BEFORE THE FAST-TRACK EXPERT CONSENTING PANEL

IN THE MATTER	An application	for approva	ls under	section 42 of
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the Fast-track Approvals Act 2024

AND

IN THE MATTER Delmore, a project listed in Schedule 2 to the Fast-

track Approvals Act 2024

MEMORANDUM OF COUNSEL FOR THE APPLICANT RESPONDING TO MINUTE 16 8 August 2025

MAY IT PLEASE THE PANEL

- 1. This memorandum responds to the request for further information in Minute 16.
- 2. The applicant's further information covers the 7 topics set out in its memorandum dated 1 August 2025. The response on each topic is provided in an Attachment to this memorandum as follows Attachment A ecology; Attachment B traffic and transport; Attachment C wastewater; Attachment D economics and funding and financing; Attachment E parks; Attachment F geotechnical; Attachment I hydrology.
- 3. The further information provided matches the precis set out in Table 1 of the applicant's 1 August 2025 memorandum. It is slightly longer than the approximate total page number. The applicant apologises for the overrun but confirms the responses are succinct.
- 4. The Council's 28 July 2025 further information also included a 20 page legal memorandum. A brief response is provided below.
- 5. Para 2.1 says that in the Council's view "there remain a number of adverse impacts that, individual and collectively, are sufficiently significant to be out of proportion to any regional benefits". Alleged adverse impacts are then listed at para 2.1(a)-(f). It is unclear how the Council has reached this view when it has failed to acknowledge any benefits and undertake the required weighting exercise.¹ On the alleged adverse impacts:
 - a. Paras 2.1(a) and (b) (and section 9): The information before the panel demonstrates (using Watercare's own data where available) there is capacity in the water supply and wastewater networks² for existing users, live zoned land, the Milldale fast-track project, and Delmore.³ Watercare has provided no contrary technical assessment. Urbanisation of other FUZ land may need to wait but it is submitted that is a small adverse impact.
 - b. Para 2.1(c): The applicant has provided two parks that meet the requests of the Council's Parks team and its policy.⁴ The applicant will pay development contributions which can be used for park acquisition.⁵ No adverse impacts arise.
 - c. Para 2.1(d): The NoR6 road within the site has a multi-million dollar benefit. It may serve only Delmore in the short term, but in the long term it will be the anchor point for the rest of the road. More vehicle movements is an avoidable impact from new development, particularly when dealing with the outer edge of the

¹ See memorandum of counsel for the applicant dated 5 July section 4 for analysis of statutory framework and section 5 for overview of regional benefits

² After the Stage 1 Army Bay upgrade

³ Applicant response to further information request lodged 5 August, Attachment A appendix 1

⁴ See further work in Appendix E to this memorandum

⁵ LGA 2002, s 197AA

- urban environment.⁶ Commute Ltd's development specific assessments demonstrate any adverse impact on existing road users is not untoward.⁷
- d. Para 2.1(e) and (d): Any adverse impact from the nature of Viridis' fauna assessment is addressed through pre-construction survey and fauna management conditions. Alleged adverse impacts on wetlands from the NoR6 road are based on a misunderstanding which has been addressed. Erosion and sediment impacts are minimised through staged erosion and sediment control measures across the site. Vegetation and wetland loss are offset. The Council has repeatedly failed to acknowledge that planting and wetland recreation across the site will have benefits felt beyond its boundaries. It is submitted that any residual adverse impacts are minimal.
- 6. Para 4.8 says the "key development from the *East West Link* decision is the recognition that genuine, on-the -merits exceptions may be permitted." That is one of two key developments. The other is the Court's findings on how to correctly "have regard to" applicable plan provisions under s 104, including 'avoid' policies. ¹⁰ When applied to Delmore, that approach supports grant of the approvals sought, as does the exception route. ¹¹
- 7. Para 5.2 says the applicant submits the FUZ is irrelevant. That is not the appellant's submission. It says that the consequence of the FTAA's statutory framework is that the distinction between live zone land and FUZ land is removed. The AUP FUZ provisions are still relevant, but they weigh less than facilitating Delmore's regionally significant benefits.
- 8. Section 6 says a panel can find a project has no significant regional/national benefits. The applicant disagrees for the reasons in its 7 July memorandum. In response to the specific matters raised by the Council: The MfE advice was one document informing Parliament's ultimate decision to list Delmore in the FTAA because of its significant regional benefits. ¹² It is Parliament's decision not a general note about information sources in an MfE advice document that is determinative. The FTCA is a different statute with a different statutory framework. The applicant's position is based on interpretation of the text of the FTAA, considering context and purpose. ¹³ Reference to ss 21 and 22 FTAA were made as part of that analysis; there is no equivalent for listed projects because their referral to the process has already been determined by Parliament. The applicant's interpretation would not have perverse outcomes. Panels must still consider the extent of significant benefits, take those into account alongside an RMA analysis, and weigh them against adverse impacts. In any event, the

⁶ See Appendix 47.2 AEE

⁷ See Appendix 28, 51.2 AEE

⁸ Appendix 57 AEE

⁹ See Attachment A to this memorandum

¹⁰ See memorandum of counsel for the applicant dated 7 August at para 4.34-4.36

¹¹ See revised AEE prepared by Barker & Associates dated 7 August sections 14 and 15

 $^{^{12}}$ Others included the advisory group report which confirmed all projects recommended for inclusion in the FTAA, which included Delmore, "can provide significant regional or national benefits" pg 5

¹³ Legislation Act 2019, s 10

- information before the panel demonstrates Delmore has significant regional benefits, so the point of focus is their extent not their existence.
- 9. Section 8 says Watercare's position there is no capacity within its networks aligns with FDS principes 3 and 5. The applicant disagrees. Principle 5 expressly acknowledges the Council (including Watercare) is required to be responsive to development that is outof-sequence with the FDS. The 'caveat' the Council relies on is only one example where out-of-sequence development may be acceptable. It is not exclusive or determinative. The applicant submits the factual and legislative context applying to Delmore is another. Regarding principles 3(a) and 3(b), a shift in focus about allocation of infrastructure capacity is necessitated by Delmore being listed in the FTAA for development now. The information before the panel demonstrates that there is capacity within Watercare's networks to support this growth; on the applicant's information significant reallocation of Watercare funding is not required. 14 Rather, other FUZ growth may have to wait for future upgrades that are already planned. 15 The Council has provided no technical evidence to show why banking capacity for land with no determined development date, only an earlier indicative urbanisation date in the FDS, is making the best use of existing infrastructure. Conversely, the applicant's information clearly explains why it is not. 16
- The Council says the applicant has not responded to the funding and financing issues 10. raised in Appendix 1 to its comments to the panel. Barker & Associates has prepared a memo showing where within the applicant's material these matters have been addressed. ¹⁷ The applicant is paying for the works within the Delmore site and covered by the approvals it seeks. It is paying for the upgrades to surrounding supporting road infrastructure and the infrastructure outside the site boundary required to connect to the water/wastewater networks that its technical advisors have identified are needed to support the development. 18 It will pay development contributions the purpose of which are to enable the Council to recover "a fair, equitable, and proportionate portion of the total cost of capital expenditure necessary to service growth over the long term." Once built, operational costs of some aspects will be funded by the residents societies and for others through rates in the normal way. The funding matters raised by the Council in Appendix 1 go beyond what the applicant is required to cover. To the extent the Council's comments can be interpreted as suggesting the applicant should pay for infrastructure upgrades outside the site and pay development contributions on top, this is unlawful.²⁰

¹⁴ This info also responds to the submissions at para 9.5 of the Council's 28 July memo

¹⁵ E.g. Army Bay Stage 2 and Orewa 3 transmission

 $^{^{16}}$ Refer to Attachment D to this memorandum and Appendix 53.2 AEE $\,$

¹⁷Refer to Attachment D of this memorandum

¹⁸ Refer to Appendix 46.3 and 51.2 re road infrastructure and 11 and 58 re connections

¹⁹ LGA 2002, s 197AA

²⁰ Auckland Council v Auckland Council & Fletcher Residential Ltd [2025] NZHC 1214; Neil Construction Ltd v North Shore City Council [2008] NZRMA 275

11. The applicant thanks the panel for attending to this matter and apologies again for the overrun of the approximate page length provided in its 1 August memorandum.

w. c. gur

Madeleine C Wright, Counsel for Vineway Ltd

Attachment A

Ecology further information



TO: Andrew Allsopp-Smith, Andrew Fawcet Date: 7 August 2025

Vineway Limited

COPY TO: Madeleine Wright Document No: 10122-011-1

FROM: Mark Delaney

DELMORE FAST TRACK APPLICATION - RESPONSE TO AUCKLAND COUNCIL FINAL ECOLOGY COMMENTS

Overview

This memorandum has been prepared by Viridis Limited (Viridis) in response to matters raised in Annexure 15 – Freshwater Aquatic Ecology (17 July 2025) and Annexure 16 – Terrestrial Ecology (16 July 2025), issued by Auckland Council.

Response to Queries

Freshwater Ecology

No clarification is provided on the wetland loss/offset implications of this application in the context of the NoR 6 arterial road works.

Following discussions with Auckland Council's freshwater ecology specialist, Ms Bootsma, it was confirmed that concerns regarding wetland offsetting in relation to the NoR 6 arterial road arose from a misunderstanding. This matter is now resolved, as confirmed in the attached email correspondence.

Hydrology (raised in Annexure 15)

Concern wetland habitat will not establish within embedded culvert.

Williamson Water & Land Advisory (WWLA 2025) has prepared a response addressing this concern. We agree with WWLA's assessment and note the following additional point:

In cases where the reformation of a natural bed is expected, Viridis referred to this as 'temporary wetland removal' in the Ecological Impact Assessment (EcIA, Section 6.2.2, Viridis 2025a). However, to adopt a precautionary approach, we treated this temporary removal as permanent reclamation in our offset calculations. This conservative assumption was made to ensure any unforeseen or residual effects were appropriately accounted for.

Terrestrial Ecology

The applicant has "declined" to address effects of development in close proximity to sensitive habitats.

To our knowledge, the applicant has not declined to address potential effects associated with development near sensitive habitats. On the contrary, both the applicant and the wider project team have remained open to engagement with Auckland Council's terrestrial ecology technical specialist, Mr Statham, and have actively considered the concerns he raised throughout the application process.

More specifically, the potential effects of development in close proximity to areas of high ecological value (i.e., 'sensitive habitats') have been assessed in both the EcIA (Viridis 2025a) and the subsequent terrestrial ecology response memorandum prepared by Viridis (Viridis 2025b).



Document No: 10122-011-1



These assessments considered the following for all areas of existing indigenous vegetation across the site (not just the Nukumea Reserve and SEA):

- Physical construction-related effects, such as vegetation clearance and earthworks;
- Operational effects, including lighting and noise disturbance and change in use from rural to urban;
 and
- Mitigation measures.

For all areas, mitigation measures to manage construction effects, and ultimately the development, include:

- Development has been deliberately concentrated within areas of non-indigenous vegetation, with removal of native vegetation limited only to where it is essential to enable a functional and wellintegrated urban layout;
- Delineating all wetlands and streams and installing exclusion fencing (Condition 37);
- Prohibiting material storage within these areas (Condition 37);
- Requiring detailed pre-construction fauna surveys, with targeted management or mitigation triggered if fauna is found (Section 2.1.9 conditions);
- Implementing robust erosion and sediment control measures (Section 2.1.3 conditions); and
- Providing temporary stream diversions during culvert works that maintain fish passage (Condition 189; indicative diversion plan).

The revegetation planting plan and wetland offset plan then provide a link between construction and operational effects, delivering significant terrestrial and freshwater ecological gains across the site. These directly address the loss of vegetation and habitat outside the Nukumea Reserve and SEA.

To mitigate operational (urban use) impacts, buffer planting and building setbacks are incorporated, including:

- For the Nukumea Reserve and SEA, a 40 m buffer from backyards is provided, with development set down in elevation to minimise light-related effects, particularly for bats; and
- For other areas of existing protected vegetation generally assessed as lower in ecological value than the Nukumea Reserve and SEA due to vegetation stature and reduced connectivity - setbacks and buffer planting are also proposed, as shown in the Greenwoods revegetation and landscape plans.

In addition, extensive revegetation is proposed across the wider site, enhancing ecological resilience and connectivity by linking existing and proposed indigenous vegetation.

These areas will be maintained by the residents' society, which will be responsible for:

- Pest plant control;
- Pest animal control; and
- Ppreventing the removal or damage of indigenous vegetation.

These long-term management obligations are intended to reduce edge effects caused by urban effects and support the durability of mitigation measures over time.



Document No: 10122-011-1

7 August 2025



The applicant has failed to consider the ecological impact of realigning the southern part of the NoR6 road.

The EcIA (Viridis 2025) assessed the ecological effects of the NoR6 alignment within the project site. Assessment of the NoR6 alignment outside the site, specifically the southern section, was not within the scope of Viridis' engagement.

It is our understanding that the design for this southern section is still at the preliminary concept stage and has not yet been finalised. Importantly, the proposed realignment remains within the designated footprint and has been positioned along the western boundary of the covenant as far as practicable, as a result of other site constraints.

While edge effects and stream crossings are expected, these are also present in the current alignment. According to McKenzie and Co. (2025), the revised design reduces bush loss through a smaller earthworks footprint and integrated stormwater infrastructure, thus reducing the overall ecological effects.

The applicant's ecologist has used Council photos.

Viridis has not used any photographs provided by Mr Statham or Auckland Council. The images referenced were taken by Viridis during a January 2025 site visit and include a staff member unknown to Mr Statham.

Regardless, the use of a representative image, even if sourced externally, does not imply a lack of site-specific ecological assessment. In this case, however, all photographs were taken by Viridis. Furthermore, Viridis has undertaken no fewer than 11 site visits to inform our ecological assessments.

The applicant has used not included effects associated with culvert 9 in its offsetting analysis.

Culvert 9 was addressed in both the EcIA (Section 6.2.2, Viridis 2025a) and the freshwater ecology response memo (Item 10, Viridis 2025c). It is explicitly and implicitly included in the offsetting analysis. The freshwater memo is also referenced in the terrestrial ecology response (Viridis 2025b).

Attachments: Email correspondence between M. Delaney (Viridis) and A. Bootsma (Auckland Council).

References

McKenczie & Co. 2025. Technical Response – Comparison of NOR 6 Original Alignment vs. Proposed Realignment through Delmore Development (Stages 1 & 2), Russell Road, Orewa. Dated 26 May 2025.

Viridis 2025a. Delmore Fast-track Application. Ecological Impact Assessment. 13 February 2025. Document No: 10122-002-1.

Viridis 2025b. Delmore Fast Track Application - Response to Auckland Council Terrestrial Ecology Queries. 30 June 2025. Document No: 10122-007-1.

Viridis 2025c. Delmore Fast Track Application - Response to Auckland Council Freshwater Ecology Queries. 1 July 2025. Document No: 10122-009-1.

WWLA 2025. Delmore Subdivision: 2nd Response to Council's Questions Regarding Wetland Hydrology. A letter addressed to Vineway Limited by WWLA. 5 August 2025. Document No: WWLA1147.

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Document No: 10122-011-1

7 August 2025

From: Antoinette Bootsma
To: Mark Delaney

Cc: <u>Carly Hinde</u>; <u>Dylan Pope</u>

Subject: RE: Delmore Fast-track Application Clarification – Wetland Offsetting and NoR 6 Works

Date: Tuesday, 5 August 2025 9:23:48 am

Attachments: <u>image004.png</u>

Morning Mark,

Thanks for the clarification. I agree that the below clarification resolves my concern regarding the offsetting of wetland loss relating to the NOR 6. While I am unable to comment on the planning component of the distinction between the NOR 6 and the Dellmore application, I conclude that effects on loss of wetlands will be adequately addressed as they pertain to the NOR 6.

Ngā mihi | Kind regards

Antoinette Bootsma | Senior Specialist

Earth, Streams and Trees | Specialist Unit, Planning & Resource Consents Department
Te Kaunihera o Tāmaki Makaurau / Auckland Council
Waea pūkoro / Phone 02 7332 0868, Email: antoinette.bootsma@aucklandcouncil.govt.nz
Level 6. Te Wharau o Tāmaki Auckland House. 135 Albert Street, Auckland, aucklandcouncil.govt.nz

From: Mark Delaney <mark.delaney@viridis.co.nz>

Sent: Monday, 4 August 2025 4:11 pm

To: Antoinette Bootsma <antoinette.bootsma@aucklandcouncil.govt.nz>

Subject: Delmore Fast-track Application Clarification – Wetland Offsetting and NoR 6 Works

Hi Antoinette,

I hope you had a great weekend.

Thank you again for taking the time to speak with me last week about the Delmore Fast-track application. I appreciated the opportunity to discuss the matter you raised in your Technical Addendum (dated 17 July 2025) regarding the need for clearer information on wetland loss and offsetting in relation to the NoR 6 arterial road works.

As discussed, and to confirm more formally in writing, I understand your concern relates to whether any potential wetland loss associated with the NoR 6 construction within the site has been accounted for in the wetland offsetting calculations prepared by Viridis.

I can confirm that it has. All potential wetland loss associated with NoR 6 has been included in the offset calculations presented in both the Viridis Ecological Impact Assessment (February 2025) and the Viridis Delmore Fast Track Application – Response to Auckland Council Freshwater Ecology Queries memorandum (July 2025).

To clarify further, all proposed wetland reclamation is related to culvert installation. Of the thirteen proposed culverts, five (Culverts 1, 5, 7, 9, and 10) involve earthworks within wetlands. Only Culvert 7 is associated with the construction of NoR 6. No additional works within wetlands are proposed as part of NoR 6. The effects of Culvert 7 have been fully incorporated into the

wetland offsetting calculations.

I hope this clarifies the matter, but please don't hesitate to get in touch if any questions remain as I'd be happy to provide further detail.

If this response resolves your concern, I'd appreciate it if you could confirm via reply. With your agreement, I would like to include your response as part of our formal reply to the other ecological matters raised by Council.

Thanks again, and I look forward to hearing from you.

Kind regards,

Mark Delaney MSc MEIANZ Director | Lead Ecologist



Viridis Limited

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Attachment B

Traffic and transport further information





Mr G Finlayson
Barker & Associates

8 August 2025

Copy via email: GusF@barker.co.nz

Dear Gus,

SPECIALIST COMMENTS RESPONSE – 88,130,133 UPPER OREWA ROAD AND 53A,53B,55 RUSSELL ROAD, OREWA

This letter responds to the additional comments provided by Auckland Council / Auckland Transport on 28 July 2025, which are considered to be additional matters/points of misunderstanding in information.

1 BECA - CRAIG RICHARDS

1.1 ITEM 1.3 – NEW INFORMATION REGARDING SPECIFIC SHOULDER WIDENING REQUIREMENTS ON WAINUI AND UPPER OREWA ROAD

Commute response:

Beca have provided some specific recommendations for widening shoulders (1m minimum) of both Upper Orewa Road and Wainui Road to accommodate traffic and cyclists from the proposed development. In this regard:

Upper Orewa Road

We agree Upper Orewa Road is a rural road with minimal shoulders. We do however note it does have approximately 6.5m road width (edge lines) and thus meets the AT Urban and Rural Roadway Design minimum lane width for local or collector roads. It does not however meet the shoulder widths requirements however the speed limit has been reduced to 60km/hr which we consider already partly mitigates this lack of shoulder width.

Wainui Road

We do not consider it appropriate for people to walk along Wainui Road (regardless of shoulder width) and there would be no reason for future residents of Delmore to do so.

This road already caters for reasonable levels of traffic and already has road shoulders of between 0.5-1.0m as follows.

- East of Orewa River, the road is essentially urban with kerbs
- West of Orewa River, the road is typically 7.6m wide (edgeline to edgeline)
- The shoulder widths varies from 0.4m to 1.2m as per Figure 1 below.

Overall, Wainui Road is some 1.2km from the site, generally meets Auckland Transport standards, already caters for reasonable levels of traffic already and as such, any upgrade is not considered the responsibility of the applicant.



Figure 1: Wainui Road widths



2 PTM CONSULTANTS – PAUL SCHISCHKA

2.1 ITEMS 86-98 – COMMENT ON ROAD WIDENING FOR WASTEWATER COLLECTION.

Commute Comment:

Mr Schischka has reviewed the memo from Commute assessing the potential traffic impacts of the removal of wastewater by truck from the development. It may not have been fully apparent in the memo however, based on the tracking we have undertaken, we agree that road widening will need to occur on Russell Road to accommodate the tanker. Details of road widening would be confirmed at Engineering Plan Approval stage. We also note and agree with Mr Schischka's comments regarding the curves to be widened and the use of the van rather than car (although we consider the difference between car and van will be minimal for these curves).

In terms of the tanker tracking in the cul-de-sac (item 86), the cul-de-sac has specifically been made larger than typical residential (11m radii) to a 12.5m radii. This allows the tanker to turn around while also allowing a 10.3m rubbish truck to undertake a three-point turn. **Appendix A** shows this tracking.

Yours sincerely

Commute Transportation Consultants

8 H.

Leo Hills

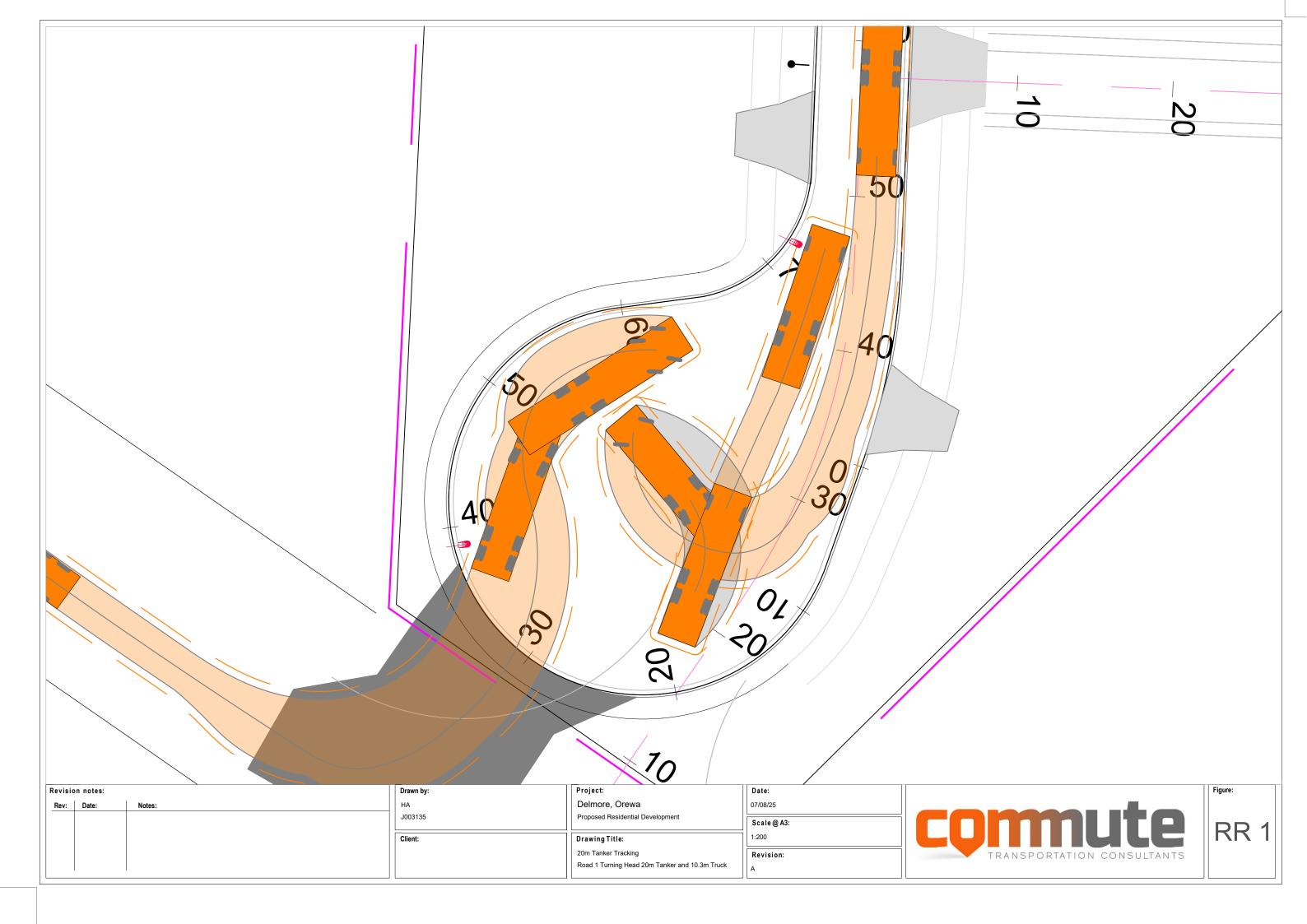
Director

leo@commute.kiwi





ATTACHMENT A – VEHICLE TRACKING





MEMO

To: Vineway Ltd From: James Kitchen Date: 08/08/25

Re: Response to Te Tupu Ngatahi/Supporting Growth Technical Note Addendum, 18/07/25

The proposed McKenzie & Co alignment has been developed to best serve the long-term, intended use of the land, rather than relying on a concept plan that would inevitably require redesign. Our approach integrates the road and land development layout from the outset, ensuring the final form delivers optimal connectivity, reduced environment impacts, and efficiency. The design grades selected are those most appropriate for the steep topography of the site. This design philosophy directly supports the future growth objectives for the area by enabling infrastructure that complements, rather than conflicts with, the natural and planned land use.

The analysis confirms that our design delivers outcomes that are fit for purpose, cost-effective, and aligned with the ultimate end-use vision for the site. While we acknowledge that the slight differences in design approach contribute to the variance in estimated costs, these two options represent the only current, developed alternatives and have therefore been compared. Both can be further optimised in the future; however, only the Delmore proposed alignment is fully integrated with the site's ultimate land use in a master-planned context.

The comparison shows an estimated \$2.65M cost saving for the Delmore alignment, excluding the most significant saving: the Delmore developer funding construction of the road within the development site.

Attachment C

Wastewater further information



PARTNERS

Issue that further information responds to

1. In its further information lodged on 28 July 2025 ("Watercare 28 July Information"), Watercare has stated that it does not support and will not accept any tankering of wastewater (both treated and untreated) from Delmore to any of its treatment plants (paras 34-40). This letter provides further information from Vineway Ltd in response to those statements.

Further information response

- 2. The Watercare 28 July Information does not give any reasons for Watercare's position. At para 34 it refers to the matters set out in its comments to the panel lodged 25 June 2025 ("Watercare 25 June Comments"), so we have assumed that the reasons for its position are those set out at points a) to f) on pgs 6-7 of the Watercare 25 June Comments.
- 3. The matters raised and points a)-e) in of the Watercare 25 June Comments have all been addressed by the independent technical advisors Vineway Ltd has engaged. The relevant technical reports are Appendix 46 to the updated Assessment of Effects lodged by Vineway Ltd on 7 July 2025. We understand that these are all matters the panel will assess, and about which conditions can be put in place to manage any potential effects. It is difficult for us to comment further, or ask our technical advisors to comment further, when Watercare has not engaged with our technical advisors' recommendations for managing these matters. We understand that the panel has identified some of the wastewater management conditions as ones to be discussed at expert conferencing. We agree that well-considered, and evidence-driven conditions are the way to address these matters.
- 4. Point f) of the Watercare 25 June Comments, says that further discharges will not be accepted because the Rosedale WWTP's ability to accept more trucking discharge is limited. No explanation for why it is limited is provided. We are not sure what this statement is based on because it is at odds with Watercare's 2021-2024 Asset Management Plan which says that the Rosedale WWTP currently services about 251,000 people and it has capacity to service around 578,000 people.¹ This is confirmed in its most recent 2025-2034 business plan which says that the Rosedale WWTP currently services around 250,000 people and that it has capacity to service around 578,000 people.² That means the Rosedale WWTP is only operating at about half capacity. here is also the Pukekohe WWTP which we understand is currently servicing around 33,800 people and which has been upgraded to now serve around 60,000 people.³ The temporary addition of 400 odd homes from Delmore Stage 1 is an insignificant reduction in the remaining capacity.
- 5. The Rosedale WWTP in particular is set up for receiving tankers, and there are many different businesses that need to get rid of both treated and untreated wastewater that truck it to Rosedale WWTP for disposal. We understand that this is where Warkworth Ridge trucks its untreated wastewater. This is located in Warkworth, much further from the Rosedale WWTP than Delmore. We are also aware of at least one very recent request to dispose wastewater from a portoloo company with similar disposal quantity requirements to us, that seems to have not been told it cannot truck untreated waste to a Watercare facility. It therefore seems that Watercare has decided to treat the Delmore project differently to other commercial

¹ 2021-2041 Watercare Asset Management Plan pg 66

² 2025-2034 Watercare Business Plan pg 55

³ 2021-2041 Watercare Asset Management Plan pg 67



PARTNERS

operators, with no valid reason for doing so. This is unfair and something we are looking into further.

- 6. Further, Watercare's comments do not recognise any of the specific aspects of the waste product that would be coming from Delmore. First, any waste product (treated or untreated) tankered from Delmore would only be a temporary measure because ultimately the development would connect to the public network. Second, if the product being taken to the WWTP is treated water or reject from the treatment plant, our technical advice is that it will actually have a positive or neutral impact on the WWTP.
- 7. Vineway Ltd will continue to try to work constructively with Watercare about this and about Delmore more generally. We also note that if on-site treatment is the short-term option we ultimately select, there are other options for dealing with discharges that cannot be disposed of on-site. For example, this could be discharged to land somewhere else. We understand that this would require other approvals, but in our experience, this is something the consent conditions could require to occur before certain other actions are taken if the on-site option was the option ultimately adopted.
- 8. From our perspective, it is important that the consent provides us with flexibility to confirm the final wastewater solution, out of the three put forward, further down the track. This is because there are a lot of commercial matters going into that decision, as this note highlights. For example, an on-site treatment plant will cost around \$15million to construct. If, because of the timing of housing delivery vis-à-vis the timing of the Army Bay Stage 1 upgrade, the on-site treatment plant would only serve say ¼ of Delmore Stage 1, or would only serve Delmore Stage 1 for a short period, it may not be financial or environmentally efficient or effective to build and then promptly decommission the on-site treatment plant and drip line system.
- 9. We thank the panel for providing Vineway Ltd with the opportunity to provide this further information.

Yours sincerely,

Andrew Fawcet

Attachment D

Economics and funding and financing further information



To: Vineways Ltd c/o Madeleine Wright

From: Adam Thompson, Date: 8 August 2025

Re: Response to the Technical Addendum from James Stewart, Auckland Council, dated 18/7/25

Benefits & Adverse Impacts

Mr Stewart [page 6] claims the applicant has failed to provide a "systematic weighing up of the costs and benefits of the Proposed Development compared to an appropriate counterfactual has not been completed". My assessment has identified the relevant benefits and adverse impacts, summarised in Appendix 1 for reference.

I consider a relevant counterfactual has been adopted, which is the site itself in its current rural grazing use. This has negligible economic value. The AUP review process has determined the site is suitable for urbanisation (implicit to FUZ land) and FTAA considers the site is suitable for development (implicit to listing the application).

Mr Stewart considers the counterfactual should consider "opportunity costs", "the most efficient use of resources" and a "broader, system wide counterfactual...which considered development sequencing and resource allocation across the region" (pages 5-6). His essential claim is only developments that have the highest net benefit should be approved. My understanding is that the FTAA requires a materially different test, which is to 'facilitate developments with significant regional benefits' and to only decline developments if there are adverse impacts that are 'sufficiently significant to be out of proportion' with those benefits. This means any development with a net benefit may be approved. I consider my assessment of benefits and adverse effects, as summarised in Appendix 1, meets the requirements of the FTAA.

I note that my assessment of benefits and impacts covers only economic matters. Other benefits and impacts, relating to other fields of expertise, also need to be included in the overall assessment.

Infrastructure Funding & Financing

The applicant considers it has responded to the matters raised regarding infrastructure funding and financing, in the Watercare memo's, dated 25 June and 28 July. This is summarised in the memo prepared by Barker & Associates.

Watercare states "We reiterate that there is a significant funding and financing gap to service this development with the infrastructure needed to enable it as required by the NPS-UD and the AUP RPS" and "Infrastructure programming and funding by the council and network infrastructure providers is based on the amount of urban live-zoned areas within the Auckland Unitary Plan. It is inefficient to have to reprioritise budgets and programming to service out-of-sequence developments. There are not infinite funds and so applications like this mean that planned upgrades and the extension of infrastructure into the areas already zoned for urban development (including intensifying brownfield areas) may have allocated funding reduced or diverted from them".

The NPS-UD and AUP RPS do not require housing capacity to be at or below infrastructure capacity. Rather, the AUP-RPS requires infrastructure to be "integrated", "timely" and "efficient" and the NPS-UD requires infrastructure to be "integrated", analysed in terms of its effect on the "competitiveness of the housing market", and to service 'development capacity' to meet demand. Neither document requires housing capacity to be at or below infrastructure capacity as claimed by Watercare. The relevant question, in my view, does not relate to capacity, rather is whether infrastructure will have efficient cost recovery. If the application is assessed from the perspective of efficient cost recovery, the benefits of additional zoned land (developer competition, increased rate of growth, increased DCs/rates paid) outweigh any temporary capacity and servicing issues. It is more efficient to utilise any existing infrastructure capacity quickly and to then have developers ready and waiting to connect to an upgraded system as soon as it becomes available. If only a few developers are given preferential access to infrastructure capacity, there are clear costs (less developer competition, decreased rate of growth, decreased DCs/rates paid). It is worth noting here that Mr Stewart and I agree that the Auckland would achieve a faster rate of growth if there is more competition and house prices are lower, and in this regard, growth cannot be considered as a fixed rate, rather it increases or decreases based on factors such as housing diversity and prices. Watercare would significantly benefit from a faster rate of growth in terms of additional DCs/rates paid and efficient cost recovery, allowing it to begin other projects sooner, and the proposed development offers benefits in this regard.

Appendix 1: Economic Benefits & Adverse Impacts Summary

Economic Benefits

The proposal is for approximately **1,217 residential dwellings that would have an average price of \$985,000. This is \$305,000 (or 23%) lower than the average sale price** for stand-alone dwellings within the study area (currently \$1,290,000). This demonstrates the proposal's comparative affordability within the Hibiscus Coast, and its overall contribution towards the supply of housing that addresses housing needs in Auckland.

The proposal is considered to make a **significant contribution towards a well-functioning urban environment by adding a second major greenfield development to the study area**, on Future Urban Zone (FUZ) land, which would contribute towards ensuring there is a wider range of housing available to the market, at more affordable prices.

The Auckland Plan 2050 (Auckland Plan) allocates demand for 129,000 dwellings over the 2016-2026 period, of which 24%, or 31,580 dwellings are expected to occur in greenfield (FUZ) locations. The more recent Auckland Future Development Strategy (FDS) allocates demand for 85,080 dwellings over the 2023-2033 period, of which, 11,700 (14%) dwellings are expected to occur in greenfield (FUZ) locations.

The Hibiscus Coast is identified in the Auckland Unitary Plan (AUP) as the largest greenfield growth area and is anticipated to accommodate 24% of the regions total greenfield demand. This equates to demand for 7,450 greenfield dwellings over the 2016-2026 period, or approximately 750 dwellings per annum, based on the Auckland Plan, and 2,760 dwellings over the 2023-2033 period, or for approximately 280 greenfield dwellings per annum based on the FDS.

Since the AUP became operative in 2016, only one new greenfield development has entered the market in the Hibiscus Coast, namely Ara Hills. This development has supplied only 50 dwellings per annum to the market since 2019 (or 25 dwellings per annum since 2016), falling substantially short of both the greenfield demand outlined in the Auckland Plan and FDS, in the order of 230-700 dwellings per annum, or 82-93% below the expected rate of greenfield growth for this part of the city, under the respective documents.

It is estimated that the study area requires an additional 4-7 medium-large greenfield developments, to be underway, in any one given year over this period under the Auckland Plan, and an additional 1-2 medium-large scale greenfield developments under the FDS, in order to ensure that there is sufficient supply and a competitive housing land and development market. The proposed development is able to make a singificant contribution by bringing a new greenfield development to the market, meeting the spatial growth objectives relating to housing.

The proposal would contribute approximately **\$292.9 million to GDP** and generate/support **2,200 FTE jobs**. This is considered to be a net economic impact, due to the current housing shortfall and high house prices, which is reducing the total potential growth of Auckland.

The proposal is considered to make a significant contribution towards retaining population that would otherwise likely be forced to relocate to other regions across the country as a result of the ongoing high prices of houses in Auckland. This will contribute towards Auckland's long term social and economic resilience, which relies on attracting and retaining younger households, however, this will not be achieved under current market conditions.

The proposal would make a notable contribution towards <u>primary sector</u> GDP and FTE employment. In total, the development of the project is estimated to result in a total contribution to <u>primary sector GDP of \$65.1 million</u>, which would support an estimated **490 FTE jobs**. This is as a result of the purchasing of raw materials that are required to construct the dwellings (i.e. timber etc), which will support the ongoing employment and performance of sectors such as the 'Agriculture, forestry and logging' sector.

The analysis shows that under the Status Quo (800 Dwellings p.a.) scenario, cost-recovery is not possible, with annual interest costs exceeding annual revenue. Under the Status Quo + Proposal (915 Dwellings p.a.) scenario, cost-recovery is not possible, with annual interest costs exceeding annual revenue. Under the Minimum Cost Recovery (1,500 Dwellings p.a.) scenario, cost-recovery is possible within the 30-year timeframe. 1,500 Dwellings p.a. is therefore the minimum rate of construction for the infrastructure cost-recovery. Under the Strong Cost Recovery (1,750 Dwellings p.a.) scenario, cost recovery occurs within 23 years. Under the Very Strong Cost Recovery (2.050 Dwellings p.a.) scenario, cost recovery occurs within 10 years.

Regarding efficient use of infrastructure, the Hibiscus Coast requires a substantial increase in the rate of new construction to achieve efficient cost-recovery of the planned infrastructure upgrades. The proposed development makes a significant contribution towards this, with 115 additional dwellings annually. **This results in a more efficient infrastructure cost-recovery of \$123m.** This is a significant economic benefit resulting from more efficient infrastructure utilisation and cost-recovery, i.e. the proposal will reduce the cost to Watercare by \$123m due to more efficient cost-recovery.

Adverse Economic Impacts

The site presently in a grazing (rural production) use, which has limited economic value (in the order of \$10,000/ha). This suggests a total **cost of \$1.1 million in lost grazing (rural production) GDP**. The proposed development would displace the existing grazing activity, which is a minor cost.

Conclusion

In summary, the proposal is considered to result in several significant regional benefits to the Auckland region, namely the provision of housing that would result in lower prices, increased product range, and a greater overall rate of construction for Auckland, and through the economic benefits. generated as a result of the construction of the proposal. The proposal would have one minor cost, relating to displacing land used for grazing.

Memorandum



To: Environmental Protection Authority

From: Gus Finlayson – Barker & Associates Limited

Date: 8 August 2025

Re: Delmore: Clarification around Auckland Council's Funding and Financing Memorandum

Auckland Council table under para 2.5 of Funding and Financing memorandum

What is Required	B&A Clarification
Transport27 x Internal local roadsJOALs	It is confirmed that the applicant is funding the construction of the internal roads and JOALs.
Transport1 x Arterial Road Section of NoR6 – yellow line	It is confirmed that the applicant is funding the construction of the section of the NoR6 Road within the site. Refer to the Commute Memorandum (Appendix 51.2 of the AEE) in terms of how the site will operate before the full extent of the NoR6 Road is delivered.
Transport ■ Remainder of NOR6, NOR10, Wainui Rd upgrade, and intersections.	It is confirmed that the applicant is <u>not</u> funding the remainder of NoR6, NoR10, or the Wainui Road upgrade. Refer to the Commute Memorandum (Appendix 51.2 of the AEE) in terms of how the site will connect to the wider network to the south, and extent of wider upgrades proposed. Those upgrades will be funded by Vineway Ltd.
 Transport The FDS identifies four infrastructure prerequisites (NoR1, NoR2, NoR6, NoR10). 	Please refer to Section 1.1.2 of Appendix 51.2 and Section 13.6.2 of the updated AEE provided 7 th July which identifies that the NoR infrastructure identified is not a pre-requisite for development of the Delmore site if developed at this time.
 Water Upgrade of Orewa 3 scheme which is dependent on NH2 watermain 	The applicant has confirmed that there is capacity within the existing network to service the development, without the upgrade of Orewa 3 Scheme. Therefore, the applicant does not propose to fund this. Refer to McKenzie & Co Memo (Appendix 45.2 of the AEE) and B&A Memo (Appendix 45.1 of the AEE). Also refer to Memorandum of Counsel Responding to Minute 11.
 Wastewater Army Bay WWTP Stage 2 Upgrade Orewa to Stanmore Wastewater Trunk Network Upgrade 	The applicant has confirmed that there is capacity within the network for the full Delmore development once the Stage 1 upgrade to Army Bay is complete. The Army Bay Stage 2 upgrade is not required to service the development. Therefore, the applicant does not propose to fund this. Refer to McKenzie & Co Memo (Appendix 45.2 of the AEE) and B&A Memo (Appendix 45.1 of the AEE). Also refer to Memorandum of Counsel Responding to Minute 11. Refer also to the proposed interim wastewater strategy (Appendix 46.1 - 46.8 of the AEE).
Stormwater • 12 x communal raingardens	It is confirmed that the applicant will fund the construction of the proposed stormwater infrastructure as listed.



 23 x open space "drainage reserve areas" Associated stormwater assets and land 	
 Parks 1 x 2,500m² Neighbourhood Park 1 x 3,200m² Neighbourhood Park 	The Applicant has proposed Neighbourhood Parks meeting AC Parks' key metrics in accordance with AC Parks' acquisition policy and will pay for the construction of these if they are acquired. Development of the parks (including hard and soft landscaping works) would be Council's responsibility. Refer to Appendix 48.3 of the AEE. The decision to acquire the parks does not rest with the applicant.
 Walking and tracks and lookout points within proximity to the neighbouring Nukumea Scenic Reserve 	It is confirmed that the construction of the walking tracks and lookout points will be funded by the applicant.
Community Facilities This Application is not of a scale that on its own will trigger the need for a Community Facility such as a library. It will drive the need cumulatively with other growth, for additional community facilities.	Community facilities such as libraries/halls are generally provided for within main centres (e.g. Orewa) rather than standalone residential developments. The assessment in Appendix 47.2 of the AEE confirms existing facilities are sufficient to support the whole Delmore development. It is noted that "community" facilities like ECE's are generally provided by the private market and an increased resident population increases the likelihood of these occurring to respond to demand (i.e. they are not typically lead infrastructure, rather they respond to growth). A commercial super lot is proposed within the site which provides opportunity for various facilities.

Auckland Council table under para 2.9 of funding and financing memorandum

Operational costs of managing areas that are owned by the residents' societies will be paid for by the residents' societies. This includes large, vegetated areas and wetlands; on-site wastewater treatment infrastructure; JOALs (including associated stormwater infrastructure within the JOALs), and private waste collection services. The walking tracks are proposed to be subject to an easement in favour of the Council for maintenance because they are public infrastructure. Rates are intended to contribute to other operational costs in the normal way.

Attachment E

Parks further information

Memorandum



To: Environmental Protection Authority

From: Gus Finlayson and Charlotte MacDonald – Barker & Associates Limited

Date: 8 August 2025

Re: Response to Parks Memo A17

The purpose of this memorandum is to respond to the Parks Response Memo A17, dated 21/07/2025 ('the Parks Memo') – specifically Proposed Conditions 157, X6-7 and 175, X6-7. These conditions effectively require that an incorporated society is established to own and manage the two proposed neighbourhood parks in the event that Auckland Council opts not to vest either Park.

We note that considerable effort has been made by the applicant to amend the scheme to ensure both proposed parks are aligned with the general design requirements of the 'Manaaki Tāmaki Makaurau - Auckland Open Space, Sport and Recreation Strategy' and recommendations of Council officers. General agreement that this has been achieved is confirmed in Section 4.0 of the Parks Memo.

However, it remains the applicant's preference that should Council decide against purchasing or acquiring these assets, that redevelopment of these sites for alternative uses is not restricted. In our opinion, this remains an appropriate outcome for the Delmore development. This opinion is based on a number of relevant factors, including:

- The objectives and policies of Chapter B2 of the RPS or indeed the concept of a Well-functioning Urban Environment does not specify the types of open spaces to be provided for any given development. Rather, it directs that communities' needs are met through access to a range of open spaces and recreational facilities. In this regard, we observe that the proposed scheme proposes extensive open space provision through a combination of enhanced riparian margins and corridors, protected native bush (with proposed pedestrian access) as well as other areas of open space where the applicant has proposed the construction of recreational facilities (e.g. walking tracks) along with extensive revegetation. We note that the opportunity to deliver this is relatively unique and specific to this site, and is contrasted with other areas of Auckland where more intensive development is proposed and these open space alternatives are not available to support residents (e.g. Sandringham). As previously noted in urban design assessments supporting the application, the development also benefits from proximity to a number of other, already established, recreational facilities including the Metro Park in Millwater and Victor Eaves Park in Millwater;
- The parks themselves have been designed to meet the vesting requirements within the Manaaki Tāmaki Makaurau Auckland Open Space, Sport and Recreation Strategy'. This strategy was prepared under the Local Government Act via the Special Consultative Procedure and relates to Auckland Council's <u>preferences</u> for open spaces, rather than the specific needs of any given location. The document is generic in nature and does not consider the actual density of a given development, locational constraints (such as topography) or the type of development proposed. Rather, the provision requirements are based on theoretical plan-enabled densities for specific zones. In this instance, it is observed that the overall development is relatively low in its density due to topographical constraints and most homes are provided with generous areas of private open space which can help fulfil amenity and recreational needs of residents. Further, the steep



topography of the site means that a significantly increased amount of earth-working and land development is required to satisfy Council requirements when compared with a relatively unconstrained piece of greenfield land;

- Combined with the other areas of open space proposed as part of the development, it is considered that even without the proposed neighbourhood parks, that the development offers significant open space amenity for future residents. This could be contrasted for more intensive developments featuring higher density typologies, such as apartment buildings, where on-site outdoor open space is typically more restricted and there is therefore a greater need for public open space to compensate;
- Whilst it is accepted that there are clear benefits in the provision of public open space (i.e. more of something is generally better), it is not clear that the non-provision of neighbourhood parks in this location would give rise to any potential actual adverse effects. If people consider that there is insufficient public open space (and an associated lack of amenity) then they are free to choose to purchase a dwelling in another location that better fulfils their needs; and
- The development will be required to contribute approximately \$7.8 million ¹ in development contributions to Auckland Council, specifically for the acquisition and development of reserves. In addition, the rates levied on future residents (the UAGC and general rates) are set to fund a range of services, including relating to the maintenance of parks. This creates potential issues around equity and fairness for future residents in requiring them to specifically fund the development and maintenance of their own local parks while subsidising the equivalent cost for the wider region.

Barker & Associates

¹ This is an approximate number based on the figures provided by AC Funding and Financing memo (at \$6,468 per HUE) but doesn't account for credits.

Technical Memo

То:	Vineway Ltd		
From:	James Kitchen - McKenzie & Co		
Cc:	-		
Date:	Friday, 8 August 2025		
Job:	Delmore	Ref:	3725
Location:	Orewa		

Re: Parks OLFP and Flooding

1. Purpose

The purpose of this document is to respond to comments received from Auckland Council regarding the Resource Consent submission for the Delmore development.

2. Comment

New issue raised about whether grading of the Stage 1 park raises flooding or stormwater implications. This includes a request for commentary and plans showing cross sections for both parks relating to a 1 in 10 and 1 in 100-year flood event

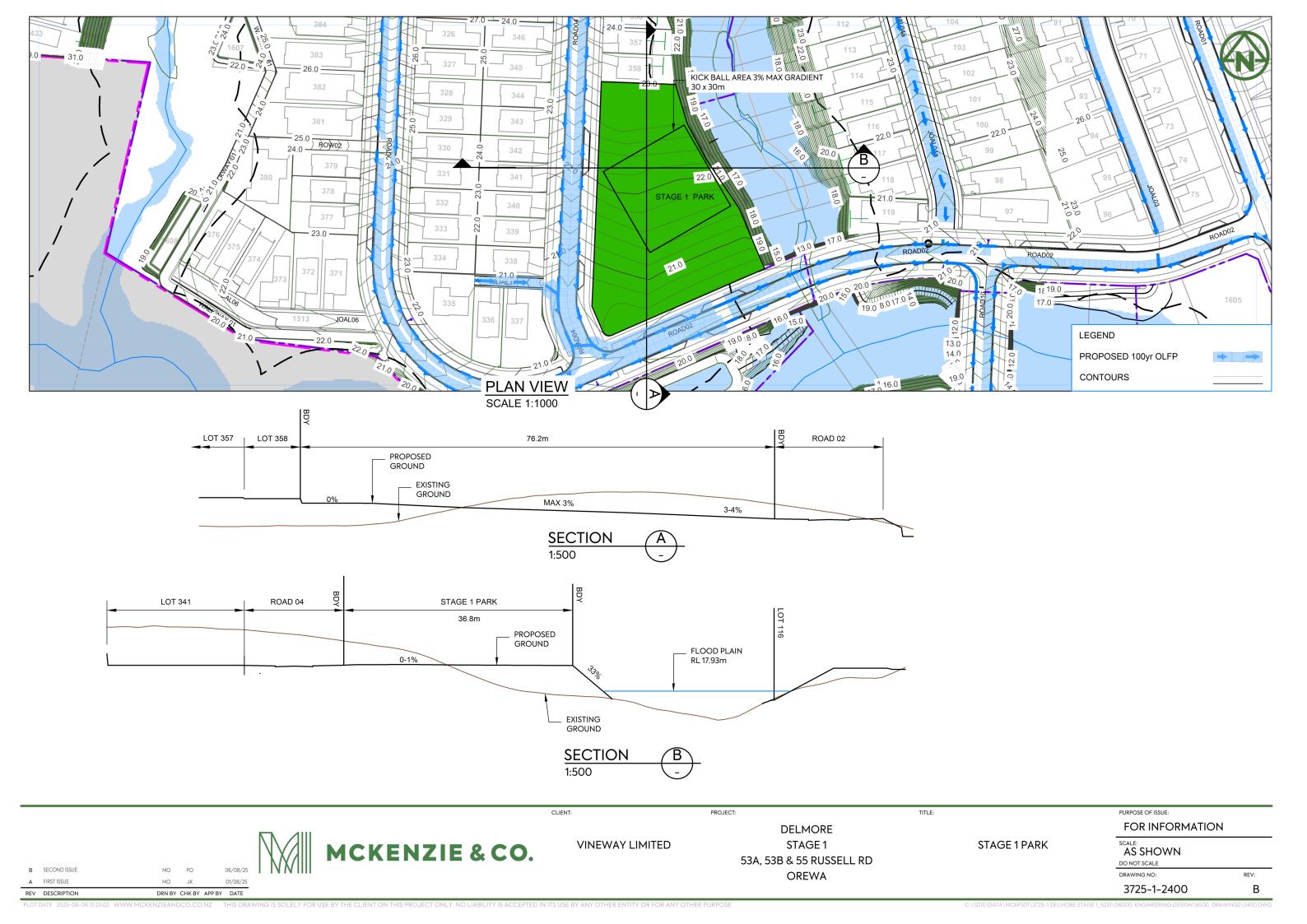
McKenzie and Co Response:

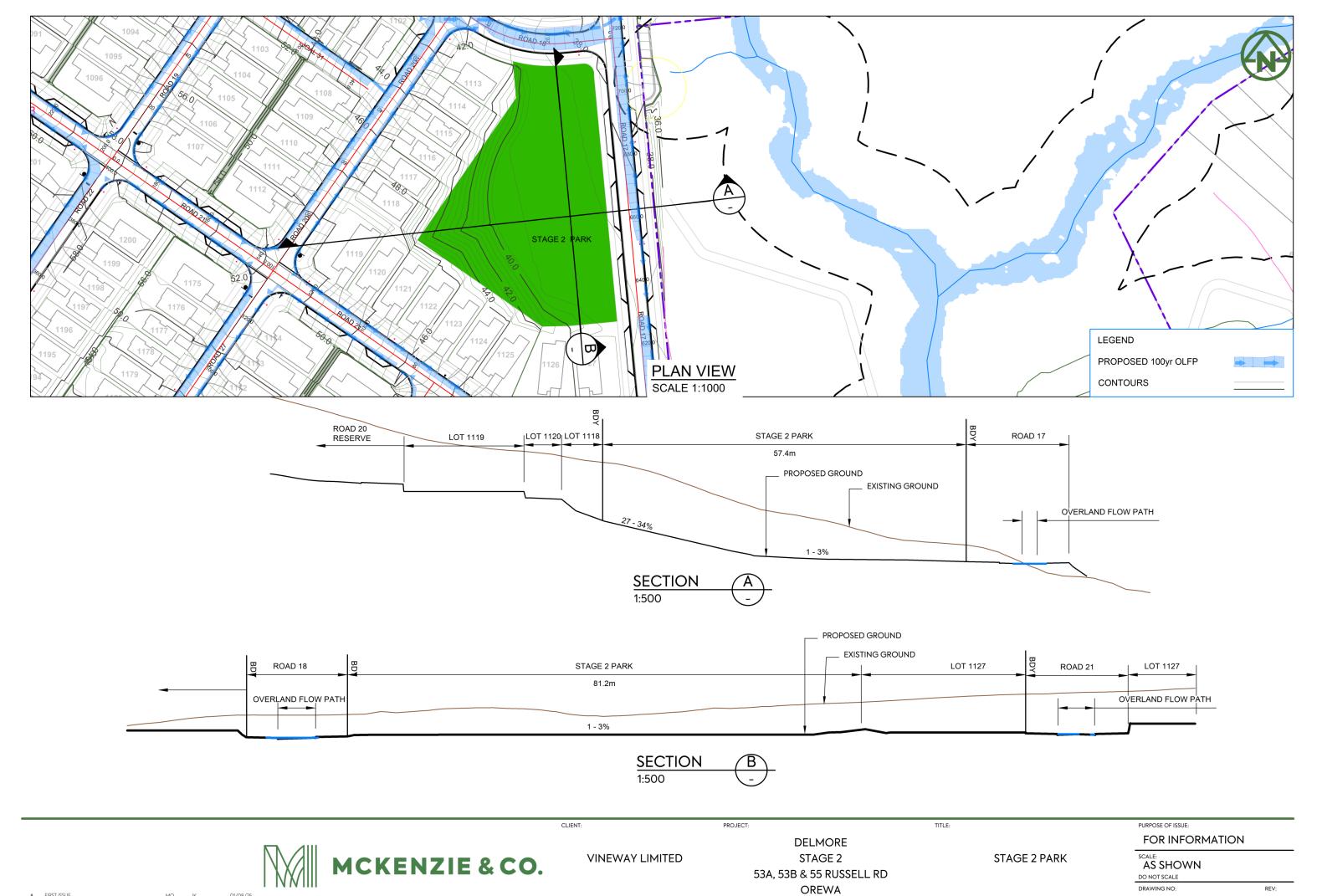
The proposed parks are not subject to inundation from either the 1 in 10-year event, or the 1 in 10-year event. Stormwater flows from the 1 in 10-year event are fully managed by the surrounding piped network, and the parks have been designed so they do not contain any stormwater infrastructure. Both parks are free from the effects of Overland Flow Paths, which are fully contained within the adjacent road reserve, and they are not affected by the 1 in 100-year flood plains, which are entirely contained within the adjacent stream corridors. This is demonstrated in the attached plans and cross sections at Attachment A (stage 1 park: 3725–S1-2400 and stage 2 park: 3725–S2-2400).

3. Attachments

Attachment A - Drawings......2

Attachment A – Drawings





REV DESCRIPTION DRN BY CHK BY APP BY DATE

3725-2-2400

C:\12DS\DATA\MCKFS01\3725-2 DELMORE STA

Attachment F

Geotechnical further information



Vineway Ltd andrew.as@mylandpartners.com

6 August 2025

Our Ref: 240065-P

Attention: Andrew Allsopp-Smith

Dear Andrew

Geotechnical Response to Council Item Delmore Residential Development

1.0 Introduction

Further to the request from Charlotte MacDonald acting on your behalf, we have reviewed the Auckland Council Responses received on 29 July 2025 with respect to geotechnical elements and provide our comments below. The specific items in relation to a new information gap is:

Information gap (existing / new)	Nature of deficiency	Decision-making impact	Risk / uncertainty created
Retaining wall alignment discrepancy.	Riley indicates a tiered wall along the northern boundary of NOR 6 Stage 1 to support return cuts—this is omitted on the Terra Studio drawing. A retaining wall within Lots 764–769 (Stage 2) is shown on Riley's sketches but is missing from the Terra Studio drawing. For Lots 6–10 and Lot 473, Terra Studio shows a 2.5–3.0m high retaining wall along the northern boundary, which is not shown on Riley's sketches.	Cannot accurately assess the remediation scope or suitability for these areas. It is unclear if cut ground will be adequately retained.	While variations in retained height can be addressed at the detailed design stage, the alignment discrepancies raise concerns about how cut ground will be managed long-term where no retention is currently shown. It would be beneficial for Riley to review the updated earthworks and retaining wall
	The earthworks plan (Drawing No. 3725-1-2103 Rev J, dated 02/07/2025) indicates cuts up to 6.5m, which contradicts the retained heights shown on Terra Studio drawings.		plans and confirm whether their proposed remediation measures remain valid.





2.0 Geotechnical Response

Our responses to each bullet point (Nature of deficiency) are presented below.

Bullet Point 1

The Terra drawings depict lot retaining walls, whereas the Riley sketches attached to our previous response to geotechnical matters (Riley Ref: 240065-M, pages 151 and 152, SK141 and SK142) depict retaining walls and other measures that are specifically required to ensure adequate FoS against instability are available. Where there is a discrepancy in retaining wall locations with respect to maintaining adequate FoS against instability, the Riley sketches should be relied on. It should be noted that some of the retaining walls depicted on the Terra drawings are not just on-lot/landscaping walls but are also important with respect to overall site stability. These same walls are shown on the Riley drawings.

Bullet Point 2

Where there is a discrepancy between Terra and Riley drawings with respect to retaining walls required for stability, the Riley drawings should take precedence.

Bullet Point 3

For Lots 6-10 and 473, this discrepancy appears to be due to a difference in treatment of the northern boundary in that location. The drawings attached to our previous response indicate that this part of the boundary was proposed to be battered, hence our retaining wall (denoted 3-RW02, on the Riley drawings) does not extend along there. Despite this discrepancy, we consider that extending the retaining wall along the northern boundary of these lots is an appropriate measure to ensure stability with the batter removed. The final retaining wall extent will be reviewed as part of our detailed design work still to be undertaken.

Bullet Point 4

The magnitude of cut does not directly relate to the retained height in the north-eastern corner of Stage I due to the cut magnitudes being designed to tie in with the adjacent Ara Hills development.

We trust this response provides the necessary clarification regarding the issues raised by Council.

3.0 Limitation

This letter has been prepared solely for the benefit of Vineway Ltd as our client with respect to the brief and Auckland Council in processing the consent(s). The reliance by other parties on the information or opinions contained in this letter shall, without our prior review and agreement in writing, be at such parties' sole risk.

Yours faithfully

Riley Consultants Ltd

Prepared by:

James Beaumont

Principal Geotechnical Engineer, CPEng

Reviewed and approved for issue by:

Brett Black

Project Director, CPEng

cc: Gus Finlayson, Barker & Associates Ltd (gusf@barker.co.nz)

Charlotte MacDonald, Barker & Associates Ltd (charlottem@barker.co.nz)
Madeleine Wright, Mills Lane Chambers (madeleine.wright@millslane.co.nz)

Attachment G

Hydrology further information





Auckland | Whangārei | Tauranga New Zealand T +64 21 65 44 22 E <u>jon.williamson@wwla.kiwi</u> W <u>www.wwla.kiwi</u>

Vineway Limited Via email

Attention: Andrew Allsopp-Smith

7 August 2025 WWLA1147

Delmore Subdivision: 2nd Response to Council's Questions Regarding Wetland Hydrology

1. Response

In summary, Auckland Council consider the following two items as unresolved:

- Will wetland habitat re-establish inside the embedded culverts (Culverts 1, 5, and 7).
- Potential changes in flow velocity at Culverts 1,7 and 10, and the potential to result in scour and erosion, resulting in incision and lowering of the water table inside wetlands as consequential draining of wetlands.

Our responses to these points are provided below.

Council's specialist, Antoinette Bootsma, stated she does not consider that it is possible for natural wetland processes to establish inside an embedded circular culvert. No further detail was provided in regard to which particular wetland processes she was referring to. We consider that functioning wetland habitat will re-establish. Over time sediment and bed material will be eroded from the catchment upstream and deposited inside the culvert – effectively re-establishing a natural bed within the culvert. The re-established bed inside culverts 1, 5, and 7 will be subject to the same hydrological processes that support the wetland immediately upstream and downstream of these culverts. Hence wetland habitat will effectively be reinstated, as wetland function is not solely dependent on the presence of wetland vegetation.

In regards to potential changes in velocity downstream of culverts 1, 7, and 10. Each of these culverts has a riprap apron on the downstream end of the culvert¹. The purpose of the riprap apron is to prevent outfall erosion by distributing flow which:

- prevents the formation of channelisation or concentrated flow that can cause scour;
- provides a hydraulically rough surface to slow flow; and
- provides a hard surface that is resistant to erosion.

Given the above, it is our opinion issues of scour and erosion have been addressed. As no scour or erosion will occur in the wetlands as a result of the proposed culverts (1, 7, and 10) there will also not be any incision and draining of the wetlands.

Closure

Please contact the undersigned if you have any o	gueries i	n relation t	o this	assessment
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Yours sincerely,

¹ Mckenzie & Co., 2025. Delmore Stage 1 & 2. Stormwater Culvert Plan Overall. Drawing No's, 3725-0-48XX



Josh Mawer

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