

In the matter of the Resource Management Act 1991

And

In the matter A notice of requirement to designate land for educational purposes
at 9 Tawa Avenue, Kaiwaka by the Minister of Education

Statement of evidence of Colin Robert Shields

Transport

7 November 2023

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Statement of evidence of Colin Robert Shields

1 Executive summary

- 1.1 I was engaged by the Ministry of Education (**MoE**) in January 2022 to prepare an Integrated Transport Assessment (**ITA**) for the notice of requirement (**NoR**) by the Minister of Education to designate land to enable the relocation of Te Kura Kaupapa Māori o Ngāringaomatariki (**Kura**).
- 1.2 In the report I describe the existing transport environment, and the transport aspects of the proposed Kura such as trip generation, mode share, intersection safety and capacity, parking, loading and pick-up/drop-off requirements.
- 1.3 In my evidence, I have outlined the assumptions of student and staff numbers and the likely mode of transport for passenger and private vehicles to the site. These assumptions have informed my calculation of the number of vehicle movements to and from the site.
- 1.4 I also summarise the main conclusions of the ITA, which include recommendations for provision of the site access on Tawa Avenue, provision of on-site parking, loading, pick up and drop off and bus circulation and provision of a school travel plan with the Kura bus service being a core component of this.
- 1.5 From recent discussions with the Northland Transportation Alliance (**NTA**), it is understood that Kaipara District Council (**KDC**) will be making a decision on 8 November 2023 to consult on a Regional Speed Management Plan which will reduce speeds outside schools in accordance with the Ministry of Transport Land Transport Rule Setting of Speed Limits 2022 requirements of a Category 1 school (where the posted speed limit is 30 km/h or 40 km/h) and Category 2 school (where the posted speed limit is 60 km/h). It is understood that these rules will apply to new schools as they are developed without the need for further consultation or an update to the KDC Regional Speed Management Plan. NTA have also confirmed that the Kura would be classed as a Category 2 school since there are no vulnerable road users (i.e. pedestrians or cyclists). Following the KDC meeting on 8 November, NTA stated they will provide MoE with a letter confirming that KDC will implement a maximum posted speed limit of 60km/h outside the Kura when it opens.
- 1.6 Multiple submissions were received relating to transport matters and I have addressed each of these matters in my evidence and I consider there are no outstanding transport matters.
- 1.7 I note the Council planner's s42A Report confirms acceptance of the ITA and that the KDC Engineers Report states that "*the NoR will have a less than minor effect on the roading network and wider community*". This aligns with my professional opinion that the designation can be supported in transportation terms. In terms of the conditions proposed in the s42A Report:
 - (a) I agree with proposed Conditions 14b, 14c and 15.
 - (b) With regard to Condition 14a (requiring a Safe System Assessment (**SSA**) at Settlement Road/Tawa Avenue intersection), although I do not disagree with the principles of a SSA, I do not consider that Condition

14a is required since my evidence demonstrates that the existing intersection is a safe layout and that the intersection will operate well within capacity in the year 2042 with the Kura and hence will not cause any significant delays for Settlement Road through traffic. I am also concerned that the outcome of the SSA has been prejudged within the KDC Engineers Report which states that Settlement Road may need to be widened. I do not consider that the KDC Engineers Report suggested widening is actually required, I consider that the suggestion is potentially unsafe and note that in order for it to be deliverable is likely to require KDC to designate land for road widening.

- 1.8 I consider that the land to be designated for the proposed Kura at 9 Tawa Avenue, and the surrounding road network, can safely and efficiently accommodate the anticipated traffic and the site can provide safe and suitable access and internal site bus and car drop off and parking arrangements. I therefore conclude that there are no transport engineering or transport planning reasons that would preclude the designation of the Kura site. Having reviewed the submissions and the council planner's 42A report, I still reach the same conclusion.

2 Qualifications and experience

- 2.1 My full name is Colin Robert Shields.
- 2.2 I am a Senior Principal Transport Planner at Tonkin & Taylor Limited (**T+T**) and I have held this position since November 2021.
- 2.3 I hold the qualification of Master of Science in Transport Engineering from the University of Newcastle Upon Tyne (UK). I am a Chartered Professional Engineer (CPEng) with Engineering NZ and I am a Chartered Member of Engineering NZ (CMEngNZ).
- 2.4 I have 35 years transport planning and engineering experience gained within New Zealand and internationally, managing the appraisal, design, and delivery of a wide range of transport projects and providing transport planning inputs to the master planning, consenting (under the Resource Management Act 1991 (**RMA**), design and delivery of education, residential and commercial land development projects.
- 2.5 I have been provided with a copy of the Code of Conduct for Expert Witnesses contained in the Environment Court's Practice Note 2023. I have read and agree to comply with that Code. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

3 Role in the project and scope of evidence

- 3.1 I have been involved in the project to designate land to enable the relocation of Te Kura Kaupapa Māori o Ngringaomatariki (**Kura**) since January 2022 when T+T were appointed by MoE to prepare an ITA to support a NoR for designation of a site at 9 Tawa Avenue (**Site**) for educational purposes. I have been responsible for preparing the ITA which was included as Appendix F of the NoR.

- 3.2 I am familiar with the Site and the surrounding transport network and I visited the Site on 17 February 2022 and 4 August 2022.
- 3.3 The purpose of my evidence is to summarise the findings from the ITA and respond to matters raised by submitters and the Council planner in the section 42A report.
- 3.4 My evidence is set out as follows:
- (a) Key findings from the ITA.
 - (b) Response to the submissions received, relevant to my evidence.
 - (c) Response to matters raised in the Council's S42A Report.

4 ITA - Key Findings

Existing Kura transport conditions

- 4.1 The Kura is currently temporarily situated on leased land 10 km from State Highway 1 (SH1) at Oruawharo (34 Oruawharo School Road) and has no room for growth. It is the only Kura in the Kaipara/Topuni area, with the next closest Kura located in Whangarei (north) and another located on the North Shore of Auckland (south). The Kura currently provides education for students in Years 1 to 8 and has approximately 50 children and 5 staff. The students mainly come from Paparoa (northwest), Waipu (north), Ruakākā (north), Mangawhai (east) and Maungatūroto (north west), and travel to the Kura is predominantly by bus. I understand that the relocation of the Kura allows it to be more central and more visible (as a destination) to attract more children and staff and will provide a larger space to facilitate outdoor recreation. Students who attend the Kura currently also travel to Kaiwaka School to use the pool, gym, fields and hall which has an impact on time and cost for the Kura, as well as additional vehicle movements on the local road network and SH1.

Existing transport conditions at the proposed 9 Tawa Avenue site

- 4.2 The site is bounded by Tawa Avenue and Settlement Road, 1.6 km east of the State Highway 1 (SH1)/Settlement Road intersection. The Site currently accommodates a single residential dwelling with an existing site access onto Tawa Avenue. The location of the Site is shown in Figure 1 and 2 below:

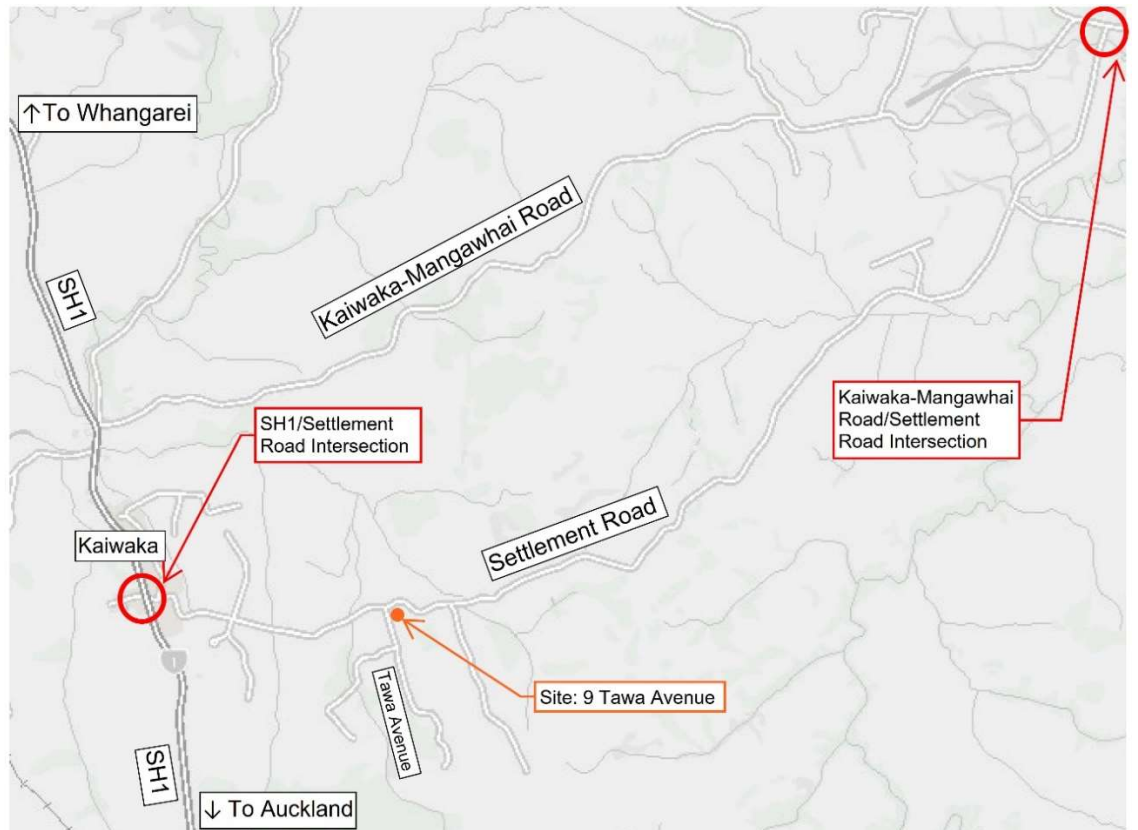


Figure 1: Location plan



Figure 2: Site plan

4.3 Tawa Avenue (on the proposed Kura frontage) between Settlement Road and Kiwi Lane is a two-lane, sealed, no-exit road and is classified as a 'Local Road' in the Kaipara District Plan (KDP) and the posted speed limit is currently 100 km/h. Information within the 2021 Kaipara District Council (KDC) Regional Speed Limit

Review Recommendations Report (dated 15 July 2021) indicates that Tawa Road has a free flow speed of approximately 23 km/h. The existing vehicle access to 9 Tawa Avenue is approximately 100 m south of the Tawa Avenue/Settlement Road intersection. There are no pedestrian or cyclist facilities and no street lighting on Tawa Avenue. Kiwi Lane is located 250 m southeast from the Tawa Avenue/ Settlement Road intersection and is a private road providing access to three properties. South of Kiwi Lane, Tawa Road is a private road providing access to eight properties.

- 4.4 Settlement Road is a two-lane sealed road (between SH1 and 600m east of Tawa Avenue) and is defined in the KDP as a 'Collector Road' and the posted speed limit is currently 80 km/h (reducing to 50 km/h at the western end towards SH1). Settlement Road provides a connection between Kaiwaka-Mangawhai Road and SH1. There are residential dwellings at the Kaiwaka township end, whilst the rest of Settlement Road is predominantly rural farming landscape. There are no pedestrian or cyclist facilities and no street lighting on Settlement Road. Information provided by the NTA indicates that traffic flows on Settlement Road are 748 vehicles/day (with 6% of these being heavy vehicles). Information from Waka Kotahi MegaMaps¹ indicates the mean operating speed between Settlement Road/Tawa Avenue intersection and 15 m south of Kaiwaka Mangawhai Road/Settlement Road intersection on Settlement Road is 38 km/h. The mean operating speed between 50 m west of Windmill Lane and Settlement Road/Tawa Avenue intersection on Settlement Road is 39 km/h.
- 4.5 At the SH1/Settlement Road intersection the speed limit on SH1 is 60 km/h. The SH1/Settlement Road intersection is staggered with the SH1/Hastie Lane intersection. Sight distances at the SH1/Settlement Road intersection comply with Austroads Safe Intersection Sight Distance (**SISD**) visibility requirements.
- 4.6 The 2021 Kaipara District Council (KDC) Regional Speed Limit Review Recommendations Report (dated 15 July 2021) recommended that the speed limit on Tawa Avenue is reduced from 100 km/h to 40 km/h. The report also recommended that the speed limit is reduced on Settlement Road adjacent to the Kura site from 100 km/h to 60 km/h.
- 4.7 From recent discussions with NTA, it is understood that KDC will be making a decision on 8 November 2023 to consult on a Regional Speed Management Plan which will reduce speeds outside schools in accordance with the Ministry of Transport Land Transport Rule Setting of Speed Limits 2022 requirements of a Category 1 school (where the posted speed limit is 30 km/h or 40 km/h) and Category 2 school (where the posted speed limit is 60 km/h). It is understood that these rules will apply to new schools as they are developed without the need for further consultation or an update to the KDC Regional Speed Management Plan. NTA have also confirmed that the Kura would be classed as a Category 2 school since there are no vulnerable road users (i.e. pedestrians or cyclists). Following the KDC meeting on 8 November, NTA stated they will provide MoE with a letter confirming that KDC will implement a maximum posted speed limit of 60km/h outside the Kura when it opens.
- 4.8 The ITA reported on an assessment of the road safety records of the surrounding road network using the Waka Kotahi Crash Analysis System (CAS) for the 6 year period of 2017 to 2022. This indicated a low number of crashes. There were no

¹ From Waka Kotahi MegaMaps Road to Zero Edition 1: <https://maphub.nzta.govt.nz/megamaps/>

crashes at the Settlement Road/Tawa Avenue or the SH1/ Settlement Road intersections and there were no crashes on Tawa Avenue. I have subsequently reviewed the crash data for the 2023 situation and so far in 2023 there has only been one minor injury crash which occurred 270m southeast of the Settlement Road/Wattle Lane intersection. I consider that there are no inherent safety issues present in the vicinity of the site.

- 4.9 Traffic survey data collected pre Covid, indicated a 1.8% annual growth in traffic volumes in the area and NTA requested that a 20 year design horizon for capacity assessments be used in the ITA (i.e. a forecast year of 2042). Therefore, 2042 traffic flows were calculated based on a compound growth factor of 1.8% p/a applied to 2021 count data provided by NTA.
- 4.10 There is no public transport provided in the immediate vicinity of the site.

Mode share and trip generation

- 4.11 The ITA assumed a maximum school roll of 200 pupils and 15 staff.
- 4.12 The MoE indicated that at least 80% of all students will travel by bus to the Kura, while the rest will be driven by car. All staff were assumed to arrive by car. Given the large distance from the site to residential communities within the catchment area, no students or staff would be expected to walk or cycle to the Kura.
- 4.13 Based on the above, the Kura was predicted to generate 222 vehicle trips day with 111 in the AM peak (0800-0900) and 111 in the PM peak (1430-1530). Based on student catchment area information provided by MoE, the generated trips were distributed to the surrounding transport network with 80% of students to/from SH1 (with then an equal split north and south) and 20% to/from the east via Settlement Road.

Assessment of effects

- 4.14 Based on the findings from the ITA, I consider that the additional traffic generated by the Kura will have a negligible impact on the safety of the surrounding road network and is unlikely to worsen existing crash trends.
- 4.15 Assessment of existing sight distances at the Settlement Road/Tawa Road intersection indicates that the required distances can be met with the proposed KDC changes to speed limits.
- 4.16 Assessment of existing visibility sight distances on Tawa Avenue indicated that a compliant site access can be located along Tawa Avenue. Based on an assessment of the predicted traffic flows, the Kura site access on Tawa Avenue can be a give way control and would be designed in accordance with KDC Engineering Standards.
- 4.17 In terms of the impact of the Kura traffic flows on SH1, this represents a 1.9% increase in daily flows on SH1, which I consider to be negligible.
- 4.18 Detailed Sidra (an internationally recognised intersection modelling software) capacity assessment for the 2042 scenario at the SH1/Settlement Road intersection indicated that the Kura would have a negligible impact on the capacity of the intersection and would continue to operate well within capacity.

The modelling indicated that the Settlement Road/Tawa Avenue intersection would operate well within capacity.

Proposed transport measures

- 4.19 The purpose of the NoR is to designate the site for educational purposes and therefore there are no details at this stage regarding the general layout of the site. The ITA identified that the following transport measures would need to be implemented:
- a) The Kura vehicular access and egress should be from Tawa Avenue. There are multiple entry options off Tawa Avenue along a relatively short stretch of lightly used low speed sealed road. NTA have indicated that Tawa Avenue would be their preference for access since it has a lower classification in the KDC road hierarchy and has better sightlines compared to Settlement Road.
 - b) When determining the location of the Kura access and designing the access, Kaipara District Council Engineering Standards 2011 would be used as guidance.
 - c) The Kura bus service will continue to be a core component of the Kura School Travel Plan.
 - d) The design of the Kura will include:
 - i. On-site bus drop off and pick up area allowing for bus circulation and bus stops.
 - ii. On-site carparks and loading spaces with regards to relevant KDC standards.
 - iii. On-site car-based pick up and drop off (**PUDO**) area to discourage on-street parking.
- 4.20 Overall, I consider that the Kura site is of sufficient area to provide opportunities for required access, parking, pick up and drop off, loading and bus drop off/circulation areas to be located and hence will avoid any adverse impacts on the surrounding road network.
- 4.21 There will be temporary traffic effects during construction of the Kura. Construction of any new access to the site from Tawa Avenue will need to be managed and assessed in accordance with Waka Kotahi NZ Guide to Temporary Traffic Management and Code of Practice for Temporary Traffic Management. This requires preparation and approval of a Construction Traffic Management Plan and subsequent Site Specific Traffic Management Plans. I consider this will be readily achievable and will ensure that temporary traffic effects during construction are minor.

ITA conclusions

- 4.22 Based on the above assessment of the transport effects and the associated recommendations, I consider that the land to be designated for the proposed Kura at 9 Tawa Avenue, and the surrounding road network, can safely and efficiently accommodate the anticipated traffic and the site can provide safe and suitable access and internal site bus and car drop off and parking arrangements. I therefore conclude that there are no transport engineering or transport planning reasons that would preclude the designation of the Kura site.

5 Submissions

5.1 Attachment D of the Councils Hearing Report provides details of the submissions received. Multiple submissions were received relating to transport matters and I have addressed all of these matters in my evidence. I provide further specific commentary using the following broad transport topics:

- a) Settlement Road.
- b) Parking and servicing.
- c) Tawa Avenue private road.
- d) Increased accessibility and good transport links by bus.

Settlement Road

5.2 Several submitters² raised various transport concerns about Settlement Road. The issues raised are discussed in the following paragraphs, in the format of a summary of the submitters comment in italics and my response following this:

East of the proposed Kura site, Settlement Road is gravel and often in a poor state of repair.

5.3 As indicated in paragraph 4.4 above, Settlement Road east of the site is currently unsealed and I am unaware of any road condition issues. Furthermore, as detailed in paragraph 4.12, the vast majority (80%) of trips to the Kura are likely to be to and from the west on the sealed section of Settlement Road.

Settlement Road is a busy road, with large numbers of trucks and traffic exceeds the 60 km/h speed limit.

5.4 As detailed in paragraph 4.4 above, I consider that observed traffic volumes, heavy vehicle numbers and speeds are relatively low on Settlement Road.

During busy times there are long waits for gaps in the traffic at SH1/Settlement Road intersection and improvements would be needed at this intersection.

5.5 As detailed in paragraph 4.18 above, detailed Sidra capacity assessment modelling for the 2042 future year scenario at the SH1/Settlement Road intersection indicated that the Kura would have a negligible impact on the capacity of the intersection and the intersection would continue to operate well within capacity. Furthermore, as detailed in paragraph 4.8 above, the Waka Kotahi Crash Analysis System indicates that there have been no reported crashes at this intersection within the study period assessed in the ITA, and as reported in paragraph 4.5 the intersection complies with required Austroads visibility guidance. As such I do not consider that improvements will be needed at the SH1/Settlement Road intersection with the proposed Kura.

Improvements would be needed at the Settlement Road/Tawa Avenue intersection.

² Allan Leslie, Barabara Mary Leslie, Fiona Hunter, JR and KE Fountain, Peter Nicholas Bull, Sydney Wayne Leslie and Linda Elizabeth Leslie, Phillip Wattam, Dean Hayden Gray, Elizabeth Thaise, Greg Pinker, Edward Timothy Fitzmaurice, Shan Young

- 5.6 As detailed in paragraph 4.18 above, detailed Sidra capacity assessment modelling for the 2042 future year scenario at the Settlement Road/Tawa Avenue intersection indicated that the Kura would have a negligible impact on the capacity of the intersection and the intersection would continue to operate well within capacity. As detailed in paragraph 4.8 above, there have been no reported crashes at this intersection within the study period assessed in the ITA, and as reported in paragraph 4.15, the required visibility distances can be met with the proposed KDC changes to the speed limits. As such I do not consider that improvements will be needed at the Settlement Road/Tawa Avenue intersection with the proposed Kura.

Traffic is busier during the summer and when the Northern Bass festival takes place at Worsfield Farm.

- 5.7 The festival and general summer traffic takes place when the Kura would be closed for the summer holidays. As such I do not consider that the Kura is impacted by, or impacts on summer and festival traffic.

The Kura would introduce "new motorway" increased traffic

- 5.8 As detailed in paragraph 4.13, the Kura is predicted to generate 222 vehicle trips per day (111 in the AM peak and 111 in the PM peak), which I consider is a relatively low number of additional vehicle trips per day and is not considered to be of motorway traffic volume proportions.

Lack of footpaths on Settlement Road and Tawa Avenue

- 5.9 As detailed in paragraph 4.12, given the large distance from the site to residential communities in the catchment area, I do not expect any students or staff to walk to the Kura and therefore I do not consider that the lack of footpaths on Settlement Road or Tawa Avenue is an issue.

Settlement Road not suitable for increased traffic as many people walk on the road

- 5.10 As reported in paragraph 4.8 there have been no crashes reported involving pedestrians on Settlement Road. Furthermore, as detailed in paragraph 4.17 the additional Kura traffic is relatively low. Therefore, I consider Settlement Road is suitable as access to the Kura.

There are "free" animal movements on Settlement Road and Tawa Avenue

- 5.11 I am not sure what the submitter means by "free" animal movements and I comment based on a number of possible scenarios. If "free" means in relation to stock movements, then I do not consider that this takes place since there are no stock crossing warning signs or flashing lights on Settlement Road and Tawa Avenue (which would be required if there was regular use of these roads by animals). If "free" means in relation to moving an untethered animal then the Land Transport (Road User) Rule 2004 part 11.4 clearly states that the person moving untethered animals from place to place along or across a road must exercise due care towards other road users, and must ensure that any disruption to traffic is minimised. Finally, if "free" means in relation to animals roaming uncontrolled onto the roads, then under Section 5 of the Animals Law Reform Act 1989, the owner of the animals has a duty of care to adequately secure their animals to prevent them from wandering onto a road. In any event, even if there is currently "free" animal movements on Settlement Road and Tawa

Avenue then this has not resulted in any safety issues, as demonstrated by the lack of reported crashes involving animals. Therefore, I consider Settlement Road and Tawa Avenue are suitable as access to the Kura.

Parking and servicing

- 5.12 Several submitters³ raised concerns about parking and servicing of the Kura. The issues raised are discussed in the following paragraphs, in the format of a summary of the submitters comment in italics and my response following this:

There needs to be sufficient parking on site for the school and any public functions held there and that parking should not be displaced on street onto Settlement Road, Tawa Avenue and Kiwi Lane.

- 5.13 As detailed in paragraph 4.19 d), all the Kura parking (including staff, visitors and pick up and drop off) would be provided on site to discourage on-street parking.

Concern that rubbish collection is currently on street on Tawa Avenue

- 5.14 As detailed in paragraph 4.19 d), all the Kura loading (including refuse collection) would be on site and not on street.

Tawa Avenue private road

- 5.15 Several submitters⁴ state that Tawa Avenue is a private road and is beyond the Council maintenance area. As detailed in paragraph 4.3, Tawa Avenue between Settlement Road and Kiwi Lane (which is the frontage of the Site) is a public road and hence is maintained by KDC. As detailed in my evidence, I do not expect there to be any impact from the Kura on the private road section of Tawa Avenue south of Kiwi Lane.

Increased accessibility and good transport links by bus

- 5.16 A significant number of submitters⁵ support the Kura proposal since they state the site provides improved accessibility for students and that most students will access the Kura via bus, so there will not be a huge impact on neighbouring properties in terms of traffic. For the reasons outlined in my evidence, I would agree with these comments.

6 Section 42A report

- 6.1 It is noted that the Council planner in section 6.9 of the Section 42A (s42A) Report dated 27 October 2023 confirms acceptance of the ITA *“on the basis that it addresses the likely traffic generation from the activity and respecting the fact that it is an NoR application.”* The Council planner in section 6.7 of the s42A Report confirms that the ITA has been reviewed in the KDC Engineers Report (Engineering memo dated 20 October 2023 prepared by Chester consultants). Section 7 of the KDC Engineers Report states *“the NoR will have a less than*

³ JR and KE Fountain, Barry Thomas Lee, Peter Nicholas Bull, Edward Timothy Fitzmaurice, Sydney Wayne Leslie and Linda Elizabeth Leslie

⁴ JR and KE Fountain, the Diamond Family Trust, Peter Nicholas Bull

⁵ Josie Gritten, Huhana Lyndon, Jeannette Nathan, Joanna Kate Rodgers, Patrick Nepia, Kelsey Orford, Casey Rarere, Casey Wikiriwhi-Heta, Christian Pule, Claire Moana Winiana, Edwina Came, Felice Karuna, Fiona Marks-Heemi, Richard Te Haara, Stephanie Huriana Fong and Stephen Mehana

minor effect on the roading network and wider community". The Council do not appear to raise any concerns with the designation in terms of transport matters, which aligns with my professional opinion that the designation can be supported in transportation terms.

- 6.2 Based on the KDC Engineers Report findings, paragraph 6.9 and Condition 14 a) of the s42A report states that a Safe System Assessment (**SSA**) is required at the Settlement Road/Tawa Avenue intersection as part of the Outline Plan approval process. The fourth paragraph of section 7 of the KDC Engineers report states that the SSA will be needed to review whether widening of Settlement Road will be required to provide a shoulder to enable eastbound through traffic on Settlement Road to pass vehicles turning right into Tawa Avenue as shown below in Figure 3 which is an extract from the reference of MOTSAM Part 2 Section 3.03 Figure 3.2 ,as specified in the KDC Engineers Report.

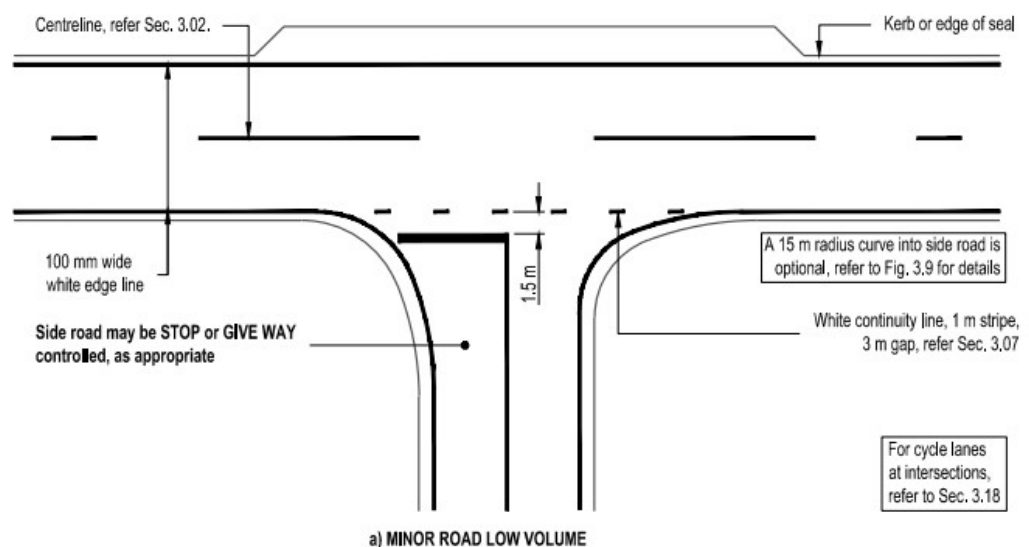


Figure 3 Extract of MOTSAM Part 2 Section 3.03 Figure 3.2

- 6.3 I do not disagree with the principles of a SSA, however, I do not consider that Condition 14a is required since my evidence demonstrates that the existing intersection is a safe layout and that the intersection will operate well within capacity in the year 2042 with the Kura and hence will not cause any significant delays for Settlement Road through traffic.
- 6.4 I am also concerned that the outcome of the SSA has been prejudged within the KDC Engineers Report when it states that Settlement Road may need to be widened and I set out below why I do not consider that a SSA is required to demonstrate this.
- 6.5 In my opinion the widening suggested in the KDC Engineering report is not required, since paragraph 4.8 above demonstrates that there are no crashes at this intersection, indicating that the existing situation without a shoulder is a safe layout. Furthermore, paragraph 4.18 above, demonstrates that the intersection will operate well within capacity in the year 2042 with the Kura and hence will not cause any significant delays for Settlement Road through traffic.
- 6.6 In my opinion the widening suggested in the KDC Engineering report could result in an unsafe layout. As shown in Figure 4 below (from google street view) the

scope to widen within the road reserve will result in the shoulder being constructed on an adverse camber, which I consider to be a significant safety risk especially as vehicles would be travelling around the inside of a bend. To remove this camber would require infilling of the existing ditch which forms the function of a surface water drain. The narrow width of the existing road reserve would make it difficult to infill the ditch to remove the camber. It is for these reasons that I consider that the intersection was most likely originally constructed without a shoulder and why the sealing of Settlement Road (undertaken a few years ago) did not include sealing to create a shoulder at this intersection. As demonstrated in paragraph 4.8, this intersection operates safely without a shoulder. In my opinion the widening suggested in the KDC Engineering report could not be delivered without third party land which KDC would need to designate for road widening purposes.



Figure 4 Extract from Google street view of Settlement Road/Tawa Avenue intersection

- 6.7 I agree with the proposed Condition 14 b) relating to the need for a parking study and that this needs to take into account the parking requirements outlined in paragraph 6.10 of the s42A Report.
- 6.8 I agree with the proposed Condition 14 c) relating to the need to determine the design of the on-site pick up and drop off facility to accommodate buses and private vehicles.
- 6.9 I agree with the proposed Condition 15 relating to the need to develop and update a School Travel Plan to develop measures to reduce private motor vehicle dependence.

7 Conclusions

- 7.1 I consider that the transport effects arising from the Kura designation will be acceptable and will be managed such that the safe, effective and efficient operation of the transport network can be achieved.
- 7.2 I note the Council planner's s42A Report confirms acceptance of the ITA and that the KDC Engineers Report states that "*the NoR will have a less than minor effect on the roading network and wider community.* This aligns with my professional opinion that the designation can be supported in transportation terms. I agree with proposed Conditions 14b, 14c and 15.

- 7.3 With regard to Condition 14a (requiring a Safe System Assessment at Settlement Road/Tawa Avenue intersection), although I do not disagree with the principles of a SSA, I do not consider that Condition 14a is required since my evidence demonstrates that the existing intersection is a safe layout and that the intersection will operate well within capacity in the year 2042 with the Kura and hence will not cause any significant delays for Settlement Road through traffic. I am also concerned that the outcome of the SSA has been prejudged within the KDC Engineers Report (which supports the s42a report) when it states that Settlement Road may need to be widened. I do not consider that the KDC Engineers Report suggested widening is actually required, I consider that the suggestion is potentially unsafe and note that in order for it to be deliverable is likely to require KDC to designate land for road widening.
- 7.4 Multiple submissions were received relating to transport matters and I have addressed each of these matters in my evidence and I consider there are no outstanding transport matters.
- 7.5 I therefore see no reason relating to transport to not confirm the Kura Designation.

Colin Robert Shields

7 November 2023