



HUB Cycling Decision Matrix for Preliminary Kitsilano Beach Park Cycle Path Routing

January 29, 2018

Summary

HUB Cycling received a qualitative decision matrix from the Vancouver Park Board concerning the selection of a separated bicycle path route through Kitsilano Beach Park in December 2017. HUB Cycling converted this decision matrix to a weighted decision matrix and then used that as a basis for presenting its own evaluation of the routing alternatives.

The HUB Cycling decision matrix results in us preferring the northernmost routing through the Southern Parking Lot area and the “middle” route through the Northern Greenspace area. The decision matrix and analysis of each factor are presented below.

Background

HUB Cycling, Vancouver Park Board staff, Vancouver Engineering Services staff, and a few community groups such as the Kits Point Residents Association (KPRIA) have been discussing possible ways to improve the safety for people on bikes and pedestrians in and around the Kitsilano Beach Park. These discussions initially focused on a desire-line used by pedestrians and people on bikes at the west end of the park, but grew in scope to include the whole park.

In December 2017, the Park Board staff presented a number of alternatives for creating separate paths for people on bikes and pedestrians to HUB Cycling and the other community groups. Two areas each had three possible routings -- the “Southern Parking Lot” area between Yew St and Arbutus St and Cornwall Ave and the concession stand, and a second “Northern Greenspace” area between Arbutus St and Maple St and McNicoll Ave and Ogden Ave. The Park Board staff presented a preferred routing for each area. The routings are shown on the enclosed map, with the options labelled 1-3 (south parking lot area) and 4-6 (north park area).

Decision Matrices

HUB Cycling and the community groups requested that the Park Board share their decision matrix for selecting the preferred routes, and this was shared in mid-December. HUB Cycling has examined this decision matrix and converted it into an objective decision matrix using numeric weights and scores, based on our understanding of the Park Board perspective and priorities. HUB Cycling then used the same decision matrix and re-evaluated each factor.

Park Board Decision Matrix

The original Park Board decision matrix is shown below:

DRAFT FOR DISCUSSION

Seaside Greenway: Kitsilano Beach Park

Design Decision Matrix

December 20, 2017

	Inset 1: Southern Parking Lot			Inset 2: Northern Greenspace		
	Option - 1	Option - 2	Option - 3	Option - 4	Option - 5	Option - 6
Pedestrian Conflict Potential	High	High	Low	High	Low	Low
Vehicle Conflict Potential	Medium	High	Low	Low	Low	High
# of Parking Spots Lost	0	50	10	0	0	0
Loss of Greenspace	702m2	240m2	501m2	744m2	429m2	0
Park-like User Experience	Yes	No	Yes	Yes	Yes	No
Intuitive Wayfinding	Less	Less	More	Less	More	Less
Distance to Beach	20m	50m	85m	25m	65m	65m
Impact to Boathouse Service Entrance	Yes	No	No	No	No	No
Cost	Medium	High	Medium	High	Medium	Low
Total=	3-G; 2-Y; 4-R	2-G; 1-Y; 6-R	5-G; 3-Y; 1-R	5-G; 4-R	6-G; 2-Y; 1-R	5-G; 4-R

This decision matrix was converted to an objective weighted decision matrix. Each decision factor remained the same, but a weight from 1 (least important) to 3 (most important) was assigned to each decision factor. Further, the descriptive assessments given in the original Park Board decision matrix were converted to an objective measure from 1 (lowest score) to 10 (highest score) according to a standard assessment rubric.

The resulting weighted (modified) decision matrix produced the same results as the Park Board's qualitative decision matrix: preference for the southern route in the Southern Parking Lot area (option 3), and the middle route (option 5) in the Northern Greenspace area.

	Weight	Inset 1: Southern Parking Lot			Inset 2: Northern Greenspace		
		Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Pedestrian Conflict Potential (-)	3	2	2	8	2	8	8
Vehicle Conflict Potential (-)	3	5	2	8	8	8	2
Parking Spots Lost (-)	3	10	2	8	10	10	10
Loss of Greenspace (-)	3	2	8	5	2	5	10
Park-like User Experience (+)	2	10	1	10	10	10	1
Intuitive Wayfinding (+)	2	4	4	7	4	7	4
Distance to Beach (-)	2	8	5	2	8	5	5
Impact to Boathouse Service Entrance (-)	1	1	10	10	10	10	10
Cost (-)	3	5	1	5	1	5	10
Total		5.3	3.4	6.8	6.2	7.4	6.8
Weight is the relative importance of the factor. Use 1, 2, or 3 where 3 is very important and 1 is least important		The option scoring is based on a scale of 1 to 10 where 1 is "bad" and 10 is "excellent" in context of the factor. So a 10 in "Pedestrian Conflict Potential" would be no potential at all, but a 10 in "Park-like User Experience" is an awesome park-like experience.					
		Scoring rubric					
		"Negative" (-) factors				"Positive" (+) factors	
		High	2	High	8		
		Medium	5	Medium	5		
		Low	8	Low	2		
		Yes	1	Yes	10		
		No	10	No	1		

HUB Cycling Decision Matrix

HUB Cycling then took the weighted decision matrix, kept the same decision factors, and the same weights, but reassessed each factor to establish its own decision matrix. The resulting decision matrix is shown below. HUB Cycling agreed with the preference for Option 5 in the Northern Greenspace area, but preferred Option 1 in the Southern Parking Lot area. The differences in assessments between HUB Cycling and the Park Board for the Southern Parking Lot area are explained beneath the decision matrix.

	Weight	Inset 1: Southern Parking Lot			Inset 2: Northern Greenspace		
		Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Pedestrian Conflict Potential (-)	3	2	2	5	2	5	8
Vehicle Conflict Potential (-)	3	5	8	5	8	8	1
Parking Spots Lost (-)	3	10	2	8	10	10	10
Loss of Greenspace (-)	3	2	8	5	2	5	10
Park-like User Experience (+)	2	10	10	1	10	10	1
Intuitive Wayfinding (+)	2	8	8	2	5	8	2
Distance to Beach (-)	2	8	5	2	8	5	2
Impact to Boathouse Service Entrance (-)	1	1	10	10	10	10	10
Cost (-)	3	5	1	5	1	5	10
Total		5.7	5.4	4.7	6.2	7.0	6.2
Weight is the relative importance of the factor. Use 1, 2, or 3 where 3 is very important and 1 is least important		The option scoring is based on a scale of 1 to 10 where 1 is "bad" and 10 is "excellent" in context of the factor. So a 10 in "Pedestrian Conflict Potential" would be no potential at all, but a 10 in "Park-like User Experience" is an awesome park-like experience.					
		Scoring rubric					
		"Negative" (-) factors		"Positive" (+) factors			
		High	2	High	8		
		Medium	5	Medium	5		
		Low	8	Low	2		
		Yes	1	Yes	10		
		No	10	No	1		

Southern Parking Lot area decision factor assessment

Pedestrian Conflict Potential: We left the “High” conflict scores for Options 1 and 2, but reduced the score for Option 3 to “Medium” due to the significant pedestrian traffic crossing at Yew, the Arbutus/Cornwall corner, and along Arbutus itself.

Vehicle Conflict Potential: We completely disagreed with the Park Board assessment of Options 2 and 3. Option 2, the south-of-tennis-court route only crosses traffic at the Boathouse access road. That is a very low conflict potential. On the other hand, Option 3 is required to cross anywhere from one to three beach parking lot accesses as well as the Boathouse access road. That is a high conflict potential, but we left it scored as “medium”.

Parking Spots Lost: No change in scoring, this is already an objective measure.

Loss of Greenspace: No change in scoring, this is already an objective measure.

Park-like User Experience: HUB Cycling disagreed with the Park Board assessment, particularly concerning

Options 2 and 3. Option 1 and Option 2 have similar park-like experiences, with the exception of the final routing around the tennis courts (north-side vs south-side). The scoring reflects this. On the other hand, Option 3 keeps the people on bicycles completely out of the beach park, and is not a park-like experience at all.

Intuitive Wayfinding: HUB Cycling interpreted this decision factor as “how easy is it to tell you’re going where you want to go”. Given most park users want to go to the park, this means that if the path is going into the park, it’s intuitively going where you want. Consequently, high scores were awarded to Options 1 and 2 which do just that. Option 3, however, does not take you into the park, nor does it seem to go along the “seawall”, and so scores low on this factor.

Distance to Beach: No change in scoring, this is already an objective measure.

Impact to Boathouse Service Entrance: No change in scoring, this is already an objective measure.

Cost: No change in scoring, this is already an objective measure.

Summary

HUB Cycling favours Option 1, followed by Option 2 in the Southern Parking Lot area. The difference in assessing the decision factors between HUB Cycling and the Park Board are entirely in the scoring of the Pedestrian Conflict Potential, Vehicle Conflict Potential, Park-like User Experience, and Intuitive Wayfinding.

HUB Cycling agrees with the Park Board in favouring Option 5 in the Northern Greenspace area. Although Option 6 scores as highly as Option 4 in this decision matrix, the on-street route is very undesirable.

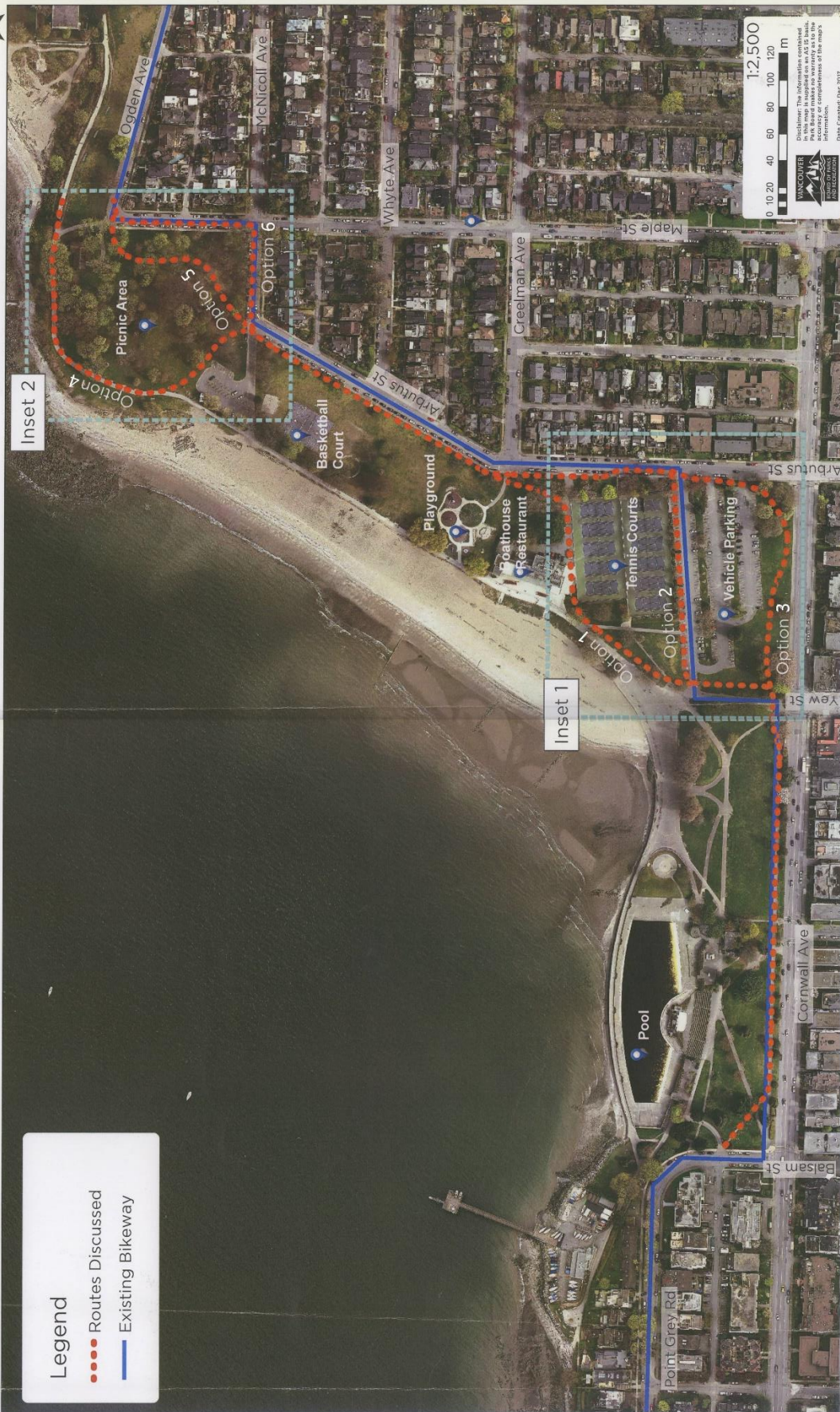
Sincerely

Jeff Leigh
Chair, Vancouver UBC Local Committee
HUB Cycling

Lisa Slakov
Chair, Seaside Greenway Working Group
HUB Cycling

Enc: Path Options Presented by Park Board Staff

DRAFT: Kitsilano Beach Park Bike Path - Options Discussed



DRAFT: Kitsilano Beach Park Bike Path - Options Discussed

Inset 1:



Inset 2:



Legend

- Routes Discussed
- Existing Bikeway



Disclaimer: The information contained in this map is supplied for informational purposes only. It is not intended to be used for navigation or other purposes. The City of Vancouver is not responsible for any errors or omissions in the information provided. Date Created: Dec 2017