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Memo

To: Burnette O'Connor – The Planning Collective

From: Sean McBride – Director, The Tree Consultancy Company

cc:

Date: 13 August 2021

Re: 1092 Coatesville Riverhead Highway,
Proposed retirement village

Dear Brunette

1.0 Introduction

1.1 The Tree Consultancy Company has been commissioned to provide high-level comments on the proposal to create a retirement village at 1092 Coatesville Riverhead Highway. As part of the proposal, comprehensive facilities will be provided on the site, including apartment buildings, medical centre, retail, childcare, a public playground and a café. The scope of our engagement is to steer and assist the project team around potential arboricultural effects and assist with design solutions that conform to best practices, including suitable mitigating measures.

1.2 I have more than 20 years' experience working as an arboricultural consultant and have carried out many specialists advisory roles for significant projects such as the City Rail Link, Mill Road/Redoubt Road Notice of Requirement and private plan changes. We, and The Tree Consultancy Company, are regularly engaged as experts for Auckland Council, Christchurch City Council and Gisborne District Council.

1.3 It is proposed to apply for resource consent under Schedule 6 of the Covid-19 Recovery (Fast Track Consenting) Act 2020, and at this stage of the proposal, a full arboricultural assessment is not required, more so, general comments around the development layout and potential adverse effects that might occur to protected vegetation.

1.4 Under the Auckland Unitary Plan, the site is zoned Future Urban. Details around the protection of vegetation for this property is provided in Section 2 of this memorandum. Figure 1 below depicts the subject.

Figure 1 – Subject site depicted in the red box

1.5 To assist in preparing this memorandum, I have been supplied with the proposed Overall Site Plan, prepared by Gel Architects (drawing 10-02, Revision A and dated 11/08/2021). The overall site plan is depicted in *Appendix B – Tree Location Plan*.

1.6 A site visit and brief ground-based tree inspection were carried out on 26 January 2021. Based on my review of the Overall Site Plan and tree inspection, my high-level comments on the proposed development are detailed below.

2.0 Statutory context

2.1 Relevant zones applicable:

- Future Urban Zone

2.2 Overlays relevant to tree protection

- None present that would protect vegetation

2.3 Relevant Auckland Unitary Plan sections that apply:

- E17 Trees in roads

Activity Table E17.4.1
(A4) Pest plant removal, as a Permitted Activity
(A8) Works within the protected root zone that do not comply with Standard E17.6.3, as a Restricted Discretionary Activity
(A10) Tree removal of any tree greater than 4m in height or greater than 400mm in girth, as a Restricted Discretionary Activity.

2.4 From an arboricultural perspective, the proposal requires resource consent as a Restricted Discretionary Activity for removal of trees in the road berm.

2.5 Alteration, removal or pruning of trees in the road reserve required Tree Owner Approval Council's Senior Urban Forest Specialist. This is a separate process outside of the resource consent.

3.0 Brief arboricultural comments

3.1 The subject property has historically been used for pastoral farming and then horticultural activities. As a result, the site has well-established shelter belts around the perimeter and within. The shelterbelt principally comprises Japanese cedar (*Cryptomeria japonica*) and river oak (*Casuarina cunninghamiana*). Japanese cedar and river oak are very common shelterbelt species, and in this setting, can be classified as arboriculturally unremarkable. Although unremarkable, and not protected by the rules of the Auckland Unitary Plan; they will be providing some function towards ecosystem service benefits[1] for the immediate area. Ecosystem services value is proportionate to canopy size . Being formed as a shelterbelt, the trees have amended forms and limited scope to increase in size and diameter.

3.2 Lining the existing driveway to the dwelling is a small avenue of eleven semi-mature American sweetgum (*Liquidambar styraciflua*) that stand up to 12 m in height. Trunk girths range between 31.2 cm and 44.6 cm in diameter. These trees are not protected under the Auckland Unitary Plan. Although not protected, four of the eleven trees are sufficiently clear of the proposed Care Home building, and could potentially be retained and carefully worked around if that is practically achievable with the required earthworks design. Arboricultural advice and guidance are currently underway to implement design solutions to try and secure this outcome.

3.3 Two other unprotected mature trees adjacent to the existing dwelling also have the potential to be retained and incorporated into the development, an olive and another five American sweetgums Trees 6, 7, 8, 10 and 14). Some pruning to improve the scaffold branch form of one the American sweetgum is recommended to address tree risk features. The six retained trees have been incorporated into an enclosed outdoor space/park, with sufficient space to enable their development into full maturity.

3.4 A small number of street trees are present adjacent to the site on the Coatesville Riverhead Highway frontage, including a cluster of semi-mature native trees (tōtara, tītoki and kāpuka). Subject to detailed design, the majority of these trees could potentially be retained and worked around if practically achievable with the earthworks design and requirements from Auckland Transport in respect to the upgrade of road infrastructure.

3.5 The nature of the proposal and construction works will require activities to occur near the retained trees. This could include the following:

- Earthworks and the potential changes to ground water availability
- Footpath, roading and paving construction
- Services and drains
- Hard and soft landscaping activities

3.6 With arboricultural design input, the above construction activities can be managed in a manner that ensures effects of trees remain at minimal levels. A full review of these aspects will be needed during the detailed design of the development. In addition to this, a suitable *Tree Protection Methodology* will need to be formulated to ensure the trees are protected during construction works.

3.7 Mitigation for the loss of any protected trees will be achieved through onsite landscaping and street tree planting. Calculations can be undertaken to detail the future ecosystem service benefits lost through removal of protected trees and forecast the performance of young tree planting against these benefits. A prescribed number of new trees can then be provided to ensure there is no deficit in the ecosystem benefits the trees provide.

[1] Ecosystem Service Benefits include atmospheric carbon sequestration, pollution removal, stormwater interception, etc.

4.0 Conclusions

4.1 It is proposed to develop 1092 Coatesville Riverhead Highway into a retirement village, with apartments, a medical centre, care home, retail units, childcare facilities and a public playground. Many shelter belt trees are present along the perimeter of the property, and several semi-mature trees are located near the existing driveway and dwelling. None of the trees contained within the site are protected under the Auckland Unitary Plan.

4.2 The development layout has been designed to allow for the retention of six non-protected trees, providing sufficient space for them to develop to full maturity. The shelterbelt trees are arboriculturally unremarkable and removal of these trees is a permitted activity under the Unitray Plan rules. A prescriptive number of new trees can be provided to ensure there is no deficit of ecosystem services that the trees offer over a set period of time (usually 2050, as this is when New Zealand is required to be carbon neutral).

4.3 Further arboricultural input will be required as the detailed design progresses to ensure suitable construction and tree protection methodologies are included and by confirming arboricultural effects remain at minimal levels.

Please do not hesitate to call me should you require more specific details.

With regards

Sean McBride
Director

Appendix A – Coatesville Riverhead Highway, Riverhead
Tree List Table

Tree number	Species	Common name	Height (m)	DBH (cm)	Structural root zone radius (m) (Coder, 1996)	Tree protection zone radius (m) (Benson, 2019)	Minimum offset	Overall vitality	Branch structure	Form	Age class	Protection status	Anticipated activity	Arboricultural comments and observations
1	*Quercus palustris*	Pin oak	12	35.0	1.9	5.3	2.1	Good	Good	Good	Mature	Non-protected	Remove	Good stand alone tree. Minor suppression by adjacent Lawson cypress
2	*Liquidambar styraciflua*	American sweetgum	42	34.0	1.9	5.1	2.0	Good	Fair	Fair	Mature	Non-protected	Remove	Tree are end of row. Twin stem from 0.5m agl. Union appears sound
3	*Liquidambar styraciflua*	American sweetgum	12	40.1	2.1	6.0	2.4	Good	Good	Fair	Mature	Non-protected	Remove	Tree 4 is approx 3m from Tree 3. Canopies developed together
4	*Liquidambar styraciflua*	American sweetgum	12	37.2	2.0	5.6	2.2	Good	Fair	Fair	Mature	Non-protected	Remove	Secondary leader at approx 4.5m agl. Recommend reduction of most eastern leader, if retained
5	*Liquidambar styraciflua*	American sweetgum	12	34.4	1.9	5.2	2.1	Good	Good	Good	Mature	Non-protected	Remove	Structurally one of the better trees. Will require removal
6	*Liquidambar styraciflua*	American sweetgum	12	39.2	2.0	5.9	2.3	Good	Good	Fair	Mature	Non-protected	Retain	Co-dominant form from 7m. Reduction of subordinate leaders recommended
7	*Liquidambar styraciflua*	American sweetgum	12	31.2	1.8	4.7	1.9	Good	Good	Good	Mature	Non-protected	Retain	Slender upright specimen.
8	*Liquidambar styraciflua*	American sweetgum	12	39.2	2.0	5.9	2.3	Good	Fair	Fair	Mature	Non-protected	Retain	Co-dominant form. Recommend reduction of various leaders. Large buttress roots towards road side. Slender trunk taper on western side
9	*Liquidambar styraciflua*	American sweetgum	12	44.6	2.2	6.7	2.7	Good	Good	Fair	Mature	Non-protected	Remove	Co-dominant from approx 1m. Union appears sound.
10	*Liquidambar styraciflua*	American sweetgum	12	40.1	2.1	6.0	2.4	Good	Good	Good	Mature	Non-protected	Retain	Co-dominant from developing.
11	*Liquidambar styraciflua*	American sweetgum	12	35.0	1.9	5.3	2.1	Good	Fair	Fair	Mature	Non-protected	Remove	Co-dominant from. Compressed union mid-way up trunk. Small bark wound one western trunk aspect.
12	*Liquidambar styraciflua*	American sweetgum	12	36.3	2.0	5.4	2.2	Good	Fair	Fair	Mature	Non-protected	Remove	Co-dominant from. Suppressed with Tree 11. Could remove these two trees and by having minimal effects on adjacent.
13	*Magnolia grandiflora*	Evergreen magnolia	9	51.2	2.4	7.7	3.1	Good	Good	Good	Mature	Non-protected	Remove	Northern side of the tree has been cut back from dwelling. Healthy tree. Explore feasibility of relocation
14	*Olea europaea*	Olive	10	35.6	1.9	5.3	2.1	Good	Good	Good	Mature	Non-protected	Retain	Large buttress root heading towards dwelling. Exposed to approx 5m trunk centre.
15	*Liquidambar styraciflua*	American sweetgum	15	44.9	2.2	6.7	2.7	Good	Poor	Fair	Mature	Non-protected	Retain	Suppressed by adjacent tree. Three leaders at approx 4m agl. Western Union poorly configured (inclusion). Could reduce if reained
16	*Fraxinus sp.*	Ash	16	80.9	3.0	12.1	4.9	Good	Fair	Fair	Mature	Non-protected	Remove	Co-dominant at 1.5m, with three primary trunks. A fourth trunks has since been removed, leaving a large pruning wound. Canopy aspect is towards the road. Little evidence of previous live branch failure. Large surface root NW of trunk, visible 7m from trunk centre. Also visible towards deck. Species profile known to shed branches

4 storey above basement
(35 apts + basement carpark)
4B

4 storey above basement
(32 apts + basement carpark)
4A

3 storey above basement
(24 apts - basement carpark)
3E

3 storey above basement
(24 apts - basement carpark)
3D

3 storey above basement
(24 apts - basement carpark)
3C

3 storey above basement
(24 apts - basement carpark)
3B

3 storey above basement
3A

5 storey above basement
(52 apts + Health & Wellbeing + basement carpark)
1A

3 storey above basement
1B

6
CAFE

5

RETAIL

MEDICAL CENTRE

CHILDCARE & PLAYGROUND

WATER FEATURE

LAWN BOWLS

PETANQUE

PETANQUE

GOLF

HUB

6 ASSESSMENT

RIVERHEAD ROAD

NEW ROAD

EXISTING ROAD EXTENDED

CAMBRIDGE ROAD

COATESVILLE RIVERHEAD HIGHWAY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

See Drawing 2098 002 B

Tree
- Retain
- Remove
- Tree Protection Zone (15 X)
- Critical Root Zone
- Care Home

matvingroup

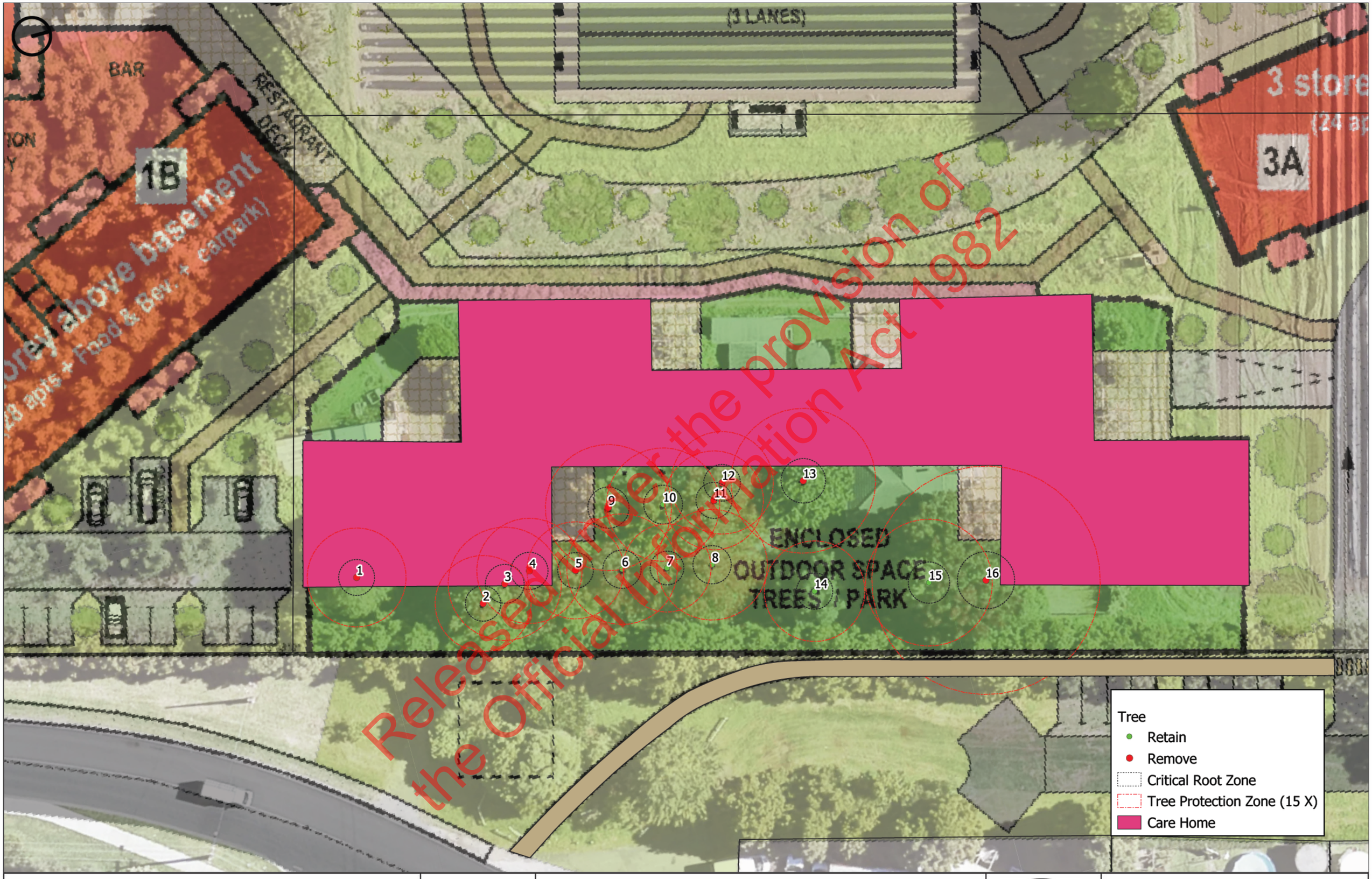
1092 Coatesville Riverhead Highway
Appendix B - Tree Location Plan

The TREE CONSULTANCY - COMPANY -

Project No. 2098

Drawing: 2098 001 A

Rev: A
Date: 13/08/2021



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1092 Coatesville Riverhead Highway
Appendix B - Tree Location Plan

The TREE CONSULTANCY COMPANY

Project No. 2098

Drawing: 2098 002 A

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Date: 13/08/2021