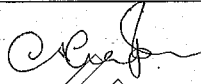





In Committee

Workshop Paper No.	09/12/0300
Submission Date	8 December 2009
Prepared by	Colin Crampton , Group Manager Highways and Network Operations 
Recommended by	Colin Crampton , Group Manager Highways and Network Operations 
Subject	SH1 Kapiti Expressway: MacKay's Crossing to Peka Peka - Workshop Briefing

Purpose

- 1 To brief the Board on the options for an expressway for State Highway One (SH1) through Kapiti in advance of a workshop to be held on 8 December 2009.
- 2 The workshop to be held on 8 December will provide a forum for officers to provide detailed feedback to the Board. Input to the workshop will include this Board Paper, the consultation report, and advice from urban design advisors. Board Members will hear a presentation on the options from NZTA officers, and will have the opportunity to ask questions and discuss the options with technical staff. The aim of the workshop is to enable Board Members to make an informed decision about the preferred option for an expressway through Kapiti.

Recommendations

- 3 There are no recommendations. This is material for the workshop

Background

Kapiti Coast Planning

- 4 The Kapiti district has one of the fastest growing populations in NZ, and in the past this has lead to urban sprawl problems for the district. These problems have been recognised in the Wellington Regional Strategy, which identified that development in Kapiti should be consolidated in existing urban areas as well as in two new growth areas (i.e. central Paraparaumu and Waikanae North).

- 5 KCDC has for some time been working to remedy the district's urban sprawl problems. In 2006, it adopted an Urban Management Strategy after extensive consultation with the community. This strategy seeks to consolidate future development of the district within existing urban areas (including Otaki), the new Waikanae North area and the undeveloped parts of central Paraparaumu (i.e. between the existing Town Centre and the Airport). The Strategy identifies that any future intensive development of Peka Peka, Otaihanga and Te Horo areas would not be encouraged. The Strategy also focuses on improving "internal connectivity" between existing urban areas, with emphasis placed on the two-lane Western Link Road. The strategy recognises that the Western Link Road traverses areas high in social and environmental values.
- 6 A local commitment to the WLR has influenced development of several longer term strategic planning frameworks. This includes the Paraparaumu Town Centre Local Outcomes document (2006) which is a non statutory document that sets out a long term vision for the community. The document includes a proposal for Rimu St to be recognised as the main street and a commitment to explore the feasibility of building a new town square on the eastern side of Rimu St. While the Western and Sandhills expressway options could adversely impact the town square concept, it is noted by KCDC in their submission that the eastern option could assist in reorienting the Paraparaumu town centre towards Rimu Road away from SH1.
- 7 Since the adoption of the Strategy, a number of major council and privately initiated plan changes have been approved. All of these plan changes have been consistent with the Strategy. Notable private plan changes include the rezoning of the Paraparaumu Airport to allow intensive commercial and industrial development to proceed in central Paraparaumu and the rezoning of 640ha of rural land to the north of Waikanae to allow mostly intensive residential development to occur. In both instances, how quickly these areas develop is largely dependent upon when the two-lane WLR becomes operational as there are a number of rules within the plan changes which require the WLR to have reached certain stages before further development can take place. KCDC's own plan changes include introducing a "Waikanae North urban edge", which limits the expansion of urban development north of Waikanae, and a more recent plan change that reinforces the Strategy's policy of consolidating retail and commercial activities within the district's main town centres. This latter plan change has however been appealed to the Environment Court by developers.

Background on the Sandhills / WLR Route

- 8 There have been various proposals for a roading link through the Kapiti Coast on what is now known as the Western Link Road route. The Government initially planned to construct a Wellington-Foxton Motorway. The Kapiti Coast section of the motorway became known as the "Sandhills Motorway." Due to funding constraints the motorway was never constructed. Various studies between the 1950s and 1990s confirmed the need to protect the route.
- 9 A key milestone in the history of the route was the 1994 *Kapiti Coast Roding Network Study* commissioned by KCDC. By this time KCDC had developed its draft District Plan. It was found that the growth assumptions in previous studies were outdated, in that the new District Plan included significantly more urban development in Paraparaumu and Waikanae.

- 10 In 1995 the *Kapiti Coast Rooding Network Study* concluded that the Sandhills route was more appropriately developed as a local arterial as it bisected land planned for urban development. Transit New Zealand agreed to the recommendation and, noting that an Expressway through the area was not then under consideration, transferred responsibility for the route to KCDC.
- 11 In 1996 KCDC lodged the Notice of Requirement (NoR) for a local arterial on the Sandhills route. Following a number of appeals, the designation was confirmed in 2006. KCDC have since obtained the Resource Consents and NZHPT approval required for the construction of Stage 1 of the Western Link Road (Te Moana to Raumati Road).
- 12 Amendments to the existing WLR designation and/or new designations would be required for each option as follows:

Sandhills Option	Western Option	Eastern Option
<ul style="list-style-type: none"> New designation required for entire length of proposed expressway 	<ul style="list-style-type: none"> Amendment to WLR designation required if decision made to shift the local road connection to SH1 from Poplar Ave to 200 Main Road South New designation required for new sections of SH1 expressway from Kapiti Rd to Peka Peka Alterations to the existing SH 1 designation will also be required if 4 laning extends beyond designated corridor 	<ul style="list-style-type: none"> Amendment to WLR designation required if decision made to shift the local road connection to SH1 from Poplar Ave to 200 Main Road South New designation required for new sections of SH1 expressway between Kapiti Rd and Te Moana Rd Alterations to the existing SH 1 designation will also be required if 4 laning extends beyond designated corridor

- 13 Therefore, the existing WLR designation could only be used to enable development of the new local road sections of the Eastern and Western options. The existing designation would need to be altered to allow the development of the Sandhills option. As such, the NoR alteration process would be the same as any new NoR application.
- 14 Interchange locations are similar in all of the three options. The exact location and number of interchanges is still to be determined in a future Scheme Assessment. However initial work indicates that the location of interchanges makes little difference to the selection of options, although the location of the interchanges does have a material impact on traffic benefits of an option. For example, the closer the interchange north of Waikanae is to Waikanae town centre the better as it brings the interchange closer to the settlement and consequently reduces journey times. Bringing the Peka Peka interchange closer to Waikanae also presents an opportunity to better define the northern limit of Waikanae and discourage urban sprawl towards Peka Peka which would be consistent with KCDC's Urban Management Strategy. Additionally, developers have made land available for a potential interchange in their structure plan design.

15 In 2007, Land Transport New Zealand agreed to a 90% FAR for "Stage 1" of the Western Link Road (Te Moana Road to Raumati Road). Subject to NZTA funding, construction on Stage 1 was intended commence in 2010.

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RoNS Context

- 16 The portfolio of Roads of National Significance (RoNS) was announced to reduce the cost of transport, to promote economic growth and productivity gains. There are seven RoNS, one of which is from Wellington Airport to north of Levin. It is proposed that the Wellington RoNS will be a high standard expressway and be the main inter-regional route.
- 17 The focus of this report is the Kapiti Coast section from MacKay's Crossing to Peka Peka. This section is characterised by slow travel conditions due to insufficient capacity, many at-grade intersections and significant side access.
- 18 The RoNS are promoted as an integrated solution within the wider network. This reflects the function of the highway as both an inter-regional route and a regional connector. On the Kapiti Coast this is true with the Kapiti Coast a significant local economy in its own right.

Consultation

- 19 On 24 August 2009, NZTA began consultation with the Kapiti Coast community on two options for a four lane expressway between MacKay's Crossing and Peka Peka, as part of the Government's Roads of National Significance (RoNS) initiative. Included in this consultation would be a revisit of the Transit Board approved alignment for an expressway between Peka Peka and north of Otaki (including an Otaki bypass). The expressway between Peka Peka and north of Otaki is subject to a separate briefing paper.
- 20 The consultation was originally scheduled to close on 2 October 2009. After a significant amount of public interest in an option that used the Western Link Road (WLR) designation as the expressway alignment, this option was added to the consultation and the consultation period extended to 30 October 2009.
- 21 At the November Board meeting, the Board received the consultation summary reports. Further analysis of the consultation feedback has been submitted to the Board workshop for consideration.

Options

- 22 The MacKays Crossing to Peka Peka route is proposed to be a four lane, median divided expressway with limited access and grade separated interchanges. The road will be designed to an alignment of 110kph which accommodates a 100kph operational speed. Depending on the option chosen, local roads would also be required to enable the local road network to function effectively when through connectivity on the State Highway is subject to limited access points.
- 23 The options were developed as part of a strategic study and are only concept plans at this stage. Attachment 1 places these concepts into a normal project development lifecycle. Detailed development and assessment of the options, including expert evidence to support the designation and consenting of any of the options, will be complete at the end of the Investigation Phase. This is expected to take some 18 to 24 months.

24 The strategic study developed four concept options (Attachment 2) for an expressway route between Mackays Crossing and Peka Peka:

- *Upgrade the Existing SH Route ("Existing Route")* – involves the provision of a four lane expressway broadly on the existing alignment, including the provision of two new bridge structures where the expressway crosses the rail at Paraparaumu and re-crosses the rail south of Waikanae. (Note: Not included in Attachment 2)
- *Expressway Follows Western Link Road (WLR) Route ("Sandhills Option")* – utilises the current WLR route which passes between the towns of Raumati, Paraparaumu, Waikanae and their associated beach settlements. The section of this route between Te Moana and Raumati Road is currently consented for a two-lane local road known as the WLR.
- *Expressway Avoids Future Town Centres ("Western Option")* – provides a four lane expressway on the SH1 alignment as far north as Otaihanga, where it would swing west to join the WLR alignment which would be used between Waikanae and Waikanae Beach.
- *Expressway Follows Rail Corridor ("Eastern Option")* – involves a four-lane expressway running against the west side of the rail line between Mackays Crossing and Peka Peka. The route would utilise the existing SH1 corridor as far as Paraparaumu before following rail as far as Waikanae, where it then utilises the existing SH1 corridor again.

25 The Board initially decided to present the Eastern and Western options to the Kapiti Coast community for consultation.

26 The Existing Route option crosses the rail line through Kapiti in Paraparaumu and again immediately south of the Waikanae River. Both of the existing rail bridge structures would need to be replaced to accommodate a four lane expressway since they are too narrow. Additionally, the existing alignment has substandard curves at the Paraparaumu Rail Overbridge and the Otaihanga Bends – easing the curves would require substantial property take. Maintaining access to existing properties between Paraparaumu and Otaihanga would also require additional service roads creating a significant infrastructure footprint with numerous land small land parcels dispersed in between.

27 The upgrade of the existing alignment would continue to cross the rail line twice. This is a historic anomaly of the area which can be eliminated in any of the alternative options presented. In addition, traffic management would be challenging during the construction period. In summary, the Existing Route option is not believed to be a logical option to progress further and was therefore not included in the consultation.

28 The Sandhills option was originally set aside by the Board due to the severance it would create, its adverse impact on growth plans for the district and the fact that it is inconsistent with KCDC's recent (15 years) urban planning. Following the start of consultation, substantial public feedback encouraged NZTA to release this option for consultation.

Option Evaluation Criteria

- 29 Section 20 of the Land Transport Management Act (LTMA) places specific obligations on NZTA in respect of decisions that impact the National Land Transport Fund. The NZTA is required to take into account the five objectives of the LTMA:

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- Assists economic development
- Assists safety and personal security
- Improves access and mobility
- Protects and promotes public health
- Ensures environmental sustainability

30 The Agency must also take into account:

- the relevant GPS; and
- any national land transport strategy; and
- any relevant regional land transport strategy; and
- any national energy efficiency and conservation strategy; and
- any relevant national policy statement and any relevant regional policy statements that are for the time being in force under the Resource Management Act 1991; and
- any relevant regional public transport plan.

- 31 The methodology used to evaluate the three options reflects the above requirements. Five LTMA objectives will be assessed. Additionally, a reflection of objectives of the NZ Transport Agency's Investment and Revenue Strategy, The Government Policy Statement, the National Energy Efficiency and Conservation Strategy and the Wellington Land Transport Strategy. Impacts on public transport have been included in the assessment.
- 32 The option evaluation has been based on the conceptual alignments set out in the consultation brochure. Where constraints are known or have been flagged following consultation that would affect the evaluation, these have been incorporated into the assessment.
- 33 Public and stakeholder feedback has informed the assessment of each of the routes against the project objectives. The aim of the evaluation exercise is to capture the issues of significance to NZTA, KCDC as the consenting authority, other key stakeholders, and the public in general.
- 34 The evaluation framework has been designed to be objective, to minimise bias and also to be comprehensive in scope. It was important to capture the issues of significance to all stakeholders, without over-emphasising any one issue. The evaluation framework also aims to capture those intangible issues which cannot be easily quantified – such as impact on urban amenity or the impact on coastal processes.
- 35 The evaluation framework builds on previous evaluations used for Transmission Gully and Waterview and adapts those evaluation processes to reflect policy changes and the specific circumstances of Kapiti Coast. The announcement of Roads of National Significance (RONS) in March 2009 is a significant change to National Policy which has warranted the addition of a new evaluation criterion. Criteria relating to consenting risk and property purchase have also been included.

Option Evaluation

- 36 A summary of the option evaluation process is set out below. The option evaluation spreadsheet is at attachment 3.

Common aspects of the three routes

- 37 All three options achieve the National aspects of the RoNS strategy. The extent to which they achieve the Regional objectives varies according to the option.
- 38 The security and flexibility of the transport system would be enhanced by all of the options, specifically through the provision of one or more additional crossings of the Waikanae River.
- 39 All of the options significantly improve through and local traffic mobility. All options present an opportunity for improved walking and cycling routes.
- 40 All routes are known to utilise areas of unstable ground, so are considered to be equally risky in this respect.
- 41 No air and noise impact assessments have been completed. Normally this work would form part of a Scheme Assessment Report and would be completed prior to the application for a Notice of Requirement and resource consents.
- 42 Detailed analysis of safety and personal security has not been carried out and no comment is possible of the relative merits of the routes with respect to personal security. A limited safety analysis has been completed and indicates that there will be significant safety improvements on SH1 in all options due to the elimination of the risk of head-on and right turn accidents.

The Sandhills Motorway Option

- 43 The Sandhills option is estimated to cost \$380M to \$500M. Only one new bridge structure over the Waikanae River is required as the existing State Highway bridge would be retained as a local road route. In addition, no new local roads are required so operational costs are low. This does mean, however, that the incremental net present value (NPV) of the Sandhills option is lower than for the Western or Eastern options.
- 44 The Sandhills Motorway option performs best in terms of minimising population displacement since the number of properties required is small and much of the property acquisition work has already been undertaken. A summary of the properties required is provided in the table below.

Property Type	Sandhills
Total Land Parcels	1,14
Approximate Houses Required	0
Crown / Council Owned	60
Private Property	54

- 45 Attachment 4 provides indicative delivery programmes for all three options. It is estimated that the Sandhills Motorway option can be completed in the same timescale as the other two options (end 2018) with a construction start in early 2014.
- 46 The Sandhills option would adversely impact on the long term plan for the development of Paraparaumu town centre as set out in KCDC's Urban Management Strategy. Additionally, this option would bisect the planned Waikanae North high quality residential development area.
- 47 This option would impact on community services and facilities due to its proximity to two schools in Raumati and increased severance between coastal communities and services in town centres. Whilst all options would impact on recreational areas, the Sandhills option may have a more severe impact due to its effect on the Nga Manu nature reserve, wetlands and potentially QE Park.
- 48 The Western and Sandhills options pass the Takamore Trust wahi tapu land and urupa and would necessitate the acquisition of additional wahi tapu land. In order to avoid further encroachment into wahi tapu land, it would be possible to construct an 80kph horizontal and 90kph vertical design speed road, equating to a speed limit of 70kph within the WLR designation. In general, the coastal plain area is known to have a rich history of Maori settlement and there is a greater risk of encountering a hitherto unknown Maori archaeological site on this alignment. All statutory iwi groups which were consulted with objected to the SandHills alignment on wahi tapu grounds.
- 49 Whilst all the alignments would affect the dunes landscape through Paraparaumu, and both the Western and Sandhills routes would affect wetlands areas to the north-west of Waikanae. It is expected that the Sandhills route would have a more significant impact on the dunes environment as the expressway is wider and the higher design speed limits the extent to which dunes can be avoided.
- 50 The Sandhills option provides no associated local infrastructure though the existing SH1 would become the local arterial. Whilst all options mean that pedestrians and cyclists are not readily able to use or cross the expressway, the Sandhills option places this potential impediment centrally within the district instead of down one side adjacent to similar linear features (e.g. the rail line).

The Western Option

- 51 The Western option is estimated to cost \$410M to \$680M with only one new bridge over the Waikanae River being required. A new section of local road would be required along the WLR corridor between Poplar Avenue / 200 Main Road and Kapiti Road which leads to higher operational costs than the Sandhills option but also a higher incremental NPV due to the benefits to local traffic.

- 52 The Western option requires substantial (though slightly less than the Eastern Option) property acquisition, although the number of houses required is considerably less than the land parcels affected. A summary of the properties required is provided in the table below.

Property Type	Western
Total Land Parcels	341
Approximate Houses Required	104
Crown / Council Owned	87
Private Property	254

- 53 It is estimated that the Western Option can be completed in the same timescale as the other two options (end 2018) with a construction start on the Expressway in early 2014. Construction on the local road between Poplar Ave and Kapiti Road could start in mid-2012.
- 54 The Western option would be consistent with current KCDC planning in that it would allow good integration with the planned town centre development. It would however bisect the planned Waikanae North high quality residential development area.
- 55 As with the Sandhills Motorway option, the Western option passes the Takamore Trust wahi tapu land and urupa and would necessitate the acquisition of additional wahi tapu land. As with the Sandhills Motorway option, there is potential to reduce this impact by reducing the design speed of the expressway.
- 56 The Western option lies somewhere between the Sandhills and Eastern options in terms of social environment, since the southern part of the route confines severance to the rail corridor. Both the Western and Sandhills options offer the opportunity for improved connections across SH1 through Waikanae due to reduced traffic through the town when a new expressway is built.

The Eastern Option

- 57 The Eastern option is estimated to cost \$610M to \$930M. It requires considerable property purchase as well as new service roads in some locations. It would also require the construction of two new bridges over the Waikanae River: a local bridge on the WLR designation and a new expressway bridge. Two new sections of local road would also be required, between Poplar Avenue / 200 Main Road and Kapiti Road and between Otaihanga Road and Tē Moana Road. The local roading improvements means that this option would have the highest operational cost but also the highest incremental NPV due to the benefits to local traffic.

- 58 The Eastern option requires substantial property acquisition, although the number of houses required is considerably less than the land parcels affected. A summary of the properties required is provided in the table below.

Property Type	Eastern
Total Land Parcels	388
Approximate Houses Required	140
Crown / Council Owned	54
Private Property	333

- 59 It is estimated that the Eastern Option can be completed in the same timescale as the other two options (end 2018) with a construction start on the Expressway in early 2014. Construction on the local road between Te Moana and Otaihangā could start in mid 2010.
- 60 The Eastern Option is consistent with KCDC's Urban Management Strategy and is relatively consistent with its growth plans in Paraparaumu and Waikanae (including town centres). The provision of new local roads will provide a high level of access to new, planned development areas in Paraparaumu and Waikanae.
- 61 Under the Eastern Option, benefits to the transport network can be delivered first by providing the consented second crossing of the Waikanae River. This will relieve congestion on SH1 while the expressway proposal is being developed.
- 62 The Eastern option provides the best route security due to the provision of two new road bridges.
- 63 The Eastern option performs better in terms of community cohesion since severance is confined to the rail corridor and new local infrastructure is provided, however, the impact on Waikanae Town Centre will require modifications to the access for town centre retail which currently fronts onto SH1. The shop frontage would be retained with a service road but there would be no access to the shops off SH1 or parking provision at the front of the shops. The access arrangements to the Coastlands shopping centre may also need to be altered since direct access off SH1 is not currently included in this concept (left-in, left-out access would be investigated under this option).
- 64 By following the existing rail line, the Eastern Option confines severance and impacts on urban form to that corridor.

- 65 The Eastern option is superior to the Western and Sandhills options in terms of physical impacts on landscapes and sites of cultural significance because its impacts are limited to an already modified rail corridor.
- 66 No Maori land is required for the Eastern option. The local link across the Waikanae River passes through wahi tapu land and adjacent to an urupa. KCDC has already secured agreement with Takemore Trust to construct the local road.

Alignment with LTMA (and other) objectives

- 67 All three options score high for strategic fit as they make a significant contribution to the RoNS by providing an expressway for SH1. The Sandhills and Western options score low for effectiveness as they are not consistent with accepted local strategies and land use plans. The Eastern option scores high for effectiveness as it improves integration with land use and other transport modes.
- 68 The Western and Sandhills options both directly conflict with KCDC's planning aspirations for the district through the utilisation of the WLR corridor which has been earmarked for a local road and around which planning for the district has been based. The Eastern option does not directly conflict with KCDC's planning aspirations.
- 69 All options have BCRs predicted to be below 1. The Sandhills option marginally has the best BCR at 0.6 - 1.0 but the differences between the options are not significant. The BCR calculation is however a crude technique which does not fully capture all benefits.
- 70 No consideration of fuel prices has been undertaken during the strategy study.

Funding

- 71 In November 2009 the Board approved funding of \$386.2m for the investigation, design and property purchase phases of the Wellington Northern Corridor RONS package. This included \$92m for the MacKays Crossing to Peka Peka element and \$34.4m for the Peka Peka to Otaki element.
- 72 These allocations only provide for state highway expenditure - no provision was made for any local roads that are identified as critical to the operation of the RoNS.
- 73 It is noted that both the Western and Eastern options proposed between MacKays and Peka Peka include upgraded and or new local roads as part of the proposed solution, with significant lengths of local road proposed. In these two options, the proposed sections of new local road closely follow the WLR for which NZTA had previously committed to fund 90% of stage 1 (i.e. the section between Kapiti Rd and Te Moana Rd).
- 74 Funding for any local roads considered necessary to support the operation of the new expressway (regardless of which option is selected) is likely to be a key issue for Kapiti Coast District Council. This reflects the significance of legacy funding decisions (i.e. the previous commitment to a 90% FAR) and affordability issues that are likely to be raised by KCDC. For these reasons it is recommended the Board consider funding options for local roads and associated cost implications as part of the process of identifying a preferred option for the Kapiti expressway.

Summary of Key Points

- 75 All three options fulfil the high-level RoNS objectives from an inter-regional perspective and they can be completed in approximately the same time period.
- 76 The differentiating factors which set the options apart are:
- How well they integrate into the local planning framework
 - The Regional transport benefits they deliver
 - How well they minimise adverse environmental and social impacts
 - When they start to deliver transport benefits (both Regionally and Nationally)
 - Risk of delivery fatal flaws
 - Cost
- 77 Subject to any other areas that the Board wish to hear detail on, it is expected that the workshop will focus on the above issues.

In-Committee Status

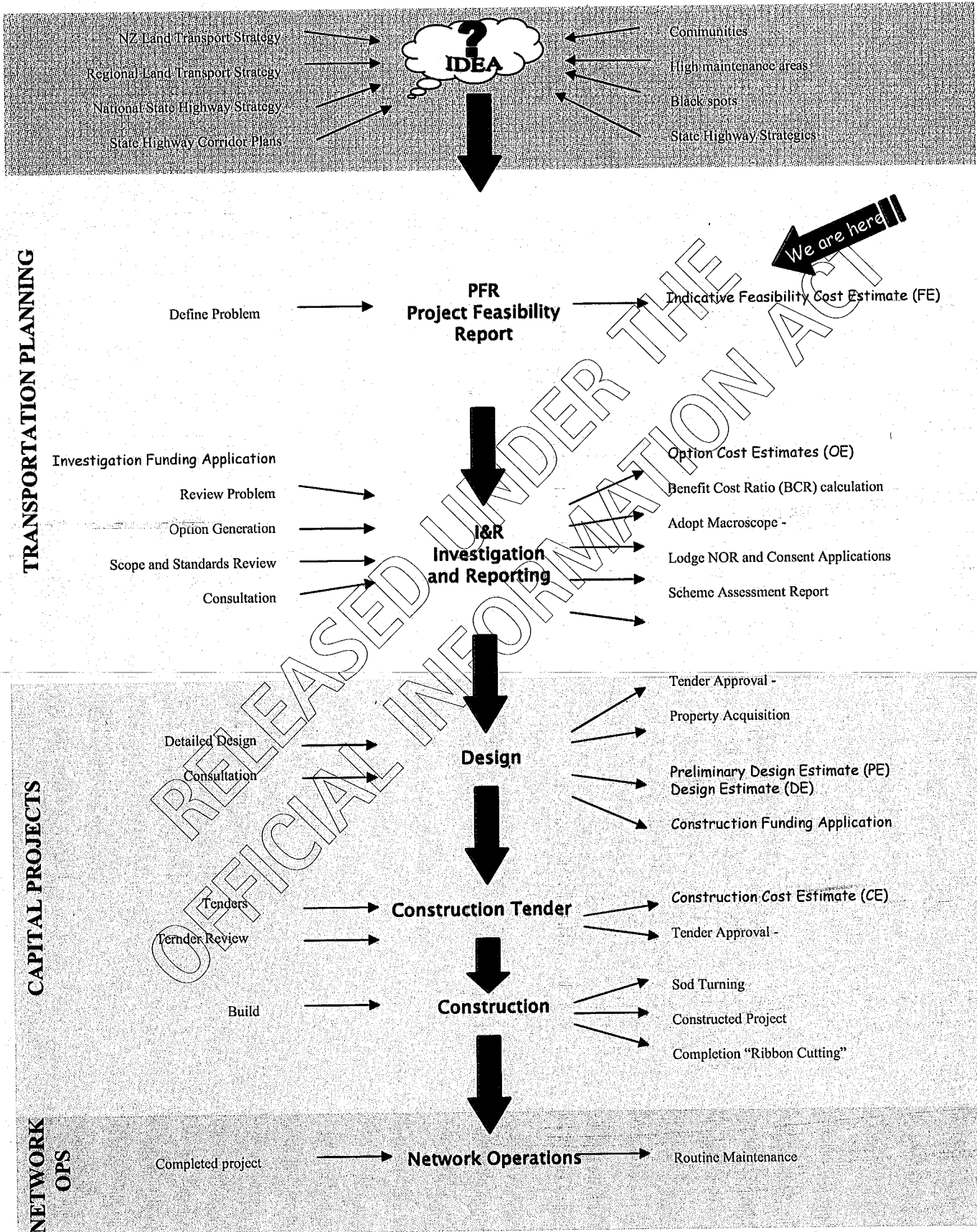
- 78 Board Paper 09/12/0310 is in Committee to allow the Board free and frank discussion of the issues. We recommend Board paper 09/12/0310 remains in committee until such time as the public has been informed about the decision regarding SH1 Kapiti Coast Expressway Alignment.

Attachments

- 79 There are 8 attachments to this paper¹

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- ¹ Attachment 1: Project Development (Flow Chart)
Attachment 2a: Expressway Options – Western (Concept Map)
Attachment 2b: Expressway Options – Eastern (Concept Map)
Attachment 2c: Expressway Options – Sandhills (Concept Map)
Attachment 3a: Option Evaluation (Summary)
Attachment 3b: Option Evaluation (Chart)
Attachment 4: Indicative Summary Programmes
Attachment 5: Urban Design Panel Report

PROJECT DEVELOPMENT FLOW CHART



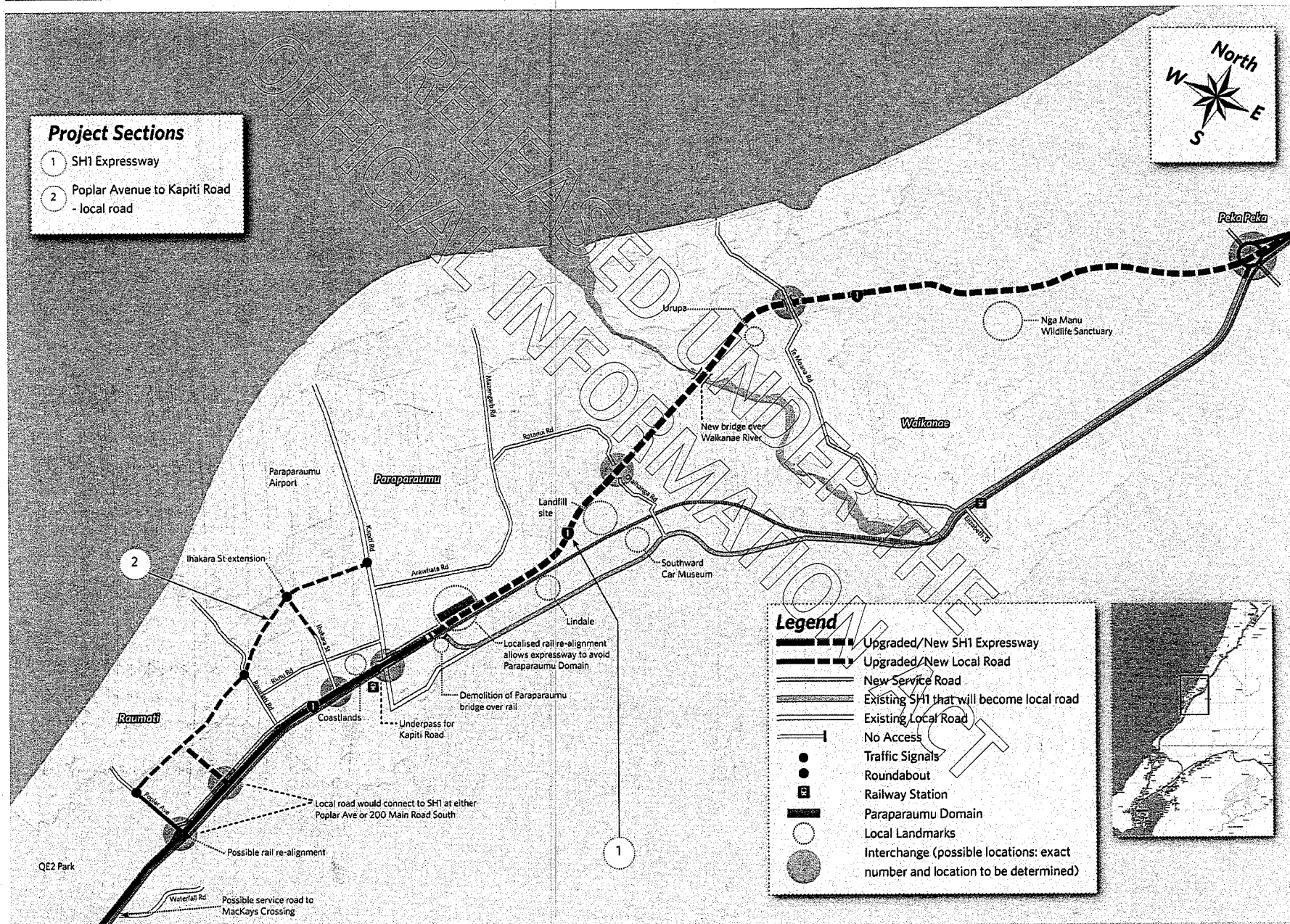


MacKays Crossing to Peka Peka - Concept Map

Western Option: SH1 Expressway avoiding Waikanae town centre with local supporting roads

Project Sections

- 1 SH1 Expressway
- 2 Poplar Avenue to Kapiti Road - local road



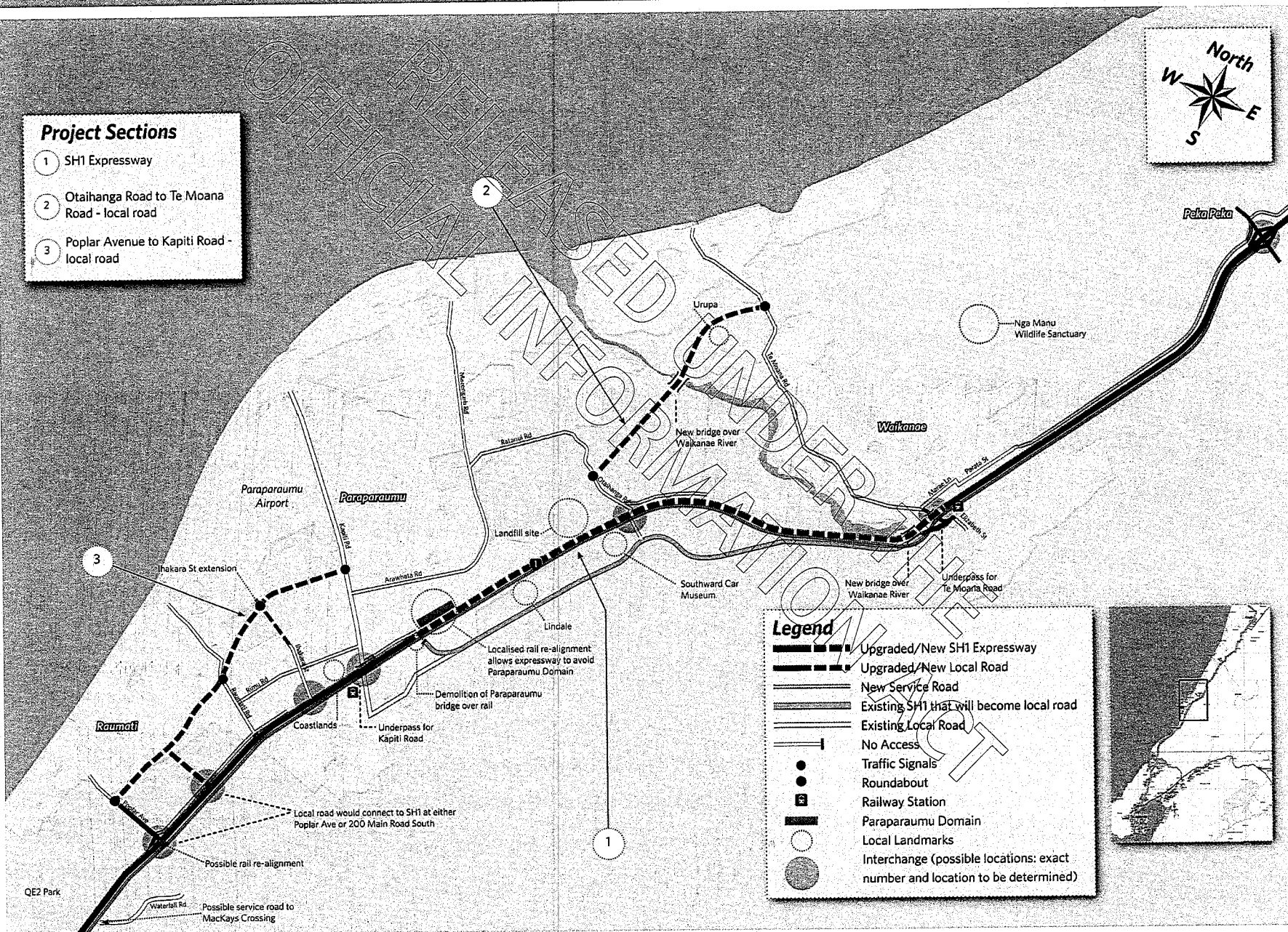


MacKays Crossing to Peka Peka - Concept Map

Eastern Option: SH1 Expressway following rail corridor with local supporting roads

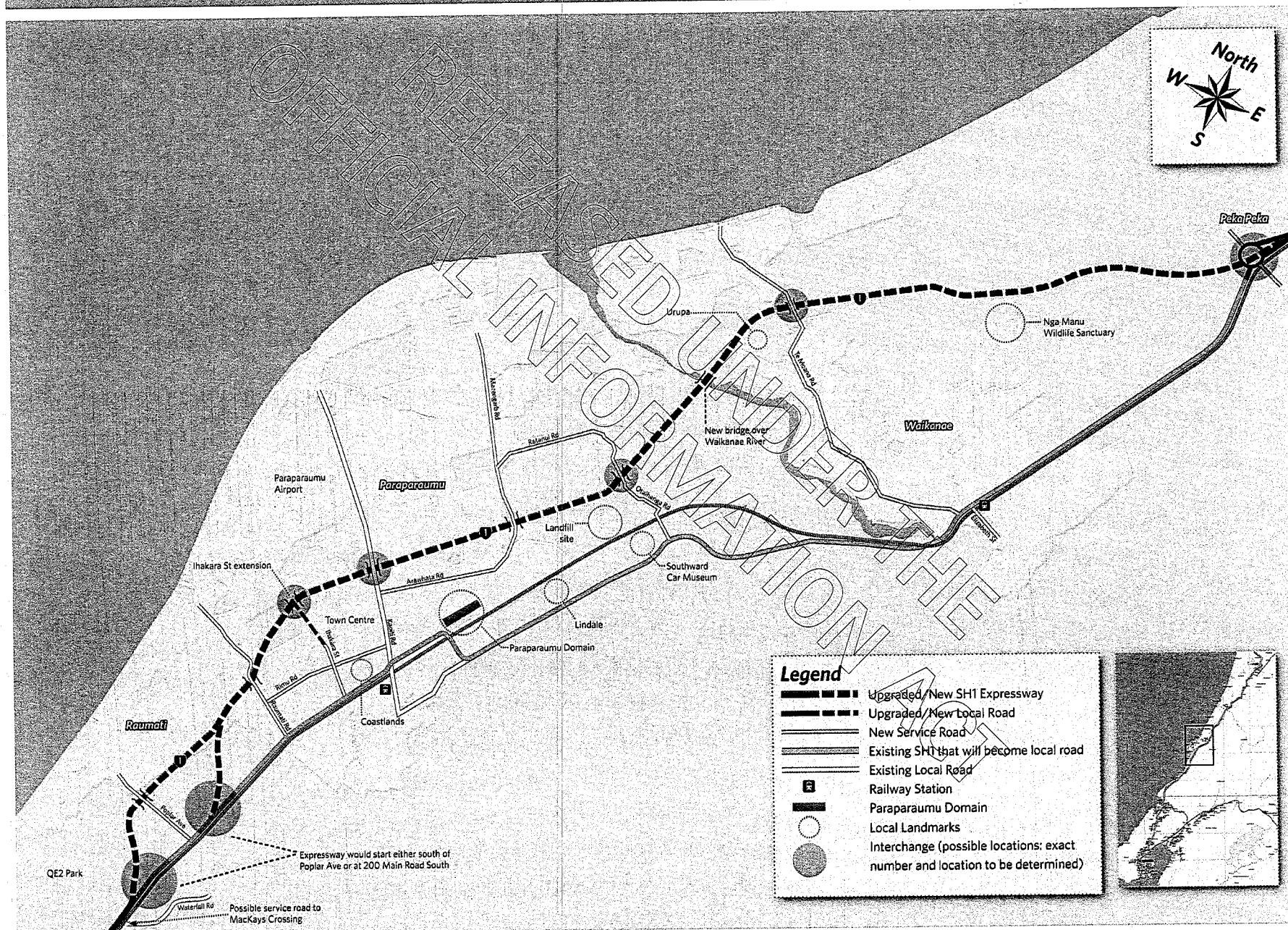
Project Sections

- 1 SH1 Expressway
- 2 Otaihanga Road to Te Moana Road - local road
- 3 Poplar Avenue to Kapiti Road - local road



MacKays Crossing to Peka Peka - Concept Map

WLR Option: SH1 Expressway following the Western Link Road Corridor



Objective	Sub-Criteria	Contribution to Criteria		
		Sandhills	Western	Eastern
Assists Economic Development	Construction Cost	X Least expensive with a construction cost of \$380 to \$500M	XX Second highest construction cost of \$410 to \$680M (inc local road elements)	XX Highest construction cost at \$610 to \$930M (inc local road elements)
	Property Cost	X Property largely already purchased. 20-50 land parcels affected	XX 200-300 land parcels affected	XX 300-400 land parcels affected
	Operation Cost	X Increase in operational cost due to increase in road length	X Increase in operational cost due to increase in road length	XX Increase in operational cost due to increase in road length. More structures and local roads included in this option
	Incremental NPV	✓ Benefits to SH1 traffic.	✓ Benefits to SH1 traffic. Minor benefit to local traffic	XX Benefits to SH1 traffic. Significant benefits also to local traffic
	Security of Transport System	✓ Second crossing of Waikanae River provides additional security.	✓ Second crossing of Waikanae River provides additional security.	✓ Two additional crossings of Waikanae River provides additional security.
	Contributing to high quality economic development	0 Provides new infrastructure to facilitate economic development. Adverse impacts on Waikanae North and Paraparaumu Town Centre plans	✓ Provides new infrastructure to facilitate economic development. Adverse impacts on planned Waikanae North	✓ Provides new infrastructure to facilitate economic development. Facilitates planned development by providing local arterial.
	Contribution to the RONS Strategy	✓ Expressway provided for SH1, but would have a long lead time before commencement.	✓ Expressway provided for SH1, but would have a long lead time before commencement. Some local road could be constructed in interim	✓ Expressway provided for SH1. Quick wins can be achieved through the provision of consented local road across Waikanae River to relieve pressure on SH1
	RMA process timeframes	XX Consenting is very risky. Could prove to be fatally flawed because of cultural impacts to Urupa near Waikanae River and environmental impacts to QEII wetlands north of Waikanae.	XX Consenting is very risky. Could prove to be fatally flawed because of cultural impacts to Urupa near Waikanae River and environmental impacts to QEII wetlands north of Waikanae. Many properties affected.	XX Consenting very risky. Many properties affected. Less cultural and environmental impact than Sandhills and Western options.
	Property Purchase Risk	0 Majority of property is already purchased however there are still 20-50 affected properties that would require acquisition.	XX Significant property purchase required (200-300 properties)	XX Significant property purchase required (300-400 properties)
	Staging	XX Staging difficult as there are no "quick wins." Congestion on SH1 will continue to build until Expressway is opened.	✓ Some staging possible through local road provision in southern and Whiti Expressway is design and consented, however traffic congestion into Waikanae continues to build until Expressway is opened.	XX Can be staged through construction of local roads first while Expressway is designed and consented.
	Consenting Risk	XX Highly likely to be objected to by Takamora Trust, affected landowners, schools and KCDC making consenting very difficult.	XX Highly likely to be objected to by Takamora Trust, many affected landowners, and KCDC making consenting very difficult.	XX Highly likely to be objected to by many affected landowners.
	Crash Rates	✓ Significant safety improvements on SH1 likely due to removal of risk of high severity head on and right-turn-against crashes. Detailed analysis has not been undertaken.	✓ Significant safety improvements on SH1 likely due to removal of risk of high severity head on and right-turn-against crashes. Detailed analysis has not been undertaken.	✓ Significant safety improvements on SH1 likely due to removal of risk of high severity head on and right-turn-against crashes. Additional local roads may result in higher local crash rates. Detailed analysis has not been undertaken.
Assists Safety and Personal Security	Personal Security	0 Insufficient work carried out. Not possible to provide meaningful comment on the differences between schemes.	0 Insufficient work carried out. Not possible to provide meaningful comment on the differences between schemes.	0 Insufficient work carried out. Not possible to provide meaningful comment on the differences between schemes.
	Urban amenity	XX Would adversely impact on the planned future town centre of Paraparaumu and high quality residential development in Waikanae.	XX Would impact on Paraparaumu businesses but would not affect future development proposals for Paraparaumu Town Centre. Would adversely impact planned high quality residential development in Waikanae.	XX Would have an impact on Waikanae Town Centre and Paraparaumu businesses on the existing SH1 but would not affect development proposals for Paraparaumu Town Centre or Waikanae.
	Integration with Other Transport Modes	0 No new local roads for improved bus routes. SH1 moved farther from rail stations resulting in less integration between modes.	✓ New local road links in Raumati will facilitate some improved bus links. SH1 can integrate with rail in Paraparaumu but is moved farther from Waikanae rail station, resulting in less integration between modes.	✓ New local arterial allows significantly improved bus links between Waikanae, Paraparaumu and Raumati. SH1 remains close to rail stations facilitating better integration between modes.
Improves Access and Mobility	Improvements to Access and Mobility with the provision of the facility	✓ New expressway significantly improves mobility for through traffic. Old SH1 will be an improved environment for local vehicular trips, walking and cycling. Good potential for parallel walking / cycling routes. Additional interchanges on expressway may need to be provided to facilitate access to urban areas.	✓ New expressway significantly improves mobility for through traffic. Old SH1 will be an improved environment for local vehicular trips, walking and cycling. Good potential for parallel walking / cycling routes.	✓ New expressway significantly improves mobility for through traffic. Old SH1 will be an improved environment for local vehicular trips, walking and cycling. Good potential for parallel walking / cycling routes. New local arterial significantly improves access and mobility for local trips and new development opportunities.
	Improvements to Access and Mobility beyond the facility (e.g. pedestrian / cycle networks included in the transport package)	0 No improvements beyond facility.	0 Limited new local roads mean improved choice of North-south routes for pedestrians and cyclists.	✓ New local roads mean improved choice of North-south routes for pedestrians and cyclists.
	Connectivity linkages and connectivity	XX No new local linkages and would prevent the provision of future linkages across the expressway	0 Some new linkages in Raumati but would prevent the provision of future linkages across the expressway north of Waikanae.	✓ New link across Waikanae River and new roads in Raumati. Some reduced permeability of SH1 in Waikanae town centre.
	Air Emissions	0 At this stage an air quality assessment has not been carried out and insufficient data is available to judge impacts of options.	0 At this stage an air quality assessment has not been carried out and insufficient data is available to judge impacts of options.	0 At this stage an air quality assessment has not been carried out and insufficient data is available to judge impacts of options.
Protects and Promotes Public Health	Noise Emissions	0 At this stage a noise assessment has not been carried out and insufficient data is available to judge impacts of options.	0 At this stage a noise assessment has not been carried out and insufficient data is available to judge impacts of options.	0 At this stage a noise assessment has not been carried out and insufficient data is available to judge impacts of options.
	Community services and facilities	XX Would place the Expressway next to two schools in Raumati. Would increase severance between coastal communities and services in the town centres.	0 Potential to benefit facilities in Paraparaumu and Raumati but would increase severance between Waikanae Beach and Waikanae township.	✓ Potential to benefit facilities in Paraparaumu and Raumati. Local arterial provides better access to community facilities for local trips.
	Recreation and reserve areas	XX Could impact on QE Park and wetlands north-west of Waikanae and pass close to Nga Manu nature reserve.	XX Could impact on wetlands north-west of Waikanae and pass close to Nga Manu nature reserve.	XX Could impact on the Paraparaumu Domain.
	Opportunities for Travel Demand Management	0 It is possible to use tolling both as a means of funding as a TDM tool.	0 It is possible to use tolling both as a means of funding as a TDM tool.	0 It is possible to use tolling both as a means of funding as a TDM tool.
Ensures Environmental Sustainability	Land stability / geotechnical stability	X All routes go through areas of peat and soft ground.	X All routes go through areas of peat and soft ground.	X All routes go through areas of peat and soft ground.
	Coastal Marine Area and receiving environment	0 Detailed assessment necessary to determine impacts	0 Detailed assessment necessary to determine impacts	0 Detailed assessment necessary to determine impacts
	Groundwater	0 Detailed assessment necessary to determine impacts	0 Detailed assessment necessary to determine impacts	0 Detailed assessment necessary to determine impacts
	Natural habitats and fauna – coastal, terrestrial and streams	0 Detailed assessment necessary to determine impacts	0 Detailed assessment necessary to determine impacts	0 Detailed assessment necessary to determine impacts
	Landscapes	XX Would significantly impact dunes environment, and wetlands north west of Waikanae.	X Provision of local road along WLR route would alter dunes environment in Raumati. Expressway would affect wetlands north west of Waikanae	XX Expressway follows an already heavily modified transport corridor. Local road elements along WLR route will alter dunes environment.
	Sites of cultural significance	XX Whiti tapu area to north west of Waikanae directly affected. Potential to affect battleground sites.	XX Whiti tapu area to north west of Waikanae directly affected. Could impact on memorial gates in Domain.	XX Could impact on memorial gates in Domain and affect historic processional route through Waikanae.
	Population Displacement	0 Property largely already purchased. 20-50 land parcels affected but potentially no private houses required.	XX Significant property purchase required (200-300 properties) but of these approximately only 100 are private houses.	XX Significant property purchase required (300-400 properties) but of these approximately only around 150 are private houses.

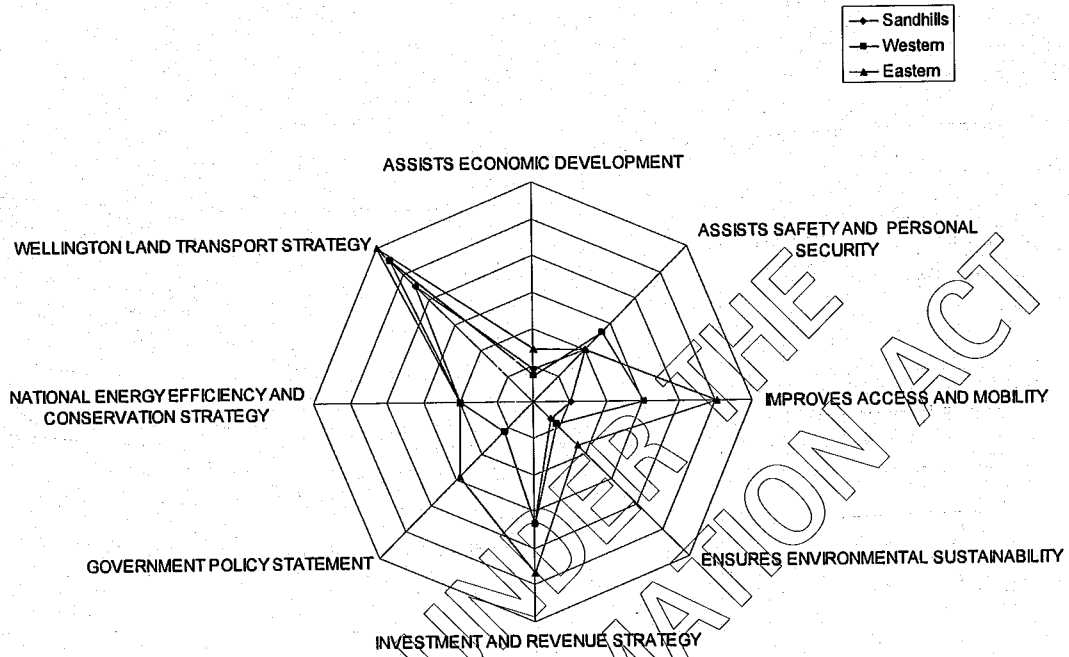
Investment and Revenue Strategy	Strategic Fit	✓✓ (High) Expressway contributes to RONS strategy.	✓✓ (High) Expressway contributes to RONS strategy.	✓✓ (High) Expressway contributes to RONS strategy.
	Effectiveness	0 (Low). Is not consistent with accepted strategies and land use plans	0 (Low). Is not consistent with accepted strategies and land use plans	✓✓ (High). Meets medium and low criteria and also improves integration with land use and other transport modes and supports networks from a national perspective.
	Economic Efficiency	0 (Low). BCR 0.6 to 1.0	0 (Low). BCR 0.5 to 0.8	0 (Low). BCR 0.4 to 0.6
Government Policy Statement	Contribute to Economic Growth and Productivity	✓ Expressway expected to facilitate economic growth by reducing travel times. Location of interchanges will affect access to new development areas.	✓ Expressway expected to facilitate economic growth by reducing travel times. Location of interchanges will affect access to new development areas.	✓✓ Expressway expected to facilitate economic growth by reducing travel times. Location of interchanges will affect access to new development areas. New local arterial will contribute to regional growth plans and higher-quality development.
	Consider Networks from a National Perspective	✓✓ Expressway will contribute to better connections to Wellington and Palmerston North, reducing journey times and congestion.	✓✓ Expressway will contribute to better connections to Wellington and Palmerston North, reducing journey times and congestion.	✓✓ Expressway will contribute to better connections to Wellington and Palmerston North, reducing journey times and congestion.
	Achieving Value for Money	X BCR 0.6 to 1.0	X BCR 0.5 to 0.8	X BCR 0.4 to 0.6
	Encouraging Integrated Planning	XX Expressway plans directly conflict with KCDC's plans for Kapiti and do not provide for local transport links.	XX Expressway plans directly conflict with KCDC's plans for Kapiti and provide for only limited local transport links.	✓✓ Expressway plans facilitates KCDC's aspirations for Paraparaumu town centre and Waikanae North. Allow for local arterial construction which is consistent with regional growth plans.
	Making best use of existing networks and infrastructure	X Requires construction of new expressway for state highway traffic however local traffic continues to use existing infrastructure.	X Requires construction of new expressway for state highway traffic. Additional local infrastructure between Paraparaumu and Waikanae.	XX Requires construction of new expressway for state highway traffic. Significant local road improvements also required.
	Implementing and fostering a co-ordinated approach	XX Expressway plans directly conflict with KCDC's plans for Kapiti.	XX Expressway plans directly conflict with KCDC's plans for Kapiti.	0 Expressway plans do not directly conflict with KCDC's aspirations.
	Considering the impact of volatile fuel prices	-- Option assessment has not considered different fuel prices.	-- Option assessment has not considered different fuel prices.	X Option assessment has not considered different fuel prices.
National Energy Efficiency and Conservation Strategy	Managing demand for travel	X Likely to generate an increase in car-based travel.	X Likely to generate an increase in car-based travel.	X Likely to generate an increase in car-based travel.
	More efficient transport modes	✓ Significant improvements to state highway traffic. No improvements to local traffic. Not likely to encourage efficiency of PT.	✓ Significant improvements to state highway traffic. Some improvements to local traffic between Paraparaumu and Raumati. May encourage efficiency in bus services between Paraparaumu and Raumati.	✓ Significant improvement to state highway and local traffic. Likely to encourage efficiency of bus services between Waikanae, Paraparaumu and Raumati.
Wellington Land Transport Strategy	A safer, more reliable road and rail corridor	✓✓ Expressway will contribute to better connections to Wellington and Palmerston North, reducing journey times and congestion and reducing accident risk on SH1.	✓✓ Expressway will contribute to better connections to Wellington and Palmerston North, reducing journey times and congestion and reducing accident risk on SH1.	✓✓ Expressway will contribute to better connections to Wellington and Palmerston North, reducing journey times and congestion and reducing accident risk on SH1.
	User expectations for a consistent regional corridor are met	✓✓ Expressway contributes to RONS strategy which is a consistent strategy for an expressway between north of Levin and Wellington Airport.	✓✓ Expressway contributes to RONS strategy which is a consistent strategy for an expressway between north of Levin and Wellington Airport.	✓✓ Expressway contributes to RONS strategy which is a consistent strategy for an expressway between north of Levin and Wellington Airport.
	Reduced congestion in parts of the corridor	✓✓ Congestion will be alleviated at key pinch points including Kapiti Road Traffic Lights and Waikanae Traffic Lights.	✓✓ Congestion will be alleviated at key pinch points including Kapiti Road Traffic Lights and Waikanae Traffic Lights.	✓✓ Congestion will be alleviated at key pinch points including Kapiti Road Traffic Lights and Waikanae Traffic Lights.
	Balanced investment in road and passenger transport, along with Travel Demand Management	X Investment is focused on building Expressway for SH1.	✓ As well as expressway provision, local road will facilitate improved bus links between Raumati and Paraparaumu.	✓✓ As well as expressway provision, provides additional local roads which will facilitate local bus services between Waikanae, Paraparaumu and Raumati. Also provides good links to the railway network.

Key

Strong Positive Contribution to Objective
 Positive Contribution to Objective
 No significant Change in Contribution to Objective
 Negative Contribution to Objective
 Strong Negative Contribution to Objective
 Not assessed or insufficient information at this time

RELEASED
OFFICIAL

Contribution to Criteria



RELEASED UNDER THE
OFFICIAL INFORMATION ACT

SH1 Expressway - Mackays Crossing to Peka Peka


 NZ TRANSPORT AGENCY
WAKA KOTAHĪ

TASK filter: All Activities

Activity Name

9	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	20
Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

SH1 Expressway - Mackays Crossing to Peka Peka

Sandhills Option

Strategic Study

Scheme Assessment

Detailed Design

Consenting & NOR

Construction

Property Purchase

Western Option

Expressway

Strategic Study

Scheme Assessment

Detailed Design

Consenting & NOR

Construction

Property Purchase

Local Roads

Construction of WLR Stage 3 (Poplar to Raumati)

Eastern Option

Expressway

Strategic Study

Scheme Assessment

Detailed Design

Consenting & NOR

Construction

Property Purchase

Local Roads

Construction of WLR Stage 1 (Te Moana - Otaihanga, Kapiti - Raumati)

Construction of WLR Stage 3 (Poplar to Raumati)



Actual Work



Construction



Remaining Work

Urban Design Review Panel

3 December 2009

The Panel was requested by the NZTA to review 3 options being considered for the Kapiti Coast Highway. A key task of the Panel was to give a view on which option is expected to result in Kapiti being a good place to live in 50 years time.

Preferred option: Eastern Option (expressway along railway corridor and the concurrent construction of a local road along WLR alignment).

Reasons

1. Best district wide structure:
 - centrally located north/south arterial (along the WLR alignment)
 - multiplicity of routes
 - greatest capacity and flexibility
 - consistency with historic transport pattern.
2. Least Severance due to co-location of road/rail and placement of strategic corridor near eastern boundary of urban area
3. Most consistent with KCDC plans for future development in the area
4. Fewest environmental impacts – high speed through traffic is concentrated in areas which are already somewhat tolerant of adverse effects
5. Better deliverability – allows staging (including early start to local road) and more lead time for complex inter-agency planning of the expressway

Support for the eastern option is contingent upon the project being based on a network wide approach to improving both local and through movement and includes:

- a. Construction of whole of WLR as a local route (this is considered essential for delivering full benefits to strategic and local elements of the network)
- b. Detailed urban and infrastructure design to mitigate impacts at existing town centres
- c. Reconsideration of existing role and design proposition for WLR to encourage multi-modal use, improved urban edge conditions and permit local activity centres where needed along it.
- d. Design led decision-making within a single inter-agency process to effect the best place-based outcomes

Risks

- i. Partial implementation of the network
- ii. Difficulty of property acquisition
- iii. Mitigation at town centres may increase costs

Option 2: Sandhills Motorway

Pros

1. Allows for the repair of town centres at Paraparaumu and Waikanae including improved east-west connections and re-orientation of development towards the local north-south arterial (existing SH1)
2. Better connections to bus/rail interchanges
3. Designated route largely in public ownership

Cons

1. Fundamental structural problem – local north-south arterial is peripheral to urban development while the expressway cuts through heart of the district
2. Duplication of lines of severance – separate impermeable road and rail corridors
3. Greatest environmental impact, including visual, disturbance of natural landform and generation of noise in currently quiet locations
4. Delayed delivery of benefits – all or nothing approach
5. Reduced flexibility for future transportation network.

Option 3 – Western Option (Hybrid)

Pros

1. Reduced severance at Waikanae town centre

Cons

1. Fails to deliver robust district-wide structure
2. Lack of clarity/legibility e.g. no single continuous local north-south arterial
3. Severance in northern part of district
4. Difficulty of property acquisition

Other comments

1. In all three options, consideration of lower speed limit is suggested as this could simplify geometry, reduce footprint, reduce noise impacts and thereby deliver a better outcome. A lower speed would not materially affect travel time though the district.
2. The group has not compared the three options with any other alternatives. However, the group believes that consideration should be given to having two lower-speed north-south routes which each carry local and strategic traffic. By dispersing the load in this manner, it may be possible to avoid grade-separated

intersections, improve local connectivity, and provide a more multi-modal facility.

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