



Project Charter

Gardom Pond Mitigation Project

Version No. 3, December 9, 2016

Project Phase:	Phase 1: Construction Cost Estimate, Phase 2: Stakeholder Consultation, Phase 3: Loan Authorization Bylaw Referendum, Phase 4: Design, Procurement and Construction
Project Service Area:	Pender Island Parks and Recreation
Client Department Name / Division Name:	Regional Parks
Budget / Account Code:	CX.029.2023.10 or .66
Contract No.:	16-1856
Prepared By:	Ben Martin, P.Eng, Senior Project Engineer

PROJECT OVERVIEW

Gardom Pond dam is located on North Pender Island, is of earthfill construction, is approximately 40 m long and 4 m in height and retains water in a small 3/4 ha reservoir.

The CRD is one of 6 water license holders (WLH) which authorizes water storage; the 5 remaining water license holders are private property owners who benefit from the water frontage provided by the pond. The Dam Safety Office has provided notice that the dam no longer meets provincial standards and remedial works are required. Currently the 6 WLH's are not in agreement on the method and cost estimates of remediation.

The dam was built in approximately 1978 and the BC Dam Safety Branch has classified the Downstream Failure Consequence as 'High' in 1997. At the October 13, 2016 meeting the CRD Board approved the following approach for the Gardom Pond dam.

1. That a financial plan be prepared to remediate the dam, which would include:
 - a) Completing the required works to update the dam to provincial standards including construction of a spill-way;
 - b) Establishing a cost sharing formula whereby 1/6 of the costs would be apportioned to the 5 private water licence holders and 4/6 to the Pender Island Parks and Recreation Service, which would seek elector approval from residents within the entire service area to borrow this share of the funds;
 - c) Confirming the approval of the Southern Gulf Islands Electoral Area Director to support funding of the remaining 1/6 of the capital project from the Electoral Area Community Works Fund, and;
 - d) Estimating any required annual maintenance cost for the pond area.
2. That a loan authorization bylaw be prepared for the purpose of completing the capital works listed in 1. above; and
3. That a meeting with the water licence holders be held to propose this option and request their approval to proceed as listed above.

Pursuant to the statutory obligations under Section 21 of the Water Act the WLH are responsible for the condition of the dam. The Province of BC's Ministry of Forests, Lands and Natural Resources (FLNRO) has requested that the WLH address the dam safety deficiencies identified at the Gardom Pond dam.

The remediation of the dam is to include the existing spillway alignment and upon completion of the remediation works all water licenses are to be transferred to the CRD.

CORPORATE PROJECT PURPOSE

Ensure the safety of the general public by championing a project in which all 6 WLH's are in agreement to satisfy the requirements of the BC Dam Safety Branch.

CRITICAL SUCCESS FACTORS

- Satisfying the requirements of the BC Dam Safety Branch
- Confirm legal mechanism of water license transfer
- Joint agreement amongst the 6 WLH with respect to dam management and specifically on the remediation program and cost sharing formula
- Establishment of a loan authorization bylaw to fund the remediation program and annual maintenance
- Effective communication with stakeholders
- Delivery of a clear public message

SCOPE

In Scope	Out of Scope
Phase 1: Construction Cost Estimate	Procuring new engineering study (develop EE Capital Cost estimate based on existing studies)
Phase 2: Stakeholder Consultation	
Phase 3: Loan Authorization Bylaw Referendum	
Phase 4: Design, Procurement and Construction	Hire new consultant (continue with AECOM)
Identification of annual dam maintenance and renewal cost	Hire new consultant (continue with AECOM)

PROJECT DELIVERABLES

No.	List of Project Deliverables	Acceptance Criteria
1	Construction Cost Estimate	List of requirements, associated costs (Class D Estimate +/- 30%), EE Capital Cost Estimating form
2	Stakeholder Consultation Plan	Sponsor approval, communication approval
3	Loan Authorization Bylaw Referendum Support	Legislative approval
4	Design, tender and construction	Design drawings, tender ready specifications, tender, award and monitoring of construction

TIMELINES

Milestones, etc.	Due Date
Construction Cost Estimate	November 2016
Stakeholder Consultation <ul style="list-style-type: none"> • WLH Joint Meeting 	November 2016
Loan Authorization Bylaw Referendum	Summer 2017
Design development and contract document development	Summer 2017
Tender, award and construction	Fall 2017

BUDGET

Cost Explanation	Amount (\$)	Level of Accuracy	Funding Source
Phase 1: Construction Cost Estimate	EE Capital Cost estimate to be developed		
Phase 2: Stakeholder Consultation			
Phase 3: Loan Authorization Bylaw Referendum			
Phase 4: Design, Procurement and Construction			

ADDITIONAL ASSUMPTIONS / CONSTRAINTS

No.	Description
1	Capital funds will be available for this project in 2016/2017
2	The 6 WLH will agree with process
3	Failure of approval of Alternative 2 (via Project Charter or Referendum) results in Alternative (ref. September 21, 2016 Report to Electoral Area Services Committee meeting)
3	Potential disruption to local WLH's during construction

INTERRELATIONSHIPS WITH OTHER PROJECTS / PROGRAMS

- CRD Regional Parks - Brad Drew (Background information)
- IWS Inspection - Fraser Hall (responsible for dam inspections)

PROJECT TEAM

Role	Team Member	Anticipated		Contact Made?
		Timeframe of Work	Hours Required	
Project Sponsor	Larisa Hutcheson/CRD			Yes
Budget Manager	Peggy Dayton / CRD			Yes
Project Manager	Joshua Frederick/ CRD			Yes
Project Engineer	Ben Martin/ CRD			Yes
Communications	Brit-Marie Phaneuf/ CRD			Yes
Legislative	Brent Reems & Kristen Morley/ CRD			Yes
Risk	Nancy Moore / CRD			Yes
Real estate	Stephen Henderson/ CRD			Yes
Parks	Brad Drew/ CRD			Yes
Legal	Colin Stewart/ Stewart McDannod Stuart			Yes

KEY STAKEHOLDERS

Stakeholder	How Stakeholder is Affected by/Interested in Project	Role or Involvement in Decision Making
FLNRO & BC Dam Safety Branch (John Baldwin - Dam Safety Officer) (Larry Barr - Director, Resource Management)	Authority having Jurisdiction	Approval
David Howe - Southern Gulf Islands Director	Local area elected official	Consulted/Decision Making
John Chapman	Pender Island Parks & Recreation Commission (PIPRC)	Consulted
Gary Holman	MLA Saanich North and the Islands	Consulted
CRD ELT		Consulted/Decision Making
CRD Board		Consulted/Decision Making
CRD Pender Island Parks & Recreation	Water license holder	Consulted/Decision Making
██████████ 6602 Harbour Hill Drive	Water license holder	Consulted/Decision Making
██████████ 6604 Harbour Hill Drive	Water license holder	Consulted/Decision Making
██████████ 2838 W38th Ave, Vancouver	Water license holder	Consulted/Decision Making
██████████ 103-533 Walter's Edge Cr., West Vancouver	Water license holder	Consulted/Decision Making
TWAM Developments Ltd., 570 Blackburn Rd. Salt Spring Island	Water license holder	Consulted/Decision Making
Razor Point Improvement District	Owner of underground water supply pipes & responsible for timely removal	Notified

COMMUNICATIONS

Internal		Required (yes / no)
Should any of the following be informed about this project?	CRD Director	Yes
	Management Teams (i.e. ELT, Corporate Team)	Yes
External		Required (yes / no)

Does the project require any of the following: *If yes, please consult your department's communications expert for direction when preparing the project plan.	Public Consultation	Yes
	Advertising in print, web, etc.	Yes
	Politically sensitive updates to stakeholders	Yes
	Development of print materials for public consumption	Yes

CHANGE MANAGEMENT CONSIDERATIONS

Standard Environmental Engineering change management procedure where relevant.

RISK IDENTIFICATION

No.	Risks Identification (Related to scope, schedule, budget, stakeholders, etc.)	High Level Risk Response Strategy (if applicable)
1	Failure of dam	The CRD along with other WLH would be responsible
2	Failure of joint agreement/ cost sharing formula	
3	Failure of approval of the loan authorization bylaw	

SIGNOFF REQUIRED

Item	Signoff Required					
	Project Mgr.	Sponsor	Budget Mgr.	Stakeholder Leader	Project Planning	WLH's
Project Charter	✓	✓	✓	✓	✓	✓
Project Plan	✓	✓	✓	✓	✓	✓
Budget Changes	Under \$ _____	✓	✓	✓		
	Over \$ _____	✓	✓	✓		
Schedule Changes	Less than _____	✓	✓	✓		
	More than _____	✓	✓	✓		
Scope Changes (significant)	✓	✓	✓			✓

LIST OF ADDENDUMS (Write n/a if none)

No.	Name of Document / SharePoint URL
1	

SIGNOFF

Position/Title	Print Name / Signature	Date
Project Sponsor	Larisa Hutchinson, General Manager, P&ES	
Project Manager	Joshua Frederick, Senior Manager, EE	
Budget Manager	Peggy Dayton, Senior Financial Analyst	
Communications	Britt-Marie Phaneuf, Communications	
Project Engineer	Ben Martin, Senior Project Engineer, EE	
Legislative	Brent Reems, Senior Manager, Legislative Kristen Morley, Contracts	
Real Estate	Stephen Henderson, Manager Real Estate	
██████████ 6602 Harbour Hill Dr	(Water License Holder)	
██████████ 6604 Harbour Hill Dr	(Water License Holder)	
██████████ 2838 W38th Ave, Vancouver	(Water License Holder)	
██████████ 103-533 Walter's Edge Cr., West Vancouver	(Water License Holder)	

TWAM Developments Ltd., 570 Blackburn Rd. Salt Spring Island	(Water License Holder)	
Pender Island Parks & Recreation Commission (PIPRC)	John Chapman, PIPRC Chair	
Southern Gulfs Islands Electoral Area Director	David Howe, Electoral Director	

Attachments: Report to Electoral Area Services Committee, meeting of Wednesday, September 21, 2016
Letter to Mr. Larry Barr dated October 17, 2016 RE: Gardom Pond Dam
Legal Map, Gardom Pond and Spillway

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**REPORT TO ELECTORAL AREA SERVICES COMMITTEE
MEETING OF WEDNESDAY, SEPTEMBER 21, 2016**

SUBJECT Gardom Pond Dam

ISSUE

Proposed approach to Gardom Pond Dam Mitigation strategy.

BACKGROUND

The Capital Regional District (CRD) is the owner of the land legally described as Lot 12, Section 12, Pender Island, Cowichan District, Plan VIP53931 ("Lot 12"). The land was transferred to the CRD in 1996, at the time of subdivision created by Plan VIP53931, and is held as part of the Pender Island Parks and Recreation Service.

Appurtenant to the land is a conditional water licence issued to the CRD in 1996, which authorized water storage. The CRD is one of 6 water licence holders; the 5 remaining water licence holders are private property owners who also benefit from the water frontage provided by the artificial pond.

The dam is located on Lot 6 and some of the water held back by the dam is stored on CRD Land Lot 12.

The 6 Water Licence Holders (owners; WLH) have been advised by the Dam Safety Office that the dam is in poor condition and remedial works are required to address the dam safety deficiencies. The dam has been classified as "high consequence" by the Dam Safety Office.

During the past 3 years, CRD staff have been playing a central role in coordinating the gathering of information, obtaining engineering reports and as the contact with the Dam Safety Officer.

Currently, the 6 WLH are not in agreement on either the costs or the option to remediate or decommission the dam.

The issue of a fire service area review has been raised as a possible funding option for the Gardom Pond dam mitigation strategy. Upon extensive review, it has been determined that the fire service issues are not relevant to the Gardom Pond Dam concerns. In the event that Gardom Pond is no longer viable as a water source for fire suppression needs, there are a number of cost effective options that can be pursued that would ensure that the area residents maintain, or potentially increase, the current level of fire protection for the area.

In discussions with the Dam Safety Officer, he has confirmed that if the water level of the pond is lowered to the natural level, the water would no longer require water licenses as there would no longer be a structure that would be considered a dam under the regulation. Decommissioning the dam would require ensuring there was road access to the two properties that are currently accessed by the road on top of the dam.

ALTERNATIVES

That the Electoral Area Committee recommend to the CRD Board:

Alternative 1

1. That a financial plan be prepared for the lowest cost option, which would include:
 - a) completing the required works to lower the water level of the pond to its natural level, and providing vehicle access to the two properties that use the road on top of the dam;
 - b) estimating the annual borrowing costs of 5/6 of the project cost over a 15-year period;
 - c) estimating any required annual maintenance cost for the pond area and any ongoing costs required for the road access;
 - d) confirming the approval of the Southern Gulf Islands Electoral Area Director to support funding the 1/6 Community Parks share of the capital project from the Electoral Area Community Works Funds.
2. That a petition be prepared to request the establishment of a Service Area consisting of the 6 water licence holders properties for the purpose of completing the works listed in 1. above; and
3. That a meeting with the water licence holders be held to propose this option and request their approval to proceed as listed above.

Alternative 2

1. That a financial plan be prepared to remediate the dam, which would include:
 - a) Completing the required works to update the dam to provincial standards including construction of a spill-way;
 - b) Establishing a cost sharing formula whereby 1/6 of the costs would be apportioned to the 5 private water licence holders and 4/6 to the Pender Island Parks and Recreation Service, which would seek elector approval from residents within the entire service area to borrow this share of the funds;
 - c) Confirming the approval of the Southern Gulf Islands Electoral Area Director to support funding of the remaining 1/6 of the capital project from the Electoral Area Community Works Fund, and;
 - d) Estimating any required annual maintenance cost for the pond area.
2. That a loan authorization bylaw be prepared for the purpose of completing the capital works listed in 1. above; and
3. That a meeting with the water licence holders be held to propose this option and request their approval to proceed as listed above.

Alternative 3

That staff work with the Board Solicitor to prepare a plan to decommission the dam and recover the costs from the individual water licence holders (5 private land owners and the Pender Community Parks Service) and bring the plan back to the Board for consideration.

ENVIRONMENTAL IMPLICATIONS

Gardom Pond dam has areas noted as ecologically sensitive and decommissioning the dam could have a negative impact on these areas. The Gulf Islands generally have seen declines in water quantity and quality as a result of demands on groundwater resources; these demands are anticipated to become more extreme with climate change. Remediating the dam and preserving the existing water levels meets a broad environmental objective to preserve and protect, and

aligns with an objective to secure water sources on the islands.

At least one of the properties has an environmental covenant attached to a portion of the property, restricting the use and allowable works. The Islands Trust have confirmed that, in spite of the covenant, they will allow the works needed to address the dam safety deficiencies, will waive any clauses in conflict with the remediation, and will continue to hold the covenant and the property owners will continue to receive the property tax reduction they currently enjoy.

ECONOMIC IMPLICATIONS

In 2013, AECOM provided an engineering report estimating the cost to decommission the dam as being \$422,000 and an estimated cost of rehabilitating the dam at \$938,025. These cost estimates do not include CRD overhead and administrative costs to manage the project.

There is a potential option of establishing a Local Service Area and loan authorization bylaw for the 5 private WLH and Pender Island Parks Commission. The CRD Local Service would then borrow the money to cover the costs of the work and the WLH would be taxed over a period of 10-15 years to recover the associated decommissioning costs or costs to upgrade the dam, if that is the option chosen by the WLH. Finance staff will need to get approval from the Province, as the Bylaw will require approval by the Inspector of Municipalities in addition to elector approval.

There is an opportunity to assign the costs of the project more broadly across the Pender Islands by way of borrowing funds through the Pender Island Parks and Recreation service, as shown in Alternative 2.

The Southern Gulf Islands Director has indicated that he would ask the Board to support an electoral area Community Works Fund Grant to cover a portion of the Pender Parks share.

If the CRD is unsuccessful with either option outlined above, the CRD Board will have to review the legal options available to decommission the dam to recover the costs.

INTERGOVERNMENTAL IMPLICATIONS

The Province of BC's Ministry of Forests, Lands and Natural Resource Operations (FLNRO) has requested that the WLH address the dam safety deficiencies identified with the Gardom Pond Dam. A decision needs to be made by the 6 WLH and confirmed in writing to the FLNRO by September 30, 2016.

RISK IMPLICATIONS

The CRD as a holder of a conditional water licence has statutory obligations under Section 21 of the *Water Act*. As a result, the CRD along with the other WLH would be responsible for a failure of the dam.

One option available to reduce the liability would be to decommission the dam, which allows the CRD Board to abandon the water licence and thus eliminate any statutory obligations arising from regulatory authority.

CONCLUSION

Discussions with the water license holders over the risk and condition of the dam have been ongoing for numerous years. The FLNRO requires, by September 30, 2016, a decision from the water license holders addressing the dam safety deficiencies identified with the Gardom Pond Dam. The 5 private license holders and the CRD (Pender Parks Service) have been notified of a dam safety risk regarding the Gardom Pond Dam. The owners have been unable to agree on a project to address their dam safety deficiencies identified by the Province of BC. Preliminary work has been completed on numerous options and establishing a cost sharing formula that apportions the funds to remediate the dam to both the 5 private licence holders and the entire service area strikes a balance that is fair, affordable for those directly impacted and meets the preserve and protect mandate of the Gulf Islands.

RECOMMENDATION

That the Electoral Area Services Committee recommend to the Capital Regional District Board:

1. That a financial plan be prepared to remediate the dam, which would include:
 - (a) Completing the required works to update the dam to provincial standards including construction of a spill-way;
 - (b) Establishing a cost sharing formula whereby 1/6 of the costs would be apportioned to the 5 private water licence holders and 4/6 to the Pender Island Parks and Recreation Service, which would seek elector approval from residents within the entire service area to borrow this share of the funds;
 - (c) Confirming the approval of the Southern Gulf Islands Electoral Area Director to support funding of the remaining 1/6 of the capital project from the Electoral Area Community Works Fund, and;
 - (d) Estimating any required annual maintenance cost for the pond area.
2. That a loan authorization bylaw be prepared for the purpose of completing the capital works listed in 1. above; and
3. That a meeting with the water licence holders be held to propose this option and request their approval to proceed as listed above.

Submitted by:	Nancy Moore, Manager Risk & Insurance
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Diana E. Lokken, DBusAdmin, CPA, CMA General Manager, Technology & Initiatives
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

NM/DL:cl

John



Making a difference...together

Parks & Environmental Services

625 Fisgard Street, PO Box 1000

Victoria, BC, Canada V8W 2S6

T: 250.360.3078

F: 250.360.3079

www.crd.bc.ca

COPY

October 17, 2016

Mr. Larry Barr
Ministry of Forests, Lands and Natural Resource Operations
2080A Labieux Road
Nanaimo, BC V9T 6J6

Dear Mr. Barr:

RE: GARDOM POND DAM

Thank you for your correspondence of October 3 and for the Ministry's support for the Capital Regional District's (CRD) proposed plan. This letter is to let you know that the CRD Board, at its October 13 meeting, approved the following approach for Gardom Pond dam, as recommended by the Electoral Area Services Committee and referenced in my letter of September 23, 2016, as follows:

1. *That a financial plan be prepared to remediate the dam, which would include:*
 - (a) *Completing the required works to update the dam to provincial standards including construction of a spill-way;*
 - (b) *Establishing a cost sharing formula whereby 1/6 of the costs would be apportioned to the 5 private water licence holders and 4/6 to the Pender Island Parks and Recreation Service, which would seek elector approval from residents within the entire service area to borrow this share of the funds;*
 - (c) *Confirming the approval of the Southern Gulf Islands Electoral Area Director to support funding of the remaining 1/6 of the capital project from the Electoral Area Community Works Fund, and;*
 - (d) *Estimating any required annual maintenance cost for the pond area.*
2. *That a loan authorization bylaw be prepared for the purpose of completing the capital works listed in 1. above; and*
3. *That a meeting with the water licence holders be held to propose this option and request their approval to proceed as listed above.*

A meeting will be scheduled with the 5 water licence holders to discuss the proposal and next steps. Following this meeting, we will provide you with an update and timeline.

We do note that adoption of a loan authorization bylaw as set out in Item 2 above will require the approval of the electors for the service area that is to be responsible for the share of costs referred to in item 1(b).



If you have any further questions, please do not hesitate to contact me at lhutcheson@crd.bc.ca or 250-360-3085.

Yours truly,

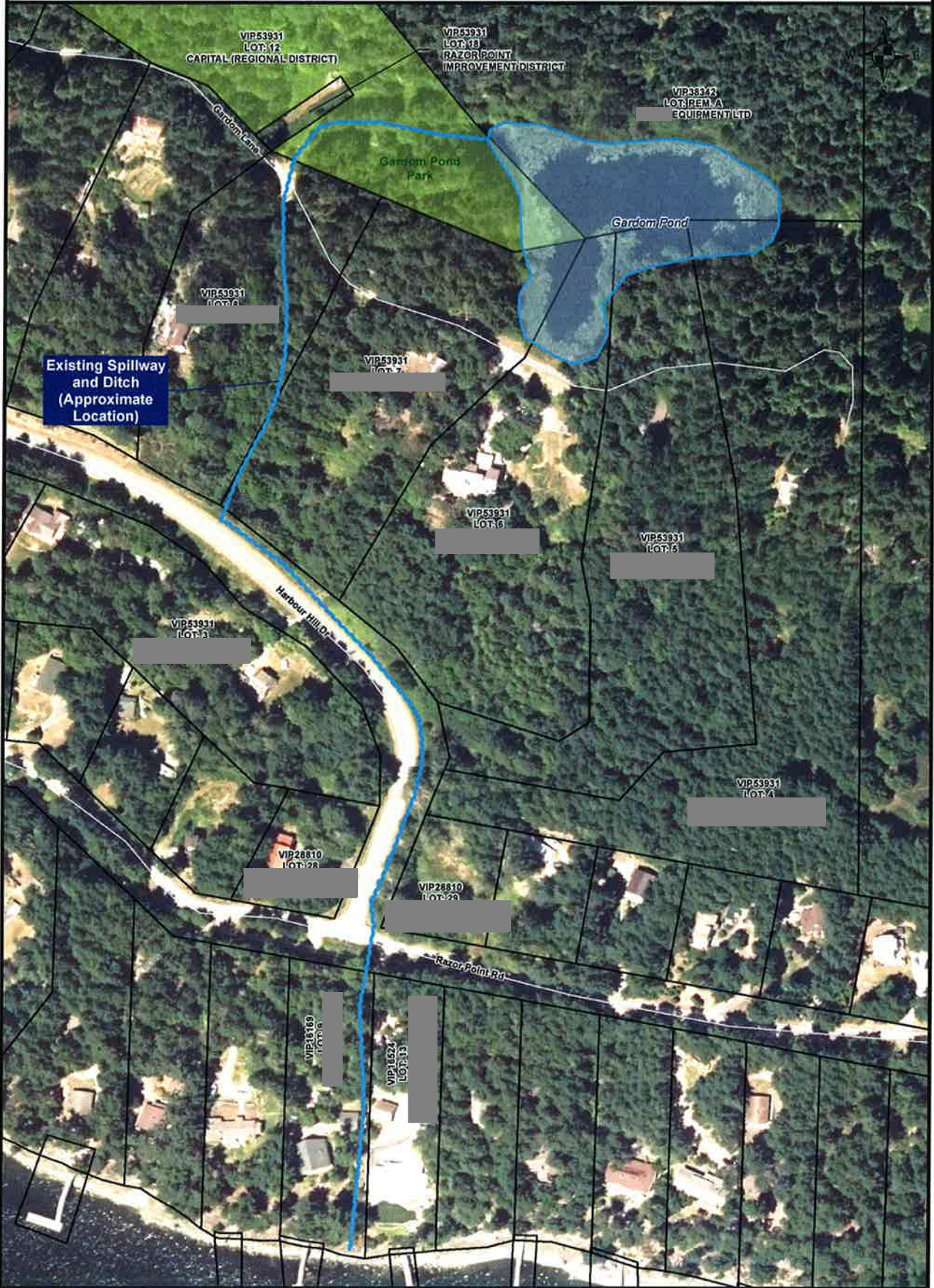
A handwritten signature in black ink, appearing to read 'Larisa Hutcheson', written in a cursive style.

Larisa Hutcheson, P.Eng.
General Manager
Parks & Environmental Services

LH:cl

cc: Director Dave Howe, Southern Gulf Islands
John Baldwin, Ministry of Forests, Lands and Natural Resource Operations
Water Licence Holders

GARDOM POND LEGAL BASE



Existing Spillway
and Ditch
(Approximate
Location)



DRAFT

For Internal CRD Use Only

Important: This map is for general information purposes only. The Capital Regional District (CRD) makes no representations or warranties regarding the accuracy or completeness of the map or the suitability of the map for any purpose. The map is not for navigation. The CRD will not be liable for any damage, loss or injury resulting from the use of the map or information on the map and the map may be changed by the CRD at any time.