Feedback from Thames River Anglers regarding “One River” Environmental Assessment
Stage #2 – Preferred Alternatives for Springbank Dam

London city hall: After years of debate, council unanimously votes to decommission busted Springbank Dam

BY MEGAN STACEY Updated: January 17, 2018

The Springbank Dam on the Thames River in London. (DEREK RUTTAN, The London Free Press)

SHARE

Let the river run.

ADJUST

The Springbank Dam question was decided for good on Tuesday night after London city council voted unanimously to decommission the controversial west-end dam.

COMMENT

What to do with the broken dam — busted since 2008 when bolts on a brand-new gate snapped off during a test — has dogged London for a decade, ultimately becoming one of the most hotly contested issues in recent city history.

PRINT

Coun. Anna Hopkins, whose ward includes the dam, was clearly breathing a sigh of relief after the vote.

"It's exciting that we be part of this movement to rebuild a healthy river in an urban area — for the citizens, for the wildlife, for the fishers, for First Nations," she said.

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Outcome of Stage 1

Stage 1 of the One River EA focused on making a decision on the future of the Springbank Dam.

It was complete in January 2018 with the selection of "Free Flowing River" Alternative for the Springbank Dam.

The preferred alternative was selected through a rigorous evaluation of each of the alternatives on the basis of their net social/cultural, environmental, technical and economic impacts.

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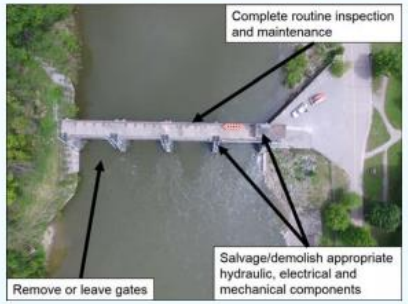
Stage 2 Springbank Dam Decommissioning Alternatives

Alternative 1: Do Nothing



Alternative 2: Partial Dam Removal

Alternative 3: Full Dam Removal

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Relative Cost of Design Alternatives for Dam Decommissioning and Forks of the Thames

Dam Decommissioning

Alternative 1: Do Nothing

Alternative 2: Partial Dam Removal ($1M-$5M)*

Alternative 3: Full Dam Removal ($10M-$20M)*

*Costs are initial estimates only. More detailed costs will be estimated as concepts are further developed.

Forks of the Thames: How will this work be funded?

"The Ribbon of the Thames" conceptual plan was endorse by City Council in January 2016 but the related projects are not currently included in the City of London's multi-year budget. In order to proceed, any Forks of the Thames projects work would need to be approved by Council and included in future multi-year budget.

The City will work with the London Community foundation in an effort to canvas for prospective provide donors.

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Stage 2 Alternatives Preliminary Scoring Summary

	Natural Environment	Social/ Cultural	Technical & Economic	Average
Springbank Dam				
Alternative 1: Do Nothing	2.8	3.0	4.3	3.4
Alternative 2: Partial Dam Removal	3.7	4.1	4.2	4.0
Alternative 3: Full Dam Removal	4.8	3.9	2.7	3.8
Forks of the Thames				
Do Nothing	2.7	2.3	3.7	2.9
Ribbon				
Alternative 1: Walkway Supported by Piers in the Thames	1.7	3.6	2.0	2.4
Alternative 2: Suspended Walkway	2.7	4.0	2.7	3.1
Alternative 3: Kensington Bridge Extension and Lookout	3.0	2.9	2.2	2.7
Alternative 4: Land Based Walkway	2.7	3.1	2.8	2.9
Terraces				
Alternative 1: Hardscape	2.0	4.1	2.3	2.8
Alternative 2: Softscape	3.2	4.0	3.1	3.4
River Management Plan				
Alternative 1: Existing Conditions	2.7	1.9	2.9	2.5
Alternative 2: Naturalized River Corridor	4.5	3.1	3.4	3.7
Alternative 3: Strategic Access and Use in the River Corridor	3.8	4.3	3.4	3.8
Alternative 4: Enhanced Active Use and Access to the River Corridor	2.2	4.4	2.9	3.1

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Order of Magnitude Cost Analysis

(Preliminary Design Estimate)	*Low Range*	- *High Range*
Ribbon Overlook	$ 4,870,000	
General Requirements 15%	$ 730,000	
Construction Fee 5%	$ 240,000	
Consultant Fees 15%	$ 730,000	
Estimating Contingency 15%	$ 730,000	
Contingency Allowance 20%	$ 0	$ 970,000
Ribbon Overlook Total	*$7,300,000*	*$ 8,270,000*
Site Development		
Demolition	$ 17,000	
Excavation, Earthwork, Grading	$ 344,300	
Paving	$ 301,290	
Walls and Steps	$ 970,250	
Planting/ slope stabilization	$ 74,230	
Site Furnishings	$ 177,500	
Misc. Site Development allowance	$ 100,000	
Protect in Place: Sewers,Trees, Lawn, One Dundas	$ 97,000	
Irrigation allowance	$ 100,000	
Lighting allowance	$ 250,000	
Site Development Sub-Total	$ 2,431,500	
General Requirements 15%	$ 364,700	
Construction Fee 5%	$ 121,500	
Consultant Fees 15%	$ 364,700	
Estimating Contingency 15%	$ 364,700	
Contingency Allowance 20%	$ 0	$ 486,300
Site Development Total	*$ 3,647,100*	*$ 4,133,400*

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TABLE A - SUMMARY OF DAM REMOVAL PROJECT COSTS AS COMPLETED BY GSS ENGINEERING CONSULTANTS LTD.

February 1, 2019

ORIGINAL/EXISTING DAM	FOLLOWING DAM REMOVAL	DESCRIPTION OF PROJECT	ACTUAL COST TO REMOVE DAM	ESTIMATED COST TO REPAIR DAM
		Removal of **Rotary Park Dam** on Armstrong Creek in Markdale. (2017) Removal of aging, concrete Rotary Park dam on cold water stream. Project included 80 m of new stream channel including pool/riffle habitat and, overhead wood cover. Removal of dam removes migration barrier for brook trout and reduces stream temperatures during the summer. Old pond area filled and landscaped. (15-026)	Construction Cost to remove Dam was **$111,000** plus HST. Main Components: – Actual Dam Removal - $35,000 – Fill pond area – pit run gravel - $55,000 – Rebuild natural stream - $16,000 – Topsoil and seed restoration - $8,000	Estimated Cost to upgrade/repair dam to LRIA requirements, and provide fish passage for brook trout, would have likely cost 150,000 to $300,000
		Removal of **Hamel Pond Dam** on Otter Creek in Mildmay (2016). Removal of deteriorated concrete dam in downtown Mildmay. Project removed barrier to fish migration and reduced summer stream temperatures to improve brook trout and brown trout habitat. Design included restoration of 160 m of stream channel in former headpond including bioengineering applications and addition of spawning gravel.	Construction Cost to remove Dam was **$70,000** plus HST. Main Components: – Mobilize/Demobilize and temporary access lane - $14,000 – Actual Dam Removal - $28,000 – Large Rip Rap - $17,000 – Channel restoration, topsoil/seed $11,000	Dam not repairable. Estimated cost to build new dam (to meet LRIA requirements) would have likely cost $300,000 to $800,000.
		Removal of **Haines Dam** on Beaver River in Thornbury (2016). Large concrete structure (60 m wide by 2 m tall) was partial blockage to salmon and trout migration. Dam was in deteriorated condition and provided no flood control benefit. Project included partial removal of cobble sediment in head pond placement of armour stone for 130 m length of west bank. Project also included restoration of public trail access and repaving of adjacent municipal road. (14-036)	Construction Cost to remove Dam was **$370,000** plus HST. Main Components: – Actual Dam Removal - $150,000 – Access road and township road restoration - $50,000 – West shore rip rap - $115,000 – Partial sediment removal - $5,000	Dam had been repaired in 1970's to try and stop leakage at abutments. Estimated cost to repair dam to LRIA Standards would have likely ranged from $500,000 to $1,000,000 before shoreline protection considered. However, dam would not likely have been repairable due to deteriorated state. Cost of a new dam meeting LRIA requirements would likely have been $2M to 3M.
		Removal of **Lockerby Dam** on the North Saugeen River (2015). Removal of aging, concrete Lockerby Dam on North Saugeen River. Dam owner was Saugeen Valley Conservation Authority and did not provide flood control function. Placement/ removal of flashboards health and safety issue. Dam was a fish migration barrier. Project included two vortex weirs upstream of dam to enhance fish habitat in new channel.	Construction Cost to remove Dam was **$129,000** plus HST. Main Components: – Actual Dam removal - $29,000 – Access road on south side of Dam - $25,000 – Rip rap of riverbanks and other restorations - $51,000 – Construction of vortex weir (fish habitat) - $24,000	Structural condition of dam was reasonable. However, there was a health and safety issue for manual placement and removal of flash boards each spring and fall. Cost to provided safer system of install and remove the flash boards would likely have been in the range of $200,000 to $500,000 and require LRIA approval

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SUMMARY OF DAM REMOVAL PROJECTS BY GSS ENGINEERING CONSULTANTS LTD.

ORIGINAL/EXISTING DAM	FOLLOWING DAM REMOVAL	DESCRIPTION OF PROJECT	ACTUAL COST TO REMOVE DAM	ESTIMATED COST TO REPAIR DAM
		Modifications to the **Memorial Park (Listowel) Dam** on the Middle Maitland River in Listowel. (2015) Project featured part removal of existing concrete dam and restoration of headpond area. Project included construction of new wetland area and stream enhancement completed including construction of new riffle and pools and new rocky ramp to aid fish migration through dam. (14-040)	Construction Cost to remove small portion of Dam and complete river restoration work was **$176,000** plus HST. Main Components: – Partial Dam removal - $30,000 – Downstream Channel Naturalization - $36,000 – Fill Headpond area, topsoil and seed - $90,000 – Wetland Creation and Trails - $20,000	Existing dam structurally sound. However, dam serves no flood control purpose and current community vision does not support/include stagnant headpond conditions. Estimated cost to remove current dam is $100,000. Cost to construct a new dam of similar width, height etc would likely be $300,000 to $500,000.
		Removal of **Truax Dam** in Walkerton on the Saugeen River. Scheduled for 2019. This project will remove a 60 m wide, 2.5 m high concrete dam on the Saugeen River. Removal of the dam will restore full passage for migratory trout and salmon as well as native warm water fish species including bass, northern pike and muskellunge as well as a wide variety of suckers, cyprinids etc. (17-066)	Project tendered in fall, 2018. Tendered Construction Cost to remove Dam is **$550,000** plus HST. Main Components: – Actual Dam removal - $255,000 – Remove existing fishway - $80,000 – West side access road - $45,000 – New Public Space and Rip Rap - $170,000	Dam condition has deteriorated to point that repairs are not feasible. Core of dam is wood poles and stone with concrete overlay. Based on 2.5 m height, and 100 m wide span, cost to replace with new dam likely $3 M to $4 M. New dam would require new fish ladder that would require long term maintenance and operational budget.
		Removal of **Petun Dam** on Black Ash Creek near Collingwood. Scheduled for 2019. Proposed project includes removal of large earthen dam on upper cold water tributary of Black Ash Creek near Collingwood. Will remove major source of summer time stream heating and provide new brook trout stream habitat. Project to be tendered in spring, 2019. (15-051)	Estimated Construction Cost to remove Dam is **$90,000** plus HST. Main Components: – Actual Dam Removal - $15,000 – New stream channel below dam - $10,000 – Regrade river banks - $25,000 – Sediment management - $30,000 – Restore stream in headpond - $10,000	Cost to rebuild new earthen dam with concrete spillway and emergency flood overflow likely >$500,000. Steep, downstream river banks major issue. LRIA approval would be required.

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Thank you.