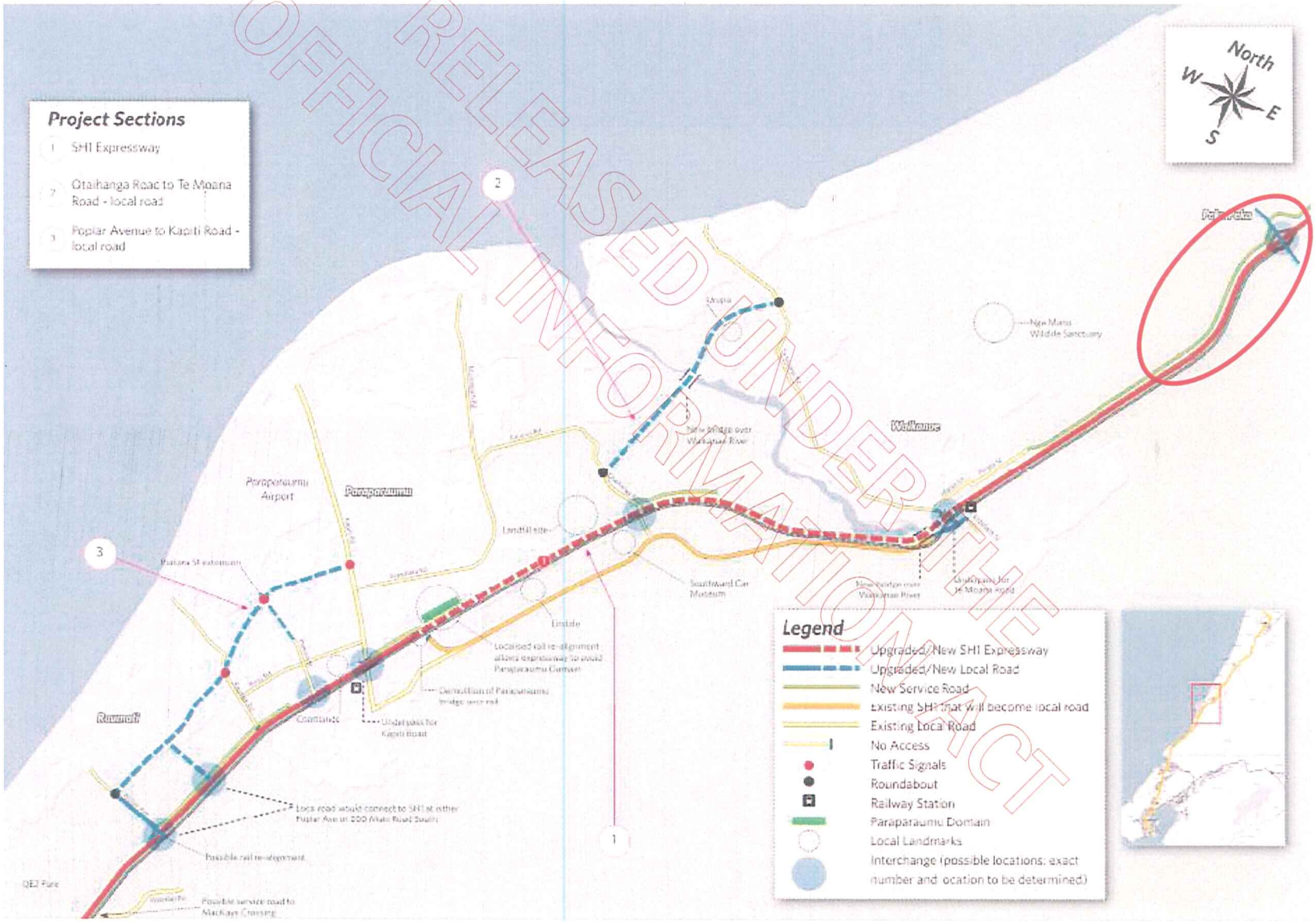
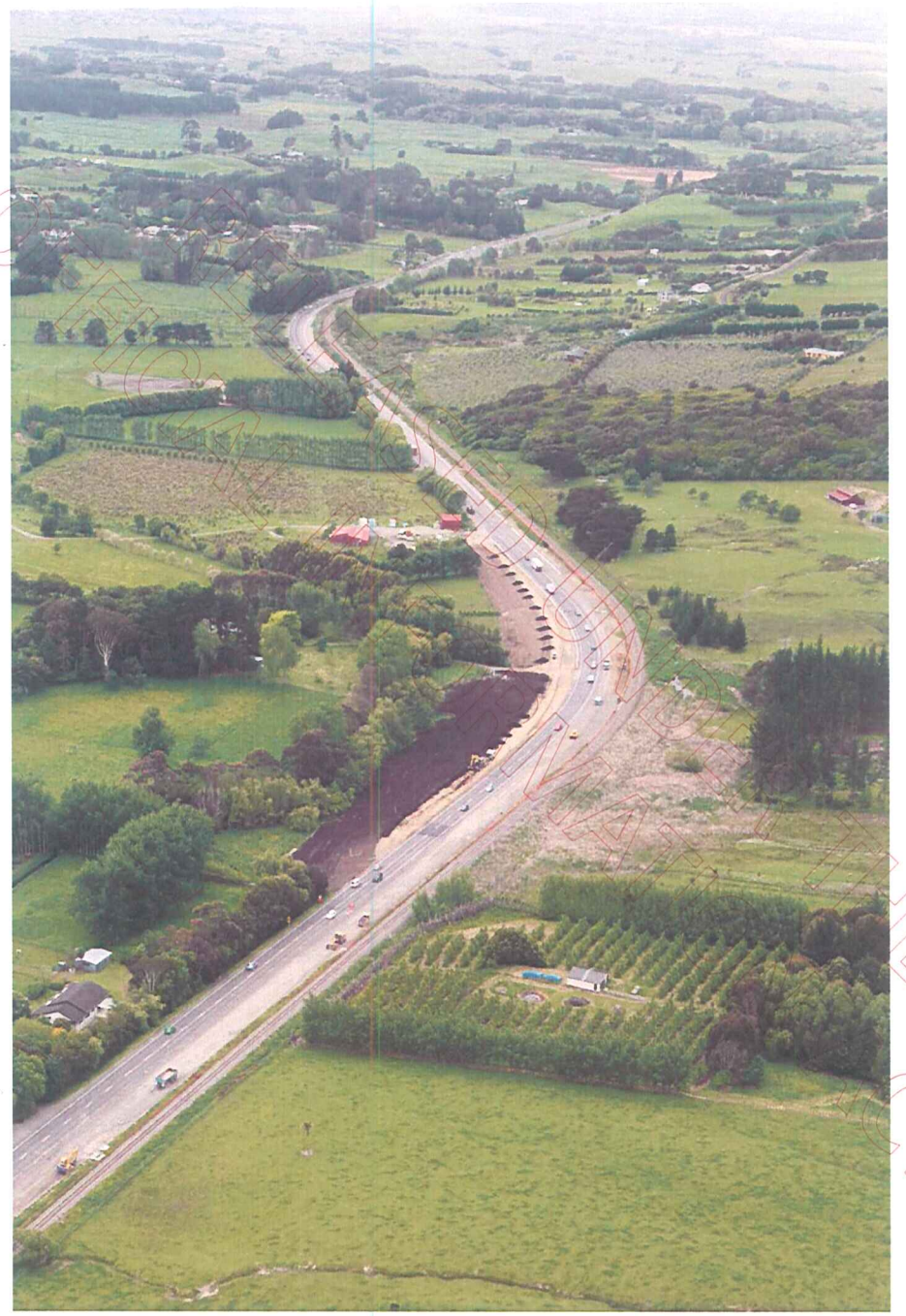
1 MacKays Crossing to Peka Peka - Concept Map

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





The Eastern Option

- Cost: Estimated at $550M to $670M
- Population displacement:
  - Total land parcels: 388
  - Approx houses: 140
  - Crown/Council owned: 54
  - Private property: 333
- Timing:
  - Construction start expressway: 2014 (Waikanae river crossing: 2010; Southern local road: 2012)
  - Construction complete: 2019
  - First benefits accrue to SH at Waikanae crossing: 2012
- Consistent with KCDC town centre development
- Severance through community around Paraparaumu minimised
- Continued severance through Waikanae township
- No additional wahi tapu land required
- New designation required for expressway
- Least environmental impact of three options

Option Comparison

Option Comparison – Common features

- All three options deliver the "National" RoNS objectives in that they create a four lane, median divided highway through the district
- The security and flexibility of the transport network would be enhanced by all options by the provision of additional crossing(s) of the Waikanae river
- All of the options improve through traffic mobility and provide opportunities to improve walking and cycling
- All routes are known to cross areas of unstable ground and are considered equally risky in this respect

Option Comparison – Differentiating features

The factors that differentiate these options are:

- Integration with 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
- Programme delivery risk (or potential fatal flaws)
- Cost

Option Comparison – Local Planning

General

- The Eastern option supports KCDC's Urban Management Strategy
- The Eastern option provides the best local connectivity, followed by the Western option and finally the Sandhills option

Paraparaumu

- The Eastern and Western options support the Paraparaumu town centre development
- KCDC have noted in their submission that the Eastern option could assist in reorienting the Paraparaumu towncentre
- The Eastern option is consistent with recent local plan changes (Airport development)

Waikanae

- The Eastern option has the greatest impact on the Waikanae township
- The Sandhills and Western options impact on recent local plan changes (Waikanae north)

Option Comparison – Regional Transport Benefits(1)

Sandhills

•This option does not provide significant travel time benefits for local traffic between the towns of Waikanae, Paraparaumu and Raumati. The new expressway will take the through traffic off the old highway (to be local road) which will result in some local benefit and potentially redevelopment of Waikanae town centre.

•Will bisect land in Waikanae and Paraparaumu that is planned for high quality development, however it will not provide any local access. This could reduce the quality of the development in these areas.

Western

The Western Option provides a new local arterial between Raumati and Paraparaumu which will reduce journey times between the two towns. The new link will provide a high quality access to the planned Paraparaumu town centre development and the Paraparaumu Airport. Because there is no new local arterial between Waikanae and Paraparaumu there are no travel time benefits between the two towns.

Under this option, the proposed expressway will bisect land planned for high quality residential development but will not provide direct access to it. This could result in a lesser quality development.

Option Comparison – Regional Transport Benefits(2)

Eastern

The Eastern option has the greatest regional benefits of all of the options. This option provides an opportunity to create a centrally-located north-south local arterial between Waikanae and Raumati (the Western Link Road) and create a logical road hierarchy for the Kapiti District. This will reduce the journey times for local trips.

The new local arterial will directly connect areas planned for development in Paraparaumu (including the Airport) and Waikanae and directly contribute to local economic growth. The new local arterial will provide an opportunity for more efficient bus services between Raumati, Paraparaumu and Waikanae.

Option Comparison – Environmental & Social Impacts

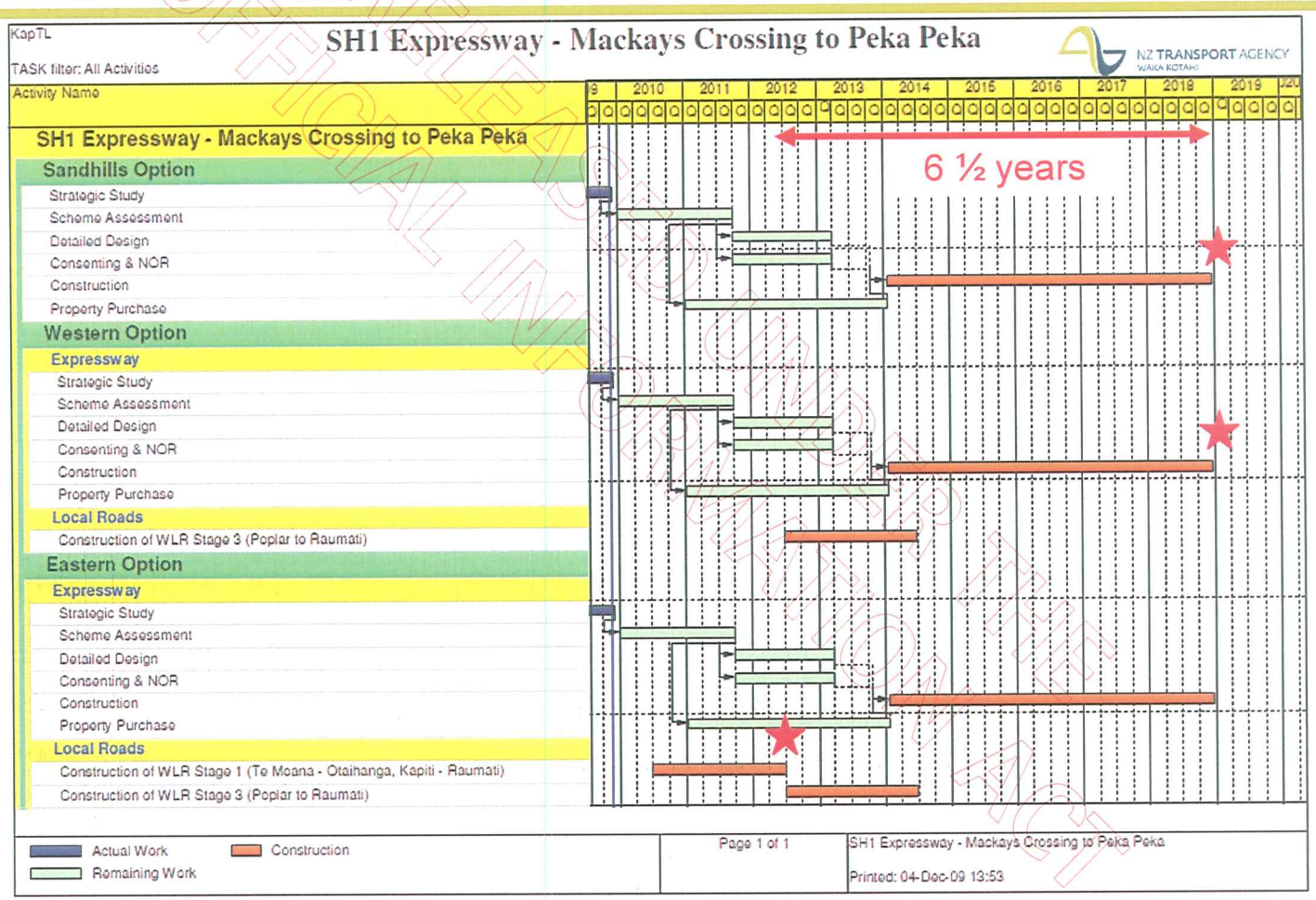
Environmental Impacts

- The Sandhills option has the greatest environmental impact on the dunes followed by the Western option with the Eastern option having the least impact
- The Sandhills option impacts on QE park
- The Sandhills and Western options impact on wetlands to the north of Waikanae

Social Impacts

- The Eastern and Western options provide the least severance through Paraparaumu town centre
- The Western and Sandhills options provide the least severance through the Waikanae township but creates new severance through planned developments
- The Sandhills option would impact on community services and facilities in Raumati (two schools)
- The Sandhills and Western options have the greatest impact on the Nga Manu nature reserve
- The Western and Sandhills options impact on Wahi Tapu land in Waikanae
- All Iwi groups objected to the Sandhills and Western alignments on wahi tapu grounds

Option Comparison - Timing



Option Comparison - Risk

- All expressway options require a new designation
- The expected programme risk is greatest for the Western and Sandhills alignments and would be on the critical path to the delivery of benefits
- The Eastern has the greatest programme risk resulting from property purchase requirements followed by the Western route with the Sandhills route having the least risk
- The expected programme risk to obtain the required consents from KCDC is greatest for the Sandhills route followed closely by the Western route and with the Eastern route providing the least risk
- The Eastern and the Western options are the most challenging to construct due to the overlap with currently live traffic lanes. The Eastern option however has the potential to provide an alternative route to allow construction of the expressway through Waikanae

Option Comparison - Cost

Option	Expressway cost (Expected)	Local Road cost (Expected)	Expected Prof Services Fee	Expected whole package Cost	P95 Whole Package Cost
Sandhills	$340M	0	$40M	$380M	$500M
Western	$340M	$60M	$50M	$410M	$680M
Eastern	$380M	$110M	$60M	$610M	$930M

Option Comparison - Cost

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Cost Risk: Spread P50 to P95 as %age of Expected:

Sandhills: 31%

Western: 43%

Eastern: 21%

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Board discussion

Board discussion

The Western option provides a poor compromise solution as follows:

- The cost is relatively close to the cost of the Eastern option but for an inferior solution
- It has the greatest cost uncertainty
- There are no short term benefits
- It carries similar consenting risk to the Sandhills option
- It displaces nearly as many people as the Eastern option
- It has higher environmental impacts than the Eastern option

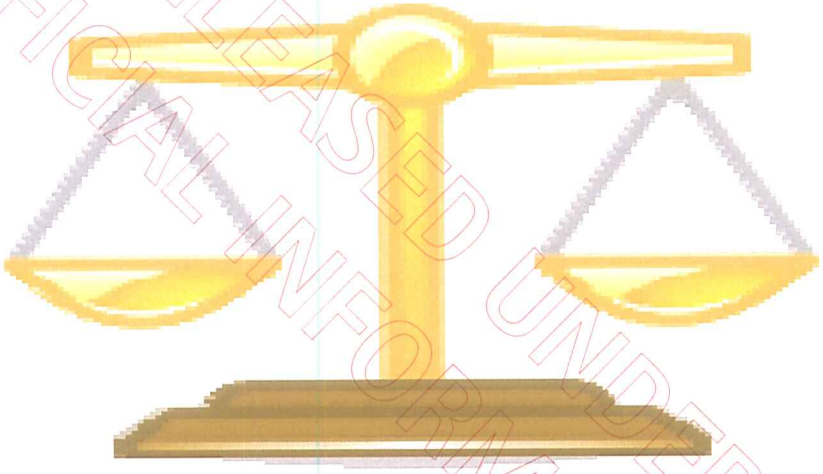
It is therefore recommended that the Western option is discounted

Board discussion

	Sandhills	Eastern
Expected cost	$380M	$550M
Comparable RoNS "National" routes	(or add 2 lanes at river crossing) $380M	(-$50M) $500M
Agglomeration/Economic growth	$380M	(-50M) $450M
Early benefit delivery bonus	$380M	(-$20M) $430M
Consenting risk	Less certain Greater programme risk	More certain Less programme risk

$50M

Board discussion



$50M

Integration into local planning framework

Regional transport benefits

Environmental and social impacts

Timing of benefit delivery

Programme risk

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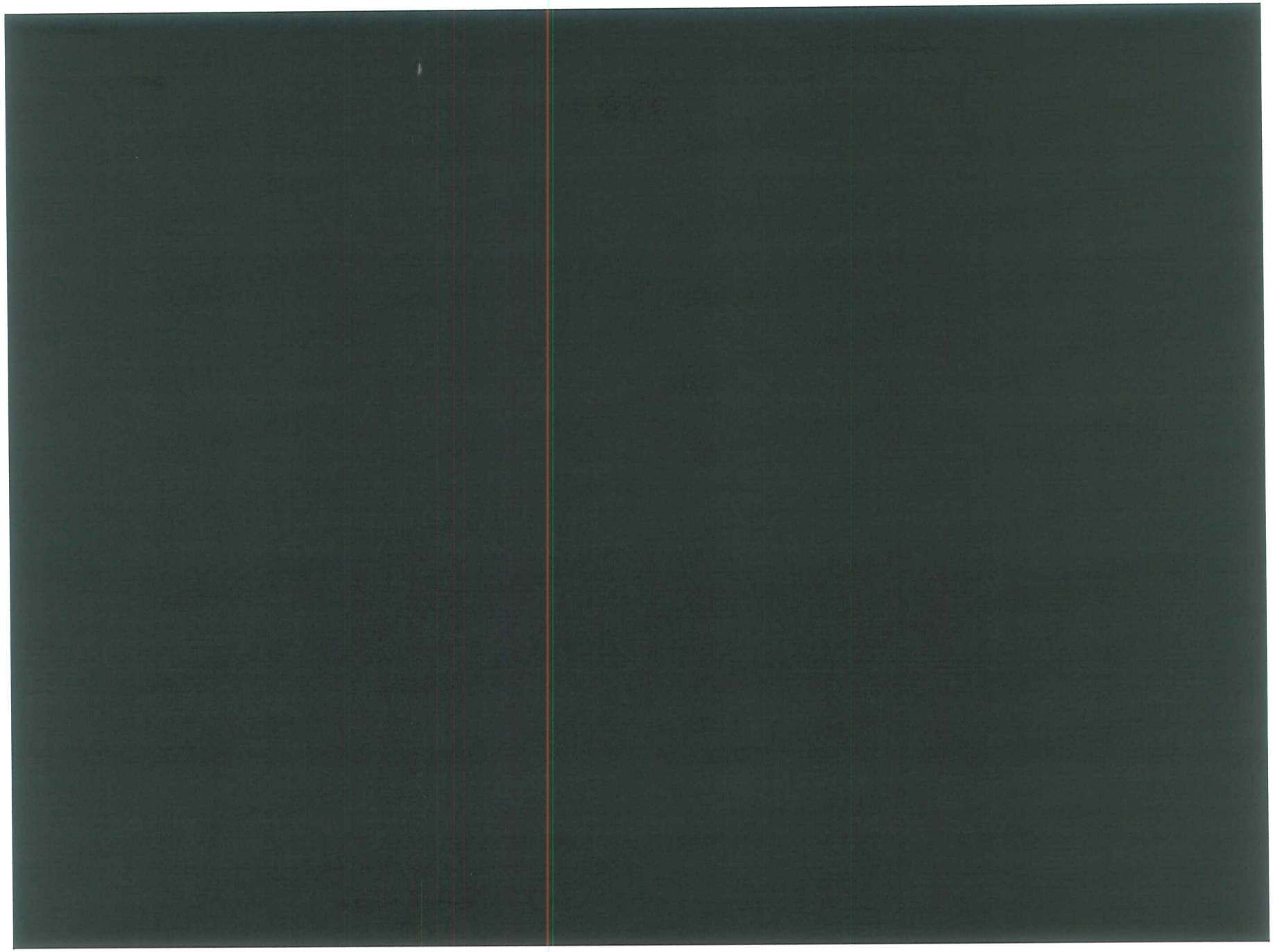
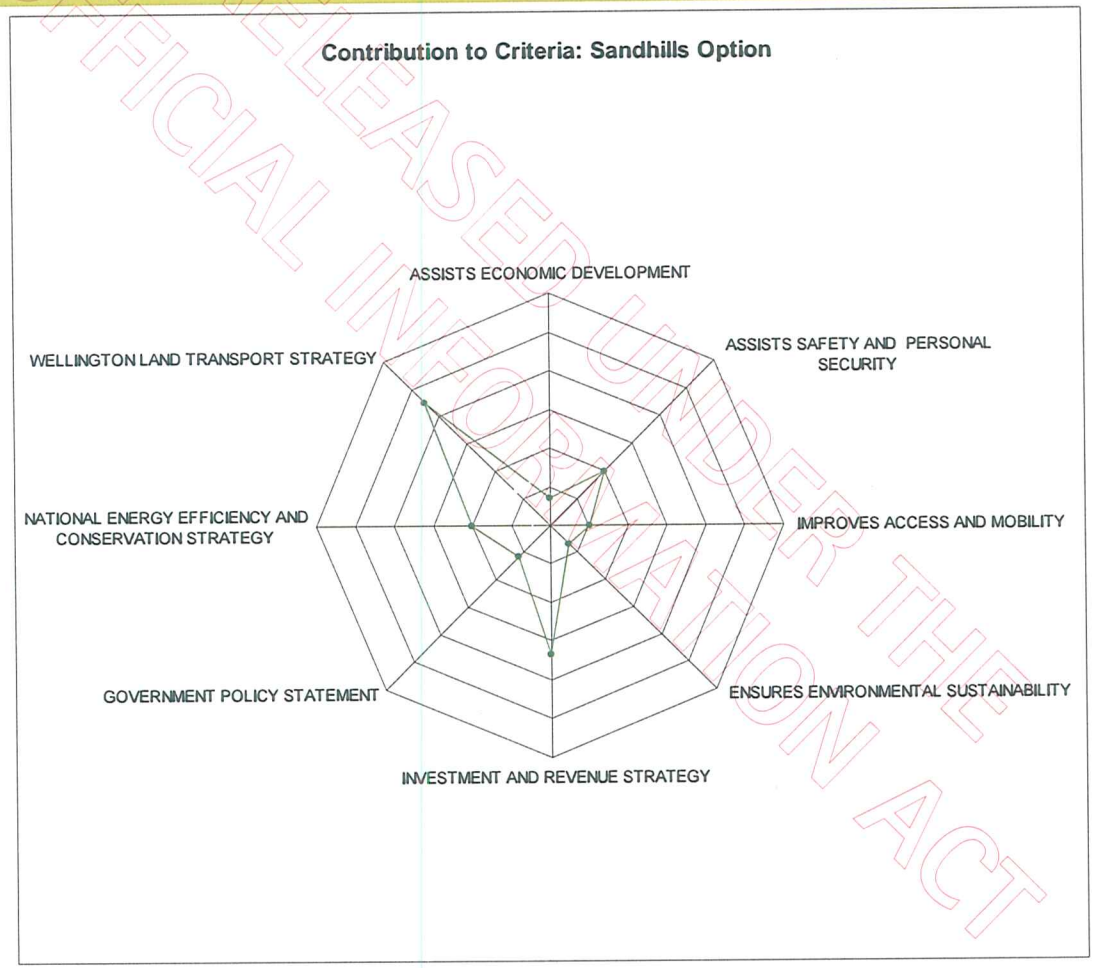


Option Comparison



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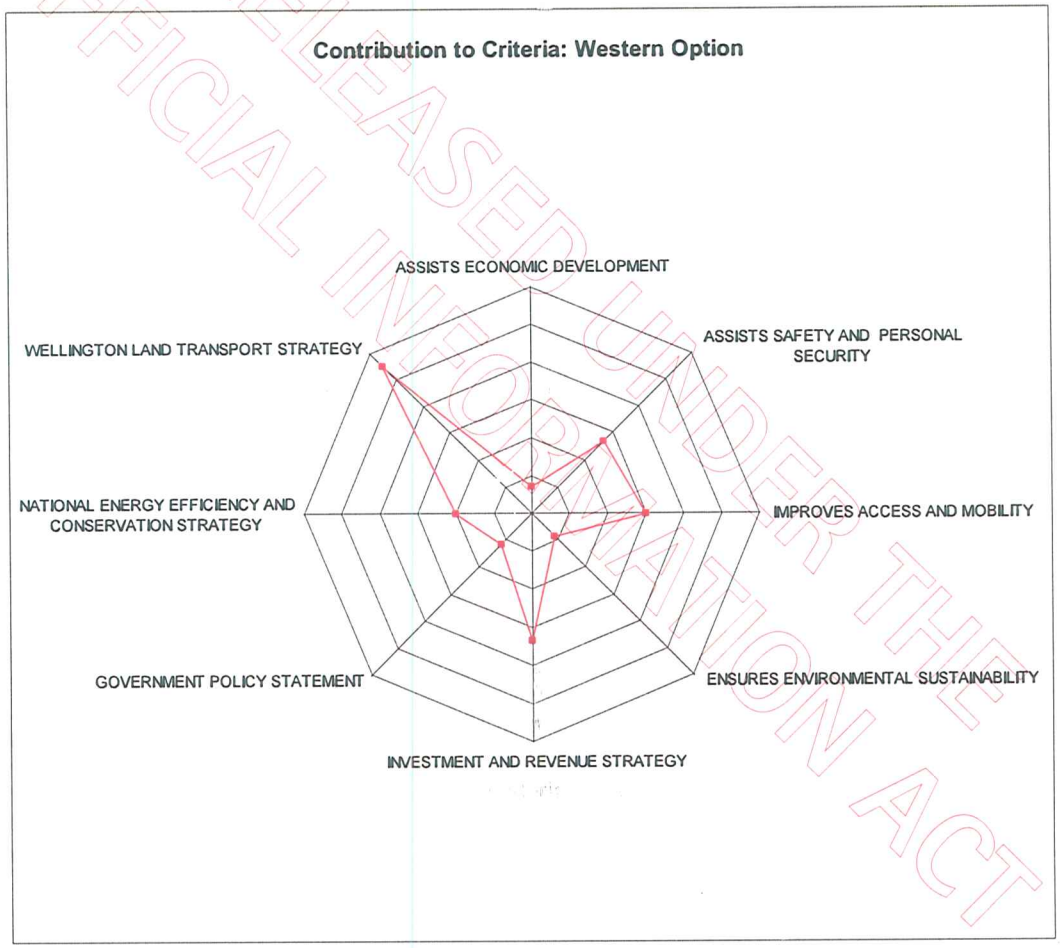

Option Comparison