CITY OF
YELLOWKNIFE

YELLOWKNIFE
Aquatic Centre

Concept Design Report
November 2020

Appendix B:

Site Selection Recommendation

TAYLOR ARCHITECTURE GROUP

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To:	City of Yellowknife	Project:	Yellowknife Aquatics Centre
Attn:	Grant White	Project no.	19-022
Cc:	Scott McFadyen, Colliers Project Leaders	Location:	Yellowknife, NT
From:	Melani Korver	Date:	July 2, 2020

Re: Recommendation for Site Selection

Recommendation

The Aquatics Centre Predesign Plan recommended two sites for consideration for the new Aquatics Centre in Yellowknife:

- Site 1: east of existing Ruth Inch Memorial Pool (old Pitch and Putt site)
- Site 2: south of the Fieldhouse & Multiplex

Based on the site comparison undertaken by Taylor Architecture group and described below, TAG strongly recommends that the **existing RIMP site is selected for the new Aquatics Centre in Yellowknife**. This site encompasses lower financial risk to the City in terms of foundation costs, and greater opportunities in terms of complimentary amenities and accessibility to the public.

Site Selection Process

In order to compare the technical feasibility of each site, the City of Yellowknife retained three study reports for each site:

- Desktop Geotechnical Evaluation (prepared by Tetra Tech, submitted May 20, 2020)
- Phase 1 Environmental Site Assessment (prepared by Tetra Tech, submitted May 2, 2020)
- Preliminary Traffic and Parking Study (prepared by Creative Transportation Solutions, submitted June 29, 2020)

Taylor Architecture Group used the information contained in these three reports to develop a list of criteria that were scored and weighted in a site selection matrix, comparing the two sites. Additional criteria that TAG felt differentiated the two sites were also captured in the matrix. The comparison shows that the Ruth Inch Memorial Pool site scored higher in every category (Geotechnical Report, Environmental Report, Traffic Report and Additional Criteria), resulting in the following total weighted scores:

Multiplex/Fieldhouse Site Score	75
RIMP Site Score	103

Please see the attached site selection matrix for detailed information regarding the evaluation.

Sincerely,

Melani Korver
melani@tagyk.com
TAYLOR ARCHITECTURE GROUP

Yellowknife Aquatics Centre - Site Selection Matrix

Score:
1 = poor
2 = fair
3 = good

Total = weight x score

Criteria	Multiplex/Fieldhouse Site Criteria Description	RIMP Site (pitch & putt)	Scoring Reasoning	Criteria Weight	Multiplex/Fieldhouse Score	Multiplex/Fieldhouse Total	RIMP Site Score	RIMP Site Total
Geotechnical Report								
Surface conditions	Mix of bedrock outcrop in NW corner, to organic material and vegetation. Drainage ditch runs through the east end of the site.	Site largely covered by exposed bedrock: Two large rock outcrops and some sand in north part of site	Consistent surface conditions across site is preferable; exposed bedrock is preferable	2	2	**4**	3	**6**
Bedrock profile	Bedrock ranges from outcropping at NW corner of site (max 8m above parking lot elevation), to at least 9m deep (based on borehole samples). Suggested that bedrock may dip steeply under a portion	Two rock outcrops (max. 3m above parking lot elevation), and ranging from 0.3m-2.7m below grade elsewhere on site (based on borehole samples)	Bedrock close to the surface is preferable; low exposed bedrock is preferable (less blasting required)	2	2	**4**	3	**6**
Bearing capacity of soil	Low	N/A (no soil; bedrock has highest bearing capacity)	Soil with high bearing capacity, or exposed bedrock is preferable	2	1	**2**	3	**6**
Groundwater present	Yes - in drainage ditch at east end of site - acts as path for groundwater flow through culverts under Kam Lake Road and through the site towards the southeast. Drainage ditch will require relocation.	Yes - at lowest point between rock outcrops (this likely acts as a drainage path for groundwater flow towards frame lake). Note manhole located at west end of site - may require relocation.	Minimal groundwater is preferable	3	1	**3**	3	**9**
Anticipated Permafrost	none	none	No permafrost is preferable	3	3	**9**	3	**9**
Foundation Options	Rock socketed steel piles or strip and spread concrete footings, depending on depth to bedrock	Shallow foundation: Strip and spread concrete footings to bedrock May also use rock socketed steel piles or a mix of the two types	Shallow foundation is preferable (most cost effective)	3	2	**6**	3	**9**
Additional testing required	Recommend additional boreholes drilled at centre and east portions of site	Recommend additional boreholes drilled along trail running through the two outcrops	No additional testing is preferable	1	2	**2**	2	**2**
Subtotal						**30**		**47**
Environmental Report								
Historical spills	historical petroleum hydrocarbon spill at Fieldhouse parking lot, directly east of site	historical petroleum spill at Esso gas station, 90m SE of site	No historical spills, or spills located offsite are preferable	2	2	**4**	3	**6**
Additional testing required	Recommend additional testing	Recommend additional testing	No additional testing is preferable	1	2	**2**	2	**2**
Subtotal						**6**		**8**
Traffic Report								
Traffic adjustments	None	Westbound approach on Forrest Drive would be near capacity with site traffic added - resolve with westbound left	No traffic adjustments are preferable	2	3	**6**	2	**4**
Parking capacity	Parking defecit: -4 stalls during weekdays; -78 stalls during Satudays	Parking surplus: +37 stalls during weekdays; +13 stalls during Saturday	Adequate or surplus parking is preferable	3	2	**6**	3	**9**
Pedestrian connectivity	Limited sidewalk access at Kam Lake Rd/Old Airport Rd intersection, and only partial sidewalk along Kam Lake Rd. Site is currently geared towards arrival by vehicle.	Site is directly adjacent to Frame Lake Trail system, and Franklin Avenue (full sidewalk)	High degree of pedestrian connectivity is preferable	2	2	**4**	3	**6**
Cycling connectivity	Cycling route on Kam Lake south of Woolgar	Cycling route on Franklin south of Forrest and Forrest east of Franklin	High degree of cycling connectivity is preferable	2	2	**4**	3	**6**
Transit connectivity	Near westbound stop for Route B and Route B express	Near northbound and southbound stops for Route A and Route B (2 routes)	Served by multiple routes is preferable	2	2	**4**	3	**6**
Subtotal						**24**		**31**
Additional Criteria								
Proximity to other recreational and cultural amenities	Multiplex, Fieldhouse, Arctic Indigenous Wellness Camp	YK Community Arena, YK Curling Centre, RIMP building, tennis courts, volleyball courts, McNiven park & playground, Frame Lake Trail	Close proximity to other facilities is preferable	2	2	**4**	3	**6**
Impact on existing site activities	None	Pitch and putt removed (not currently used), relocation of recycling containers, relocation of trail running through the site.	Minimal impact on existing site activities is preferable	1	3	**3**	2	**2**
Additional Site Work	Parking lot between Fieldhouse and Site is unpaved. Consider paving.	Parking lot requires levelling and resurfacing	Minimal additional site work is preferable	2	2	**4**	2	**4**
Views from the site/new building	Potential views to Kam Lake Road, concrete plant, residential neighbourhood and Multiplex/Fieldhouse. Potential views to forested area to the east.	Potential views to Frame Lake and trail system, RIMP building, Franklin Ave	Views to natural settings are preferable	1	2	**2**	3	**3**
Site Context & Architectural Potential	Multiplex & Fieldhouse are boxy, industrial buildings that do not necessarily respond to site; site is geared towards arrival by vehicle.	RIMP, Curling Centre and Arena are lower scale buildings. Proximity to frame lake trail requires a more "human scale" building design	Architectural potential is somewhat subjective. RIMP site has more context (architectural and landscape) that it must respond to, whereas Fieldhouse site is more of a "blank slate" site	1	2	**2**	2	**2**
Subtotal						**15**		**17**

	Multiplex/Fieldhouse	RIMP Site
Total Weighted Score	**75**	**103**

(highest score wins)