

4 Option Scoring



Key considerations:

- Road geometry
- Intersection number & type
- Interface with vulnerable road users

	Option 3	Option 4	Option 5	Option 6
Score	3	4	2	3
Weight	9%			
Total	0.3	0.4	0.2	0.3

Opt 3 Free flow	3
Opt 4 1 add signalised intersection	4
Opt 5 2 signalised intersection	2 (this option originally scored a 3 in the workshop, however there was agreement that further assessment would be undertaken based on feedback from participants on safety research of interchanges, which subsequently led to a change in score)

4 Option Scoring



Key considerations:

- Number of Arboretum trees impacted

	Option 3	Option 4	Option 5	Option 6
Score	4	1.5	3	4
Weight	4%			
Total	0.1	0.1	0.1	0.1

Opt 3 Free flow	4 Preferred, less impact on arboretum
Opt 4 1 add signalised intersection	1.5 More impact on front of Arb
Opt 5 2 signalised intersection	3 Concerned about the extent of batter, construction and disturbance footprints

4 Option Scoring



Key considerations:

- Amenity for active travelers

	Option 3	Option 4	Option 5	Option 6
Score	4	3	2	4
Weight	3%			
Total	0.1	0.1	0.1	0.1

Opt 3	4 Preferable as avoids any intersection
Opt 4	3 One intersection or needs a loop
Opt 5	2 Intersections to navigate

4 Option Scoring

Key considerations:

- Modelled Network performance – travel time
- Modelled Network performance – distance traveled
- Modelled Network performance – average speed

Opt 3	3.5 Fastest
Opt 4	2 Significantly slower
Opt 5	3 Second best

	Option 3	Option 4	Option 5	Option 6
Score	3.5	2	3	3.5
Weight	29%			
Total	1.0	0.6	0.9	1.0

Network Operation

Option	2041	Demand	VKT	VHT	Ave. Speed (km/h)		
					Each Peak	Both Peaks	With Virtual Queue
Option 3	AM	19338	62,557	2,814	22.2	27.2	19.6
	PM	18754	65,574	1,897	34.6		
Option 4	AM	19354	63,518	2,761	23.0	26.3	17.2
	PM	18767	59,053	1,901	31.1		
Option 5	AM	19210	61,106	2,875	21.3	26.3	19.1
	PM	18773	64,862	1,912	33.9		

Whole of Life costs added post MCA. Only pavements considered in WoL analysis as other asset elements are considered consistent across options

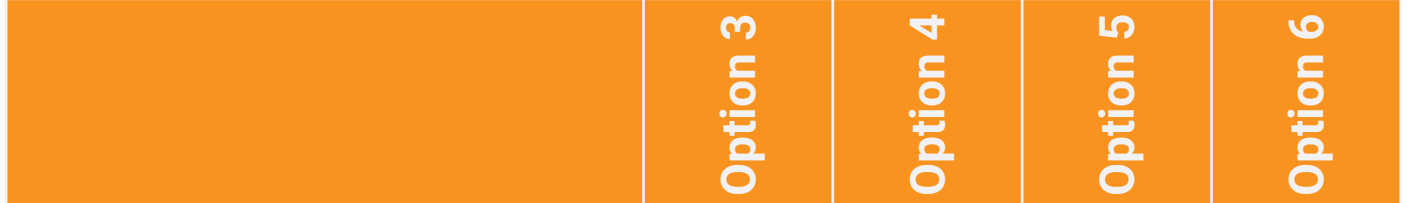
4 Option Scoring

Construction & WoL Costs

Key considerations:

- Capital costs
- Whole of Life Costs

	Option 3	Option 4	Option 5	Option 6
Score	4	1	3	3
Weight	20%			
Total	0.8	0.2	0.6	0.6



4 Option Scoring

Traffic Impacts
during
Construction

Key considerations:

- Staging
- Work required on existing road network

It was concluded during the session that all options would have similar impacts on the Parkway, and as such should all score a 3, meaning that this criteria dropped out of the analysis (ie weighting of 0)

	Option 3	Option 4	Option 5	Option 6
Score	3	3	3	3
Weight	0%			
Total	0.0	0.0	0.0	0.0

4 Option Scoring

Development Potential

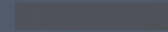
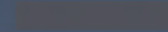
Key considerations:

- Accessibility to future development
- Infrastructure footprint (size and location)

Option 4 has a significant footprint both west of the river and on the Parkway, Option 3 has a significant impact at the parkway interchange, and Option 5 has the smallest footprint impact of all options and best facilitates future access to the east. Option 6 was considered to lie between option 3 & 5 on development potential

	Option 3	Option 4	Option 5	Option 6
Score	3	2	5	4
Weight	10%			
Total	0.3	0.2	0.5	0.4

Mini-Q



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5 Aggregate Results & Rank

	Option 3	Option 4	Option 5	Option 6
Aggregate Score	3.28	1.77	3.47	3.67
Score out of 100	66	35	69	73
TCCS Weightings (out of 100)	67	41	66	73

6 Sensitivity Analysis

Criteria	Option 3	Option 4	Option 5
En1 Ecology + 20%	3.25	1.75	3.52
En1 Ecology - 20%	3.31	1.78	3.41
En2 Heritage + 20%	3.28	1.75	3.48
En2 Heritage - 20%	3.28	1.78	3.45
En3 Visual Impacts + 20%	3.28	1.77	3.47
En3 Visual Impacts - 20%	3.28	1.76	3.46
S1 Road User Safety + 20%	3.28	1.81	3.44
S1 Road User Safety - 20%	3.28	1.72	3.49
S2 Arboretum Plantings + 20%	3.29	1.76	3.46
S2 Arboretum Plantings - 20%	3.27	1.77	3.47

Criteria	Option 3	Option 4	Option 5
S3 Active travel + 20%	3.29	1.77	3.46
S3 Active travel - 20%	3.28	1.76	3.47
Ec1 Network Operation + 20%	3.35	1.81	3.49
Ec1 Network Operation - 20%	3.21	1.72	3.44
Ec2 Construction & Whole of Life Costs + 20%	3.34	1.74	3.47
Ec2 Construction & Whole of Life Costs - 20%	3.22	1.79	3.46
Ec3 Traffic Impacts during Constion + 20%	3.28	1.77	3.47
Ec3 Traffic Impacts during Constion - 20%	3.41	1.83	3.60
Ec4 Development Potential + 20%	3.34	1.81	3.56
Ec4 Development Potential - 20%	3.34	1.79	3.48

Next Steps

- 1 Confirm preferred option
- 2 Compile options report
- 3 Strategic design
- 4 Strategic cost estimate
- 5 Economic analysis of preferred option
- 6 Preferred option report

Thank you



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70 YEARS
OF IMPACT

local people global experience

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