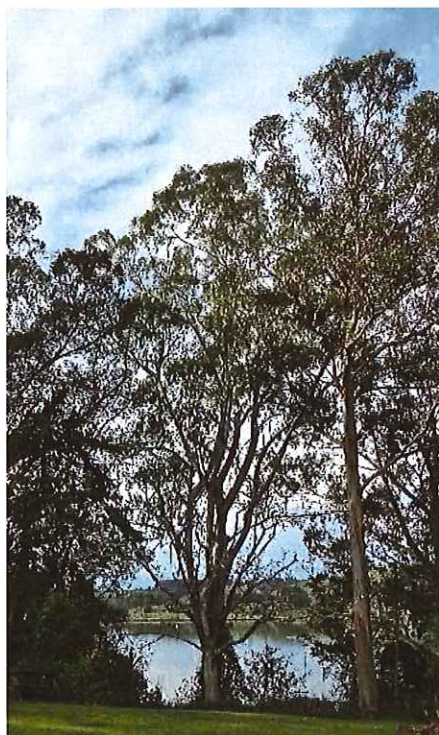


Greentrees Tree Report including RMA application
concerning removal of 20 Eucalyptus trees
& retention of 10 Eucalyptus trees from
within a listed tree group G089
at 8 Scotia St, Waikouaiti



Contents

Cover letter	3
Report	4 - 9
Maps	10 - 13
STEM	14 - 23
Tree Risk	24 - 31
Risk vs STEM	32 - 33
Tree ID	34 - 35
Maintenance	36 - 37
Hancock report	38 - 39
Buddingh' report	40 - 45
Insurance	46
Authorisation letter	47
RMA application	48 - 52



GreenTrees Ltd

Peter Waymouth - Consulting Arborist
11 Bouverie St, Dunedin, NZ, 9010

p 03 473 8065
m 027 432 9646
e pw@greentrees.co.nz

23.11.18

Kathleen Ryan
16 Regents Riverside
Reading RG1 8QS
Brigham Road
Berkshire
United Kingdom

Dear Kathleen,

Thank you for engaging me to write this report and providing a letter of authorisation, to act on your behalf concerning the matter of the listed trees G089 at 8 Scotia St, Waikouaiti, with regard to the treefund, notified RMA applications and related activities.

Pg
10
11

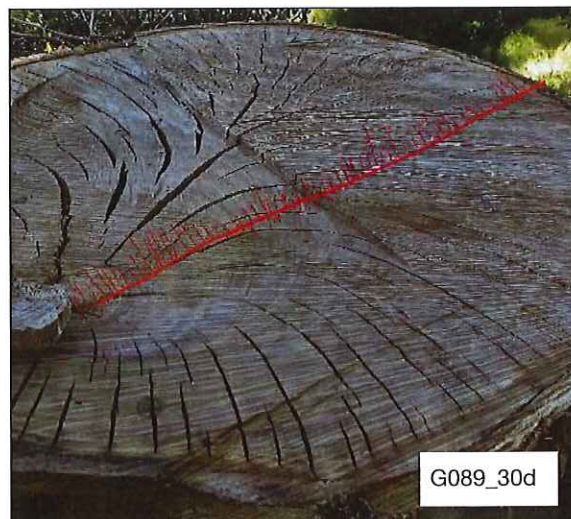
Enclosed is my report concerning the group of 30 mature Eucalyptus globulus trees within your property at 8 Scotia St, Waikouaiti, Otago. The main objective is to remove 20 trees from the Dunedin District Plan, from within the listed tree group G089, while retaining 9 trees along the shoreline of the Hawksbury Lagoon wildlife sanctuary.

Pg
21
32

Yours sincerely,

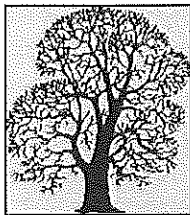
Peter Waymouth

Peter Waymouth



Pg
34
35
44
45

PS Eucalyptus globulus tree G089_30d is a recently cut stump shown above. It yielded an age estimate for the G089 tree group of ≤ 65 yrs based on its annual growth ring count.



GreenTrees Ltd

Peter Waymouth - Consulting Arborist
11 Bouverie St, Dunedin, NZ, 9010

p 03 473 8065
m 027 432 9646
e pw@greentrees.co.nz

23.11.18

Kathleen Ryan
16 Regents Riverside
Reading RG1 8QS
Berkshire
United Kingdom

Report & RMA application for the removal from the district plan of
20 listed Eucalyptus globulus trees
being part of a group 30 trees G089 at 8 Scotia St, Waikouaiti

Introduction

The owner of the property at 8 Scotia St, Waikouaiti, Kathleen Ryan, has requested a report from Greentrees Ltd for the purpose of removing 20 Eucalyptus globulus trees from the district plan. They stand within a large group of 30 trees surrounding her historic homestead. The remaining 9 Eucalyptus trees along the edge of Hawksbury Lagoon are adjoined with another group of 10 listed trees at 7 Scotia St on the road reserve. This integrated tree group form a landmark stand of 19 large Eucalypts standing by the lagoon, bringing a combination of ecological & amenity benefits to the local community, as well as the wildlife sanctuary.

Pg
10
11

Overview

Even a casual observer will sense the stature, that this stand of magnificent Eucalyptus trees brings to an otherwise flat estuarine landscape. Equally, people living in houses directly beneath the large spreading canopy of 30m high trees need to feel safe. Eucalypts have fast growth rates & have been used throughout NZ to provide quick shelter belts on farms, where these forest giants are in scale with the landscape. They also produce a strong honey flow when in flower & will attract nectar loving birds such as tui & korimako, as well as bees & many insects. It is however the ultimate size potential at maturity, which requires careful attention when planting. Mature Eucalyptus globulus may reach 50 - 70 metres in height, given optimal conditions in good soils with adequate moisture; other locally grown Eucalyptus species such as E.nitens, E. regnans have similar growth characteristics.

Pg
21
32

Therefore, identifying the main tree species correctly within the stand surrounding the house is essential, to estimating with reasonable accuracy such attributes as longevity & mature height & canopy spread. For the purposes of this report, I will refer to Eucalyptus globulus as they would appear to be the dominant species throughout the parkland tree stand at both 8 Scotia St G089 & 7 Scotia St. G088. However, the tree marked 7 is a

Pg
34
35

Eucalyptus nicholii & it is likely that there some other Eucalyptus species present. Some regenerating E. globulus 1m high seedlings were also found, close to a sapling Black Beech (Fuscospora solandri) near a large Pine 32f on the tree map.



Brief

The aim of this report is to clearly establish which trees are of sufficient value for listing on the district plan; at present, tree protection is provided against removal, mutilation or topping. By dividing the G089 parkland tree stand at 8 Scotia St into 4 smaller groups & also including the 7 Scotia tree group G088 on the road reserve within the context of the discussion, the common attributes of each of these 4 sub-groups may be comparatively assessed; ie Tree Risk versus STEM evaluation. The relative tree group values may then be used to evaluate which trees are worth retaining for the longterm, as opposed to those that are not.

There is a distinct physical separation between the trees to be retained as against those proposed for removal. This separation will also be shown to exist in comparative terms of amenity values & risk profiles, between those trees suggested for retention versus removal. The risk profile for some of these individual trees suggested for removal may well rise exponentially, to exceed amenity & ecological benefits, over a 50 year timeframe.

Site

The flat estuarine site with a northwest aspect is occupied by an historic homestead surrounded by 30 large Eucalyptus trees on the edge of the Hawksbury Lagoon wildlife reserve. The soil is probably a silty clay loam & the water table will be consistently fairly high, although possibly slightly saline. For eucalypts these optimal conditions have produced the consistent steady growth of the last 60 -70 years, judging by the growth ring count on the recently cut stump G089_30d on the tree map.

The height range of the stand is now 25 - 30 metres & was estimated at 20 metres in the Buddingh report of 20 years ago (1997). Since these trees are at a semi-mature to mature stage in their life-cycle, with a possible life expectancy of 150 years, it is conceivable that they may achieve a height range of 35 - 45 metres within the next 50 years.

Discussion

The Eucalyptus globulus stand of 30 trees G089 at Scotia St is of variable quality in terms of its suitability for overall protection as one large listed group on the district plan. Taking a longview, the 9 trees E. globulus G089 along the lagoon shoreline, together with the 10 trees E. globulus G088 on the adjoining avenue, would continue as a contiguous landmark group of 19 trees without any perceivable drawbacks into the future. Whereas, the remaining 20 trees E. globulus in the G089 group have potential failure issues with electricity wires on the street & the houses/garages/sheds within fall range of the properties at 8, 10 & 14 Scotia St.

These 3 properties lie within a 30 metre range of whole tree failure in extreme weather. Although from a safety perspective, this outlook could be considered only as a low to moderate risk, as the trees are healthy & have good root plate stability at present. However, recently deadwood has already fallen twice from trees (G089.5c & 29c on tree map) shattering glass panels of the back door porch at 8 Scotia St. An immediate neighbour's house at 10 Scotia St, lies partially within the dripline of trees (G089.16d_19d); the house & occupants are potentially exposed to the risk of falling deadwood & branch failure during occasional nor'wester gales in particular.

Discussion (continued)

All 29 trees in this group of *Eucalyptus globulus* G089 will continue to gradually grow larger canopies over time. The possibility of branch & whole tree failure will increase in proportion to canopy size & windloading. This will slowly elevate the risk of property damage & harm to people living directly beneath their canopies, at 8 & 10 Scotia St.

Pg
10
11
17
38
39



Recent damage to the back porch at 8 Scotia St caused by deadwood falling from the tree shown above left.
Evidence of repair costs may be produced if required

Pg
17
24
<>
32

Tree Risk

The risk profile of 4 sub-groups of trees within G089 & G088 listed tree groups is considered in this report for comparative purposes & can be seen on the tree map by colour groupings. The tree metrics observed in the field by estimation are tabulated & similarly grouped by colours. Finally, these metrics are shown in graph form for comparative visual risk analysis of each tree group. The relationship between suggested removal & retention in 4 sub-groups can be shown within the 2 main tree groups G088 & G089 in a holistic way.

The qualitative ISA method of Tree Risk Assessment has been used to analyse each of the 4 tree groups.

a + e	= 19 low risk trees Retain	combined group G088.01a_10a & G089.20e_28e (only one branch needing end-weight reduction.
b.	= 3 moderate risk trees Remove	group G089.01b_03b (potential conflict with the electricity wires)
c	= 5 high risk trees Remove	group G089.04c_07c, 29c (potential to harm people & damage property)
d	= 12 moderate risk trees Remove	group G089.08d_19d (potential to harm people & damage property)

Pg
7
32

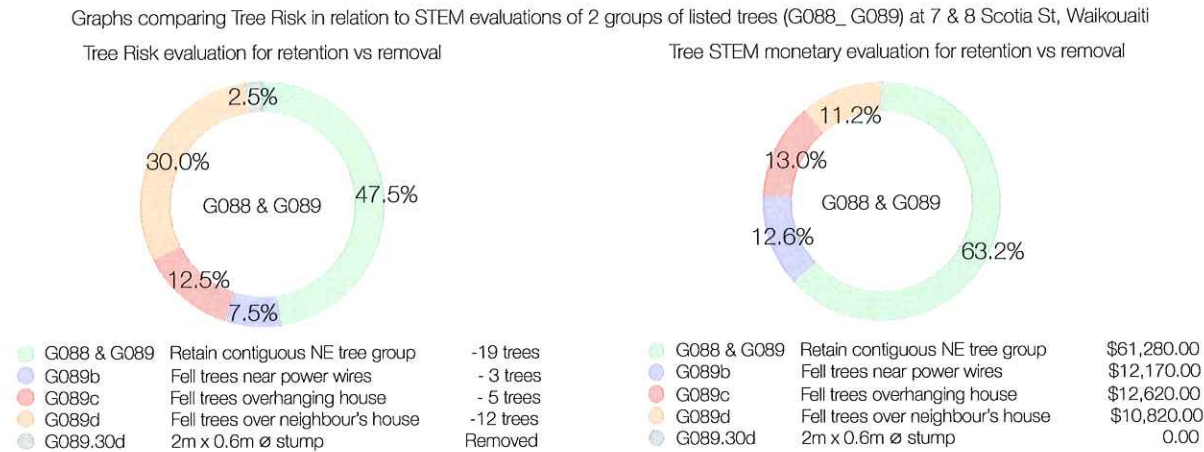
Tree Risk (continued)

The ISA Tree Risk Assessment has been accepted & used widely throughout the world since its publication in April 2013, as a qualitative method of risk analysis. The process initially requires the careful recording of field observations, which are then assayed by 2 matrices:-

- A. Likelihood Matrix Combines likelihood of failure & impact
- B. Consequences Matrix Combines likelihood of failure & impact with consequences

The end result after passing through the 2 above matrices is a Risk Rating, which may be mitigated through a variety of techniques at the discretion of the owner or risk manager.

The goal in managing tree risk should be to provide sensible, proportionate, reasonable & balanced advice, as a guide to tree owners.



STEM

The STEM (Standard Tree Evaluation Method) has been in use since Ron Flook published the guide in 1996. It has become the benchmark for councils in New Zealand when assessing trees for protection on district plans. Monetary appraisal of STEM was favourably compared against 4 other countries (USA, UK, Spain, Australia) in the Jan 2002 issue of ISA's Journal of Arboriculture by Gary Watson, although he mentions STEM's valuations are high compared to the USA. In practice, STEM has been periodically used in New Zealand to settle disputes where a tree may have been removed without an owner's consent.

STEM has been used in this report to compare the relative monetary evaluations, in relation to the tree risk ratings, in order to separate the trees of high value from trees of lower value. By taking a conservative approach when accrediting the amenity & condition scores a 'points total' is produced in a lower range. Tree evaluation requires 'points total' to be multiplied by the 'cost of a wholesale replacement tree' as an integral part of the monetary value calculation.

STEM (differential calculation explained as response to ISA Journal of Arboriculture - Watson Jan 2002 article)

Pg
14
<>
23

For calculations in this report the 'cost of a wholesale replacement tree' is differentially altered to read as '10 seedlings @ \$7.50 = \$75.00'. This transposes to an equivalent multiplier when calculating \$75.00 as the 'cost of a wholesale replacement tree'. Effectively it is set at $\leq 43\%$ of Flook's guidance of \$177.00 for a nursery tree in Dunedin (C1996).

The concept arises from the practical replacement of one large tree being replaced by 10 seedlings, which often out-grow a large planted tree within 10 years. In any case, the obvious deflationary effect is quite clear when using a reduced multiplier of over $\geq 230\%$.

As a multiplication factor within the calculation, it is the key to achieving an acceptable value range between 'wholesale' & 'retail', leading to a reasonable & negotiable monetary value. Flook is clear that if a tree or tree group is of poor form or compromised in any way (ie overhanging electric wires or occupied houses) then the estimated value would be lower at 'wholesale' level. Conversely, if no such impediment exists, the estimated value of the specimen tree or tree group would be higher at 'retail' level. (refer to STEM evaluations)

Conclusion

While the above discussion involves technical points about tree risk assessment & evaluation using accepted methodology, it shows that by dividing the 40 trees into 4 groups it allows an effective analytical process, in order to assess quality versus quantity.

In conclusion, my recommendation is to retain 9 trees & remove 20 trees from the Eucalyptus globulus group of trees G089, which surround the house at 8 Scotia St, Waikouaiti. The result would allow the listed tree group G088 to remain complimented by the high value trees along side Hawksbury Lagoon & allowing for a cohesive group of 19 significant trees.

1. Recommendation to retain 9 Trees in G089

Retain 9 trees comprised of: **G089.20e_28e** & being an overall high quality/value tree group deserving of protection, viewed from the perspective of a 50 year timeframe.

Pg
32

The reasons for this conclusion are: A. Low tree risk rating
B. High STEM score & High monetary evaluation

2. Recommendation to remove 20 Trees in G089

Remove 20 trees comprised of: **G089.01b_03b (3), 089.04c_07c, 29c (5), G089.08d_19d (12)** which are 3 tree groups collectively of lower quality/value & need to be removed for the safety of people & property, viewed from the perspective of a 50 year timeframe.

Their removal would not unduly affect the local amenity or ecological values to any more than a minor extent, given that a large integrated group of 19 listed trees would remain standing.

The reasons for this conclusion are: A. Moderate to High risk rating
B. Low STEM scores & Low monetary valuation

Replanting

From the point view of replanting it is well to mention that many Eucalyptus species are capable of coppicing or regenerating from a cut stump. With careful management it is possible to regrow a tree by selecting one strong shoot to grow-on after suppressing all other shoot growth. Ancient woodland practice in many parts of the world has used this technique with many species of trees for various purposes. eg firewood production in Scandinavia.

Replanting is suggested following removal of trees & best done immediately after felling work is completed. Many native & exotic tree species would fill the gaps within 5-10 years reaching semi-maturity in 15-20 years.

Lists of a few native & exotic trees that may be suitable shown below:

Native trees

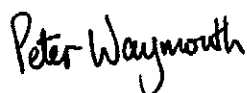
Kowhai, Papauma, Houhere, Makomako, Mahoe, Kohuhu, Karo, Tarata, Rata, Ngiao, Tawhai, Tawhairaunui, Tawhairauriki, Karaka, Akeake, Horoeke, Pohutukawa, Ti kouka, Titoki

Exotic trees

Oak, Elm, Ash, Walnut, Maple, Walnut, Sweet Chestnut, Horsechestnut, Rowan, Hawthorn, Magnolia, Cherry, Apple, Pear, Plum, Redwood, Fir, Spruce, Cedar, Larch, Pine

These lists are merely suggestions but many possibilities arise for replanting a newly cleared site & this would best be addressed with a plan drawn by a landscape architect, if required.

Peter Waymouth



References:	Title	Author	Pub	ISBN
	'Common sense risk management of trees'	The National Tree Safety Group	2011 UK Forestry Commission	978.0.85538.840.9
	'Wood Decay in Living and Dead Trees: A Pictorial Overview'	Shortle & Dudzik	2011 USDA forest service	Report NRS-97
	'STEM - A Standard Tree Evaluation Method'	Ron Flook	1996 Ron Flook	0.473.04039.5
	'Tree Roots in the Built Environment'	Roberts, Jackson & Smith	2006 Arboricultural Assn UK	978.0.90099.859.3
	'The Manual of Tree Statics and Tree Inspection'	Wessolly & Erb	2016 Patzer Verlag	978.3.87617.143.2
	'An Illustrated Guide to Pruning'	Ed Gilman	2012 Delmar, Cengage Learning	13.978.1.111.30730.1
	'Tree Risk Assessment Manual' 2nd Edition	Julian Dunster	2017 International Society of Arb.	978.1.881956.99.0

iOS, desktop & online applications for tree identification

'EUCLID Eucalypts of Australia'	CSIRO Slee, Brooker, Duffy, West	2014 CSIRO (Aust. Govt)	keyserver.lucidcentral.org
'VTree'	John Peterson - Virginia Tech, USA		
iPlantfile Pro	Plantfile Pty Ltd		

*'Common sense tree risk management' NTSG - National Tree Safety Group
set of 5 key underpinning principles*

trees provide a wide variety of benefits to society

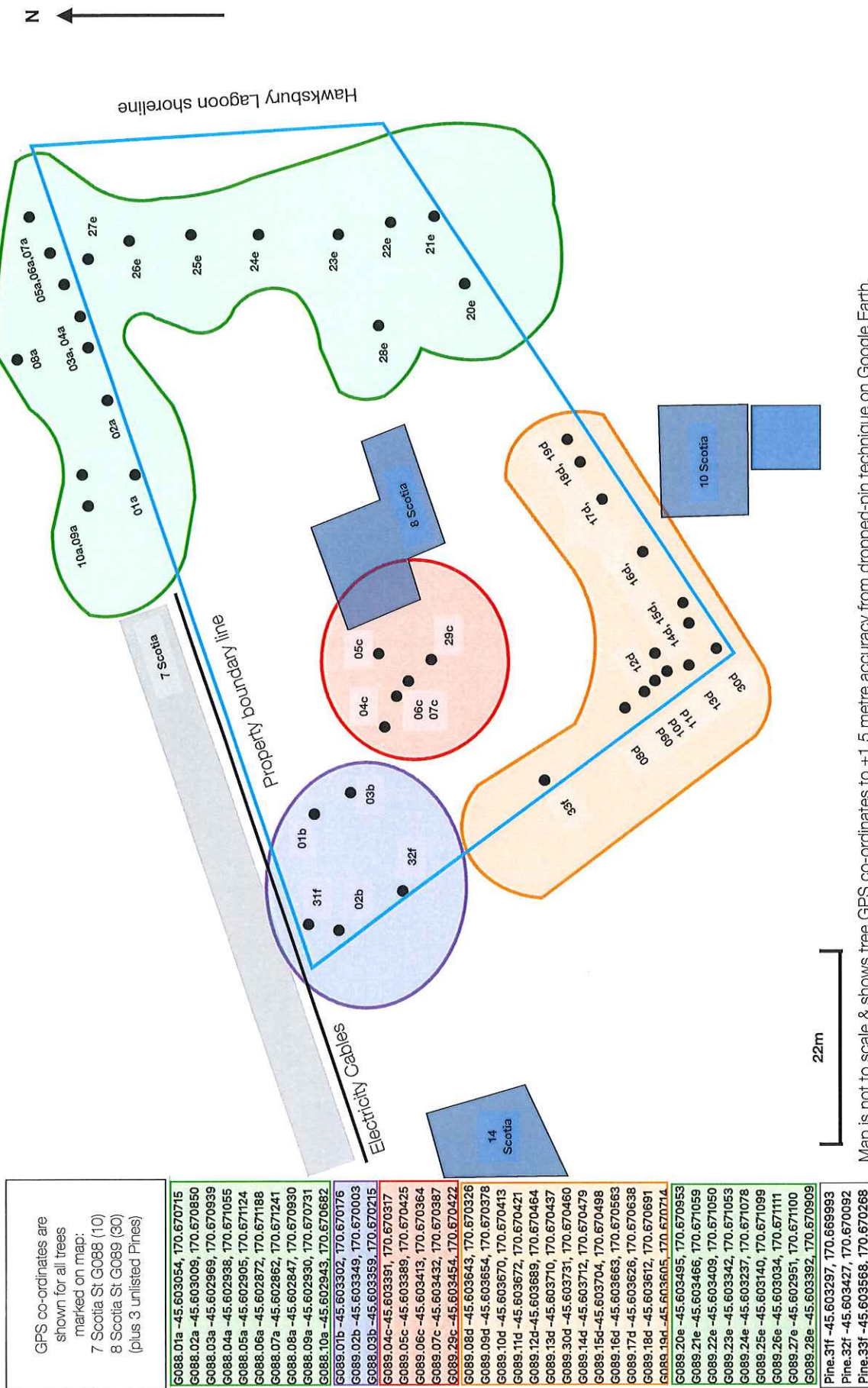
trees are living organisms that naturally lose branches & fall

the overall risk to human safety is extremely low

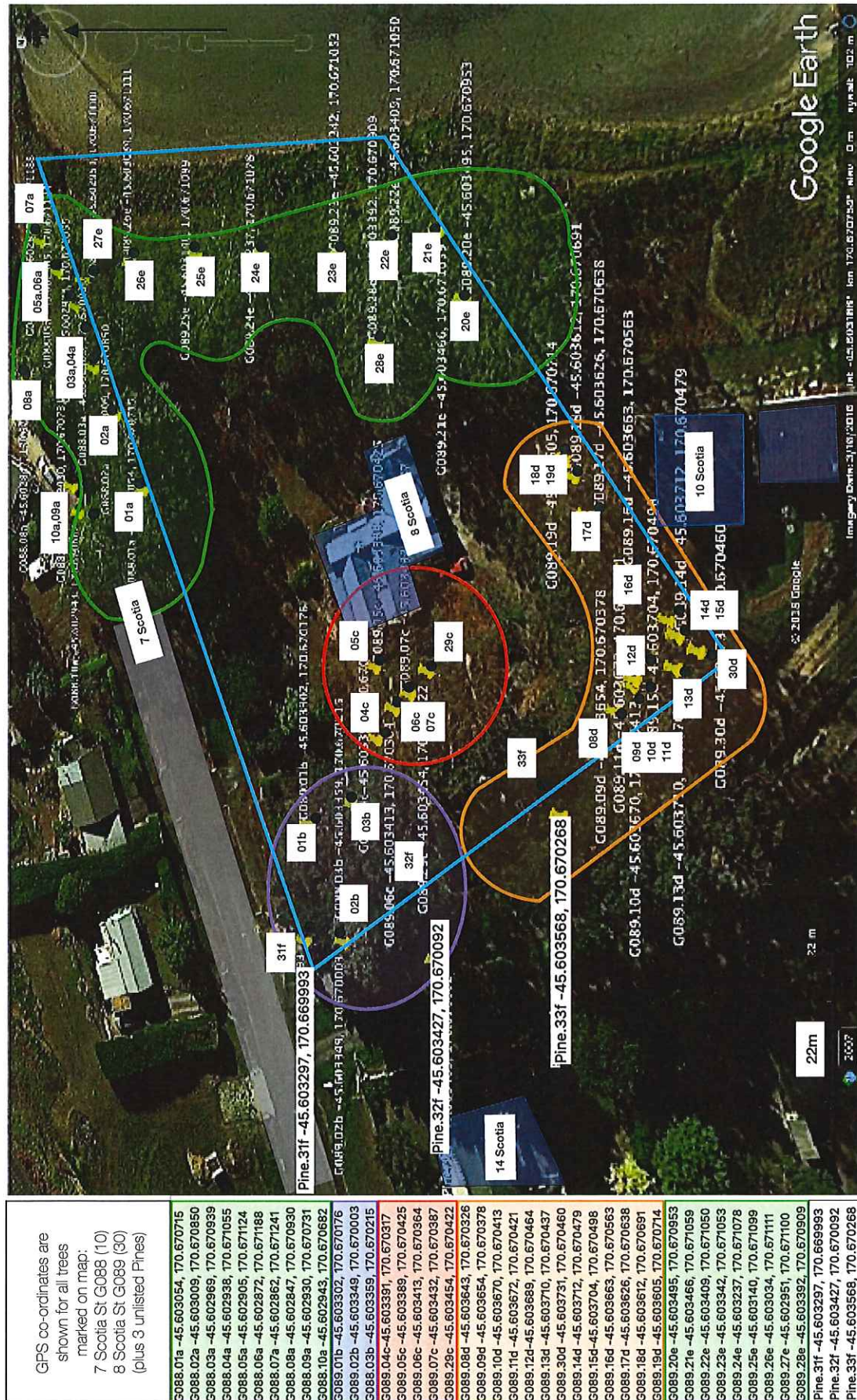
tree owners have a duty of care

tree owners should take a balanced & proportionate approach to tree safety management

Simplified Map of 40 x DOC listed Eucalyptus sp. trees within 2 adjoining groups at 7 & 8 Scotia St, Waikouaiti, Otago designated as G088 & G089 05/11/18



Google Earth Map of 40 x DCC listed Eucalyptus sp. trees within 2 adjoining groups at 7 & 8 Scotia St, Waikouaiti, Otago designated as G088 & G089 05/11/18



Map showing tree GPS co-ordinates to ± 1.5 metre accuracy from dropped-pin technique & forms the underlying layer of the above simplified map.
 View of all 40 Eucalyptus trees in G088 & G089 & 3 unlisted Pinus trees is shown in relation to buildings within tree fall distance of 25 - 30m.
 NB G089.30d was seen as a recently sawn stump of ≤ 2.0 m in height & diameter 0.6m; age ≥ 65 yrs with average growth rate ≥ 5.0 mm pa



Aerial photography DCC, Jan/Feb 2013, CC BY 3.0 NZ

Property Details

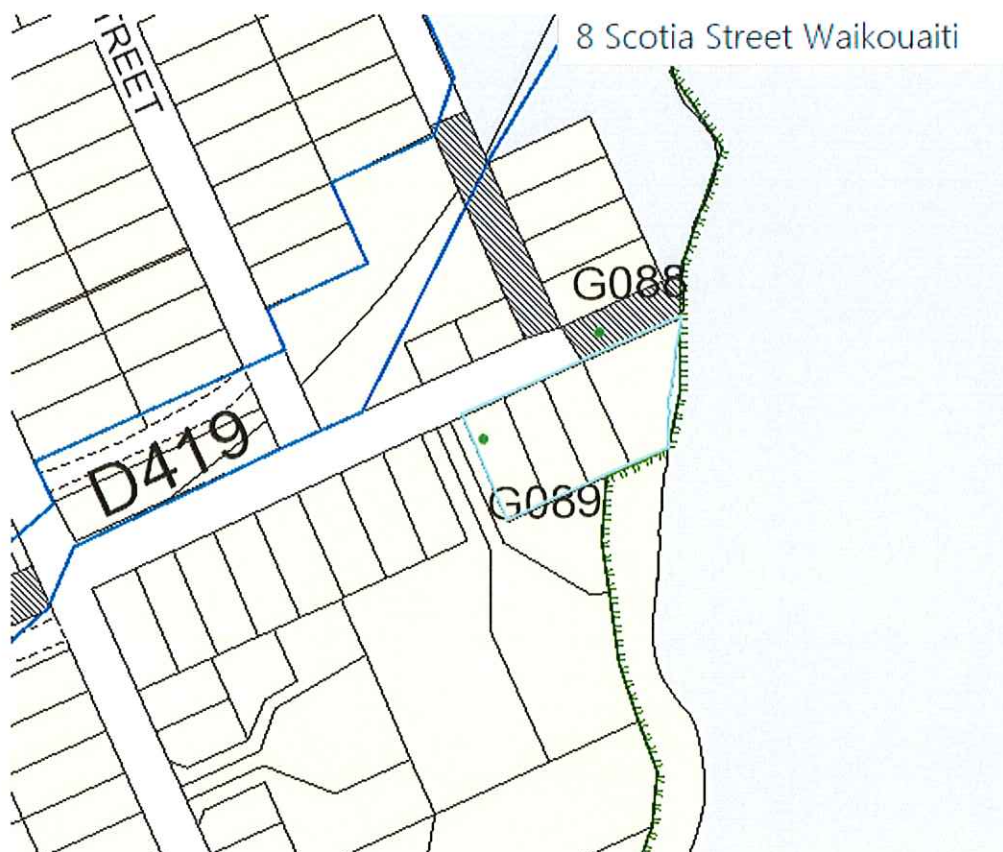
Click the link below to map the property (opens a dynamic map viewer in new tab or window).

[Map this property](#)

Valuation number	26620-23701
Rate account ID	2047369
Property number	5047369
Property address	8 Scotia Street Waikouaiti
Certificate(s) of title (guide only)	237/210
Ratepayer name(s)	Kathleen Mary Ryan Practice Management Trustee Limited
Postal address for this assessment	Bimbime Trust 17 Izard Road Khandallah Wellington 6035

From: Phil Marshall Phil.Marshall@dcc.govt.nz
Subject: 8 Scotia Street.
Date: 30 July 2018 at 15:04
To: pw@greentrees.co.nz

PM



Hi Peter,

The District Plan has little further info – just the map and a note in the schedule about two groups of Gum trees, one of which is on a paper road.

Regards
Phil

Phil Marshall
Senior Planner, City Planning
Dunedin City Council
50 The Octagon, Dunedin ; P O Box 5045, Moray Place Dunedin 9058 New Zealand
Telephone: 03 477 4000; Direct Dial: 474 3348 Fax: 03 474 3451
Email: phil.marshall@dcc.govt.nz; www.CityofDunedin.com

 Please consider the environment before printing this e-mail



STEM: Standard Tree Evaluation Method (NZ)

Adapted from RNZIH - www.rnzih.org.nz - Ron Flook 1996
see below for full explanation

Client	Kathleen Ryan	P		Date	19.11.18
Address	8 Scotia St, Waikouaiti	M	01b	Lat	-45.603302°S
Email	kathryan09@gmail.com			Lon	170.670176°E
Species	Tasmanian blue gum - <i>Eucalyptus globulus</i>	H	30.0m_average	DBH	1.2mø_average
Listing	G089.01b_03b (3 trees)	S	8.0m_average	Age	≤65 yrs (≤5.0mm/pa)

1. Condition of tree (points)	3 (10%)	9 (30%)	15 (50%)	21 (70%)	27 (90%)	Score
Form (structure / appearance)	imperfect	average	standard	choice	fine	9
Occurrence (frequency in locality)	frequent	common	occasional	scarce	rare	9
Vigour/Vitality (health)	poor	adequate	fair	good	excellent	15
Function (usefulness)	small	useful	practical	strong	robust	9
Age (years)	10 yrs+	20 yrs+	40 yrs+	80 yrs+	100yrs+	15
Subtotal Points						57

2. Amenity values (points)	3 (10%)	9 (30%)	15 (50%)	21 (70%)	27 (90%)	Score
Stature (greater of height or spread)	3m - 8m	9m -14m	15m -20m	21m -26m	27m+	27
Visibility (from unseen to landmark)	0.5km	1.0km	2.0km	4.0km	8.0km	9
Proximity (presence of other trees)	forest	woodland	group 10+	group 3+	solitary	15
Role (as landscape element)	lesser	modest	select	prime	notable	9
Climate (Micro-ecological effect)	slight	normal	valuable	vital	critical	9
Subtotal Points						69

3. Valuation (based on replacement cost equivalent) *	Σ	Calculations	
		(1. + 2.)	57 + 69
a. Total Points (Condition of tree + Amenity values = Total points score)	a	TP = a	126
b. Unit cost - 10 x 1yr trees (H = 0.4m, S = 0.2m, DBH = 0.02mø) ★	b	∴ (126TP x 75) = b	9450.00
c. Cost of planting (10 tree-holes 0.5mø x 0.25m depth, plant & mulch)	c	3hr @ \$40/hr = c	120.00
d. Maintenance period (over equivalent period to approx tree age) †	d	(65 x 10 x 4) = d	2600.00
e. Wholesale value (gst incl)	e	(a x b) + (c + d) = e	12,170.00
f. Retail Value (2 x e) #	f		\$24,340.00



NZ-00395TM

Explanation of terms used above

* Flook formula for wholesale value (a x b) + (c + d) = e. Ref. ISA - Journal of Arboriculture 28(1) Jan 2002

★ Unit cost based on 10 replacement trees @ \$75.00 each = \$750.00

† Maintenance equivalent = Age of tree x 10 replacements x \$4.00 p.a.

Retail Value is twice wholesale ⇒ (2 x e) = f. Ref. ISA - Journal of Arboriculture 28(1) Jan 2002

N.B. This STEM evaluation form is adapted from Ron Flook's 1996 publication ISBN 0.473.04039.5

In order to allow for unique field values within the matrices for database applications, some changes have been made.

These changes in no way affect the intended statistical or functional outcomes of the original Standard Evaluation Tree Method.

8 Scotia St, Waikouaiti
G089.01b_03b
3 x Eucalyptus globulus





STEM: Standard Tree Evaluation Method (NZ)

Adapted from RNZIH - www.rnzih.org.nz - Ron Flook 1996
see below for full explanation

Client	Kathleen Ryan	P		Date	19.11.18
Address	8 Scotia St, Waikouaiti	M	04c	Lat	-45.603391°S
Email	kathryan09@gmail.com			Lon	170.670317°E
Species	Tasmanian blue gum - <i>Eucalyptus globulus</i>	H	30.0m_average	DBH	1.0mØ_average
Listing	G089.04c_07c, 29c (5 trees)	S	8.0m_average	Age	≤65 yrs (≤5.0mm/pa)

1. Condition of tree (points)	3 (10%)	9 (30%)	15 (50%)	21 (70%)	27 (90%)	Score
Form (structure / appearance)	imperfect	average	standard	choice	fine	9
Occurrence (frequency in locality)	frequent	common	occasional	scarce	rare	9
Vigour/Vitality (health)	poor	adequate	fair	good	excellent	21
Function (usefulness)	small	useful	practical	strong	robust	9
Age (years)	10 yrs+	20 yrs+	40 yrs+	80 yrs+	100yrs+	15
Subtotal Points						63

2. Amenity values (points)	3 (10%)	9 (30%)	15 (50%)	21 (70%)	27 (90%)	Score
Stature (greater of height or spread)	3m - 8m	9m -14m	15m -20m	21m -26m	27m+	27
Visibility (from unseen to landmark)	0.5km	1.0km	2.0km	4.0km	8.0km	9
Proximity (presence of other trees)	forest	woodland	group 10+	group 3+	solitary	15
Role (as landscape element)	lesser	modest	select	prime	notable	9
Climate (Micro-ecological effect)	slight	normal	valuable	vital	critical	9
Subtotal Points						69

3. Valuation (based on replacement cost equivalent) *	Σ	Calculations	
		(1. + 2.)	63 + 69
a. Total Points (Condition of tree + Amenity values = Total points score)	a	TP = a	132
b. Unit cost - 10 x 1yr trees (H = 0.4m, S = 0.2m, DBH = 0.02mØ) ★	b	∴ (132TP x 75) = b	9900.00
c. Cost of planting (10 tree-holes 0.5mØ x 0.25m depth, plant & mulch)	c	3hr @ \$40/hr = c	120.00
d. Maintenance period (over equivalent period to approx tree age) †	d	(65 x 10 x 4) = d	2600.00
e. Wholesale value (gst incl)	e	(a x b) + (c + d) = e	12,620.00
f. Retail Value (2 x e) #	f		\$25,240.00



Explanation of terms used above

* Flook formula for wholesale value (a x b) + (c + d) = e. Ref. ISA - Journal of Arboriculture 28(1) Jan 2002

★ Unit cost based on 10 replacement trees @ \$7.50 each = \$75.00

† Maintenance equivalent = Age of tree x 10 replacements x \$4.00 p.a.

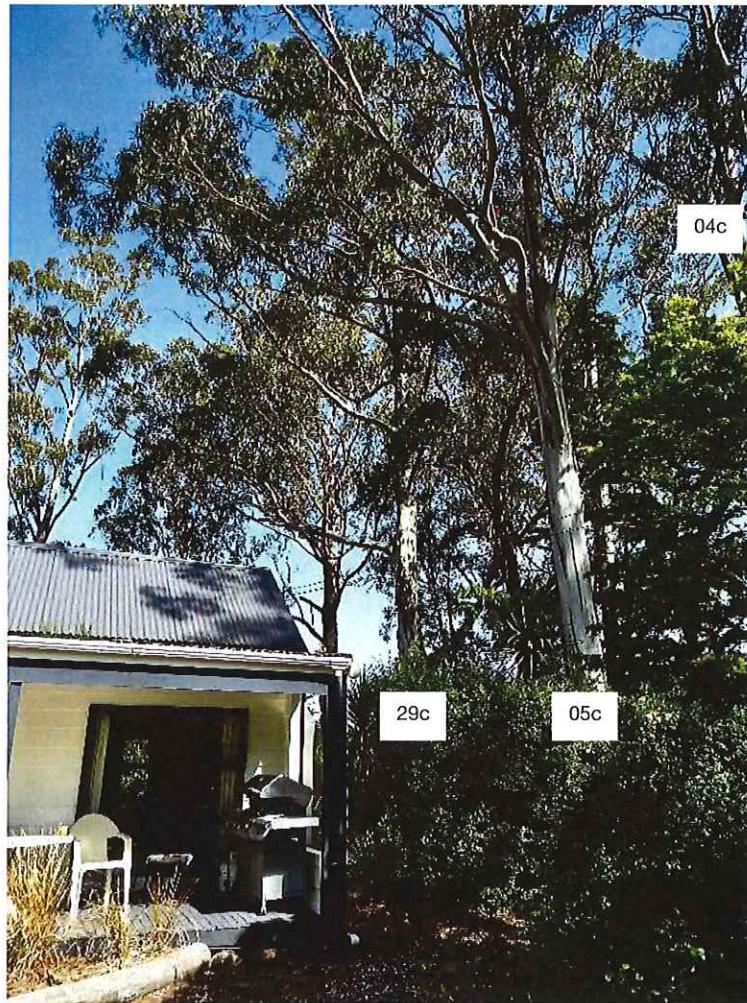
Retail Value is twice wholesale ⇒ (2 x e) = f. Ref. ISA - Journal of Arboriculture 28(1) Jan 2002

N.B. This STEM evaluation form is adapted from Ron Flook's 1996 publication ISBN 0.473.04039.5

In order to allow for unique field values within the matrices for database applications, some changes have been made.

These changes in no way affect the intended statistical or functional outcomes of the original Standard Evaluation Tree Method.

8 Scotia St, Waikouaiti
G089.04c_07c,29c
5 x Eucalyptus globulus





STEM: Standard Tree Evaluation Method (NZ)

Adapted from RNZIH - www.rnzih.org.nz - Ron Flook 1996
see below for full explanation

Client	Kathleen Ryan	P		Date	19.11.18
Address	8 Scotia St, Waikouaiti	M	30d	Lat	-45.603731°S
Email	kathryan09@gmail.com			Lon	170.670460°E
Species	Tasmanian blue gum - <i>Eucalyptus globulus</i>	H	20.0m_average	DBH	0.7mø_average
Listing	G089.08d_19d (12 trees)	S	10.0m_average	Age	≤65 yrs (≤5.0mm/pa)

1. Condition of tree (points)	3 (10%)	9 (30%)	15 (50%)	21 (70%)	27 (90%)	Score
Form (structure / appearance)	imperfect	average	standard	choice	fine	9
Occurrence (frequency in locality)	frequent	common	occasional	scarce	rare	9
Vigour/Vitality (health)	poor	adequate	fair	good	excellent	9
Function (usefulness)	small	useful	practical	strong	robust	9
Age (years)	10 yrs+	20 yrs+	40 yrs+	80 yrs+	100yrs+	15
Subtotal Points						51

2. Amenity values (points)	3 (10%)	9 (30%)	15 (50%)	21 (70%)	27 (90%)	Score
Stature (greater of height or spread)	3m - 8m	9m -14m	15m -20m	21m -26m	27m+	15
Visibility (from unseen to landmark)	0.5km	1.0km	2.0km	4.0km	8.0km	9
Proximity (presence of other trees)	forest	woodland	group 10+	group 3+	solitary	15
Role (as landscape element)	lesser	modest	select	prime	notable	9
Climate (Micro-ecological effect)	slight	normal	valuable	vital	critical	9
Subtotal Points						57

3. Valuation (based on replacement cost equivalent) ✱	Σ	Calculations	
		(1. + 2.)	51 + 57
a. Total Points (Condition of tree + Amenity values = Total points score)	a	TP = a	108
b. Unit cost - 10 x 1yr trees (H = 0.4m, S = 0.2m, DBH = 0.02mø) ★	b	∴ (108TP x 75) = b	8100.00
c. Cost of planting (10 tree-holes 0.5mø x 0.25m depth, plant & mulch)	c	3hr @ \$40/hr = c	120.00
d. Maintenance period (over equivalent period to approx tree age) †	d	(65 x 10 x 4) = d	2600.00
e. Wholesale value (gst incl)	e	(a x b) + (c + d) = e	10,820.00
f. Retail Value (2 x e) #	f		\$21,640.00



Explanation of terms used above

✱ Flook formula for wholesale value (a x b) + (c + d) = e. Ref. ISA - Journal of Arboriculture 28(1) Jan 2002

★ Unit cost based on 10 replacement trees @\$7.50 each = \$75.00

† Maintenance equivalent = Age of tree x 10 replacements x \$4.00 p.a.

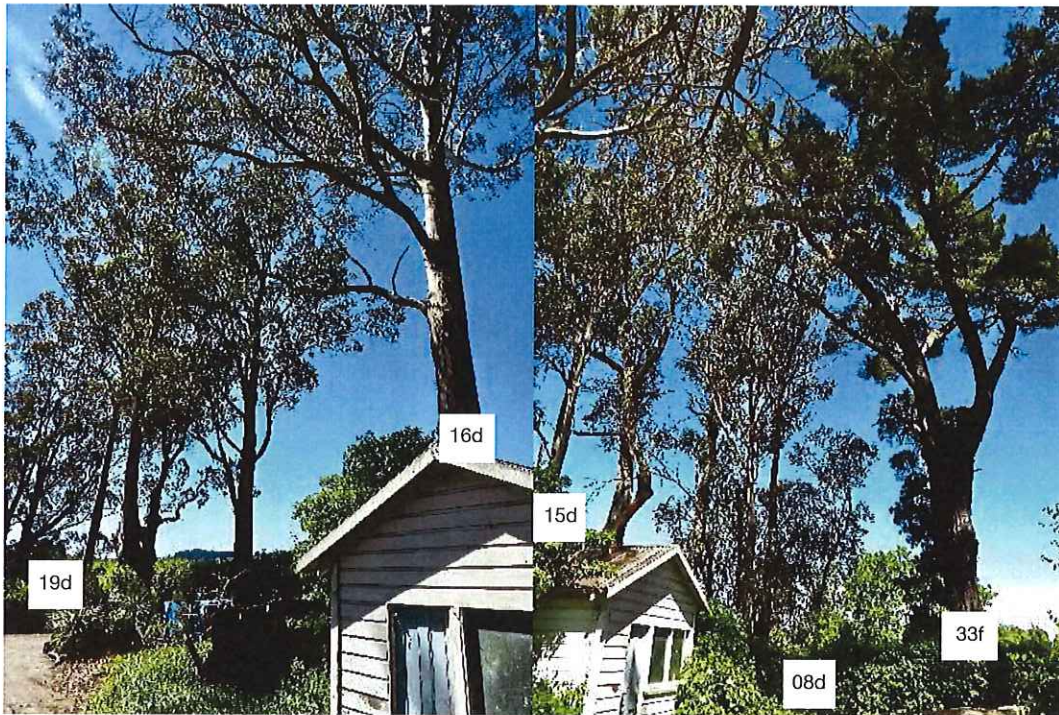
Retail Value is twice wholesale ⇒ (2 x e) = f. Ref. ISA - Journal of Arboriculture 28(1) Jan 2002

N.B. This STEM evaluation form is adapted from Ron Flook's 1996 publication ISBN 0.473.04039.5

In order to allow for unique field values within the matrices for database applications, some changes have been made.

These changes in no way affect the intended statistical or functional outcomes of the original Standard Evaluation Tree Method.

8 Scotia St, Waikouaiti
G089.8d_19d, 33f
12 x Eucalyptus globulus





STEM: Standard Tree Evaluation Method (NZ)

Adapted from RNZIH - www.rnzih.org.nz - Ron Flook 1996
see below for full explanation

Client	Kathleen Ryan	P		Date	19.11.18
Address	8 Scotia St, Waikouaiti	M	27e	Lat	-45.602951°S
Email	kathryan09@gmail.com			Lon	170.671100°E
Species	Tasmanian blue gum - <i>Eucalyptus globulus</i>	H	25.0m_average	DBH	0.9mø_avreage
2 Groups	G088.01a_10a & G089.20e_28e (10 + 9 = 19 trees)	S	15.0m_average	Age	≤65 yrs (≤5.0mm/pa)

1. Condition of tree (points)	3 (10%)	9 (30%)	15 (50%)	21 (70%)	27 (90%)	Score
Form (structure / appearance)	imperfect	average	standard	choice	fine	15
Occurrence (frequency in locality)	frequent	common	occasional	scarce	rare	9
Vigour/Vitality (health)	poor	adequate	fair	good	excellent	21
Function (usefulness)	small	useful	practical	strong	robust	21
Age (years)	10 yrs+	20 yrs+	40 yrs+	80 yrs+	100yrs+	15
Subtotal Points						81
2. Amenity values (points)	3 (10%)	9 (30%)	15 (50%)	21 (70%)	27 (90%)	Score
Stature (greater of height or spread)	3m - 8m	9m -14m	15m -20m	21m -26m	27m+	21
Visibility (from unseen to landmark)	0.5km	1.0km	2.0km	4.0km	8.0km	9
Proximity (presence of other trees)	forest	woodland	group 10+	group 3+	solitary	15
Role (as landscape element)	lesser	modest	select	prime	notable	21
Climate (Micro-ecological effect)	slight	normal	valuable	vital	critical	21
Subtotal Points						87

3. Valuation (based on replacement cost equivalent) *	Σ	Calculations	
		(1. + 2.)	81 + 87
a. Total Points (Condition of tree + Amenity values = Total points score)	a	TP = a	168
b. Unit cost -10 x 1yr trees (H = 0.4m, S = 0.2m, DBH = 0.02mø) ★	b	∴ (168TP x 75) = b	12,600.00
c. Cost of planting (10 tree-holes 0.5mø x 0.25m depth, plant & mulch)	c	3hr @ \$40/hr = c	120.00
d. Maintenance period (over equivalent period to approx tree age) †	d	(65 x 10 x 4) = d	2600.00
e. Wholesale value (gst incl)	e	(a x b) + (c + d) = e	15,320.00
f. Retail Value 2 tree groups x (2 x e) #	f	G088 + G089 =	\$61,280.00



Explanation of terms used above

* Flook formula for wholesale value (a x b) + (c + d) = e. Ref. ISA - Journal of Arboriculture 28(1) Jan 2002

★ Unit cost based on 10 replacement trees @\$7.50 each = \$75.00

† Maintenance equivalent = Age of tree x 10 replacements x \$4.00 p.a.

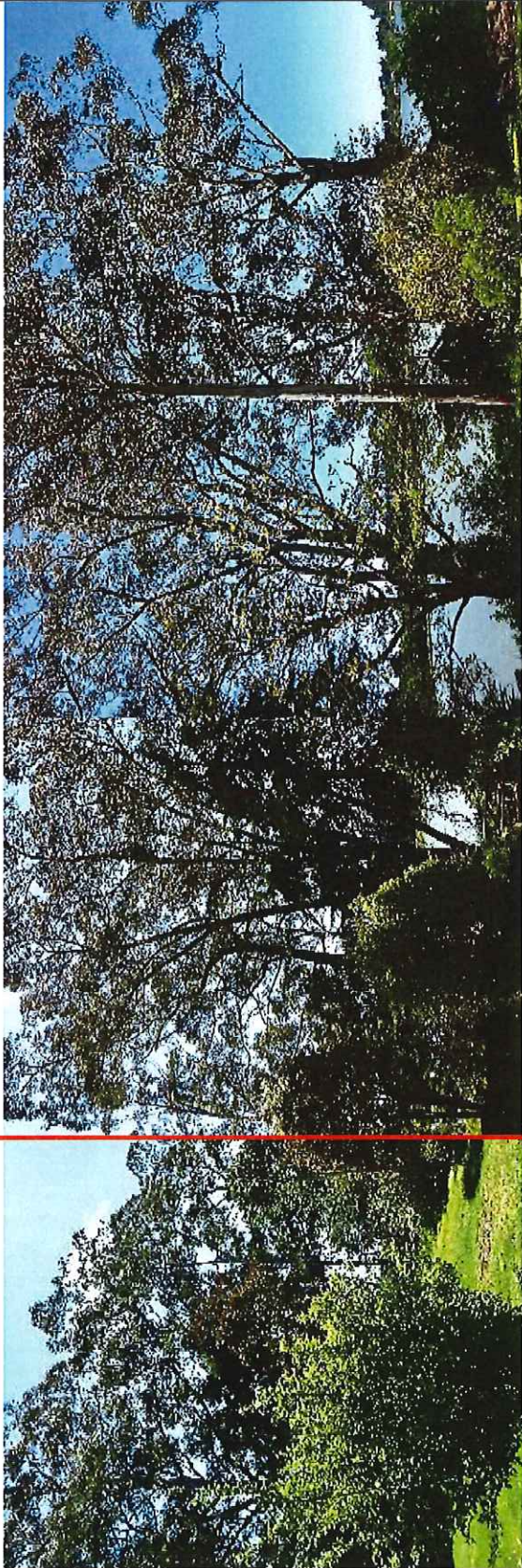
Retail Value is twice wholesale ⇒ (2 x e) = f. Ref. ISA - Journal of Arboriculture 28(1) Jan 2002

N.B. This STEM evaluation form is adapted from Ron Flook's 1996 publication ISBN 0.473.04039.5

In order to allow for unique field values within the matrices for database applications, some changes have been made.

These changes in no way affect the intended statistical or functional outcomes of the original Standard Evaluation Tree Method.

8 Scotia St, Waikouaiti G088 & G089 19 x Eucalyptus globulus

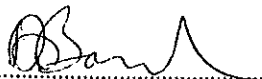


G089.20e_28e
9 x Eucalyptus globulus

G088.01a_10a
10 x Eucalyptus globulus

STANDARD TREE EVALUATION FORM

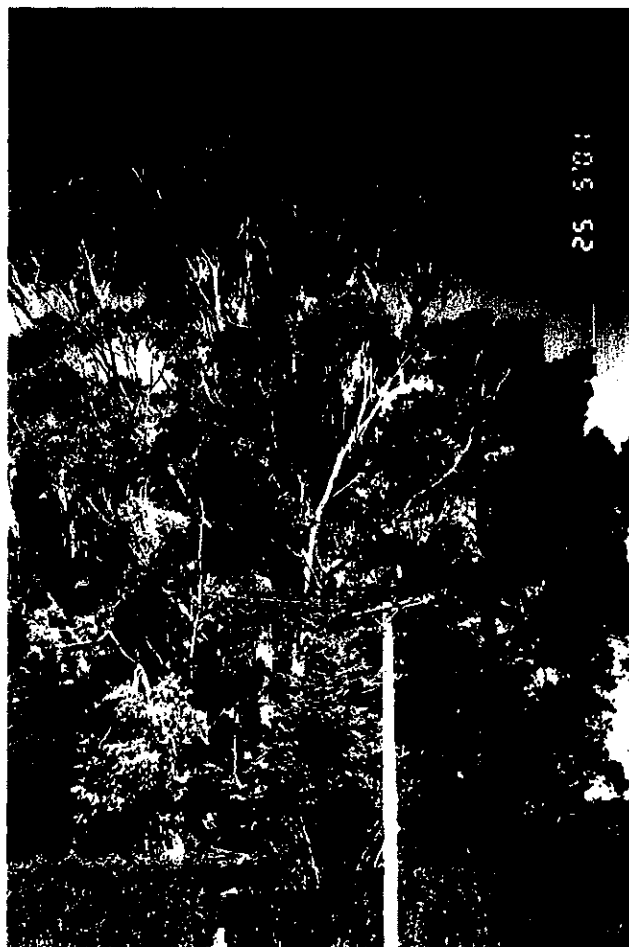
Date	25.5.01					
Tree	Gum Group					
Address	8 Scotch St					
	1362					
Height (m)	Radius (m)		Circumference (m) @ 1.2m			
CONDITION EVALUATION						
Points	3	9	15	21	27	Score
• Form	Poor	Moderate	Good	Very Good	Specimen	15
• Occurrence	Predominant	Common	Infrequent	Rare	Very Rare	9
• Vigour & Vitality	Poor	Some	Good	Very Good	Excellent	15
• Function	Minor	Useful	Important	Significant	Major	21
• Age (Yr)	10 Yrs+	20 Yrs +	40 Yrs +	80 Yrs +	100 Yrs+	15
Subtotal Points						75
AMENITY EVALUATION						
Points	3	9	15	21	27	Score
• Stature (m)	3-8	9-14	15-20	21-26	27+	21
• Visibility (km)	0.5	1.0	2.0	4.0	8.0	9
• Proximity	Forest	Parkland	Group 10+	Group 3+	Solitary	15
• Role	Minor	Moderate	Important	Significant	Major	15
• Climate	Minor	Moderate	Important	Significant	Major	21
Subtotal Points						81
NOTABLE EVALUATION						
Recognition Points	Local 3	District 9	Regional 15	National 21	International 27	Score
Stature						
• Feature						
• Form						
Historic						
• Age 100+						
• Association						
• Commemoration						
• Remnant						
• Relict						
Scientific						
• Source						
• Rarity						
• Endangered						
Subtotal Points						
Total Points						156


Arborist
 Peter Hamdani

Based on STEM - A Standard Tree Evaluation Method



8 Scotia Street



Eucalyptus sp (Gum group)
01.02.01

Tree No 1362

ISA Tree Risk Assessment form

Date: 17.11.18

Peter Waymouth - ISA Board Certified Master Arborist

NZ-0039BTM

Tree Characteristics		Client: Kathleen Ryan		NB G089.01b_03b					
Genus	Eucalyptus	Address: 8 Scotia, Waikouaiti, Otago		3 trees within group					
Species	globulus								
Common name	Tasmanian blue gum	Assessor: Peter Waymouth	Time Frame: 3 years						
Age (approx)	≤65 yrs	Tree location (GPS / remote sensor)	Latitude 10b	-45.603302°S					
Live crown ratio (LCR)	≤60%	Tools: Camera, Probe, Measuring Tape	Longitude	170.670176°E					
DBH	≤1.2mø	Trowel, Binoculars, iPad, Laptop, Clinometer, Calculator		(see over for details)					
Height	≤30.0m	Risk	Low	High	Risk Rating				
Spread	≤ 8.0m	Options	Moderate	Extreme	Moderate				
No.	Target Description & Assessment		Z1	Z2	Z3	O	M	R	
1	People, 2 houses & electricity lines		YES	YES	NO	2	NO	NO	
2									
3									
Target Zones: Z1 = 100% Dripline, Z2 = 100% Height, Z3 = 150% Height, M = Move Target, R = Restrict Access? Yes/No									
O = Occupancy Rate, 1 = Rare, 2 = Occasional, 3 = Frequent, 4 = Constant									
Site Factors			Topography			Aspect			
History of failures	Deadwood falling from height			Flat	Slope.....%	NW			
Site Changes	None	Grade	Clearing	Hydrology	Root Cuts	Describe:			
Soil Conditions	Low Volume	Saturated	Shallow	Compacted	Paved over roots...%	Describe:			
Weather Patterns	Prevailing Wind: Sou'west		High winds	Ice	Snow	Heavy rain	Describe: Easterly winds		
Tree Health & Species Profile									
Vigour	Low	Normal	High	Foliage	Leafoff	Dead	Normal 90%	Chlorotic...% Necrotic ...%	
Pests				Abiotic					
Species Failure Profile	Branches	Trunk	Roots	Describe: Eucalyptus trees may shed live or dead branches in gales					
Load Factors									
Wind Exposure	Protected	Partial	Full	Funnelling	Crown Size	Small	Medium	Large	
Crown Density	Sparse	Normal	Dense	Interior	Few	Normal	Dense	Vines/Moss	
Recent or planned changes in load factors									
Tree Defects & Conditions Affecting the Likelihood of Failure									
Crown & Branches									
Unbalanced Crown	Dead Branchescm	Cracks			Lightning Damage				
Broken / Hangers	Number	Codominant:			Included Bark				
Over Extended Branches	Epicormics	Weak Attachments			Cavity/Nest hole.....% circ				
Pruning History	Lion Tailed	Previous Branch Failures			Similar Branches				
Cleaning	Thinned	Dead /Missing Bark			Cankers /Galls / Burls	Sapwood Damage / Decay			
Reduced	Topped	Conks							
Flush Cuts	Raised	Response Growth:							
Other:									
Main Concerns: Occasional branch may fall in high winds									
Load on Defect	N/A	Minor	Moderate	Significant					
Likelihood of Failure	Improbable	Possible	Probable	Imminent					
Trunk			Roots & Root Collar						
Dead / Missing Bark	Codominant Stems	Cankers/Galls/Burls	Collar Buried / Not Visible	Depth.....cm	Stem Girdling				
Abnormal Bark Color	Included Bark	Conks/Mushrooms	Conks / Mushrooms	Decay	Dead				
Sapwood Decay	Trunk Cracks	Poor Trunk Taper	Cavity.....% circ	Sap Ooze	Cracks				
Heartwood Decay	Sap ooze	Lightning Damage	Distance from trunk.....m	Cut/damaged Roots	Root Plate Lifting				
Cavity/Nest Hole% circ	Depth.....cm	Leandegrees	Soil Weakness						
Response Growth:			Response Growth:						
Main Concerns: None at present			Main Concerns: None at present						
Defect Load	N/A	Minor	Moderate	Significant	Defect Load	N/A	Minor	Moderate	Significant
Likeli..Fail	Improbable	Possible	Probable	Imminent	Likeli..Fail	Improbable	Possible	Probable	Imminent

International Society of Arboriculture takes no responsibility for conclusions/recommendations drawn from use of this form. Adapted by Peter Waymouth
ISA Board Certified Master Arborist (NZ - 0039BTM) from a data sheet produced for ISA Tree Risk Assessment Qualified (TRAQ) Arborists in 2018

ISA Tree Risk Assessment form

Date: 17.11.18

Peter Waymouth - ISA Board Certified Master Arborist

NZ-0039BTM

Risk Categories																																											
						LIKELIHOOD		Matrix 1		Matrix 2																																	
						FAILURE	IMPACT	FAILURE & IMPACT	CONSEQUENCES	RISK																																	
						FAIL	IMP	FAIL & IMP	CONSE	RISK																																	
						Rate	Rate	Rate	Rate	Rate																																	
C						TAR-	i	p	p	i	v	m	h																														
O		CONDITIONS				TAR-	GET	m	o	r	m	l	e																														
N	TREE	OF	PART	FALL	GET	PRO	p	s	o	m	o	o	d																														
D	PART	CONCERN	SIZE	DIST	No	TECT	r	s	b	i	w	w	i																														
CD	TRP	COC	PS	FD	TN	TGP	A	B	C	D	E	F	G																														
1	Branches	Large limb failure	15cm	10m	1	NO																																					
Tree map of group G089.1b_3b, plus 2 Pines																																											
Matrix 1. Likelihood matrix <table border="1"> <thead> <tr> <th>Likelihood of Failure</th> <th colspan="4">Likelihood of Impacting Target</th> </tr> <tr> <th></th> <th>Very Low</th> <th>Low</th> <th>Medium</th> <th>High</th> </tr> </thead> <tbody> <tr> <td>Imminent</td> <td>Unlikely</td> <td>Somewhat</td> <td>Likely</td> <td>Very Likely</td> </tr> <tr> <td>Probable</td> <td>Unlikely</td> <td>Unlikely</td> <td>Somewhat</td> <td>Likely</td> </tr> <tr> <td>Possible</td> <td>Unlikely</td> <td>Unlikely</td> <td>Unlikely</td> <td>Somewhat</td> </tr> <tr> <td>Improbable</td> <td>Unlikely</td> <td>Unlikely</td> <td>Unlikely</td> <td>Unlikely</td> </tr> </tbody> </table>														Likelihood of Failure	Likelihood of Impacting Target					Very Low	Low	Medium	High	Imminent	Unlikely	Somewhat	Likely	Very Likely	Probable	Unlikely	Unlikely	Somewhat	Likely	Possible	Unlikely	Unlikely	Unlikely	Somewhat	Improbable	Unlikely	Unlikely	Unlikely	Unlikely
Likelihood of Failure	Likelihood of Impacting Target																																										
	Very Low	Low	Medium	High																																							
Imminent	Unlikely	Somewhat	Likely	Very Likely																																							
Probable	Unlikely	Unlikely	Somewhat	Likely																																							
Possible	Unlikely	Unlikely	Unlikely	Somewhat																																							
Improbable	Unlikely	Unlikely	Unlikely	Unlikely																																							
Matrix 2. Risk rating matrix <table border="1"> <thead> <tr> <th>Likelihood</th> <th colspan="4">Consequences of Failure</th> </tr> <tr> <th></th> <th>Negligible</th> <th>Minor</th> <th>Significant</th> <th>Severe</th> </tr> </thead> <tbody> <tr> <td>Very Likely</td> <td>Low</td> <td>Moderate</td> <td>High</td> <td>Extreme</td> </tr> <tr> <td>Likely</td> <td>Low</td> <td>Moderate</td> <td>High</td> <td>High</td> </tr> <tr> <td>Somewhat</td> <td>Low</td> <td>Low</td> <td>Moderate</td> <td>Moderate</td> </tr> <tr> <td>Unlikely</td> <td>Low</td> <td>Low</td> <td>Low</td> <td>Low</td> </tr> </tbody> </table>														Likelihood	Consequences of Failure					Negligible	Minor	Significant	Severe	Very Likely	Low	Moderate	High	Extreme	Likely	Low	Moderate	High	High	Somewhat	Low	Low	Moderate	Moderate	Unlikely	Low	Low	Low	Low
Likelihood	Consequences of Failure																																										
	Negligible	Minor	Significant	Severe																																							
Very Likely	Low	Moderate	High	Extreme																																							
Likely	Low	Moderate	High	High																																							
Somewhat	Low	Low	Moderate	Moderate																																							
Unlikely	Low	Low	Low	Low																																							
3 x Eucalyptus G089.1b_3B in group by Scotia St																																											
Notes, Explanations & Descriptions: The 3 Eucalyptus trees on the 8 Scotia St frontage within group_b also have 2 large 25m Pines standing close by. All trees are within fall distance of electric supply street wires. Delta's 1st trim has already cleared branches of the closest trees (Cedar & Pine) to a 1.5m clearance of these wires.																																											
Mitigation Options																																											
1. Remove 3 x Eucalyptus trees as marked in group G089.1b_3b										Residual Risk	LOW																																
2										Residual Risk																																	
Tree Risk Rating																																											
Overall Tree Risk Rating	Low	Moderate	High	Extreme	Work Priority	1	2	3	4																																		
Overall Residual Risk	Low	Moderate	High	Extreme	Recommended Inspection Interval of:																																						
Data	Final	Preliminary	Advanced Assessment needed	No	Yes	Type / Reason																																					
Inspection Limitations	None	Visibility	Access	Vines	Root Collar Buried	Describe:																																					

ISA Tree Risk Assessment form

Date: 17.11.18

Peter Waymouth - ISA Board Certified Master Arborist

NZ-0039BTM

Tree Characteristics		Client: Kathleen Ryan		NB G089.04c_29c						
Genus	Eucalyptus	Address: 8 Scotia, Waikouaiti, Otago		5 trees within group						
Species	globulus									
Common name	Tasmanian blue gum	Assessor: Peter Waymouth	Time Frame: 3 years							
Age (approx)	≤65 yrs	Tree location (GPS / remote sensor)	Latitude	04c	-45.603391°S					
Live crown ratio (LCR)	≤60%	Tools: Camera, Probe, Measuring Tape	Longitude	170.670317°E						
DBH	≤1.0m	Trowel, Binoculars, iPad, Laptop, Clinometer, Calculator (see over for details)								
Height	≤30.0m	Risk	Low	High	Risk Rating					
Spread	≤ 8.0m	Options	Moderate	Extreme	High					
No.	Target Description & Assessment				Z1	Z2	Z3	O	M	R
1	People, 2 houses & electricity lines				YES	YES	NO	3	NO	NO
2										
3										
Target Zones: Z1 = 100% Dripline, Z2 = 100% Height, Z3 = 150% Height, M = Move Target, R = Restrict Access? Yes/No										
O = Occupancy Rate, 1 = Rare, 2 = Occasional, 3 = Frequent, 4 = Constant										
Site Factors							Topography		Aspect	
History of failures	Deadwood falling from height						Flat	Slope.....%	NW	
Site Changes	None	Grade	Clearing	Hydrology	Root Cuts	Describe:				
Soil Conditions	Low Volume	Saturated	Shallow	Compacted	Paved over roots...%	Describe:				
Weather Patterns	Prevailing Wind: Sou'west		High winds	Ice	Snow	Heavy rain	Describe: Easterly winds			
Tree Health & Species Profile										
Vigour	Low	Normal	High	Foliage	Leafoff	Dead	Normal 90%	Chlorotic...%	Necrotic ...%	
Pests					Abiotic					
Species Failure Profile	Branches	Trunk	Roots	Describe: Eucalyptus trees may shed live or dead branches in gales						
Load Factors										
Wind Exposure	Protected	Partial	Full	Funnelling	Crown Size	Small	Medium	Large		
Crown Density	Sparse	Normal	Dense	Interior	Few	Normal	Dense	Vines/Moss		
Recent or planned changes in load factors										
Tree Defects & Conditions Affecting the Likelihood of Failure										
Crown & Branches										
Unbalanced Crown	Dead Branches 8.0cm		Cracks				Lightning Damage			
Broken / Hangers	Number 10 to 15		Codominant:				Included Bark			
Over Extended Branches	Epicormics		Weak Attachments				Cavity/Nest hole.....% circ			
Pruning History	Lion Tailed		Previous Branch Failures				Similar Branches			
Cleaning	Thinned		Dead /Missing Bark		Cankers /Galls / Burls		Sapwood Damage / Decay			
Reduced	Topped		Conks							
Flush Cuts	Raised		Response Growth:							
Other:										
Main Concerns: An occasional live branch may fail or large deadwood break-off falling on the house immediately below										
Load on Defect	N/A	Minor	Moderate	Significant						
Likelihood of Failure	Improbable	Possible	Probable	Imminent						
Trunk					Roots & Root Collar					
Dead / Missing Bark	Codominant Stems		Cankers/Galls/Burls		Collar Buried / Not Visible		Depth.....cm		Stem Girdling	
Abnormal Bark Color	Included Bark		Conks/Mushrooms		Conks / Mushrooms		Decay		Dead	
Sapwood Decay	Trunk Cracks		Poor Trunk Taper		Cavity.....% circ		Sap Ooze		Cracks	
Heartwood Decay	Sap ooze		Lightning Damage		Distance from trunk.....m		Cut/damaged Roots		Root Plate Lifting	
Cavity/Nest Hole% circ	Depth.....cm		Leandegrees		Soil Weakness					
Response Growth:					Response Growth:					
Main Concerns: None at present					Main Concerns: None at present					
Defect Load	N/A	Minor	Moderate	Significant	Defect Load	N/A	Minor	Moderate	Significant	
Likeli..Fail	Improbable	Possible	Probable	Imminent	Likeli..Fail	Improbable	Possible	Probable	Imminent	

International Society of Arboriculture takes no responsibility for conclusions/recommendations drawn from use of this form. Adapted by Peter Waymouth
ISA Board Certified Master Arborist (NZ - 0039BTM) from a data sheet produced for ISA Tree Risk Assessment Qualified (TRAQ) Arborists in 2018

International Society of Arboriculture takes no responsibility for conclusions/recommendations drawn from use of this form. Adapted by Peter Waymouth
ISA Board Certified Master Arborist (NZ - 0039BTM) from a data sheet produced for ISA Tree Risk Assessment Qualified (TRAQ) Arborists in 2018

ISA Tree Risk Assessment form

Date: 17.11.18

Peter Waymouth - ISA Board Certified Master Arborist

NZ-0039BTM

Tree Characteristics		Client: Kathleen Ryan		NB G089.08d_19d			
Genus	Eucalyptus	Address: 8 Scotia, Waikouaiti, Otago		12 trees within group			
Species	globulus						
Common name	Tasmanian blue gum	Assessor: Peter Waymouth	Time Frame: 3 years				
Age (approx)	≤65 yrs	Tree location (GPS / remote sensor)	Latitude 30d	-45.603731°S			
Live crown ratio (LCR)	≤60%	Tools: Camera, Probe, Measuring Tape	Longitude	170.670460°E			
DBH	≤0.7mØ	Trowel, Binoculars, iPad, Laptop, Clinometer, Calculator (see over for details)					
Height	≤20.0m	Risk	Low	High	Risk Rating		
Spread	≤10.0m	Options	Moderate	Extreme	Moderate		
No.	Target Description & Assessment	Z1	Z2	Z3	O	M	R
1	People, & 2 houses	YES	YES	NO	3	NO	NO
2							
3							
Target Zones: Z1 = 100% Dripline, Z2 = 100% Height, Z3 = 150% Height, M = Move Target, R = Restrict Access? Yes/No							
O = Occupancy Rate, 1 = Rare, 2 = Occasional, 3 = Frequent, 4 = Constant							
Site Factors				Topography Aspect			
History of failures	Deadwood falling from height			Flat	Slope.....%	SE	
Site Changes	None	Grade	Clearing	Hydrology	Root Cuts	Describe:	
Soil Conditions	Low Volume	Saturated	Shallow	Compacted	Paved over roots...%	Describe:	
Weather Patterns	Prevailing Wind: Sou'west		High winds	Ice	Snow	Heavy rain	Describe: Easterly winds
Tree Health & Species Profile							
Vigour	Low	Normal	High	Foliage	Leafoff	Dead	Normal 90% Chlorotic...% Necrotic ...%
Pests				Abiotic			
Species Failure Profile	Branches	Trunk	Roots	Describe: Eucalyptus trees may shed live or dead branches in gales			
Load Factors							
Wind Exposure	Protected	Partial	Full	Funnelling	Crown Size	Small	Medium
Crown Density	Sparse	Normal	Dense	Interior	Few	Normal	Dense
Recent or planned changes in load factors							
Tree Defects & Conditions Affecting the Likelihood of Failure							
Crown & Branches							
Unbalanced Crown	Dead Branchescm		Cracks		Lightning Damage		
Broken / Hangers	Number		Codominant:		Included Bark		
Over Extended Branches	Epicormics		Weak Attachments		Cavity/Nest hole.....% circ		
Pruning History	Lion Tailed		Previous Branch Failures		Similar Branches		
Cleaning	Thinned		Dead /Missing Bark		Cankers /Galls / Burls	Sapwood Damage / Decay	
Reduced	Topped		Conks				
Flush Cuts	Raised		Response Growth:				
Other:							
Main Concerns: Occasional branch may fall in high winds							
Load on Defect	N/A	Minor	Moderate	Significant			
Likelihood of Failure	Improbable	Possible	Probable	Imminent			
Trunk				Roots & Root Collar			
Dead / Missing Bark	Codominant Stems	Cankers/Galls/Burls	Collar Buried / Not Visible	Depth.....cm	Stem Girdling		
Abnormal Bark Color	Included Bark	Conks/Mushrooms	Conks / Mushrooms	Decay	Dead		
Sapwood Decay	Trunk Cracks	Poor Trunk Taper	Cavity.....% circ	Sap Ooze	Cracks		
Heartwood Decay	Sap ooze	Lightning Damage	Distance from trunk.....m	Cut/damaged Roots	Root Plate Lifting		
Cavity/Nest Hole% circ	Depth.....cm	Leandegrees	Soil Weakness				
Response Growth:				Response Growth:			
Main Concerns: None at present				Main Concerns: None at present			
Defect Load	N/A	Minor	Moderate	Significant	Defect Load	N/A	Minor
Likeli..Fail	Improbable	Possible	Probable	Imminent	Likeli..Fail	Improbable	Possible



International Society of Arboriculture takes no responsibility for conclusions/recommendations drawn from use of this form. Adapted by Peter Waymouth ISA Board Certified Master Arborist (NZ - 0039BTM) from a data sheet produced for ISA Tree Risk Assessment Qualified (TRAQ) Arborists in 2018

ISA Tree Risk Assessment form

Date: 17.11.18

Peter Waymouth - ISA Board Certified Master Arborist

NZ-0039BTM

Tree Characteristics				Client: Kathleen Ryan		NB G088.01a_10a/G089.20e_28e	
Genus	Eucalyptus			Address: 8 Scotia, Waikouaiti, Otago		19 trees within the retained group	
Species	globulus						
Common name	Tasmanian blue gum			Assessor: Peter Waymouth		Time Frame: 3 years	
Age (approx)	≤65 yrs			Tree location (GPS / remote sensor)		Latitude 27e -45.602951°S	
Live crown ratio (LCR)	≤75%			Tools: Camera, Probe, Measuring Tape		Longitude 170.671100°E	
DBH	≤0.9mø			Trowel, Binoculars, iPad, Laptop, Clinometer, Calculator		(see over for details)	
Height	≤25.0m			Risk	Low	High	Risk Rating
Spread	≤ 15.0m			Options	Moderate	Extreme	Low
No.	Target Description & Assessment			Z1	Z2	Z3	O
1	People, 2 houses & electricity lines			YES	YES	NO	2
2							
3							
Target Zones: Z1 = 100% Dripline, Z2 = 100% Height, Z3 = 150% Height, M = Move Target, R = Restrict Access? Yes/No							
O = Occupancy Rate, 1 = Rare, 2 = Occasional, 3 = Frequent, 4 = Constant							
Site Factors				Topography		Aspect	
History of failures	Deadwood falling from height			Flat	Slope.....%	North	
Site Changes	None	Grade	Clearing	Hydrology	Root Cuts	Describe:	
Soil Conditions	Low Volume	Saturated	Shallow	Compacted	Paved over roots...%	Describe:	
Weather Patterns	Prevailing Wind: Sou'west		High winds	Ice	Snow	Heavy rain	Describe: Easterly winds
Tree Health & Species Profile							
Vigour	Low	Normal	High	Foliage	Leafoff	Dead	Normal 90%
Pests				Abiotic			
Species Failure Profile	Branches	Trunk	Roots	Describe: Eucalyptus trees may shed live or dead branches in gales			
Load Factors							
Wind Exposure	Protected	Partial	Full	Funnelling	Crown Size	Small	Medium
Crown Density	Sparse	Normal	Dense	Interior	Few	Normal	Dense
Recent or planned changes in load factors							
Tree Defects & Conditions Affecting the Likelihood of Failure							
Crown & Branches							
Unbalanced Crown	Dead Branchescm			Cracks		Lightning Damage	
Broken / Hangers	Number			Codominant:		Included Bark	
Over Extended Branches	Epicormics			Weak Attachments		Cavity/Nest hole.....% circ	
Pruning History	Lion Tailed			Previous Branch Failures		Similar Branches	
Cleaning	Thinned			Dead /Missing Bark		Sapwood Damage / Decay	
Reduced	Topped			Conks			
Flush Cuts	Raised			Response Growth:			
Other:							
Main Concerns: Occasional branch may fall in high winds							
Load on Defect	N/A	Minor	Moderate	Significant			
Likelihood of Failure	Improbable	Possible	Probable	Imminent			
Trunk				Roots & Root Collar			
Dead / Missing Bark	Codominant Stems	Cankers/Galls/Burls		Collar Buried / Not Visible	Depth.....cm	Stem Girdling	
Abnormal Bark Color	Included Bark	Conks/Mushrooms		Conks / Mushrooms	Decay	Dead	
Sapwood Decay	Trunk Cracks	Poor Trunk Taper		Cavity.....% circ	Sap Ooze	Cracks	
Heartwood Decay	Sap ooze	Lightning Damage		Distance from trunk.....m	Cut/damaged Roots	Root Plate Lifting	
Cavity/Nest Hole% circ	Depth.....cm	Leandegrees		Soil Weakness			
Response Growth:				Response Growth:			
Main Concerns: None at present				Main Concerns: None at present			
Defect Load	N/A	Minor	Moderate	Significant			
Likeli..Fail	Improbable	Possible	Probable	Imminent			
Defect Load	N/A	Minor	Moderate	Significant			
Likeli..Fail	Improbable	Possible	Probable	Imminent			

International Society of Arboriculture takes no responsibility for conclusions/recommendations drawn from use of this form. Adapted by Peter Waymouth
ISA Board Certified Master Arborist (NZ - 0039BTM) from a data sheet produced for ISA Tree Risk Assessment. Qualified (TRAQ) Arborists in 2018

ISA Tree Risk Assessment form

Date: 17.11.18

Peter Waymouth - ISA Board Certified Master Arborist

NZ-0039BTM

Risk Categories																							
										LIKELIHOOD					Matrix 1	Matrix 2							
										FAILURE					IMPACT	FAILURE & IMPACT	CONSEQUENCES	RISK					
										FAILURE					IMPACT	FAILURE & IMPACT	CONSEQUENCES	RISK					
C						TAR-	i	p	p	i	v	m	h	u	s	l	v	n	m	s	s	of	
O		CONDITIONS				TAR-	g	e	t	m	o	r	m	l	e	i	n	o	i	l	e	i	Part
N	TREE	OF	PART	FALL	GET	PRO	p	s	o	m	o	o	d	g	l	m	k	i	g	n	g	v	
D	PART	CONCERN	SIZE	DIST	No	TECT	r	s	b	i	w	w	i	h	i	e	e	k	l	o	n	e	
CD	TRP	COC	PS	FD	TN	TGP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
1	Branches	Large limb failure	15cm	10m	1	NO																LOW	



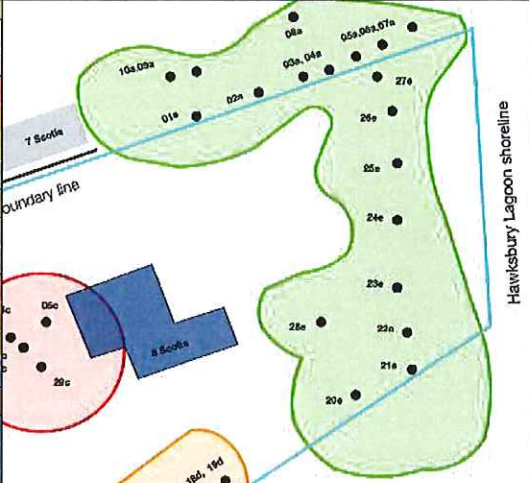

View of 19 Eucalyptus globulus trees in groups G088 & G089 looking North from inside property at 8 Scotia St

Matrix 1. Likelihood matrix				
Likelihood of Failure	Likelihood of Impacting Target			
	Very Low	Low	Medium	High
Imminent	Unlikely	Somewhat	Likely	Very Likely
Probable	Unlikely	Unlikely	Somewhat	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Matrix 2. Risk rating matrix				
Likelihood	Consequences of Failure			
Fail&Impact	Negligible	Minor	Significant	Severe
Very Likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

Notes, Explanations & Descriptions:

The listed trees in G088.1a_10a & G089.20e_28e form a contiguous group on public & private land adjoining the Hawksbury Lagoon wildlife reserve. They provide both amenity & ecological benefits to the local community of Waikouaiti. At an age estimate of ≤65 yrs they are mature but may grow taller despite some exposure to wind from all quarters. However, while wind may be a limiting factor, this tree species is capable of growing to ≥50m in optimal conditions.

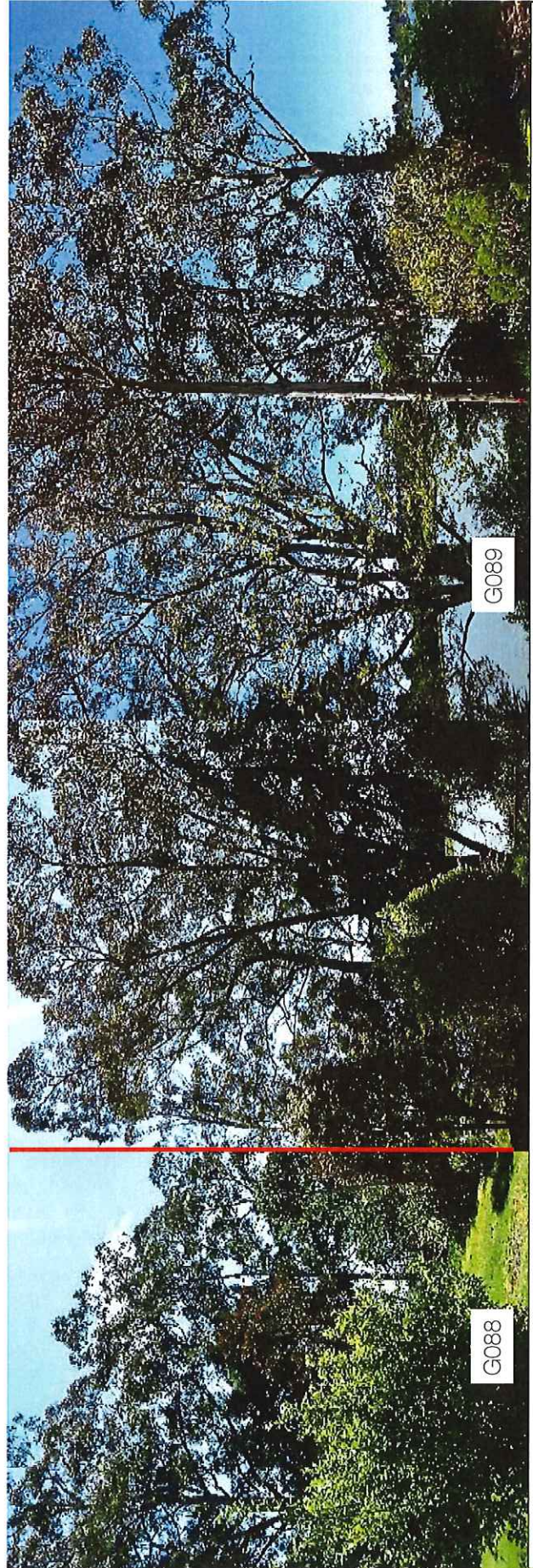
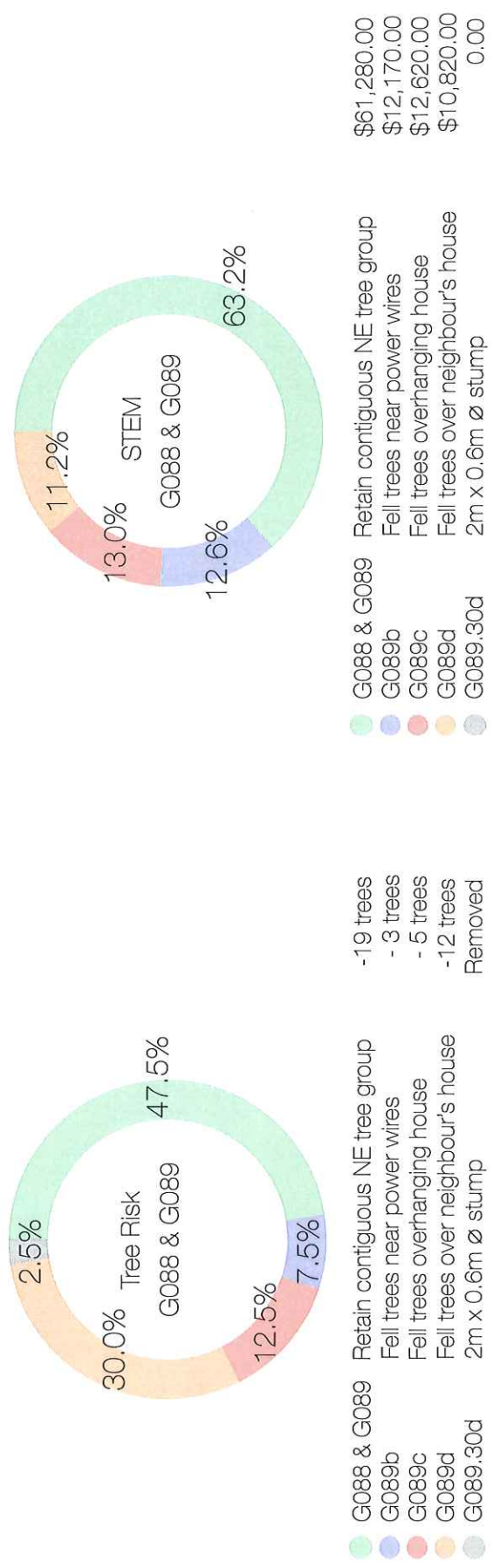


19 x Eucalyptus trees G088.01a_10a & G089.20e_28e are shown above

Mitigation Options		
1	An over-extended branch on tree G088.10a overhangs electricity street wires & could be reduction pruned	Residual Risk: LOW
2		Residual Risk:

Tree Risk Rating									
Overall Tree Risk Rating	Low	Moderate	High	Extreme	Work Priority	1	2	3	4
Overall Residual Risk	Low	Moderate	High	Extreme	Recommended Inspection Interval of:				
Data	Final	Preliminary	Advanced Assessment needed	No	Yes	Type / Reason			
Inspection Limitations	None	Visibility	Access	Vines	Root Collar Buried	Describe:			

Graphs comparing Tree Risk in relation to STEM evaluations of 2 groups of listed trees (G088_ G089) at 7 & 8 Scotia St, Waikouaiti
Tree STEM monetary evaluation for retention vs removal



Proposal to retain a landmark Eucalyptus globulus group of 19 trees (G088 & part of G089) at 7 & 8 Scotia St, Waikouaiti beside the Hawksbury Lagoon

Tree Metrics for: DCC listed tree groups at & Scotia St (G088) & 8 Scotia St G(089), Waikouaiti, Otago (see attached GPS maps) 14/11/18

Item no.	Tree Group Number	Height (metres)	Spread (metres)	DBH (metres)	Item no.	Tree Group Number	Height (metres)	Spread (metres)	DBH (metres)
1	G088.01a	30	20	1.2	21	G089.11d	10	2	0.3
2	G088.02a	25	15	0.7	22	G089.12d	10	1	0.2
3	G088.03a	25	10	0.3	23	G089.13d	20	10	0.8
4	G088.04a	20	15	0.5	24	G089.14d	25	12	1.2
5	G088.05a	30	20	0.7	25	G089.15d	20	8	0.5
6	G088.06a	25	20	0.8	26	G089.16d	25	20	1.5
7	G088.07a	25	15	1.0	27	G089.17d	15	8	0.8
8	G088.08a	20	15	1.2	28	G089.18d	25	10	2x 0.7
9	G088.09a	15	3	0.25	29	G089.19d	15	8	0.5
10	G088.10a	30	20	1.0	30	G089.20e	25	15	1.2
11	G089.01b	30	8	1.5	31	G089.21e	25	20	1.2
12	G089.02b	30	8	1.0	32	G089.22e	25	20	1.2
13	G089.03b	30	8	0.5	33	G089.23e	15	10	0.6
14	G089.04c	25	8	0.6	34	G089.24e	25	20	1.2
15	G089.05c	30	10	1.0	35	G089.25e	25	20	1.2
16	G089.06c	30	8	0.5	36	G089.26e	20	15	0.8
17	G089.07c	20	5	0.4	37	G089.27e	15	10	0.5
18	G089.08d	15	3	0.3	38	G089.28e	25	15	0.7
19	G089.09d	15	10	2x 0.5	39	G089.29c	30	10	1.5
20	G089.10d	10	2	0.2	40	G089.30d (stump)	2	0	0.6

Eucalyptus globulus tree 5c overhanging house at 8 Scotia St - flowers, foliage & bark of used for tree identification



Recently cut stump 30d at 8 Scotia St established age for G089 group of 30 similar size trees, which may contain up to 3 to 4 species

[home](#) | [about eucalypts](#) | [about EUCLID](#) | [browse species](#) | [glossary](#) | [references](#)

Eucalyptus globulus subsp. *globulus*

Tasmanian blue gum, Southern blue gum, Blue gum

[Description](#) | [Notes](#) | [Flowering Time](#) | [Origin of Name](#)

Eucalyptus globulus Labill., *Voy. Rech. Pérouse* 1: 153, t. 13 (1800)
subsp. *globulus*.

T: probably Recherche Bay, [Tasmania.], Dec. 1792, J.J.H. de
Labillardière s.n.; holo: FI; iso: BM, G, K, L, W.

E. gigantea Dehnh., *Catalogus Plantarum Horti Camaldulensis*. 2nd edn,
6, 20 (1832). T: cultivated in Paris, France.

^ TOP

Description

Tree to 70 m tall. Forming a lignotuber.

Bark smooth apart from base which has persistent slabs, shedding in large strips and slabs; smooth bark white, cream, grey, yellowish or pale creamy orange, often with ribbons of decorticated bark in the upper branches.

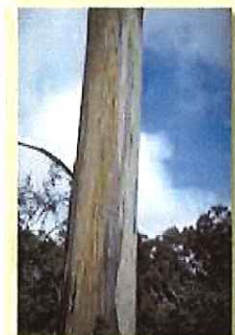
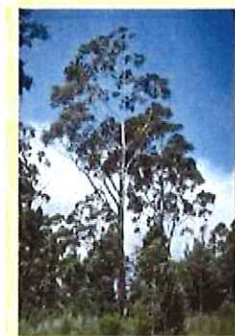
Juvenile growth (coppice or field seedlings to 50 cm): stem square in cross section and prominently winged, glaucous; juvenile leaves opposite and sessile for many pairs, oblong to elliptical then ovate to lanceolate, 4–10.5 cm long, 2.2–5 cm wide, base amplexicaul, margin sometimes crenulate, usually discolourous with upper surface green or slightly glaucous and the lower surface copiously white-waxy.

Adult leaves alternate, petiole 2–3.5 cm long; blade lanceolate to falcate, 12–30 cm long, 1.7–3 cm wide, glossy, green, side-veins greater than 45° to midrib, densely reticulate, intramarginal vein parallel to and well removed from margin, oil glands island and intersectional.

Inflorescences axillary unbranched, peduncle absent or short and stout, 0–0.5 cm long; buds solitary, sessile. **Mature buds** hypanthium obconical, glaucous, warty, with about 4 longitudinal ribs, 1.4–2.5 cm long, 1.4–2 cm wide, scar present, operculum flattened and umbonate, stamens inflexed, anthers cuboid to oblong, versatile, dorsifixed, dehiscing by longitudinal slits (non-confluent), style long, locules 4 or 5, the placentae each with 6(8) vertical ovule rows. Flowers white.

Fruit sessile, hemispherical or obconical, or square in cross section, 1–1.5 cm long, 1.4–2.7 cm wide, 4-ribbed longitudinally, glaucous, disc raised-convex and lobed over the 4 or 5 valves which are usually near rim level.

Seed black, brown or grey, 2–4 mm long, ovoid to flattened-ovoid or slightly cuboid, often lacunose, dorsal surface shallowly pitted, hilum





Application Form for Tree Maintenance or Emergency Works on a Significant Tree

50 The Octagon, PO Box 5045, Moray Place, Dunedin 9058, New Zealand
Ph 03 477 4000 | www.dunedin.govt.nz

Application details

I/We Kathleen Mary Ryan hereby apply for land use consent for work on a significant tree.

The work is for the purposes of: ☒ Maintenance ☐ Emergency Works

Tree Species: Tasmanian blue gum (Eucalyptus globulus) District Plan Tree Number: G089

Name of Contractor: (if known)

Description of Proposed Work:

☐ Crown Raising ☒ Crown Clearing ☐ Crown Thinning

☐ Power Line Clearance ☐ Work in Drip Line ☒ Crown Reduction

☒ Other: End-weight reduction of branches over house

Assessment of the effects of the proposed work:

Pruning by end-weight reduction & deadwood removal from G089 trees 5 & 29 (numbers painted on the trunk) will reduce the risk of falling branches causing harm to people or damage to property.



Site description/location

Owner of the Tree: (if not the applicant) Kathleen Mary Ryan

Address of the Property: 8 Scotia St, Waikouaiti

Legal Description: Lots 10, 11, 52, 53 Block IV Deeds 51

Address for correspondence

Name: Peter Waymouth - Greentrees Ltd

Address: 11 Bouverie St, NEV, Dunedin Postcode: 9010

Phone (daytime): 027 432 9646 Email: pw@greentrees.co.nz

Chosen contact method (this will be the first point of contact for all communications for this application)

I wish the following to be used as the address for service: ☒ email ☐ post ☐ other _____

Office use only

RMA: _____ Prop ID: _____ Person ID: _____

Declaration

I certify that, to the best of my knowledge and belief, the information given in this application is true and correct

Signature of Applicant(s):

Peter Waymouth

Date: 04.12.18

Signature of Tree Owner(s):

Date:

Criteria for assessment of application

This application will be considered with regard to the following matters:

- Assessment Matters 15.6.1, 15.6.2 and 15.6.3 of the Trees section of the District Plan
- Whether or not the work will benefit the health and growth of the tree
- Any alternative methods available to achieve the desired outcome
- Any previous applications involving trees
- The contribution the tree makes to the neighbourhood, both visually and physically
- The contribution the tree makes as a habitat for wildlife
- The extent to which the tree is structurally unsound in the opinion of the Council's Parks Officer- Trees.
- The applicant's need to obtain a practicable building area, access, parking area or install services etc

FURTHER ASSISTANCE

If you require any further help, please contact:

City Planning
Dunedin City Council
First Floor, Civic Centre
50 The Octagon
PO Box 5045
Dunedin
Phone 477 4000
www.dcc.govt.nz

This is also where you can lodge your resource consent application. We are there to provide you with planning information. If you consider you need further planning advice, you may wish to discuss your application with an independent planning consultant.

Nuisance Trees – 8 Scotia Street, Waikouaiti – Observations for an Absentee Landowner

Disclaimer: *The following contains observations to assist an absentee landowner to determine and develop an appropriate course of action regarding reported “nuisance trees” on her historic Waikouaiti property. They should not be regarded as definitive recommendations.*

- **Schedule 25.3 Significant Trees, Dunedin City District Plan**

Some Dunedin trees are protected under the provisions of the Dunedin City District Plan – Schedule 25.3 Significant Trees. Some of the trees at 10 Scotia Street, Waikouaiti, appear in this schedule - viz. Tree No. G089; Map No. 10; Eucalyptus sp (group); Lot 10 Blk IV DEEDS 51 [The Schedule also notes trees on the adjacent Road Reserve (7 Scotia Street) – viz. Tree No. G088; Map No. 10; Eucalyptus sp (group); Road Reserve (SCOTIA STREET).]

Before a person can remove, maintain, or make any alteration to such trees, including emergency work, a Resource Consent is required. These consent applications are usually free.

Such consent application may require supporting evidence from a qualified arborist. The need for this could be determined from discussion with the appropriate Council Officer.

It should be noted that there is a *Fund for Maintaining Significant Trees*, which provides a financial incentive to assist owners.

- **Site Inspection**

The property was visited on 14 September 2018. One of the tenants was in attendance throughout.

The trees in question comprise (mostly) Eucalyptus (15) and Radiata pine (3). By any standard, they are large – ranging in height from 25 – 30m, and 75 – 150+cms in diameter. The trees are located on the west and southwest side of the property, to the rear of the dwelling. Google Street View provides very good imagery of the trees in question.

From a positional perspective, 4 – 5 trees are within 10m of the dwelling; a further 4 – 5 trees are within 15m; and the remainder are within 20 – 25m of the dwelling. (It was also observed that 4 – 5 trees on the southern boundary are within 10 – 15m of a neighbouring dwelling at 10 Scotia Street.)

Branches from the closest 4 – 5 trees overarch the dwelling. An accumulation of bark, leaves, seed capsules and branches in the spoutings and roof valleys, and against the rear walls of the dwelling, was observed. Some of the branches lying on the ground were up to 10cm in diameter and 2 – 3m in length.

Given the age and size of the trees, coupled with their proximity to the dwelling, a health and safety risk exists – a risk that would be heightened during wind events. The prevailing wind in the area is described as WSW.

That risk could be managed/minimised by the removal and/or form pruning of those trees closest to the dwelling in the first instance, although all the trees in question are in need of some maintenance. A suppressed understory of ornamental conifers and the like was observed. Care should be taken to protect these from damage if at all practical to do so.

For obvious reasons the work would need to be undertaken by an appropriately qualified contractor holding all relevant insurances.

Aside from firewood, there is little merchantable value in the trees.

Rodger Hancock
17 September 2018

8

INTERNATIONAL TREE MANAGERS LTD.

P.O.Box 8032
Dunedin, New Zealand
Telephone 0-3-474 1302
Cellphone 021-34 25 24
Fax: 0-3-479 0363
E-mail InterTree@compuserve.com

Dunedin, 5 March 1997

Ross, Dowling, Marquet and Griffin
Barristers & Solicitors
Attn: Mr Simon Anderson
P.O. Box 1144
Dunedin.

Ref. 397.97

RE: Trees Boundary 8 + 10 Scotia Street Waikouaiti

Dear Sir,

In response to your letter dated 18.2.97 I report back to you, after having visited the site on 22.2.97.

I refer in particular to your questions in your letter under #2a + 2b

General notes

The trees which are subject of the dispute, are all Eucalyptus trees. Nine specimen are Eucalyptus globulus, one specimen is a to me unknown form of Eucalyptus. It appears that the trees are approximately on the true Eastern boundary in common of the above mentioned properties.

As a result, the canopies are overhanging both properties.

Age

The trees are approximately 60 - 80 years old

Height

The majority of the trees are approximately 20 metres tall

Canopy width

The canopy width varies from 6-10 metres, in effect one can speak of one mutual canopy.

Trunk diameter

All trees exceed a trunk diameter of 500mm, measured at 1200mm above ground level.

Frank C. Buddingh' - Managing Director
Fellow Arboricultural Association, England.
Member International Society of Arboriculture, U.S.A.

FROM : PACIFIC GEOLOGICAL CONSULTING PHONE NO. : 64 3 4657365

Mar. 29 1997 09:09PM P1

9

This means that all trees are protected under the tree ordinances of the DCC district plan.

Any modification will require a permit issued by the DCC.

Health

All trees have developed into tall straight specimen, with exception of the most left hand tree, if one faces the trees from no. 8 Scotia street. This specimen has developed a moderate lean. See photographs.

If one takes the age of the trees into consideration, then they have produced relatively few dead branches.

The foliage density is not optimal, due to moderate attacks by the Eucalyptus leaf beetle. Leaf damage may vary from year to year depending on the prevalence of the beetle. Whilst trees may suffer, in general they do not die.

Stability

✓ I have examined the stability of all trees in dispute and found that none of the trees have moved unduly at the stem base.

In addition to this visual assessment I have taken core samples from three different trees and found all of these to be sound.

✓ There are no further indicators with any of these trees which mark that they are internally decayed and/or unstable.

Location of compost stack

I understand that some concern has been expressed what the impact of the current location of the compost heap has upon the trees.

There have been no adverse effects found.

"Twin eucalyptus trees"

Two specimens have literally embraced each other.

The contact points look somewhat deformed, but the trees are interlocked to such a degree that no chafing takes place.

This means that no decay internal decay pockets have formed at the points of contact.

Proposed dwelling location

The house to be erected is planned at a distance of some 4.5 mtrs from the heart line of the trees.

Some preliminary excavation work has already taken place, which resulted in the removal of some small to medium size feeder roots.

✓ The damage to date is sustainable by the trees.

✓ I have been informed though, that projected underground utilities are scheduled to be laid between the future house and the trees. The trenches will be approx. 600 mm. Deep. If the utilities are laid in the proposed area, then serious consequences will arise for the general health and stability of the trees.

I must strongly advise against the proposed trench planning and recommend that underground utilities will stay within the current excavated zone.

(10)

Recommendations for future tree management

With some careful planning of the new building, all trees can and should, in my opinion, be retained.

The trees form an intricate part of the heritage landscape surrounding the historic home at no. 10 Scotia Street

I advise that, with employment of a qualified Arborist the following work is carried out:

- Removal of all dead wood.
- Raising of some canopies combined with a gentle canopy thinning, in order to avoid shedding of large limbs which may damage the future home.
- That no building activity will take place any closer to the trees than the current excavation line.
- That the area between the new building and the trees will be excluded from the 'building envelope', as to avoid undue soil compaction through building equipment, storage of building materials, storage of chemicals etc
- That the hawthorn hedge will be retained. Removal of the hedge will invariably disturb the root systems of the trees.
- That the resistance of the trees will be improved, so they can cope better with annual elm beetle attacks.
- Thereto it is recommended that all trees are injected with a quick absorb fertilizer into the sap flow system, followed up by a soil/deep feeding fertilizing method with slow release organic fertilizer pellets.

Driveway of no.8, along South boundary of no.10

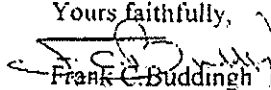
I draw your attention to some apparent recent removal and or breakage of limbs/branches from various trees.

The wounds require attention in the form of wound re-shaping to minimise decay. Some branches are partially broken and require removal.

I enclose some photographs as illustration of the trees mentioned in this report.

Conditional to the above recommendations I am satisfied that retention of the trees, in combination with the new land use can go hand in hand in a harmonious manner.

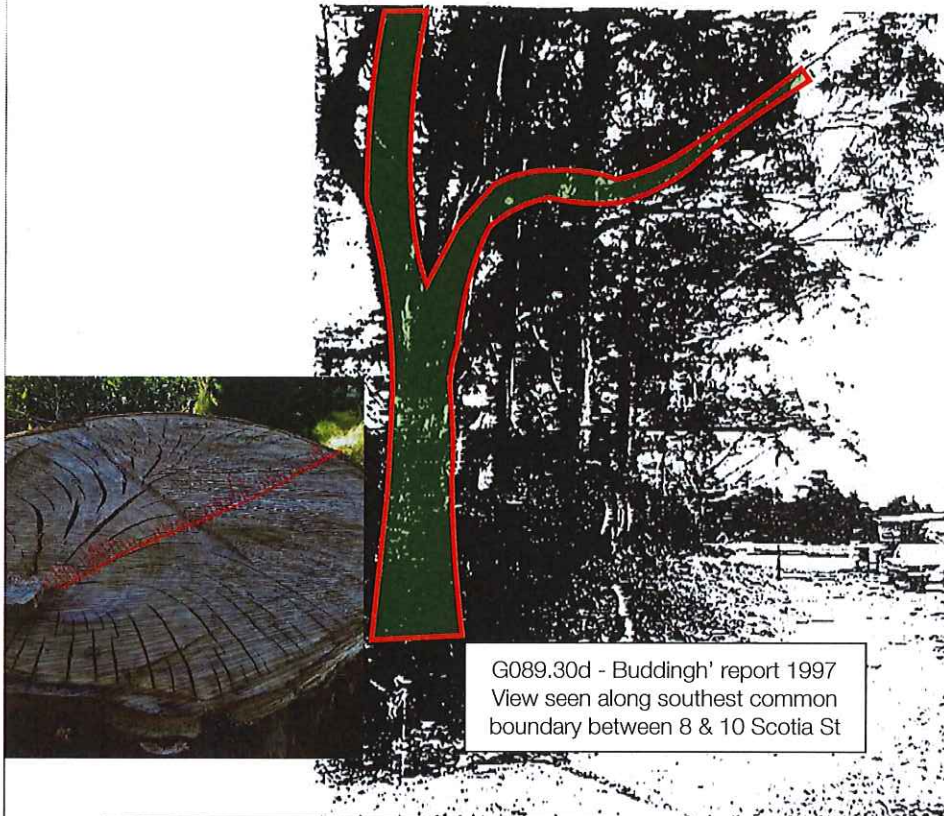
Yours faithfully,


Frank C. Buddingh F.Arb.A

INTERNATIONAL TREE MANAGERS LTD



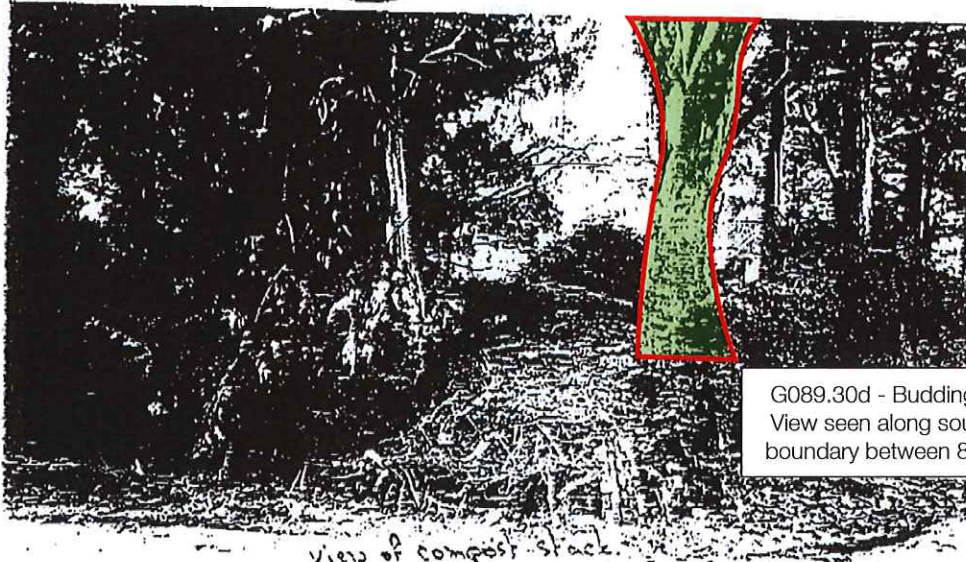
12



Aerial photo 2013 of 8 Scotia St, Waikouaiti with cadastral property lines overlaid showing position of G089.30d as a recently cut stump (≤ 6 months past) 22.11.18



13



G089.30d - Buddingh' report 1997
View seen along southeast common
boundary between 8 & 10 Scotia St

view of compost stack



driveway no. 8.
note damaged branches

POLICY SCHEDULE			
Mr P & Mrs M Waymouth C/- Aon New Zealand - Albany	Client No 6001566	Policy No 6106106	Reference No 5-1 (45388)



Professional Indemnity

POLICY NUMBER	HO-LPI-6106106		
WORDING	VL POL PI-0903		
INSURED	P & M Waymouth		
BUSINESS DESCRIPTION	Consulting Arborist		
PERIOD OF INSURANCE	From:	31 July 2018	at 4pm
	To:	31 July 2019	at 4pm
RETROACTIVE DATE	Unlimited		
TERRITORY	New Zealand		
JURISDICTION	New Zealand		
LIMIT OF INDEMNITY	\$ 500,000	any one claim / in the aggregate during the Period of Insurance including costs and expenses	
EXCESS	\$ 1,000	each and every claim including costs and expenses	
COVERAGE			
Defamation		Included	
Past Liabilities		Excluded	
Loss of Documents		Included	
Amendment to Dishonesty Exclusion		Excluded	
Fidelity		Excluded	
Automatic Reinstatement		Included	

ENDORSEMENTS	PI1010	Fair Trading Act Extension The Company agrees to indemnify the Insured against any claim which may be made against the Insured during the Period of Insurance and reported to the Company during that period in respect of any liability of the Insured in the course of conduct of the Business of the Insured arising out of orders in the nature of monetary compensation under the Fair Trading Act 1986 made by a court of competent jurisdiction, unless such liability was brought about or contributed to by any criminal or malicious act, error, omission or statement of the Insured.
--------------	--------	--

Signed for and on behalf of Vero Liability Insurance Limited

ASL

Authorised Officer
ANS



18 July 2018

16 Regents Riverside
Brigham Road
Reading RG1 8QS
Berkshire
United Kingdom

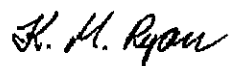
19 November 2018

To Whom It May Concern

This letter is to confirm that I am the owner of the property at 8
Scotia Street, Waikouaiti, New Zealand.

I authorise Peter Waymouth, Consulting Arborist, of Green Trees
Ltd, 11 Bouverie Street, Maori Hill, Dunedin 9010 to represent me
in the matter of the listed trees (G089) at the above property with
regards to the tree fund, notified RMA applications and related
activities.

Yours sincerely



Kathleen Mary Ryan



Application Form for Resource Consent

50 The Octagon, PO Box 5045, Moray Place, Dunedin 9058. Ph 477 4000

www.dunedin.govt.nz

Application details

I/We Kathleen Mary Ryan (must be the FULL name(s) of an individual or an entity registered with the New Zealand Companies Office. Family Trust names and unofficial trading names are not acceptable: in those situations, use the trustee(s) and director(s) names instead) hereby apply for:

☐ Land Use Consent ☒ Subdivision Consent

Brief description of the proposed activity:

This application is for the removal of 20 Eucalyptus nitens listed trees on the DCC 25.3 schedule being the group G089 (8 Scotia St, Waikouaiti). Group G089 currently contains 29 mature Eucalyptus nitens trees & the 9 trees on the shoreline of Hawksbury Lagoon wildlife reserve are not part of this removal application.

Have you applied for a building consent? ☒ No ☐ Yes, Building Consent Number ABA _____

The following additional resource consents from the Otago Regional Council are required and have/have not (delete one) been applied for:

☐ Water Permit ☐ Discharge Permit ☐ Coastal Permit ☐ Land use consent for certain uses of beds of lakes and rivers ☒ Not applicable

Site description

I am/We are the: Kathleen Mary Ryan (owner, occupier, lessee, prospective purchaser etc) of the site

Street Address of Site: 8 Scotia St, Waikouaiti

Legal Description: Lots 10, 11, 52, 53 Block IV Deeds 51

Certificate of Title: 237/210

Address for correspondence

Name: Peter Waymouth - Greentrees Ltd (Put your name here if you are preparing the application for someone else.)

Address: 11 Bouverie St, NEV, Dunedin Postcode: 9010

Phone (Daytime): 027 432 9646 Fax: _____

Email: pw@greentrees.co.nz

Ownership of the site

Who is the current owner of the site? Kathleen Mary Ryan

If the applicant is not the site owner, please provide the site owner's contact details:

Address: 16 Regents Riverside, Brigham Road, Reading, Berkshire, United Kingdom Postcode: RG1 8QS

Phone (Daytime): _____ Fax: _____

Email: kathryan09@gmail.com

Monitoring of your resource consent

Please estimate the date of completion of the work for which resource consent is required. Your resource consent may be monitored for compliance with any conditions at the completion of the work. (If you do not specify an estimated time for completion, your resource consent, if granted, may be monitored three years from the decision date.)

_____ (month and year)

Description of site and existing activity

Please describe the existing site, its size, location, orientation and slope. Describe the **current** usage and type of activity being carried out on the site. For example, discuss the bulk and location of buildings, parking provision, traffic movements, manoeuvring, noise generation, signage, hours of operation, number of people on-site, number of visitors etc. Please also provide plans of the site and buildings thereon. Photographs can help.

This historic residential property is currently rented & stands on a 0.4ha flat section with a northwest aspect. It is surrounded by a 2 groups of listed Eucalyptus trees (G089) extending along the shoreline of Hawksbury Lagoon wildlife reserve (G089) and is contiguous with the group (G088) of Eucalyptus trees on the road reserve at 7 Scotia St.

Detailed description of proposed activity

Please describe the **proposed activity** for the site, giving as much detail as possible. For example, discuss the bulk and location of buildings, parking provision, traffic movements, manoeuvring, noise generation, signage, hours of operation, number of people on-site, number of visitors etc. Please provide plans showing what is proposed.

This proposal is to remove 20 listed Eucalyptus trees from a group (G089) & retain 9 Eucalyptus trees along the shoreline of Hawksbury Lagoon adjoining another group of 10 Eucalypts (G088) on the 7 Scotia St road reserve leading to the lagoon.

District plan zoning

What is the District Plan zoning of the site? Residential - Single unit excluding bach

Are there any overlays that apply to the site e.g. In a Landscape Management Area, In a Townscape or Heritage Precinct, Scheduled Buildings on-site etc?

Breaches of district plan rules

Please detail the rules being breached by the **existing activity** on the site (if any). Also detail the degree of those breaches. In most circumstances, the only rule you need to consider is one rule from the zone in which your work is located. However, you need to remember to consider not just the Zone rules but also the Special Provisions rules that apply to the activity (from the Townscape, Landscape, Trees, Indigenous Vegetation and Flora sections of the District Plan) and also the General Provisions rules that apply to the activity (from the Hazards, Hazardous Substances and Earthworks, Subdivision Activity, Signs, Transportation, Environmental Issues and Utilities sections of the District Plan):

Not applicable

Please detail the rules that will be breached by the **proposed activity** on the site (if any). Also detail the degree of those breaches. In most circumstances, the only rule you need to consider is one rule from the zone in which your work is located. However, you need to remember to consider not just the Zone rules but also the Special Provisions rules that apply to the activity (from the Townscape, Landscape, Trees, Indigenous Vegetation and Flora sections of the District Plan) and also the General Provisions rules that apply to the activity (from the Hazards, Hazardous Substances and Earthworks, Subdivision Activity, Signs, Transportation, Environmental Issues and Utilities sections of the District Plan):

District Plan rule 15.5.1

Affected persons' approvals

We have obtained the written approval of the following people/organisations and they have signed the plans of the proposal:

Name: _____

Address: _____

Name: _____

Address: _____

Please note: You must submit the completed written approval form(s), and any plans showing the proposal signed by affected persons, with this application, unless it is a fully notified application in which case affected persons' approvals need not be provided with the application. If a written approval is not obtained from an affected person, it is likely that the application will be fully notified or limited notified.

Assessment of effects on environment

In this section you need to consider what effects your proposal will have on the environment. Discuss both positive and adverse (negative) effects. The extent of the assessment must be proportional to the degree of potential effects of the proposed activity.

For controlled activities, it need only cover those matters to which the Council's control is reserved (refer to the relevant rule for the matters of control). For restricted discretionary activities, it need only cover those matters to which the Council's discretion is restricted (refer to the relevant rule for the matters of discretion).

Schedule 4 of the Resource Management Act 1991 provides some guidance as to what to include. Also refer also to the Council's relevant checklist and brochure on preparing this assessment. Also see the Ministry for the Environment's publication "A Guide to Preparing a Basic Assessment of Environmental Effects" available on www.mfe.govt.nz.

The effect of 20 listed trees being removed to lower future risks to people & property will create a loss of amenity to a degree; it will be buffered by the retention of 9 Eucalypts along the Hawksbury lagoon shoreline.

The loss of privacy enjoyed for many years by the occupants the house at 8 Scotia St will be a drawback.

Remediation of the barren state of the garden after tree removal is an essential part of the overall plan.

Replanting with suitable native & exotic tree/shrub species immediately following tree removal would begin to address the losses of privacy & wider amenity values within the 5/10 year outlook. With good soils & high water table at hand, a well mulched planting will have every chance of thriving over the within a few years.

(Attach separate sheets if necessary)

Declaration

I certify that, to the best of my knowledge and belief, the information given in this application is true and correct.

I accept that I have a legal obligation to comply with any conditions imposed on the resource consent should this application be approved.

I agree to pay all the fees and charges levied by the Dunedin City Council for processing this application, including a further account if the cost of processing the application exceeds the deposit paid.

Signature of Applicant/Agent (delete one): Peter Waymouth

Date: 21.11.18

Privacy – Local Government Official Information and Meetings Act 1987

Under this Act, any person can request applications lodged with the Council. The Council is obliged to make available the information requested unless there are grounds under the above Act that justify withholding it. While you may request that it be withheld, the Council will make a decision, following consultation with you. If the Council decides to withhold an application, or part of it, that decision can be reviewed by the Office of the Ombudsmen.

Please advise if you consider it necessary to withhold your application, or parts of it, from any persons (including the media) to (tick those that apply):

- ☐ Avoid unreasonably prejudicing your commercial position
- ☒ Protect information you have supplied to Council in confidence
- ☐ Avoid serious offence to tikanga Maori or disclosing location of waahi tapu

What happens when further information is required?

If an application is not in the required form or does not include adequate information, the Council can reject the application. In addition, section 92 of the Resource Management Act 1991 allows the Council to request further information from an applicant at any stage through the process where it is considered necessary to better understand the nature of the activity, the effects it may have on the environment, or the ways in which adverse effects may be mitigated.

Fees

The actual deposits, fees and rates are set annually during the annual plan process. These are intended to cover the actual and reasonable costs of processing your application. Most applications require a deposit and costs above this deposit will be recovered. A current fees schedule is available on www.dunedin.govt.nz or from Planning staff. Planning staff also have information on the actual cost of applications that have been processed.

Further assistance

Please discuss your proposal with us if you require any further help with preparing your application. The Council does provide pre-application meetings without charge to assist in understanding the issues and completing your application.

Please note that we are there to provide you with planning information and we cannot write the application for you. You may need to discuss your application with an independent planning consult if you need further planning advice.

City Planning Staff can be contacted as follows:

In Writing: Dunedin City Council, PO Box 5045, Moray Place, Dunedin 9058
In Person: Customer Service Centre, Ground Floor, Civic Centre, 50 The Octagon
By Phone: (03) 477 4000, Fax: (03) 474 3451
By Email: planning@dcc.govt.nz

There is also information on our website at www.dunedin.govt.nz.

Information requirements (two copies required)

- ☒ Completed and Signed Application Form
- ☒ Description of Activity and Assessment of Effects
- ☐ Site Plan, Floor Plan and Elevations (where relevant)
- ☐ Certificate of Title (less than 3 months old) including any relevant restrictions (such as consent notices, covenants, encumbrances, building line restrictions)
- ☐ Written Approvals
- ☐ Forms and plans and any other relevant documentation signed and dated by Affected Persons
- ☐ Application Fee (cash, cheque or EFTPOS only; no Credit Cards accepted)

In order to ensure your application is not rejected or delayed through requests for further information, please make sure you have included all of the necessary information. A full list of the information required for resource consent applications is in the Information Requirements Section of the District Plan.

OFFICE USE ONLY

Has the application been completed appropriately (including necessary information and adequate assessment of effects?) ☐ Yes ☐ No

Application: ☐ Received ☐ Rejected

Received by: ☐ Counter ☐ Post ☐ Courier ☐ Other: _____

Comments:

(Include reasons for rejection and/or notes to handling officer)

Planning Officer: _____ Date: _____



Tasmanian blue gum seedling at 8 Scotia St
(*Eucalyptus globulus*)



Greentrees