessment of such issues.
- 59 Where mitigation of risk or hazard is identified as the reason for the proposed removal or alteration of the root zone of a Notable or protected public Tree(s), the risk or hazard should be quantified by an appropriately trained individual using a recognised risk assessment method such as Quantified Tree Risk Assessment (QTRA), Tree Risk Assessment Qualification (TRAQ) or similarly accepted risk assessment method.
- 60 I recommend that discretionary activity rules applicable to scheduled notable and generally protected public tree works within "three times of the radius of the canopy root zone of a New Zealand Kauri tree (*Agathis australis*)" should be included.
- 61 I recommend that the term "trimming" is replaced throughout the proposed NPT provisions by "pruning and maintenance."

- 62 The term “root zone” and its extent (or means by which it is quantified) should be utilised in place of “dripline” throughout the proposed NPT provisions. A definition should also be included as follows:

*‘The area of ground around a tree trunk created by taking a radius equal to the greatest radial spread of the canopy/foliage of the tree, measured from the trunk and rotating that radius in a full circle around the trunk.’*

- 63 The above root zone definition should be accompanied by an image such as the one below from the Auckland Unitary Plan:



**Simon Miller**

12.11.18

## **Appendix 1**

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**PC129 Submission Notable Trees- STEM assessment  
report 07.02.18**

ID#	Submitter	Tree #	Issue	Submitter Comments	Arborist Comments	Original STEM Score	Updated STEM score	Difference in STEM score	Reason for difference in STEM score
77	Turner L & C	201	Doesn't meet criteria	Tree has grown too large and creates too much shading.	The property (and tree) owner indicated that he really likes the trees. However he has concern about the size of the trees (he submitted that the 'were out of control') and the extent of shading arising from them. He would like Council to prune the trees as it is his understanding that at some point in the past the Council pruned them every two years or so. The owner was supportive of a change in Heritage Tree controls that would allow for the pruning of branches of a larger diameter within recourse to resource consent. From an arboricultural perspective enabling the property owner to feel that he had some level of control over the perceived 'maintenance' requirements of the trees would go some way to address his concerns of the presence of scheduled trees on his property.	102	144	plus 42	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes
58	Erceg L & D	201	Unsafe	Concern that if a branch or bough breaks off it will damage people or property. The trees are extremely large and 'out of control'.	See above	102	144	plus 42	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes

77	Turner L & C	202	Doesn't meet criteria	Tree has grown too large and creates too much shading.	The submitter (my understanding not the property owner - or more correctly the former property owner who was vacating the premises on the day of my site visit due to having sold the house) has submitted that the tree/ trees don't meet criteria and create too much shading. Based on the current STEM assessment the trees meet the criteria. With regards to the shading issue it was unclear who or what was being shaded. Given the breadth and volume of trees within the stand it may be appropriate that the stand be assessed (by appropriate personnel) from an historical, ecological and/ or significant landscape perspective	102	147	plus 45	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes
26	Polkinghorne V & Burns K	224	Locational problem	Submitter is unsure which tree is subject to protection	With regards to locational problem as highlighted by submitter, the subject tree is the only Pohutukawa tree standing within the site. Tree is a multi-stemmed specimen, stems arising from the base of the tree. It is recommended that the tree be monitored on a yearly basis taking note of any alteration of torsional load on stems (twisting), especially over road. The canopy overhangs low over the road - recommend clearing canopy to 4.25m above carriageway. Canopy should be pruned to clear power lines.	102	129	plus 27	Original STEM assessment is for a Titoki tree on this site. The 2017 STEM assessment was for a Pohutukawa tree on site. As such there is no reason for the difference in STEM scores as two different trees were assessed
7	Badham G and Adam M	225	Tree is unsafe	Some big branches have fallen off the tree, presenting a hazard. There is also concern that the tree is not in good health.	Site not visited as was not included in supplied list of trees to be visited				

61	Thomson M	228	Doesn't meet criteria	The large size of the two rimus is inappropriate for the context and they are too close to the submitter's house. The roots are also damaging the driveway.	On-site discussions revealed that the roof of the dwelling had been recently replaced, the former roof having been compromised by the extent of leaf litter falling from the caopies of the scheduled trees. The submitter would like to be able, at a minimum, to further prune the canopies of the trees to provide a greater clearance between the canopies of the trees and the (new) roof. She notes however that she is uncertain about the rules relating to pruning and was concerned that pruning couldn't occur without a resource consent. With regards to pruning of the trees it is considered reasonable, from an arboricultural perspective, that a tree owner - scheduled tree or otherwise - should be able to maintain an appropraite clearance between a given tree canopy and their dwelling without requiring a resource consent.	114	126	plus 12	Original STEM assessment is for two Kauri trees on this site. Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, ameoleoration of wind, stormwater and pollutants, maintenace of ecological habitats and pathways and improved community health outcomes
53	Ogle S	229	Tree requires trimming	Neighbour's notable tree dangerously overhangs submitter's driveway.	Issue could be addressed through the removal of a reasonable sized branch (diameter approx 100mm) that hangs low over the submitter's driveway. Removal of this branch would provide approximatey 4.5m clearance above ground.	114	120	plus 6	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, ameoleoration of wind, stormwater and pollutants, maintenace of ecological habitats and pathways and improved community health outcomes

28	Macgregor V & B	245	Doesn't meet criteria/unsafe	Tree roots have damaged driveways and there is concern that they will interfere with underground services	Two Totara trees on site; one in decline. While the two trees collectively achieve sufficient STEM assessment points to warrant inclusion on the Heritage Tree List, it should be considered whether it is appropriate to include a declining tree - albeit one that may take many years to decline - on the list (given that ecological/habitat functions are not the principal assessment criteria)	102	114	plus 12	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes
23	Newman F	271	Doesn't meet criteria/unsafe	Tree poses a hazard to the public and vehicle traffic. WDC removed identical trees from Mander Park. The species is not scarce or under threat.	From an arboricultural perspective, and with reference to the STEM assessment the tree meets criteria for scheduling. However the tree is currently displaying evidence of stress (canopy retrenchment, epicormic growth, increased levels of dead wood). It is recommended that the condition of the tree be monitored at quarterly to six monthly intervals (or after severe weather events). Levels of dead wood, delamination of branches and appearance (or otherwise) of bracket fungi should be noted. Should the condition of the tree decline further its inclusion on the Heritage Tree list should be reassessed. The tree is displaying characteristics of a 'veteran' tree i.e. retrenchment of canopy; mid-canopy reformation (through epicormic growth). It may be appropriate to manage the tree in a manner that acknowledges the reality of its aging condition i.e. significant canopy reduction that results in a more compact canopy and removal of declining large diameter limbs.	120	114	minus 6	2017 STEM assessment saw the tree score lower in stature and proximity categories.



43	Abbeyfield Properties Ltd	289	Locational problem	Needs clarification as to which trees are included in the list and subject to protection measures.	The Heritage Tree List lists 7 trees, however there is a total of 12 trees on site (in close proximity to each other), of which 8 stand in the most 'definable' first main group as one enters the site. From an arboricultural perspective it is considered that this group is the most likely candidate (despite there being 8 as opposed to 7 trees). Further clarification may be required from WDC.	108	150	plus 48	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes. Original STEM assessment appears to treat the stand of trees as if it was an individual tree.
49	Singh G	290	Doesn't meet criteria	Tree is big and old and creates a lot of debris from its falling leaves which blocks drains.	A number of submitters (5) note that the tree doesn't meet the criteria for scheduling. The tree/ property owner (one of the submitters) is concerned about the volume of leaf litter arising from the tree and potentially damaging the roof. The general tenor of the submitter's concerns is that the tree is too tall, potentially dangerous in high winds and unsuitable for its setting. Based on the result of the STEM assessment the tree meets the criteria for scheduling. From an arboricultural perspective, the tree could be said to be located in generally unfavourable (for the tree) growing environment due to the density of development and proximity of adjacent dwellings/ structures. It is noted however that within 25 Elizabeth St, a significant portion of the tree's rootzone is permeable and relatively unmodified. Overall the tree's form and current condition are not displaying evidence of decline. The canopy of the tree extends approximately 2 metres over the roof of the dwelling on 25 Elizabeth St. Pruning of the canopy to clear the roof may reduce some of the volume of leaf litter on the roof. (It is unclear what damage the leaf litter is doing to the roof.) Monitoring of the condition of the tree on a yearly basis or after severe weather events could address some	102	144	plus 42	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes

6	Pullman M	290	Doesn't meet criteria/unsafe	Thinks that the tree should be removed as it is a hazard to the surrounding houses and especially dangerous during high winds.	See above	102	144	plus 42	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes
8	Molony P & B	290	Doesn't meet criteria	Tree creates considerable debris during strong winds. Submitter does not believe pohutukawa should be protected in a confined garden.	See above	102	144	plus 42	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes
18	Trimmer A	290	Doesn't meet criteria/unsafe	Tree has grown to over 17m tall and is unsuitable for the build up urban setting. During wind there are concerns for safety as the top branches 'sway alarmingly'.	See above	102	144	plus 42	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes

30	Thurgood J	290	Doesn't meet criteria/unsafe	Tree is over 17m tall and considered to be a risk to surrounding properties, it's size is also not appropriate to the urban setting. Additionally, tree debris blocks spoutings creating maintenance issues.	see above	102	144	plus 42	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, ameoleoration of wind, stormwater and pollutants, maintenace of ecological habitats and pathways and improved community health outcomes
39	O'Connell J	294	Unsafe/requires trimming	During high winds large branches have broken off the tree. The tree needs trimming as several branches do not seem healthy and possibly have borer.	The property (and tree) owner is very concerned about liability arising from branches falling on the street side of the tree. She reports that a large branch was shed by the tree in the winter of 2015. It is her understanding that she is liable for any damage that may arise. She would like to prune the tree and remove the existing dead and dangerous wood from the canopy of the tree but is concerned that a consent would be required. From an arboricultural perspective it is considered that a Heritage Tree rules environment that allowed for removal of branches up to 100mm in diameter without requiring resource consent would address much of the submitter's concerns.	114	114		No change in STEM score
17	Taylor R & L	301(a)	Tree requires trimming	Limbs of Pohutukawa trees overhang footpath and dropping debris. The debris is causing downpipes to become blocked, creating overflows and is dangerous to footpath users.	Two trees/ tree groups i.e. two Pohutukawa trees standing immediately adjacent to each other is one scheduled tree; the other is a Kauri standing apart from the Pohutukawa. The resident on site expressed concern regarding liability for any damage to the dwelling on site that may arise from the scheduled trees on site (Pohutukawa in particular). It is recommended that dead wood and declining branches within the canopies of the trees - in particular where they overhang the dwelling, greater than 50mm in diameter is removed.	102	138	plus 36	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, ameoleoration of wind, stormwater and pollutants, maintenace of ecological habitats and pathways and improved community health outcomes

17	Taylor R & L	301(b)	Tree requires trimming	Kauri	The Kauri tree stands apart from the Pohutukawa trees on site. The resident on site expressed concern regarding liability for any damage to the dwelling on site that may arise from the scheduled trees on site (Pohutukawa in particular). It is recommended that dead wood and declining branches within the canopies of the trees - in particular where they overhang the dwelling, greater than 50mm in diameter is removed.	114	138	plus 24	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes
32	McKenna H	309	Doesn't meet criteria/unsafe	Size of trees is inappropriate for the built up urban setting. Trees pose a risk of falling during high winds and the roots are a potential threat to underground services.	Submitter notes that the size of tree(s) is inappropriate for the built up urban setting, poses a risk of falling during high winds and roots are a potential threat to underground services. The subject tree is typical in height and spread of a mature Oak; trees of this size are often found in urban settings. At the time of writing this assessment I have not been made aware of any conflict with existing underground services. However it is recommended that the condition of the tree be monitored on a yearly basis, or after extreme weather events, to ensure that any structural issues that may become apparent are addressed.	126	120	minus 6	Difference relates to height measurement. 2017 STEM assessment measured height with a laser measuring instrument.
29	Robbins B & G	322	Unsafe	Concern for stability of trees during high winds.	It is unclear what the submitters consider to be 'unsafe' or 'unstable' about the tree - further discussion would be required to gain a fuller understanding of their concerns. Similarly further consultation with the submitters would be required to gain an understanding of what is required - from their perspective - from pruning of the canopy of the tree. The tree has been extensively pruned previously. It was noted however, during the site visit the surface root activity is affecting existing paving within the site.	102	141	plus 39	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes

48	Walker P	322	Doesn't meet criteria/unsafe	More needs to be done to maintain and prune this tree.	See above	102	141	plus 39	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes
1	Vulecich G	330	Unsafe	Tree has rotten branches that are falling off. Branches are about to touch the power pole.	With regards to the 'rotten' branches the property owner/ resident indicated a branch on the ground of her property of a similar size to the one that the submitter was concerned about. This branch was 15mm - 20mm in diameter (i.e. very small) and typical of the dead wood that occurs in Puriri trees, particular when they are not growing in a forest environment. Standard arboricultural practice would see dead wood of a diameter of 50mm or greater as warranting removal (in some instances). Dead wood of a lesser diameter is not considered hazardous. With regards to the proximity of the canopy to the existing power pole and power lines on the street. There is typically a statutory obligation on behalf of the lines company and/ or tree owner to maintain a minimum clearance between the canopy of a given tree and adjacent power lines. It is recommended that District Plan controls with respect to Notable/ Scheduled trees to not come into conflict with these statutory obligations.	126	159	plus 33	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes

57	Calabano V & D	334	Unsafe	<p>Tree is causing damage to submitters roof due to high volumes of debris and falling branches. Concern that more serious damage could occur during high winds.</p>	<p>Two scheduled trees on site - a Totara and a Rimu. Based on the proximity of the Totara to the dwelling it is assessed that this is the problematic tree on site (no one was at home at scheduled time of site visit). Submitter notes that tree is causing damage to roof due to high volume of debris and falling branches. While extent of damage to roof hasn't been assessed (by report's author) or evidence of extent of previous damage and diameter of previously fallen branches hasn't been provided (to report's author) the extent of small diameter dead wood within the canopy/ overhanging the existing root would likely result in small diameter deadwood and leaf litter falling on the roof, particular when the wind blows. It is likely also that the gutters of the house would fill up reasonable frequently with this debris. Based on previous arboricultural experience it would not be unusual that both scenarios would be irritating and/ or annoying for the resident. It is therefore recommended that the the vigour, condition and extent of dead wood within the canopy is monitored on a yearly basis (at this stage) so that any change in condition is noted and assessed. It is further recommended that any decline in condition of the tree should result in an updated STEM assessment.</p>	108	138	plus 30	<p>Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes</p>
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41	Augustine G	342	Doesn't meet criteria/unsafe	Branches are falling off the tree creating a hazard. Concern for stability of tree during high winds.	The property owner is concerned that should the tree fall it would fall on his house. He would like the tree removed or, at a minimum, the tree is pruned by the Council. The likelihood of the tree falling on the house, or otherwise, has not been assessed. Should this be progressed it is recommended that a Quantified Tree Risk Assessment be undertaken to assess the likelihood of this risk of harm being realised. The property owner indicated that the size of branches falling off was small diameter deadwood. With regards to the notable value of the tree, the tree meets the STEM criteria for scheduling. Significant earthworks - likely drainage - have been undertaken in close proximity to the base of the tree. The owner of the site indicated that works had occurred to months previous to site visit (Sept/ Oct 2017). Based on the scale and proximity of the works it would appear that the health and stability of the tree and its rootzone were not taken into account.. It is recommended that the condition of the tree is monitored - taking particular note of foliar density, canopy/ shoot-tip die back and cracking in the bark/ cambium - at 6 monthly intervals and after any extreme weather events.		141		2017 STEM assessment is first assessment
45	Williamson R	342	Doesn't meet criteria	Oak tree at 2 Kirkiri Stream Lane has no notable value.	See above		141		2017 STEM assessment is first assessment
62	Jones B	342	Unsafe	There is concern that branches from the tree will fall and damage people and property. There is a rotten branch that is ready to fall. Submitter would like the tree to be assessed and trimmed back.	See above		141		2017 STEM assessment is first assessment

74	Percy E	393	Doesn't meet criteria/unsafe	<p>The roots of the tree have potential to damage the road, footpath and private driveways. There is also potential that they will interfere with powerlines. Tree is a pohutukawa which is a coastal tree and submitter believes it to be inappropriate for it to be a notable tree in its urban context.</p>	<p>Sections of the footpath within the property have been uplifted/ cracked by surface roots arising from the tree - this is not an uncommon scenario with regards to Pohutukawa. During the site visit the owner expressed concern about roots undermining the dwelling on site. However there was no immediate evidence of cracking or lifting in the side of the house immediately adjacent to the tree. Conclusive comment regarding the undermining of the dwelling or otherwise would have to be made an appropriately qualified individual. While the tree owner expressed her overall like of the tree/ trees in general, the responsibility she feels about the maintenance of the tree weighs heavily on her. She considers that WDC should bear some of the responsibility for maintenance. Based on discussions with the tree owner, some of her concerns about both the 'safety' of the tree and the canopy's proximity to power lines may likely be allayed through the pruning/ end weight reduction of the bough of the tree that overhangs the public footpath in close proximity to the lines. From an arboricultural perspective these pruning works would be in accordance with modern arboricultural practice and in compliance with statutory requirements regarding the proximity</p>	108	135	plus 27	<p>Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes</p>
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34	Morgan D	401	Unsafe	Tree is close to the house and over 20m high. It is dangerous during high winds and close to powerlines.	The tree (and property) owners noted that they feel constrained by the the existing Hertiage Tree controls in the extent that they can prune the tree. The owners really love the tree but want to be able to undertake pruning e.g. clearing the canopy away from the roof line of their house; removal of fractured or comprimised branches, keeping the canopy clear from the power lines in the street without having to gain consent to do so. Given the history of failure within the canopy of the tree (the tree is exposed to the NE) this seems reasonable from an arboricultural perspective. It is therefore recommended that a Heritage Tree rules allow for removal of branches up to 100mm in diameter without requiring resource consent.	126	162	plus 36	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, ameoleoration of wind, stormwater and pollutants, maintenace of ecological habitats and pathways and improved community health outcomes
35	Ward M	401	Unsafe	Tree is over 20m tall and close to submitter's house. Concern for safety as large branches have fallen off the tree as a result of rot.	The owners of the tree, with some justification, are concerned about branches failing over the roof of their house. During our discussion on site the erection of a 'Cobra Bracing' system (a system of flexible bracing that essentially would hold a failed branch 'in situ' within the canopy until it could be safely removed) was discussed. The owners were aware of this system through discussions with other arborists and wondered if the Council might come to the party in terms of installation costs.	126	162	plus 36	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, ameoleoration of wind, stormwater and pollutants, maintenace of ecological habitats and pathways and improved community health outcomes

63	Lee D & B	416	Doesn't meet criteria/unsafe	Concern that the root system is interfering with underground services. Roots have already caused damage at 33 Mains Avenue . Concerns regarding the debris generated by the trees.	Two Rimu trees are scheduled. The owners of the neighbouring property (may or may not be submitters)f are particularly concerned about the extent of the canopy that extends into their property. They were also concerned that the tree could not be pruned (over their property in particular) without recourse to resource consent (and subsequent costs). They noted that they had difficulty erecting a new boundary fence due to roots arising from the tree and also reported that roots from the tree had been found in a sewer line. They were concerned about the tree's proximity to the power lines and felt that the Council should 'come to the party' in terms of costs of maintaining the tree. Another concern was that a resident had a fall on the driveway where a temporary repair was made a the site of damage to the driveway arising from root activity. From an arboricultural perspective it is considered that the bulk of concerns could be addressed through a District Plan Heritage Tree rules environment that allowed for greater flexibility in the pruning of scheduled trees without the need to obtain a consent i.e. allow for removal of branches up to 100mm in diameter without requiring resource consent..	108	132	plus 24	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, ameoleoration of wind, stormwater and pollutants, maintenace of ecological habitats and pathways and improved community health outcomes
66	Stratford J	416	Unsafe	Debris from the tree blocks drains. The root system is damaging to driveways and has the potential to disrupt underground services.	See above	108	132	plus 24	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, ameoleoration of wind, stormwater and pollutants, maintenace of ecological habitats and pathways and improved community health outcomes

69	Luke P	416	Unsafe	The tree is an inconvenience and the root system has caused damage to the driveway which is hazardous to the users.	See above	108	132	plus 24	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes
73	Williams M	416	Unsafe	Roots of tree have damaged the driveway causing a hazard to the users. Concern that branches and debris may fall and damage people or property during strong winds.	See above	108	132	plus 24	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes

42	Rye H	433	Locational problem	Tree number 433 listed as on 74 Mains Avenue however submitter believes that the actual location of said tree is 76 Mains Avenue. Submitter does not want this tree to be listed as its size is inappropriate to the urban setting there is significant risk of branches falling off during strong winds.	The site visit to assess the tree confirmed - as the submitter noted - that the tree stands in 76 Mains Ave. The submitter also noted that she considers the trees size is inappropriate in an urban setting - 76 Mains Ave is a small lot. The tree's canopy is a significant component of the both the site and the adjacent path and carriageway. From an arboricultural perspective it is accepted that the tree could be seen to dominate both the site and adjacent streetscape. However the bulk of the canopy is situated above the garden fence and property boundary with the trunk occupying a small portion of the garden. From a STEM perspective these issues are difficult to factor into the scoring system. The canopy of the tree extends towards the adjacent power lines, as such regular pruning is required to maintain clearnace between the canopy and the lines. Sites of previous branch failure and fractures within the canopy are evident. It is recommended that the tree is monitored on a yearly basis or after severe weather events for structural instability, especially at sites of included unions and scaffold stems and branches extending over the carriageway.		150		2017 STEM assessment is first assessment
78	Houlbrooke W	435		Submitter wants this tree which is on their property removed as they were not aware of its protected status when the property was purchased and its presence prevents the planned development of the property.	From an arboricultural perspective this is one of the most impressive Pohutukawa trees I have ever encountered. The tree achieves a STEM score of 192 (almost twice the baseline for scheduling.) As such its removal could not be supported from an arboricultural perspective				2017 STEM assessment is first assessment
15	Wheeler L	436	Unsafe	Concern for stability of trees during high wind	The trees do not currently display characteristics (e.g. canopy die-back, poor vigour, extensive decay) that would indicate that the trees are unstable.		138		2017 STEM assessment is first assessment
20	Hammer W & F	436	Doesn't meet criteria/unsafe	Risk of trees falling or losing limbs during high winds, damaging nearby homes. Trees are becoming too tall and are unmaintained.	Based on my site visit it is apparent that the trees have been pruned ('maintained) relatively frequently in the past. In terms of height they are considered typical of the species and are not unusually tall		138		2017 STEM assessment is first assessment

25	Reader D & Perkin M	501	Doesn't meet criteria/unsafe	Tree poses a hazard as it is extremely close to the main road. Submitter believes that this tree does not belong in such a built up, urban setting.	Based on the submitters concerns, a recent branch failure (the resident - renting the house - reported that a branch had split out from the tree and landed in the garden during the winter of 2016. No damage arose) and the size, species and existing structural issues of the tree (included unions, long spreading branches over carriageway and adjacent power lines) it is recommended that the tree is monitored on a yearly basis and some end weight reduction of branches over the carriageway should be considered.	138	138		No change in STEM score
68	Whangarei Intermediate School	513	Doesn't meet criteria	Tree is located on land that is subject to a designation. Tree is incorrectly identified as a Dawn Redwood when it is actually a Swamp Cypress. Submitter sees the tree's inclusion on the list to be because of it's initial incorrect identification as Dawn Redwoods, a species of Scientific Significance. Falling branches from the tree poses a hazard to children at the school. Additionally the tree is located near to a Critical Underground Electrical Line and there is concern that the root system may damage this.	With regards to the tree being previously incorrectly identified, this does not affect the STEM score achieved by the tree - sufficient for scheduling. From an arboricultural perspective the threat, or otherwise, of branches falling on children, would need to be quantified (via a QTRA assessment). To date I am unaware of any injuries to children of the school arising from falling branches. Similarly with (potential) threats or otherwise to the Electrical Line further information with regards to previous damage arising from roots would need to be provided in order for an assessment to be made.	120	144	24	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes

9	McNab M	515	Unsafe	Tree could easily fall onto house and is a fire risk. Roots may present risk to drains, sewerage and driveways.	With regards to the risk of complete tree failure (tree falling on house - trees in very close proximity to house), the trees current condition does not indicate that complete tree failure is likely in the next 12 months. Their root zone was examined and no cracking or heaving was evident. The buttress roots of both trees did not display any signs of structural instability. The risk of trees catching on fire were discussed with the owner and there seemed to be general agreement, from an arboricultural perspective (as opposed to a qualified fire risk assessor's perspective) that it would take a deliberate attempt on behalf of a given individual to set the trees on fire. As such the risk of this hazard arising could not be meaningfully assessed under the strictures of STEM.	156	126	minus 30	Form, stature, visibility, proximity and occurrence of species categories were scored higher in the 1996 assessment.
10	Campbell R & B	515	Unsafe	Trees have grown too large for the house and section, concern for underground services, regarding root structure. Submitter concerned that should the tree fall down it will damage property.	Discussion with the tree owner at the time of the site visit indicated that no issues with services had arisen thus far.	156	126	minus 30	Form, stature, visibility, proximity and occurrence of species categories were scored higher in the 1996 assessment.
29	Robbins B & G	518	Unsafe	Concern for stability of trees during high winds.	Not assessed as site was not included in supplied list of sites to be visited				
29	Robbins B & G	519	Unsafe	Concern for stability of trees during high winds. Tree has roots that are lifting the road up, creating a hazard.	See below	120	144	plus 24	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes

48	Walker P	519	Doesn't meet criteria/unsafe	More needs to be done to maintain and prune this tree. The pohutukawa should be checked for myrtle rust. There is also concern that the roots are too close to underground services.	Based on site assessment the tree meets the STEM criteria for scheduling (from an arboricultural perspective). The tree displays good vigour - the tree owner reports that she is concerned about the proximity of the tree to the roof of her house but that there has been no damage arising from branch failure thus far. The tree does shed small dead branches and seed husks. This is considered typical of the species and age of the tree. Extent of damage to the road, and any arising hazard, would need to be assessed by a roading engineer. The tree has been pruned previously with the canopy 'breaking' high above the ground. The extent of any further pruning necessary should be assessed through further consultaion with tree owner/ submitters to gain a fuller understanding of what the pruning should achieve (there may be more specific outcomes required in their perspective). Discolouration of the canopy which may be indicitave of Myrtle Rust was not evident at the time of the site visit. Further monitoring would be required to monitor the situation with regards to Myrtle Rust.	120	144	plus 24	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, ameoleoration of wind, stormwater and pollutants, maintenace of ecological habitats and pathways and improved community health outcomes
11	Hindle R	9 Headland Farm Park Rd	New tree	grove of pohutukawa trees on fringes of Headland Farm Park, just below section 47, between this section and the beach.	Based on site assessment the tree meets the STEM criteria for scheduling (from an arboricultural perspective).The trees display and support a vibrant biodiversity within their (combined) canopies. Epiphytes are evident; a Totara tree grows and is 'supported' by the Pohutukawa canopy. Tui's were evident within the canopy on the day of assessment.		180		2017 STEM assessment is first assessment
44	Tomason H	Hatea Drive	Doesn't meet criteria/new tree	The falling fruit of the protected Supote tree is a hazard to both people and property. Submitter notes two pohutukawa nearby on the roadside which are more significant and could be protected.	Not assessed as site was not included in supplied list of sites to be visited				

64	Stallworthy L		Locational problem	Two puriri are listed as on 415 Maunu Road however these do not exist, instead one tree is on 411 Maunu Road and one on Selwyn Village at the corner of three properties.	Submitter/ resident has queried location of three Puriri trees standing in or adjacent to her property. This tree - #331(b), straddles boundary of 415 and 411 Maunu Road. Consultation of site with the property owner indicated that the existing boundary fence was an accurate indication of the property boundary. This being the case #331(a) clearly stands within the site boundaries of 411 Maunu Road. Given that two Puriri trees only are listed on the schedule, this tree (#331(a) was not assessed as it clearly stands in the neighbouring property. The Puriri tree standing within the grounds of Selwyn Village - #331(c) - was assessed as its location could be considered to be 'unclear' as it stands within the same forest remnant as #331(b)	117	141	224	Trees generally scored higher in vitality, function, role and climatic influence categories in 2017 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes
31	Hoogeveen J		New tree	Pohutukawa at 27 Kauika Road should be added to list of notable trees	Not assessed as site was not included in supplied list of sites to be visited				
59	Laird L		New tree	Large pohutukawa on the boundary of submitter's property on the Kirikiri Stream.	Tree could not be located - need more info				



## **Appendix 2**

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**PC129 Submission Notable Trees- STEM assessment  
report 12.11.18**

Sub No.	Submitter	Tree #	Issue	Submitter Comments	Arborist Comments	Original STEM Score	Updated STEM score	Difference in STEM score	Reason for difference in STEM score
PC129 - 002	Marie Reta Whimp	349	Locational problem.	Uncertainty as to whether the tree still exists.	No Palm tree on site	N/A	N/A	N/A	N/A
PC129 - 003	Jennifer Robin Bax	209	Locational problem.	Uncertainty as to whether the tree still exists.	No Hawaiian Kowhai on site	N/A	N/A	N/A	N/A
PC129 - 008	Robyn May Wasson	13 Whimp Ave	Locational problem.	Uncertainty as to whether the tree still exists.	No tree on site (likely Pohutukawa)	N/A	N/A	N/A	N/A
PC129 - 011	Laurel Mary Wheeler	5 Conifer Grove, Kamo (possibly Tree #436)	Unsafe.	The submitter wishes for the trees to be removed or cut to a lower height as they pose a safety risk in adverse weather conditions	3 x Totara trees. Couldn't access site as no one home (submitter not landowner) but could view trees from street. Trees appear to be well foliated (indicating vigour) however I could not make a complete assessment. If the trees are scheduled (unsure) recommended that the submitter submit an evidence based assessment of the condition of the trees and why they consider them to be 'unsafe	N/A	N/A	N/A	N/A
PC129 - 014	Housing New Zealand	258	Locational problem.	Uncertainty as to whether the tree still exists.	Two large Oak trees on site. Undertook STEM assessment on Oak tree most likely to be scheduled, the one standing in shared garden area (as opposed to the one standing in a small front garden)	114	111	Minus 3	Original STEM assessment may not have fully taken into account the proximity of the adjacent Oak tree.
PC129 - 020	Mary Roy Gowans McDonald	Whangarei Hospital carpark	New tree.	Requests full protection of Morton Bay Fig located in the Whangarei Hospital carpark. Provides stability to the steep bank. It also beautifies the area and provides shelter.	Could not locate tree in any of the car parks I visited. There may be another car park I don't know about, but couldn't find a Morton Bay Fig (however acknowledge that it may be somewhere else or I missed it). The only tree that came close-ish to a Morton Bay Fig looking tree was a low vigour Magnolia outside an administration building. Need submitter to provide more accurate info.	N/A	N/A	N/A	N/A

PC129 - 023	Bernard Duncan Worthington	6 Scotia Place	Unsafe.	Submitter (not landowner) says the trees dangerously overhang submitter's property and promote excessive weed growth under the canopy, which cover old fences, dangerous stumps and branches. Submitter believes that they are not an asset that encourages future generations to appreciate the trees and reserves.	Recommend trees/ canopies are cut back to property/ reserve boundary. May be a consentable activity due to branch diameter.	N/A	N/A	N/A	N/A
PC129 - 028	Elizabeth Percy	41 Puiru Park Road, Maunu	Unsafe	The roots are damaging footpaths, driveways, and my house foundations.	Looks like there might have been a bit of a mix up with landowner/ submitter Elizabeth Percy. On the map of visits that came through from WDC the site and tree are located at 28 Norfolk Street. I visited this site and tree last time and undertook a STEM assessment. The tree scored 135 STEM points. Reviewing the spreadsheet now the site is (may be) located at 41 Puiru Park Road, Maunu. Another visit could be required.	N/A	N/A	N/A	N/A
PC129 - 030	Stuart Barton/ DC Empires Ltd	378	Doesn't meet criteria.	They do not have significant amenity, historical, ecological or cultural values.	From an arboricultural perspective, and with reference to the STEM assessment the trees meets criteria for scheduling - undertook STEM assessment with trees scoring above 100. It is noted that the STEM assessment does not require all criteria to achieve a 'significant' score in order to score sufficient STEM points to be included on the Heritage Tree register.	102	117	plus 15	Trees generally scored higher in vitality, function, role and climatic influence categories in 2018 STEM assessments. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes

PC129 - 031	Trevor Griffiths	23 Rurumoki Street	Proximity of trees to property	Submitter comments that 'at least two trees overhang our property which . We are continually having to clear debris and bear the costs. They pose a risk to our house. We don't think it is fair that we need a resource consent and are liable for associated costs to maintain the tree, with no certainty of approval.'	The trees are located in the adjacent reserve – mainly Pohutukawa and Totara. A large Pohutukawa in particular overhangs the site close to the house. Recommend canopies cut back to property/ reserve boundary. May be a permitted activity - NPT.1.5 permitted activity rules allow trimming of branches up to 100mm in diameter and up to 20% of live growth in any 12 month period.	N/A	N/A	N/A	N/A
PC129 - 047	Northland District Masonic Trust, Malcolm McKerrow	508	Unsafe/ Doesn't meet criteria	Submitter comments that this is a 'nuisance tree that is considered an inappropriate size in an urban environment. Does not contribute to the social, economic and cultural well-being of local people and communities who are adversely affected.'	Undertook a STEM assessment. Tree scores more than 100. Understand that a tree this size in a retirement village sometimes causes concern to residents etc due to 'size' and maintenance worries. A consenting regime that had a lower bar for 'Permitted' activities (i.e. pruning branches up to 100mm in diameter) may assist in reducing costs associated with maintenance of the tree. Similarly, a pruning programme that reduced the canopy by up to 20% may also address some of the 'size' and adjacent property maintenance issues. It is noted that the NPT.1.5 permitted activity rules allow trimming of branches up to 100mm in diameter and up to 20% of live growth in any 12 month period.	132	126	minus 6	The lower score reflects a difference in assessment of 'visibility' of tree i.e. whether it is visible from 0.5 kms or 1 km away. In the 2018 assessment it was assessed as being meaningfully visible from 0.5kms away due to its location and proximity of other large trees in the neighbourhood.
PC129 - 048	Pullman M	280	Locational problem.	Submitter comments that 'the tree is located on a cross lease section. Uncertainty regarding the correct legal description.'	The tree meets STEM criteria for scheduling. Talking to one of the property owners on site they didn't want to see the tree removed, just seem to be a bit uncertain as to who has to pay to maintain the tree (all the residents on the cross lease site?). Couldn't really help with the legal issues and recommended they seek more clarification from WDC.	120	135	plus 15	Trees generally scored higher in vitality, function, role and climatic influence categories in 2018 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes

PC129 - 050	Alan Kirk	293 & 507	Locational problem/new tree	Submitter wishes to remove these trees from the schedule as the trees do not exist. Submitter also seeks advice as to whether a remnant pohutukawa tree on the property should be protected.	No Ginkgo or Jacaranda on site so should be removed from schedule. Remnant pohutukawa easily meets STEM criteria – very impressive tree. There are some other trees (including Pohutukawa) on site that could also be scheduled if the owner so wishes	N/A	165	N/A	New STEM score refers to potential new scheduled tree.
PC129 - 021	Stuart Rogers	404	Unsafe	Submitter (not landowner) says 'the shade affects my home, causing dampness and health issues. The tree also poses a safety risk as it would damage my property if it fell in a storm. The tree is unappealing and doesn't have any amenity value. The location of the tree, being at the rear of my home, means that the public do not benefit from it.' Notes from WDC also say that the submitter believes the tree to be unsafe and should be removed as it is nearing the end of its life.	The tree has been topped and this has reduced some of its amenity value. Also some dead wood has arisen where pruning has occurred. The tree still scores above 100 in STEM. I feel that safety issues need to be more clearly defined (i.e. evidential based assessment) and the owner of the tree would need to be involved in conversation.	122	114	minus 8	The difference in score likely reflects the reduced stature of the tree as a result of topping/ pruning
PC129 - 025	Haeather Joyce Thomason	323	Unsafe	Submitter (not landowner) says the tree is in unsafe due to size, damage to house, proximity to power pole and size of fruit that drops. Also a section of the timber boundary fence is collapsing underweight of branch sitting on it.	Recommend pruning branch off fence (may be consentable due to diameter). With regards to 'safety issues' submitter would need to provide evidential based assessment in support of removal. Tree could be pruned quite extensively (away from power pole, house etc). May be a permitted activity - NPT.1.5 permitted activity rules allow trimming of branches up to 100mm in diameter and up to 20% of live growth in any 12 month period.	102	102		No change in STEM score

PC129 - 032	GEK Property Nominees Limited, Vicki Toan	389(a)	Doesn't meet criteria.	Submitter comments that trees don't meet criteria, don't have such significant amenity, historical, ecological or cultural values.	Two trees on site. Previously jointly assessed and one STEM score produced. In this instance trees assessed individually (as both are considered individual trees as opposed to a 'group' canopy where two trees effectively form one tree). Both trees score more than 100 STEM points.	108	114	plus 6	Trees generally scored higher in vitality, function, role and climatic influence categories in 2018 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes
PC129 - 032	GEK Property Nominees Limited, Vicki Toan	389(b)	Doesn't meet criteria.	Submitter comments that trees don't meet criteria, don't have such significant amenity, historical, ecological or cultural values.	Two trees on site. Previously jointly assessed and one STEM score produced. In this instance trees assessed individually (as both are considered individual trees as opposed to a 'group' canopy where two trees effectively form one tree). Both trees score more than 100 STEM points.	108	114	plus 6	Trees generally scored higher in vitality, function, role and climatic influence categories in 2018 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes
PC129 - 018	Patrick Cox	350	Unsafe	Submitter says tree threatens structural integrity of house as well as water supply. The tree roots and the constantly falling debris pose trip hazards.	At the site visit it was apparent that some of the adjacent paving/ path was raised/ lifted. While I do not want to diminish the submitter's concerns in any way my impression of the damage to the paving was that it was not significant damage. I feel that both the safety and structural issues need to be more clearly defined (i.e. evidential based assessment).	108	111	plus 3	Trees generally scored higher in vitality, function, role and climatic influence categories in 2018 STEM assessment. This is due in the main to an increase in documented evidence with regards to the roles trees play and their contribution to the urban forest. In the main this relates to moderation of adverse climatic effects, amelioration of wind, stormwater and pollutants, maintenance of ecological habitats and pathways and improved community health outcomes

PC129 - 010	Robbins B & G	200 & 201	Unsafe	Submitter (not landowner) believes trees are hazardous. They are in close proximity to the boundary with branches encroaching's into the submitter's property.	Tree #201 was visited in 2017 and the tree owner was met on site. Unclear which trees are #200. Viewed the stand of Taraire trees located street front between 89 and 89A that overhang 87 Crawford. Some dieback evident on one of the trees – perhaps these are the trees submitter is concerned about. Safety issues need to be more clearly defined by submitter (i.e. evidential based assessment). Otherwise pruning of the canopies back to the site boundary may address the issue.	N/A	N/A	N/A	N/A
PC129 - 042	Margaret Barbara Hicks	Ruakaka Estuary	Specific tree(s)	Submitter comments that the trees provide vital environmental benefits e.g. the ability to absorb carbon dioxide and offset climate change and protection from coastal erosion.	Six Pohutukawa trees assessed on site. Of the six, four scored over 100 STEM points - trees standing opposite 24, 20, 12 and 6 Princes Road. Trees standing opposite 10 and 22 Princes Road did not score above 100 STEM points. It is noted that both trees standing opposite 24 and 20 Princes Road both display some level of undermining of their root plates/ root zone by the action of sea water and some levels of sparseness and tip die back in their canopies. However this is typical of the coastal Pohutukawa and not considered indicative of short term incipient decline or 'defective'. Similarly the proximity of powerlines is not considered in and of itself an arboricultural factor in any potential downgrading of the STEM assessment. Heritage trees are regularly pruned in order to minimise conflicts with infrastructure.				