

**BEFORE INDEPENDENT HEARING COMMISSIONERS
APPOINTED BY THE WAIKATO DISTRICT COUNCIL**

IN THE MATTER of the Resource Management Act 1991
(**RMA**)

AND

IN THE MATTER of the Proposed Waikato District Plan

BETWEEN **RANGITAHİ LIMITED**

Submitter No. 343

AND **WAIKATO DISTRICT COUNCIL**

Local Authority

**STATEMENT OF EVIDENCE OF
IAN DAVID CLARK FOR RANGITAHİ LIMITED**

16 November 2020

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SUMMARY OF EVIDENCE

1. My name is Ian David Clark and I am a transport planner and Director of Flow Transportation Specialists Limited. My evidence considers the need for a secondary access to serve the development of the Rangitahi Peninsula, as currently required by Policy 9.3.5.4 of Chapter 9 of the Proposed Waikato District Plan.
2. I summarise my evidence as follows:
 - (a) I support the concept of secondary accesses for new developments of a certain size, in principle;
 - (b) However, the need for secondary access to service the development of up to between 500 and 550 households proposed on the Rangitahi Peninsula is not clear, particularly now that the primary access, via a new bridge connection to the pre-existing section of Oporuru Road (which has been upgraded), has been fully established;
 - (c) The secondary access is not required for capacity reasons, rather it appears to have been recommended solely for reasons of resilience;
 - (d) The resilience benefits of a secondary access are likely to be minor in this case;
 - (e) The potential (wider) future growth of Raglan West, as envisaged by Waikato 2070, may be the more appropriate means to secure a secondary road link through to Rangitahi.

INTRODUCTION

3. My name is Ian David Clark.
4. I am a Director of Flow Transportation Specialists Limited, which was established in February 2005. Prior to October 2005 I was the Manager of the Transportation Planning Section at the Auckland office of Opus International Consultants Ltd. I was employed by Opus for eight years. I have the following academic qualifications:
 - (a) Bachelor of Arts in Geography from the University of Wales;
 - (b) Master of Science in Transportation from the University of London.
5. I am a member of the Chartered Institute of Logistics and Transport, the Chartered Institution of Highways and Transportation and the Australian Institute of Traffic Planning and Management. I am also a member of Engineering New Zealand (formerly the Institute of Professional Engineers of New Zealand), and I was formerly a board member of the Trips Database Bureau and Chairman of the New Zealand (Transport) Modelling User Group.
6. I have over 30 years' experience in transport planning, working in both New Zealand and the United Kingdom.
7. My experience in New Zealand includes responsibility for the transportation planning of numerous major transport schemes, including the State Highway 20 (SH20) Manukau Harbour Crossing, the SH18 Upper Harbour Motorway, the SH1 Esmonde Interchange, the SH1 to Highbrook Drive interchange, the City Rail Link, and the Southern Corridor Improvements projects, all in Auckland. I presented transport planning evidence to the Boards of Inquiry relating to the SH1 Northern Corridor Improvements project and the SH20 Waterview Tunnel projects, and recently at the council hearing relating to the SH1 Warkworth to Te Hana project.
8. I have been involved in the planning and assessment of numerous residential developments, including that currently under construction at Long Bay and Red Beach (North Auckland), Redhills (Northwest Auckland) and those proposed in Okura and Albany (both in North Auckland, providing evidence at various council and Environment Court hearings).

9. I have been retained by Rangitahi Limited to prepare a statement of evidence on its submission on the Proposed Waikato District Plan (**PWDP**) seeking amendments to the proposed policies and rules for the Rangitahi Peninsula Zone.
10. I am familiar with the Rangitahi Peninsula Structure Plan Area, Raglan West and the wider road network servicing Raglan. I have visited the Structure Plan Area and have travelled around the surrounding roads.
11. In preparing this evidence I have read the following documents:
 - (a) Rangitahi's submission and further submission on the PWDP;
 - (b) The relevant provisions of the Operative Waikato District plan and the Proposed Waikato District Plan;
 - (c) The statement of evidence of Mr Ben Inger on behalf of Rangitahi; and
 - (d) The s42A report.

CODE OF CONDUCT

3. I have read the Environment Court Code of Conduct for expert witnesses and agree to comply with it.
4. I confirm that the topics and opinions addressed in this statement are within my area of expertise except where I state that I have relied on the evidence of other persons. I have not omitted to consider materials or facts known to me that might alter or detract from the opinions I have expressed.

BACKGROUND

12. This statement of evidence relates to Policy 9.3.5.4 of Chapter 9 of the Proposed Waikato District Plan, which refers to Specific Zones. Section 9.3 relates to the Rangitahi Peninsula Zone, and Policy 9.3.5.4 relates to secondary access to the Zone.

13. The proposed Plan states:¹

9.3.5.4 Policy – Secondary access

- (a) From the beginning of development of the Rangitahi Peninsula Structure Plan Area up to completion of the permanent secondary access, an interim alternative access shall be provided to a usable standard for use at any time where the primary access may be closed.
- (b) A permanent secondary access must be constructed:
- (i) Prior to development of any of the Precincts E, F or G; and
 - (ii) In accordance with access and road performance standards suitable for its secondary function.
14. There is a subdivision standard in the PWDP which requires that *“there must be secondary legal access for all road users when the Oporuru Road connection is not available for any reason”* (Rule 28.4.1 RD1(a)(v)). The boundary adjustment subdivision standard goes further than that, also stating that *“a metalled access route protected by easement is sufficient for this purpose”* (Rule 28.4.2 C1(a)(vi)). The Operative Waikato District Plan (OWDP) also contains subdivision standards with the same requirements for secondary access, including that a metalled access protected by easement is sufficient.
15. The context around this Policy and the subdivision standards is set out in the evidence of Mr Inger. Mr Inger’s evidence refers to the OWDP, the existing resource consents for the Rangitahi Peninsula, as well the PWDP.

ASSESSMENT

Concept of Secondary Access

16. At a conceptual level, I support the principle of new development areas above a certain size having a secondary access, where practicable, in order to provide network resilience. This term refers to the need to ensure that people can safely continue to reach a zoned residential area, either during periods of planned disruptions (for example, scheduled road works) or unplanned disruptions (for example, a crash at a critical location on the network). This

¹ Note that the policy contains a number list error; corrected in this extract.

may explain the reasons for the subdivision standards in the OWDP and PWDP, which require the provision of a secondary access, including that a metalled access protected by easement is sufficient.

17. However, there are numerous other considerations that relate to the reasonableness of the concept of secondary access, and around what level of secondary access is being sought.
 - (a) The OWDP was written before the construction of the bridge connection from the Rangitahi Peninsula to the pre-existing section of Oporu Road to the north, which has also since been upgraded by Rangitahi Ltd. I am unclear whether the OWDP was concerned at least partly with the situation prior to the completion of the bridge connection and Oporu Road upgrades.
 - (b) The Rangitahi Structure Plan forms part of the OWDP and the PWDP. The Indicative Movement Plan within the Structure Plan identifies Oporu Road as the single primary route within the site (see Figure 1 below). It also identifies a series of Secondary Routes, also termed Neighbourhood Collector Routes, **within** the site, but it does not identify any secondary routes **to** the site. The Structure Plan states that the primary road *“connects the peninsula to the rest of Raglan and is positioned to enable a further connection to Te Hutewai Road in the future if required.”*²
 - (c) The Waikato 2070 document was adopted by Waikato District Council in May 2020. The Raglan Development Plan, contained within that document, shows a range of future connections from Raglan West (see Figure 2 below). These connections were not referred to in the (earlier) Rangitahi Structure Plan.

² Rangitahi Structure Plan, page 17.

Figure 1: Extract from Rangitahi Structure Plan

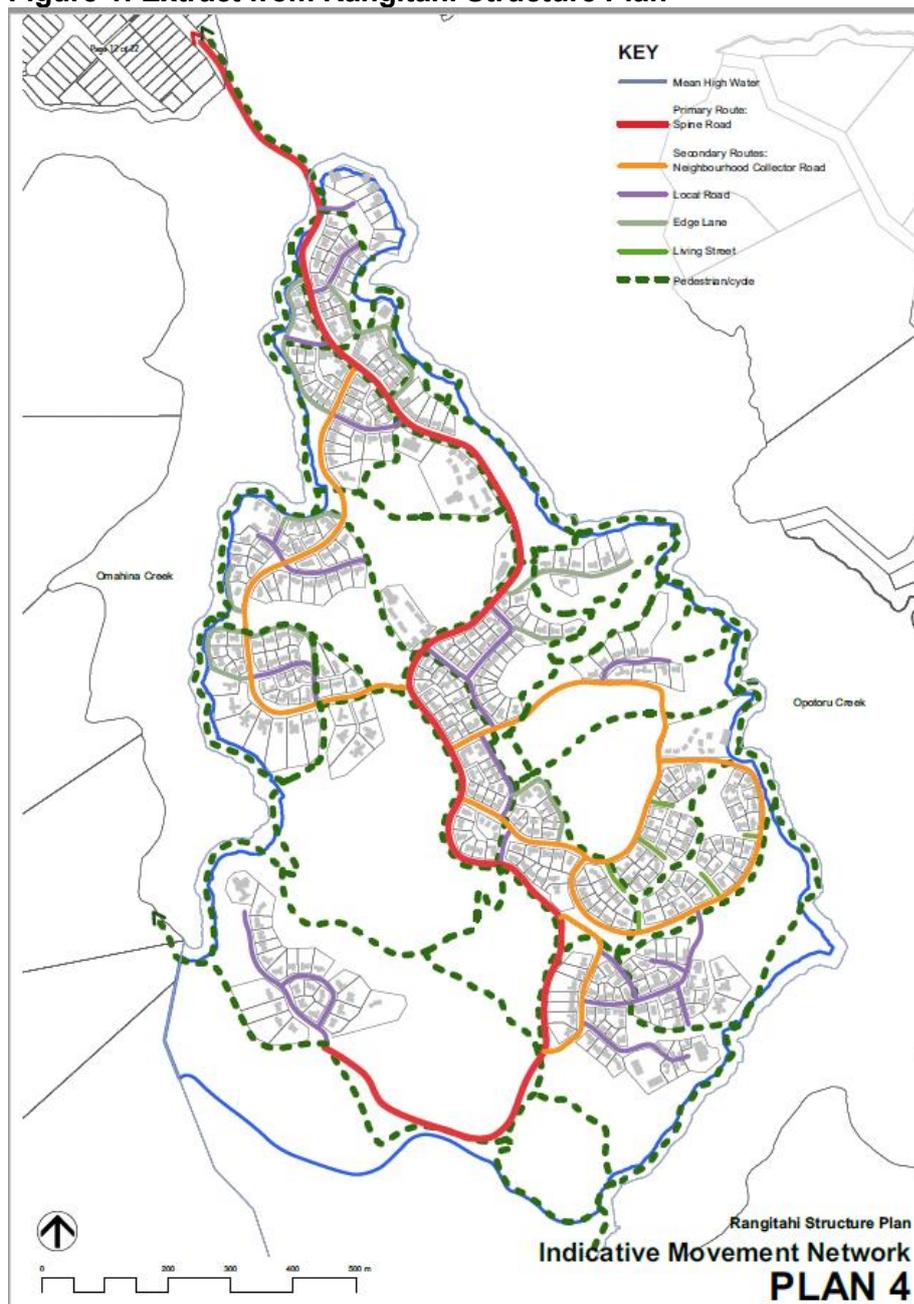
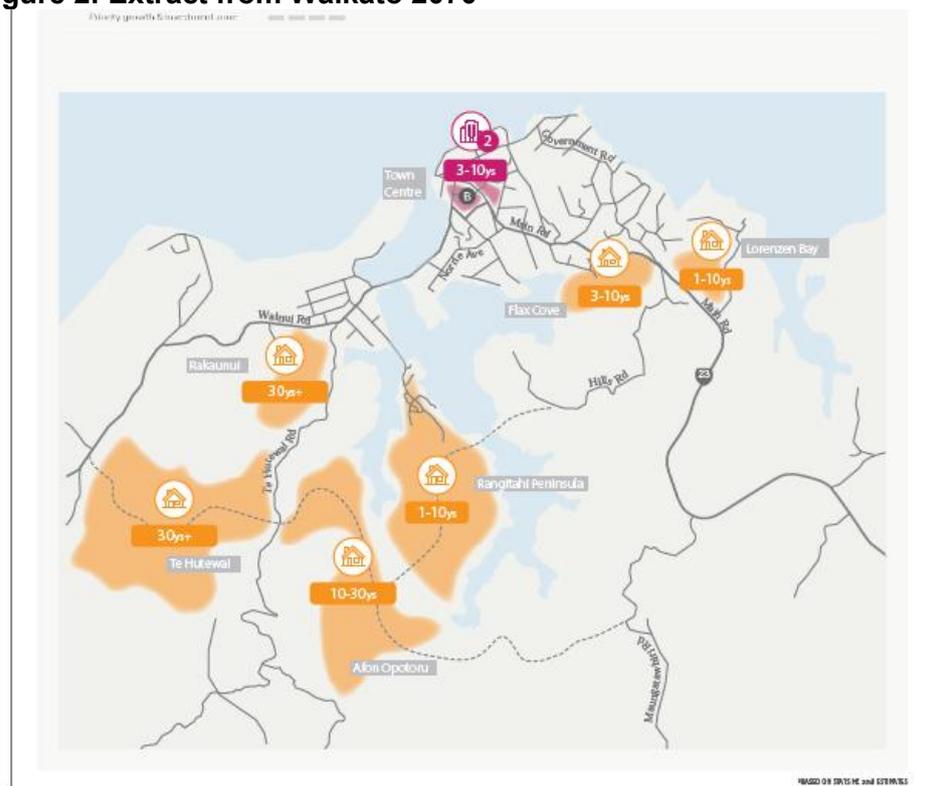


Figure 2: Extract from Waikato 2070



18. Therefore I am unclear from the above documents which route is being referred to as “the secondary access” within policy 9.3.5.4 of the PWDP, for the Rangitahi Peninsula, and how this is distinct from the “interim alternative access” referred to in that policy (and in policy 15B.3.34 of the OWDP).
19. The provisions within the OWDP have been fed through to the land use consent for Precinct A, which requires public access to either Benseman Road or Te Hutewai Road, in the event that access to and from the Rangitahi Peninsula is temporarily not available via Oporu Road for any reason.
20. My understanding of this requirement is shown in Figure 3 below. That is, I understand the aim to be to get people via Benseman Road or Te Hutewai Road back to Wainui Road, which is still part of Raglan West, not back across to Raglan East (see Figure 4), which would be achievable via an extended length of single track, gravelled road.

Figure 3: Alternative Route between Rangitahi Peninsula and Wainui Road (Raglan West)

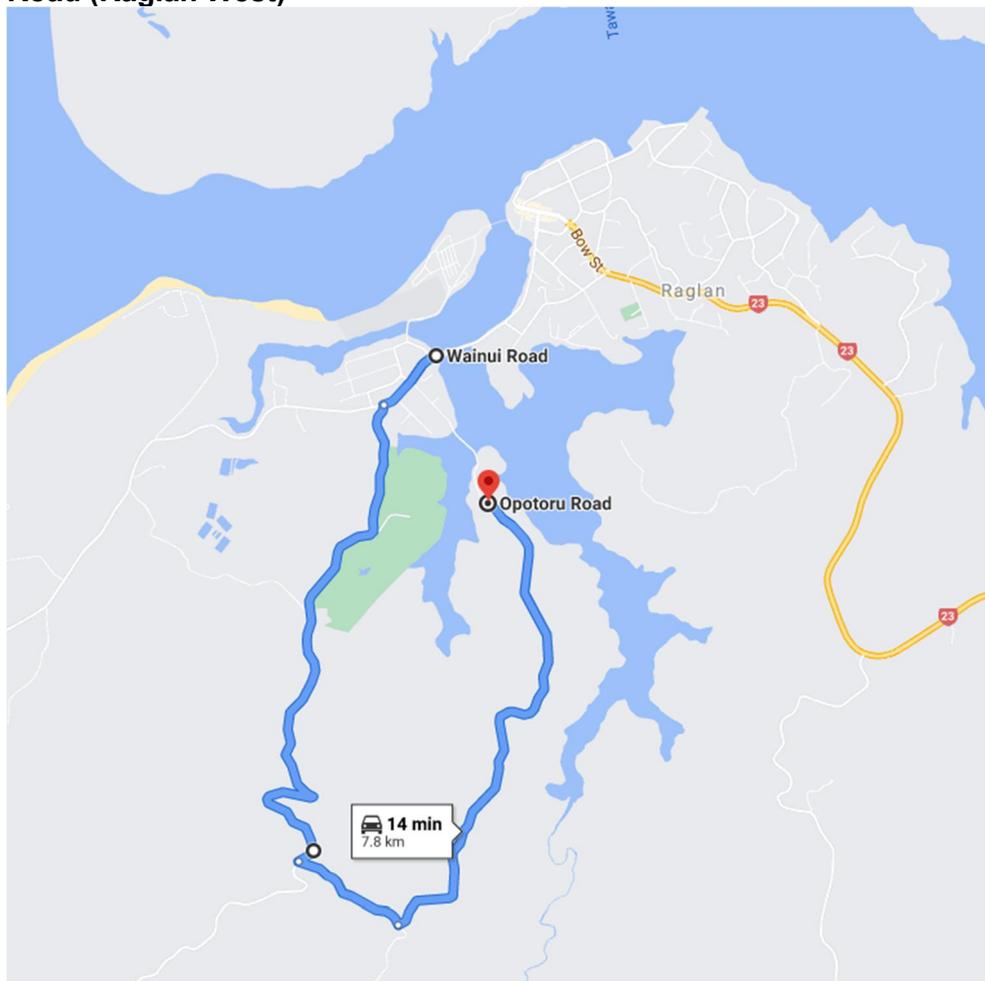
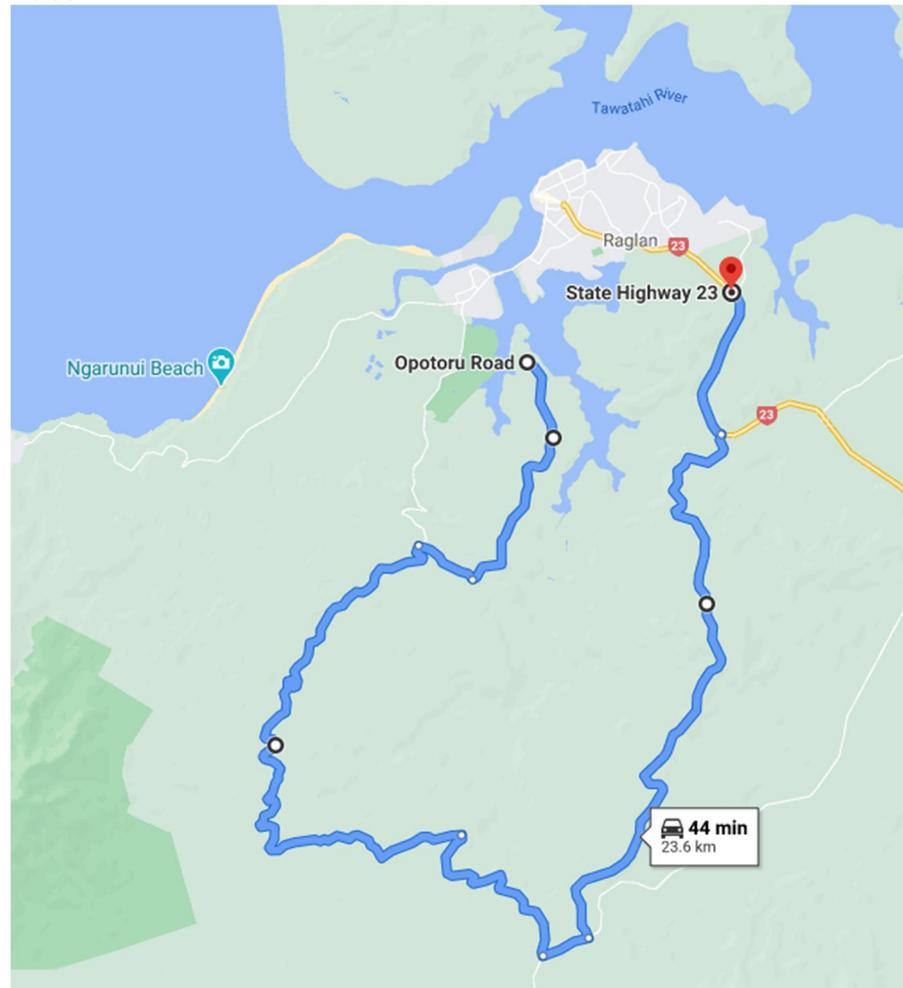


Figure 4: Alternative Route between Rangitahi Peninsula and Raglan East



21. If my understanding of this requirement is correct, the secondary route sought only gets people off the Rangitahi Peninsula, and not out of Raglan West. That is to say, it would cover the situation of Oporuru Road (or the new bridge to the Rangitahi Peninsula) being closed, but it would not adequately cover the situation of the one lane bridge on Wainui Road being closed. As such, it does not make the Peninsula fully resilient, and in the event, for example, of a crash at or adjacent to the Wainui Road bridge, it would be difficult (but not impossible) to gain access between Raglan West (including the Rangitahi Peninsula) and the main Raglan township.
22. The next issue relates to the intended use of the secondary access. My understanding is that for the resource consents, it has been accepted that the interim secondary route only needs to accommodate emergency vehicles.

For this reason, this interim route has been accepted as the farm track that connects to Benseman Road.

23. I understand that the OWDP also refers to “permanent secondary access” – as distinct from an “interim alternative access” – providing access choice for the full development enabled within the Structure Plan area or potentially being provided to ensure safe and efficient operation of the primary access and surrounding road network (policy 15B.3.34). The OWDP policy does not establish a trigger for the provision of the permanent secondary access, leaving this to be determined at a future time either when “appropriate” or “necessary”. This anticipates a process – either resource consent or structure plan – to access the requirement for a secondary access and to evaluate the appropriate route and formation standard.
24. The PWDP departs from the OWDP to specify a trigger for the construction of the permanent secondary access. The policy states that the secondary access must be constructed prior to the development of Precincts E, F and G. I am not aware of any assessment in the s32 report of this departure from the OWDP.
25. In my opinion, there is currently likely to be very limited demand for residents and the general public to travel south from Rangitahi. Even if a publicly accessible (secondary) route was provided in that direction, the rural nature of the land uses around Benseman Road and Te Hutewai Road would mean it would be likely to carry very low volumes of traffic.
26. In terms of the Rangitahi submission itself, it requests that the requirement for a secondary access should not relate to the completion of precincts E, F and G, but only to F and G. The relevant household numbers for each precinct set out in the Rangitahi Structure Plan are summarised in Table 1 below. The Structure Plan relates to a total of 500 households, but I understand that up to 550 households could be established within the variance thresholds, so the additional column in Table 1 inflates all numbers by 10%. Precinct A and part of Precinct B have been completed and construction of Precinct D is underway. The table assumes that all remaining precincts are implemented in sequence (i.e. A then B, then D, then C, then E and so on).

Table 1: Cumulative Numbers of Households in Rangitahi Peninsula

| Precincts | Households in Structure Plan ³ | Households in Structure Plan plus 10% |
|-----------|---|---------------------------------------|
| A to D | 333 | 366 |
| A to E | 418 | 460 |
| A to F | 476 | 524 |
| A to G | 500 | 550 |

27. Thus the request by Rangitahi Ltd seeks that the requirement for the permanent secondary access is increased from between 333 and 366 (completion of precincts A to D) to between 418 and 460 households (completion of precincts A to E).

Current Practices around Secondary Access

28. As noted at paragraph 16 above, at a conceptual level, I support the principle of new development areas above a certain size having a secondary access, where practicable. However, it is relevant to consider this concept against current practices.
29. I do not know of any guideline which recommends or dictates the provision of a secondary access above a certain development threshold. I have considered what has been provided elsewhere, or is being proposed elsewhere, and note that there are numerous examples of development areas or even townships that have only one access.
- (a) The Devonport Peninsula is an example on Auckland's North Shore of a large established residential area ostensibly served by a single road; Lake Road (see Figure 5, in Appendix 1)⁴. The Auckland Unitary Plan

³ Rangitahi Structure Plan, pages 2 to 8.

⁴ I acknowledge that there is generally an alternative route to Lake Road that could be used for emergency access, if necessary.

provides for a significant increase in residential densities on the peninsula.

- (b) Further to the north, the Whangaparaoa Peninsula is another large, established residential development also served by a single road. East of the intersection of Whangaparaoa Road with Red Beach Road, there is a section where there is no secondary road alternative (see Figure 6, in Appendix 1). A solution has long been proposed in the form of PENLINK, which now forms part of the Government's NZ Upgrade Programme,⁵ announced in early 2020. However, this situation (with majority of the Peninsula being served by a single access road and with a potential solution identified but not implemented) has been in place for many years;
- (c) The township of Raglan itself is served by a single route, being State Highway 23. There are some sections where it would be possible to provide an emergency route, via gravel tracked roads, but these roads would need to serve much higher flows than the secondary/emergency route for the Rangitahi Peninsula;⁶
- (d) At a smaller level, the Conifer Grove area of South Auckland, west of the Southern Motorway is an area of some 800 households that is served by a single road; Walter Strevens Drive, which passes over the Southern Motorway (see Figure 7, in Appendix 1). I understand that a secondary access was provided for by means of an emergency access directly off the motorway onto a grassed lot at the end of a cul-de-sac road, Brylee Drive, in the event that Walter Strevens Drive overbridge is unusable. Through the Waiata Shores development (discussed below) a formal secondary access route is now being provided;
- (e) Close to the Conifer Grove area in South Auckland, the former Manukau Golf Course is currently being redeveloped as "Waiata Shores". This was consented in 2013 for 479 residential dwellings with a single access off Great South Road (see Figure 8, in Appendix 1).

⁵ <https://www.nzta.govt.nz/planning-and-investment/nz-upgrade/auckland-package/>

⁶ I note that Waikato 2070 envisages an increase from over 4,000 people to over 12,500 people, whereas the 550 households within Rangitahi Peninsula may accommodate some 1,400 people.

There were a number of variations to the consent, allowing more than 500 dwellings and a supermarket. A secondary connection (to Brylee Drive) is now being constructed, to provide connectivity between the residential areas of Waiata Shores and Conifer Grove, but this area provides a recent example of a new development of 479 dwellings with no secondary access being envisaged at the time that the development was approved;

- (f) The Auckland Unitary Plan (now operative in part) includes details of proposed development within the Clarks Beach Precinct (Precinct I450). The precinct relates to approximately half of the area identified for future urban development, but the entire area zoned Future Urban at Clarks Beach, which will allow for about 1,500 households, has been subject to a structure plan analysis. The township already has a population of about 1,430 people, according to the 2018 census, and the AUP precinct allows around 700 households (of the total of 1,500) new households to be built, and early stages are currently under way. The township is served by a single road, Clarks Beach Road (Figure 9, in Appendix 1), and the precinct provisions do not refer to the possibility of, or need for, a secondary access.

30. The above paragraphs set out a few examples of relevance to the situation at Rangitahi. Further examples are provided at Appendix 2.

31. As a result of the above, while some form of secondary access to the Rangitahi Peninsula may be desirable to provide access choices, I do not consider it to be fully justified in this case. This is because:

- (a) The Oporu Bridge connection and Oporu Road upgrades are now provided. In my opinion this upgrade to the public road network adequately services the Rangitahi Structure Plan Area, and, to my knowledge, there has been no assessment which demonstrates that a secondary access is necessary to ensure safe and efficient operation of the primary access and surrounding road network prior to the development of Precincts E, F and G. Indeed I note that the evidence of Mr Keith Bell to the 2015 Private Plan Change 12 Hearing stated that the Oporu Road will operate with significant spare capacity (with

a single access road), with the full development of the Structure Plan Area⁷;

- (b) The probability of the secondary access being required are very low:
 - i. It is unlikely to be required for capacity reasons, when the peninsula is anticipated to accommodate 550 households.
 - ii. It is unlikely to be required for safety reasons, as the new connection from the Peninsula has included safety improvements along the former Oporuru Road, up to and including the intersection with Wainui Road;
 - iii. It is therefore only likely to be required for resilience reasons, but the resilience benefits need to be considered further;
- (c) The resilience benefits of the secondary access currently envisaged are likely to be modest, for the reason set out in paragraph 21. The secondary access will only be required in the following occasions:
 - i. In the event of a crash temporarily blocking the whole road, at a location where there is no alternative. It can reasonably be expected that such an event will be very infrequent, particularly given the relatively low number of households proposed on the peninsula (limiting the number of vehicles/day), and the low speed environment within the Peninsula⁸;
 - ii. In the event of roadworks temporarily blocking the whole road, again at a location where there is no alternative. Again this can reasonably be expected to be very infrequent, as the vast majority of roadworks can be staged, for example, to affect only one lane of traffic at a time;
 - iii. In the event of a natural disaster, such as flooding limiting/prohibiting passage across the bridge. I am not an

⁷ Evidence of Mr Keith Bell for Raglan Land Company Ltd, June 2015, paragraph 33. See extract on “Capacity” attached in Appendix 3.

⁸ The low speed environment will mean that most crashes are likely to be “smaller events”, rather than ones that block the whole road.

engineer, but I expect that the new bridge has been built to suitable standards, at a height to accommodate the anticipated effects of climate change (i.e. meaning potentially higher water levels). This means that the likelihood of this type of event can also be reasonably expected to be very infrequent;

- iv. The ultimate event would be an emergency (such as a resident suffering a medical event, or there being a fire) while the primary access is closed due to a crash, roadworks or a natural disaster. The likelihood of such a combination of events coinciding would clearly be **extremely** rare;
- (d) The current metalled access is sufficient to cover the occasional/emergency access in circumstances when the primary access is not available, and
- (e) The physical and environmental costs of providing a permanent secondary access are unknown, and the PWDP does not provide an indicative alignment for such an access.

ISSUES RAISED IN SECTION 42A REPORT

- 32. The Section 42A report discusses the issue of the proposed secondary access at Section 8 (pages 21 to 25), and the Planner, notes the following:
 - (a) There is confusion around the requirement for secondary access;
 - (b) It is unclear whether it is still required now that the bridge is in place;
 - (c) It is unclear why it is required, when there are other communities within New Zealand that are likely to have only one access road;
 - (d) The benefits could be outweighed by the adverse environmental effects;
 - (e) The Planner supports the changes proposed by the submitter (Rangitahi Ltd) but suggests that traffic evidence may be useful, to consider possible further amendments to the policy, or even removal of the policy;

- (f) She notes that the potential future growth of Raglan West, as envisaged by Waikato 2070, would appear to be the more appropriate means to secure road links through to Rangitahi.
33. As outlined above in my evidence, I agree with each of the points raised by the Council's reporting planner, although I note that I am not claiming expertise in assessing the adverse environmental effects.

CONCLUSION

34. In summary, I conclude that:
- (a) I support the concept of secondary accesses for new developments of a certain size, in principle. However, the need for secondary access to the Rangitahi Peninsula is not clear, and may stem from requirements drafted prior to the provision of the upgrade of Opotoru Road and the bridge connection to the Peninsula;
 - (b) There has been no assessment undertaken to support the need for a secondary access to service the development of up to between 500 and 550 households under the Rangitahi Structure Plan. Indeed, the assessment carried out in 2015 indicated that it is not required for capacity reasons;
 - (c) Therefore the secondary access would appear to be recommended solely for reasons of resilience, and the resilience benefits are likely to be minor in this case;
 - (d) The potential (wider) future growth of Raglan West, as envisaged by Waikato 2070, may be the more appropriate means to secure a secondary road link through to Rangitahi.

16 November 2020



Ian David Clark

Appendix 1: Figures showing areas/townships with restricted or single access

Figure 5: Devonport Peninsula (see Paragraph 29 (a))



Figure 6: Whangaparaoa Peninsula (see Paragraph 29 (b))



Figure 7: Conifer Grove (see Paragraph 29 (d))

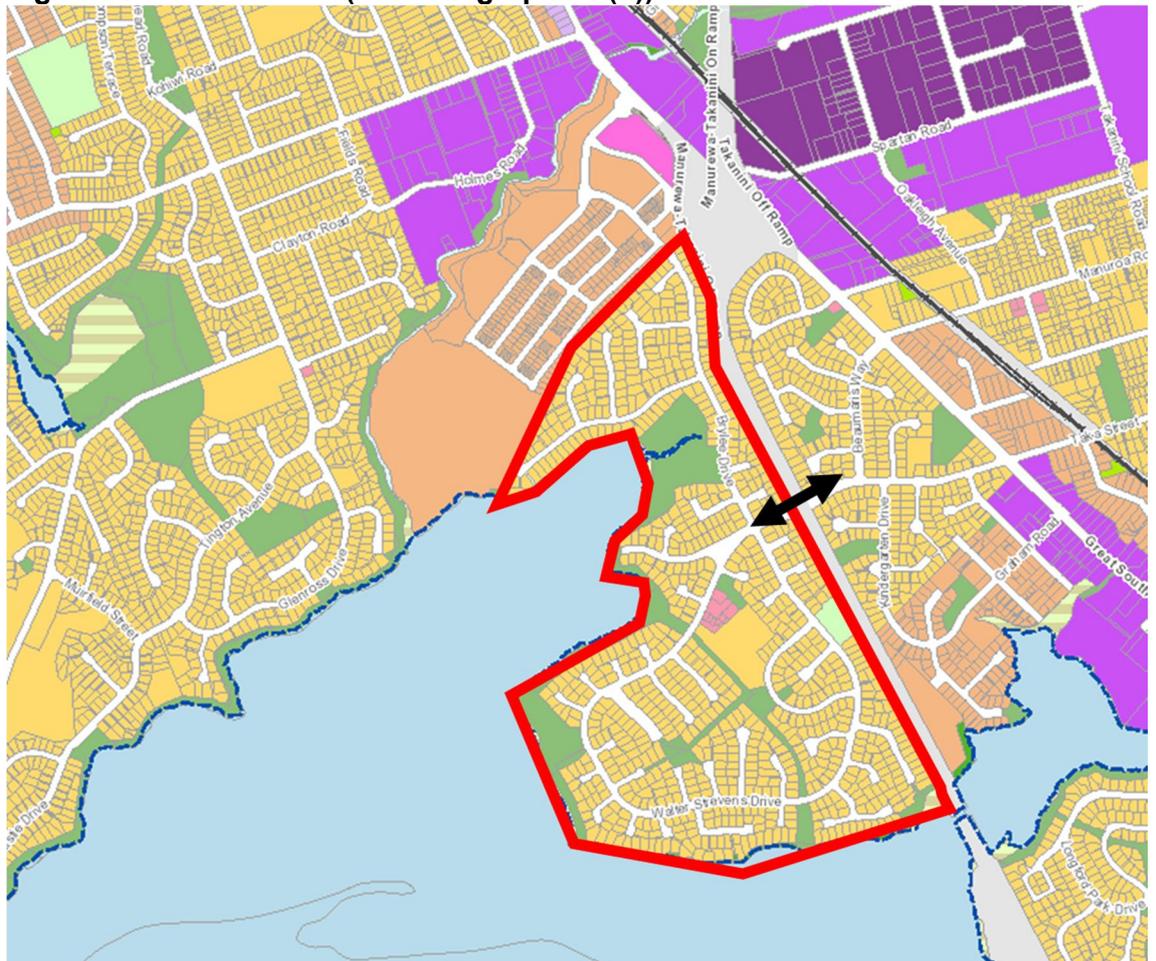


Figure 8: Waiata Shores (formerly Manukau Golf Course) (see Paragraph 29 (e))

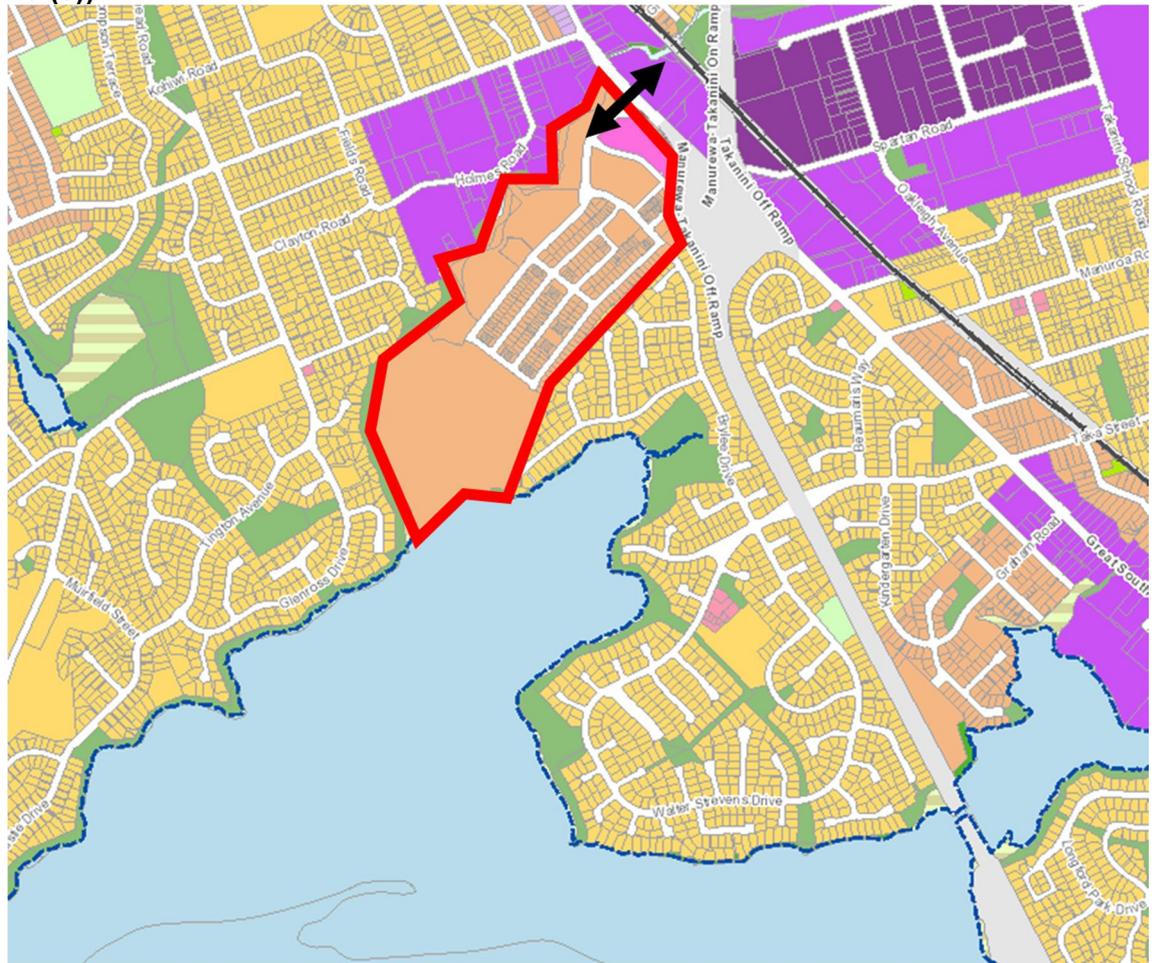


Figure 9: Clarks Beach Precinct Plan (see Paragraph 29 (f))

1450.11 Precinct Plan – Clarks Beach



Appendix 2: Further examples of areas/townships with restricted or single access

Paragraph 29 provided a few examples of development areas or townships that have only one access. Other examples include:

- (a) Omokoroa, in the Western Bay of Plenty, is served by a single access from State Highway 2, and this area is to be subject to further intensification;
- (b) Pauanui, on the Coromandel Peninsula, is served by a single route from State Highway 25;
- (c) The Te Atatu Peninsula in west Auckland is served by a single route, immediately north of the SH16 Northwestern motorway interchange.
- (d) In Red Beach, at the neck of the Whangaparaoa Peninsula, the area of the former Peninsula Golf Course is currently being developed, for around 570 households. While the development has to proceed in accordance with the precinct plan (Precinct I533 of the Auckland Unitary Plan – operative in part), and Policy I533.3 (2) (b) refers to safe and efficient connections to Hibiscus Coast Highway **and** Red Beach Road, there are no rules specifying the provision of the second access at a particular threshold.

Appendix 3: Extract from Keith Bell's evidence on PC 12

10

Capacity

29. My co-authored report³ on the upgrading also discussed in some detail the capacity of the road with the proposed widths – as this was a matter of concern to some submitters.
30. Without repeating the details of the analysis, I concluded that the full-width two-way traffic volume limit for the upgraded Oporuru Road carriageway is approximately 1880 vehicles per hour with the application of a number of conservative assumptions⁴. I would like to stress that this capacity is a volume *per hour*, not a volume *per day*.
31. In light of the application of the conservative assumptions in my analysis, in reality this calculated traffic flow limitation will be lower than the actual practical capacity of the road.
32. To determine if this capacity is sufficient to accommodate the future development of the Rangitahi Peninsula, I have used the highest predicted peak hour two-way traffic flow arising from the full future development of the Peninsula. This estimate was provided in the Integrated Transport Assessment that supported the Plan Change documentation and is expected⁵ to be in the order of 326-344 vehicles/hour.
33. On this basis the calculated (conservative) capacity of Oporuru Road is more than five times higher than the anticipated volumes, and thus the upgraded road will be able to accommodate the future traffic flows with significant reserve capacity.
34. Therefore, I consider that the proposed upgrading will be able to easily and safely accommodate the anticipated future traffic flows.

³ "Oporuru Road – Proposed Upgrading" dated 12 February 2015.

⁴ Based on 2 second headways, each lane can accommodate 1800 vehicles hour. This base capacity has then been conservatively reduced to allow for the effects of lane widths, lateral clearances (3.2m lane with no clearance) and HCV content (5% HCV)

⁵ Based on a 2061 scenario of a 500 dwelling development in addition to the 10 existing dwellings