

B.4 SH1 PUHOI - WELLSFORD: REPORT ON CAMPAIGN FOR BETTER TRANSPORT PROPOSALS
L064 - 04

John Smith, General Manager Transport and Urban Development and Don Houghton, Group Manager Transport: 18 August 2010

The report has been prepared in accordance with the provisions of section 76 and 77 of the Local Government Act 2002, having regard to section 79.

EXECUTIVE SUMMARY

A deputation from the Campaign for Better Transport (CBT) presented 2 options for improving SH1 between Puhoi and Wellsford to the August meeting of the Transport and Urban Development meeting. The options consisted of selective improvements to the parts of the road with the worst safety record and the most critical bottlenecks. Packages of projects were proposed comprising 10% and 20% respectively of the estimated cost of an off line road. The committee resolved that officers review the proposals and report back to the September meeting.

The paper from CBT illustrates how projects can be identified to address the safety and reliability issues on the existing State Highway, and how such projects can be combined to form packages that would achieve many of the benefits at a considerably lower cost compared with a new off line road. This is the approach supported by the ARC in its submission to NZTA and in its letter to the Minister of Transport. A number of the projects that make up the packages proposed by CBT should be supported, but some require further investigation.

Information publicly available about the Puhoi – Wellsford road of national significance, and used by CBT to develop its options, is currently very high level and much of it is dated or consists of crude estimates. NZTA is now in the process of gathering extensive information about potential alignments between Puhoi and Wellsford and the likely costs and benefits of those alignments. It is likely that this will include information regarding possible staging of the route. NZTA is planning to make this information available around the end of 2010 as part of a more focused round of consultation.

RECOMMENDATIONS

- a) That the report be received.
- b) That the Auckland Regional Council note that some of the improvements suggested by the Campaign for Better Transport have already been considered by the New Zealand Transport Agency and achieve a high Benefit/Cost ratio.
- c) That the Campaign for Better Transport be thanked for its contribution and advised that the Auckland Regional Council agrees with its approach of developing a package of cost effective improvements to the existing road with an emphasis on improving safety and reliability, and has made these points in its submission and in letters to the Minister of Transport and the New Zealand Transport Agency.

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

- d) That it be recommended to Auckland Council and Auckland Transport that those organisations should carefully review the more detailed information expected to be released later this year in order to:
- ensure the proposals put forward by CBT are fully considered,
 - ensure staging options are fully developed, and
 - consider whether there are low cost in line options which have been overlooked or which warrant more detailed consideration.

B.4.1 PURPOSE

This report reviews proposals presented by the Campaign for Better Transport (CBT) for alternative ways of improving SH1 between Puhoi and Wellsford.

B.4.2 BACKGROUND

A deputation from CBT presented 2 options for improving SH1 between Puhoi and Wellsford to the August meeting of the Transport and Urban Development meeting. The options consisted of selective improvements to the parts of the road with the worst safety record and the most critical bottlenecks. Packages of projects were proposed comprising 10% and 20% respectively of the estimated cost of an off line road

A copy of the paper from CBT is attached to this report as Attachment 1.

As a result of considering the deputation, the committee resolved:

- a) *That the deputation from Mr Arbury and Mr Pitches be received with thanks.*
- b) *That the committee supports selected on-line improvements to SH1 from Puhoi to Wellsford such as those outlined in the Campaign for Better Transport's presentation and recognises the benefits of these improvements in terms of:*
- *Cost effectiveness;*
 - *Timely safety and congestion relief, meaning lives will be saved in the meantime;*
 - *Retaining access to Puhoi;*
 - *Environmental benefits;*
 - *Cost-of capital advantages over an off-line option.*
- c) *That officers review the alternatives proposed by the Campaign for Better Transport and report back to the committee in September on that review and any other options that could improve safety and reliability on SH1 between Puhoi and Wellsford in a cost effective manner.*
- d) *That staff, the Committee Chair, and the Chair of the Council meet with senior officials at the New Zealand Transport Agency and with*

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

the Minister of Transport to discuss the need for more immediate safety upgrades to the existing sections of State Highway 1 between Puhoi and Wellsford and concerns held about the cost-effectiveness of the State Highway 1, Puhoi to Wellsford road upgrade.

- e) *That the Committee Chair write to the New Zealand Transport Agency and the Minister of Transport requesting that efforts be focused on progressing a Warkworth bypass and safety upgrades to the most dangerous sections of State Highway 1 and that current investigations into a full offline motorway between Puhoi and Wellsford be placed on hold.*

This report addresses point (c) of the above resolution.

At the same meeting the committee reviewed the ARC position regarding the New Zealand Transport Agency (NZTA) proposals and agreed its submission.

One of the main elements of the ARC submission is support for cost effective, staged improvements to the existing road with an emphasis on improving safety and reliability.

The final ARC submission is attached as Attachment 2. The letters to the Minister and to NZTA (resolution (e) above) are attached as Attachments 3 and 4.

B.4.3 MAIN REPORT

CBT proposals

The CBT has obtained information from NZTA about previous schemes for SH1 between Puhoi and Wellsford and has added a few ideas of its own to develop packages of measures aimed at improving the areas with the worst safety record, and reducing congestion and improving reliability. Two packages have been developed, estimated by CBT to cost approximately 10% and 20% respectively of the off line option. CBT then used NZTA preliminary estimates of benefits and costs of an off line highway to produce Benefit/Cost estimates for its own proposals.

The theme of the CBT packages is that by addressing the safety and congestion issues on the existing highway a solution can be found which is much more cost effective than a new off-line highway. This is very much in line with ARC's views as expressed in the ARC submission.

The packages developed by CBT illustrate an alternative approach to improvements between Puhoi and Wellsford and provide examples of the sorts of projects that should be considered.

A number of the proposed projects, such as the Pohuehue Viaduct widening project, the Falls Bridge to Waitarere Bridge safety improvements, and the Waybe Valley Road intersection improvements should be supported. They have each been shown by NZTA studies to have good Benefit/Cost ratios. Widening of the Pohuehue Viaduct would provide a continuous passing lane which will allow for greater relief of congestion and will remove the current unexpected narrowing. Improvements between Falls Bridge and Waitarere Bridge would address long standing safety issues on this stretch of road. Upgrading the Waybe Valley Road intersection (5 km south of Wellsford) would improve safety at the intersection, particularly for the increasing numbers of turning heavy vehicles.

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

Some of the projects making up the packages would need considerable further investigation. For example, CBT proposes a bypass of Warkworth, which would effectively remove one of the main current congestion points. CBT include the bypass in its packages at an assumed cost of \$50 million. NZTA officers advise that there are no current feasible plans for a bypass of Warkworth. A bypass alignment was identified some years ago but has subsequently been compromised by development and is not now feasible. NZTA advise that a Warkworth bypass does form part of their current investigations, but is likely to cost considerably more than the CBT estimate of \$50 million.

As a further example, CBT propose wire or concrete median and edge barriers on Schedewys Hill and Dome Valley as safety measures. Wire barriers rely for their strength on tensioned wire rope and are only effective on straight or almost straight roads, as the tension cannot effectively be maintained around corners. Wire barriers also rely on some "give" to be effective, with either a wide median being necessary or restrained vehicles allowed to protrude into opposing lanes. Concrete medians require space for their placement – around 0.6m plus some clearance from the moving traffic lanes. Both wire and concrete medians confine vehicles to one side of the carriageway, and in the event of an incident enough room is required to allow traffic to pass a stationary vehicle. For these reasons wire and concrete median barriers are not suitable for narrow, winding roads and at Schedewys Hill or Dome Valley there would need to be considerable improvements to the alignment and/or width of the road for these measures to be feasible.

Benefit/Cost calculations

CBT has obtained estimates of benefits and costs of a new off line road from a preliminary business case study carried out for NZTA at the end of 2009. CBT have used estimates from that preliminary study and have adjusted those estimates through assumptions of how they would relate to the CBT proposals. It should be noted that while those estimates are the only ones publicly available at this time, they are very crude and were developed before investigations into the project proper had commenced. NZTA is in the process of developing more accurate benefits and costs and when these are available it is likely that the CBT methodology can be used to assess the Benefit/Cost ratios of alternative packages.

Discussion

CBT has illustrated how projects can be identified to address the safety and reliability issues on the existing State Highway, and how such projects can be combined to form packages that would achieve many of the benefits at a considerably lower cost compared with the cost of a new off line road. This supports the approach taken by the ARC in its submission to NZTA and in its letters to the Minister and to NZTA.

A number of the projects which make up the CBT packages have merit and should be progressed. Some of the projects however pose challenges and would need further investigation and refinement, but may well provide more timely and cost effective improvements for safety and congestion relief compared with a new off-line option.

Information publicly available about the Puhoi – Wellsford road of national significance, and used by CBT to develop its options, is currently very high level and much of it is dated or consists of crude estimates. NZTA is now in the process of gathering extensive information about potential alignments between Puhoi and Wellsford and the likely costs and benefits of those alignments. It is likely that this will include information regarding possible staging of the route. NZTA is planning to make this information available around the end of 2010 as part of a more focussed round of consultation.

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

ARC has been clear in its submission and in the letters to the Minister and NZTA that the investigation into improvements to the route should focus on cost effective, staged improvements to the existing road with an emphasis on improving safety and reliability. It is suggested that the ARC and its successors should carefully review the next round of information produced by the NZTA (expected later this year), to ensure staging options are fully developed and to consider whether there are low cost in line options which have been overlooked or which warrant more detailed consideration.

B.4.4 FINANCIAL AND RESOURCING IMPLICATIONS

There are no direct financial implications for the ARC arising from this report.

B.4.5 LEGAL AND LEGISLATIVE IMPLICATIONS

There are no legal implications for the ARC arising from this report.

B.4.6 CONSULTATION

Aspects of this report have been discussed with NZTA officers and representatives of the Campaign for Better Transport.

ATTACHMENTS

- Attachment 1 - Campaign for Better Transport paper on a faster and more cost effective approach to improving SH1 Puhoi - Wellsford.
- Attachment 2 - ARC submission on SH1 Puhoi – Wellsford consultation.
- Attachment 3 - Letter to Minister of Transport dated 18 August 2010.
- Attachment 4 - Letter to NZTA Chief Executive dated 23 August 2010.

RECOMMENDATIONS

- a) That the report be received.
- b) That the Auckland Regional Council note that some of the improvements suggested by the Campaign for Better Transport have already been considered by the New Zealand Transport Agency and achieve a high Benefit/Cost ratio.
- c) That the Campaign for Better Transport be thanked for its contribution and advised that the Auckland Regional Council agrees with its approach of developing a package of cost effective improvements to the existing road with an emphasis on improving safety and reliability, and has made these points in its submission and in letters to the Minister of Transport and the New Zealand Transport Agency.
- d) That it be recommended to Auckland Council and Auckland Transport that those organisations should carefully review the more detailed information expected to be released later this year in order to:
 - ensure the proposals put forward by the Campaign for Better Transport are fully considered,
 - ensure staging options are fully developed, and
 - consider whether there are low cost in line options which have been overlooked or which warrant more detailed consideration.

Attachment 1

To: Auckland Regional Council – Transport and Urban Development Committee

From: Campaign for Better Transport

Regarding: Faster and more cost effective approach to improving State Highway One between Puhoi and Wellsford

1. Summary:

The Campaign for Better Transport (CBT) is a non-politically aligned group that advocates for more balanced, cost-effective and sustainable transport policy decisions. The CBT is concerned that the “Puhoi to Wellsford road of national significance”, which is currently under investigation by the New Zealand Transport Agency (NZTA), is an extremely expensive project that is not economically justified. That being said, the CBT is well aware that the Puhoi to Wellsford stretch of State Highway One (SH1) suffers from unacceptable safety and congestion problems. Therefore, the CBT has proposed a much more cost-effective and faster approach to improving this stretch of SH1. The CBT seeks that the Auckland Regional Council (ARC) adopts the CBT’s approach as the ARC’s preferred solution to the problems faced along this road and advocates to NZTA and the Minister of Transport for this alternative approach.

2. Background:

In May 2009 the Government released an updated Government Policy Statement on land transport funding 2009/10-2018/19¹. As part of that document, seven “roads of national significance” (RoNS) were proposed for construction within the next decade, one of which is the upgrade to SH1 between Puhoi and Wellsford.

Prior to the release of the May 2009 GPS, there had been little planning for the Puhoi-Wellsford RoNS, beyond upgrades to the existing route, some small deviations and a bypass of Warkworth.

The Puhoi-Wellsford road was not prioritised by either the most recent 2010-2040 Regional Land Transport Strategy², or any of its predecessors. Neither was it prioritised in any of NZTA’s main plans and strategies prior to the May 2009 GPS. From the CBT’s perspective, it appears as though the Minister of Transport made a personal decision that the project was important and a priority, and all progress has flowed from there; rather than from NZTA identifying a need for the project. Amongst all RoNS, the Puhoi-Wellsford road appears to be unique in this respect.

3. The Current Proposal:

In January 2010 NZTA released the Puhoi to Wellsford: Project Summary Statement³, which detailed the project’s benefits, gave a brief description of what the project would entail, and undertook a preliminary business case analysis of the project to determine its cost effectiveness.

The project was described as follows:

¹ <http://www.transport.govt.nz/news/newsevents/Documents/Final-GPS-May-09.pdf>

² [http://www.arc.govt.nz/albany/fms/main/Documents/Transport/RLTS/Regional%20Land%20Transport%20Strategy%20\(RLTS\)%202010-2040%20part%201.pdf](http://www.arc.govt.nz/albany/fms/main/Documents/Transport/RLTS/Regional%20Land%20Transport%20Strategy%20(RLTS)%202010-2040%20part%201.pdf)

³ <http://nzta.govt.nz/network/rons/docs/puhoi-wellsford-project-summary-statement.pdf>

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

Section 1: A new motorway running parallel to the old highway featuring a high standard of construction, including grade separation of connections with the existing roads, starting from the terminus of the Northern Gateway Toll Road and ending just north of Warkworth.

Section 2: A new expressway parallel to the old highway with lower geometric and access standards than Section 1, running from north of Warkworth to just north of Wellsford.

The anticipated cost of the project was given as \$1.38 billion, within a range from \$1.24 billion to \$1.52 billion. This cost was given in 2009 dollars – but because of the lengthy construction period the forecast outturn cost of the RoNS corridor would be \$1.69 billion with a confidence range of \$1.53 billion to \$2.04 billion.

As noted above, cost-benefit analysis of the proposal was undertaken, its findings are outlined below:

| Discount Rate | Standard NZTA BCR | BCR inc WEBS |
|---------------|-------------------|--------------|
| 8% | 0.8 | 1.1 |
| 6% | 1.1 | 1.5 |
| 4% | 1.6 | 2.0 |

The standard discount rate for transport projects is 8%, so under the standard business case analysis, the project has a cost-benefit ratio of 0.8 – meaning that for a \$1.69 billion ‘investment’, it would only generate \$1.352 billion in return, effectively a “loss” of \$338 million. While this does not take into account the “wider economic benefits” referred to in the table above, the CBT understands that these benefits are considered to be quite debatable in transport policy circles, and should be treated quite carefully and not necessarily accorded too much weight.

Because of the project’s poor cost-benefit ratio (in contrast, rail electrification has a demonstrated cost benefit ratio of 1.5-1.7 and the Onehunga Line one of 3.1), and because the project has other adverse effects (potentially significant environmental impact, encouraging urban sprawl, encouraging car dependency and so forth) the CBT considers that the project is poorly justified and should not be a high priority in its current form. There are many projects in Auckland that desperately require funding, such as the CBD Rail Tunnel, rail to the airport and arterial road upgrades, that the CBT considers should be of a higher priority for a number of reasons:

- they are likely to be more economically justified;
- they work to assist Auckland’s regional urban growth strategies, through encouraging intensification, rather than work against them by encouraging urban sprawl;
- they help reduce Auckland’s auto-dependency; and
- they align more closely with the 2010-2040 RLTS

Another significant reason why the CBT opposes this project is because of its very lengthy design, consenting and construction timeframes. In January 2010 a media statement by the Minister of Transport suggested that while the Puhoi to Warkworth section of the road could be completed by 2019, the Warkworth to Wellsford section would take longer⁴. Given the safety and congestion problems faced along this route of SH1, the CBT considers that more urgent action than these timeframe is required – particularly in terms of safety upgrades and the bypassing of Warkworth.

⁴ <http://www.scoop.co.nz/stories/PA1001/S00117.htm>

4. The Problems With State Highway One:

The CBT does not dispute that urgent action is required to improve the quality of SH1 between Puhoi and Wellsford. The New Zealand Road Assessment Programme has identified SH1 between Warkworth and Wellsford as having the 7th highest risk of any stretch of road in NZ, with SH1 between Orewa and Warkworth having the 10th highest risk⁵. Furthermore, between 2000 and 2009 there have been 41 road fatalities on this stretch of SH1, comprised of 15 between Puhoi and Warkworth⁶, and 26 between Warkworth and Wellsford⁷. In addition to these 41 fatalities, between 2004 and 2008 alone there were 31 serious injuries and 118 minor injuries resulting from accidents between Puhoi and Wellsford.

The route also suffers from severe congestion, particularly during the holiday period, but also at normal times – particularly around Warkworth.

Considering NZTA's timelines for designing, consenting and constructing this RoNS, it appears likely that the congestion problems around Warkworth may not be solved for at least another five years (and up to nine years if that stretch of the project is built at once) while improvements to the road between Warkworth and Wellsford, which includes the notorious Dome Valley, may be ten or more years away. Furthermore, it appears likely that NZTA are not going to "waste" money on safety upgrades to the existing SH1 if they plan to bypass that alignment in the future via the new motorway/expressway. Therefore one would expect the current death-rate on the road to remain for up to 10 years under the current plan.

If fatalities on the stretch of State Highway 1 between Puhoi and Wellsford are to continue at their current rates, and the Puhoi-Warkworth section is not completed until 2019 and the Warkworth to Wellsford section until 2022, then there will be 50 further fatalities along this stretch of road before the upgrade opens.

5. The Alternative:

Considering the various problems with the Puhoi-Wellsford road in its currently proposed form, and recognising the urgent need to relieve congestion around Warkworth and undertake safety upgrades to the entire route – particularly between Warkworth and Wellsford through the 'Dome Valley', the CBT proposes two alternatives, and seeks that the ARC adopt one of these alternatives as its preferred option for improving SH1 between Puhoi and Wellsford. The CBT also seeks that the ARC advocate to NZTA and the Minister of Transport the advantages of this scheme.

At a broad level, the proposed alternative seeks to analyse what benefits could be achieved from spending approximately 10% of the budget for the Puhoi to Wellsford road. In other words, what could be constructed for around \$160 million. It is also considered worthwhile to look at what might be able to be achieved for approximately 20% of the cost of the Puhoi-Wellsford project, which would provide a funding envelope of \$320 million.

It is estimated that the following projects could be constructed for a cost that fits within the \$160 million funding envelope (Option 1):

Option One (\$160m)

⁵ <http://www.kiwirap.org.nz/results.html>

⁶ http://www.parliament.nz/en-NZ/PB/Business/QWA/a/6/9/QWA_10163_2010-10163-2010-David-Shearer-to-the-Minister-of-Transport.htm

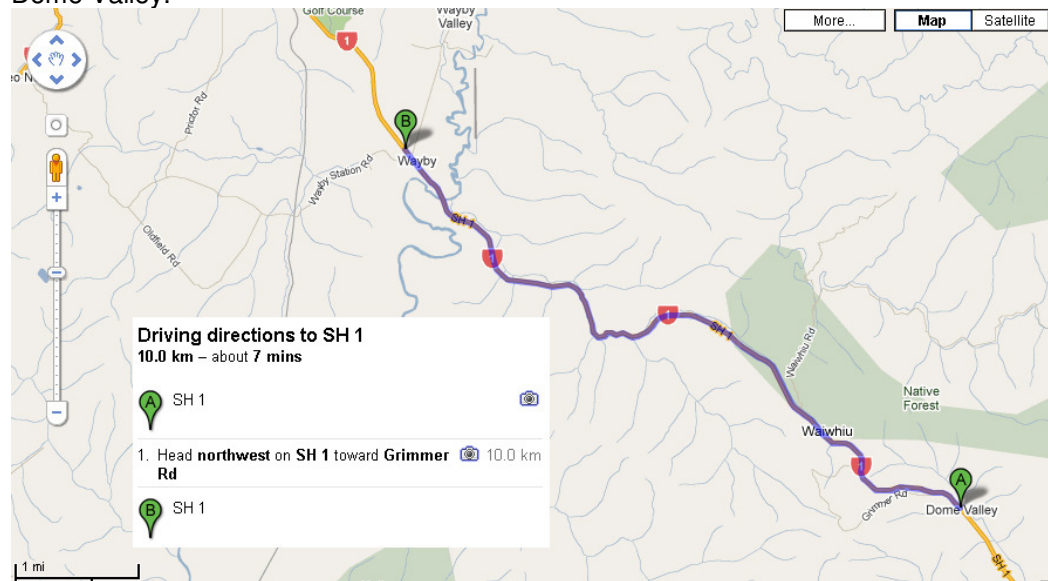
⁷ http://www.parliament.nz/en-NZ/PB/Business/QWA/e/d/8/QWA_10162_2010-10162-2010-David-Shearer-to-the-Minister-of-Transport.htm

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

- Warkworth Bypass - approximately \$50 million cost. There has been some previous investigation into this project.
- Wire/concrete medians throughout Dome Valley and around Schedewys Hill. At an average cost of \$1 million per kilometre the total cost would be \$15 million: \$10 million for Dome Valley and \$5 million for Schedewys Hill/Pohuehue area.
- Wire/concrete barriers on sides of road in particularly dangerous sections of Dome Valley and Schedewys Hill (where there is a record of “loss of control” accidents). Approximately 5km at \$2 million per kilometre, total cost of \$10 million.
- Wayby Valley Road intersection upgrade. In 2009-2012 NLTP. Cost approximately \$2.5 million and BCR of 5.0 (see attached OIA response).
- Pohuehue widening and edge protection. Widens existing viaduct to three lanes and provides upgraded edge protection barrier. Cost: \$4.7 million, BCR: 3.2 (see attached OIA response)
- Falls Bridge to Waitarere Bridge safety improvement, part of Dome Valley. Project involves seal widening and cuttings widening to improve sight lines. Cost: 1.4 million, BCR: 2.5 (see attached OIA response).
- Sheepworld southbound passing lane – north of Warkworth. Extends existing 570 m passing lanes by another 756m. Cost \$4.7 million, BCR: 3.4 (see attached OIA response).
- Dome Hill realignment

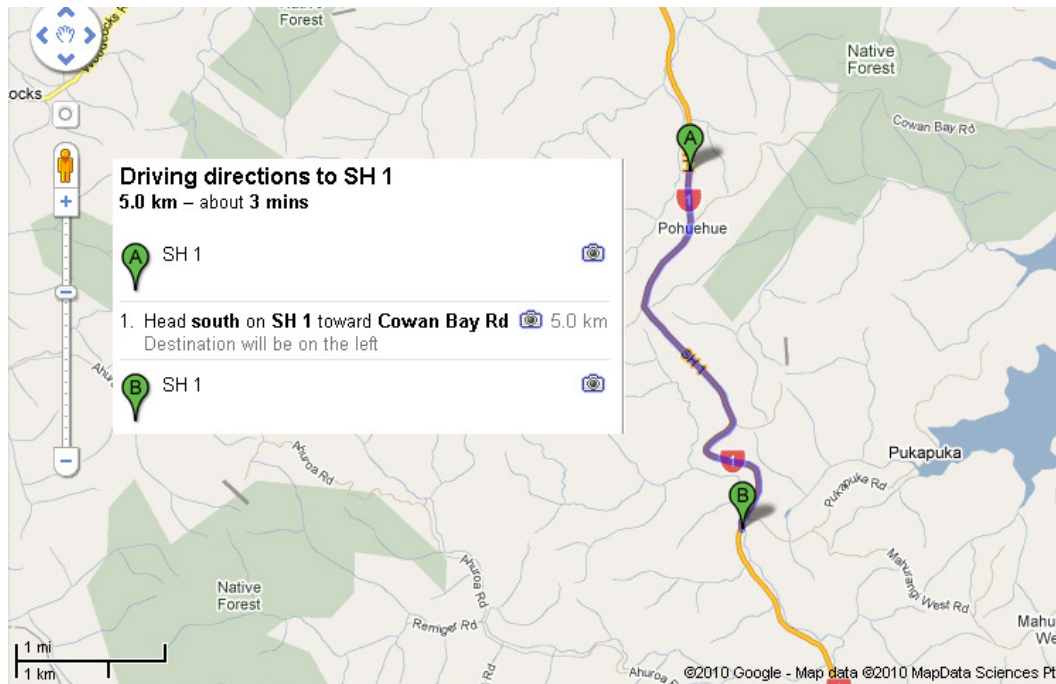
The lengths of State Highway 1 proposed for wire/concrete median barriers are shown in the two images below:

Dome Valley:



Schedewys Hill/Pohuehue Viaduct:

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE



Option 2 (\$320m):

Within the \$320 million funding envelope it is considered that the following additional projects could be constructed (over and above what is proposed in Option 1):

- Tidal “three-laning” between Warkworth and Puhoi along the existing alignment
- Schedewys Hill realignment. Cost: \$25-70 million depending on alignment, BCR 1.3-1.4 (see attached OIA response).
- Wire/concrete barriers throughout entire Dome Valley and at dangerous points between Puhoi and Warkworth

The CBT accepts that further analysis should be undertaken into testing what projects would be possible for \$160 million, and for \$320 million.

The relatively low cost of the upgrades listed above suggests that significant benefits could be gained for a relatively modest cost. It should also be noted that both CBT alternatives would retain access between Puhoi and the Orewa-Puhoi section of State Highway 1, alleviating a strong community concern that Puhoi’s accessibility will be greatly reduced by the current proposal.

An analysis of the cost-effectiveness of the alternatives, and how that compared to the cost-effectiveness of the current proposal, are analysed in the section below.

6. Analysis of Cost-Effectiveness:

This section analyses how the cost-benefit ratio of the current proposal was undertaken, and uses this process to undertake an approximate analysis of what the benefits would be from the two proposed alternatives.

6.1. *Travel Time Savings*

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

The table below is taken from the December 2009 Business Case Study by SKM into the Puhoi to Wellsford project:

■ **Table 4-11: Summary of Benefits: Conventional Economic Appraisal and Wider Economic Benefits**

| Criteria | NPV Benefits (\$millions) | | |
|--------------------------------------------------|---------------------------|-----------------------|--------------|
| | Puhoi – Warkworth | Warkworth – Wellsford | TOTAL |
| Journey time reliability | \$5.0 | \$3.4 | \$8.4 |
| Travel time benefits (including holiday periods) | \$236.3 | \$115.7 | \$352.0 |
| Vehicle operating cost benefits | \$23.6 | \$11.6 | \$35.2 |
| Accident cost savings | \$73.6 | \$59.8 | \$133.4 |
| Total Conventional Economic Benefits | \$339 | \$191 | \$530 |
| Wider Economic Benefits | \$122 | \$37 | \$159 |
| Total Including Wider Economic Benefits | \$461 | \$228 | \$689 |

As can be seen, the main benefits as calculated are travel time benefits and safety (accident cost) benefits. Wider economic benefits include mainly benefits to forestry and tourism, although as noted above the CBT is highly sceptical of the real value of these benefits (tourists may prefer a more scenic road to a motorway while logs are more suited to rail transportation than road transportation).

The CBT also notes that the calculation of travel time savings is reliant upon some quite significant assumptions – as described on page 31 of the December 2009 SKM Report.

This page reads:

The current alignment standards of SH1 between Puhoi and Wellsford vary considerably. Delays are caused by various sections of difficult terrain, high likelihood of being forced to slow down due to following HCVs, lack of overtaking opportunity and other operational factors are impede traffic speeds. The traffic signals in Warkworth and the high side friction evident when travelling through Wellsford are also significant.

To account for the delays on the existing SH1 as discussed above, an average speed of 60 km/hr has been taken as representative of the current route. Assuming that the standard of road discussed in Section 4 are achieved, travel times resulting from the project would result in a saving of 8 minutes from Puhoi to Warkworth and 7 minutes from Warkworth to Wellsford, giving a total travel time saving of 15 minutes along the whole route. The results of this analysis using these travel time savings are reported below in Table 4-4.

It is the CBT's consideration that much of the reason behind the low speed results from problems originating in Warkworth, where State Highway 1 passes through the town. The CBT notes that there is a current upgrade to Warkworth under construction, and the impact of that project should be taken into consideration when analysing what the actual improvements of the Puhoi-Wellsford upgrade would be. Furthermore, as noted above, a bypass of Warkworth could achieve many gains, and potentially increase the average speed significantly from the estimated 60 kph.

Considering that such a large proportion of the project's benefits are supposed to arise from travel time savings, the CBT would hope for some detailed analysis being undertaken to determine what the real existing average travel speed is, rather than the "wild guess" that the 2009 SKM Report appears to have made. It is noted that page 29 of the December 2009 SKM Report states that easing severe congestion during holiday periods will only contribute \$19.88 million of benefits over the economic lifetime of the project.

Most of the time savings benefits are accrued between Puhoi and Warkworth (\$236.3 million out of \$352 million, or 67%), a part of the route that the 2009 SKM Report considered to include Warkworth. As State Highway 1 between Puhoi and Warkworth is generally straighter

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

than the road between Warkworth and Wellsford, it would appear as though a significant proportion of the “time lost” along this route is as a result of the Warkworth bottleneck. Significant improvements to travel times could therefore be achieved by constructing a Warkworth bypass.

6.2. Safety

In terms of safety benefits, it is recognised that the project creates \$133.4 million of “accident cost benefits” – including \$73.6 million for the Puhoi to Warkworth section and \$59.8 million for the Warkworth to Wellsford section. This reflects the significant safety issues faced by the current stretch of road. This is shown in the tables below (adapted from pages 32 and 33 of the SKM Report:

Puhoi to Warkworth Crashes 2004 – 2008

| Crash Severity | Number of Crashes (2004 – 2008) |
|----------------|---------------------------------|
| Fatal | 5 |
| Serious Injury | 19 |
| Minor Injury | 52 |
| Non Injury | 174 |
| TOTAL | 250 |

Warkworth to Wellsford Crashes 2004 – 2008

| Crash Severity | Number of Crashes (2004 – 2008) |
|----------------|---------------------------------|
| Fatal | 14 |
| Serious Injury | 12 |
| Minor Injury | 66 |
| Non Injury | 169 |
| TOTAL | 261 |

This shows that in addition to the 19 fatalities between 2004 and 2008, there were 31 serious injuries and 118 minor injuries. This has a significant social, as well as economic, impact.

It would be the goal of the proposed safety upgrades listed in the two CBT alternatives to seek to eliminate as many of these accidents as possible. Of the 19 fatal crashes between 2004 and 2008, 14 were the result of head-on collisions, which could be eliminated through the placement of either wire or concrete median barriers. Wire barriers can be erected for approximately \$1 million per kilometre (cost taken from section of Waikato Expressway). Such an upgrade would provide significant benefits for relatively low cost, particularly if focused on the most dangerous parts of the route (Dome Valley and Schedewys Hill). The second-most common cause of fatal or serious injury accidents is “loss of control”. It is considered that the number of these types of accidents could be reduced through some realignments, and also through the potential placement of wire or concrete barriers on the sides of the state highway in the most dangerous stretches. The placement of barriers both in the centre of the road and at its sides would make it very difficult for either ‘head on’ or ‘loss of control’ accidents to occur.

6.3. Economic Analysis

The economic appraisal is based approximately on the December 2010 SKM Report. Generally it has been estimated the percentage of benefits that the CBT’s suggested alternative would provide compared to the level of benefit provided by the full Puhoi to Wellsford upgrade.

6.3.1. Journey time reliability

The SKM report suggests that \$8.4 million of NPV benefit will arise from improvements to journey time reliability. As both CBT alternatives include a Warkworth upgrade, the main bottleneck in the road between Puhoi and Wellsford, it is considered that a significant proportion of the improvements could be anticipated. Furthermore, with Option 2 providing three-laning between Puhoi and Warkworth as well as a Warkworth bypass, it is considered that most of the improvements would be achieved.

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

Option 1: 60% of benefits - \$5.04 million
Option 2: 80% of benefits - \$6.72 million

6.3.2. Travel time benefits (including holiday periods)

The SKM report suggests that \$352 million of NPV benefit will arise from improvement to travel times. CBT option 1 is likely to have some improvement to travel times, through bypassing Warkworth and also through the extension of passing lanes, allowing faster vehicles to pass slower vehicles. For CBT option 2, additional time savings benefits would arise, particularly during holiday periods, through the tidal three-laning of the road between Puhoi and Warkworth.

Option 1: 30% of benefits - \$105.6 million
Option 2: 40% of benefits - \$140.8 million

6.3.3. Vehicle operating cost benefits

The SKM report suggests that \$35.2 million of NPV vehicle operating cost benefits will arise from the project. It is considered that the CBT alternatives are likely to offer relatively low benefits compared to the full upgrade, as the road's existing alignment will be largely maintained. Some benefit is likely to occur from the Warkworth bypass.

Option 1: 5% of benefits: \$1.76 million
Option 2: 10% of benefits: \$3.52 million

6.3.4. Accident cost savings

The SKM report suggests that \$133.4 million of NPV accident cost savings will arise from the project. A particular focus of the CBT alternatives is to improve the safety of this stretch of State Highway 1, with median barriers, side barriers, realignments, extensions of passing lanes and other possible upgrades all likely to have significant safety benefits.

Option 1: 70% of benefits: \$93.4 million
Option 2: 90% of benefits: \$102.1 million

6.3.5. Total Conventional Benefits and Cost

Option 1: \$170.6 million NPV
Option 2: \$253.1 million NPV

This compares with the \$530 million of total NPV benefits calculated by SKM to arise from the Puhoi to Wellsford project. The table below summarises comparisons of the options above

| Benefits | NZTA proposal (\$1.69 billion cost) | CBT Option 1 (\$160 million cost) | CBT Option 2 (\$320 million cost) |
|---------------------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|
| Journey Time Reliability | \$8.4 million | \$5.04 million | \$6.72 million |
| Travel Time Benefits | \$352 million | \$105.6 million | \$140.8 million |
| Vehicle Operating Cost Benefits | \$35.2 million | \$1.76 million | \$3.52 million |
| Accident Cost Benefits | \$133.4 million | \$93.4 million | \$102.1 million |
| Analysis | | | |
| Total Benefits | \$530 million | \$170.6 million | \$253.1 million |
| Benefits/Cost | 0.31 | 1.07 | 0.79 |
| Benefits/Cost (assuming a 0.8 BCR for | 0.8 | 2.76 | 2.04 |

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

| | | | |
|----------------|--|--|--|
| NZTA proposal) | | | |
|----------------|--|--|--|

The conventional analysis of the cost-benefit ratio gives a total of 0.8 with an 8% discount rate. This suggests a project cost of \$662.5 million, rather than the \$1.69 billion cost of the project. Either the cost of the project appears to have been under-estimated in the SKM business case, or the benefits have been calculated in a way that under-values them. If the former is the case, then the project would have a BCR of 0.31 (assuming a cost of \$1.69 billion and benefits of \$530 million). If the latter is the case, and a 0.8 BCR is retained with a project cost of \$1.69 billion, then the benefits should come to a total of \$1280 million, more than twice what SKM's calculations show them to be.

The uncertainty in SKM's figures make it difficult to undertake a full cost-benefit analysis of the proposed alternatives, but it appears clear that they would be a far more cost-effective solution to the problems faced by State Highway 1.

7. Contribution to the RLTS:

It is important to note that the 2010-2040 Regional Land Transport Strategy (RLTS) does not mention the Puhoi-Wellsford road upgrade in any great detail. Section 4.4 of the RLTS notes that the road network should be improved by way of a number of projects, one of which is "Safer and more reliable linkages to Northland, Waikato and Bay of Plenty." The CBT considers that this objective could be achieved through the cost-effective alternative, particularly through focusing efforts on improving safety in the very short term and also improving trip reliability by bypassing Warkworth.

Policy 6.4.2 of the RLTS notes that the "investigation of the SH1 Puhoi-Wellsford Road of National Significance" is supported. This alternative does not seek to undermine that policy, as what is proposed is still a significant upgrade to State Highway 1.

A brief analysis has been undertaken to compare the currently proposed project and the CBT alternative against the various aspects that make up the "vision" of the RLTS – as outlined in section 2.1 of that strategy.

7.1. People and goods are able to move when and where necessary

Both projects would contribute to improving the ability of people and goods to move between Auckland and Northland. It is accepted that the current proposal would probably save more time off trips between Puhoi and Wellsford than either CBT alternative, but this should be weighed up against the significantly higher cost that the current proposal has. By bypassing Warkworth and (under the "Option 2 proposal") providing a third 'tidal' lane between Puhoi and Warkworth, it is considered that the CBT alternative would eliminate the worst congestion faced on this road and therefore assist in achieving this part of the RLTS's vision.

The CBT considers that it is important to consider the ways in which other projects that could be funded as a result of the savings on this project could better achieve the vision of the RLTS.

7.2. Transport supports vibrant, well designed, attractive and environmentally sustainable urban and rural centres, business and economic activity, and access to social, cultural and recreational activities

The CBT considers that the extension of a motorway/expressway standard road to Wellsford could encourage urban sprawl in this northern part of the Auckland Region, and beyond it into the southern part of the Northland Region. An urban sprawl type of development would make it difficult to create vibrant, well designed, attractive and environmentally sustainable urban centers – as the growth would be directed away from these areas potentially leaving

them to deteriorate. Furthermore, the value of the rural areas may be adversely affected by their urbanisation – that would be encouraged by the motorway/expressway standard road.

A dispersed type of development that the current proposal may encourage can reduce access to social, cultural and recreational activities as facilities will generally be more spread out, and people will have poorer access (especially those without cars).

7.3. Streets are safe places for people and the community

The CBT alternative proposes immediate safety upgrades to SH1, which would assist in immediate improvements to the road's safety record. As noted in section 4 of this document, the timeframe for the current proposal and the existing death-rate for the road between Puhoi and Wellsford could mean that 50 fatalities occur before the motorway upgrade is completed. The CBT alternative would improve safety immediately, as safety works are within the existing designation so could occur with a minimal amount of delay.

7.4. The distinct volcanic and coastal (Whenua, moana/awa) character of the region and the cultural values of its inhabitants (nga tangata katoa) is protected and enhanced

While the route is not immediately located in the coastal area, and does not appear to pass through any areas of distinctive volcanic character, it is likely that the CBT's alternative would have less impact on cultural values and on the character of the region, because the existing alignment of the road would be retained and the amount of earthworks would be much less than the current proposal.

7.5. Getting around by all modes is integrated, safe, effective, and accessible to all, including people with disabilities

It is considered that the current proposal will tie up a significant amount of the funding available for transport projects in the Auckland region while only benefitting a relatively small number of people – particularly freight distributors, holiday-makers and commuters living in the north Rodney area. As noted above, both proposals will have positive effects on safety and accessibility, however the safety benefits of the CBT alternative will be realised a lot sooner than the current proposal.

7.6. People have choices which enable them to participate equitably in society, especially those with mobility issues, including children and the elderly and those most disadvantaged.

As noted above, the current proposal ties up significant funding while benefitting a relatively narrow (and generally quite advantaged) section of society. The key element that the CBT is concerned about is the opportunity cost of this project – of what the funding proposed to be spent on the current proposal could otherwise be spent on to better achieve parts of the RLTS's vision such as this.

7.7. The natural environment and human health are protected and enhanced

The CBT alternative is considered to have significantly less environmental impact than the current proposal. The current proposal involves a completely new "off-line" road of motorway/expressway standard that would require significant earthworks, vegetation removal and land modification. Parts of the route, notably around the Pohuehue Viaduct and in the Dome Valley, are areas with significant environmental values that would be sensitive to building a completely new high-speed road through the area.

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

While aspects of the CBT's alternative may have environmental effects, such as widening the existing road, undertaking some deviations and bypassing Warkworth, it is considered that these would be very minor compared to the environmental effects of a completely new motorway/expressway standard road.

7.8. Transport resources are used efficiently, supported by sustainable, innovative design practices.

As noted throughout this document, the CBT strongly considers that the current proposal is a very poor use of transport resources. The current proposal represents poor value for money, and the CBT considers that the money saved by pursuing the CBT's alternative could free up significant funds for more cost-effective projects elsewhere in the Auckland region (such as the CBD rail tunnel).

While the CBT is sure that sustainable and innovative design practices would be adopted in the construction of the project, the poor 'value-for-money' that the project represents as well as its potentially significant environmental impact mean that it is considered the project does not accord with this part of the RLTS's vision.

7.9. The transport system is resilient in the event of shocks and is adaptable to change

The CBT considers that the current proposal undermines the resiliency of the transport network, because it involves spending a significant amount of funds on a project that will undermine the viability of the North Auckland Railway Line (which is already proposed for potential closure). Furthermore, it will act as an incentive for people working in Auckland to live further and further north, creating a greater amount of car (and therefore oil) dependency. The most likely 'shocks' and 'change' to be experienced by the transport network in the future would be a significant spike in the price of oil, or a very sudden need to reduce carbon emissions to counter the effects of climate change. In both scenarios, the current proposal is considered to do more harm than good.

Furthermore, one must again consider the 'opportunity cost' of spending a significant amount of transport funds on this project, when it could instead be spent on projects that would improve the resiliency of the transport network to shocks – such as the CBD rail tunnel project that would stimulate increased use of the rail system that will be electrified in the near future.

7.10. Summary

Overall the CBT considers that the current proposal does not contribute positive to the vision set by the Regional Land Transport Strategy. While the project's investigation is supported by the RLTS, and the RLTS recognises the need to improve connectivity with Northland, the poor cost-effectiveness and potentially significant environmental effects of the proposal mean that compared to other projects, the Puhoi-Wellsford road of national significance in its current form is considered to be a 'poor fit'.

Furthermore, the CBT considers that the 'opportunity cost' of spending funds on this project rather than on other, more needed and more strategically aligned projects, will adversely impact on the ability to fulfil the vision of the RLTS.

8. Discussion:

The CBT considers that the current project does not offer good value for money and should not be a priority transport project. Many of the benefits the project is supposed to deliver are highly questionable, and the low cost-benefit ratio of the conventional analysis (which

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

excludes wider economic benefits) is considered likely to be over-stating the benefit of the project in any case. This is largely because the travel time savings benefit, which are the most significant proportion of benefits generated by the project, are predicated on a base average speed of 60 kph along the whole route between Puhoi and Wellsford. This seems to be extremely slow, and therefore if the current speed is higher, the benefits of the project would be significantly reduced.

A summary of the estimated costs and benefits of the different options is included in the table below, with an analysis of their comparative cost-effectiveness:

| Benefits | NZTA proposal (\$1.69 billion cost) | CBT Option 1 (\$160 million cost) | CBT Option 2 (\$320 million cost) |
|------------------------------------------------------|--------------------------------------------|------------------------------------------|------------------------------------------|
| Journey Time Reliability | \$8.4 million | \$5.04 million | \$6.72 million |
| Travel Time Benefits | \$352 million | \$105.6 million | \$140.8 million |
| Vehicle Operating Cost Benefits | \$35.2 million | \$1.76 million | \$3.52 million |
| Accident Cost Benefits | \$133.4 million | \$93.4 million | \$102.1 million |
| Analysis | | | |
| Total Benefits | \$530 million | \$170.6 million | \$253.1 million |
| Benefits/Cost | 0.31 | 1.07 | 0.79 |
| Benefits/Cost (assuming a 0.8 BCR for NZTA proposal) | 0.8 | 2.76 | 2.04 |

In terms of the project's wider economic benefits, the CBT considers that these are tenuous as well. The primary wider benefits are considered to relate to tourism and forestry, but as tourists may prefer a more scenic route over a motorway while logs are often more suited to rail transportation, these benefits might be over-stated. It should be noted that the 2008 SH1/16 Auckland to Wellsford Strategy Study – prepared by SKM for Transit NZ – had the following to say about wider economic benefits:

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

5.9.1 Regional Economic Impacts

Within the initial evaluation framework, the relative effects of strategy options for the state highway network were considered. Further work was undertaken to assess the potential magnitude of implementing the strategy on the regional economy. The key conclusions that arose from this assessment were:

- The economy of Northland is relatively weak with low regional GDP per capita and a low historic growth rate.
- The economy also has a relatively high concentration of activities in the agriculture and natural resources sectors, areas where key demand may lie overseas rather than elsewhere in New Zealand. For this traffic, interactions with Auckland may decline with the development of port facilities at Marsden Point and the construction of a connecting rail link.
- The key centre in the Northland is Whangarei, which is at a considerable distance from the main centres in the Auckland region. The areas south of Whangarei are relatively lightly developed containing about 10-15 per cent of total regional employment, and the scope for substantial economic growth with the upgrading of SH1 is limited.
- The activity most likely to benefit from the improvement of SH1 to Wellsford is tourism. However, this is relatively small scale in the areas in the south of Northland with a contribution to GDP of about \$30-50 million. Even a significant increase in this contribution would be modest when set against the likely costs of road upgrading.

Therefore, regional economic issues are unlikely to make a significant contribution to the viability for implementing the strategy. However, it is clear that the strategy would make an overall positive contribution to the region.

The CBT is highly surprised that between 2008 and 2009 SKM changed their opinion of the impact of wider economic benefits from the above to "The impact of including the wider economic benefits would therefore be significant" as is stated on page 36 of their 2009 report.

It is considered that many of the most significant benefits of the Puhoi to Wellsford road upgrade, particularly in terms of safety, could be achieved at a fraction of the cost, and that is what has been proposed by this report. It is also very important to consider that the timeframe for implementing many of the upgrades proposed is far shorter than would be the case for constructing a completely new, offline motorway. Many of the safety upgrades would occur within the existing highway designation, and therefore would require very minimal consenting work. The smaller scale of other projects, such as the Warkworth bypass, is likely to mean that consenting, design and construction would be much faster than the full 38 km upgrade. Therefore, the benefits could be realised much sooner.

9. Conclusion and Recommendations:

Overall, the CBT considers that either of the two alternatives proposed would provide far better value for money than NZTA's current project. The benefits would also be delivered much sooner, which is of particular importance to avoid any further loss of life along this stretch of State Highway One.

Therefore, the CBT recommends that the ARC adopts the following principles and position with regards to the Puhoi to Wellsford road upgrade.

- That officers undertake further analysis of the CBT's proposed alternatives, particularly in terms of their approximate costs, benefits and economic evaluation.
- That, subsequent to further analysis of the proposed alternatives, the ARC adopts either Option 1 (approximate cost \$160 million) or Option 2 (approximate cost \$320 million) as their preferred solution to the current issues faced on the Puhoi to Wellsford section of State Highway One.
- That the ARC will meet with senior officials at NZTA and with the Minister of Transport to discuss the concerns held about the cost-effectiveness of the Puhoi to Wellsford road upgrade and the need for more immediate safety upgrades to the existing sections of State Highway One between Puhoi and Wellsford.
- That the ARC will write to NZTA and the Minister of Transport requesting that current investigations into a full off line road between Puhoi and Wellsford be placed on hold, and efforts be focused on progressing a Warkworth bypass and safety upgrades to the most dangerous sections of State Highway 1.

State Highway 1 Puhoi – Wellsford Consultation on Key Principles July 2010 Submission from Auckland Regional Council

Overview

The Auckland Regional Council (ARC) acknowledges concerns about safety and traffic bottlenecks on State Highway 1 between Puhoi and Wellsford and supports cost effective improvements to safety and reliability on the route. The ARC is not convinced however that the best solution is to construct a new off line motorway standard road. Construction of a new route is not expected to be completed until 2022 and may cost 2.3 billion dollars. Such a long construction period means a delay in addressing the existing serious safety problems on the route. The very large funding requirements also mean that other higher priority transport projects in the region may be delayed.

The ARC considers that the investigation into improvements to the route should focus on cost effective, staged improvements to the existing road with an emphasis on improving safety and reliability.

Background

The Auckland Regional Land Transport Strategy 2010 – 2040 contains a number of references to the need to develop good transport links to the Northland, Waikato and Bay of Plenty regions and contains the following policies which relate directly to the project:

Policy 6.4: Ensure strategic roading connections to other regions are developed and improved where necessary to contribute to economic development, network resilience and safety outcomes

Policy 6.4.1: Support cost effective improvements to safety and reliability to major interregional connections between Auckland and Northland, Waikato and the Bay of Plenty, including :

- SH1 North between Auckland and Whangarei

Policy 6.4.2: Support investigation of the SH1 Puhoi – Wellsford Road of National Significance

At its June 2010 meeting the ARC Transport and Urban Development Committee resolved:

“That the Auckland Regional Council acknowledges concerns about safety and traffic bottlenecks on State Highway 1 between Puhoi and Wellsford and reiterates its support for cost effective improvements to safety and reliability”.

NZTA principle: When completed, the new highway will be “off line” from the existing SH1

NZTA’s rationale for adopting the off line principle is that this allows smoother curves, easier grades, will cause less disruption and will result in a safer, more efficient road. This is true, but applies to almost all roading projects. Off line solutions are generally very costly however, particularly when being developed through difficult terrain such as that between Puhoi and Wellsford. It is generally the case that upgrades of existing roads can achieve worthwhile improvements in safety and reliability at lower cost. Upgrades to existing roads can also be staged so that urgent needs can be addressed first and funding can be spread over a longer period. The ARC notes that funding provision of \$2.3 billion is made in the NLTP for the project. The risk in developing only off line options without regard to cost effectiveness is that the resulting project will require significant capital investment, and will either tie up funds that are needed for other projects, or will be unaffordable and not proceed at all.

The ARC is concerned that an off line route will take some considerable time to construct and will delay improving sections of the route which have a demonstrated poor safety record. The ARC notes that an off line road would not be completed until 2022 and that the Dome Valley, one of a number of sections with a poor safety record, is likely to be among the last sections of the route to be constructed.

For these reasons, the ARC considers that the new highway should not be off line, and that cost effectiveness should be a key principle in developing the project. The ARC considers that the investigation should focus on a staged upgrade of the existing road (with possibly some offline components). This would have benefits in terms of

- cost effectiveness,
- timely safety and congestion relief, meaning lives will be saved in the meantime,
- retaining access to Puhoi,
- environmental benefits, and
- cost-of capital advantages over an off line option.

Accordingly, the ARC submits that:

- *A requirement for the project to be offline should not be a key principle.*
- *The investigation should focus on cost effective, staged improvements to the existing road with an emphasis on improving safety and reliability.*
- *Cost effectiveness should be a key principle.*

While the ARC considers that staged upgrading of the existing highway is likely to be a better option than a new off line highway, the ARC accepts that the NZTA may decide to proceed with an off line highway. If that is the case, then the ARC wishes its views to be considered on how such a highway should be designed. Comments on these matters should not be taken however to conflict with ARC’s preference for a staged improvement to the existing road.

NZTA principle: There will be access points at Warkworth and Wellsford.

While ARC and Rodney District Council plan for additional development at Warkworth, Wellsford and Snells/Algies, the ARC is concerned that a major new road would accelerate growth in these areas beyond what can be effectively managed and provided with supporting infrastructure, would generate pressure for additional areas to be opened up for development, and would generate increased demand for countryside living. Restricting the new road, as proposed, to 2 access points only, and locating those access points at Warkworth and Wellsford where growth is already planned, would help guide growth into the planned areas and would help to manage increasing pressure for further development.

The ARC acknowledges however that no specific investigation has been undertaken on the potential for undesirable growth in the catchment that would be served by a Puhoi interchange, or whether the amount of additional growth would be significant given the geological constraints of the area.

The ARC also acknowledges that people living and working in Puhoi, Mahurangi West and other local areas between Puhoi and Warkworth currently have good access to the motorway to the south and by the time the new road is built will have enjoyed that level of access for around 9 years. The ease of access to the motorway will have become an important part of people's quality of life and is likely to be a factor in supporting the local economy. The ARC strongly supports retention of good access to Puhoi and Mahurangi West.

The ARC notes that no design work has been done on a potential interchange, so that it is not clear whether an interchange could be designed without severe impacts on local ecologies, coastal areas, or the local community.

The ARC also notes that no analysis has been undertaken on the impacts on local traffic of providing or not providing access to the new highway, including impacts on traffic volumes and safety on the existing SH1 and through Orewa.

The ARC reiterates its concern that the new road should be designed so as to minimise pressure for unplanned development, but submits that more information is required before a decision can be made on how best to provide access to Puhoi and Mahurangi West. In particular, better information is required concerning:

- *the extent of likely development pressure that would arise from providing an interchange,*
- *the impacts of an interchange on the local community and local environment,*
- *the impacts on the local road network, including through Orewa, of removing current access to Puhoi/Mahurangi West, and*
- *the impacts of different levels of access on the local economy.*

The ARC submits that options both with and without access to the new highway to serve the Puhoi/Mahurangi West area should be carried forward for more detailed investigation.

NZTA principle: The new highway will pass Warkworth to the west and Wellsford to the east

The ARC notes that a bypass to the west of Warkworth would be shorter than a bypass to the east and would therefore deliver greater traffic benefits and would cost less. The ARC also notes that a bypass to the east would encroach on coastal areas and would need to cross the Mahurangi Estuary.

The ARC therefore supports a bypass to the west of Warkworth.

The ARC notes that bypasses to either the west or the east of Wellsford would be of similar length and would deliver similar traffic benefits for similar costs, and that a bypass to the east of Wellsford would provide better accessibility to the growing Mangawhai area than a bypass to the west, but would not connect directly to SH 16. The ARC considers that on balance the improved accessibility to Mangawhai of an eastern bypass would provide greater benefits than the direct connection to SH16 which a western bypass would provide. Good access to Wellsford and Te Hana will remain important to the economies of those communities.

The ARC therefore supports a bypass to the east of Wellsford.

Environmental, community and cultural issues

The consultation document states that the project team is identifying and mapping environmental, community and cultural issues from existing statutory and non statutory documents, and asks for input from local people on:

- historical sites they value,
- issues about noise, air quality etc,
- natural areas important to people,
- cultural and community sites,
- landslips and unstable land, and
- anything else people consider important.

The ARC encourages the project team to continue to work with ARC staff on the detailed information which ARC holds in these various areas. A high level compilation has been produced of information held by the ARC for the Puhoi/Mahurangi West area and is attached to this submission.

Wider traffic effects

The ARC notes that the traffic effects of major improvements to SH1 Puhoi – Wellsford will not be confined to this section of SH1. Improved roading will lead to increased traffic volumes and the effects of at least some of this additional traffic will extend to the congested network within the urban area. The ARC is particularly concerned at the impacts the proposed improvements could have on traffic volumes on the Auckland Harbour Bridge and the congested sections of the Northern Motorway.

The ARC submits that the project should include consideration of impacts on the wider road network.

Need to take holistic view

The ARC agrees that it is important to improve connections between Auckland and Northland, but is disappointed that the project is focussed only on a roading solution. The ARC considers there is potential for increased movement of freight by rail between the two regions and notes proposals to extend the rail line to the deepwater port at Marsden Point. Increased use of rail freight would not only provide economic and environmental benefits, but would also reduce the need for roading improvements.

The ARC submits that a more holistic view should be taken including consideration of rail improvements.

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

Attachment 3



Auckland Regional Council

21 Pitt Street Auckland New Zealand Private Bag 92 012 Auckland
Telephone 09 366 2000 Facsimile 09 366 2115 www.arc.govt.nz

COUNCILLORS OFFICE

18 August 2010

**COPY FOR YOUR
INFORMATION**

Honourable Steven Joyce
Minister of Transport
Parliament Buildings
Wellington

File Ref: L064 - 04

Dear Minister

SH1 Puhoi - Wellsford

You will be aware that the New Zealand Transport Agency is in the process of completing consultation on a number of matters relating to the Puhoi – Wellsford road of national significance. One of the issues being consulted on is an NZTA proposition that the upgrade should take the form of a new road on a completely new alignment (an "off line" route). The ARC Transport and Urban Development Committee spent some time at its August meeting debating the issues raised by NZTA. After completing the ARC submission, which I enclose for your information, the committee also resolved that I write to you expressing our concern at the off line route proposal.

The ARC agrees that there are safety and reliability issues with SH1 between Puhoi and Wellsford and we also agree that there is a need to improve links between the Auckland region and the Northland region. We are not convinced however that a new off line road is the best option, or that it should be the only option to be explored. We consider an off line alignment will require much higher capital investment than upgrading the existing route, and note that provision of \$2.3 billion is included in the NLTP. That is a very large amount of capital and a significant proportion of national transport funding. We are concerned that a funding commitment of this size is likely to delay other priority projects, both in Auckland and no doubt in the rest of New Zealand. We believe it is just as important to make sure the solution in this case is the most cost effective available, as it is for other transport projects.

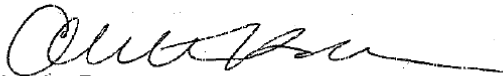
The ARC is also concerned that a new completely off line road will take more than 10 years to address all the most critical trouble spots. We note a new off line road would not be completed until 2022. That seems to us to be much too long to wait to address known safety issues - at current accident rates up to 45 lives could be lost before the road is completed, lives that could well be saved by more timely on-line safety improvements.

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AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

The ARC considers that the investigation into improvements to the route should focus on cost effective, staged improvements to the existing road with an emphasis on improving safety and reliability. Staged improvements would allow the most critical issues to be addressed first, and would allow the funding for upgrading the whole route to be spread over a longer period, and consequently would have less impact on funding of other projects. The ARC requests that efforts be focused on progressing a Warkworth bypass and safety upgrades to the most dangerous sections of State Highway 1, and that current investigations into a full off-line motorway between Puhoi and Wellsford be placed on hold.

Yours faithfully



Christine Rose
Chair, Transport and Urban Development Committee
Auckland Regional Council

Encl

AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

Attachment 4



Auckland Regional Council

21 Pitt Street Auckland New Zealand Private Bag 92 012 Auckland
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COUNCILLORS OFFICE

23 August 2010

Geoff Dangerfield
Chief Executive
New Zealand Transport Agency
Private Bag
Wellington 6141

File Ref: L064 - 04

Dear Geoff

SH1 Puhoi – Wellsford

As you know, the New Zealand Transport Agency has recently consulted on a number of matters relating to the Puhoi – Wellsford road of national significance. One of the issues being consulted on is an NZTA proposition that the upgrade should take the form of a new road on a completely new alignment (an "off line" route). The ARC Transport and Urban Development Committee spent some time at its August meeting debating the issues raised by NZTA. After completing the ARC submission, the committee also resolved that I write to the NZTA expressing our concern at the off line route proposal.

The ARC agrees that there are safety and reliability issues with SH1 between Puhoi and Wellsford and we also agree that there is a need to improve links between the Auckland region and the Northland region. We are not convinced however that a new off line road is the best option, or that it should be the only option to be explored. We consider an off line alignment will require much higher capital investment than upgrading the existing route, and note that provision of \$2.3 billion is included in the NLTP. That is a very large amount of capital and a significant proportion of national transport funding. We are concerned that a funding commitment of this size is likely to delay other priority projects, both in Auckland and no doubt in the rest of New Zealand. We believe it is just as important to make sure the solution in this case is the most cost effective available, as it is for other transport projects.

The ARC is also concerned that a new completely off line road will take more than 10 years to address all the most critical trouble spots. We note a new off line road would not be completed until 2022. That seems to us to be much too long to wait to address known safety issues - at current accident rates up to 45 lives could be lost before the road is completed, lives that could well be saved by more timely on-line safety improvements.

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AGENDA
WEDNESDAY 15 SEPTEMBER 2010
TRANSPORT AND URBAN DEVELOPMENT COMMITTEE

The ARC considers that the investigation into improvements to the route should focus on cost effective, staged improvements to the existing road with an emphasis on improving safety and reliability. Staged improvements would allow the most critical issues to be addressed first, and would allow the funding for upgrading the whole route to be spread over a longer period, and consequently would have less impact on funding of other projects. The ARC requests that efforts be focused on progressing a Warkworth bypass and safety upgrades to the most dangerous sections of State Highway 1, and that current investigations into a full off-line motorway between Puhoi and Wellsford be placed on hold.

Yours sincerely



Christine Rose
Chair, Transport and Urban Development Committee
Auckland Regional Council