

Appendix C

Results of univariable screening tests from Chapter 3

Ngā hua o ngā whakamātautau tauanga-rau i te Wāhanga 3

Result of univariable screening test presence of symptomatic kauri

Variable	N	Coefficient	SE	P-value
Size	2133			< 0.01
Ricker		Reference		
Intermediate		0.232	0.137	
Mature		0.671	0.193	
Diameter at breast height (10 cm)	2133	0.040	0.011	< 0.001
Canopy height (m)	2140	0.018	0.008	< 0.05
Canopy estimate (m)	1413	0.049	0.016	< 0.01
Host origin (= local tree stand)	2140			0.15
Cut over regenerating		Reference		
Farmland		0.517	0.530	
Mature forest stand		0.190	0.125	
Other/Unsure		-1.092	1.040	
Plantation kauri		-13.093	333.646	
Restoration planting		-0.607	1.063	
Ecotype (= forest type)	2132			< 0.05
Broadleaved forest		Reference		
Kauri forest		0.376	0.187	
Others		0.116	0.225	
DBH of closest neighbouring tree (cm)	2132	0.004	0.002	0.07
Distance to the closest neighbouring tree (m)	2109	-0.077	0.042	0.07
Slope	2140	-0.010	0.005	0.05
Elevation (100 m)	2140	-0.251	0.077	< 0.01
Drainage in km ² (= size of sub-catchment area)	2140	0.017	0.011	0.12
Distance to the closest coast (100 m)	2140	-0.004	0.003	0.08

Distance to the closest <i>P. agathidicida</i> site (100 m)	2140	-0.054	0.007	< 0.0001
Distance to the closest <i>P. cinnamomi</i> site (100 m)	2140	-0.011	0.003	< 0.01
Presence of immature Kauri nearby	1452	-0.176	0.131	0.18
Presence of sapling nearby	1452	-0.219	0.139	0.11
Suspected kauri dieback nearby	1589			< 0.0001
No		Reference		
Unsure		0.600	0.276	
Yes		1.627	0.143	
Presence of <i>Coprosma arborea</i> nearby	1406	0.179	0.136	0.19
Presence of <i>Kunzea robusta</i> nearby	1406	-0.244	0.133	0.07
Presence of <i>Leucopogon fasciculatus</i> nearby	1406	-0.218	0.133	0.10
Presence of <i>Nestegis lanceolata</i> nearby	1406	-0.217	0.134	0.11
Presence of <i>Olearia rani</i> nearby	1406	-0.290	0.137	< 0.05
Presence of <i>Pseudopanax crassifolius</i> nearby	1406	-0.211	0.150	0.16
Decline of <i>Coprosma arborea</i> nearby	90	2.180	0.790	< 0.01
Decline of <i>Myrsine australis</i> nearby	90	2.180	1.256	0.08
Distance to the closest timber site (100 m)	2140	-0.048	0.007	< 0.0001
Type of the closest timber site	2135			< 0.001
Saw pit		Reference		
Timber mill		0.494	0.135	
Source of the closest timber site location	2140			< 0.05
Auckland museum map		Reference		
CHI		0.438	0.205	
Number of archaeological sites nearby	2140	0.018	0.012	0.14
Distance to the closest track (100 m)	2140	-0.073	0.030	< 0.05
Distance to the closest road (100 m)	2140	-0.105	0.037	< 0.01
Distance to the closest uphill track (100 m)	1895	-0.085	0.029	< 0.01
Angle of the closest uphill track	1895	-0.001	0.001	0.12
Evidence of disturbance	2140			< 0.001
No		Reference		
Yes		0.407	0.123	
Disturbance by track nearby	2140	0.600	0.200	< 0.01
Disturbance by possum browse nearby	2140	1.21	0.67	0.07
Disturbance by pig or hoofed animals nearby	2140	-0.69	0.48	0.15

Disturbance by pest control and bait-line nearby	2140	0.80	0.39	< 0.05
Disturbance by other cause nearby	2140	0.59	0.30	< 0.05

Result of univariable screening test presence of *Phytophthora agathidicida*

Variable	N	Coefficient	SE	P-value
Size	759			< 0.05
Ricker		Reference		
Intermediate		-0.733	0.264	
Mature		-0.708	0.423	
Diameter at breast height (10 cm)	759	-0.066	0.029	< 0.05
Canopy height	761	-0.037	0.020	0.06
Canopy estimate	743	-0.082	0.038	< 0.05
Crown epiphytes	761			< 0.01
No		Reference		
Unable to see		-0.211	0.397	
Yes		-1.303	0.437	
Distance to the closest neighbouring tree (m)	748	-0.329	0.107	< 0.01
Elevation (100 m)	761	-1.284	0.207	< 0.0001
Distance to the closest coast (100 m)	761	-0.025	0.007	< 0.001
Distance to the closest <i>P. cinnamomi</i> site (100 m)	761	-0.024	0.010	< 0.05
Presence of immature kauri nearby	761	0.319	0.250	0.20
Suspected kauri dieback nearby	761			< 0.0001
No		Reference		
Unsure		1.313	0.484	
Yes		2.156	0.312	
Presence of <i>Coprosma arborea</i> nearby	744	0.929	0.288	< 0.01
Presence of <i>Dacrydium cupressinum</i> nearby	744	-0.454	0.249	0.07
Presence of <i>Kunzea robusta</i> nearby	744	0.392	0.254	0.12
Presence of <i>Leucopogon fasciculatus</i> nearby	744	-0.429	0.250	0.09
Presence of <i>Olearia rani</i> nearby	744	-0.571	0.264	< 0.05
Presence of <i>Pectinopitys ferruginea</i> nearby	744	-0.553	0.279	< 0.05
Presence of <i>Phyllocladus trichomanoides</i> nearby	744	1.187	0.278	< 0.0001

Presence of <i>Pseudopanax crassifolius</i> nearby	744	-0.747	0.263	< 0.01
Distance to the closest timber site (100 m)	761	-0.143	0.022	< 0.0001
Type of the closest timber site	761			< 0.001
Saw pit		Reference		
Timber mill		1.739	0.470	
Source of the closest timber site location	761			0.05
Auckland museum map		Reference		
CHI		1.169	0.601	
Number of archaeological sites nearby	761	0.103	0.025	< 0.0001
Distance to the closest track (100 m)	761	-0.238	0.078	< 0.01
Distance to the closest road (100 m)	761	-0.233	0.085	< 0.01
Distance to the closest uphill track (100 m)	671	-0.100	0.059	0.09
Distance to the closest park boundary (100 m)	761	-0.025	0.007	< 0.001
Evidence of disturbance	761			0.14
No		Reference		
Yes		-0.486	0.327	
Evidence of climbers	761			< 0.01
Absent		Reference		
Present		-0.725	0.244	

Univariable screening test variables with p-values >0.2 for both outcomes

Variable	N	N (<i>P. agathidicida</i>) (Symptomatic)
Aspect	2140	761
Dieback of other nearby tree species	1588	759
Distance to closest overland flow path	2140	761
Disturbance by fallen tree/ windthrow nearby	2140	761
Disturbance by fungal fruiting bodies on trunk	2140	761
Disturbance by insect damage on trunk	2140	761
Disturbance by invasive weeds nearby	2140	761
Disturbance by poor drainage nearby	2140	761
Disturbance by track or road maintenance nearby	2140	761
Disturbance by slip or landslide nearby	2140	761
Disturbance by phosphite injections nearby	2140	761
Depth to water index	2140	761
Ecotypes	2132	757
Epicormic growth on trunk	1453	761

Host origin (farmland, mature forest stand, plantation, restoration, other)	2140	761
Kauri tree dominant or subdominant to closest neighbouring tree (based on DBH comparison)	2127	755
Landcare database class (40, 52, 54, 69)	2140	761
<i>P. cinnamomi</i> present	761	761
<i>P. sp.</i> present	761	761
Presence of <i>Astelia trinervia</i> nearby	1406	744
Presence of <i>Brachyglottis kirkii</i> nearby	1406	744
Presence of <i>Coprosma lucida</i> nearby	1406	744
Presence of <i>Knightia excelsa</i> nearby	1406	744
Presence of <i>Melicytus macrophyllus</i> nearby	1406	744
Presence of <i>Myrsine australis</i> nearby	1406	744
Presence of <i>Toronia toru</i> nearby	1406	744
