

Glenda Shaw

From: Ernst Zollner
Sent: Friday, 27 November 2009 10:04 a.m.
To: Rob Whight
Cc: Colin Crampton; Jacque Bell; Eric Whitfield; Deborah Hume
Subject: Kapiti urban design peer review panel

Importance: High

I refer to Colin's memo re the above

Ideal time slot

- A briefing on Wednesday afternoon 2 December
- An all-day workshop on Thursday 3 December

Willing but not available:

- Kobus Mentz or Ian Munro, Urbanism Plus, Auckland

Willing and available (and awaiting further info/details/times):

- Chris McDonald, Senior Lecturer, School of Architecture, VUW
- [REDACTED]
- [REDACTED]

Waiting to hear back (this am) from:

- Prof John Hunt, School of Architecture & Planning, University of Auckland
- Gerald Blunt, Chief Urban Designer, Wellington City Council
- Marc Bailey, Urban Design Principal, Boffa Miskell

We should also invite:

- Gael Ferguson, Kapiti Coast District Council

Contact details

Gerald Blunt
Chief Urban Designer, Wellington City Council

[REDACTED]
[REDACTED]
[REDACTED]

Ernst Zollner
GM Strategy & Performance
DDI [REDACTED]

Glenda Shaw

From: Lisa Rossiter
Sent: Friday, 27 November 2009 11:15 a.m.
To: Dave Gennard; David Silvester
Subject: RE: Kapiti paper - evaluation

Hi Dave
My quick thoughts:

- a) spider diagrams show "network flexibility". Is this referring to the road network or the transport network (ie. SH, local roads and rail)? I think you need to be specific, and personally I think it should be the transport network so you are encompassing road and rail integration (or not as the case may be!)
- b) I find it difficult to distinguish between the 'social environment' and 'physical environment' categories, so I suggest it would be a good idea to include explanatory statements in the key about what each of the five categories covers means.
- c) the different numbers also need some explanation ie. -3 to 3 and 0 - 20.
- d) I note the construction cost comment is still saying WLR is cheapest... are we sure, given our recent discussion about the need for a revised route and revised costings post-consultation?
- e) safety text needs consideration of all transport users, not just motor vehicles.
- f) as discussed, I really think we should be using the GPS short-medium impacts on page 11 of the GPS, as these are what the Minister usually refers to. I understand why the team has selected those on page 14 instead, as those are designed to influence planning and evaluation processes. The best solution is probably to add the seven impacts from page 11 to the existing list. I know it makes it a bit long, but that way we've covered both bases.
- g) good to see consideration of the Wellington Land Transport Strategy. Alongside that we should also include consideration of the Wellington growth strategy (or nearest equivalent), the regional policy statement and the Kapiti plans - LTCCP and district plan.

Just to clarify who is doing what and avoid any surprises, Ernst indicated to me yesterday that Colin was arranging the three peer reviewers... not sure if that means 'Dave G' or not, but might pay to check! I would suggest at this late hour that we could consider two external peer reviewers and one internal peer reviewer (Jacque Bell or Dougal List).

Regards
Lisa

From: Dave Gennard
Sent: Thursday, 26 November 2009 5:55 p.m.
To: Lisa Rossiter; David Silvester
Subject: FW: Kapiti paper - evaluation

Hi Lisa and David,

This is where we have got to so far. We are progressing this for the Board paper. However, as I understand it now that an independent team will be reviewing the information between now and the Board consisting of three people - one of which may be Kobus Mentz.

Your feedback on this would be very much appreciated.

Regards

Dave G

From: Eric Whitfield
Sent: Thursday, 26 November 2009 3:15 p.m.
To: Dave Gennard
Subject: Kapiti paper - evaluation

Hi Dave,

Do you want to review the next draft of this assessment? Go to the last tab with the ticks and crosses. I still think the GPS area needs more thinking which I'll work on in the meantime. I'm with the Board all day tomorrow but will catch up soon.

Cheers,

Eric Whitfield
Transport Planning Manager

New Zealand Transport Agency
PSIS House, Level 9
20 Ballance Street
PO Box 5084 Lambton Quay
T 64 4 894 5200
F 64 4 894 3305
[REDACTED]
[REDACTED]

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David Silvester

From: Lisa Rossiter
Sent: Friday, 27 November 2009 11:15 a.m.
To: Dave Gennard; David Silvester
Subject: RE: Kapiti paper - evaluation

Hi Dave

My quick thoughts:

- a) spider diagrams show "network flexibility". Is this referring to the road network or the transport network (ie. SH, local roads and rail)? I think you need to be specific, and personally I think it should be the transport network so you are encompassing road and rail integration (or not as the case may be!) *Need better weighting*
- b) I find it difficult to distinguish between the 'social environment' and 'physical environment' categories, so I suggest it would be a good idea to include explanatory statements in the key about what each of the five categories covers means.
- c) the different numbers also need some explanation ie. -3 to 3 and 0 - 20.
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Eric Whitfield
Transport Planning Manager

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DDI [REDACTED]
[REDACTED]

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Glenda Shaw

From: Tyler Ross
Sent: Friday, 27 November 2009 12:05 p.m.
To: Dave Gennard
Subject: RE: Kapiti evaluation framework - comments please.
Attachments: radar diagrams v2.xls

Dave,

my comments are in green.

Tyler

Tyler Ross
Transport Planner

DDI [REDACTED]

E [REDACTED]

Please consider the environment before printing this email.

From: Dave Gennard
Sent: Friday, 27 November 2009 11:35 a.m.
To: Tyler Ross
Subject: Kapiti evaluation framework - comments please.

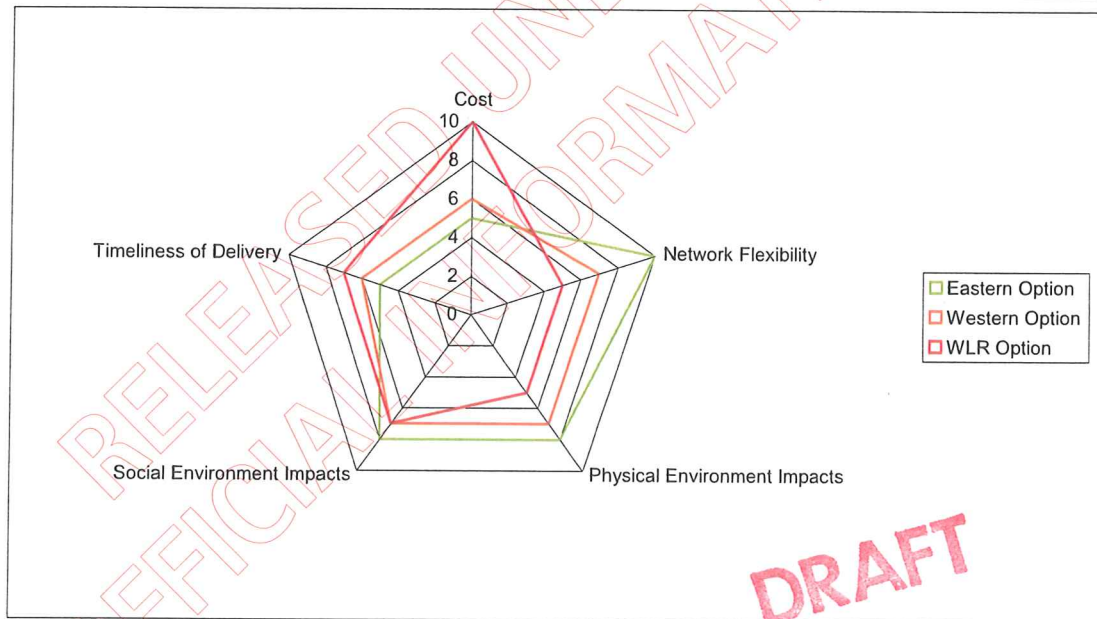
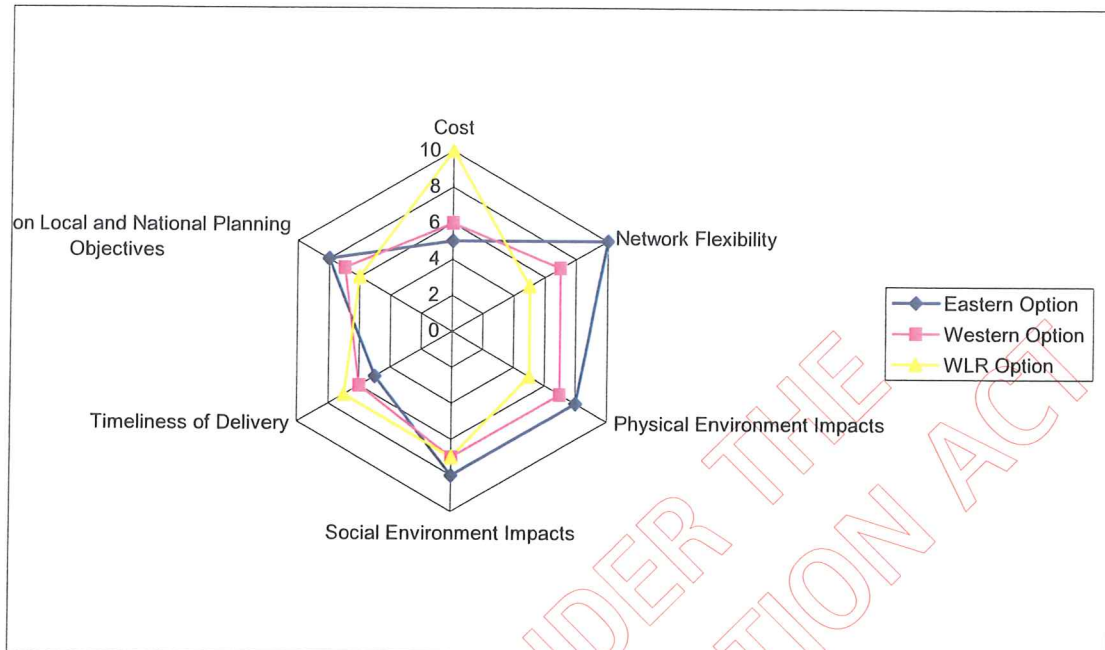
You need to look at the last sheet on the right and just trawl through the headings

cheers

Dave G

Spider Diagrams 1st Draft

Option	Cost	Network Physical	Social En	Timeline	Impact on Local and National Planning Objecti	
Eastern Option	5	10	8	8	5	8
Western Option	6	7	7	7	6	7
WLR Option	10	5	5	7	7	6



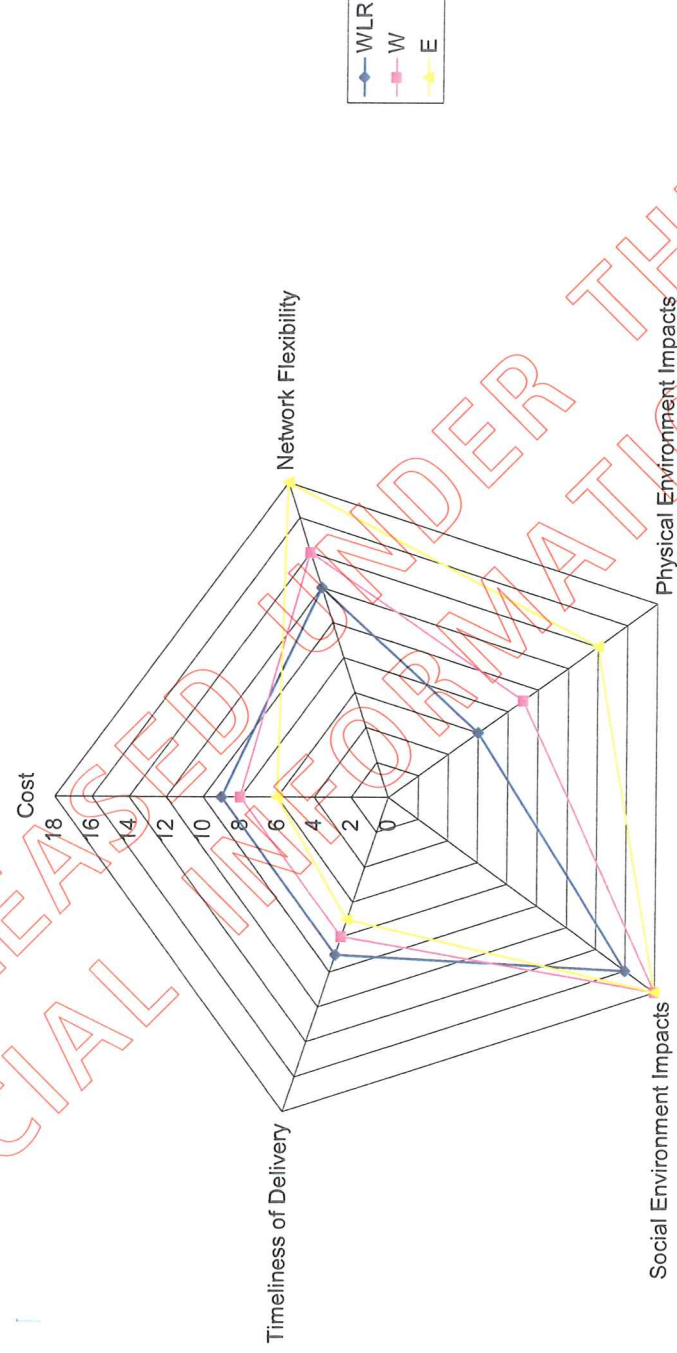
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Category	Factor	Comments	Ranking		
			WLR	W	E
Cost	Construction Cost	Eastern highest, followed by Western and then WLR. Costs considered only for expressways although if local roads are included, the order is the same. NB If expressway only is built, an interchange at Kapiiti Road / Ihakara would be required on the Eastern Option.	3	2	1
	Property Cost	Much greater for Eastern, then Western. WLR is least.	3	2	1
	Operation Cost	Not Assessed in detail. But will include Vehicle Operating Cost, CO2 emission costs, but no road maintenance costs. Similar road lengths but one additional structure for Eastern Option, so Eastern is highest.	2	2	1
	Incremental NPV	Benefits greatest for East because of the local road provision. Therefore Eastern will be highest, followed by Western, then WLR.	1	2	3
	Subtotal		9	8	6
Network Flexibility	Security of Transport System	All comprise an improvement over do nothing. Three bridges not significantly better than two. However, Western and WLR options risk a threat of sea level rise.	1	1	3
	Integration with Other Transport Modes	Eastern is better as new local road through heart of community provides better network for buses and two new local roads across river. Eastern route is also closer to rail stations.	1	2	3
	Improvements to Access and Mobility with the provision of the facility	WLR option and Western option have greater potential for parallel pedestrian / cycle routes.	3	2	1
	Improvements to Access and Mobility beyond the facility (e.g. pedestrian / cycle networks included in the transport network)	New local roads – improved safety for pedestrians and cyclists. Best in Eastern, then Western.	1	2	3
	Future Proofing – capacity for change in use of route	WLR option preserves the ability for 6 lanes. Past of Western route could also be future proofed.	3	2	1
	Opportunities for Travel Demand Management with the option	Possible tolling on all options.	1	1	1
	Land transport integration – supporting regional growth	Providing new infrastructure to unlock development potential. WLR and Western would impact on planned developments at Waikanae North. East has least conflict with land transport integration objectives and with Paraparaumu town centre plans.	1	2	3
	Contribution to the RONS Strategy	WLR can be built first. Higher cost of Eastern could compromise the ability to build the rest of the RONS, however, can get quick wins from local road construction in the Eastern option meaning the ability to defer the larger spends and use saved funds elsewhere in the RONS.	1	2	3
	Subtotal		12	14	18
Physical Environmental Impacts	Land stability / geotechnical stability	Eastern follows a known route with good land stability so scores best. Followed by Western and then WLR.	1	2	3
	Coastal Marine Area and receiving environment	Difference in impacts indiscernable between options.	1	1	1
	Groundwater	WLR and Western options reduce groundwater catchment area and influence the groundwater recharge process.	1	1	3
	Natural habitats and fauna – coastal, terrestrial and streams	Western / WLR worse due to crossing swampy ground west of Waikanae.	1	2	3
	Coastal processes as they contribute to natural character of coastal environment	Difference in impacts indiscernable between options.	1	1	1
	Landscapes	WLR option would destroy Sandhills environment. Both WLR and Western options would affect the natural environment west of Waikanae, and alter a greenfield environment.	1	2	3
	Subtotal		6	9	14
	Sites of cultural significance	Wahi Tapu area west of Waikanae directly impacted by Western and WLR options. Also potential for battleground sites to be impacted by WLR and Western options. Eastern could displace Memorial Gates in Domain and may impact on the historic professional route.	1	2	3
	Community linkages and connectivity	Eastern provides new link across Waikanae River and new road in Raumati but would cause additional severance in Waikanae. WLR would provide no new linkages. Western would provide some new linkages in Raumati.	1	2	3
	Population impacts / displacement	Eastern would cause greatest impact on population and physical displacement. WLR would cause least.	3	2	1
Social Environmental Impacts	Health and wellbeing – air emissions	Eastern would be worst as two new roads across river and route of expressway is closest to homes.	3	2	1
	Health and wellbeing – noise emissions	Potentially WLR would have least impact on residential populations, and Eastern option would be worst as closest to homes.	3	2	1
	Community services and facilities	None of the options destroy community facilities although the environment of them would be affected. WLR is the worst option as the route would be adjacent to schools. Western is the best option, although both Eastern and Western options would have an impact on Coastlands. Eastern would have an impact through proximity to the church and marae in Waikanae.	1	3	2
	Recreation and reserve areas	Eastern could impact on Domain. WLR could impact on QE Park. Both Western and WLR options could impact on Waikanae North.	1	2	3

Urban amenity		Eastern would have an impact on Waikanae Town Centre. Western and Eastern Options both have impacts on Coastlands.		
	Business and economic opportunities	Potential for development around interchanges in all three options. All three would unlock development potential by freeing up roadspace. Redevelopment potential on old SH1 in all options. Eastern is preferred due to the greatest length of local access road.	1	3
		Subtotal	16	18
Timeliness	RMA process timeframes	All options would be called in so no difference between them. NORs to be lodged by 2012.	1	1
	Property Purchase	Eastern option has most property purchase so represents the greatest risk. Would be dealt with by the Environment Court so no control over process. WLR is the lowest risk.	3	2
	Construction Programme	WLR option is best as traffic management is not required and there is less road length to build.	3	2
	Staging	Would be difficult to stage the WLR option. Eastern option would be best as it can be staged through construction of local roads. Western option can also be staged to an extent.	1	2
	Consenting Risk	Western and WLR options are likely to be objected to by Takamōre Trust. However there is no planning blight on WLR or Western options. All options are equally risky.	1	1
		Subtotal	9	8
			9	7

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Option Evaluation Summary



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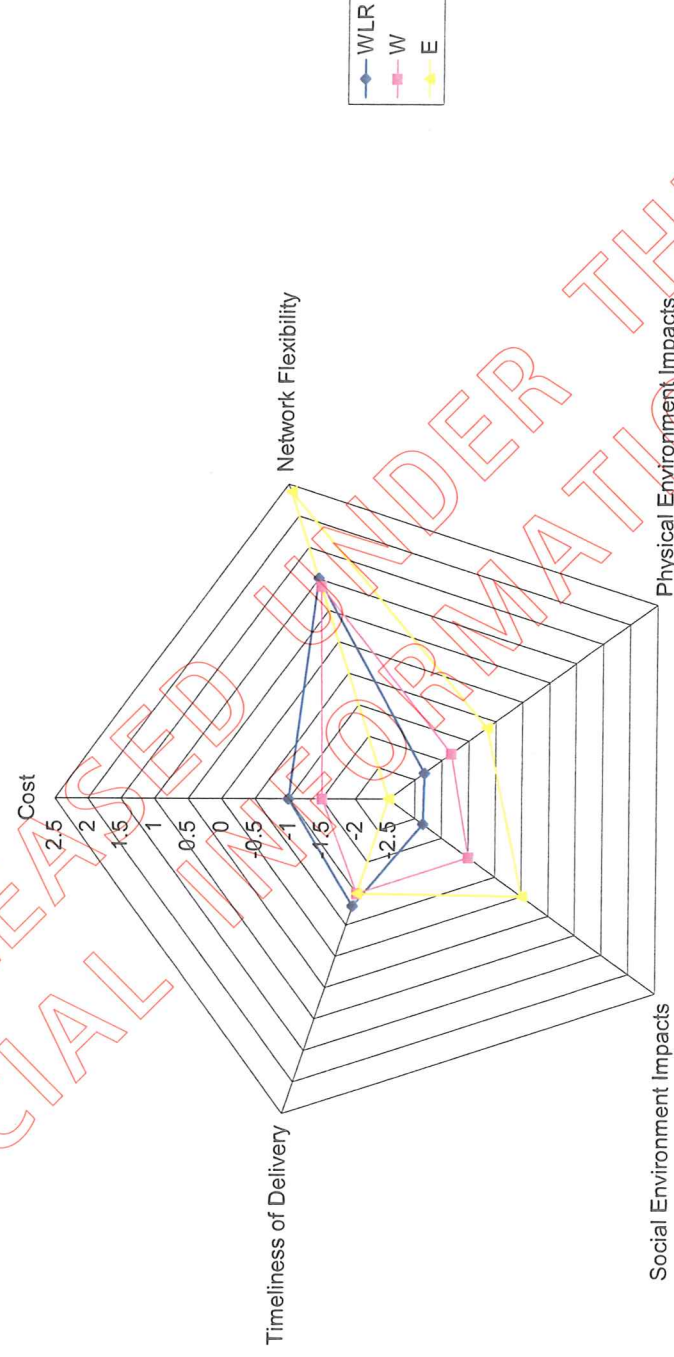
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Category	Factor	Comments	Ranking	
			WLR	E
Cost	Construction Cost	Eastern highest, followed by Western and then WLR. Costs considered only for expressways although if local roads are included, the order is the same. NB if expressway only is built, an interchange at Kapiti Road / Ihakara would be required on the Eastern Option.	-2	-3
	Property Cost	Much greater for Eastern, then Western. WLR is least.	-2	-3
	Operation Cost	Not Assessed in detail. But will include Vehicle Operating Cost, CO2 emission costs, but no road maintenance costs. Similar road lengths but one additional structure for Eastern Option, so Eastern is highest.	-1	-2
	Incremental NPV	Benefits greatest for East because of the local road provision. Therefore Eastern will be highest, followed by Western, then WLR.	1	2
		Subtotal	-1	-1.5
Network Flexibility				-2.5
	Security of Transport System	All comprise an improvement over do nothing. Three bridges not significantly better than two. However, Western and WLR options risk a threat of sea level rise.	2	2
	Integration with Other Transport Modes	Eastern is better as new local road through heart of community provides better network for buses and two new local roads across river. Eastern route is also closer to rail stations.	1	2
	Improvements to Access and Mobility with the provision of the facility	WLR option and Western option have greater potential for parallel pedestrian / cycle routes. However, the old SH will be a better environment for cycling and walking in all options.	3	2
	Improvements to Access and Mobility beyond the facility (e.g. pedestrian / cycle networks included in the transport package)	New local roads – improved safety for pedestrians and cyclists. Best in Eastern, then Western.	1	2
	Future Proofing – capacity for change in use of route	WLR option preserves the ability for 6 lanes. Part of Western route could also be future proofed.	2	0
	Opportunities for Travel Demand Management with the option	Possible tolling on all options.	1	1
	Land transport integration – supporting regional growth	Providing new infrastructure to unlock development potential. WLR and Western would impact on planned developments at Waikanae North. East has least conflict with land transport integration objectives and with Paraparaumu town centre plans.	-3	-2
	Contribution to the RONS Strategy	WLR can be built first. Higher cost of Eastern could compromise the ability to build the rest of the RONS, however, can get quick wins from local road construction in the Eastern option meaning the ability to defer the larger spends and use saved funds elsewhere in the RONS.	1	0
		Subtotal	1	0.875
Physical Environmental Impacts				2.375
	Land stability / geotechnical stability	Eastern follows a known route with good land stability so scores best. Followed by Western and then WLR.	-1	0
	Coastal Marine Area and receiving environment	Difference in impacts indiscernable between options but likely to have a negative impact due to increased run off from more hard surface.	-1	-1
	Groundwater	WLR and Western options reduce groundwater catchment area and influence the groundwater recharge process.	-2	-2
	Natural habitats and fauna – coastal, terrestrial and streams	Western / WLR worse due to crossing swampy ground west of Waikanae.	-3	-2
	Coastal processes as they contribute to natural character of coastal environment	Difference in impacts indiscernable between options but likely to have a negative impact due to increased run off from more hard surface..	-1	-1
	Landscapes	WLR option would destroy Sandhills environment. Both WLR and Western options would affect the natural environment west of Waikanae, and alter a greenfield environment.	-3	-2
		Subtotal	-1.833	-1.333
				-0.667
Social Environmental Impacts	Sites of cultural significance	Wahi Tapu area west of Waikanae directly impacted by Western and WLR options. Also potential for battleground sites to be impacted by WLR and Western options. Eastern and Western could displace Memorial Gates in Domain and may impact on the historic processional route.	-3	-3
	Community linkages and connectivity	Eastern provides new link across Waikanae River and new road in Raumati but would cause additional severance in Waikanae. WLR would provide no new linkages and would prevent future linkages across expressway. Western would provide some new linkages in Raumati.	-3	0
	Population impacts / displacement	Eastern would cause greatest impact on population and physical displacement. WLR would cause least.	-1	-2
	Community services and facilities	None of the options destroy community facilities although the environment of them would be affected. WLR is the worst option as the route would be adjacent to schools. Western is the best option, although both Eastern and Western options would have an impact on Coastlands. Eastern would have an impact through proximity to the church and marae in Waikanae.	-2	1
	Recreation and reserve areas	Eastern could impact on Domain. WLR could impact on QE Park. Both Western and WLR options could impact on greenspace around Waikanae North and pass close to Nga Manu Nature Reserve.	-3	-3
	Urban amenity	Eastern would have an impact on Waikanae Town Centre. Western and Eastern Options both have impacts on Coastlands. WLR option would impact on the desired future town centre of Paraparaumu but Eastern and Western would not affect the future town centre.	-2	-1
	Business and economic opportunities	Potential for development around interchanges in all three options. All three would unlock development potential by freeing up roadspace. Redevelopment potential on old SH1 in all options. Eastern is preferred due to the greatest length of local access road.	1	1

	Subtotal				-1.857	-1	0
Timeliness	RMA process timeframes	All options would be called in so no difference between them. NORs to be lodged by 2012.				-1	-1
	Property Purchase	Eastern option has most property purchase so represents the greatest risk. Would be dealt with by the Environment Court so no control over process. WLR is the lowest risk.				-1	-2
	Construction Programme	WLR option is best as traffic management is not required and there is less road length to build.				-1	-2
	Staging	Would be difficult to stage the WLR option. Eastern option would be best as it can be staged through construction of local roads. Western option can also be staged to an extent.				0	1
	Consenting Risk	Western and WLR options are likely to be objected to by Takamore Trust. However there is no planning blight on WLR or Western options. All options are equally risky.				-1	-1
	Subtotal				-0.8	-1	-1

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Option Evaluation Summary



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LTMA Objective	Sub-Criteria	Comments	Contribution to LTMA Objective		
			WLR	W	E
Assists Economic Development	Construction Cost	Eastern highest, followed by Western and then WLR. Whether costs are considered for the expressway only elements or including the local road elements, Eastern is the highest, followed by Western and then WLR. NB If expressway only is built, an interchange at Kapiti Road / Ihakara would be required on the Eastern Option.	-	--	--
	Property Cost	Property cost is much greater for Eastern, then Western. WLR is least.	-	--	--
	Operation Cost	Not Assessed in detail. But will include Vehicle Operating Cost, CO2 emission costs, but no road maintenance costs. Similar road lengths but one additional structure for Eastern Option, so Eastern is highest.	-	-	--
	Incremental NPV	Benefits greatest for Eastern because of the local road provision. Therefore Eastern will be highest, followed by Western, then WLR.	+	++	++
	Security of Transport System	All comprise an improvement over do nothing. Three bridges are not significantly better than two. However, Western and WLR options risk a threat of sea level rise.	+	+	++
	Contributing to high quality economic development	All options provide new infrastructure to unlock development potential. WLR and Western would impact on planned developments at Waikanae North. East has least conflict with land transport integration objectives and with Paraparaumu town centre plans and provides most new infrastructure.	--	-	++
	Contribution to the RONS Strategy	WLR can be built first. Higher cost of Eastern could compromise the ability to build the rest of the RONS, however, can get quick wins from local road construction in the Eastern option meaning the ability to defer the larger spends and use saved funds elsewhere in the RONS.	+	+	++
	RMA process timeframes	All options would be called in so no difference between them. NORs to be lodged by 2012.	0	0	0
	Property Purchase	Eastern option has most property purchase so represents the greatest risk. Would be dealt with by the Environment Court so no control over process. WLR is the lowest risk.	++	-	--
	Staging	Would be difficult to stage the WLR option. Eastern option would be best as it can be staged through construction of local roads. Western option can also be staged to an extent.	0	+	++
Assists Safety and Personal Security	Consenting Risk	Western and WLR options are likely to be objected to by Takamore Trust. However there is no planning blight on WLR or Western options. All options must be considered equally risky until further work carried out.	--	--	--
	Crash Rates	Accident assessments have not been carried out, however, all expressway options are likely to have similar accident rates, but accident levels on SH1 should be reduced. The Eastern Option is likely to have a higher accident rate as a whole as additional local roads are included in the roading package.	++	++	+
	Personal Security	At this stage it is impossible to provide a meaningful comment on the difference between the options in terms of personal security. Not enough detailed work has been undertaken.	0	0	0
	Integration with Other Transport Modes	Eastern is better as new local road through heart of community provides better network for buses and two new local roads across river. Eastern route is also closer to rail stations.	0	+	++
Improves Access and Mobility	Improvements to Access and Mobility with the provision of the facility	WLR option and Western option have greater potential for parallel pedestrian / cycle routes. However, the old SH will be a better environment for cycling and walking in all options.	++	++	+
	Improvements to Access and Mobility beyond the facility (e.g. pedestrian / cycle networks included in the transport package)	New local roads mean improved safety and environment for pedestrians and cyclists. Best in Eastern, then Western.	0	+	++
	Community linkages and connectivity	Eastern provides new link across Waikanae River and new road in Raumati but would cause additional severance in Waikanae. WLR would provide no new linkages and would prevent future linkages across expressway. Western would provide some new linkages in Raumati.	--	0	++
	Urban amenity	Eastern would have an impact on Waikanae Town Centre. Western and Eastern Options both have impacts on Coastlands. WLR option would impact on the desired future town centre of Paraparaumu but Eastern and Western would not affect the future town centre.	--	-	0
Protects and Promotes Public Health	Air Emissions	At this stage an air quality assessment has not been carried out. However it is felt that there would be little difference between the options.	0	0	0
	Noise Emissions	At this stage an noise assessment has not been carried out. However it is felt that there would be little difference between the options.	0	0	0
	Community services and facilities	None of the options destroy community facilities although the environment of them would be affected. WLR is the worst option as the route would be adjacent to schools. Western is the best option, although both Eastern and Western options would have an impact on Coastlands. Eastern would have an impact through proximity on the church and marae in Waikanae.	-	0	0
	Recreation and reserve areas	Eastern could impact on Domain. WLR could impact on QE Park. Both Western and WLR options could impact on greenspace around Waikanae North and pass close to Nga Manu Nature Reserve.	--	--	-
Ensures Environmental Sustainability	Opportunities for Travel Demand Management with the option	Possible tolling on all options.	+	+	+
	Land stability / geotechnical stability	Eastern follows a known route with good land stability so scores best. Followed by Western as half of the route is well known and then WLR where the land is known to be marshy.	-	0	++
	Coastal Marine Area and receiving environment	Difference in impacts indiscernable between options but likely to have a negative impact due to increased run off from more hard surface.	-	-	-
	Groundwater	WLR and Western options reduce groundwater catchment area and influence the groundwater recharge process.	-	-	0
	Natural habitats and fauna – coastal, terrestrial and streams	Western / WLR worse due to crossing swampy ground west of Waikanae.	--	-	0
	Coastal processes as they contribute to natural character of coastal environment	Difference in impacts indiscernable between options but likely to have a negative impact due to increased run off from more hard surfaces.	-	-	-
	Landscapes	WLR option would destroy Sandhills environment. Both WLR and Western options would affect the natural environment west of Waikanae, and alter a greenfield environment.	--	-	0

	Sites of cultural significance	Wahi Tapu area west of Waikanae directly impacted by Western and WLR options. Also potential for battleground sites to be impacted by WLR and Western options. Eastern and Western could displace Memorial Gates in Domain and Eastern may impact on the historic processional route.	--	--	-
--	--------------------------------	---	----	----	---

Key

- ++ Strong Positive Contribution to LTMA Objective
- + Positive Contribution to LTMA Objective
- 0 No significant Change in Contribution to LTMA Objective
- Negative Contribution to LTMA Objective
- Strong Negative Contribution to LTMA Objective

Option Evaluation (2)

Objective	Sub-Criteria	Contribution to LTMA Objective		
		Western Link Road	Western	Eastern
Assists Economic Development Key economic development input is the journey time savings and the costs. The costs are a two edged sword as they expenditure will bring jobs into the region for sub contractors as well as support facilities eg "pie shops" should scheme issues be separated out?	Construction Cost	Least expensive with a construction cost of \$380 to \$500M	Second highest construction cost of \$410 to \$680M (inc local road elements)	Highest construction cost at \$610 to \$930M (inc local road elements)
	Property Cost	Property largely already purchased. 20-50 land parcels affected	200 - 300 land parcels affected	300 - 400 land parcels affected
	Operation Cost	Increase in operational cost due to increase in road length	Increase in operational cost due to increase in road length	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. No significant benefit to local traffic	Benefits to SH1 traffic. Minor benefit to local traffic	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	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 I would be more precise about location of main lvi issues ie around river crossing and burial ground. - risks around using the EPA process may need to be considered.	Consenting is very risky. Could prove to be fatally flawed because of cultural and environmental impacts.	Consenting is very risky. Could prove to be fatally flawed because of cultural and environmental impacts. Many properties affected.	Consent very risky. Many properties affected. Less cultural and environmental impact than WLR and Western options.
	Property Purchase Risk	Majority of property is already purchased however there are still 20-50 affected properties that would require acquisition.	Significant property purchase required (200 - 300 properties)	Significant property purchase required (300 - 400 properties)
	Staging	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 end while Expressway is design and consented, however traffic congestion into Waikanae continues to build until	Can be staged through construction of local roads first while Expressway is designed and consented.
Assists Safety and Personal Security	Consenting Risk - likely to be suitable for revised RMA call-in procedures	Highly likely to be objected to by Takamore Trust, affected landowners, schools and KDC making consenting very difficult.	Highly likely to be objected to by Takamore Trust, many affected landowners, and KDC making	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
	Personal Security	Insufficient work carried out. Not possible to provide meaningful comment on the differences between schemes.	Insufficient work carried out. Not possible to provide meaningful comment on the differences between	Insufficient work carried out. Not possible to provide meaningful comment on the differences between schemes.
	Integration with Other Transport Modes need to be slightly clearer about how integration works. Is it between the community and PT facilities or is it between the transport modes eg SH traffic access to the station?	No new local roads for improved bus routes. SH1 moved farther from rail stations resulting in less integration.	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.	New local arterial allows significantly improved bus links between Waikanae, Paraparaumu and Raumati. SH1 remains close to rail stations facilitating better integration.
	Improvements to Access and Mobility with the provision of the facility	New expressway significantly improves mobility for through traffic. Old SH 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 SH 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 SH will be an improved environment for local vehicular trips? which bit is it not replaced by new expressway?, walking and cycling. Good potential for parallel walking / cycling routes. New local arterial significantly improves access and mobility for local trips
	Improvements to Access and Mobility beyond the facility (e.g. pedestrian / cycle networks included in the transport package)	No improvements beyond facility.	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.
	Community linkages and connectivity	No new local linkages and would prevent the provision of future linkages across the expressway	Some new linkages in Raumati but would prevent the provisions of future linkages across the expressway north of	New link across Waikanae River and new roads in Raumati. Some reduced permeability of SH1 in Waikanae town
	Urban amenity probably need to cover a little more eg does urban amenity cover open space provision, civic sites such as library town hall assembly halls. How do we capture impact on things like schools, larger medical centres/ hospitals	Would adversely impact on the planned future town centre of Paraparaumu and high quality residential development in Waikanae.	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.	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.
	Air Emissions	At this stage an air quality assessment has not been carried out and insufficient data is available to judge impacts of options.	At this stage an air quality assessment has not been carried out and insufficient data is available to judge impacts of options.	At this stage an air quality assessment has not been carried out and insufficient data is available to judge impacts of options.
	Noise Emissions	At this stage a noise assessment has not been carried out and insufficient data is available to judge impacts of options.	At this stage a noise assessment has not been carried out and insufficient data is available to judge impacts of options.	At this stage a noise assessment has not been carried out and insufficient data is available to judge impacts of options.
Protects and Promotes Public Health	Community services and facilities could also pick up issue of relocation of town centre here as well noting potential for double counting but it is a different aspect is it not or a subsection of urban amenity. Some discussion about effect on emergency services may be appropriate.	Would place the Expressway next to two schools in Raumati. Would increase severance between coastal communities and services in the town centres.	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. Would have potential to reduce community access to Waikanae Rail station unless sensitive design is progressed.
	Recreation and reserve areas - some discussion about the access to the coastal areas for the greater wellington residents may be okay.	Could impact on QE Park and wetlands north-west of Waikanae and pass close to Nga Manu nature reserve.	Could impact on wetlands north-west of Waikanae and pass close to Nga Manu nature reserve.	Could impact on the Paraparaumu Domain.
	Opportunities for Travel Demand Management with the notion how does this minimize with any lvm			

THE OBJECTIVE OF THIS DOCUMENT IS TO PROVIDE A STRATEGY THAT THE DISTRICT MAY HAVE TO HANDLE ON THIS?

Ensures Environmental Sustainability	Land stability / Geotechnical stability	✗	✗	It is possible to use tolling both as a means of funding as a TDM tool.	It is possible to use tolling both as a means of funding as a TDM tool.
	Coastal Marine Area and receiving environment	--	--	All routes go through areas of peat and soft ground.	All routes go through areas of peat and soft ground.
	Groundwater	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts
	Natural habitats and fauna – coastal, terrestrial and streams	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts
	Landscapes	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts
Investment and Revenue Strategy	Sites of cultural significance	✗✗✗	✗✗✗	Provision of local road along WLR route would alter dunes environment in Raumati. Expressway would affect wetlands north west of Waikanae	Expressway follows an already heavily modified transport corridor. Local road elements along WLR route will alter dunes environment.
	Strategic Fit	✗✗✗	✗✗✗	Wahi tapu area to north west of Waikanae directly affected. Potential to affect battleground sites	Could impact on memorial gates in Domain and affect historic processional route through Waikanae.
	Effectiveness	(High) Expressway contributes to RONS strategy.	(High) Expressway contributes to RONS strategy.	(High) Expressway contributes to RONS strategy.	(High) Expressway contributes to RONS strategy.
	Economic Efficiency economic efficiency should be caveated with timescale because they go hand in hand	(Low). Is not consistent with accepted strategies and land use plans	(Low). Is not consistent with accepted strategies and land use plans	(Low). Is not consistent with accepted strategies and land use plans	(High). Meets medium and low criteria and also improves intergration with land use and other transport modes and supports networks from a national perspective.
	Contribute to Economic Growth and Productivity I would comment on the effect of any development areas and access to such development areas eg new town centre and the airport site as well as new house site.	0	0	Reducing travel times and new Expressway expected to facilitate economic growth	Reducing travel times and new Expressway expected to facilitate economic growth. New local arterial will contribute to regional growth plans and higher-quality
Government Policy Statement	Consider Networks from a National Perspective Value for money should also be seen in the context of the whole RONS.	(Low). BCR 0.6 to 1.0	(Low). BCR 0.5 to 0.8	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	BCR 0.6 to 1.0	BCR 0.5 to 0.8	Expressway plans directly conflict with KDC's plans for kapiti and do not provide for local transport links.	Expressway plans contribute to KDC's aspirations for Paraparaumu town centre and Waikanae North. Allow for local arterial construction which is consistent with regional growth plans.
	Encouraging Integrated Planning Is there a differentiation between the western option since it does the same as the eastern option within Paraparamau while same as the western LINK Road to the north so perhaps it is between the two?	✗✗	✗✗	Utilises the old SH as a local road.	Utilises the old SH as a local road with the addition of new local roads.
	Making best use of existing networks and infrastructure	✗✗	✗✗	Expressway plans directly conflict with KDC's plans for kapiti.	Expressway plans do not directly conflict with KDC's aspirations.
	Implementing and fostering a co-ordinated approach	--	--	Option assessment has not considered different fuel prices.	Option assessment has not considered different fuel prices.
National Energy Efficiency and Conservation Strategy	Considering the impact of volatile fuel prices	✗	✗	Likely to generate an increase in car-based travel	Likely to generate an increase in car-based travel
	Managing demand for travel - majority of commuters to Wellington for work use the trains which are presently being upgraded. Nature of increase in trips needs to be discussed.	✗	✗	Limited local roads will facilitate some improved bus links.	Provides additional local roads which will help to facilitate local bus services. Also provides good links to the railway network.
	More efficient transport modes	✗	✗	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.
	A safer, more reliable road and rail corridor	✗	✗	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.
	User expectations for a consistent regional corridor are met	✗	✗	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.
Wellington Land Transport Strategy	Reduced congestion in parts of the corridor	✗	✗	Investment is focused on building Expressway for SH1	As well as expressway provision, provides additional local roads which will facilitate local bus services between Waikanae.
	Balanced investment in road and passenger transport, along with Travel Demand Management	✗	✗	Provides a 4 lane state highway	Provides a 4 lane state highway
	Contributes to 30 year concept	✗	✗	Provides a 4 lane state highway	Provides a 4 lane state highway
	National State Highway Strategy	✗	✗	Provides a 4 lane state highway	Provides a 4 lane state highway
		✗	✗	Provides a 4 lane state highway	Provides a 4 lane state highway

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

Glenda Shaw

From: Dave Gennard
Sent: Friday, 27 November 2009 12:18 p.m.
To: Eric Whitfield
Subject: FW: Kapiti evaluation framework - comments please.
Attachments: radar diagrams v2.xls

Hi Eric,

We have looked at the evaluation framework and I attach some detailed comments for you. Some of which you will be able to answer others you will not.

In general I think you have captured a good proportion of the issues. And the information and comments are only about how we can improve the presentational understanding.

However, general comments are.

I would create a heading of project information and include the cost property cost and op cost, staging and risks.

I would consider what is truly economic development and would suggest this is really only about the benefits.

I would either create a urban amenity or include it in the public health section and collect together the sub criteria that would contribute to urban amenity as it cuts across a lot of the different sub criteria rather than being a single sub criteria.

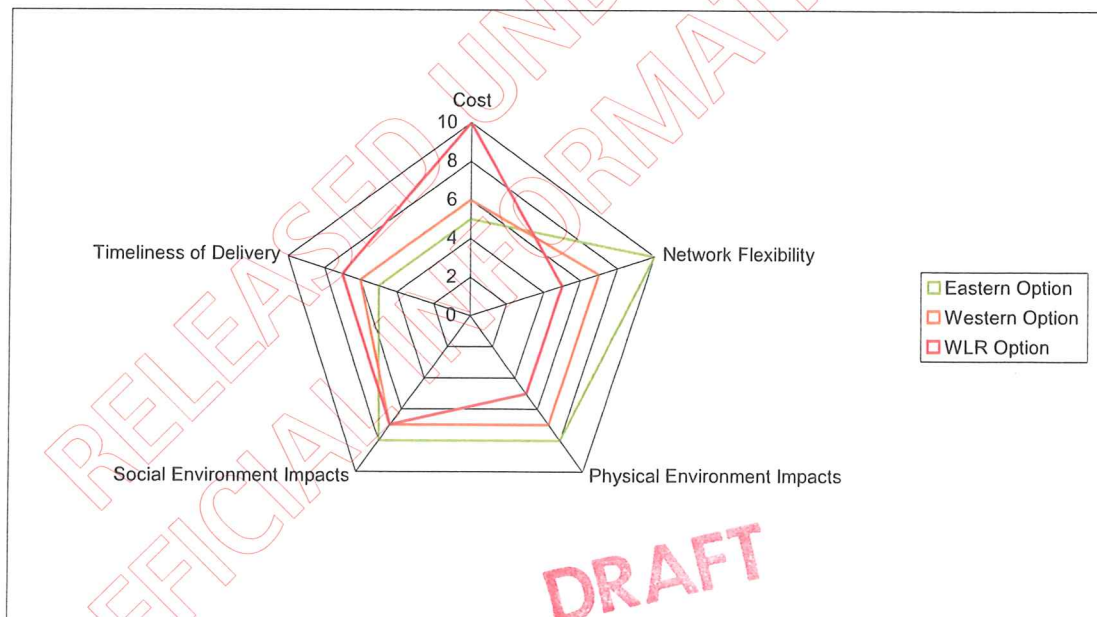
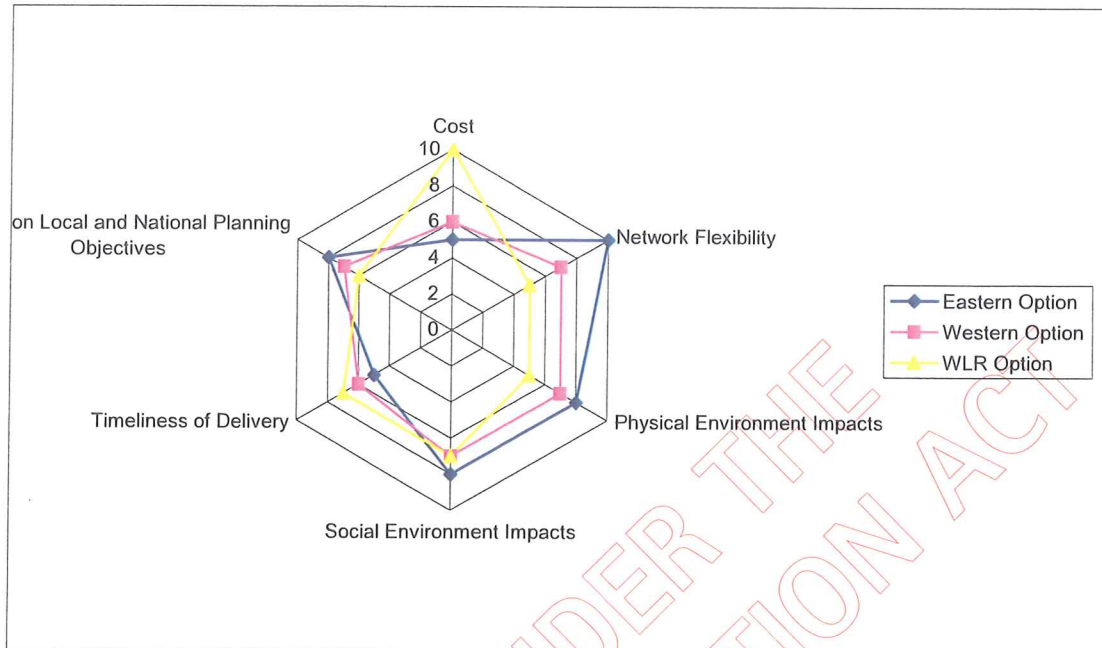
As you are working on the GPS stuff I have left the main comments.

Hope these assist. Clearly some of the stuff you will not have information about but may be able to decide to say requires further analysis or make a judgement call.

cheers

Dave G

Option	Cost	Network Physical	Social En	Timeline: Impact on Local and National Planning Objectiv		
Eastern Option	5	10	8	8	5	8
Western Option	6	7	7	7	6	7
WLR Option	10	5	5	7	7	6



Glenda Shaw

From: Dave Gennard
Sent: Friday, 27 November 2009 3:06 p.m.
To: Jacque Bell
Cc: Eric Whitfield
Subject: FW: Kapiti paper - evaluation
Attachments: radar diagrams v2.xls; kapiti-consultation-extended[1].pdf

Hi Jacque,

Lisa suggested that we pass the attached across you. Needless to say we have very limited time and the data is only at strategic study stage. If you have a chance today or on Monday we would welcome your view and knowledge you can see the options from the attached consultation leaflet.

I will not be contactable much after 4 :30 pm today but should be around Monday if you need to discuss.

cheers

Dave G

From: Dave Gennard
Sent: Friday, 27 November 2009 1:22 p.m.
To: Lisa Rossiter; David Silvester
Cc: Eric Whitfield
Subject: RE: Kapiti paper - evaluation

Hi, Lisa thanks for your very useful feedback. That is helpful.

I terms of the cost I guess we were thinking that we had to show the same as the consultation leaflet but needed to show risks -

Numbers take the point

We will take back the safety issue etc and look how we can incorporate it.

Colin has not mentioned that I needed to engage the external panel. I only found out by the usual osmosis system. I am guessing he will charge Rob or Eric with engaging the team.

Will raise the idea of getting Jacque or Dougal involved although I think they wanted a fully independent review however, the team will require support.

Thanks once again for the comments and turning it round quickly.

Cheers

Dave G

From: Lisa Rossiter
Sent: Friday, 27 November 2009 11:15 a.m.
To: Dave Gennard; David Silvester
Subject: RE: Kapiti paper - evaluation

Hi Dave
My quick thoughts:

a) spider diagrams show "network flexibility". Is this referring to the road network or the transport network (ie. SH, local roads and rail)? I think you need to be specific, and personally I think it should be the transport network so you are encompassing road and rail integration (or not as the case may be!)

b) I find it difficult to distinguish between the 'social environment' and 'physical environment' categories, so I suggest it would be a good idea to include explanatory statements in the key about what each of the five categories covers means.

c) the different numbers also need some explanation ie. -3 to 3 and 0 - 20.

d) I note the construction cost comment is still saying WLR is cheapest... are we sure, given our recent discussion about the need for a revised route and revised costings post-consultation?

e) safety text needs consideration of all transport users, not just motor vehicles.

f) as discussed, I really think we should be using the GPS short-medium impacts on page 11 of the GPS, as these are what the Minister usually refers to. I understand why the team has selected those on page 14 instead, as those are designed to influence planning and evaluation processes. The best solution is probably to add the seven impacts from page 11 to the existing list. I know it makes it a bit long, but that way we've covered both bases.

g) good to see consideration of the Wellington Land Transport Strategy. Alongside that we should also include consideration of the Wellington growth strategy (or nearest equivalent), the regional policy statement and the Kapiti plans - LTCCP and district plan.

Just to clarify who is doing what and avoid any surprises, Ernst indicated to me yesterday that Colin was arranging the three peer reviewers... not sure if that means 'Dave G' or not, but might pay to check! I would suggest at this late hour that we could consider two external peer reviewers and one internal peer reviewer (Jacque Bell or Dougal List).

Regards
Lisa

From: Dave Gennard
Sent: Thursday, 26 November 2009 5:55 p.m.
To: Lisa Rossiter; David Silvester
Subject: FW: Kapiti paper - evaluation

Hi Lisa and David,

This is where we have got to so far. We are progressing this for the Board paper. However, as I understand it now that an independent team will be reviewing the information between now and the Board consisting of three people - one of which may be Kobus Mentz.

Your feedback on this would be very much appreciated.

Regards

Dave G

From: Eric Whitfield
Sent: Thursday, 26 November 2009 3:15 p.m.
To: Dave Gennard
Subject: Kapiti paper - evaluation

Hi Dave,

Do you want to review the next draft of this assessment? Go to the last tab with the ticks and crosses. I still think the GPS area needs more thinking which I'll work on in the meantime. I'm with the Board all day tomorrow but will catch up soon.

Cheers,

Eric Whitfield
Transport Planning Manager

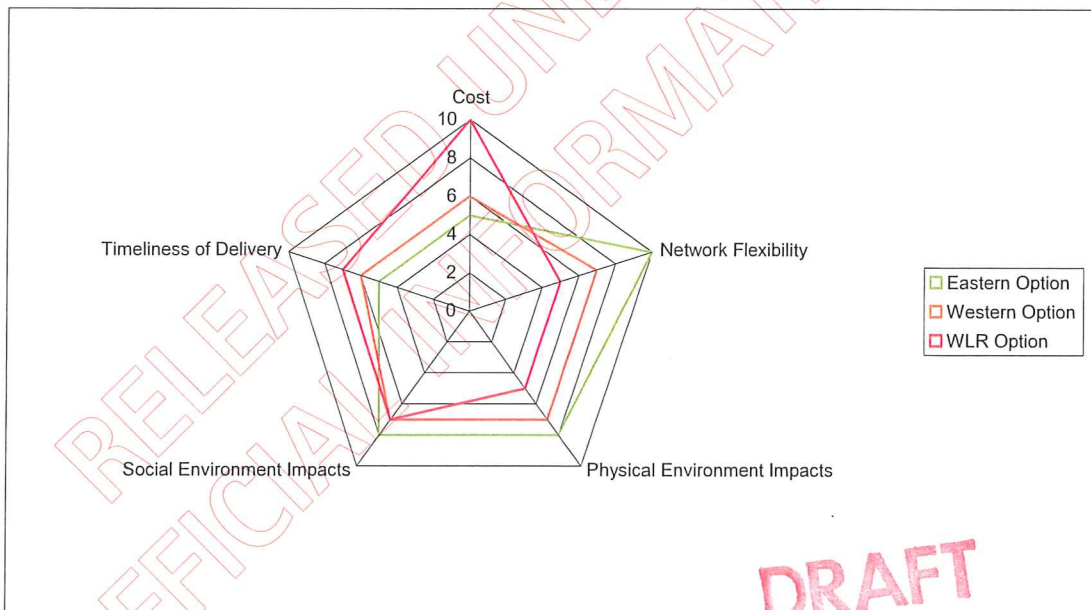
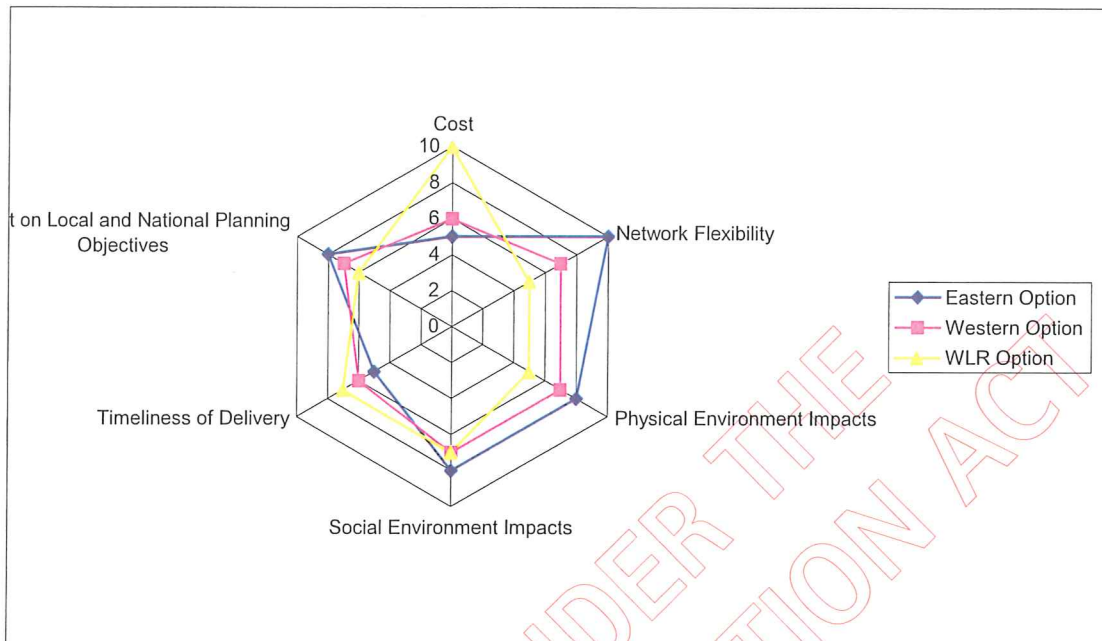
New Zealand Transport Agency
PSIS House, Level 9
20 Ballance Street
PO Box 5084 Lambton Quay
T 64 4 894 5200
F 64 4 894 3305
DDI 64 4 894 5221

eric.whitfield@nzta.govt.nz

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Spider Diagrams 1st draft

Option	Cost	Network	Physical	Social En	Timeline	Impact on Local and National Planning Objectiv
Eastern Option	5	10	8	8	5	8
Western Option	6	7	7	7	6	7
WLR Option	10	5	5	7	7	6



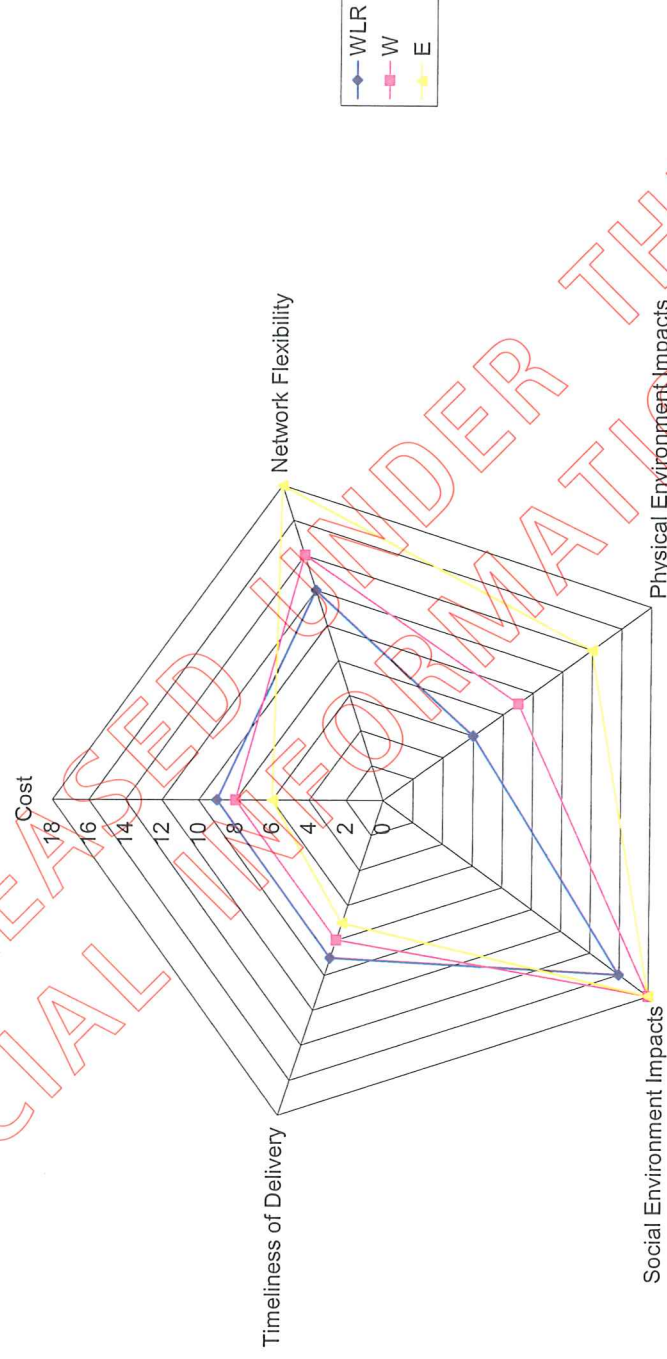
Category	Factor	Comments	Ranking		
			WLR	W	E
Cost	Construction Cost	Eastern highest, followed by Western and then WLR. Costs considered only for expressways although if local roads are included, the order is the same. NB If expressway only is built, an interchange at Kapiti Road / Ihakara would be required on the Eastern Option.	3	2	1
	Property Cost	Much greater for Eastern, then Western. WLR is least.	3	2	1
	Operation Cost	Not Assessed in detail. But will include Vehicle Operating Cost, CO2 emission costs, but no road maintenance costs. Similar road lengths but one additional structure for Eastern Option, so Eastern is highest.	2	2	1
	Incremental NPV	Benefits greatest for East because of the local road provision. Therefore Eastern will be highest, followed by Western, then WLR.	1	2	3
	Subtotal		9	8	6
Network Flexibility	Security of Transport System	All comprise an improvement over do nothing. Three bridges not significantly better than two. However, Western and WLR options risk a threat of sea level rise.	1	1	3
	Integration with Other Transport Modes	Eastern is better as new local road through heart of community provides better network for buses and two new local roads across river. Eastern route is also closer to rail stations.	1	2	3
	Improvements to Access and Mobility with the provision of the facility	WLR option and Western option have greater potential for parallel pedestrian / cycle routes.	3	2	1
	Improvements to Access and Mobility beyond the facility (e.g. pedestrian / cycle networks included in the transport package)	New local roads – improved safety for pedestrians and cyclists. Best in Eastern, then Western.	1	2	3
	Future Proofing – capacity for change in use of route	WLR option preserves the ability for 6 lanes. Past of Western route could also be future proofed.	3	2	1
	Opportunities for Travel Demand Management with the option	Possible tolling on all options.	1	1	1
	Land transport integration – supporting regional growth	Providing new infrastructure to unlock development potential. WLR and Western would impact on planned developments at Waikanae North. East has least conflict with land transport integration objectives and with Paraparaumu town centre plans.	1	2	3
	Contribution to the RONS Strategy	WLR can be built first. Higher cost of Eastern could compromise the ability to build the rest of the RONS, however, can get quick wins from local road construction in the Eastern option meaning the ability to defer the larger spends and use saved funds elsewhere in the RONS.	1	2	3
	Subtotal		12	14	18
Physical Environmental Impacts	Land stability / geotechnical stability	Eastern follows a known route with good land stability so scores best. Followed by Western and then WLR.	1	2	3
	Coastal Marine Area and receiving environment	Difference in impacts indiscernable between options.	1	1	1
	Groundwater	WLR and Western options reduce groundwater catchment area and influence the groundwater recharge process.	1	1	3
	Natural habitats and fauna – coastal, terrestrial and streams	Western / WLR worse due to crossing swampy ground west of Waikanae.	1	2	3
	Coastal processes as they contribute to natural character of coastal environment	Difference in impacts indiscernable between options.	1	1	1
	Landscapes	WLR option would destroy Sandhills environment. Both WLR and Western options would affect the natural environment west of Waikanae, and alter a greenfield environment.	1	2	3
	Subtotal		6	9	14
Social Environmental Impacts	Sites of cultural significance	Wahi Tapu area west of Waikanae directly impacted by Western and WLR options. Also potential for battleground sites to be impacted by WLR and Western options. Eastern could displace Memorial Gates in Domain and may impact on the historic processional route.	1	2	3
	Community linkages and connectivity	Eastern provides new link across Waikanae River and new road in Raumati but would cause additional severance in Waikanae. WLR would provide no new linkages. Western would provide some new linkages in Raumati.	1	2	3
	Population impacts / displacement	Eastern would cause greatest impact on population and physical displacement. WLR would cause least.	3	2	1
	Health and wellbeing – air emissions	Eastern would be worst as two new roads across river and route of expressway is closest to homes.	3	2	1
	Health and wellbeing – noise emissions	Potentially WLR would have least impact on residential populations, and Eastern option would be worst as closest to homes.	3	2	1
	Community services and facilities	None of the options destroy community facilities although the environment of them would be affected. WLR is the worst option as the route would be adjacent to schools. Western is the best option, although both Eastern and Western options would have an impact on Coastlands. Eastern would have an impact through proximity to the church and marae in Waikanae.	1	3	2
	Recreation and reserve areas	Eastern could impact on Domain. WLR could impact on QE Park. Both Western and WLR options could impact on Waikanae North.	1	2	3

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	Urban amenity	Eastern would have an impact on Waikanae Town Centre. Western and Eastern Options both have impacts on Coastlands.	2	2	1
	Business and economic opportunities	Potential for development around interchanges in all three options. All three would unlock development potential by freeing up roadspace. Redevelopment potential on old SH1 in all options. Eastern is preferred due to the greatest length of local access road.	1	1	3
		Subtotal	16	18	18
Timeliness	RMA process timeframes	All options would be called in so no difference between them. NORs to be lodged by 2012.	1	1	1
	Property Purchase	Eastern option has most property purchase so represents the greatest risk. Would be dealt with by the Environment Court so no control over process. WLR is the lowest risk.	3	2	1
	Construction Programme	WLR option is best as traffic management is not required and there is less road length to build.	3	2	1
	Staging	Would be difficult to stage the WLR option. Eastern option would be best as it can be staged through construction of local roads. Western option can also be staged to an extent.	1	2	3
	Consenting Risk	Western and WLR options are likely to be objected to by Takamore Trust. However there is no planning blight on WLR or Western options. All options are equally risky.	1	1	1
		Subtotal	9	8	7

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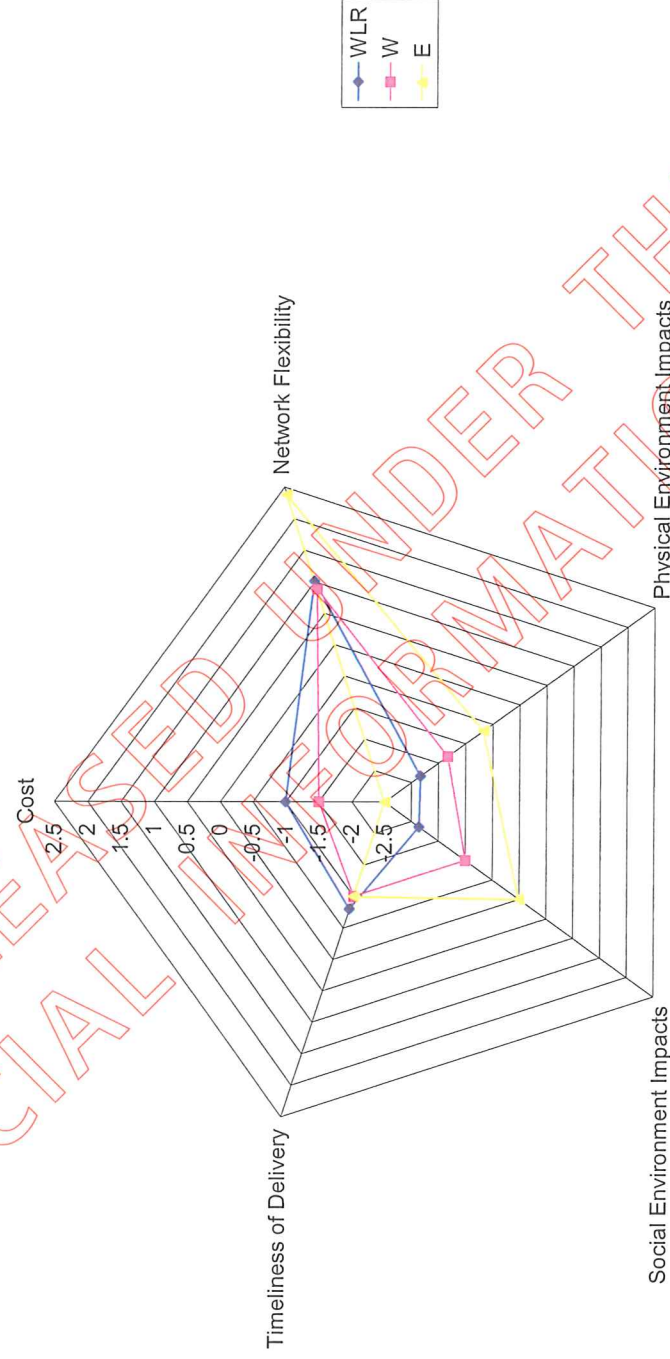
Option Evaluation Summary



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Category	Factor	Comments	Ranking	
			WLR	W E
Cost	Construction Cost	Eastern highest, followed by Western and then WLR. Costs considered only for expressways although if local roads are included, the order is the same. NB If expressway only is built, an interchange at Kapiiti Road / Ihakara would be required on the Eastern Option.	-2	-3 -5
	Property Cost	Much greater for Eastern, then Western. WLR is least.	-2	-3 -5
	Operation Cost	Not Assessed in detail. But will include Vehicle Operating Cost, CO2 emission costs, but no road maintenance costs. Similar road lengths but one additional structure for Eastern Option, so Eastern is highest.	-1	-2 -3
	Incremental NPV	Benefits greatest for East because of the local road provision. Therefore Eastern will be highest, followed by Western, then WLR.	1	2 3
		Subtotal	-1	-1.5 -2.5
Network Flexibility	Security of Transport System	All comprise an improvement over do nothing. Three bridges not significantly better than two. However, Western and WLR options risk a threat of sea level rise.	2	2 4
	Integration with Other Transport Modes	Eastern is better as new local road through heart of community provides better network for buses and two new local roads across river. Eastern route is also closer to rail stations.	1	2 3
	Improvements to Access and Mobility with the provision of the facility	WLR option and Western option have greater potential for parallel pedestrian / cycle routes. However, the old SH will be a better environment for cycling and walking in all options.	3	2 1
	Improvements to Access and Mobility beyond the facility (e.g. pedestrian / cycle networks included in the transport package)	New local roads – improved safety for pedestrians and cyclists. Best in Eastern, then Western.	1	2 3
	Future Proofing – capacity for change in use of route	WLR option preserves the ability for 6 lanes. Part of Western route could also be future proofed.	2	0 0
	Opportunities for Travel Demand Management with the option	Possible tolling on all options.	1	1 1
	Land transport integration – supporting regional growth	Providing new infrastructure to unlock development potential. WLR and Western would impact on objectives and with Paraparaumu town centre plans.	-3	-2 4
	Contribution to the RONS Strategy	WLR can be built first. Higher cost of Eastern could compromise the ability to build the rest of the RONS, however, can get quick wins from local road construction in the Eastern option meaning the ability to defer the larger spends and use saved funds elsewhere in the RONS.	1	0 3
		Subtotal	1	0.875 2.375
Physical Environmental Impacts	Land stability / geotechnical stability	Eastern follows a known route with good land stability so scores best. Followed by Western and then WLR.	-1	0 1
	Coastal Marine Area and receiving environment	Difference in impacts indiscernable between options but likely to have a negative impact due to increased run off from more hard surface.	-1	-1 -1
	Groundwater	WLR and Western options reduce groundwater catchment area and influence the groundwater recharge process.	-2	-2 -1
	Natural habitats and fauna – coastal, terrestrial and streams	Western / WLR worse due to crossing swampy ground west of Waikanae.	-3	-2 -1
	Coastal processes as they contribute to natural character of coastal environment	Difference in impacts indiscernable between options but likely to have a negative impact due to increased run off from more hard surface..	-1	-1 -1
	Landscapes	WLR option would destroy Sandhills environment. Both WLR and Western options would affect the natural environment west of Waikanae, and alter a greenfield environment.	-3	-2 -1
		Subtotal	-1.833	-1.333 -0.667
Social Environmental Impacts	Sites of cultural significance	Wahi Tapu area west of Waikanae directly impacted by Western and WLR options. Also potential for battleground sites to be impacted by WLR and Western options. Eastern and Western could displace Memorial Gates in Domain and may impact on the historic processional route.	-3	-3 -1
	Community linkages and connectivity	Eastern provides new link across Waikanae River and new road in Raumati but would cause additional severance in Waikanae. WLR would provide no new linkages and would prevent future linkages across expressway. Western would provide some new linkages in Raumati.	-3	0 3
	Population impacts / displacement	Eastern would cause greatest impact on population and physical displacement. WLR would cause least.	-1	-2 -3
	Community services and facilities	None of the options destroy community facilities although the environment of them would be affected. WLR is the worst option as the route would be adjacent to schools. Western is the best option, although both Eastern and Western options would have an impact on Coastlands. Eastern would have an impact through proximity to the church and marae in Waikanae.	-2	1 0
	Recreation and reserve areas	Eastern could impact on Domain. WLR could impact on QE Park. Both Western and WLR options could impact on greenspace around Waikanae North and pass close to Nga Manu Nature Reserve.	-3	-3 -1
	Urban amenity	Eastern would have an impact on Waikanae Town Centre. Western and Eastern Options both have impacts on Coastlands. WLR option would impact on the desired future town centre of Paraparaumu but Eastern and Western would not affect the future town centre.	-2	-1 -1
	Business and economic opportunities	Potential for development around interchanges in all three options. All three would unlock development potential by freeing up roadspace. Redevelopment potential on old SH1 in all options. Eastern is preferred due to the greatest length of local access road.	1	1 3

Option Evaluation Summary



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LTMA Objective	Sub-Criteria	Comments	Contribution to LTMA Objective		
			WLR	W	E
Assists Economic Development	Construction Cost	Eastern highest, followed by Western and then WLR. Whether costs are considered for the expressway only elements or including the local road elements, Eastern is the highest, followed by Western and then WLR. NB If expressway only is built, an interchange at Kapiti Road / Inakara would be required on the Eastern Option.	-	--	--
	Property Cost	Property cost is much greater for Eastern, then Western. WLR is least.		--	--
	Operation Cost	Not Assessed in detail. But will include Vehicle Operating Cost, CO2 emission costs, but no road maintenance costs. Similar road lengths but one additional structure for Eastern Option, so Eastern is highest.	-	-	--
	Incremental NPV	Benefits greatest for Eastern because of the local road provision. Therefore Eastern will be highest, followed by Western, then WLR.	+	++	++
	Security of Transport System	All comprise an improvement over do nothing. Three bridges are not significantly better than two. However, Western and WLR options risk a threat of sea level rise.	+	+	++
	Contributing to high quality economic development	All options provide new infrastructure to unlock development potential. WLR and Western would impact on planned developments at Waikanae North. East has least conflict with land transport integration objectives and with Paraparaumu town centre plans and provides most new infrastructure.	--	-	++
	Contribution to the RONS Strategy	WLR can be built first. Higher cost of Eastern could compromise the ability to build the rest of the RONS, however, can get quick wins from local road construction in the Eastern option meaning the ability to defer the larger spends and use saved funds elsewhere in the RONS.	+	+	++
	RMA process timeframes	All options would be called in so no difference between them. NORs to be lodged by 2012.	0	0	0
	Property Purchase	Eastern option has most property purchase so represents the greatest risk. Would be dealt with by the Environment Court so no control over process. WLR is the lowest risk.	++	-	--
	Staging	Would be difficult to stage the WLR option. Eastern option would be best as it can be staged through construction of local roads. Western option can also be staged to an extent.	0	+	++
Assists Safety and Personal Security	Consenting Risk	Western and WLR options are likely to be objected to by Takamore Trust. However there is no planning blight on WLR or Western options. All options must be considered equally risky until further work carried out.	--	--	--
	Crash Rates	Accident assessments have not been carried out, however, all expressway options are likely to have similar accident rates, but accident levels on SH1 should be reduced. The Eastern Option is likely to have a higher accident rate as a whole as additional local roads are included in the roading package.	++	++	+
	Personal Security	At this stage it is impossible to provide a meaningful comment on the difference between the options in terms of personal security. Not enough detailed work has been undertaken.	0	0	0
	Integration with Other Transport Modes	Eastern is better as new local road through heart of community provides better network for buses and two new local roads across river. Eastern route is also closer to rail stations.	0	+	++
Improves Access and Mobility	Improvements to Access and Mobility with the provision of the facility	WLR option and Western option have greater potential for parallel pedestrian / cycle routes. However, the old SH will be a better environment for cycling and walking in all options.	++	++	+
	Improvements to Access and Mobility beyond the facility (e.g. pedestrian / cycle networks included in the transport package)	New local roads mean improved safety and environment for pedestrians and cyclists. Best in Eastern, then Western.	0	+	++
	Community linkages and connectivity	Eastern provides new link across Waikanae River and new road in Raumati but would cause additional severance in Waikanae. WLR would provide no new linkages and would prevent future linkages across expressway. Western would provide some new linkages in Raumati.	--	0	++
	Urban amenity	Eastern would have an impact on Waikanae Town Centre. Western and Eastern Options both have impacts on Coastlands. WLR option would impact on the desired future town centre of Paraparaumu but Eastern and Western would not affect the future town centre.	--	-	0
Protects and Promotes Public Health	Air Emissions	At this stage an air quality assessment has not been carried out. However it is felt that there would be little difference between the options.	0	0	0
	Noise Emissions	At this stage an noise assessment has not been carried out. However it is felt that there would be little difference between the options.	0	0	0
Ensures Environmental Sustainability	Community services and facilities	None of the options destroy community facilities although the environment of them would be affected. WLR is the worst option as the route would be adjacent to schools. Western is the best option, although both Eastern and Western options would have an impact on Coastlands. Eastern would have an impact through proximity on the church and marae in Waikanae.	-	0	0
	Recreation and reserve areas	Eastern could impact on Domain. WLR could impact on QE Park. Both Western and WLR options could impact on greenspace around Waikanae North and pass close to Nga Manu Nature Reserve.	--	--	-
	Opportunities for Travel Demand Management with the option	Possible tolling on all options.	+	+	+
	Land stability / geotechnical stability	Eastern follows a known route with good land stability so scores best. Followed by Western as half of the route is well known and then WLR where the land is known to be marshy.	-	0	++
	Coastal Marine Area and receiving environment	Difference in impacts indiscernable between options but likely to have a negative impact due to increased run off from more hard surface.	-	-	-
	Groundwater	WLR and Western options reduce groundwater catchment area and influence the groundwater recharge process.	-	-	0
	Natural habitats and fauna – coastal, terrestrial and streams	Western / WLR worse due to crossing swampy ground west of Waikanae.	--	-	0
	Coastal processes as they contribute to natural character of coastal environment	Difference in impacts indiscernable between options but likely to have a negative impact due to increased run off from more hard surfaces.	-	-	-
	Landscapes	WLR option would destroy Sandhills environment. Both WLR and Western options would affect the natural environment west of Waikanae, and alter a greenfield environment.	--	-	0
	Sites of cultural significance	Wahi Tapu area west of Waikanae directly impacted by Western and WLR options. Also potential for battleground sites to be impacted by WLR and Western options. Eastern and Western could displace Memorial Gates in Domain and Eastern may impact on the historic processional route.	--	--	-

Key

- ++ Strong Positive Contribution to LTMA Objective
- + Positive Contribution to LTMA Objective
- 0 No significant Change in Contribution to LTMA Objective
- Negative Contribution to LTMA Objective
- Strong Negative Contribution to LTMA Objective

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option Evaluation (2).

Objective	Sub-Criteria	Contribution to LTMA Objective		
		Western Link Road	Western	Eastern
Assists Economic Development they expenditure will bring jobs into the region for sub contractors and the major contractors as well as support facilities eg "pie shops" should scheme issues be separated out?	Construction Cost	Least expensive with a construction cost of \$380 to \$500M	Second highest construction cost of \$410 to \$680M (inc local road elements)	Highest construction cost at \$610 to \$930M (inc local road elements)
	Property Cost	Property largely already purchased. 20 -50 land parcels affected	200 - 300 land parcels affected	300 - 400 land parcels affected
	Operation Cost	Increase in operational cost due to increase in road length	Increase in operational cost due to increase in road length	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. No significant benefit to local traffic	Benefits to SH1 traffic. Minor benefit to local traffic	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	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 roading 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 I would be more precise about location of main iwi issues ie around river crossing and burial ground.	Consenting is very risky. Could prove to be fatally flawed because of cultural and environmental impacts.	Consenting is very risky. Could prove to be fatally flawed because of cultural and environmental impacts. Many properties affected.	Consent very risky. Many properties affected. Less cultural and environmental impact than WLR and Western options.
	Property Purchase Risk	Majority of property is already purchased however there are still 20-50 affected properties that would require acquisition.	significant property purchase required (200 - 300 properties)	significant property purchase required (300 - 400 properties)
	Staging	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 end while Expressway is design and consented, however traffic congestion into Waikanae continues to build until	Can be staged through construction of local roads first while Expressway is designed and consented.
Assists Safety and Personal Security	Consenting Risk	Highly likely to be objected to by Takamore Trust, affected landowners, schools and KCDC making consenting very difficult.	Highly likely to be objected to by Takamore Trust, many affected landowners, and KCDC making	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
	Personal Security	Insufficient work carried out. Not possible to provide meaningful comment on the differences between schemes.	Insufficient work carried out. Not possible to provide meaningful comment on the differences between	Insufficient work carried out. Not possible to provide meaningful comment on the differences between schemes.
	Integration with Other Transport Modes need to be slightly clearer about how integration works. Is it between the community and PT facilities or is it between the transport modes eg SH traffic access to the station?	No new local roads for improved bus routes. SH1 moved farther from rail stations resulting in less integration.	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.	New local arterial allows significantly improved bus links between Waikanae, Paraparaumu and Raumati. SH1 remains close to rail stations facilitating better integration.
	Improvements to Access and Mobility with the provision of the facility	New expressway significantly improves mobility for through traffic. Old SH 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 SH 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 SH will be an improved environment for local vehicular trips? which bit is it not replaced by new expressway?, walking and cycling. Good potential for parallel walking / cycling routes. New local arterial significantly improves access and mobility for local trips
	Improvements to Access and Mobility beyond the facility (e.g. pedestrian / cycle networks included in the transport package)	No improvements beyond facility.	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.
	Community linkages and connectivity	No new local linkages and would prevent the provision of future linkages across the expressway	Some new linkages in Raumati but would prevent the provisions of future linkages across the expressway north of	New link across Waikanae River and new roads in Raumati. Some reduced permeability of SH1 in Waikanae town
	Urban amenity probably need to cover a little more eg does urban amenity cover open space provision, civic sites such as library town hall assembly halls. How do we capture impact on things like schools, larger medical centres/ hospitals	Would adversely impact on the planned future town centre of Paraparaumu and high quality residential development in Waikanae.	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.	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.
	Air Emissions	At this stage an air quality assessment has not been carried out and insufficient data is available to judge impacts of options.	At this stage an air quality assessment has not been carried out and insufficient data is available to judge impacts of options.	At this stage an air quality assessment has not been carried out and insufficient data is available to judge impacts of options.
	Noise Emissions	At this stage a noise assessment has not been carried out and insufficient data is available to judge impacts of options.	At this stage a noise assessment has not been carried out and insufficient data is available to judge impacts of options.	At this stage a noise assessment has not been carried out and insufficient data is available to judge impacts of options.
Protects and Promotes Public Health	Community services and facilities could also pick up issue of relocation of town centre here as well noting potential for double counting but it is a different aspect is it not or a subsection of urban amenity.	Would place the Expressway next to two schools in Raumati. Would increase severance between coastal communities and services in the town centres.	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. would have potential to reduce community access to Waikanae Rail station unless sensitive design is progressed.
	Recreation and reserve areas	Could impact on QE Park and wetlands north-west of Waikanae and pass close to Nga Manu nature reserve.	Could impact on wetlands north-west of Waikanae and pass close to Nga Manu nature reserve.	Could impact on the Paraparaumu Domain.
	Opportunities for Travel Demand Management with the notion How does this minimize with any idm			

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the opportunity to use this information to help the District to have a strategy that the District may have to do we have a handle on this?

Ensures Environmental Sustainability	Land stability / geotechnical stability	✗	It is possible to use tolling both as a means of funding as a TDM tool.	✗	It is possible to use tolling both as a means of funding as a TDM tool.
	Coastal Marine Area and receiving environment	--	All routes go through areas of peat and soft ground.	--	All routes go through areas of peat and soft ground.
	Groundwater	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts
	Natural habitats and fauna – coastal, terrestrial and streams	--	Detailed assessment necessary to determine impacts	--	Detailed assessment necessary to determine impacts
	Landscapes	Detailed assessment necessary to determine impacts	Detailed assessment necessary to determine impacts	--	Detailed assessment necessary to determine impacts
	Sites of cultural significance	✗✗	Provision of local road along WLR route would alter dunes environment in Raumati. Expressway would affect wetlands north west of Waikanae.	✗✗	Expressway follows an already heavily modified transport corridor. Local road elements along WLR route will alter dunes environment.
Investment and Revenue Strategy		✗✗	Wahi tapu area to north west of Waikanae directly affected. Potential to affect battleground sites.	✗✗	Could impact on memorial gates in Domain and affect historic processional route through Waikanae.
	Strategic Fit	(High) Expressway contributes to RONS strategy.	(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	(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 economic efficiency should be caveated with timescale because they go hand in hand	0	(Low). BCR 0.6 to 1.0	0	(Low). BCR 0.4 to 0.6
	Contribute to Economic Growth and Productivity I would comment on the effect of any development areas and access to such development areas eg new town centre and the airport site as well as new house site.	✓	Reducing travel times and new Expressway expected to facilitate economic growth	✓	Reducing travel times and new Expressway expected to facilitate economic growth. New local arterial will contribute to regional growth plans and higher-quality
	Consider Networks from a National Perspective Value for money should also be seen in the context of the whole RoNS.	✓	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.
Government Policy Statement	Achieving Value for Money	✗	BCR 0.6 to 1.0	✗	BCR 0.4 to 0.6
	Encouraging Integrated Planning Is there a differentiation between the western option since it does the same as the eastern option within Paraparamau while same as the western LINK Road to the north so perhaps it is between the two?	✗✗	Expressway plans directly conflict with KCDC's plans for Kapiti and do not provide for local transport links.	✗✗	Expressway plans contribute to KCDC's aspirations for Paraparamu 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	✓	Utilises the old SH as a local road.	✓	Utilises the old SH as a local road with the addition of new local roads.
	Implementing and fostering a co-ordinated approach	✗✗	Expressway plans directly conflict with KCDC's plans for Kapiti.	✗✗	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.
	Managing demand for travel	✗	Likely to generate an increase in car-based travel	✗	Likely to generate an increase in car-based travel
National Energy Efficiency	More efficient transport modes	✓	No specific consideration.	✓	Provides additional local roads which will help to facilitate local bus services. Also provides good links to the railway network.
	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.
	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.
	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.
	Balanced investment in road and passenger transport, along with Travel Demand Management	✗	Investment is focused on building Expressway for SH1	✓	As well as expressway provision, provides additional local roads which will facilitate local bus services between Waikanae,
Wellington Land Transport Strategy					

Key

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

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