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	**RANGITAHI LIMITED**
	Submitter No. 343
AND	**WAIKATO DISTRICT COUNCIL**
	Local Authority

EVIDENCE-IN-CHIEF OF IAN DAVID CLARK FOR RANGITAHI LIMITED

(TRANSPORT)

Dated: 17 February 2021

Solicitors on Record
BURTON PARTNERS
SOLICITOR — TONY NICHOLSON
PO Box 8889, Symonds Street, Auckland 1150, DX CP24147
P 09 300 3775 F 09 300 3770 E jeremy.carr@burtonpartners.nz

Counsel
Dr R A MAKGILL
BARRISTER
PO Box 77-037, Mt Albert, Auckland 1350
P 09 815 6750 E robert@robertmakgill.com

CONTENTS

INTRODUCTION, QUALIFICATIONS AND EXPERIENCE

1. My name is Ian David Clark.

2. 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; and

   (b) Master of Science in Transportation from the University of London.

3. 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.

4. I have over 30 years' experience in transport planning, working in both New Zealand and the United Kingdom.

5. 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.

6. 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 that proposed in Okura and Albany (both in North Auckland), providing evidence at various council and Environment Court hearings.

CODE OF CONDUCT

7. I have read the Environment Court Code of Conduct for expert witnesses and agree to comply with it.

8. 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

9. I have been retained by Rangitahi Limited (**Rangitahi**) to prepare a statement of evidence on its submission on the Proposed Waikato District Plan (**pWDP**) seeking provision for future urban growth in Raglan West.

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-in-chief (**EIC** or **evidence**) I have read the following documents:

    (a) Rangitahi's submission and further submission on the pWDP;

    (b) The other statements of EIC on behalf of Rangitahi;

    (c) Integrated Transport Assessment by Traffic Engineering & Management Ltd dated July 2013 for the Private Plan Change 12.

    (d) A traffic modelling report by Opus which forms Appendix 1 of the TEAM ITA (**Opus report**) dated 28 July 2013; and

    (e) The s.42A Framework Report.

TRANSPORT ENVIRONMENT

12. This statement of evidence relates to the submission by Rangitahi to the pWDP seeking provision for medium to long term growth areas in Raglan West. Raglan West is currently accessed by a one-lane bridge on Wainui Road which poses capacity constraints as Raglan continues to develop.

13. Traffic Engineering & Management Ltd (**TEAM**) produced an Integrated Transport Assessment (**ITA**) in July 2013 in support of the proposed Private Plan Change 12 (**PPC**) for Raglan Land Company. As part of the ITA, a traffic modelling report was prepared by Opus in July 2013 to assess the operation of the one-lane Wainui Road bridge, considering development scenarios in the forecast years of 2021, 2041 and 2061.

14. My evidence re-assesses the Wainui Road bridge with the level of residential development set out in the EIC by Dr Douglas Fairgray on both sides of the bridge, which I refer to as East and West Raglan.

Existing transport environment

15. The existing transport environment in Raglan relevant to pWDP and specifically Rangitahi Peninsula is as follows:

    (a) Opoturu Road bridge connects Rangitahi Peninsula to the rest of Raglan West. Previously there was a causeway which was only accessible by vehicles during low tide. This has recently been upgraded to a two-lane bridge with footpaths. The new bridge is operational at all times and is no longer dependent on tides.

    (b) Wainui Road includes a one lane bridge between Raglan township and Raglan west, with priority given to westbound vehicles. This is the sole vehicle connection to Raglan West and is a main focus of my evidence.

    (c) The intersection of Wainui Road/Opoturu Road has been upgraded, with a flush median, pedestrian refuge island to the east and changes to the parking outside of the convenience store at the top of the intersection.

    (d) Similarly, Opoturu Road, between the new bridge to the Rangitahi Peninsula and Wainui Road, has been upgraded.

    (e) A pedestrian only bridge to the north, connects Raglan Holiday Park to the west with the Raglan township on the eastern side.

16. The works described in paras. 15(a), (c), and (d) above are significant upgrades which were completed by Rangitahi as requirements of Plan Change 12 and subdivision consents for development on the Rangitahi Peninsula.

Future transport environment

17. There are a number of matters that will affect the future transport environment, namely changes to population and to the transport network.

i. Changes in population

18. The existing population of Raglan is around 3,300 people, according to the 2018 census.[1]

19. The Long Term Plan (**LTP**) for Waikato District suggests that the population of Raglan will increase from around 3,000 in 2013 to just under 4,000 by 2031.[2] After that, the document indicates a slight decline from 2031 to 2061. These forecasts seem surprising, given the comment in the document that parts of the District are experiencing high levels of growth, specifically noting Raglan as one of two locations where there is *"noticeable planned growth"*.[3]

20. I refer to Dr Fairgray's EIC for Rangitahi, but I note the following growth projections:

    (a) Waikato 2070 records that the current population of Raglan is around 4,000 people. The document expects this to increase to around 12,500 by 2070.[4]

---

1 https://www.waikatodistrict.govt.nz/your-district/district-overview/towns/raglan#:~:text=Raglan%20(Maaori%20name:%20Whaingaroa)%20is%20a%20coastal%20town,breaks,%20arts%20and%20crafts,%20fashion,%20cafes%20and%20restaurants.

2 Waikato District Council (undated), "Long Term Plan 2018-28", Figure 4, page 17

3 Ibid, page 13

4 Waikato District Council (2020), Waikato 2070 Growth and Economic Development Strategy", page 40

(b) The s.42A Framework Report notes Raglan is one of the areas that has recently experienced significantly higher growth than the 1.5% annual increase observed across the District as a whole.[5]

(c) The s.42A Framework Report notes the policy in the pWDP that seeks to focus urban growth in existing urban communities that have capacity for expansion, including Raglan.[6]

(d) Appendix 8 of the s.42A Framework Report (page 88) lists the growth cells within Raglan, and Appendix 9 (page 98) sets out household projections, from a current figure of around 2,100 households to forecasts for 30+ years ("2050 beyond") of around 3,950 under medium growth and around 5,100 under high growth.

ii. Changes in transport network

21. The LTP indicates only one transport related project for Raglan, presumably in response to the low forecast increase in population, according to that document (see para. 19 above).

22. The single transport project for Raglan is the replacement of the Wainui Walkway and Bridge. The LTP indicates that the primary driver is that the bridge is nearing the end of its useful life and requires replacement. However, the LTP also notes that the single lane bridge results in delays at peak times, such that options are to replace the bridge with a new one lane or a two-lane bridge, with the two lane option being preferred.[7]

23. The LTP indicates that a decision should be included within the 2021 Long Term Plan, with design and construction expected to take place between 2023-26.

24. The Waikato 2070 document refers to a number of proposed, conceptual, roading links within the Raglan area, as follows:

---

5 Waikato District Council (2021), "Section 42A Report: Hearing 25 Zone Extents Framework Report", page 39

6 Ibid, page 64

7 Waikato District Council (undated), "Long Term Plan 2018-28", page 27

(a) A new link between the Rangitahi Peninsula and Hills Road, on the eastern side of the Harbour, thus providing a connection to State Highway 23;

(b) A connection between the Rangitahi Peninsula and the proposed Afon Opotoru residential development area to the southwest (with that development anticipated within 10-30 years); or

(c) Onward connections between the Afon Opotoru growth area to Maungatawhiri Road to the east of the Harbour, and to the proposed Te Hutewai growth area to the west.[8]

25. I am not aware of any assessment of the costs, benefits, effects, or feasibility of these potential links at this stage, and I understand that they are to be considered as part of future structure planning for these development areas.

iii. Development at Rangitahi Peninsula

26. The main consented development within Raglan is that at the Rangitahi Peninsula, undertaken as a result of Plan Change 12. That Plan Change currently envisages up to 550 households to be accommodated in this area, although submissions by Rangitahi Ltd to the pWDP are seeking additional development.

27. As noted in para. 14 above, the transport infrastructure required to accommodate the currently anticipated development at Rangitahi is already in place, external to the site, although the internal road network is still under construction.

28. I provided evidence to Hearing 23, in late 2020. The primary transport related issue was around the need for a secondary access to the site. It was accepted by WDC that this was only required for heavy vehicles associated with subdivision civil construction.

---

8 Waikato District Council (2020), Waikato 2070 Growth and Economic Development Strategy", page 40

29. It is important to note that no improvement to the Wainui Road bridge is required to serve the level of development currently anticipated within the Rangitahi Peninsula.

TRANSPORT ASSESSMENT OF WAINUI ROAD BRIDGE

Current baseline traffic

30. The Opus report of 2013 included details of traffic counts in the vicinity of the Wainui Road bridge. These occurred on different days between December 2012 and April 2013.

    (a) The counts taken on Tuesday 29 January 2013 (after Auckland Anniversary Weekend) were used as the base volumes for the Opus traffic model. This was reported to be busier than normal traffic conditions. Between the observed hours of 10 am to 2 pm, the highest two-way flow was recorded to be about 500 vehicles/hour. This occurred around 1 pm, with approximately 210 eastbound vehicles and 290 westbound vehicles.

    (b) The counts taken on Thursday 11 April 2013 were used as the evening peak base volumes. A two-way flow of 350 vehicles/hour was recorded around 3 pm, with approximately 150 vehicles eastbound and 200 vehicles westbound.

31. The ITA found that the inter peak volumes are higher than the evening peak volumes, and I have therefore only assessed this period.

32. The speed of vehicles travelling across the bridge is typically 45 to 50 km/h, and it takes approximately 11 seconds to cross the bridge.

33. Since the TEAM and Opus reports were produced in 2013 when Opoturu Road bridge was still a tidal causeway, I consider the traffic counts to be outdated and no longer appropriate to use as “current” baseline conditions. Thus, I have re-modelled a number of development scenarios with the latest available data.

34. Due to the COVID-19 pandemic, traffic data from 2020 may not adequately represent “typical” traffic conditions. Therefore, I have taken the Opus traffic

data from 2013 and applied a growth rate in line with the increase in traffic on State Highway 23 (**SH23**). SH23 is the primary access to Raglan and is therefore likely to fully reflect the level of traffic growth within Raglan.

35. I have obtained traffic volume data from NZ Transport Agency for SH23. The data shows a 16% increase from 2013 to 2018, which is the latest available data. The data indicates that, on average, annual growth between the years of 2009 to 2018 on SH23 has been 2%.

36. Therefore, I expect traffic in Raglan has grown by 18% between 2013 and 2020.

37. It is interesting to note that the Opus work anticipated an increase of around 19% in the wider Raglan area, from 2013 to a forecast year of 2021. Therefore, in my opinion 18% growth in traffic from 2013 is a realistic estimate of current traffic volumes.

38. I have applied the 18% growth in traffic from the counts taken on 29 January 2013 (para. 30(a) above). This equates to around 595 vehicles/hour in the inter peak travelling across the bridge in 2020, with 250 eastbound vehicles and 345 westbound vehicles.

Base model

39. A spreadsheet model has been developed to assess the capacity of the bridge, utilising Monte Carlo methodology.[9] The model generated random arrival profiles for a specified number of vehicles, and simulated the interaction of opposing streams of traffic, including give-way behaviour, the formation of platoons, and queue build-up. The time required for vehicles to cross the bridge has been based on observed values.

40. The model has been run through one hundred replications, and the arrival delay for each vehicle, and the maximum queue length for each platoon, has been recorded. If a vehicle travelled unimpeded, both queue and delay were recorded as 0 seconds.

---

[9] The spreadsheet model was developed by my colleague Mr Jan Franta, a principal at Flow, with 14 years' experience. I have reviewed the set-up of the model, the assumptions, and the results.

41. The results were subsequently statistically evaluated and the average, median, 5th and 95th percentile queues and delays have been determined.

42. The spreadsheet model has been calibrated to the micro simulation modelling in the Opus report. Using the January 2013 weekday volumes in Table 6 of the Opus report for their sensitivity testing, the 95th percentile queues are 6 vehicles eastbound and 7 vehicles westbound. This is very similar to the modelled maximum queue length in the Opus report of 5 vehicles in both eastbound and westbound directions. Thus. I conclude the spreadsheet model is calibrated appropriately.

43. The base year was modelled using the flows in para. 38 and the results are summarised in **Table 1**.

Table 1: 2020 Base model inter peak

	Vehicles/hour	**95th percentile queue length (vehicles)**	**Average delays (sec)**
Eastbound	250	8	15
Westbound	345	9	9

Forecasting assumptions

44. I refer to Dr Fairgray's EIC which outlines the level of residential development now forecast for Raglan in 2030, 2050, and 2070, based on the new population forecasts included within the s.42A Framework Report, focussing on the medium growth scenario.

45. These scenarios were modelled to understand how the Wainui Road bridge can be expected to operate as the level of development in Raglan increases. This includes the development of approximately 550 houses on the Rangitahi Peninsula (noting that Rangitahi is reviewing development yield in the Structure Plan Area as discussed in the EIC of Mr David Peacocke).

46. The traffic modelling is mostly concerned with the **differences** in household numbers between 2020 and each of the forecast years. These differences

and the resulting forecast flows on the Wainui Road bridge are summarised in **Table 2: Forecast inter peak volumes on Wainui Road Bridge**

	Differences in household numbers from 2020 (medium growth, medium density scenario)		**Inter peak traffic volumes (vph)**	
	Raglan East	Raglan West	Westbound	Eastbound
Base	-	-	345	250
2030	+260	+290	430	335
2050	+340	+930	590	495
2070	+390	+1410	705	610

47. .

Table 2: Forecast inter peak volumes on Wainui Road Bridge

	Differences in household numbers from 2020 (medium growth, medium density scenario)		**Inter peak traffic volumes (vph)**	
	Raglan East	Raglan West	Westbound	Eastbound
Base	-	-	345	250
2030	+260	+290	430	335
2050	+340	+930	590	495
2070	+390	+1410	705	610

48. The forecast flows are based on the following trip generation and distribution assumptions:

(a) 0.6 vehicles per hour per dwelling in the peak hour. This was the agreed trip rate used in the ITA and was calibrated in the Opus report against the number of households and the traffic counts undertaken; and

(b) 80% of trips generated by the houses in West Raglan are to/from the east, and 20% of trips from East Raglan are to/from the west.

Forecast queues and delays

49. The 95th percentile queues and average delays for each of the forecast years are presented in **Table 3**.

Table 3: Modelled queue lengths and delays

	Average delays (seconds)		**95th percentile queues (vehicles)**	
	Westbound	Eastbound	Westbound	Eastbound
Base	9	15	9	8
2030	16	24	17	14
2050	71	97	82	72
2070	263	354	314	275

50. The results indicate that:

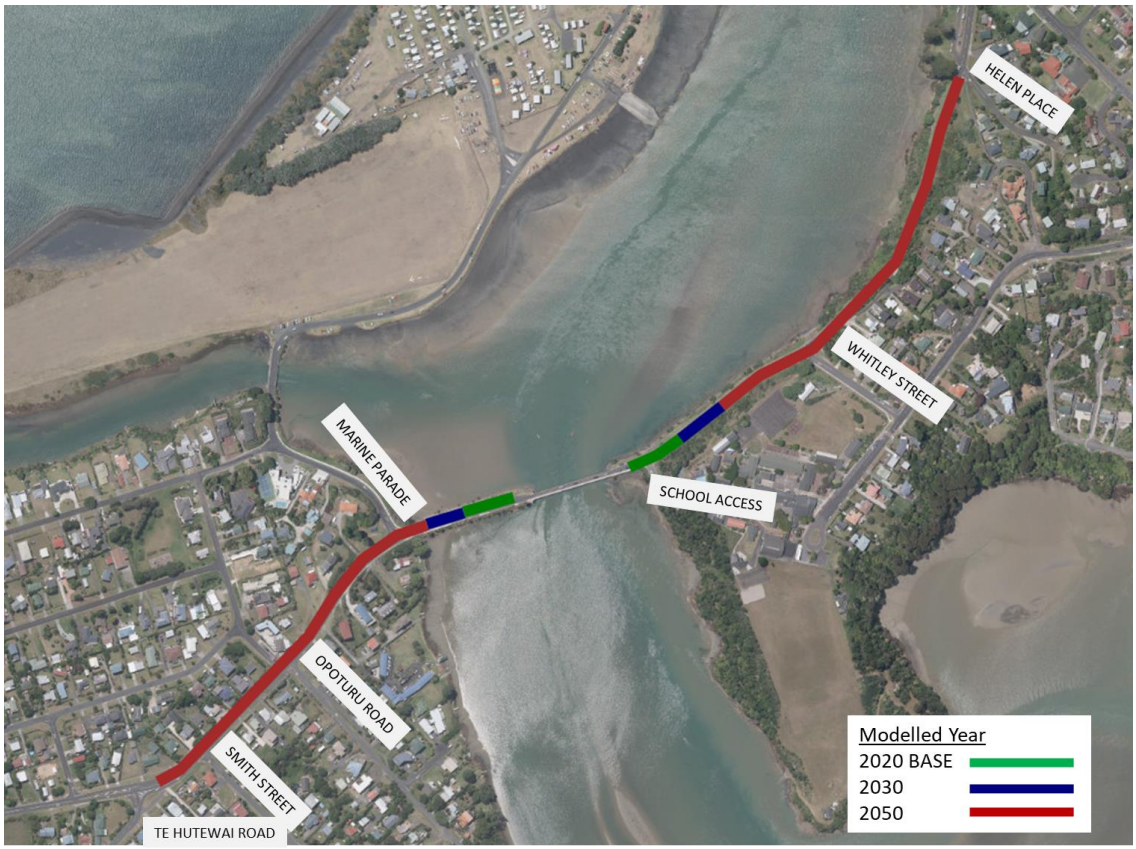
(a) The 2030 scenario is predicted to result in delays and queue lengths that may be described as acceptable;

(b) Delays of one and a half minutes are forecast for 2050, but extensive queues are forecast, up to Te Hutewai Road in the eastbound direction and up to Helen Place in the westbound direction; and

(c) Queues in the 2070 scenario are forecast to extend another 1.4 km in the eastbound direction, up to Riria Kereopa Memorial Drive, and to the town centre and beyond in the westbound direction.

51. To illustrate these results, the 95th percentile queues during the inter peak period for each of the forecast years up to 2050 are shown in **Figure 1** (drawn from the limit line on the bridge). Although the queues in the 2070 scenario are not shown in Figure 1, they would extend beyond Opoturu Road, and further east in the westbound direction.

Figure 1: Modelled inter peak 95th percentile queues[10]



52. Therefore, from the modelling undertaken and the forecast household numbers, I consider the Wainui Road bridge will need to be upgraded fairly soon after 2030 for acceptable levels of service to be retained (noting that earlier replacement may be required due to the structural reasons noted in the LTP). However, the levels of service will depend to a significant extent on the rate of growth, and the results set out above should be taken to represent the effects of levels of development, rather than relating to particular calendar years.

53. The results will also depend on the location of the growth in Raglan. Although household growth in Raglan West will result in an increased number of movements over the Wainui Road bridge compared to household growth in Raglan East, all growth within Raglan will have some impact.

10 Note, there is an existing painted keep clear zone at both intersections of Marine Parade and Whitley Street, for illustrative purposes, the queues are shown to extend across these zones.

54. The effects of long queues and delays on the approaches to the bridge may have safety implications since a driver at the front of a queue is likely to feel pressure as the queue builds up. This may result in drivers taking smaller gaps in traffic and taking the first opportunity to cross the bridge. In a scenario where the road operation relies on human courtesy and decision-making, this is likely to have consequences on safety. Furthermore, queues on the western approach to the bridge are expected to extend beyond the Marine Parade intersection soon after 2030. This is likely to further exacerbate the safety issues, as it will increase the extent of courtesy required, and thus the level of driver uncertainty in this area.

55. As such, from a safety standpoint, an upgrade to the bridge or its replacement to provide two traffic lanes will be required as queues and delays increase.

Signal operation

56. A possible solution to address the safety implications of priority control and eliminate the reliance on drivers making decisions, would be signal operation on the bridge. To test if the 2050 development scenario would improve with a signalised operation on the bridge, I have modelled this using SIDRA.

57. The minimum green time was set to 15 seconds (the time it takes for a vehicle to cross the bridge plus additional allowance), with 17 seconds intergreen time (yellow plus all-red period). A range of cycle times has been assessed, but the results below relate to a cycle time of 150 seconds, which is predicted to lead to a degree of saturation of over 100%. The SIDRA results are summarised in **Table 4** below.

Table 4: SIDRA results for 2050 development scenario - signalised operation

	Average delays (seconds)		**95th percentile queues (vehicles)**	
	Westbound	Eastbound	Westbound	Eastbound
2050	415	410	925	763

58. The SIDRA modelling indicates that the intersection will perform with longer queues and delays than the current priority operation. This is most likely due to the intergreen time, which is effectively lost time of 17 seconds, equivalent

to the time it takes for 2 to 3 vehicles to cross the bridge under priority operation.

59. While signal control would improve safety, it is predicted to perform worse from an operational and efficiency point of view and it would not be able to support the level of development anticipated by 2050.

Sensitivity testing

60. As a sensitivity test, I modelled how the bridge would operate if the Rangitahi Peninsula is fully developed with 550 houses, not taking into account other development in wider Raglan.

61. The inter peak scenario volumes on the bridge, and resulting queues and delays, are summarised in **Table 5**.

Table 5: Rangitahi Peninsula development scenario

	Inter peak traffic volumes (vph)	**Average delays (seconds)**	**95th percentile queues (vehicles)**
Eastbound	380	33	22
Westbound	475	23	25

62. The Rangitahi development only scenario results in acceptable average delays, with 95th percentile queues extending across Marine Parade in the eastbound direction, but not reaching Whitley Street in the westbound direction. This is illustrated in **Figure 2**.

Figure 2: Modelled 95th percentile queue for Rangitahi Peninsula development only scenario

63. This scenario is predicted to perform worse than the 2030 scenario assessed above. Clearly if development at Rangitahi occurs at a faster rate than anticipated in Dr Fairgray's EIC (i.e. in accordance with the expectations set out in Waikato 2070) the bridge will become a constraint sooner than currently indicated by my analysis.

64. It has already been accepted (as part of the PPC) that the Rangitahi development can proceed without an upgrade to the Wainui Road bridge (considering only traffic issues, and not considering structural issues).

65. If additional development is to be proposed for the Rangitahi Peninsula (beyond 550 households), then clearly this would bring forward the need for the upgrade, although the situation can still be expected to fall between the 2030 and 2050 results in Table 3.

Holiday peak

66. As noted in para. 30 above, the assessment has been based on traffic flows during the middle of a busy summer's day in January. However, the assessment does not relate to the peak holiday volumes, such as those around New Year, or when an event is being held in or around Raglan, such

as the Soundsplash festival, or a surfing competition. Traffic during these periods can be expected to be significantly higher, but it is normal practice for traffic assessments not to consider such peaks. For example, shopping centre car parks are not normally designed to accommodate peak demands, such as those just before or after Christmas.

67. During peak periods, therefore, it is to be expected that greater queues and delays would be experienced, even though some peak spreading may occur as holidaymakers tailor their travel. While queues and delays during these busy days may be tolerated by drivers, there may be safety consequences if the delays tempt drivers to take risks, or if drivers approach unexpected queues too fast.

OTHER TRANSPORT RELATED ISSUES

Future road connections

68. As noted in para. 24, Waikato 2070 envisages additional transport connections to serve the future development in the Raglan area. I note that:

(a) The future connectivity of the Rangitahi Peninsula would be improved by additional connections to the east and west;

(b) The connectivity of the other proposed development areas will be improved if the primary spine road through the Peninsula is extended to the south, to connect into these new road links; and

(c) There are currently no capacity issues anticipated with the roading infrastructure provided by Rangitahi to service the Rangitahi Peninsula Structure Plan Area (i.e. the intersection of Wainui Road/Opoturu Road, Opoturu Road itself, and the spine road through the Peninsula).[11]

Additional development at Rangatahi

69. As noted in para. 45, Rangatahi Ltd is seeking to increase the number of dwellings to around 650 households within the existing Rangitahi Structure

[11] This was noted in my evidence to Hearing 23, and I expand on this point at paragraph 70 below

Plan area. Given the comments earlier in this evidence, I support this from a transport perspective, as it would make use of the roading investment already made, without causing additional/new bottlenecks, and it would support the policy in the Proposed Waikato District Plan that seeks to focus urban growth in existing urban communities that have capacity for expansion, including Raglan.

70. Rangitahi is also proposing a Future Urban Zone (**FUZ**) at the southern end of the Rangitahi Peninsula through the PWDP. Initial analysis of this Rangitahi South area by Boffa Miskell indicates that it could be suitable for approximately 350-450 additional dwellings. Therefore, a total of up to 1,100 dwellings could potentially be built on the Peninsula in total (including the 650 dwellings I refer to above).

71. In my evidence for Hearing 23 I referred to traffic evidence by Mr Keith Bell for Plan Change 12 which concluded the capacity of Opotoru Road is more than five times higher than the anticipated volumes for the Rangitahi Peninsula Zone. This indicates that although additional road connections from the peninsula in future would improve connectivity to other areas (including those intended for development in Waikato 2070) the traffic generation from the Rangitahi Peninsula and the FUZ is likely to be within the capacity of Opotoru Road. I understand that this matter would be subject to more detailed consideration through a future structure planning process for the proposed FUZ.

CONCLUSION

72. In summary, I conclude that:

(a) Rangitahi has made significant investment in the transport network serving the development of the Rangitahi Peninsula. The external works required are already in place, acknowledging that the spine road within the site is still ***being*** constructed.

(b) The single transport project that has currently been identified for Raglan in the Council's Long Term Plan relates to the Wainui Road bridge. This is already programmed for improvement, with the primary driver being the structural condition of the bridge, with traffic capacity

at peak times being a secondary driver.

(c) My assessment of the operation of the current single lane bridge indicates that an increase in capacity will be required soon after 2030 (although this clearly depends on the rate of development).

(d) Further residential development in Raglan West is proposed, and the Waikato 2070 document puts forward a number of potential new transport links.

(e) I consider that the existing road access through the Rangitahi Peninsula is suitable for access to the proposed FUZ in Rangitahi South and would assist rather than preclude opportunities for the future road links to the west and east that are identified conceptually in Waikato 2070.

(f) I support Rangithi's submissions to increase the number of dwellings in the Rangitahi Structure Plan area, from a transport perspective, as this would make use of the roading investment already made, without causing additional/new bottlenecks. Also, it would support the policy in the pWDP that seeks to focus urban growth in existing urban communities that have capacity for expansion, including Raglan.

Dated this 17th day of February 2021

Ian David Clark