

GreenTrees Ltd

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22.08.24

Phillipa & Darren Bain
27 King St
Mosgiel 9024

Comment: Pin Oak (T666) STEM 'Visibility', 'Form' & 'Vigour/Vitality'

Dear Phillipa & Darren,

Thank you for asking me to comment briefly on the STEM score put forward by McKinlay/Roberts which is contained within the Hearing Agenda for RMA consent application LUC.2024.171 & is set down for a hearing on 6 September next.

Since receiving a copy of the hearing agenda I have made a trip to ascertain the claim that your Pin Oak (T666) could be seen by the naked eye from 1 Fairmile Drive, East Taieri. While my eyesight is reasonable I could not pick out your tree at that distance of ≤ 1.4 km on a clear sunny day, with a small amount of haze all across the Taieri Plain including Mosgiel.

However, with aid of a 30x zoom lens on my camera I was able to take a fair number of photos, among which 2 good sharp photos were stitched together to obtain a contextual image of the block where MacAllister House & 27 King St are situated. Again for further contextual confirmation a 3D Apple Maps aerial photo of the block mentioned above sets my photos as correctly identifying your Pin Oak (T666). The Mosgiel block referred to is bordered by Gordon Rd, Inglis St, King St & Bruce St.

This is a positive identification of Pin Oak (T666) with the electricity lines beneath the canopy overhanging King St, the Holly hedge on your boundary & the Cherry trees in the berm.

Further examination of the recent McKinlay/Roberts STEM re-assessment photo on page 90 of the hearing agenda has lead me to believe, that the correct tree may not have been clearly identified. The blurred conical tree image marked as (T666) simply does not correlate to my photos. Therefore, I hold with my STEM assessment within the hearing agenda for the STEM 'Visibility' (3 points_10%) can be easily seen by the naked eye from 0.5km at end of Joe Brown Drive with the elevation of this viewing point.

Equally, I also hold with my STEM 'Form' (15 points_50%) rating as being reasonable because of canopy raising where large branches have been removed overhanging the house & on the street side standard utility practice has raised the canopy leading to a slight imbalance in aesthetic appearance.

The tree's STEM 'Vigour/Vitality' is set at 'fair' or 'good' (15 points_50%) considering the cyclical pruning which applies to both the house & street aspects. Because it is a large growing forest tree squeezed into a small space, there will be continual need to pay for future crown reduction/thinning to allow sunlight into the house & electricity line clearance. The poses a question about pruning dose & may have longterm implications to tree health.

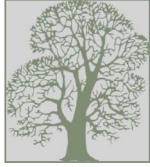
To reiterate I hold with my STEM assessment (26.04.24) at 138 points total within my report & contained in the hearing agenda for LUC.2024.171.

Please do not hesitate to contact me should you have any questions.

Yours sincerely,

Peter Waymouth





STEM: Specific Tree Evaluation_Monetary

After Flook 1996
see below for full explanation

Client	DCC_Hearing_Agenda_LUC.2024.171	P		Date	21.04.24
Address	27 King St, Mosgiel	M	03 489 7636	Lat	-45.883051°S
Email				Lon	170.351431°E
Species	Pinoak (<i>Quercus palustris</i>) T666	H	≤ 20m	DBH	≤ 0.8mø
	McKinlay/Roberts STEM assessmermt	S	≤ 20 m	Age	≤ 65 years

1. Condition of tree (points)	3 (10%)	9 (30%)	15 (50%)	21 (70%)	27 (90%)	Score
Form (structure / appearance)	imperfect	average	standard	choice	fine	21
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	15
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+	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	21
Role (as landscape element)	lesser	modest	select	prime	notable	15
Climate (Micro-ecological effect)	slight	normal	valuable	vital	critical	15
Subtotal Points						75

3. Valuation (based on replacement cost equivalent) ✖	Σ	Calculations	81
		(1. + 2.)	75
a. Total Points (Condition of tree + Amenity values = Total points score)	a	TP = a	156
b. Unit cost -10 x 1yr trees (H = 0.4m, S = 0.2m, DBH = 0.02mø) ★	b	∴ (156TP x 180) = b	28080
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	(55 x 10 x 4) = d	2200.00
e. Wholesale value (Negotiable value range wholesale to retail) (gst incl)	e	(a x b) + (c + d) = e	30400
f. Retail Value (NB all costs shown include gst) (2 x e) #	f	Negotiable Value	60800



NZ-0039BTM

Explanation of terms used above

✖ Flook formula for wholesale value (a x b) + (c + d) = e.

★ Unit cost based on 10 replacement seedling 1yr trees @\$18.00 each = \$180.00 (or alternatively maybe interpreted as 1 tree @\$180.00)

† Maintenance equivalent = Age of tree x 10 replacements x \$4.00 p.a. (or alternatively 1 replacement tree as above)

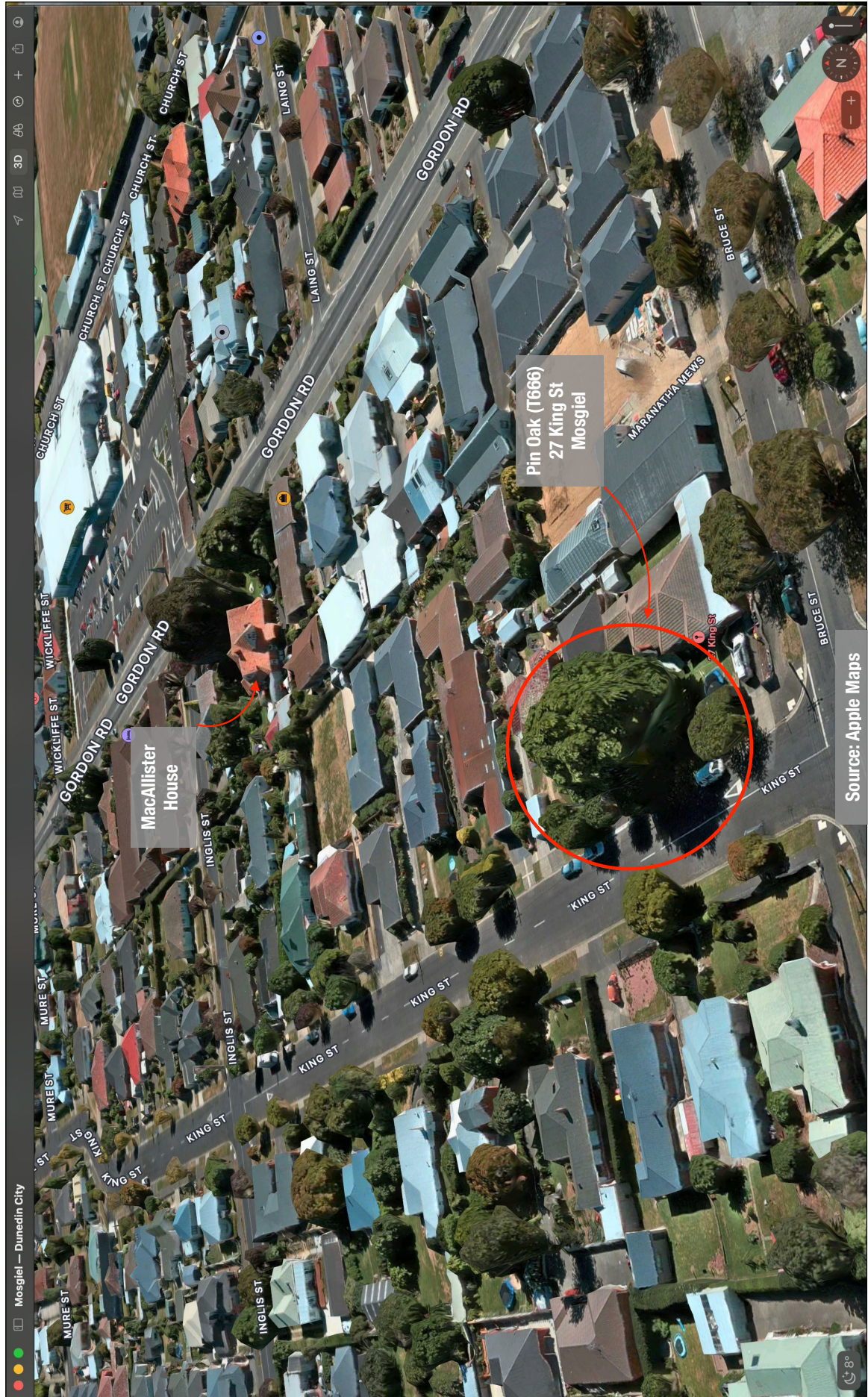
Retail Value is twice wholesale ⇒ (2 x e) = f.

N.B. This monetary tree evaluation form is adapted from an article in the ISA - Journal of Arboriculture 28(1) Jan 2002
In order to allow for unique field values within the matrices for database applications, many field names have been changed.
These changes do not affect either the statistical or functional outcomes of the Flook methodology.

Pin Oak (*Quercus palustris*) photos taken from 1 Fairmile Drive, East Taieri for STEM 'Visibility' distance $\leq 1430\text{m}$, elevation 80m contour 21.08.24 greentrees.co.nz



Pin Oak (*Quercus palustris*) photos taken from 1 Fairmile Drive, East Taiari for STEM 'Visibility' distance $\leq 1430\text{m}$, elevation 80m contour 21.08.24 greentrees.co.nz



Pin Oak (*Quercus palustris*) photos taken from 1 Fairmile Drive, East Taieri for STEM 'Visibility' distance $\leq 1430\text{m}$, elevation 80m contour 21.08.24 greentrees.co.nz

After photographing several blocks of Mosgiel from Fairmile Drive (1.4km distant) with a camera on 30x zoom the Macallister House was the key to eventually finding Pin Oak (T666) nearby in the same block. By stitching 2x frames together the bare rounded canopy framework of the deciduous Pin Oak (T666) emerged next to the Holly hedge on the frontage of 27 King St & the large listed Copper Beech of MacAllister House places these trees in context with the immediate surroundings. Countdown Supermarket across Gordon Rd also completes this contextual picture.

However, when a comparison is made between the 'stitched photos' shown above & the Mackinlay/Roberts photo below, the tree identified as T666 appears to be a wrongly identified as the Pin Oak, in question. The shape of the canopy has a broadly conical aspect & good part of its trunk showing, as against the 'stitched photos' showing a rounded canopy with little or no trunk showing behind the Holly hedge on King St & a Cherry tree on the berm.

N.B. The photo below is an enlarged section of Figure 1. Appendix 3, which appears on page 90 of the Hearing Agenda (ie Council Officer Evidence).



Pin Oak (*Quercus palustris*) photos taken from 1 Fairmile Drive, East Taieri for STEM 'Visibility' distance $\leq 1430\text{m}$, elevation 80m contour 21.08.24
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Pin Oak (T666 *Quercus palustris*) photos taken from 1 Fairmile Drive, East Taieri for STEM 'Visibility' distance $\leq 1430\text{m}$, elevation 80m contour 21.08.24 greentrees.co.nz

