

Chairperson and Committee Members

ENVIRONMENT AND COMMUNITY DEVELOPMENT COMMITTEE

6 DECEMBER 2011

Meeting Status: Public

Purpose of Report: For Decision

**PAEKĀKĀRIKI HILL ROAD / BEACH ROAD / SH1
INTERSECTION PROGRESS REPORT**

PURPOSE OF REPORT

- 1 This report provides a summary of options that have been considered over the past six years for the intersection of Paekākāriki Hill Road, Beach Road and State Highway 1 at Paekākāriki (hereafter referred to as '*the intersection*').
- 2 The report also suggests an approach to future dialogue between Kāpiti Coast District Council and the NZ Transport Agency (NZTA) on this subject.

SIGNIFICANCE OF DECISION

- 3 The recommendations in this report do not trigger the Council's significance policy.

BACKGROUND

- 4 Since 2002, a wide range of alternative measures have been considered for the intersection, including: traffic management measures on Paekākāriki Hill Road ie. banning right turn out or introducing one way working, as well as different priority layout arrangements, signalisation and grade separated arrangements. All of these have been rejected for a combination of reasons including: costs, insufficient economic benefit, conflict with state highway policy, feasibility issues, misalignment with long term corridor planning or community opposition.
- 5 Recently the Paekākāriki Community Board has requested that Council review options associated with the intersection with specific reference to the introduction of a one way working Paekākāriki Hill Road or a Left turn only option exiting Paekākāriki Hill Road. This report is in response to the board's request.

CONSIDERATIONS

- 6 The intersection has been the subject of a number of previous studies to address road safety and traffic delay problems, each report is discussed in turn.
- 7 In 2002, consultants for Transit NZ undertook the Paekākāriki Access Study. This provided the community with the opportunity to feedback their views on the design for the intersection. The results of the study were released in 2003 and showed that a signalised intersection was the public's preferred option. Transit NZ indicated they did not support signals at this location. This was primarily because Transit NZ classified the section of State Highway through Paekākāriki as rural.

Report : Transit NZ, SH1 Paekākāriki Beach Road Intersection: Option Scoping Report, Beca, September 2005

- 8 In 2005 a study of seven grade separated options for the intersection was considered. This recommended three for further consideration:
- a quarter clover leaf for southbound on-off movements and with Paekākāriki Hill Road passing under SH1 to connect with the at grade northbound on and off ramps in a signalised intersection adjacent to the level crossing;
 - an at grade state highway with an elevated Paekākāriki Hill Road connection to Ames Street and closure of the level crossing;
 - an at grade state highway to connect to a two way ramp down to the existing level crossing.

Report : Kāpiti Coast District Council SH1 Paekākāriki Intersection Improvements, Resolve, November 2006

- 9 The Resolve report of 2006 also evaluated on the Council's behalf other options including a southbound left lane holding bay for both right and left turning traffic. This was based on an overseas principle of the Hamburger roundabout (Figure 1). This would incorporate signalisation of the roundabout. This layout would require Beach Road traffic to wait west of the railway line, a variation of the hook right turn suggested by other consultations. The requirement to incorporate signals into the roundabout at this location with topographical constraints made it difficult to get a full hamburger layout to work efficiently at the intersection. The design was also non-conventional. However, further consideration of a scaled down version of the design principle of signalisation for right turning traffic was recommended. The consideration of this option has been undertaken in preparing this report.
- 10 There have been other suggestions from the community for Paekākāriki Hill Road to be one-way only up to the lookout. In 2006 it was resolved that Council staff further investigate this option. This option would allow southbound traffic to exit on to the road. There would be no facility for northbound trips or traffic to use the road from the east. One way roads encourage higher traffic speeds as the driver knows they will not meet any oncoming traffic. This is an undesirable situation which could increase fatal and serious injury crashes and would not align with national and local road safety strategies and plans.
- 11 Feedback from the Paekākāriki community and from Porirua City Council on the one-way option was negative.

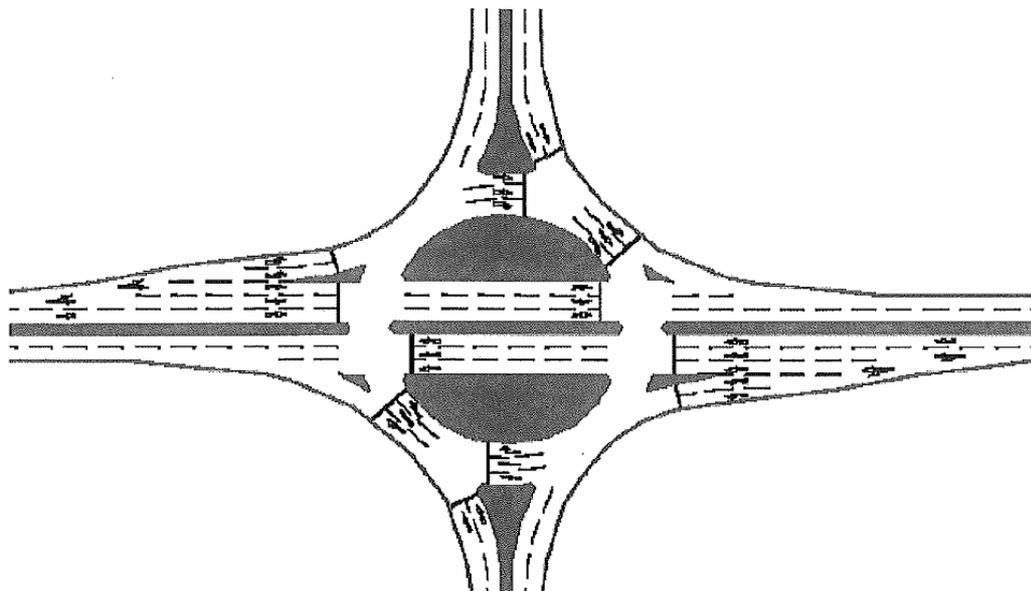


Figure 1 : Hamburger roundabout

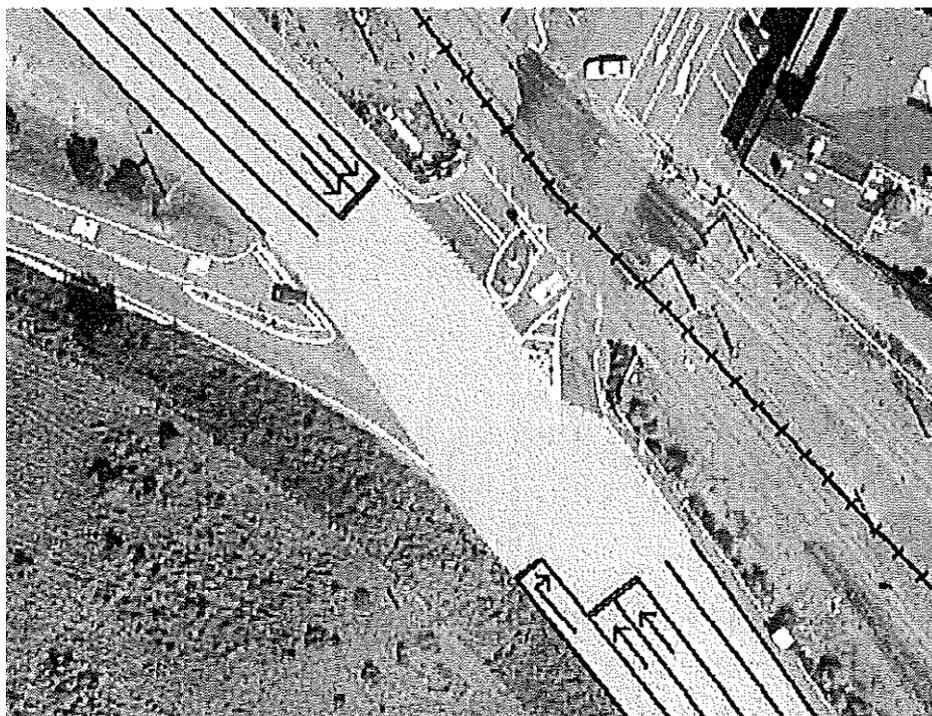


Figure 2 : Left hand holding lane

12 In 2006 Transit NZ put forward proposals to upgrade the intersection, this was based loosely on the Beca Scoping Report of 2005. At this time, Transit NZ again indicated they did not favour signalisation at rural intersections. The proposals included:

- seagull with Paekākāriki Hill Road northbound traffic detouring south and undertaking a u-turn at Fisherman's Table;

- hook right turn, signalised option which achieved option of removing right turning traffic into Paekākāriki;
 - one through lane. This is a traffic light controlled intersection and retains centrally located right turns on main State Highway;
 - two through lanes. Extra lane version of the above option.
- 13 The installation of a seagull (Figure 3) would restrict certain movements, primarily on Paekākāriki Hill Road which would allow only SH1 southbound traffic to turn in and the Paekākāriki Hill Road traffic to only turn out (commonly referred to as a left in/left out intersection). The analysis indicated that partial signalisation of a seagull layout would be required at a location with traffic flows at 2000vph if local turning movements were to be adequately catered for.

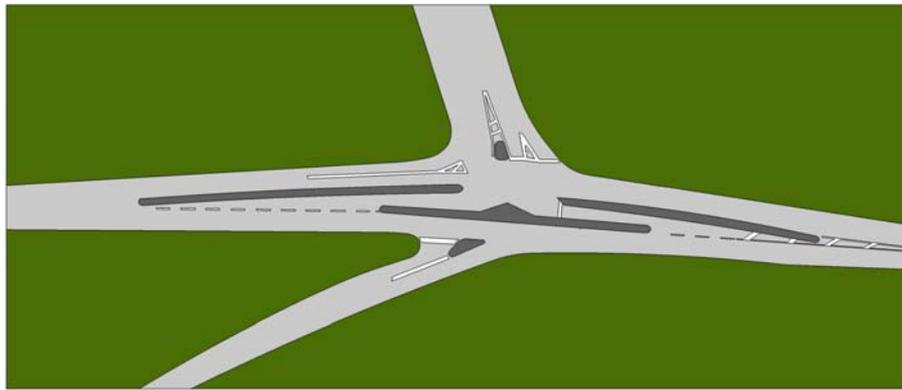


Figure 3: Seagull layout

- 14 At this time, Transit NZ also presented signalised intersection options. Limited technical information on the layout and traffic assumptions for these is available. The report information suggests that they were excluded from further investigation at the time as a result of the need for road widening and substantial retaining walls. Transit NZ considered Paekākāriki to be a rural environment in which it did not favour signalised intersections. Reference was made to high costs associated with retaining wall however, no cost information was presented in the reports available to council officers.
- 15 During 2005/2006 the Western Corridor Study was also underway. The recommendations of the study and subsequent hearing, found in favour of constructing Transmission Gully. The Regional Land Transport Committee recommended safety measures for Paekākāriki.

Report : Kāpiti Coast District Council, Paekākāriki Intersection, Speed Limit Investigation, Resolve, February 2008

- 16 In 2008, Transit NZ proposed installing a seagull configured intersection. This was opposed by the community who sought the introduction of a lower speed limit (50kph) through Paekākāriki. This idea had previously been put forward by the Paekākāriki Community Board in 2002. Kāpiti Coast District Council commissioned

consultants to investigate the impacts of a 50 kph speed limit. The report had no conclusive findings supporting the lowering of the speed limit due to limited data availability. The report suggested there may be some perceived benefits from lower speed limit but *“there is no guarantee that there will be a significant change in the current environmental speed”*. The report identified the seagull configuration would restrict certain turning movements which would have a significant impact on the local functionality for the community. It further suggested that best option for the local community to pursue would be an appropriately signalised intersection.

Report : NZTA, Crash Reduction Study, Kāpiti Coast, MWH, November 2010

- 17 Two years later in 2010, NZTA commissioned consultants to undertake a crash reduction study for SH1 through the Kāpiti Coast District. The study reviewed five years of data from 2005–2009. During this period there had been two minor injury crashes and 12 non-injury crashes at the intersection. The recommendations were to provide some additional line markings, larger signs and to extend the northbound left turn lane including the removal of some pohutukawa trees. The Paekākāriki Community Board supported the additional line markings but did not support the lengthening of the northbound left turn lanes because of the impact on the pohutukawa trees. To date NZTA has not made any changes to the line markings.

Report : NZTA SH1 Paekākāriki Intersection Improvements – Preliminary Investigation & Design Report, October 2011

- 18 The crash reduction study had also considered an elongated roundabout which would provide turning opportunities north and south of the Beach Road intersection. This option did not consider the impact on pedestrians crossing the SH1 to access the coffee shop and for those dropped off at the garage forecourt. The elongated roundabout (Figure 4) would also have a larger footprint and create a much larger physical barrier resulting in reduced connectivity. None of the alternative options are considered to offer an improved entry treatment for Paekākāriki and may actually have a negative impact on the number of trips in/out of the village.

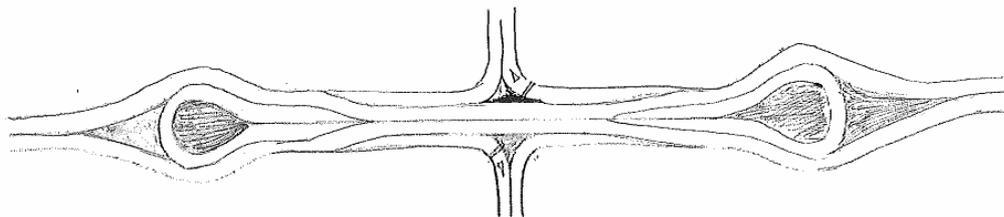


Figure 4 : Elongated roundabout

- 19 Intersection options have previously been considered by the Council, on 14 December 2006 (MCAS-06-390) in which officers recommended Transit NZ be requested to further investigate and report on three other intersection layouts namely: hook right hand turn, left hand storage and two through lanes. It was resolved to support Transit NZ's preferred option, namely the seagull layout option. The community later withdrew support for this option and subsequently Transit NZ did not implement these improvements.
- 20 In 2007, the speed limit on SH1 through the intersection was reduced to 70km/hr. This has provided a lower speed environment where the installation of traffic signals is more acceptable.
- 21 Ongoing problems remain, especially in terms of:
- (a) the perceived danger, actual delay and frustration experienced by those in right turning/crossing vehicles;
 - (b) no cycling facilities or pedestrian crossing facilities in the vicinity of the intersection;
 - (c) the hostile nature of the current intersection that deters visitors and suppresses local movement to/from Paekākāriki impacting on economic viability for business.
- 22 The left-turn only option out of Paekākāriki Hill Road (to SH1), suggested by the community board, is a modified version of the seagull option previously discussed. This option would divert turning traffic from an intersection with significant potential for a serious harm accident to a location where the potential for a serious harm accident is potentially less (Fisherman's Table restaurant). This was considered by Transit NZ/NZTA to be an acceptable risk when the full seagull option was considered previously.
- 23 Although the left turn only option does not remove the risk of a serious harm accident it does potentially reduce that risk. The option has been supported by NZTA previously and if a medium term low cost solution was to be considered it may be something that NZTA would consider funding.

Roads of National Significance – Transmission Gully

- 24 Transmission Gully has been a factor in many of the decisions and options of Transit NZ/NZTA when proposing options for the intersection. In October 2011 a Notice of Requirement for Transmission Gully was lodged with the Environmental Protection Agency. The supporting documentation including the Assessment of Environmental Effects set out the assumptions used in the evaluation and selection of the "preferred route".
- 25 The Assessment of Environmental Effects report includes the concept of a coastal package for treating the existing SH1 after Transmission Gully opens. which include (for modelling purposes):
- (a) extension of the 70km/hr limit south to Fishermans Table and north to the tie-in with Transmission Gully south of Mackays Crossing;

- (b) a signalised intersection at Beach Road /Paekākāriki Hill Road and the revoked SH1.

Future Dialogue

- 26 Transmission Gully is unlikely to be implemented for 10 years, so there is sufficient time to consider substantial improvement works on SH1 prior to opening, even if these require some minor changes to the infrastructure post Transmission Gully opening. In connection with the possible measures identified in this report, the following approach is recommended:
 - (a) support traffic signals at the intersection;
 - (b) continue to support in the immediate short term: various minor marking, lining, hatching and signing measures.
- 27 The following measures are not supported:
 - (a) extension of the diverge lane from SH1 to Beach Road by 50m involving the removal of some large pohutukawa trees;
 - (b) left-turn only option out of Paekākāriki Hill Road (to SH1);
 - (c) one-way only east-bound up Paekākāriki Hill Road (ie. from SH1);
 - (d) seagull layout.

Financial Considerations

- 28 The lack of any significant accidents at the intersection is a significant barrier to the possibility of NZTA funding any major improvements to the intersection, based on their current funding criteria. As this is state highway Council has no budget allocation within the current Long Term Council Community Plan for any future improvements to the intersection.

Legal Considerations

- 29 There are no legal consideration at this stage but to be kept under review in terms of SH1 revocation issues.

Delegation

- 30 The Environment and Community Development Committee is delegated:
 - “authority to develop (within any wider existing strategic framework) policies and work programmes that support the social, economic, environmental and cultural wellbeing of the community. This authority encompasses the power to undertake (within any wider sustainable Transport Strategy) all matters not specifically delegated to Council, Council officers or other committees concerning or involving transport and roading policy issues;”* and
 - “Have an oversight of all matters related to the promotion of road safety”.*

Consultation and Policy Implications

31 There are no consultation and policy implications.

Tāngata Whenua Considerations

32 There were no Iwi considerations identified.

Publicity Considerations

33 Any publicity on changes to SH1 is the responsibility of the NZTA.

RECOMMENDATIONS

34 That Council continue dialogue with the NZTA on options as follows:

- (a) support traffic signals at the intersection as the optimum long term solution;
- (b) support in the immediate short term: various minor marking, lining, hatching and signing measures;
- (c) requests that NZTA reclassify SH1 through Paekakariki as urban to enable installation of traffic signals.

35 That the Committee notes that the following options have been extensively canvassed in the past and are not supported for engineering and planning reasons:

- (a) extension of diverge lane from SH1 to Beach Road by 50m involving the removal of some large pohutukawa trees;
- (b) one-way only eastbound up Paekākāriki Hill Road (ie. from SH1);
- (c) left-turn only option out of Paekākāriki Hill Road (to SH1);
- (d) seagull layout.

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