



7 October 2022

Variation 2 Hearing Panel
Dunedin City Council
PO Box 5045
Dunedin 9054

Attn: Gary Rae (Chairperson)

RESPONSE TO MINUTE 14

RS193 Tomahawk – 177 Tomahawk Road

Thank you for the invitation to provide additional information to support our client's submission to re-zone site RS 193 Tomahawk. Our response to Minute 14 is set out below, and various documents have been attached to support our response.

1. A meeting was held between me, Bede Morrissey (DCC Policy Manager), Jared Oliver (3 Waters Services Team Leader), and the submitters Tim Lequeux and Dani Nicolson on the morning of the 6th of October 2022. Due to the snow event on that morning the meeting was held remotely and was perhaps a condensed version of what had been originally envisaged. We remain happy to meet on a future occasion if required to review any outstanding matters.
2. We have revised the structure plan in response to Minute 14 and the meeting with DCC staff. The plan is attached (*Attachment 1 - D18088 Structure Plan Rev B*). The changes are explained in the following paragraphs.
3. The submitters agree to restricting the development capacity of Area B to 26 lots.
4. Stormwater management: Please find attached some additional information provided by e3Scientific, who carried out the original report covering preliminary stormwater management options (*Attachment 2 - SW Report - response to further information request*).

The further information outlines a calculation showing that the area provided for stormwater management on the supplied structure plan is sufficient for a combined detention area/wetland area, with buffers, to provide treatment to target standards. The calculation excludes Area C, however no significant changes to this area are proposed other than planting. If use of the dwelling in Area C was re-authorised by a rezoning of Area C, it would be either renovated or replaced with a structure with similar impermeable area. As mentioned in the additional information, the site is large enough to achieve improved water run-off quality within its own area.

The area of 155 Tomahawk Road has been included in the above calculation. Note that we have assumed the reference to '55 Tomahawk Road' in Minute 14 is a typo. While we acknowledge that 155 Tomahawk Road is currently being subdivided for residential purposes, we don't believe it is appropriate to compel the submitters to treat and/or detain run-off from this development as part of the Variation. That said, we note that the

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submitters do intend on working with the owners of the 155 Tomahawk Road development and accept that the flows from the site cross RS193 (hence including the area in the calculations as requested).

The additional information also sets out several development limitations which the submitters accept:

- Only allow residential activities on Areas A, B and C.
 - Limit the impervious surfaces on Areas A and B to a maximum of 45% of total site area.
 - The overall development shall improve the quality of the existing stormwater discharge from the catchment.
 - Stormwater treatment should include a treatment-train approach including tertiary treatment (i.e. a wetland).
 - Maintenance plans should be prepared for all stormwater treatment facilities at the time of subdivision. These plans should clarify ownership and maintenance responsibilities.
 - During the site development, appropriate erosion and sediment controls should be used to minimise the risk of sediments discharging to the lagoon.
5. Mr Oliver voiced concerns that the responsibility of gaining any discharge consents from Otago Regional Council, should they be required, would fall to Council if the re-zoning is approved. It is our view that this would not be the case and that the responsibility would lie with the developer.
6. Area D: We have now shown this area as remaining Rural (Peninsula Coast) Zone. Protective covenants can be applied to both the whole allotment and specific sensitive areas at the time of subdivision. Covenants should include (but may not be limited to):
- Planting is to be carried out in accordance with an approved planting plan (see *Attachment 3 - 177 Tomahawk Road Planting Plan*, which is to be read with reference to the latest structure plan).
 - Planted areas are to remain permanently planted.
 - No further subdivision.
 - No residential development.
 - No Intensive Farming (using the 2GP definition which includes insensitive pig & poultry farming, animal feedlots and mushroom farming).
 - Covenants over the wetland area once established (at the time of subdivision).
 - Covenants over the stormwater management area specifying how ongoing management will be achieved.

We note that there are various parcels of Crown land that separate the site from the lagoon i.e. a marginal strip and land set aside for conservation purposes. Therefore, a specific covenanted strip along the lagoon margin (Area D) is perhaps not required or appropriate.

7. The access from Tomahawk Road has been labelled as a 'New Legal' Road where it crosses Areas B and D.
8. A public pedestrian link from Gloucester Street to the new road is shown on the attached structure plan. The new road then allows access to Tomahawk Road and the coast.
9. A planting plan has been prepared specifically for the site and is attached - *Attachment 3 - 177 Tomahawk Road Planting Plan*. The planting plan is to be read in conjunction with the structure plan, which depicts the planting areas. The plan has been prepared in accordance with the recommendations made by Aukaha.

10. We have explored the option of undertaking a pre-application meeting with Otago Regional Council. However, due to time-constraints and the appropriateness of such a meeting when there is no application currently being prepared, a meeting has not been held. We note that ORC encourages the construction of new wetlands, and that this proposal has the advantage of offering an improvement in lagoon water quality by collecting and treating significant quantities of urban run-off that is currently un-treated.
11. The submitters have compiled their thoughts on Minute 14. Please see *Attachment 4 – Post meeting letter* from Sorrel O’Connel-Milne, Tim Lequeux and Dani Nicolson.

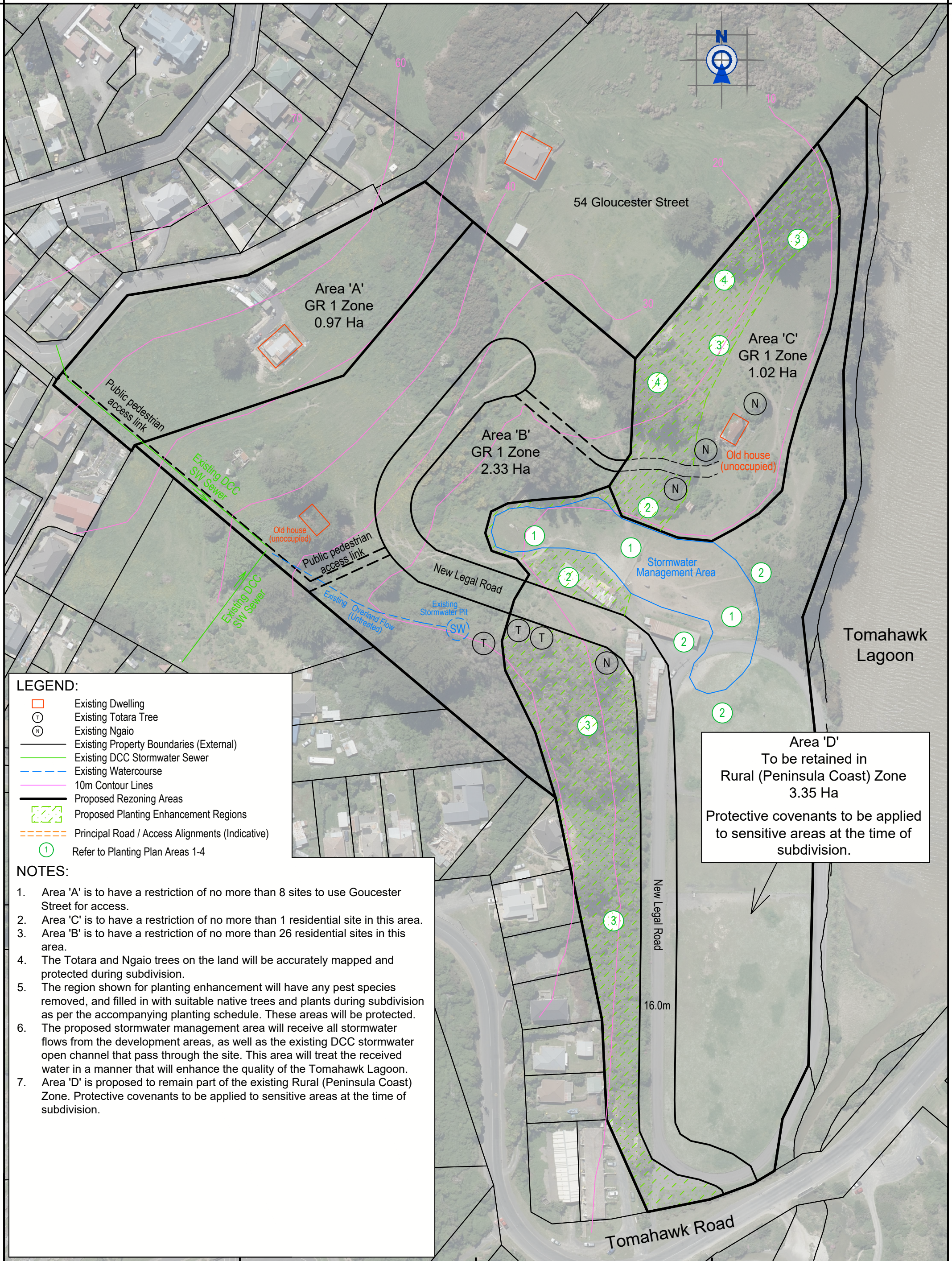
Please do not hesitate to get in touch if you require any further clarifications or information.

Yours faithfully,
PATERSON PITTS GROUP



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LEGEND:

- Existing Dwelling
- Existing Totara Tree
- Existing Ngaio
- Existing Property Boundaries (External)
- Existing DCC Stormwater Sewer
- Existing Watercourse
- 10m Contour Lines
- Proposed Rezoning Areas
- Proposed Planting Enhancement Regions
- Principal Road / Access Alignments (Indicative)
- Refer to Planting Plan Areas 1-4

NOTES:

- Area 'A' is to have a restriction of no more than 8 sites to use Gloucester Street for access.
- Area 'C' is to have a restriction of no more than 1 residential site in this area.
- Area 'B' is to have a restriction of no more than 26 residential sites in this area.
- The Totara and Ngaio trees on the land will be accurately mapped and protected during subdivision.
- The region shown for planting enhancement will have any pest species removed, and filled in with suitable native trees and plants during subdivision as per the accompanying planting schedule. These areas will be protected.
- The proposed stormwater management area will receive all stormwater flows from the development areas, as well as the existing DCC stormwater open channel that pass through the site. This area will treat the received water in a manner that will enhance the quality of the Tomahawk Lagoon.
- Area 'D' is proposed to remain part of the existing Rural (Peninsula Coast) Zone. Protective covenants to be applied to sensitive areas at the time of subdivision.

MEMO

To: Tim Lequeux Ref: 22123
Cc:
From: Sarah Johnstone
Date: 03/10/2022
Subject: Stormwater Report for rezoning at 177 Tomahawk Road – Response
to Further Information Requested

1 Introduction

Dr Tim Lequeux and Ms Dani Nicolson are landowners of 177 Tomahawk Road, Dunedin. This property is currently being considered in the Dunedin City Council proposed District Plan (2GP) Variation 2 hearings. The landowners propose to re-zone parts of the property from its existing rural land use to general residential 1 zoning. To support this process, advice has been sought from e3Scientific Ltd (e3s) regarding stormwater management options for the site.

In March 2022, e3s provided preliminary stormwater management options for 177 Tomahawk Road (preliminary report)ⁱ for the re-zoning and development of eight residential lots adjacent to Gloucester Street.

Following the preliminary report, the proposed area for potential residential development has expanded to include a secondary area. Hence, the scope of the original stormwater assessment needs to be expanded to include this new area. The hearing panel has requested the following further information:

"We note that the stormwater analysis provided with the submission only addressed Area A (8 sites). Please provide an updated stormwater analysis for all areas proposed for development (Areas B and C) that supports the rezoning. Please note the analysis is also to consider stormwater that will pass through the

ⁱ letter reference 22016, 28 March 2022. Included as Attachment 2.

site including from 55 Tomahawk Rdⁱⁱ. It should address any limitations on development or other rules necessary to manage stormwater that should then be included in proposed structure plan rules."

This memo provides an update to the preliminary report (28 March 2022) to take into account the new development area, and responds to the hearing panels request for further information.

2 Updates to preliminary report

2.1 Changes to proposed development area

The latest drawings provided are the *Structure Plan for Proposed Rezoning Revision A* (Paterson Pitts Group, 19/07/2022). The Structure Plan is included as an attachment to this memo, and effectively updates Figure 10 in the preliminary report. The Structure Plan includes an additional 2.33 hectare area of residential development (Area 'B'), a large site for a single residence (Area 'C') and a 3.35 hectare recreational zone (Area 'D') which includes an area earmarked for stormwater management. The updated catchment to be treated in the stormwater management area is provided in Table 1.

Table 1: Updated areas

Residential catchment passing through stormwater management area	Area (m²)
177 Tomahawk Road – proposed residential development area ('A' and 'B')	33,000
Adjacent residential area discharging to site from 155 Tomahawk Road*	33,500
TOTAL	66,500

*Slight increase from preliminary report = southwest catchment (from preliminary report) + remaining part of 155 Tomahawk Road (not previously included)

The analysis above does not include Area 'C', which is 1.02 hectares earmarked for one dwelling only. Stormwater from this area should either be directed back to the main stormwater management area or managed on site. Given the close proximity of Area 'C' to the lagoon, future landowners should be made to demonstrate that any development will improve water quality runoff from the site. The site is large enough to achieve this. Furthermore, wastewater should be connected to the council network.

ⁱⁱ This is assumed to be referring to 155 Tomahawk Road

2.2 Assessment of the amended proposed development area

Christchurch guidelines indicate that a combined detention basin/wetland area, with buffers, will typically require 5 to 8% of the urban catchment to provide treatment to target standards and meet acceptable facility criteria (Christchurch City Council, 2013). The proposed stormwater management area for 177 Tomahawk Road is 3700 m² (5.6% of the residential area draining to itⁱⁱⁱ - see Table 1). This indicates that there is enough land available to treat the total residential catchment with the proposed treatment train approach of detention basin and wetland.

3 Conclusion

There is adequate land available at 177 Tomahawk Road to treat stormwater for the proposed development and the adjacent residential area that drains through the site to a high level prior to discharge.

Recommended development limitations:

- Allow only residential activities
- For Areas 'A' and 'B' limit imperviousness to a maximum of 45%
- The overall development shall improve the quality of the existing stormwater discharge from the catchment
- Stormwater treatment should include a treatment train approach including tertiary treatment (i.e. wetland)
- Maintenance plans should be prepared for all stormwater treatment facilities, including clarity regarding ownership and responsibility.
- During the site development appropriate erosion and sediment controls should be used to minimise the risk of sediments discharging to the lagoon.

4 References

Christchurch City Council. (2013). *Waterways, Wetlands and Drainage Guide - Part B: Design*.

ⁱⁱⁱ Total residential area in the catchment

Attachments:

1. Structure Plan for Proposed Rezoning (Rev A) (Paterson Pitts Group, 19/07/2022)
2. Preliminary Stormwater Management Options - 177 Tomahawk Road, Dunedin (letter reference 22016, 28 March 2022)

177 Tomahawk Road Planting Plan

Wetland Stormwater Basin and Margins – Area “1”

- Rautahi (*Carex geminata*) [Plant within inner margins]
- Toetoe (*Austroderia richardii*) [Plant on outer margins]
- Pukio (*Carex secta*) [Can be planted in areas that are occasionally inundated]
- Harakeke (*Phormium tenax*) [Plant on outer margins]
- Mingimingi (*Coprosma propinqua*) [Plant on outer margins]
- Tī kōuka/cabbage tree (*Cordyline australis*) [Plant on outer margins]
- Kahikatea (*Dacrycarpus dacrydioides*) [Plant in poorly drained areas but not routinely inundated]
- Leafless rush (*Juncus pauciflorus*) [Can be planted in areas that are occasionally inundated]
- Wiwi (*Juncus edgariae*) [Can be planted in areas that are occasionally inundated]
- Oioi/jointed wire rush (*Apodasmia similis*) [Can be planted in areas that are occasionally inundated]
- Giant rush (*Juncus pallidus*) [Can be planted in areas that are occasionally inundated]

Wetland Seepage Areas (e.g. the overland flow) – Area “2”

- Rautahi (*Carex geminata*) [Plant within seepage]
- Toetoe (*Austroderia richardii*) [Plant on margins]
- Pukio (*Carex secta*) [Plant within seepage]
- Harakeke (*Phormium tenax*) [Plant on margins]
- Mingimingi (*Coprosma propinqua*) [Plant on margins]
- Tī kōuka/cabbage tree (*Cordyline australis*) [Plant on margins]

Densities:

- Planting of sedges and rushes (*Carex*, *Juncus*, *Apodasmia* species) should generally be carried out at a density of 4 plants per square metre (i.e. at 0.5 metre centres).
- Larger species such as harakeke (*Phormium tenax*), tī kōuka/cabbage tree (*Cordyline australis*), toetoe (*Austroderia richardii*) and mingimingi (*Coprosma propinqua*) can be planted at 2 metre spacing, or 1 metre spacing if resources allow (this will achieve canopy closure more quickly).
- Kahikatea (*Dacrycarpus dacrydioides*) can be planted at 4 metre spacing. Larger species should be at least 40cm tall before being planted out.

Dune Forest (sandy areas e.g. near the macrocarpa) – Area “3”

- Lowland tōtara (*Podocarpus totara*) [Exposure tolerant, plant early/pioneer]
- Kōhūhū (*Pittosporum tenuifolium*) [Exposure tolerant, plant early/pioneer]
- Mahoe (*Melicytus ramiflorus*) [Plant under forest canopy or in protected areas]
- Ngaio (*Myoporum laetum*) [Exposure tolerant, plant early/pioneer]
- Kapuka/broadleaf (*Griselinia littoralis*) [Exposure tolerant, plant early/pioneer]
- Mataī (*Prumnopitys taxifolia*) [Plant under forest canopy or in protected areas]
- Red matipo (*Myrsine australis*) [Plant under forest canopy or in protected areas]
- Poroporo (*Solanum laciniatum*) [Exposure tolerant, plant early/pioneer]
- Tī kōuka/cabbage tree (*Cordyline australis*) [Plant on margins]
- Fierce Lancewood (*Pseudopanax ferox*) [Plant in drier sites]
- Shield fern (*Polystichum vestitum*) [Understory species, plant in established forest]
- Hounds tongue (*Lecanopteris pustulatum*) [Understory species, plant in established forest]
- Hen and chicken fern (*Asplenium bulbiferum*) [Understory species, plant in established forest]
- Kōkihi/New Zealand spinach (*Tetragonia tetragonioides*) [Understory species]

Coastal broadleaved forest with scattered podocarps – Area “4”

- Kapuka/broadleaf (*Griselinia littoralis*) [Exposure tolerant, plant early/pioneer]
- Kōhūhū (*Pittosporum tenuifolium*) [Exposure tolerant, plant early/pioneer]
- Horoeke/Lancewood (*Pseudopanax crassifolius*) [Plant in drier sites]
- *Pseudopanax colensoi* var. *ternatus* [Plant under forest canopy or in protected areas]
- Putaputawētā/Marbleleaf (*Carpodetus serratus*) [Exposure tolerant, plant early/pioneer]

- Mingimingi (*Coprosma propinqua*) [Wide tolerance, plant throughout and on borders]
- Fierce Lancewood (*Pseudopanax ferox*) [Plant in drier sites]
- Lowland ribbonwood (*Plagianthus regius*) [Exposure tolerant, plant early/pioneer]
- Mahoe (*Meliczytus ramiflorus*) [Plant under forest canopy or in protected areas]
- Hall's tōtara (*Podocarpus laetus*) [Exposure tolerant, plant early/pioneer]
- Horopito/Pepper Tree (*Pseudowintera colorata*) [Plant in protected areas]
- Raukawa (*Raukaua edgerleyi*) [Plant in damp areas under forest canopy or in protected areas]
- Kōwhai (*Sophora microphylla*) [Exposure tolerant, plant early/pioneer]
- Ti kōuka/cabbage tree (*Cordyline australis*) [exposure tolerant, plant on margins and throughout]
- Kakaha/bush lily (*Astelia fragrans*) [Understory species, plant once canopy has begun to establish]
- Narrow-leaved lacebark (*Hoheria angustifolia*) [Plant in drier sites, e.g. uphill]
- Ngaio (*Myoporum laetum*) [Exposure tolerant]
- Red matipo (*Myrsine australis*) [Plant under forest canopy or in protected areas]
- Kānuka (*Kunzea robusta*) [Exposure tolerant, plant as an early/pioneer species in drier areas]
- *Olearia aviceniifolia* [Exposure tolerant, plant early/pioneer]
- Fragrant Tree Daisy (*Olearia fragrantissima*) [Exposure tolerant, plant early/pioneer]
- Kōtukutuku (*Fuchsia excorticata*) [Plant in damp areas under forest canopy or in protected areas]
- Tarata/Lemonwood (*Pittosporum eugenioides*) [Plant under forest canopy or in protected areas]
- *Coprosma crassifolia* [Exposure tolerant, plant in drier areas e.g. uphill]
- *Coprosma rotundifolia* [Plant under forest in damper areas]
- *Coprosma areolata* [Exposure tolerant, plant early/pioneer]
- Poroporo (*Solanum laciniatum*) [Exposure tolerant, plant early/pioneer]
- Kahikatea (*Dacrycarpus dacrydioides*) [Plant in poorly drained areas]
- Harakeke (*Phormium tenax*) [Plant on margins]
- Hen and chicken fern (*Asplenium bulbiferum*) [Understory species, plant in established forest]
- *Asplenium lyallii* [Understory species, plant in established forest]
- *Asplenium obtusatum* [Understory species, plant in established forest]
- Hounds tongue (*Lecanopteris pustulatum*) [Understory species, plant in established forest]
- Shield fern (*Polystichum vestitum*) [Understory species, plant in established forest]

Densities:

- Podocarp species such as Kahikatea (*Dacrycarpus dacrydioides*), Lowland tōtara (*Podocarpus totara*), Hall's tōtara (*Podocarpus laetus*) and Mataī (*Prumnopitys taxifolia*) should be planted 4 metres apart if interplanted with broadleaved and/or shrub species.
- Ngaio (*Myoporum laetum*) 2 metres from neighbouring plants (of any species) to accommodate lateral growth.
- Most tree and shrub species should be planted can be planted at 2 metre spacing, or 1 metre spacing if resources allow (this will achieve canopy closure more quickly).

Notes:

- Plants should be sourced from local sites, preferably from the Otago Peninsula. The Yellow Eyed Penguin Trust and the Tomahawk Smalls Beach Care Trust are two local nurseries. Seed can be collected from remnant bush sites on the peninsula.
- Over time the mature macrocarpa can be replaced with indigenous species.
- Gorse can be used as a nursery/shelter for indigenous species.

Addressed to Variation 2 committee
Gary Rae, Steve Walker and Jim O'Malley

Kia ora koutou,

Following our meeting with council staff on 6 October 2022, we provide these additional notes for the panel to consider alongside our updated evidence submitted on 7 October 2022. We would like to outline our understanding of some key barriers to rezoning (which we discussed in the meeting) and also reiterate how our approach to development within the Tomahawk catchment considers the ecological sensitivities of the adjacent Tomahawk Lagoon.

We are aware of stormwater issues for the 11 Centre Road subdivision, which we understand have caused significant challenges for the DCC and the developers. We do not consider the same issues will arise in our situation, primarily because we have not considered discharge of stormwater to the lagoon as an option. All management of stormwater from development of 177 Tomahawk Road is proposed to be land based.

We understand that the Tomahawk Lagoon is of ecological significance (and which we want to protect!). We are therefore 'front footing' the process and addressing any challenges now, by investigating an ecologically viable plan using our stormwater specialist. This will hopefully prevent or address any future issues.

We are also part of the advisory group for ECOTAGO, a citizen science community initiative which monitors ecological health of the lagoon and includes water quality metrics. Our ethos is to support improvement of the lagoon ecology.

We are committed to development of the Tomahawk Catchment Group and have attended initial meetings. We have shared our vision of an improved estuary margin and water quality as part of these early discussions.

Regarding the resource consent process and possible barriers, our engagement with tangata whenua and DCC indicate that our land based stormwater management plan (and ecological focus) are appropriate. We envision our plans will fit well with ORC requirements for a stormwater management approach adjacent to a regionally significant system. Subsequent to our meeting on 6 October, we have approached the ORC for preliminary comment on our stormwater management plan. We are happy to share with the committee any information provided to us by the ORC, though we expect that any comment from ORC will be after 7 October 2022 when we submit our new evidence.

We are available for ongoing discussions with the panel. Please do not hesitate to contact us.

Kā mihi nui,
Sorrel O'Connel-Milne, Tim Lequeux and Dani Nicolson