



Long Term Plan Submissions
The Chief Executive
Marlborough District Council

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10 May 2024

Dear Sir

Submission –Long Term Plan 2024/2034

1. Introduction

1.1 This submission concerns selected aspects of the Council consultation process and consultation document re the proposed Marlborough District Council Long Term Plan 2024/2034 (LTP). In particular that section of the LTP consultation document entitled Sounds Roading Funding. This submission is made on behalf of the Kenepuru and Central Sounds Residents' Association Inc (Association).

1.2 *Who we are:* The Association is a voluntary community organization with few resources, other than the experience and skills of our Committee members. Since incorporation in 1991 the Association has endeavored to represent the interests of our many members (currently around 300, mainly household members) on a variety of local issues.

1.3 *Why we are concerned:* The main road into our region is the Kenepuru Road Network. It is one of the larger if not the largest rural roads network in the region. Including side roads it is around 150km, with both sealed and unsealed sections. It is a road of prime importance to this region. Accordingly, a core work stream, since incorporation, for the Association's elected voluntary Committees has been the delivery of a safe, efficient and reliable Kenepuru road network.

2. Structure of this Submission & Summary

2.1 We have structured this submission as follows:

- i. We summarise our submission points in section 3 below.
- ii. At Section 4 we explain why a departure from the subsisting rating model is both unfair and an inapt precedent for addressing climate change driven or other extraordinary events going forward.
- iii. At Section 5 we expand on these issues as they derive from the LTP proposals to

- break the Sounds into separate cost recovery zones.
- iv. At Section 6 we expand on these issues as they derive from the LTP proposals to reduce the weighting applied to Non-Sounds properties for the purpose of cost recovery from the 21/22 events.
 - v. At Section 7 we quantify an unfairness issue arising from the LTP proposals to recover event costs only from those areas that are to be repaired using Stage 3 repair funding.
 - vi. At Section 8 we explain why the LTP marine study and marine infrastructure proposals are significantly unbalanced and should not proceed in their current form.
 - vii. In Appendix 1 we tabulate a comparison between the LTP targeted rating options and the options proposed by KCSRA in this submission.
 - viii. In Appendix 2 we tabulate our calculation of the Stage 1/2 funding equity issue identified at Section 7.
 - ix. In Appendix 3 we observe some background but contributing or relevant roading administration issues, a chronology of key events following the 2021 and 2022 storm events, and the details behind critical numbers presented in this submission.
 - x. We include as Appendix 4 an expert review of the Marlborough Sounds Future Access Programme Business Case that is underpinning these rating proposals.

3. The Association's Preferred Options

- 3.1 Our members are unanimous in that any targeted recovery must be **fair**. It is also the Association's submission that any proposal must be **well reasoned and pertinent**. In this regard we submit that everybody's turn will come to face a climate change driven or other extraordinary event. It is our submission that the region will all be better off in the longer term by staying together and enduring these adverse event costs, as they occur over time into the future, collectively. However, the LTP proposals, if proceeded with, will instead fractionalise the region and frustrate the adoption of such a simpler, fairer, more objective, and more financially enduring model for extraordinary event cost recovery in the future.
- 3.2 In recognition of this and the other submission points herein made, the Association seeks the following key outcomes from the LTP:
 - i. For the reasons herein given under no option should the Sounds be divided into separate zones for road repair cost recovery. This will create significant inequities as between different property owners within a zone and could only ever be fair as between zones if corrected retrospectively and effected permanently. More significantly, it is also the antithesis of an appropriate way for Council to deal with climate change and other indiscriminate extraordinary event recovery costs going into the future.
 - ii. For similar reasons the weighting applied to Non-Sounds taxpayers should remain at 100%, and should certainly be set significantly higher than the 25% weighting currently used for water access only Sounds Admin Rural ratepayers. Council has also made an analytical error when discarding weightings higher than 25% for Non-Sounds ratepayers. This renders the preferred option by Council not only unaffordable by many, but also an effectively arbitrary and unfortunate precedent. Whilst we see no basis for adopting a weighting any less than 100% for Non-Sounds ratepayers, we have nonetheless proposed a weighting of 50% for Non-Sounds ratepayers providing that the balance of our submission points, including the retention of the Sounds as a single cost recovery zone, are adopted.

- iii. For the reasons herein given no targeted funding should proceed for the proposed marine study and marine improvement work. No sound basis has been made out for this work and it seems very clear that the cost will far outweigh any perceived benefit. This would reduce the proposed rating increases for these events by an average of 38% across the region.
- iv. Under any option involving targeted rating the appropriate road repair recovery amount must be determined having full regard to the Stage 1 and 2 road repair funding equity issue identified in Section 7 below. Our calculation of this is detailed in Appendix 2 and shows that the recovery costs to be rated to the Kenepuru Road zone are overstated by at least **\$9.3M**. On our calculations this reduces the average annual rate increase taken at 30 June 34 for the Kenepuru area by \$210 a year if separate Sounds zones prevail or by \$64 a year without separate Sounds zones.
- v. LTP Option 2(a) is our **best preferred option** but with the Sounds Admin Rural category retained at a 25% weighting (there is no basis made for increasing their weighting) and with a Uniform Annual Charge across all ratepayers for the difference. This is shown as **KCSRA Best Option A** in Schedule 1. This option is consistent with the existing roading policy philosophy of ‘equal access equal cost’ and will not create an unfortunate precedent for, or otherwise disrupt, the adoption of more objective, simpler and financially enduring “shared risk” recovery models for future extraordinary events in the region. It also avoids large contributions from particularly high value properties and addresses all other equity and pertinence issues raised in this submission. Moreover, it does not inaptly increase the weighting of the Sounds Admin Rural zone, will alleviate ratepayers in the Kenepuru zone from significant financial hardship or from having to leave their homes or properties, and will only increase the rates for Non-Sounds ratepayers by \$56 per year more than the ‘preferred option’ under the LTP proposals. Further, this option will still leave Non-Sounds ratepayers paying *less* than what the average rate increase would be for Non-Sounds ratepayers under the subsisting rating model if nothing was changed (See Appendix 1 - Base Case Illustration).
- vi. The next best option would be Option 2(b) but with Non-Sounds ratepayers adopting a 50% weighting and Sounds Admin Rural properties retaining their 25% weighting. This is shown as **KCSRA Best Option B** in Schedule 2. Whilst this fails to address the lack of any basis for Non-Sounds ratepayers departing from the subsisting 100% weighting policy, it does at least address the difference in levels of benefit derived by Sounds Admin Rural and Non-Sounds properties from the Sounds roading network and, most importantly, it also offers some much needed relief to Kenepuru ratepayers who may otherwise be required to leave their homes or properties or suffer significant financial hardship. This only increases the rates for Non-Sounds ratepayers by \$51 per year more than the preferred option under the LTP but is still less than the average increase payable under the subsisting rating model if nothing changes (See Schedule 1 - Base Case Illustration). KCSRA only support a 50% weighting for Non-Sounds ratepayers if the Sounds are treated as a single cost recovery zone.

3.3 Appendix 1 shows the LTP options along with the **KCSRA Best Option A** and **Best Option B** highlighted below in yellow. Note that we have not removed the marine study or development costs from the numbers. This is simply for ease of reference back to the numbers as produced in the LTP documents. Also shown in grey shade are other LTP options corrected for the equity issue identified at section 7 and the Non-Sounds weighting issue identified at section 6. These are not KCSRA options but are presented for the sake of completeness of the tables only.

4. An Inappropriate Departure from Policy

- 4.1 As noted, current policy is to fund roading on an “equal access rights equal cost” basis, this being recently adopted into the 2021 – 2031 long term plan. We fail to see how the extraordinary nature of an event in any way, of itself, challenges the veracity or appropriateness of this policy. Everybody retains the same access rights and benefits from the roading irrespective of whether or not the road suffers extraordinary damage in an event.
- 4.2 Even if departing from the existing policy for extraordinary events could be rationalised (which it is not), there are no definitions, thresholds or parameters identified to enable such a departure from policy to be analysed and consistently applied in the future. **This renders the proposed departure arbitrary and a dangerous precedent.**
- 4.3 Moreover, severing communities from the common cost share model if they suffer an extraordinary event is also the antithesis of an appropriate model to deal with climate change driven or any other extraordinary events. Ultimately almost everybody in the region will face an extraordinary event of some kind in their time, whether it be flooding, sea inundation, earthquake or landslide damage etc, but under this proposed LTP approach for any future events they should all be required to suffer the potentially crippling and unaffordable financial cost of these eventualities on their own. Many will not be able to and will lose their home or have to endure significant suffering or sacrifice to retain it. This is why the equal access equal share model is preferred. Outside of its simplicity and objectivity, it also ensures that these risks and costs of extraordinary events are shared across the whole region making them more financially enduring for all. This is fair in the long term and avoids ratepayers having to leave their homes or be rendered financially crippled when an extraordinary event occurs in their area.
- 4.4 The LTP proposals nonetheless breach this subsisting policy at two levels. Firstly, by severing the wider Sounds area from the rest of Marlborough through a differential property weighting. Secondly, by then rating different parts of the Sounds by reference to their relative degree of damage from the 21/22 events.
- 4.5 Neither of these departures from policy is validly reasoned and both raise significant issues of unfairness and inequity. We expand on each of these policy breaches in turn in Sections 5 and 6 below.

5. Using Differential Zones in the Sounds for Cost Recovery

- 5.1 The breaking of the Sounds FAS area down into 5 different zones is presumably premised on a ‘user pays’ or ‘who benefits’ principle. There are significant issues with this.
- 5.2 Firstly, it will create *new* fairness issues at a property by property level. For example, a property that only requires 100m of access along a damaged road will suffer a significantly higher rate than an immediately adjacent neighbour who doesn’t need that 100m of access to get onto their property. Equity can never be achieved with infrastructure funding and **attempting to fund infrastructure by user pays simply creates inequity.** This is one of the reasons, we submit, that the “equal access equal cost” is the most apt and commonly adopted funding model for infrastructure assets in New Zealand.
- 5.3 Secondly, and perhaps more significantly, the breaking of the Sounds down into Zones will also bring about significant inequity at a *Zone by Zone* level. This is because all Sounds properties have historically contributed equally toward all Sounds road repair funding. Significantly, there is also no suggestion that this collection model will change for all *other* future event repair costs. This means that those sounds zones facing the relatively higher

repair costs for these particular events, such as the Kenepuru zone, are not only suddenly left to fend for themselves when they have nonetheless duly paid their *full* share of *all* road recovery costs for *all* other Sounds events in the past, even when the shoe has been on the other foot, but they will also still be required to continue to pay their *full* share of *all* other Sounds events repair costs into the future.

- 5.4 For this reason alone suddenly isolating a hard hit area, such as is proposed by the LTP for Kenepuru road, is an affront to equity and to the underlying mantra of the existing road repair funding model that we have all duly been adhering to, and will all be required to continue adhering to, in the future.
- 5.5 It is noteworthy that the equal access right equal cost mantra of the subsisting system is particularly well suited to the Sounds roading network. This is because all of the Sounds roading zones share a commonality of pocketed community areas served by similarly vulnerable roading networks. Pooling recovery costs across the Sounds is thus particularly apt given the Sounds share common risk factors. Retaining the Sounds as a single zone for cost recovery will render all future recoveries a smoother and more financially enduring process for everyone in the Sounds, as well as being simpler, objective and fairer over the longer term.

Optical Issue with Different Sounds Zones

- 5.6 We note that retaining the Sounds as a single Zone also addresses a perceived threshold issue identified by Council at paragraph 3 on page 43 of the Order Paper for Council's 26 February 2024 Council meeting. Here it is recorded that a Non-Sounds weighting of 40% "*was discarded because...it yielded ..an average rate for one of the directly benefiting Sounds Zones that was lower than in the indirectly benefiting Non-Sounds properties.*"
- 5.7 This is actually a non-issue for reasons explained in Section 6 below. In short, the low rate burden of one Sounds sub-zone is completely offset by a correspondingly higher rate burden in the other Sounds sub-zones. Thus, the amount paid by the low rate sub-zone is of no relevance at all to what is fairly payable by Non-Sounds ratepayers.
- 5.8 The relevant point here though, is that this perceived unsavoury optic for Council only exists because the LTP proposes to break the Sounds down into sub-Zones based on relative damage incurred. It does not present with the Sounds properly recognised as a single zone.
- 5.9 For all of the above reasons we submit that any option put forward for road recovery funding that incorporates the breaking up of the Sounds into different roading zones must be **rejected**. It will introduce significant inequity as between ratepayers within a zone as well as subjectivity and complexity. It is also fundamentally unfair on those zones that happen to be disproportionately adversely effected this time around. Significantly, it is also the antitheses of an appropriate precedent for dealing with this sort of issue as Council faces climate change driven or other significant events into the future.

6. Proposed Non Sounds Weighting is Unsupported and Unfair

- 6.1 As we have noted, the magnitude of the 21/22 events does not change the relative degree of benefit (i.e. between Sounds and Non-Sounds ratepayers) that is derived from Marlborough's roading network. It remains as it was when the subsisting long term plan road rating policy of "*equal access rights equal cost share*" was determined as appropriate.
- 6.2 Non-Sounds ratepayers derive significant benefits from Sounds roads, both directly through access to the Sounds themselves and indirectly through the economic activity generated for the region by the Sounds roading network - through the tourists, recreationalists, holidaymakers and other visitors to the region.

- 6.3 The Council nonetheless proposes to reduce the valuation weighting for Non-Sounds properties down to only 25% for the purpose of recovering the costs of the 21/21 events. This will effectively quadruple the relative 21/22 event recovery costs paid by Sounds property owners and this alone is likely to more than double most Kenepuru zone rates. Some of our members are already contemplating having to leave their properties or homes because the rates will become unaffordable whilst others will have to endure significant financial constraint or hardship to stay. On the other hand the movement from a 100% weighting to only a 25% weighting for Non-Sounds ratepayers **only reduces the average rate per property in the Non-Sounds zone by around \$50 per year.**
- 6.4 There are also more specific issues with the proposed 25% weighting model. As noted above, a 40% Non-Sounds weighting was disregarded by Council because it rendered the average recovery from some Sounds zones, such as Te Hoiere/Pelorus, as less than the average recovery from the Non-Sounds zone.
- 6.5 As noted, this is simply a function of the Sounds being split into sub-zones. It renders one or two sub-zones with very low 21/22 damage paying less than the average paid per property for the wider Sounds area and the average paid per property for the Non-Sounds area. However, the very low share paid by these properties (such as Te Hoiere/Pelorus) is of course completely offset by a correspondingly higher average share paid by the other Sounds sub-zones suffering the relatively greater levels damage. The recovery share of one of the low damage sub-zones is simply an irrelevant comparative for Non-Sounds ratepayers. This means, in our view, that disregarding the use of a higher weighting because of this stands as an **analytical error** made by Council in preparing its LTP proposals. The only relevant comparative for Non-Sounds properties is the average recovery for all Sounds properties on the whole.
- 6.6 The other basis given for a 25% Non-Sounds weighting is that this is consistent with the weighting paid by Sounds Admin Rural ratepayers. These ratepayers do not have direct road access – i.e. they generally have boat access only. We note that this comparative was not raised in the February Order Paper and we fail to see how it can be seen as a relevant comparative for Non-Sounds ratepayers. Non-Sounds ratepayers are much more likely to directly access the Sounds roading network themselves than Sounds Admin Rural ratepayers. Moreover, it is also the Non-Sounds rating demographic that derives all of the indirect economic benefits of the Sounds roads through the significant numbers of tourists, recreationalists, holiday makers and other visitors brought to the region by the Sounds.
- 6.7 Given no plausible basis is made for departing from the subsisting 100% common share model, the hardship that the proposals will impose on members in our demographic, the relatively insignificant effect that the move to a 25% weighting has on the average Non-Sounds property, and the fact that such targeted recovery is the antithesis of an appropriate model for dealing with significant events going forward, we submit that there should be **no change** from the subsisting 100% property weighting model for the Non-Sounds zone. This is inherent in the **Best Option A** presented by KCSRA in Appendix 1. **This still produces a lower rates increase than what would be paid by the average Non-Sounds ratepayer under the current rating model.**

7. Allocation of Stage 3 Funding Deficit per LTP Proposals is Unfair

- 7.1 There is another inherent inequity in the proposals. This is that the proposals seek to load all of the differential rating burden arising from the 21/22 events onto *only* those areas with roads that are to be repaired using Stage 3 funding. This notwithstanding that the \$140M of Stage 1 and 2 recovery work was undertaken without any targeted ratepayer recovery on those relevant areas at all.

- 7.2 To address this inequity the recovery of MDC’s share of the Stage 3 road repair costs should be allocated across *all* of the affected areas in the region based on their relevant portion of the *total* 21/22 event repair costs.¹
- 7.3 On our calculations this means that, for the purposes of calculating any targeted rates, the cost of the repair work required in relation to Kenepuru Road has been over-stated in the LTP by at least \$32M.
- 7.4 We show our calculation of this in table form at Schedule 2. We summarise the calculation as follows.
- The total road repair costs of the events are \$282M (Stages 1&2 \$140M; Stage 3 \$142M).
 - Total Kenepuru Road repair costs are estimated at \$116.56M – being \$25.76M to March 2024² plus \$90.8M proposed under Stage 3. This means Kenepuru Road accounts for 41.3% (\$116.56M/\$282M) of the total repair costs of the 2021/22 events.
 - This means the share of Stage 1 & 2 Funding to be attributed to the repair of Kenepuru Road is \$57.9M (41.33% of \$140M). Stage 1 or 2 funding actually spent on K road is \$25.76M. This leaves a notional reduction to the Stage 3 recovery cost for Kenepuru Road for the purpose of rating recovery of **\$32.2M**.
 - This reduces the amount recoverable by way of targeted rating in relation to Kenepuru Road by **\$9.3M** (being 29% of \$32.2M).
- 7.5 Note that this is a conservative calculation as it is not clear if or to what extent the \$25.76M to be spent on Kenepuru Road using Stage 1 or Stage 2 funding will or has included repairs that are *also* currently included in the \$90.8M of Stage 3 repair costs proposed to be recovered by rating under the LTP.

8. Marine Study and Infrastructure Improvement Proposals

- 8.1 The FAS PBC proposes \$40M of marine studies and improvements to existing marine infrastructure. This is to be funded 100% by Council (ratepayers). Over 50% of the proposed expenditure \$21.7M (being marine study costs (\$3.68M) and marine infrastructure costs (\$18M)) has been allocated to the Kenepuru Zone.³
- 8.2 Appendix U.3 of the FAS PBC sets out the proposed cost allocation of that share among various works - mainly being upgrades of existing marine infrastructure. Thus, in the Kenepuru Zone for example the relatively newly constructed Fish Bay barge facility is to have another \$1.5M spent on it and the one new marine arterial hub proposed for Goulter Bay is costed at \$4.5 million. The balance of the \$18M is spread among another six upgrades.
- 8.3 We have **real concerns** at the need for such a massive Council (ratepayer) expenditure and note that no substantive basis for these estimates were made available to BondCM when peer reviewing the Stantec/Council cost estimates for this last category⁴.

¹ This necessarily excludes any regard to road improvement costs as these do not appear to have been funded by Council or WK under Stages 1 and 2.

² Advice from Council dated 26 October 2022 following a KCSRA LGOIMA (OIA) request gives this as 9M at that date. Advice from M Wheeler dated 4 April 2024 suggests that as at March 2024 a total of \$25.76M will be spent on Kenepuru Road using Stage 1 or 2 Funding.

³ See page 18 of the Councils LTP consultation document.

⁴ See page 4 of the cost review of the FAS PBC undertaken for Council by specialist Consultant Company BondCM dated 11 August 2023.

- 8.4 Nor was any cost benefit analysis set out in the FAS PBC by Zone or overall. All that is presented for the Kenepuru is the overall Benefit Cost Ratio results, which includes the positive impact of the roading repair and improvements investments. Rather, we are told that the BCR has improved from the previous analysis by reducing the capital cost and delaying the implementation of the Marine scheme. We submit that this is telling us that the present value of the proposed marine investment is actually negative. In other words poor value for money. Please refer to Appendix 4 for the commentary on this aspect of the FAS PBC (and related matters) from our expert.
- 8.5 As the farmers in the Kenepuru will quickly tell you the interim marine service is costly (despite significant subsidies) and not preferred by users to handle their stock, bulk fuel, fertilizer and so on.
- 8.6 More to the point, we submit that the \$40M on marine infrastructure is little more than a very expensive insurance policy to merely help reduce travel disruption whilst some form of emergency or temporary road access is restored post significant storm events in the future. Moreover, and whilst we are not experts, it is not unreasonable to expect that Kenepuru Road will be significantly more resilient once \$100M of repair work under Stage 3 is carried out⁵.
- 8.7 Further, we also query giving any priority to this work stream given, for example, that following the July 2021 event improvements to marine infrastructure in the Kenepuru were made and worked well subsequently⁶. In other words there is little justification for the proposed expenditure as the emergency need is being met with the current facilities in the Kenepuru Zone.
- 8.8 Further the proposal ignores other new developments in the Kenepuru. No account has been taken of the extensive barge ramp and marshaling area recently consented at Mills Bay. We submit that the Mills Bay development will obviate the need for the FAS PBC proposed \$4.5 million marine hub facility just around the corner at Goulter Bay. When we raised this obvious duplication and over-sight with the appropriate Assets and Services operational Council staff they confirmed that they had not been consulted or even asked for their views on the marine investment proposals.
- 8.9 The proposed cost for the marine study (\$7M) is **staggering** and, by way of context, note that this equals the total amount the Council funded on its account for all road repair work under Stage 1 and 2 combined. Bear in mind we are talking \$7M for just the study side of it!
- 8.10 Although little detail is given in the FAS PBC as to what the study will cover (the sum of it seems to be to identify *a clear way forward*⁷) it seems to us that Council should, at least in the first instance, handle this study in house, using Council data bases and the experience, local knowledge and expertise of Council staff. When a draft report is produced then, if necessary, external consultants could, before finalization, review the draft report. This self-help, in house approach will, we submit, save many millions of ratepayer dollars (and produce a better local focused product) given the likely conclusion that the massive scale of marine infrastructure investment proposed is both unnecessary and very poor value for ratepayer money. This is simply because of the very limited improvement in transport efficacy that such infrastructure would actually add.
- 8.11 Accordingly we submit that the Marine investment cost component (\$40M) be removed from the Funding proposals and that any recovery from ratepayers be based on that reduced figure.

⁵ The bias or failings of the FAS PBC in regard to climate change and Kenepuru Road's vulnerability are outlined in Parts 1-3 of the Tailrisk Economics report at Appendix 4.

⁶ We refer, for example, to the new barge ramp and associated facilities speedily installed by Council emergency event managers using local contractors at Fish Bay in the Kenepuru Sound post July 2021.

⁷ See page x of the Executive Summary to the FAS PBC.

8.12 If this approach is not acceptable to Council then:

- a) The cost of the Marine studies for any funding proposals purposes in the LTP should be reduced to less than \$500,000 – this sum, we submit, being more than adequate for both the Council and an independent review based on the detail already available; and
- b) The cost of the Kenepuru allocation be reduced by \$4.5M to reflect the removal of the Goulter Bay hub from the cost equation given the proposed Mills Bay barge and marshaling area facility; or
- c) The entire Marine investment proposal be deferred without any allocation to the Kenepuru area for the first three-year cycle of this LTP with the Councils funding options adjusted accordingly. This will facilitate a focus on the more pertinent and urgent implementation of the road repair and improvements aspects of the FAS PBC. In the meantime we submit that a **fully transparent** high level review of the efficacy of a marine focus in the Kenepuru be undertaken.

9. Attendance at Hearing

The Association thanks the Council for the opportunity to make submissions on the Long Term Plan 2024 - 2034. The Association wishes to talk to the above submissions at the hearing.

Yours sincerely.



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APPENDIX 1

Table of LTP Options and KCSRA Preferred Options

KCSRA Option Analysis										
Using Average Rate Increases at 30 June 2034										
	Base Case Illustration			LTP Option 2(a)		LTP Option 2(b)		LTP Options 2(c) and (d)		
	Average increase for the Sounds area, the Sounds Admin Rural area, and the Non Sounds area, with no change to the existing weightings and no Sounds Zones			Average Increase across the region if a 100% weighting for all properties, including Sounds Admin Rural		Average Increase with 25% Weighting for Non Sounds & Sounds Admin Rural		Average Increase with 25% Weighting for Sounds Admin Rural and Non Sounds plus Separate Sounds Zones		
Number of Properties	Average Per Property		Total	Average Per Property	Total	Average Per Property	Total	Average Per Property	Total	
Te Aumiti/French Pass	896	215.64	193,211.60	290.35	260,151.81	674.41	604,271.36	505.12	452,587.52	
Te Hoiere/Pelorus	162	215.64	34,933.35	290.35	47,036.38	674.41	109,254.42	323.06	52,335.72	
Totaranui/Queen Charlotte	712	215.64	153,534.22	290.35	206,727.78	674.41	480,179.92	333.05	237,131.60	
Kenepuru	930	215.64	200,543.30	290.35	270,023.64	674.41	627,201.30	1,224.15	1,138,459.50	
Port Underwood	339	215.64	73,101.27	290.35	98,427.97	674.41	228,624.99	498.58	169,018.62	
Sounds Admin Rural	1,451	46.81	67,917.24	290.35	421,294.95	146.39	212,411.89	146.39	212,411.89	
Non-Sounds	22,297	316.38	7,054,311.80	290.35	6,473,889.36	247.37	5,515,608.89	247.37	5,515,608.89	
Total	26,787		\$ 7,777,552.77		\$ 7,777,551.88		\$ 7,777,552.77		\$ 7,777,553.74	

	KCSRA Best Option A		KCSRA Best Option B		LTP Option 2(b) - Corrected		LTP Option 2(c) and (d) - Corrected		LTP Option 2(c) and (d) - Corrected		
	Option 2(a) but with Sounds Admin Rural retained at its 25% Weighting and the balance shared by UAC for Sounds and Non Sounds		Average increase using Option 2(b) but with K Road Stage 1/2 Funding equity adjustment allocated across all Sounds zones, a 50% Non-Sounds weighting, and no Sounds Zones		Illustration of LTP Option 2(b) Corrected to show K Road share of Stage 1/2 Funding allocated across all Sounds zones with the offset balance added to the Non Sounds zone		Illustration of LTP Options 2(c) and (d) corrected to show with K Road Share of Stage 1/2 Funding taken off K Road with the offset balance added to the Non-Sounds zone		Illustration of LTP Options 2(c) and (d) corrected to show with K Road Share of Stage 1/2 Funding taken off K Road with the offset balance added to the Non-Sounds zone, and a 50% weighting for the Non Sounds zone		
Number of Properties	Average Per Property	Total Collected	Average Per Property	Total Collected	Average Per Property	Total Collected	Average Per Property	Total Collected	Average Per Property	Total Collected	
Te Aumiti/French Pass	896	302.64	271,168.31	330.32	295,969.72	610.15	546,694.46	505.12	452,587.52	295.54	264,799.43
Te Hoiere/Pelorus	162	302.64	49,028.20	330.32	53,512.38	610.15	98,844.31	323.06	52,335.72	189.02	30,620.53
Totaranui/Queen Charlotte	712	302.64	215,481.96	330.32	235,190.23	610.15	434,426.85	333.05	237,131.60	194.86	138,740.71
Kenepuru	930	302.64	281,458.17	330.32	307,200.72	610.15	567,439.56	1,014.17	943,173.57	506.24	470,802.76
Port Underwood	339	302.64	102,596.04	330.32	111,979.62	610.15	206,840.87	498.58	169,018.62	291.71	98,889.24
Sounds Admin Rural	1,451	72.59	109,783.82	85.65	124,277.78	146.39	212,411.89	146.39	212,411.89	85.65	124,277.78
Non-Sounds	22,297	302.64	6,748,035.38	298.22	6,649,422.32	256.13	5,710,894.82	256.13	5,710,894.82	298.22	6,649,422.32
Total	26,787	1,888.45	\$ 7,777,551.88		\$ 7,777,552.77	3,453.27	\$ 7,777,552.77		\$ 7,777,553.74		\$ 7,777,552.77

Weighting Factors

	Base Value Percentage	Property Number	Therefore Average Value Ratio	Reduce Weight to 25% for Sounds Admin Rural	Therefore Adjusted Share	Reduce Weight to 25% for SAR and 50% for Non Sounds	Therefore Adjusted Share
Sounds Zone Valuation Percentage	8.21%	3,039	100%	8.21%	8.43%	8.21%	15.42%
Sounds Admin Valuation Percentage	3.40%	1,451	86.83%	0.85%	0.87%	0.85%	1.60%
Non Sounds Valuation Percentage	88.39%	22,297.00	146.72%	88.39%	90.70%	44.19%	82.98%
	100.00%	26,787			100%	53.25%	100%

These tables are derived from data provided by Marlborough District Council staff and information provided in the Marlborough District Council Long Term Plan Consultation Document 2024-2034. A copy of the spreadsheet and formulas used to present these alternatives can be provided if required.

The Base Case Illustration shown in the first column of the top table is not shown in the LTP documents. It represents our calculation of what the average rate increase would be for the three different zones having regard to their relative average property values. This differs to the LTP Option 2(a) because that appears to assume a common average property value across the entire region.

KCSRA only support any reduction in the weighting for Non-Sounds ratepayers from 100% if the Sounds are retained as a single zone for cost recovery.

Options shown in greyshade are not KCSRA preferred options and are shown for the sake of completeness only.

APPENDIX 2

Calculation of Kenepuru Road Stage 1 and 2 Funding Equity Adjustment

	To March 24 Stage 1 and 2 100% Funded	Stage 1 & 2 Per LTP Consultation Document	Per LTP FAS Costs Excl Marine & Improvements	Total Road Repair Costs for 21 and 22 Events	%	Respread Stage 1&2 Funding	Corrected Balance of Costs to Recover	Excess R&M Being Rated On K Road
	124,230,000	140,000,000	142,000,000	282,000,000		-	142,000,000	
Balance of Marlborough	98,470,000	114,240,000	51,200,000	165,440,000	58.67%	32,106,667	83,306,667	
Kenepuru Road	25,760,000	25,760,000	90,800,000	116,560,000	41.33%	(32,106,667)	58,693,333	32,106,667
							Deduct Stage 3 FAR	(22,795,733)
							Net Excess Council Cost Being Recovered from K Road	9,310,933
							LTP K Road Costs to Recover	54,280,000
							Deduct Excess Above	(9,310,933)
							Corrected LTP K Road Costs to Recover	44,969,067

APPENDIX 3

1. Background - Sounds Roading Administration Structure

- 1.1 As Council will be aware the Association (and indeed much of the Sounds ratepayers and road users) has since 2016 formed increasingly strong evidence-based views as to the weaknesses of the current administrative, contractual and operational structure concerning the supply of roading maintenance and repair works for Councils rural road network.
- 1.2 In particular because a significant proportion of the expense and worry now facing the likes of the Kenepuru communities can be attributed to these shortcomings having amplified the effects of the significant storm events in July 2021 and then August 2022.
- 1.3 These aspects, whilst a substantive part of the causative reasons for the 2021 and 2022 damage suffered, we believe, are not the focus of this submission. However, for completeness sake we direct you to the Associations submission on the Marlborough Regional Land Transport Plan (RTLTP). Here, among other things, we set out the detail of how the complicated and, in our view, increasingly dysfunctional key Network Outcomes Contract (NOC) is contributing to unnecessary expense and poor roading maintenance and repair outcomes. In that submission we **recommend** that Council commission (and thus provision funds for) an independent review of the NOC.
- 1.4 As to some suggested operational solutions to turn around the current parlous state of affairs we refer you to the Association's separate submission on the Council's *General Roading* section of LTP.

2 Sounds Roading Funding Options – How did we get here?

- 2.1 Following the July 2021 storm event and then the August 2022 storm event engagement in the process of the recovery of the damaged Kenepuru Road network has taken up an increasing amount of the Committee's focus and energy.
- 2.2 After the August 2022 event Council pivoted away from continuing road recovery work for the likes of the Kenepuru road network. Instead it engaged consultants Stantec and embarked upon a lengthy and costly process of review, investigation and consultation. This process was referred to as the Sounds Future Access Study (FAS). From the get go the Committee committed extensive time, thought, energy and many meeting hours to this process⁸.
- 2.3 Then, in early June 2023, Council and its consultants produced a suite of FAS engagement documents. The Sounds was divided in to Five Study Zones. The geographical area for the Kenepuru Zone encompasses the Kenepuru Road Network. We duly reviewed, attended various forums, and again formally submitted⁹.
- 2.4 *The FAS PBC for NZTA:* In September 2023 Council and its Consultants produced a 500 plus page document entitled Marlborough Sounds Future Access Programme Business Case (FAS PBC). The FAS PBC contained various costings as to the Councils preferred

⁸ See the Association's submission to Council dated 15 January 2023 on aspects of the FAS as at that point.

⁹ See the Associations submission to Council dated 11 July 2023 entitled "Feedback - Sounds Future Access Study- Engagement By Council".

programme of road recovery works for each study Zone. These costings were acknowledged by Council as very high level. The programme of works was split into three work streams - road repairs, a programme of roading improvements (culvert replacements) and various marine transport studies and improvements to marine infrastructure.

- 2.5 This was duly presented to the Board of NZTA/Waka Kotahi at its December 2023 meeting. During that month¹⁰ Council relayed to the public the verbal advice it had received as to the likely content of the Board's decision. This advice indicated that the Financial Assistance Rate (FAR) from NZTA/WK for road repairs would be 71%, the proposed road improvements 51% and marine related studies and works would have to be funded 100% by Council (aka ratepayers). These were the same FAR's that the FAS PBC had assumed would be adopted by NZTA.¹¹ In other words no surprises.
- 2.6 The Council immediately started preparing to consult over the funding shortfall via the special LTP consultation process. In its February meeting Council formally adopted the agenda paper recommendations as to the FAS Works Programme and the Sounds Roding Funding Recovery options¹². A consultation document was then prepared covering all of the LTP including the Sounds Roding Funding options. Various public "drop ins" were held and the public were encouraged to make submissions.
- 2.7 For completeness sake we note a copy of the actual NZTA Board minute was recently released (24 April) and reviewed by the Association. The NZTA Board minute¹³ endorsed the FAS PBC but notes this was not a financial commitment to the Programme. The minute notes that the Board anticipated that, following the special consultation procedure, Council will make a funding application for the Stage Three (Recovery) phase of the Council's Emergency Works at a cost of \$146.4 million at a FAR of 71%.
- 2.8 There is no specific mention of the road improvement or marine studies/infrastructure improvements. The indication seems to be that road improvements will form part of the Councils normal funding bids for road repairs which if successful attract a FAR of 51%. Clearly the proposed marine studies and marine infrastructure improvements were out of NZTA's jurisdiction.

3 Background to the Numbers

- 3.1 *Reallocation:* Kenepuru Road was allocated \$20M of the \$88M Stage 1 funding¹⁴ for 2021 event recovery at 95% FAR. However come August 2022 only \$9M (including \$4M on P&G, overheads and barge subsidies) was actually spent. Council then elected to suspend its programme of recovery operations on Sounds roads pending the result of the FAS. The \$11M Kenepuru Road Stage 1 funding balance was diverted toward 2022 event recovery work in other Marlborough areas¹⁵.
- 3.2 *Stage 2 funding application:* Marlborough Roads is duly instructed to prepare a NZTA funding application for August 22 damage, primarily for Non-Sounds roads. In mid 2023 NZTA approves \$52 million at a 95% FAR for this Stage of road recovery work (Stage 2 funding). This was to enable the completion of recovery work in the Awatere Valley, Northbank and Waihopai Valley. It also facilitated a one-year extension of water transport subsidies in the Sounds, some design work for Queen Charlotte Drive and some temporary immediate access work on other Sounds roads pending the FAS.

¹⁰ See Council Media statement dated 19 December 2023.

¹¹ See page xiii of the executive summary of the FAS PBC.

¹² See Items 4.4 and 4.5 of the Agenda pars to the 26 February 2024 Council meeting.

¹³ See NZTA Board Meeting minute 1 12 December section 8.1 Marlborough Sounds Future Access PBC.

¹⁴ Council and MR use this Stage 1, 2, 3 identification system in general correspondence and discussion with the Association so we adopt the same.

¹⁵ Advice from Council dated 26 October 2024 following a KCSRA LGOIMA (OIA) request.

- 3.3 *Total \$140 million allocated at 95% FAR:* Total Stage 1 and Stage 2 recovery costs approved for funding at 95% FAR is thus \$140M¹⁶. Council funds its 5% share - \$7M - out of reserves.
- 3.4 *Stage 3 Funding Costs – Kenepuru Road- as per the LTP:* The LTP consultation document states FAS estimates recovery costs for FAS road repairs of \$142M and road improvement costs of \$48M. Of this Kenepuru Road repair costs are estimated at \$91M and road improvement costs at \$12M. Also proposed are a \$3M road improvement study, a \$6.75M marine improvement study and \$33M of marine improvement work.
- 3.5 *FAS PBC to NZTA:* Council submits a PBC for “Stage 3” road repair work proposing a FAR of 71%. And, as noted, the NZTA Board endorses the FAS PBC¹⁷ and notes it expects MDC to apply for funding at a FAR of 71% for Stage 3 following a “*special consultative process on future roading customer level of service identified in the PBC.*”
- 3.6 *Consultation Documentation- Funding the Council Share:* On 11 April 2024 Council releases proposals indicating that Council anticipates a 71% FAR on Stage 3 road repair work, a 51% FAR for road improvement work (including a road improvement study) and a Nil FAR for marine study and marine infrastructure improvement work. This leaves Council required to fund \$105M from its own sources– being 100% of marine study and marine improvement work (\$40M), 49% of road improvement work (including a study) at \$24M (49% of \$48M) and 29% of road repair work at \$41M (29% of \$142M).
- 3.7 *How the costs might be allocated to classes of ratepayers:* Council now proposes to fund the entire \$105M Stage 3 work programme cost out of a special rates structure. Its preferred option¹⁸ proposes to break away from its subsisting long term plan road rating policy of “*equal access rights equal cost*”.
- 3.8 *Why the Break from Existing Policy ?* Council rationale for this breach from policy is that the 2021 and 2022 events are extraordinary with a greater benefit from the repair work going to those in the Sounds Zone(s) who might use the Sounds road(s) to access their properties.
- 3.9 The LTP proposals raise a number of issues in both pertinence and fairness. We expand on these issues in the body of this submission.

¹⁶ See Council media statement of 19 December 2023.

¹⁷ See footnote 6 above.

¹⁸ See option 2(d) of the LTP consultation document – Uniform charge for the remainder of Marlborough.

The Marlborough Sounds Future Access Study

A review from a Kenepuru Sound perspective.

Professional Biography

1. My full name is Ian Ross Harrison.
2. I have an Honours Degree in Economics from Victoria University of Wellington and a Masters degree in International Public Policy from Johns Hopkins University.
3. My work career was largely as an economist with the Reserve Bank of New Zealand. During that time, I worked on a number of economic issues and in the latter part developed methodologies for applying cost benefit analyses to complex financial system issues.
4. During my time at the Reserve Bank I also had working engagements with the World Bank, the International Monetary Fund and the Bank for International Settlements.
5. In 2012 I established a consultancy, Tailrisk Economics, and have consulted to several New Zealand financial institutions on aspects of risk measurement and management.
6. Through Tailrisk Economics I have published multiple papers on public policy issues including: climate change adaptation and mitigation; Wellington City Council policies; covid policy; road safety; financial stability policy.
7. I recently completed cost benefit reviews including the Lets Get Wellington Moving cost benefit assessment of the Wellington Golden Mile project and the Wellington City Council speed reduction proposals.

Part one: Introduction

We have been engaged by the Kenepuru and Central Sounds Residents Association to review the document dated September 2023 'Marlborough

Sounds Future Access – Programme Business Case’ - (the Study) produced by the consulting firm Stantec for the Marlborough District Council. We have had particular regard to the implications for the Kenepuru area. Our review is restricted to analysis and information in the above report and to the Stantec report ‘Marlborough Sounds Future Access Study Preliminary Natural Hazard Susceptibility, Implications and Interventions’ (Hazards assessment report).

We have focussed on the key analyses and information that we believe are driving the final recommendations. This is not a detailed walk-through of every discussion and result and of different evolutions of the results through the development of the Study.

This report is organised as follows:

Part two reviews the Stantec assessment of natural hazards and in particular how the risk of extreme rainfall events may increase with climate change. The reason that this is important is that Stantec has assumed that the analysis has to be ‘draped’ in climate change impacts and ‘adaptation’ to secure Government funding. With the change in government this imperative may not be so pressing.

Part three describes and critiques the assessment models presented in the Stantec report.

Part four looks at the cost and benefits of the ‘marine option’ that tends to be favourably represented despite the lack of credible supporting evidence.

Part five concludes.

Part two: Hazards assessment

The Study discusses a range of hazards including sea level rise and earthquakes. However, as only extreme rainfall events have a material bearing on road repair strategies, we have restricted our discussion just to this hazard.

The Study claims that climate change will have a material impact on the incidence of future extreme rainfall events and that adaptation to these events will be necessary.

The main evidence of future increases in extreme rainfall events is their figure 4.5, which is presented in our figure one below. It shows the increases in rainfall for different time horizons by 2080-2100, under the Intergovernmental Panel on Climate Change (IPCC) emissions scenarios. The first scenario (RCP4.5 - in orange) is consistent with a 1.7°C temperature increase from the present. This scenario is roughly consistent with countries' current commitments, under the Paris agreement, to reduce greenhouse gas commitments. It allows for some backsliding.

What this figure tells us is that by 2080-2100 a 1 in 100 year event for 24-hour rainfall, for example, will be 10 percent more intense. The Study says that according to NIWA's High Intensity Rainfall model a 1:100 event will become just as intense as a historic 1:200 year event. We examined the NIWA model, which is an online calculator (<https://hirds.niwa.co.nz/>). It showed that rainfall in a 1:50 year event for 2030-50 would increase from the historic average of 225mm to 239 mm. For 2080-2100 it increases to 248mm. This is not much of a difference, particularly for the more relevant shorter time horizon. The difference is driven by the underlying science that suggests that a 1° C increase in temperature will drive a 7 percent increase in rainfall intensity.

The second scenario in the figure - RCP8.5 (black) should be ignored. It is a highly implausible high emissions scenario where the world switches to a heavily coal energy system. This will not happen.

The other intense rainfall event information presented was the August rainfall events at Turakino and Rai Falls. The August 2022 rainfall at Turakino was two and a half times higher than the previous August maximum recorded in 2017 and 36 percent higher than the previous monthly maximum recorded in October 1998. We see this as just cherry picking the data. At an individual rainfall gauge level short term changes in rainfall can be highly variable so it is easy to select a gauge with a high increase over a selected short time horizon.

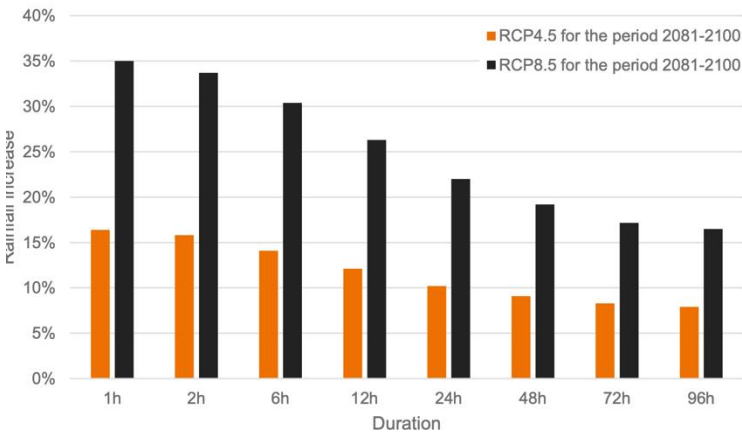
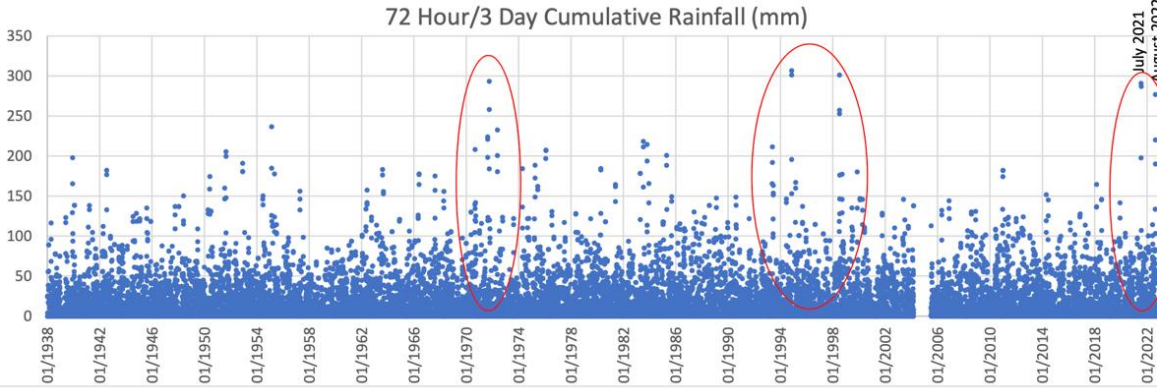


Figure one: Rainfall increases with climate change

What was not presented in the Study was the long term rainfall record for Linkwater that appeared in the Stantec Hazards document. It shows that there can be clusters of extreme events (ringed in red), which could have been misinterpreted as an upward trend at the time when the longer term data shows no such increase.

Figure two: Linkwater rainfall events



Thus the Study gives the impression that there will be a material increase in extreme rainfall risk in the future and that it follows that this increasing risk requires a major adaptation response. This is not supported by the evidence.

Another shortcoming in the discussion is that there was no analysis of differences in rainfall in different parts of the Sounds. It might be that at least part of the higher incidence in road damage in parts of Kenepuru could have been due to higher rainfall rather than an intrinsically higher vulnerability of the Kenepuru road from Linkwater to the Heads.

Part three: Modelling assessment

There are three main problems with the assessment process. First, there is no clarity on how decisions on specific road sectors were actually made (in particular the Portage to the heads sector). All of the modelling information is presented just for the zones. But obviously the modelled outputs will differ significantly by sector.

Second, the assessment process is overly complex with four criteria being used. It is not clear how these evaluations are consolidated to generate a final decision. This is illustrated in the description of the programme assessment in the executive summary. Figure three shows the assessments for Kenepuru as presented in the Executive Summary¹⁹ (figure three below). Four assessment criteria are presented in the table: Weighted MCA (multiple criteria assessment) score; Transport efficiency BCR (benefit cost ratio); WEI (Wider Economic Impact) factor; and the likelihood of restoring previous economic activity.

At best this assessment is confusing. This is illustrated in the description of the criteria in the executive summary. Their description of the criteria lists only two²⁰

The programmes were assessed using multi-criteria analysis (MCA), economic impact (likelihood of option enabling full restoration of previous economic activity) assessment, and indicative, high level engineering cost estimates. The assessment was used to identify an Emerging Preferred Programme.

Either Stantec did not understand their own evaluation framework or they were unable to describe it succinctly and accurately.

Figure three: Assessment summary for Kenepuru

Considerations	Do Minimum	Road Focus	Road Access	Balanced	Marine Access	Marine Focus
Weighted MCA Score	-0.52	-1.06	-0.67	0.07	-0.24	-0.38
Transport Efficiency BCR	0.57	0.86	1.07	1.12	0.59	0.53
WEI Factor	5.57	7.72	9.56	10.2	5.81	5.56
Initial Cost Estimate	\$8.6M	\$145.2M	\$81.9M	\$57.6M	\$46.5M	\$41.6M
Likelihood of restoring previous economic activity	Unlikely	Almost Certain	Likely	Likely	Possible	Possible

¹⁹ See page viii of the Studies Executive Summary

²⁰ *ibid*

The third issue is that the assessments seem to have been biased to favour a marine focus for Kenepuru.

In the following we describe and discuss the four assessment metrics.

The Multicriteria assessment

The MCA appears to be the primary basis for the selection of the balanced approach for Kenepuru. Returning to Figure 3 there is not much difference between the balanced and road access for the BC and WEI metrics and there is an identical likelihood of restoring economic activity. But for the MCA the difference appears to be significant. Road access receives a score of -0.67 and an orange colour coding, whereas the balanced option has a (slightly) positive score and a green coding.

The MCA works (as explained in section 9.1 of the Study) by scoring eight attributes on a -3 to +3 scale. These are then weighted and added to generate a single score. The full set of results are set out in figure four below²¹. For Kenepuru the results in the Weighted Score column range from -1.055 for the Road Focus option to +.070 for Balanced. By contrast all of the other zones had positive road focus scores. Looking at the scoring notes it appears that the Kenepuru scores were driven by a preference for a role for Marine solutions and against a stronger role for road improvements in Kenepuru.

The results for the metrics are presented in figure three above.

Figure four: MCA scoring

Programme		Investment Objectives			Achievability	Opportunities and Impacts				Weighted Score	Score Rank
		Travel Alternatives (8%)	Reduced Disruption (12%)	Resilience (20%)	Technical Difficulty (30%)	Social and Community (13.5%)	Environment (9%)	Climate Change (4.5%)	Supplier Capacity and Capability (3%)		
Te Aumiti/French Pass	Do Minimum	-1	-2	-2	3	-3	-2	-1	3	-0.360	6
	Road Focus	0	2	1	-1	2	1	-3	1	0.395	4
	Road Access	1	0	1	1	1	1	-3	1	0.700	3
	Balanced	2	-1	2	1	1	1	-2	0	0.875	1
	Marine Access	2	-2	3	1	0	1	-1	0	0.865	2
	Marine Focus	3	-2	2	-1	-2	1	-1	-1	-0.155	5
Te Hoiere/Pelorus	Do Minimum	1	-1	-1	3	-1	-2	0	3	0.435	4
	Road Focus	1	2	2	0	2	1	-1	2	1.095	1
	Road Access	1	1	1	1	1	1	-1	2	0.940	2
	Balanced	2	1	0	0	1	1	-1	2	0.520	3
	Marine Access										
	Marine Focus	2	-1	-1	1	-1	-1	0	2	-0.025	5
Queen Charlotte	Do Minimum	1	-2	-2	3	-3	-2	0	3	-0.155	3
	Road Focus	1	1	2	-2	3	1	-3	1	0.390	1
	Road Access										
	Balanced	1	-1	1	-1	2	1	-2	1	0.160	2
	Marine Access	2	-2	0	-1	1	1	-2	0	-0.245	4
	Marine Focus	2	-3	-1	-2	1	0	-1	-1	-0.940	5
Kenepuru	Do Minimum	1	-3	-3	3	-3	-2	-1	3	-0.520	4
	Road Focus	1	0	-2	-3	2	1	-3	-2	-1.055	6
	Road Access	2	-1	-1	-2	1	1	-2	-1	-0.655	5
	Balanced	2	2	0	-1	0	1	-2	-1	0.070	1
	Marine Access	3	1	1	-2	-2	2	-1	-2	-0.235	2
	Marine Focus	3	0	3	-3	-2	1	-1	-3	-0.375	3

The eight criteria reduce to three sets. The first three criteria (accounting for a 40 percent weighting) are: travel alternatives; reduced disruption; and resilience and are really just difference expressions of the resilience metric. Together the three account for about half of the difference between the road focussed and balanced options for Kenepuru. But as we discuss below there is not a clear discussion of how greater reliance on marine transport improves resilience in a cost effective manner. But this is driving much of the MCA result.

The second set is the single 'achievability' metric, which accounts for a 30 percent weight. 'Achievability' is also described as technical difficulty and was more 'precisely' described in appendix R to the Study as:

Serious effort required for investigation, optioneering, design, risk assessment

The scores for road focus are -3 for road focus, -2, for road access, and -1 for balanced. A difference of just 1 on this metric accounts for a significant part of the difference between road access and road focus.

It is difficult to see why the fact that a 'serious' design effort might be required in places should be so determinate of the difference between the road focussed and balanced options.

The third set of four more minor criteria do not in net terms make much of a difference between the options.

In general the MCA is an inferior substitute for a reasonably robust cost benefit analysis because the explicit and implicit weightings are subjective and arbitrary. With a cost benefit analysis the weightings are correctly driven by the estimated dollar values.

In our view the Study MCA does not serve a useful purpose in this evaluation.

The benefit cost ratio

This metric is based on the standard Waka Kotahi metric for evaluating roading investments capturing time and vehicle operating costs.

As noted above the BCRs are only presented by zone not by sector. The difference in the BCRs (1.12 for balanced versus 1.07 for road access) is not

material. Even small changes in some of the many inputs into the model could have reversed the result.

Wider economic impact (WEI)

The third metric is what is called the wider economic impact (WEI). It calculates the cost of an adverse climate event and weights it by its probability of occurrence to generate an expected value over time. These estimates have been added to the cost benefit analysis.

However it is used again to estimate the likelihood of '*returning the zone to its previous level of economic activity*'. But as this assessment is the same for the balanced and road access options the WEI is not influencing the assessment here. As the WEI is already captured in the BCR it is not necessary to present it again as an additional decision metric.

The most intuitive and probably influential output from this analysis was the expected cost of extreme events, which was reported as being \$4.8 million a year for Kenepuru.

The problem with this estimate is that event probabilities and hence the costs appear to have been overstated. The critical assumption is that a one in 10 year event will have 50 percent of the damage impact of the benchmark actual 21/22 event which has a cost of \$45 million. The expected cost of one in 10 year events is therefore \$2.25 million. However, the cost of 1:10 year event cost does not fit with Stantec's own rainfall event review. In the Stantec Hazard risk assessment report there is the following:

Retired Marlborough Roads roading engineer David Miller was involved in maintaining the Kenepuru Road and Queen Charlotte Drive from the 1980s to the early 2000s. He was commissioned by MDC to compile a report³ in 2015 to input into an environmental study with an objective to provide an estimate the volume of sediment entering coastal water from road related instabilities. In a report to the council environmental committee (16th Feb 2016, it was documented:

"There were significantly more slips along the Kenepuru Road with a total of 36 recorded (Figure 1). These dated from 1982-2005, with an approximate frequency also of one every 9 months. Slips were on average approx. 2400 m³ on the Kenepuru Road (Figure 2), and ranged in volume from 200-8000 m³ with one extreme event of ~35,000 m³ in the mid-1990s on the northern side of the Kenepuru above Mills Bay"

If the average 10 year event is half as damaging as the 2021 event then this was not evident over 1982-2005. There was just one very large slip over 23 years.

Part four: Marine Access

In our view the report is strongly invested in some form of marine solution for Kenepuru.

Kenepuru has good resilience potential through development of a marine network.

This is a very positive situation for Kenepuru, because there are considerable challenges across much of the road network with many road segments having a high or very high susceptibility across much of their length to underlying natural slope hazard. This means that regardless of any geotechnical or stormwater engineering improvements, the roads will continue to fail following trigger events such as storms. A high level of investment in the road network to try and improve resilience is not justified (p.74) .

The capital cost of the Marine investments is \$40 million with Kenepuru accounting for \$18 million for that. However there is no cost benefit of the marine element in the cost benefit analysis on an overall basis or by zone. All that is presented for Kenepuru is the overall BCR results, which includes the positive impact of the roading investments. We are told that the BCR had improved from the previous analysis by reducing the capital cost and delaying the implementation of aspects of the Marine scheme. This is telling us that the present value of the marine investments is negative.

This is pretty self-evident. The Marine investment involves a significant capital investment and increasing the cost of commercial transport by restricting the use of commercial trucking on an ongoing basis. The payoff is some smaller negative effect from climate induced disruptions every forty years or so.

It is also claimed that carbon emissions will be reduced by progressively transitioning freight within Kenepuru from road to marine. But there is no analysis of the impact on emissions and how big the reduction will be and at what cost per ton of emissions.

The real motivation for the marine focus appears to be political. If it can be argued that efforts were being made to 'adapt' to climate change and to reduce emissions then the government will be more sympathetic to the road repair

agenda. But the government has changed and the new Minister of Transport, Simeon Brown, is in our view unlikely to be so impressed by the effort.

The report recommends that the Council spends \$6.5 million (a Marine Study costing \$3.0m and a Marine Plan Change at \$3.5m.). In our view the Council should not accept this recommendation.

Part five: Summary

Our main conclusions are:

- The assessments were presented on a zonal basis. But investment recommendations have been made sector by sector. The evidence basis for the key decisions is therefore not transparent.
- Of the four decision metrics: the MCA; the BCR; the MEI; and the probability of restoring economic activity, only the BCR provides value.
- The BCRs for the Kenepuru road access and balanced options are not materially different.
- No BCR is presented for the Marine focus investment but it seems to be obvious that it will be below 1 and will provide poor value for money.
- Spending \$6.5 million on further investigation and regulatory set-up for this option would in our view be a waste of resources.

Ian Harrison

Tailrisk Economics
December 2023