A G E N D A

COMMITTEE OF THE WHOLE MEETING OF COUNCIL

MONDAY, JANUARY 21, 2019 AT 3:30 PM
IN THE CITY HALL COUNCIL CHAMBERS

PRESENT:

A. CALL TO ORDER AND APPROVAL OF AGENDA

1. Recognition of Traditional Territories.

That the agenda be approved as circulated.

B. ADOPTION OF MINUTES - Page 3

1. Meeting held at 4:00 pm on December 17, 2018.

C. CAO - INTRODUCTION

The City's CAO to provide context to the meeting which will focus on the current and future operations of the McLean Mill and Port Alberni's tourism rail service. Stakeholders will be provided an opportunity for input.

Documents provided for reference:

- Cost Sharing Agreement for McLean Mill National Historic Site (outlining City's obligations) dated July 23, 1996 - Page 10

- McLean Mill Society (MMS) Constitution dated December 8, 2016 - Page 22

- Operation and Management Agreement between City and MMS dated January 1, 2017 - Page 23

- McLean Mill Site Assessment prepared by John Dam & Associates Inc. dated July 3, 2018 - Page 36

E. CORRESPONDENCE

1. Jim Del Rio - Page 112

Copy of a newspaper article from 'The Canadian Press" regarding the Tumbler Ridge dinosaur museum facing closure after funding denial.

2. Roland Smith - Page 113

Letter dated January 14, 2019 from Roland Smith including questions regarding McClean Mill and Alberni Pacific Railway operations and budget for 2019.

That the letter dated January 14, 2019 from Roland Smith including questions regarding McLean Mill and Alberni Pacific Railway operations and budget for 2019, be received.

E. DELEGATIONS/PUBLIC INPUT

1. McLean Mill Society

2. Industrial Heritage Society

Open for stakeholder and public input including via City's social media platforms

E. ADJOURNMENT

That the meeting adjourn at pm.

MINUTES OF THE COMMITTEE OF THE WHOLE MEETING OF COUNCIL HELD MONDAY, DECEMBER 17, 2018 AT 4:00 PM IN THE CITY HALL COUNCIL CHAMBERS

PRESENT: Mayor Minions; Councillors Corbeil, Haggard, Poon, Solda, Washington

LATE: Councillor Paulson (4:06 pm)

A. APPROVAL OF AGENDA

It was moved and seconded:

That the agenda be approved as circulated.

CARRIED

B. ADOPTION OF MINUTES

It was moved and seconded:

That the minutes of the Committee of the Whole Meeting held at 4:00 pm on November 19, 2018, be adopted.

CARRIED

C. DISCUSSION

Mayor Minions welcomed candidates and the public to the meeting and invited input following the recent election around what candidates heard from the public during the election campaign specifically:

a) What were the top 3 community issues/challenges heard from the public during the election?
b) What were the top 3 opportunities heard from the public during the election?
c) If you had been elected what would be the one initiative you would hope to accomplish by the end of your term?

Issues/Challenges:

Michael Moore:
- Disconnect from how government works
- No real world engagement
- Once turn off Johnston Road, Port Alberni looks run down
- Difficult to engage with Council standing at podium

Todd Patola:
- What is the mandate of Council? Council elected to do a job – time to get on with it
- Three things heard: less crime; more housing; lower taxes

Aaron Brevick
- Housing #1 issue
- Everyone wants lower crime/taxes
- Trust issue – not understanding processes; how to do stuff.

Kevin Wright
- Economic stagnation
- 3rd generation unemployment
- Advocate for business models/planning for future

Chris Alemany
- Homelessness; opioid addiction crisis
- Economic transition – in between place from traditional resource based economy to something else
- McLean Mill

John Douglas
- Accessibility to participating with Council – meetings too formal, people don't feel comfortable
- Healthy community always in transition; need to be flexible
- Housing #1 issue – low end and seniors
- Economic development in different sectors – people voicing that forestry is gone – move on to other sectors

Dan Washington
- Affordable housing; crime; McLean Mill
- Better livability

Deb Haggard
- Affordable housing; unemployment; crime
- 3rd Avenue vacant buildings

Ron Paulson
- Maintaining/growing economy
- How do we attract entrepreneurs
- People are tired of hearing "stinky old mill town"; change comes from within
- Housing

Cindy Solda
- Affordable housing for all ages
- McLean Mill

Ron Corbeil
- Housing; crime; addiction
- Unemployment
- McLean Mill
- Livability; empty lots/buildings

Helen Poon
- Housing; economy; addiction

Sharie Minions
- Housing; seniors care; young families
- Engaging with Council – need other ways to engage ie. social media
- Opportunity to educate regarding processes
- Economic diversification
- Reconciliation – need to improve relationships with First Nations – build real relationships
- Beautification – hold ourselves to higher standards

Comments from Public:

Neil Anderson
- Affordable housing – difficulty finding good tenants discourages people from making good quality housing available
- Premature marketing Port Alberni as a retirement destination – supports not available
- Taxes

Andy Callicum (elected Vice-President for Nuu-chah-nulth Tribal Council)
- Of their 10,000 members, approximately 3,000 live off-reserve in Port Alberni
- Worked with former Mayor in trying to be proactive to address issues; potential to work together
- Rental cost increases in recent years challenging on low income
- NTC would like to be part of solution

Ian Thomas
- Look at inventory of skills in our community

Jim del Rio
- Housing issues not on Council – hit the property owners
- Developers should be required to build certain amount of lower cost homes as in other communities – rein in developers
- Opioid crisis is not council issue – people won't change until they want to. Sometimes if you leave something alone it will fix itself
- McLean Mill going to cost a lot of money

Mayor Minions
- City has place at the table – knowing what the issues are even if they are not our issues – can advocate

Opportunities:

Michael Moore:
- Cultural experiences
- Community engagement
- Some form of Council liaison for volunteers
- Housing – be aggressively creative; put together info package with bylaws, permit info, etc.
- Branding – no sign for Port Alberni

Kevin Wright:
- Safety for renters (owners)
- Being prepared for business models and open to new, novel ideas

Peter Rueschmann:
- Be open-minded to diversification
- Work as a team

Chris Alemany:
- Opportunities stem from challenges
- Untapped potential in the waterfront
- Invest in our natural assets

John Douglas:
- Developing industrial core outside urban core
- Waterfront development; bypass road; development of Port
- Industrial growth compatible with how we grow in the future

Todd Patola:
- Get on with making things better
- Things we can't do – change provincial legislation
- Create new truck route (only where we can)
- Advertise City; promotion
- Use of appropriate metrics
- Danger in talking about things and not doing them

Aaron Brevick:
- Many issues brought forward are not Council issues
- Re housing and rentals - can Council meet with Rental/Housing Boards and lobby them – landlord/tenancy Act a mess
- Meet with social development people – Council's voice carries weight

Dan Washington:
- Stop people before they leave town
- Beautification extended past Johnston Road
- Crime reduction/livability

Deb Haggard:
- Tourism – positive marketing
- Trails – lack of signage and promotion
- Waterfront (more industrial development/less industrial development

Ron Paulson:
- First Nations cultural development
- Alberni Valley Learning Council opportunity – trying to be proactive to community needs

Cindy Solda:
- Port Alberni best kept secret
- Amazing education opportunities; arts programs; sports; services
- Lifestyle
- Partnerships with First Nations governments
- People don't understand Council's mandate as defined by the Community Charter
- Need to be more self-promoting

Ron Corbeil:
- Industrial park – catalogue of what is available
- Somass Mill site a huge opportunity
- Community Forest
- Time to connect the town – infill empty lots; walkways
- Bylaws to deal with empty buildings/lots

Helen Poon:
- Tourism – Port Alberni can be a destination; doesn't need to be a stop on the way to somewhere else
- Promote City and culture; enough here to sustain people
- Look within the town for opportunities; don't need urban sprawl; infill

Initiatives:

Michael Moore:
- Work towards business development
- Be active in community; hands-on
- Listen to what people want; people don't want to hear "I can't"
- Create project list of what's being worked on

Kevin Wright:
- Tourism
- Opportunity to build the community the way we want
- Communities like Cumberland, Tofino, Salmon Arm – building a culture
- Educate business owners as much as employees
- Share ourselves regionally

Chris Alemany:
- Advocate at provincial level
- Regional transit huge opportunity
- Acknowledge firefighting model is unsustainable
- Continue to improve bike infrastructure – make more safe and secure

Todd Patola:
- UBCM is lobbying group for municipalities
- Need to be ourselves
- Make a resolution to make things better – includes things like improving economy; keeping taxes low

Aaron Brevick:
- Not look for ways to raise taxes but look for ways to expand tax base
- Council needs to listen to the public; get out in public
- Make processes simpler/smoother

John Douglas:
- We live in a fantastic community
- People do the work – will continue to work on initiatives
- Council can open doors; help pave the way; provide guidance and support
- Advisory Planning Commission type model to coordinate/connect agencies
- Encourage competitive hotel development and bring back MRDT

Dan Washington:
- Livability; front door is decorated now time to clean up the rest of the house

Deb Haggard:
- Working with Chamber on bringing back MRDT

Ron Paulson:
- Will continue to work outside of Council; don't give ourselves enough credit

Cindy Solda:
- More work on aging infrastructure – fix it and start doing it right.
- Diversify economy; increase tax base
- Partnerships

Ron Corbeil:
- Community Forest growth; produce more local employment

Helen Poon:
- Larger tax base

Mayor Minions:
- Build strong strategic plan that Council buys into and that Council follows over next four years; check in with public.
- Don't be afraid to say No if ideas don't fit within strategic plan

Mayor Minions thanked everyone for attending to provide their input.

F. ADJOURNMENT

It was moved and seconded:

That the meeting adjourn at 6:12 pm.

CARRIED

CERTIFIED CORRECT

Mayor

City Clerk

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COST SHARING AGREEMENT FOR MCLEAN MILL NATIONAL HISTORIC SITE

This Agreement consists of 8 pages and Schedule A.

THIS AGREEMENT made this 23rd day of July, 1996.

BETWEEN:

HER MAJESTY THE QUEEN, IN RIGHT OF CANADA,
represented herein by the Minister of Canadian Heritage

("Her Majesty")

OF THE FIRST PART

AND:

THE CORPORATION OF THE CITY OF PORT ALBERNI,
in the Province of British Columbia,

(the "City")

OF THE SECOND PART,

WHEREAS the *Historic Sites and Monuments Act,* RSC 1985 c.H-6, section 1, empowers the Minister to make agreements for marking or commemorating historic places pursuant to the said Act and for the care and preservation of any places so marked or commemorated;

AND WHEREAS the Minister is authorized by Treasury Board Minute TB 818927 of September 17, 1992 to enter into such agreements that provide for federal government contributions towards the cost of acquisition, restoration, preservation and presentation of sites and structures of national historic and/or architectural significance;

AND WHEREAS the Minister had declared McLean Mill, situated in the Regional District of Alberni-Clayoquot, Province of British Columbia, and known as the McLean Mill National Historic Site, to be of national historic significance;

AND WHEREAS the City has agreed to assume responsibility for the conservation and heritage presentation of McLean Mill to ensure its commemorative integrity;

AND WHEREAS the City has requested the Minister to contribute towards the cost of the conservation and heritage presentation of McLean Mill;

AND WHEREAS the City has agreed to operate, maintain, conserve and present McLean Mill in the same condition as its conserved state, for a period of forty-two (42) years, from the date of execution of this Agreement; and

AND WHEREAS Her Majesty has agreed to contribute a sum not exceeding two million and six hundred thousand dollars ($2,600,000.00) towards the total cost of the conservation and heritage presentation of the McLean Mill National Historic Site upon the condition that the City shall contribute or expend an equal or greater sum toward the cost of the conservation and heritage presentation work subject to the terms and conditions hereinafter set forth.

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the premises, mutual covenants and agreements herein contained, the parties covenant and agree as follows:

1. In this Agreement:

   (a) "City" means the Corporation of the City of Port Alberni or any person(s) authorized to act on its behalf;

   (b) "Commemorative Integrity" means the health or wholeness of a national historic site. A national historic site possesses commemorative integrity when (1) the resources that symbolize or represent its importance are not impaired or under threat, (2) when the reasons for the site's national historic significance are effectively communicated to the public, and (3) when the site's heritage values are respected by all whose decisions or actions affect the site;

   (c) "Conservation" means those activities that are aimed at the safeguarding of a cultural resource so as to retain its historic value and extend its physical life. Conservation does not include the construction, repair, or provision of modern services such as visitor use facilities, electricity, heating and sewage nor complete period reconstructions;

   (d) "Heritage Presentation" means those activities, facilities, programs and services, including those related to interpretation and visitor activities, that bring the public into contact, either directly or indirectly, with the national historic site;

   (e) "Level I Resources" means those resources or messages directly related to the reasons for the site having been declared of national significance.

   (f) "Management Plan" means the document approved by the Minister, attached hereto as Schedule "A", which forms part of this Agreement. The Management Plan

provides strategic direction for the management and operation of the site and provides a framework for subsequent business and work planning;

(g) "McLean Mill" means that site declared by the Minister to be of national historic significance located in the Regional District of Alberni-Clayoquot, Province of British Columbia, known as the McLean Mill National Historic Site;

(h) "Minister" means the Minister of Canadian Heritage, or his/her Deputy Minister or the Assistant Deputy Minister of Parks Canada, or any authorized officer appointed by any of them for the purposes of this Agreement.

2. (a) The Management Plan shall be used as a guide for the conservation and heritage presentation work by the City. Specific conservation and/or heritage presentation projects will be reviewed and approved on an annual basis by the Minister and in accordance with the procedures established in the Management Plan.

(b) Any major deviation from the Management Plan must be agreed to in writing and signed by all parties to this Agreement and shall form part of this Agreement.

(c) In the event that the City does not undertake the conservation and heritage presentation of McLean Mill as identified in the Management Plan, the Minister may terminate this Agreement and any monies advanced by Her Majesty shall become a debt due and payable to Her Majesty.

3. (a) The City shall furnish the Minister, within 90 days of the execution of this agreement, satisfactory evidence that the City is the owner(s) in fee simple of the McLean Mill site subject to a restrictive covenant and option to purchase in favour of MacMillan Bloedel Ltd. and an exception and reservation in favour of Esquimalt and Nanaimo Railway Company.

(b) The City shall, to the satisfaction of the Minister and in accordance with the Management Plan and the terms of this Agreement, undertake the conservation and heritage presentation of McLean Mill subject to payment by Her Majesty of the sums set out in section 4 of this Agreement in accordance with the requirements of that section. The conservation work is to be completed within 4 years of the date of execution of this Agreement.

4. (a) Her Majesty shall pay to the City, as a contribution towards the cost of the conservation and heritage presentation work identified under section 3(b), a sum equal to the amount contributed by the City, such sum not to exceed two million and six hundred thousand dollars ($2,600,000.00) and representing not more than fifty per cent (50%) of the total estimated conservation and heritage presentation costs of McLean Mill, subject to the following conditions:

(i) Her Majesty's contribution will be applied to heritage conservation and heritage presentation initiatives linked to the first two elements of commemorative integrity and the level one resources at McLean Mill;

(ii) The application of Her Majesty's contribution will be prioritized to address threats to the achievement of commemorative integrity; and

(iii) The City shall contribute an equal or greater sum to the conservation and heritage presentation work identified under section 3(b).

(b) Her Majesty shall make payments to the City in amounts not to exceed a total of two million and six hundred thousand dollars ($2,600,000.00) in the following manner:

(i) In the fiscal year 1996/97, an amount not to exceed five hundred thousand dollars ($500,000.00);

(ii) In the fiscal year 1997/98, an amount not to exceed one million dollars ($1,000,000.00);

(iii) In the fiscal year 1998/99, an amount not to exceed one million dollars ($1,000,000.00);

(iv) In the fiscal year 1999/2000, an amount not to exceed one hundred thousand dollars ($100,000.00);

such payments to be based on submission to the Minister by the City of satisfactory proof that expenditures have been incurred and that the conservation and heritage presentation of McLean Mill is progressing in accordance with the Management Plan and the terms of this Agreement.

(c) The financial records and accounts received by the Minister from the City as proof that expenditures have been incurred for the conservation and heritage presentation work identified in the Management Plan shall be reviewed and approved prior to any contribution being made.

(d) Any contribution made by Her Majesty shall be made within thirty (30) days after the City has provided the appropriate financial records and accounts. All amounts not disputed shall be paid in full so that any disputed amounts may be negotiated separately.

(e) Any contribution made by Her Majesty in excess of that required by the City, including any overpayment of non-eligible expenses, shall be reimbursed to Her Majesty by the City. The City hereby acknowledge(s) that any excess contribution aforementioned is a debt due and payable to Her Majesty.

5. It is understood and agreed that the City shall oversee the conservation and heritage presentation work as identified in the Management Plan, and that all contributions made by Her Majesty to the City shall be disbursed exclusively for that work.

6. (a) The City shall ensure that all costs pertaining to the conservation and heritage presentation work are properly incurred and that all invoices in respect thereof are promptly paid.

   (b) The Minister may at any reasonable time and at his/her own expense, for verification or audit purposes, inspect the vouchers and other accounting documents concerning expenses incurred by the City in the performance of this Agreement.

7. The City shall give the Minister the right to review the progress of the work at regular intervals, at the Minister's own expense. The review shall be based upon the Management Plan and the terms of this Agreement. The City shall provide the Minister with full information as to what is being done to execute the work and shall give him/her every possible assistance in conducting a progress review. The Minister shall ensure that the review contributes to and does not impede the progress of the City in completing the work within the time frame set out in section 3(b).

8. Her Majesty shall not deduct from any amount to be paid to the City under this Agreement any costs incurred by Her Majesty in connection with the conservation and heritage presentation work of McLean Mill, unless such deduction has first been agreed to by the City in writing.

9. The City shall not move any of the surviving historic buildings or structures, as identified in the Management Plan, or permit them to be moved from their present location without the prior written consent of the Minister.

10. The City shall not construct, nor permit to be constructed, any new buildings or other structures on the property, nor make any alterations or additions to the existing buildings, if such an intervention will have a negative impact upon the commemorative integrity of the site, as outlined in the Management Plan, without prior written consent of the Minister.

11. The City shall implement normal fire detection, suppression and maintenance practices to reduce the risks of fire at the site.

12. (a) The City shall, during the time that Her Majesty contributes funds to the conservation and heritage presentation work, install or erect, or cause to have installed or erected on the project site, a bilingual sign to the effect that the work is being carried out under a cost-sharing agreement with Her Majesty, The form of the sign shall be by mutual agreement of the parties and Her Majesty shall be shown as "The Government of Canada".

(b) The Minister may, install or erect, or cause to have installed or erected, a permanent, visible and prominent bilingual plaque or sign to the Minister's standard design indicating Her Majesty's contribution in the conservation and heritage presentation of the site. The location of the plaque or sign shall be by mutual agreement of the parties.

(c) The City shall give the Minister the right to mark the McLean Mill National Historic Site as place of national significance, by means of a permanent bilingual Historic Sites and Monuments Board of Canada plaque or sign. The location of the plaque or sign shall be by mutual agreement of the parties.

(d) The City shall ensure that the National Flag of Canada shall be flown at the site in recognition of McLean Mill's national significance.

13. The City shall ensure that the use of the McLean Mill will not prejudice of detract from the site's national historic significance and its commemorative integrity, and that its use will be compatible with the Management Plan.

14. (a) The City covenants and agrees to make every reasonable effort to ensure that all activities on the site will comply with the spirit of federal legislation and policies.

(b) The City covenants and agrees to comply with the Canadian Environmental Assessment Act or any successor or similar legislation and regulations made thereunder.

15. (a) The City shall, at its own expense, insure all McLean Mill buildings, structures and associated cultural resources against loss or damage by fire with extended coverage in such amounts as shall, in the opinion of the Minister, represent its full replacement value. Such insurance shall be in effect from the date of execution of this Agreement.

(b) In the event that McLean Mill is damaged by fire, the Minster shall elect to assess the impact of said fire upon the commemorative integrity of the site. If the impact of the fire severely compromises the commemorative integrity of the site, the City and the Minister will enter into negotiations to amend the Management Plan and/or the terms of this Agreement.

(c) If it is determined by the Minister that the impact of the fire does not severely compromise the commemorative integrity of the site, the City shall elect either to repair and restore it fully or to repay the whole or any part of the money received by the City from Her Majesty pursuant to this Agreement, and shall give notice of such election to the Minister within 30 days of the fire. Any obligation of the City under this section is subject to the payment to the City by the insurer of a sufficient insurance proceeds to cover the cost of performing the obligation.

16. The City shall at all times indemnify and save harmless Her Majesty from and against all claims, demands, losses, costs, damages, actions, suits or other proceedings, by whomsoever made, sustained, brought or prosecuted, in any manner based upon, occasioned by, or attributable to, anything done or omitted by the City, its servants or agents in the fulfilment or purported fulfilment of any of the provisions of this Agreement.

17. (a) If the City is at any time in default with respect to any of its obligations hereunder, the Minister may, in writing, notify the City of such default and require the City to remedy such default within a period of ninety (90) days, failing which the Minister may terminate this Agreement forthwith.

(b) If the Minister terminates this Agreement pursuant to subsection (a), the City shall, upon written request by the Minister, repay to Her Majesty the whole or any part of the monies received by the City from Her Majesty pursuant to this Agreement.

(c) If Her Majesty is at any time in default with respect to any of its obligations hereunder, the City may, in writing, notify the Minister of such default and require the Minister to remedy such default within a period of ninety (90) days, failing which the City may terminate this Agreement forthwith.

(d) If the City terminates this Agreement pursuant to subsection (c), the Minister shall, upon written request by the City, repay to the City the whole or any part of the monies expended by the City pursuant to this Agreement.

(e) Notwithstanding anything in this section, if either party is in default with respect to any of its obligations hereunder and such default is the result of events beyond the control of the defaulting party, the defaulting party shall have a period of ninety (90) days from the date that the events causing the default come under the defaulting party's control to remedy the default.

18. Any claim or dispute arising out of or in connection with this Agreement shall be submitted by the parties to binding arbitration pursuant to the *Commercial Arbitration Act,* RSC 1985 c.17, 2nd Supplement. The party requesting such arbitration shall do so by written notice to the other party. The costs of the arbitration and fees of the arbitrator(s) shall be borne equally by the parties. The arbitration shall take place in Port Alberni,

Canada, before a single arbitrator to be chosen jointly by the parties. If the parties cannot agree on the choice of arbitrator within thirty (30) days of written notice to submit to arbitration, then the parties shall each choose an arbitrator who in turn will select a third. The parties may determine the procedure to be followed by the arbitrator(s) in conducting the proceedings, or may request the arbitrator(s) to do so. The arbitrator(s) shall issue a written award within thirty (30) days of completion of the hearing. The award shall be rendered in such form that judgment may be entered thereon in any court having jurisdiction.

19. This Agreement may not be assigned by the City without the prior written approval of the Minister.

20. No member of the House of Commons shall be admitted to any share or part of this Agreement or to any benefit arising therefrom.

21. The parties acknowledge that this Agreement does not constitute an association for the purpose of establishing a partnership or joint venture, and does not create an agency relationship between the Minister and the City.

22. This Agreement inures to the benefit of and is binding upon Her Majesty, Her Heirs and Successors and upon the City, its successors and assigns.

IN WITNESS WHEREOF the Minister of Canadian Heritage, on behalf of HER MAJESTY THE QUEEN IN RIGHT OF CANADA, has hereunto set his/her hand, and the City has caused this Agreement to be executed by its proper officers, duly authorized in that behalf.

SIGNED, SEALED AND DELIVERED on behalf of the City of Port Alberni in the presence of	)	
Jane MacNaughton	)	Gillian Trumper, Mayor
Witness (as to both signatures)	)	Colleen Bawn — COLLEEN BAWN DEPUTY CLERK
	)	for George Wiley, Clerk
SIGNED, SEALED AND DELIVERED by Minister of Canadian Heritage on behalf of Her Majesty, in the presence of	)	Minister of Canadian Heritage
Bruce Lund	)	per Orest M. Kruhlak, Regional Executive Director, Pacific and Yukon Region,
Witness	)	Department of Canadian Heritage

This AGREEMENT made this 9th day of August, 1996

BETWEEN: HER MAJESTY THE QUEEN in right of Canada, hereinafter called *Her Majesty* represented herein by the Minister of Canadian Heritage

OF THE FIRST PART

AND: THE CORPORATION OF THE CITY OF PORT ALBERNI, in the Province of British Columbia, hereinafter called *The City*

OF THE SECOND PART,

Pursuant to, and in accordance with, Section 4. of the *Cost Sharing Agreement for McLean Mill National Historic Site* between the two said Parties dated the 23rd of July, 1996, the Parties hereto agree and covenant as follows:

1. Her Majesty agrees to make a total contribtuon of $500,000.00 to The City by March 31, 1997, to fund completion of the following components of McLean Mill National Historic Site:

(a)	Mill Building	$309,500.00
(b)	Building Restorations	363,000.00
(c)	Observation Deck	135,000.00
(d)	Mill Electrical	72,500.00
(e)	Steam Boiler & System	90,000.00
(f)	Roads & Parking	35,000.00
(g)	Site Washrooms	20,000.00
(h)	Visitor Reception Centre	20,000.00
(i)	Curatorial Workshop	10,000.00
(j)	Worker's Residence	5,000.00
(k)	Fire Suppression System	10,000.00
(l)	Logging Demonstration Area	35,000.00
(m)	Interpretation Planning	5,000.00

2. The contribution referred to in (1) above will be made by advance and/or progress payments as authorized by the Director, Professional and Technical Services, Pacific and Yukon Region, Department of Canadian Heritage.

3. The City agrees:

   (a) that the funds contributed under this Agreement will be used solely for the projects described in (1) above;

   (b) to keep accounts and records of all expenditures in accordance with Sub-sections 4. (b), (c) and (d), and Section 6. of the *Cost Sharing Agreement for McLean Mill National Historic Site*; and

(c) that any money advanced by Her Majesty under this Agreement which is in excess of the actual expenses incurred by The City shall be an amount due to the Department of Canadian Heritage, and shall be refunded on or before April 15, 1997.

3. The liability of Her Majesty in respect of this Agreement shall in no event whatsoever exceed the expenditure authorized herein.

4. No member of the House of Commons shall be admitted to any share or portion or part of this Agreement or to any benefit arising therefrom.

IN WITNESS WHEREOF the Director, Professional and Technical Services, Pacific and Yukon Region, Department of Canadian Heritage, on behalf of Her Majesty has hereunto set his hand and seal, and the City of Port Alberni has caused this Agreement to be executed by its proper officers, duly authorized in that behalf.

SIGNED, SEALED AND DELIVERED

by

the

James L. Barlow
Director, Professional and Technical Services
Pacific and Yukon Region
Department of Canadian Heritage

Witness

the

Alex Zellermeyer
Director, B.C. Coast/Interior District
Department of Canadian Heritage

SEALED, DELIVERED AND ATTESTED TO
on behalf of the City of Port Alberni

by

the

Donovan R. Walker
City Manager
City of Port Alberni

Witness

the

Eric McCormick
Director of Parks and Recreation
City of Port Alberni

Canadian Heritage Patrimoine canadien

PACIFIC RIM National Park Reserve

Phone (250) 726-7721; Telefax: (250) 726-4720

Pacific Rim National Park Reserve

Box 280
Ucluelet, BC
V0R 3A0

AGREEMENT FOR McLEAN MILL NATIONAL HISTORIC SITE COST SHARING PROGRAM

This AGREEMENT made this 1st day of September, 1997

BETWEEN: HER MAJESTY THE QUEEN in right of Canada, hereinafter called *Her Majesty* represented herein By the Minister of Canadian Heritage

OF THE FIRST PART

AND: THE CORPORATION OF THE CITY OF PORT ALBERNI, in the Province of British Columbia, hereinafter call *The City*

OF THE SECOND PART,

Pursuant to, and in accordance with, Section 4. of the *Cost Sharing Agreement for McLean Mill National Historic Site* between the two said Parties dated July 23, 1996, the Parties hereto agree and covenant as follows:

1. Her Majesty agrees to make a total contribution of up to $1,000,000.00 to The City by March 31, 1998, to fund completion of the following components of McLean Mill National Historic Site:

(a)	Architectural Fees and Disbursements	$470,070.80
(b)	Construction Management Fees and Disbursements	109,616.38
(c)	Project Management Fees and Disbursements	66,609.04
(d)	Miscellaneous Fees and Insurance	21,720.39
(e)	Archeological Services	17,583.60
(f)	Cultural Resource Management Fees	2,564.30
(g)	Package Steam Boiler	197,158.48
(h)	Mill Building Heavy Timber Time and Materials Work	110,081.25
(i)	Site Services / Utilities	85,284.00
(j)	Mill Roof Material	16,210.71
		$1,096,898.95

2. The contribution referred to in (1) above will be made by advance and/or progress payments as authorized by the Superintendent, Pacific Rim National Park, Department of Canadian Heritage.

3. The City agrees:

   (a) that the funds contributed under this Agreement will be used solely for the projects described in (1) above;

   (b) to keep accounts and records of all expenditures in accordance with Sub-sections 4. (b), (c), and (d), and Section 6. of the *Cost Sharing Agreement for McLean Mill National Historic Site*; and

   (c) that any money advanced by Her Majesty under this Agreement which is in excess of the actual expenses incurred by The City shall be an amount due to the Department of Canadian Heritage, and shall be refunded on or before April 15, 1998.

4. The liability of Her Majesty in respect of this Agreement shall in no event whatsoever exceed the expenditure authorized herein.

5. No member of the House of Commons shall be admitted to any share or portion or part of this Agreement or to any benefit arising therefrom.

IN WITNESS WHEREOF the Superintendent, Pacific Rim National Park, Department of Canadian Heritage, on behalf of Her Majesty has hereunto set his hand and seal, and the City of Port Alberni has caused this Agreement to be executed by its proper officers, duly authorized in that behalf.

SIGNED, SEALED AND DELIVERED
by
the

Superintendent
Pacific Rim National Park
Department of Canadian Heritage

in the presence of

Witness

SEALED, DELIVERED AND ATTESTED TO
on behalf of the City of Port Alberni
by
the MAYOR (ACTING)
and
by
the CLERK,

Jack Thornburgh

Canada

CONSTITUTION

BC Society • Societies Act

CERTIFIED COPY
Of a document filed with the Province of British Columbia Registrar of Companies

CAROL PREST

NAME OF SOCIETY: **MCLEAN MILL SOCIETY**

Incorporation Number:	S0066490
Business Number:	73914 3295 BC0001
Filed Date and Time:	December 8, 2016 03:59 PM Pacific Time

The name of the Society is MCLEAN MILL SOCIETY

The purposes of the Society are:

1. The name of the Society is McLEAN MILL SOCIETY.

2. The purposes of the Society are:

(a) To undertake operation and management of the McLean Mill National Historic Site, in the Alberni Valley, as agreed to with the site owners and other stakeholders.

(b) To promote heritage tourism in the City of Port Alberni and the Alberni Valley.

(c) To act in an advisory, coordinative and supportive way with the Alberni Valley Museum and the Western Vancouver Island Industrial Heritage Society to ensure the preservation and presentation of industrial heritage resources in the Alberni Valley.

(d) To facilitate the forgoing objectives through marketing, fund raising, project management, and the development of contemporary use assets to provide visitor services.

MCLEAN MILL NATIONAL HISTORIC SITE
OPERATION AND MANAGEMENT AGREEMENT

THIS AGREEMENT dated for reference the 1st day of January, 2017 is

BETWEEN:

CITY OF PORT ALBERNI, 4850 Argyle Street, Port Alberni, British Columbia, V9Y 1V8

(the "**City**")

AND:

MCLEAN MILL SOCIETY (Inc. No. S066490), 5633 Smith Road, Port Alberni, British Columbia, V9Y 8M1

(the "**Society**")

WHEREAS:

A. The City is the registered and beneficial owner of those lands located in Port Alberni, British Columbia, legally described as PID: 018-572-871, Lot A, Loop Farms and District Lot 106, Alberni District, Plan VIP57991 Except that part in Plan VIP 65071 (the "**McLean Mill Site**"), upon which is located a former lumber camp and sawmill complex (the "**McLean Mill**"), which has been named a National Historic Site of Canada and has been restored and rebuilt to operate as it did in the past and has been opened to tourists since 2000;

B. Located on the McLean Mill Site are various buildings, including three visitor centre buildings, a train platform and associated buildings, certain heritage buildings, certain non-historical buildings, and a barn (together, the "**Buildings**"), as well as certain parking areas (the "**Parking Areas**") and various tools and equipment, including a golf cart, power tools, kitchen equipment and sawmilling tools (together, the "**Equipment**"), all used in connection with the restored McLean Mill as shown on the site plan attached as Schedule "A";

C. The Society has offered to operate and manage the McLean Mill Site and the City has agreed to engage the Society to provide these services on the terms and conditions and in consideration for the payments set out herein;

NOW THEREFORE THIS AGREEMENT WITNESSES that, in and for the consideration and other payments hereinafter provided for and the mutual covenants herein contained, the parties hereto covenant and agree with each other as follows:

1.0 Interpretation

1.1 In this agreement, in addition to the terms defined elsewhere:

(a) "**Annual Capital Plan**" means a plan setting out the Society's proposed Capital Expenditures in connection with the operation and management of the McLean

Mill each year, prepared by the Society in consultation with the City's CAO and submitted to Council for its review and approval;

(b) "**Annual Operating Plan**" means a plan for the Society's operation and management of the McLean Mill each year, prepared by the Society in consultation with the City's CAO and submitted to Council for its review and approval;

(c) "**Capital Expenditures**" means expenditures for purchases having a value in excess of $1000, approved restoration projects within the Historic Zone having a value in excess of $5000, and any construction projects approved on the McLean Mill Site having a value in excess of $5000;

(d) "**Contaminants**" means:

(i) as defined in the *Environmental Management Act* (British Columbia), any biomedical waste, contamination, contaminant, effluent, pollution, recyclable material, refuse, hazardous waste or waste;

(ii) matter of any kind which is or may be harmful to human safety or health or to the environment; or

(iii) matter of any kind the storage, manufacture, disposal, emission, discharge, treatment, generation, use, transport, release, remediation, mitigation or removal of which is now or is at any time required, prohibited, controlled, regulated or licensed under any Environmental Laws.

(e) "**Environmental Law**" means any past, present or future common law or principle, enactment, statute, regulation, order, bylaw or permit, and any requirement, standard or guideline of any federal, provincial or local government authority or agency having jurisdiction, relating to the environment, environmental protection, pollution or public or occupational safety or health.

(f) "**Five Year Financial Plan**" means a financial plan setting out the Society's proposed budget for the operation and management of the McLean Mill over the next 5 years, prepared by the Society in consultation with the City's Director of Finance and submitted to Council for its review and approval;

(g) "**Historic Zone**" means that portion of the McLean Mill Site outlined in bold on the site plan attached as Schedule "A";

(h) "**Management Plan**" means that document attached as Schedule A to the 1996 Cost-Sharing Agreement between the City and the Minister of Canadian Heritage, outlining the strategic direction for the management and operation of the McLean Mill and providing a framework for the business and working plan, a copy of which is attached as Schedule "B"; and

(i) "**Operational Services**" includes all services necessary for the operation, maintenance and management of the McLean Mill Site, including the McLean Mill and all associated Buildings, Parking Areas, and Equipment, including site

safety, programming, accounting and financial management, and the implementation of appropriate controls for monitoring expenditures and revenues, which services are further detailed in Schedule "C".

2.0 Agreement to Operate, Maintain and Manage

2.1 The Society will provide the Operational Services throughout the Term in a safe and business-like manner, consistent with the Management Plan and to a standard equivalent to the operation, maintenance, and management of comparable national historic sites, and will use all reasonable efforts to obtain the highest possible profile for and greatest number of tourist visits to the McLean Mill Site in accordance with the terms and conditions of this agreement.

2.2 The term of this agreement (the "**Term**") is five (5) years, commencing January 1, 2017 and expiring on December 31, 2021, subject to the possibilities of extension and earlier termination, as provided for herein.

2.3 This agreement may be extended for a further term of five (5) years on the same or altered terms and conditions with the mutual agreement of the parties, and if either party proposes to extend this agreement, it will give written notice to the other party, no later than June 30, 2021, of the terms and conditions on which it proposes to do so.

3.0 Society's Covenants

3.1 In connection with the provision of the Operational Services, the Society will:

(a) prepare and submit to the City for approval an Annual Operating Plan for the following year, together with a Five Year Financial Plan, containing the information set out in Schedule "D". The Society will provide the first Annual Operating Plan and Five Year Financial Plan no less than thirty (30) days before the commencement of the Term and will provide all subsequent Annual Operating Plans and Five Year Financial Plans no later than December 31 of each year of the Term;

(b) prepare and submit to the City for approval an Annual Capital Plan for the following year. The Society will provide the first Annual Capital Plan no less than thirty (30) days before the commencement of the Term and will provide all subsequent Annual Capital Plans no later than December 31 of each year of the Term;

(c) prepare and submit to the City an annual operational review of the current year no later than December 31 of each year of the Term, which review will include a record of daily, monthly, and seasonal visitor statistics and an outline of the Society's general operations in that year;

(d) employ and provide the services of such staff and personnel as are necessary to promptly and efficiently carry out the Operational Services and the duties and responsibilities required of the Society under this agreement, and take full responsibility for all such staff and personnel including payroll, training, supervision, and implementation of an appropriate occupational health and safety program;

(e) implement a volunteer management program appropriate for the operation and management of the McLean Mill and take full responsibility for all volunteers, including recruitment, training, safety, supervision and recognition;

(f) ensure that its employees and volunteers wear appropriate clothing and name tags that clearly identify them to the public and ensure that they display a positive image as befits a national historic facility owned by the City;

(g) be responsible for paying all charges for motive fuels and propane in connection with the operation, maintenance, and management of the McLean Mill, including the Equipment;

(h) not place or permit the placement of any commercial advertisement on the McLean Mill Site unless the advertisement has been approved by the City, in its sole discretion;

(i) not make any improvements, extensions, installations, alterations, additions or renovations to the McLean Mill Site, or alter the existing state of the McLean Mill Site in any way, without the prior written consent of the City, in its sole discretion;

(j) promptly and fully pay for all work and materials to the McLean Mill Site and will not permit any builder's liens for work, labour, services or material ordered by the Society or the cost of which the Society may be in any way obligated during the term of this agreement, to attach to the McLean Mill Site, and, should such a lien, claim of lien or related judgment or certificate of pending litigation be filed, the Society will, within thirty (30) days of receiving notice from the City to discharge the lien, procure the discharge by payment or by giving security or in such other manner as is or may be required or permitted by law, to the satisfaction of the City; and

(k) comply with all municipal, provincial and federal statutes, regulations, bylaws, and permits including but not limited to regulations arising from the *Railway Safety Act* (British Columbia), the *Workers Compensation Act* (British Columbia), the *Employment Standards Act* (British Columbia), and the *Human Rights Code* (British Columbia).

3.2 The Society represents and warrants that the Society:

(a) is a society validly incorporated under the *Societies Act* (British Columbia) and is in good standing under the laws of British Columbia;

(b) has the power and capacity to enter into and carry out the obligations under this agreement;

(c) has completed all necessary resolutions and other preconditions to the validity of this agreement; and

(d) will abide by its Articles of Incorporation, Bylaws and other constating documents and will file annual reports, financial statements, and other documents required to be filed with the Registrar of Companies to ensure the Society remains in good standing as a society under the *Societies Act* (British Columbia).

4.0 Accounting and Financial Records

4.1 The Society will, throughout the Term, keep books of account, receipts, records, vouchers, cheques, papers and documents in relation to the Society's operation and management of the McLean Mill according to generally accepted accounting standards and in a manner acceptable to the City.

4.2 The Society will ensure that all records of transactions (revenues and expenditures) are kept in such a way as to allow the City to review and compare previous years of operation.

4.3 On or before March 31st of each year of the Term and the year following expiry of the Term, the Society will provide to the City annual financial statements for the immediately preceding calendar year for the management and operation of the McLean Mill and setting out the gross revenue, actual expenses, and profits in relation to the operation, maintenance, and management of the McLean Mill.

4.4 The Society agrees that the City and its auditors, upon request, will have access to the books of account, records, vouchers, cheques, papers and documents of and which may relate to the operations of the McLean Mill.

4.5 The Society may retain all gross revenue collected with respect to the operation of the McLean Mill and will use such revenue for the sole purpose of carrying out its obligations to provide the Operational Services in accordance with the terms and conditions of this agreement.

5.0 City's Covenants

5.1 The City will:

(a) provide the Society with access to such historical research, information, and materials as is in the City's possession, as required by the Society for training and operational planning;

(b) work with the Society to develop programs and annual working plans for capital upgrades, restoration, conservation, exhibits, and interpretation related to the McLean Mill; and

(c) assist with orientation of employees and volunteers regarding the preservation of the McLean Mill and its heritage value.

5.2 As of the date of this agreement, the City advises that the following agreements are in place:

(a) a non-exclusive track license agreement between the City and the Island Corridor Foundation permitting operation of the Alberni Pacific Railway between Mile 33.25 Port Alberni Subdivision (Smith Road Rail Crossing) and Mile 37.9 Port Alberni Subdivision (Stamp Avenue Rail Crossing);

(b) an operating and maintenance agreement between the City and The Western Vancouver Island Industrial Heritage Society (the "WVIIHS") requiring the

WVIIHS to operate and maintain the City-owned railway assets and equipment located on the McLean Mill Site and that property legally described at Lot A, District Lot 1, Alberni District, Plan VIP68454;

(c) a lease agreement between the City and the owner of District Lot 60 Alberni District for the use of land and buildings for storage of logging and railway equipment;

(d) a lease of a right of way on a portion of Lot 1 Loops Farms, Alberni District, Plan VIP65249 containing the rail spur access to the McLean Mill Site,

and the City will notify the Society of any changes to or cancellations or those agreements from time to time throughout the Term.

6.0 Mutual Covenants and Agreements

6.1 The parties agree:

(a) to recognize the overarching importance of protecting the heritage value of the McLean Mill Site;

(b) to cooperate on the preparation of an annual marketing plan for the McLean Mill Site;

(c) that the financial year and the operating season for the McLean Mill will follow the calendar year;

(d) that the context statement outlined in Schedule "E" provides a reasonable explanation of the context for the McLean Mill Site and will be provided to all representatives, agents, staff, volunteers and contractors who will participate in the operation, maintenance, and management of the McLean Mill Site.

6.2 Notwithstanding anything else set out in this agreement, the parties acknowledge that, by way of a separate lease agreement, the City leases a portion of the McLean Mill Site to the Alberni Valley Enhancement Society (the "**AVES**") for the purpose of operating a demonstration fish hatchery. The parties agree that the Society has no responsibility for the operation or maintenance of the fish hatchery facility and the Society will cooperate with the AVES on matters related to site access, water supply for the hatchery, and site programming.

7.0 Payments by City

7.1 In consideration for the Society providing the Operational Services as set out in this agreement, and subject to the Society fulfilling its obligations hereunder, the City will pay the Society the sum set out in the approved Annual Operating Plan, which payment will be paid in 2 equal installments on March 1 and July 1 of each year of the Term.

7.2 The City will pay all costs associated with third party monitoring of security and fire protection systems.

7.3 The City will pay for all Capital Expenditures set out in the approved Annual Capital Plan.

8.0 Insurance

8.1 The City will obtain, at its expense, all-risk insurance for replacement cost on the McLean Mill and all improvements, fixtures, and equipment in connection therewith, including the Buildings, the Parking Areas, and the Equipment, in such amount as is deemed reasonable by the City. Further, the City will obtain comprehensive general liability insurance providing coverage for death, bodily injury, property loss and damage, and all other losses arising out of or in connection with the operation of the McLean Mill, including the Buildings, the Parking Areas, and the Equipment, and the Society's use of and activities on the McLean Mill Site in an amount of not less than two million dollars ($2,000,000.00) per occurrence.

8.2 The City will ensure that the Society is named as an additional insured on the policies of insurance required by section 8.1 above.

8.3 The Society will reimburse the City the deductible amount paid by the City for any insurance claims arising from the acts or omissions of the Society, including its directors, officers, employees, volunteers, contractors and agents.

8.4 The Society will, at its expense, obtain and maintain throughout the Term directors and officers liability insurance and include satisfactory proof of such insurance along with its Annual Operating Plan.

9.0 Environmental Matters

9.1 The Society will not:

(a) use, exercise, or carry on or permit or suffer to be used, exercised, or carried on, in or upon the McLean Mill Site, or any part, any dangerous, noxious, noisome, odorous, or offensive activity, or keep, use, handle or dispose of and goods or things which are objectionable, or by which the McLean Mill Site or any part may be damaged or injuriously affected;

(b) use the McLean Mill Site or permit the McLean Mill Site to be used for the storage, manufacture, disposal, treatment, generation, use, transport, remediation, release into the environment of, or any other dealing with, any Contaminants, and without limiting the generality of the foregoing, the Society will take all reasonable measures to ensure that any effluent or other substance discharged, spilled, emitted, released or permitted to escape, seep, or leak into any ditches, culverts, drains or sewers on or adjacent to the McLean Mill Site does not contain any Contaminants or any other substances harmful to any sewage disposal works or to the bacteriological process of sewage purification.

9.2 The Society will promptly and strictly comply with and conform to the requirements of all Environmental Laws at any time or from time to time in force, together with any requirement of insurers, regarding the proper and lawful storage, manufacture, disposal, treatment, generation, use, transport, remediation, release into the environment of, or other dealing with, Contaminants on, in, under or from the McLean Mill Site.

9.3 The Society will, as may be required by the City from time to time, provide the City will a certificate certifying that the Society is in compliance with all Environmental Laws and that no adverse environmental occurrences have taken place on the McLean Mill Site.

9.4 The Society will provide the City, promptly on request, with such written authorizations as the City may require from time to time in order to make inquiries with any governmental authorities regarding the Society's compliance with Environmental Laws.

9.5 The Society will promptly notify the City in writing of:

(a) the introduction of any Contaminants in, on, or under the McLean Mill Site or any part thereof;

(b) the introduction of any Contaminants, or any occurrence or condition, on the McLean Mill Site or any lands adjoining or in the vicinity of the McLean Mill Site, which could subject the Society, the City, or the McLean Mill Site to any fines, penalties, orders, or proceedings under Environmental Laws;

(c) any enforcement, order, investigation, litigation, or other governmental, regulatory, judicial, or administrative action instituted, contemplated, or threatened against the Society or the McLean Mill Site pursuant to Environmental Laws; and

(d) all claims, actions, orders, and investigations made or threatened by any third party against the Society or the McLean Mill Site relating to damage, contribution, cost-recovery, compensation, loss or injuries resulting from any Contaminants brought onto or created on the McLean Mill Site by the Society or its employees, agents, contractors, licensees, or invitees, or arising from the use or occupation of the McLean Mill Site hereunder or the exercise of the Society's rights or duties hereunder, or any breach of any Environmental Laws arising from any of the foregoing.

9.6 The Society will, promptly and at the City's request from time to time, remove any and all Contaminants from the McLean Mill Site and remediate any contamination of the McLean Mill Site or any other lands, resulting from Contaminants brought onto or created on the McLean Mill Site by the Society or its employees, volunteers, agents, contractors, tenants, licensees, invitees, or caretakers, or arising from the use or occupation of the McLean Mill Site under this agreement, the provision of the Operational Services under this agreement, or the exercise by the Society of any other rights or duties under this agreement. The Society will leave the McLean Mill Site free from any and all Contaminants brought onto or created on the McLean Mill Site by the Society or its employees, volunteers, agents, contractors, tenants, licensees, invitees or caretakers, or resulting from the use or occupation of the McLean Mill Site hereunder, the provision of the Operational Services, or the exercise by the Society of any other rights of duties.

9.7 If the Society brings or created upon the McLean Mill Site any Contaminants, then, notwithstanding any rule of law to the contrary, such Contaminants are and remain the sole exclusive property of the Society and do not become the property of the City, notwithstanding the degree of affixation of the Contaminants or the goods containing the Contaminants to the McLean Mill Site and notwithstanding the expiry or earlier

termination of this agreement. This section supersedes any other provision of this agreement to the contrary.

9.8 Notwithstanding sections 9.1 through 9.7 and section 10.1 of this agreement, the City must indemnify and save harmless the Society and its directors, officers, employees, agents, caretakers, and volunteers from any and all liabilities, actions, damages, claims, losses, costs and expenses (including, without limitation, the full amount of all legal fees, costs, charges, and expenses and the costs of removal, treatment, storage and disposal of Contaminants and remediation of the McLean Mill Site), which may be paid by, incurred by, or asserted against the Society or its directors, officers, employees, agents, caretakers, or volunteers with respect to or as a direct or indirect result of the presence of Contaminants on the McLean Mill Site on or before the reference date of this agreement.

10.0 Mutual Indemnity

10.1 Each party (the "**Indemnifying Party**") will indemnify and save harmless the other party, its elected officials, directors, officers, employees, and volunteers (collectively, the "**Indemnitees**") from and against any losses, claims, damages, awards, penalties, costs, expenses (including legal fees and disbursements), liabilities, actions, causes of action and proceedings made, suffered, incurred, sustained, brought, prosecuted, threatened to be brought or prosecuted, in any manner caused, based upon, occasioned by, or attributable to any personal injury or death, damage to or loss of property, or other loss or damage or any kind, arising from any willful or negligent act or omission or other actionable wrong by the Indemnifying Party or any breach of any term of this agreement by the Indemnifying Party. The Indemnifying Party will have the sole right to defend such claims at its own expense. The Indemnitees will provide, at the Indemnifying Party's expense, such assistance in investigating and defending such claims as the Indemnifying Party may reasonably request. These indemnities will survive the termination of this agreement.

11.0 Default and Termination

11.1 The Society acknowledges that the City, by its authorized representatives, may, but is not obligated to, carry out inspections of the McLean Mill Site for the purpose of determining whether the Society is complying with its obligations under this agreement.

11.2 If the City considers the Society to be in breach of its obligation to operate, maintain and manage the McLean Mill Site in accordance with this agreement, the City may give to the Society a written notice requiring correction of such default within the time specified in the notice.

11.3 The Society must promptly correct its default according to any notice received from the City under section 11.2 and, if the Society fails to do so, the City may, but is not obligated to, cause such default to be corrected at the Society's cost and may cause the City's representatives to enter the McLean Mill Site for such purpose. In the event of an emergency, the City may undertake repairs and maintenance without prior notice to the Society.

11.4 The Society shall pay to the City all such costs as the City may incur on the Society's behalf under this agreement within five (5) business days of receipt of the City's account, and unpaid accounts shall bear interest at the rate of 10% per annum, compounded semi-annually not in advance.

11.5 Notwithstanding that the City may inspect the McLean Mill Site and require repairs and maintenance, the Society agrees that it is responsible for repair and maintenance of the McLean Mill Site as specified in this agreement and it is not relying on the City for determining the need for repair or maintenance.

11.6 The City may terminate this agreement for default by giving written notice of immediate termination to the Society:

(a) in the event of bankruptcy or insolvency or the taking of any proceedings toward dissolution or winding up of the Society or if demand for payment is made upon the Society by its bank or a foreclosure action is commenced against the Society by its bank; or

(b) if the Society fails to abide by any term or obligation of this agreement and fails to rectify the default within the time specified in the written notice from the City requiring rectification of the default.

11.7 The City may terminate this agreement without default upon giving twelve (12) months prior written notice to the Society.

12.0 No Assignment

12.1 The Society may not assign this agreement without the written consent of the City, which consent may be arbitrarily withheld, provided that, if such consent is given, the Society will be relieved of its obligations hereunder except to the extent such obligations arose prior to the giving of such consent.

13.0 Approvals

13.1 The Society hereby acknowledges and agrees that any approvals required from the City hereunder may be arbitrarily withheld by the City, provided such arbitrary withholding of approval by the City is bona fide and based on the merits of the proposed act, course of action, or matter for which approval is required. The City hereby acknowledges and agrees that if, as a result of such an arbitrary withholding of approval by the City, the Society is unable to observe and perform its obligations hereunder, the Society will not be deemed to be in default of such obligations.

13.2 Nothing in this agreement will fetter the discretion or prejudice the rights and powers of the City in the exercise of its functions pursuant to the *Community Charter* (British Columbia) and the *Local Government Act* (British Columbia).

14.0 Delays

14.1 Whenever in this agreement it is provided that anything be done or performed, such provisions are subject to unavoidable delays and neither the Society nor the Society will be regarded as being in default in the performance of any obligation hereunder during

the period of any such unavoidable delays relating hereto and each of them shall notify the other of the commencement, duration, and consequence (so far as is within the knowledge of the party giving such notice) of any unavoidable delays affecting the performance of any of its obligations hereunder.

14.2 In this agreement, "unavoidable delay" means any prevention, delay, stoppage, or interruption in the performance of any obligation of a party hereunder due to a strike, lockout, labour dispute, act of God, inability to obtain labour or materials, laws, ordinances, rules, regulations, or orders of governmental authorities, enemy or hostile, civil commotion, fire or other casualty, and any other condition or cause beyond the reasonable control of the party obligated to perform, but shall not include any inability to perform because of any lack of funds or other financial consideration occasioned by default of the City or the Society performing its obligations hereunder.

14.3 Subject to section 13.0, whenever it is provided herein that a consent, approval, or other action shall be obtained from the City, such expression shall be deemed to include a requirement that such consent, approval, or other action or refusal thereof shall not be unreasonably delayed.

15.0 Notices

15.1 Any notices required to be given hereunder by either party to the other will be deemed to have been well and sufficiently given if mailed by prepaid registered mail, faxed (if applicable), or delivered at the addresses hereinafter set forth:

(a) to the City:

City of Port Alberni
4850 Argyle Street
Port Alberni, BC V9Y 1V8

Fax # (250) 723-1003
Attention: City Clerk

(b) to the Society:

McLean Mill Society
5633 Smith Road
Port Alberni, BC V9Y 8M1

Attention: Executive Director

or at such other addresses as the parties hereto may from time to time advise in writing, and any such notice will be deemed to have been received, if mailed or faxed (if applicable), forty-eight (48) hours after the date of such mailing or faxing and, if delivered, upon the day of delivery.

16.0 Non-Release

16.1 Upon termination of this agreement by effluxion of time or otherwise, the Society shall not be released from any of its obligations under this agreement existing at the time of such termination and the Society will forthwith deliver to the City all records and other documents in its possession or control reasonably required for the continued operation of the McLean Mill Site.

17.0 Waiver

17.1 No condoning, excusing, or overlooking by the City or the Society of any default, breach or non-observance by the Society or the City respectively at any time or times in respect of any covenant, proviso, or condition herein contained will operate as a waiver of the City's or the Society's rights or duties respectively hereunder in respect of any continuing or subsequent default, breach or non-observance, or so as to defeat or affect in any way the rights of the City or the Society respectively herein in respect of any such continuing or subsequent default or breach, and no waiver will be inferred from or implied by anything done or omitted by the City or the Society respectively, save only express waiver in writing.

18.0 Confidentiality

18.1 The Society will not divulge to any other party at any time any information in its possession or control relating to the McLean Mill or the McLean Mill Site, except as may be reasonably necessary to perform its obligations hereunder or otherwise as may be required by law, and this covenant will survive the termination of this agreement.

19.0 Dispute Resolution

19.1 If a dispute relating to this agreement should arise, and the parties are unable to settle the dispute through negotiation, then the parties may, at their option and mutual agreement, attempt to resolve the dispute through mediation. If mediation is unsuccessful, the parties may, at their option and mutual agreement, submit the dispute to binding arbitration pursuant to the *Arbitration Act* (British Columbia).

19.2 If any dispute is referred to mediation or to an arbitrator appointed under the *Arbitration Act*, the costs of the mediation or arbitration shall be borne equally by the parties involved in the dispute, unless other arrangement is made by agreement of the parties. Unless otherwise agreed, the parties agree that, in the event of an arbitration, a single arbitrator will be appointed in lieu of a panel.

20.0 Relationship Between the Parties

20.1 It is understood and agreed that nothing contained in this agreement nor in any act of the parties hereto will be deemed to create any relationship between the parties hereto other than the relationship of owner and service provider. For certainty, nothing in this agreement makes the City and the Society joint venturers or partners.

As evidence of the mutual intention of the parties to be bound by all the terms of this agreement, the parties hereto have executed this agreement on the dates written below:

CITY OF PORT ALBERNI, by its authorized signatories:

Mayor: MIKE RUTTAN

City Clerk: DAUNA HARTWELL

AUGUST 16, 2017
Date

MCLEAN MILL SOCIETY, by its authorized signatories:

Name: BILL COLLETTE

Name: DEANNA BEAUDOIN

August 4, 2017
Date

John Dam & Associates
Building Conservation Engineering

McLean Mill National Historic Site

SITE ASSESSMENT

Prepared for:

City of Port Alberni
c/o Jamie Morton - Manager of Museum, Heritage & Culture, City of Port Alberni
4255 Wallace Street
Port Alberni, British Columbia

Prepared by:

John Dam & Associates Inc.
2884 Gorge View Drive
Victoria, British Columbia

July 3rd, 2018
#1056.001

Synopsis

On behalf of the City of Port Alberni, John Dam & Associates has completed an assessment of the McLean Mill National Historic Site in Port Alberni, British Columbia. The purpose of this assessment is to provide a summary overview of the condition of the extant buildings and ancillary structures along with associated renewal and maintenance recommendations.

A visual review of the historic assemblies was completed over several days by JDA. Background documentations were also reviewed to provide context to the current status of the site and conservation planning. These documents include the Interim Protection Plan Draft Report produced by the Canada Parks Service (Parks Canada) in 1990, a Management Plan for the McLean Mill NHS produced by Commonwealth Historic Resource Management in 1993, and architectural renewal documents produced by Paul Merrick Architects in 1998.

Based on the site assessment, the buildings and associated structures were generally found to be in good condition, especially considering their vintage and exposure. There were limited observations of existing or imminent failure, with a number of buildings noted to be at risk. Several structures and building were also observed to have been restored and appeared to be performing well. Failing roof materials and members as well as the encroachment of organic growth and grade with associated moisture related deterioration at the building perimeters are the most significant detrimental impacts on site. Considering the important context of conserving the site as a whole, the priority recommendation is that all buildings be provided with a functioning roof, either renewing the existing assembly or installing a temporary sheet metal roof, and that all material and debris be sensitively removed from the building perimeters. It is also recommended that the at-risk buildings be stabilized either by addressing the localized deterioration with new material or bracing the building to prevent further movement and relieve compromised load bearing members. Upon completion of this stabilizing work, a plan can then be developed to effectively conserve each of the buildings.

Recommendations have been provided for both maintenance and renewal work with associated frequency and priority ratings.

Sincerely,

John Dam & Associates Inc.

Table of Contents

1.0 Introduction

At the request of Jamie Morton, the Manager of Museum, Heritage & Culture for City of Port Alberni (CPA), John Dam & Associates (JDA) has completed a site assessment of the McLean Mill National Historic Site in Port Alberni, British Columbia. The purpose of this report is to provide a current summary assessment of the site buildings and structures, focusing their general condition. Based on visual observations and an understanding of building durability, maintenance and renewal recommendations are presented with associated frequency and prioritization. With these recommendations, conservation planning for immediate and future works can be accomplished.

2.0 Terms of Reference

The scope of work undertaken to complete this report included:

- briefly reviewing a selection of previous reports to gain a contextual understanding of the site
- completing a preliminary review of the site, noting known problem areas as revealed by site staff
- completing a full review of the identified buildings, noting their current condition and those assemblies and conditions warranting conservation attention
- completing a full review of all provided documentation to gain a full understanding of the various buildings, their history including all noted previous maintenance and renewal work, and all identified demolitions
- summarizing the findings of the review in this condition assessment report and providing associated maintenance and renewals recommendations

The primary documents that were made available for review include the Interim Protection Plan Draft Report produced by the Canadian Parks Service (CPS – now Parks Canada) in 1990, a Management Plan for the McLean Mill NHS produced by Commonwealth Historic Resource Management in 1993, and architectural renewal documents produced by Paul Merrick Architects in 1998. Additional documents provided include the statement of significance, a site resource summary, and a site map. A descriptive summary of the site's current condition as well as previous conservation works was provided by Jamie Morton via email prior to the review of the site.

3.0 Site History

The construction of McLean Mill started on Beaver Creek in April 1926. Financed by Robert Bartlett McLean, his three sons managed the day to day operations beginning in the spring of 1927. Due to its isolated location, some employess would live in bunkhouses and eat in the cookhouse while some of the families would have cabins. Overtime, offices were built as well as a school house for the growing children. The Japanese workers and their families would live in a separate camp on Kitsuksis Creek.

In the early years, the site was dependant on rail transportation. During the Second World War and following, with work at the Mill slowing down, the company would gradually switch from rail to gas powered trucks and refocus on producing and delivering dimensional lumber. A number of big changes came in the '50s with the introduction of electricity and a better road network to the site. Rail transportation came to a stop and the workers moved to town resulting in the decline of camp life.

Photograph 1 – Gas powered logging truck

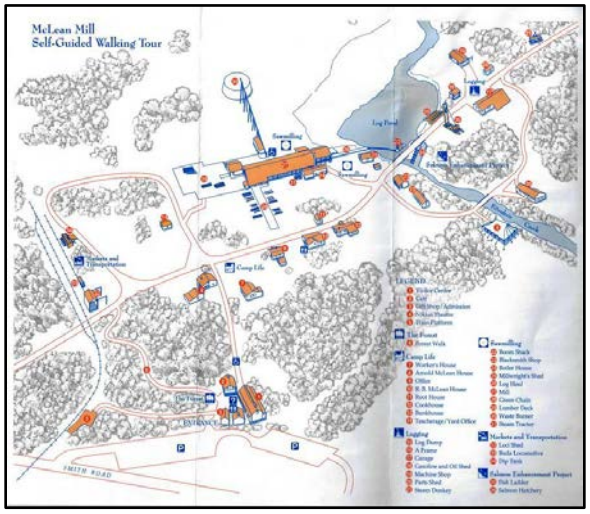
The Mill would continue to operate through to 1965 when the Mclean family would end independent operations and start to working for Macmillan Bloedel. The site would soon cease operation entirely and be donated to the City of Alberni. In 1989, the site was recognized as being national significant and designated as such.

In 1990, Canadian Parks Service commissioned a report identifying the condition of the site, recognizing the importance of the extant buildings and their presentation as a whole while also noting the advanced deterioration that would require immediate attention. In 1993, Commonwealth Historic Resource Management was commissioned to develop a management plan for the renewal of the site. With the plan not fully realized, from 1997 to 2000, the site was partially restored. In 2010, the Province invested in restoring a number of buildings. Site Operations have attempted to complete a number of repairs while Parks Canada focussed on conserving the Mill which remained in operation until 2017.

Photograph 2 – Building deterioration

4.0 Site Description

Located on just under 13 hectares (just over 32 acres), The McLean Mill site forms a self-contained community of residences, offices, and service buildings around the mill and pond. Set in the temperate rainforest that seeded the beginning of operations, a path leads from the contemporary Visitors Centre to a number of residential and administration buildings. Across the main road, running east-west across the site, is the mill and associated operations buildings. To the west of this is the remaining railway track and the buildings/structures linked its' operations. The east end of the site, across the pond and Kitsukis Creek from the mill, is the original logging operations and associated infrastructure. More recently, a salmon hatchery has started operations in this area within its own building. This has resulted in the construction of a bypass water way that allows for the historic preservation of the pond. To the north, the Beaufort Mountain Range provides the natural back drop to the site with the ongoing logging operations altering its landscape over time.



Photograph 3 – Site Map

5.0 Site Assessment

The assessment of the site was visual in nature with areas of particular interest highlighted by personnel associated with the management and maintenance of the site. The review focussed on 28 identified buildings and structures and was an overview in nature, focussing on the general conditions and particular deterioration mechanisms towards developing a stabilization plan for the site. The following sections are a summary of the observations of each building and structures with recommendations for maintenance and renewal work provided where appropriate.

Camp Life

5.1 Worker's House

Originally built in 1929, a porch was added to the east elevation in the '40s while major renovation works including the addition of a front room and bedroom, the enclosing of the porch, and the finishing of the attic space were completed in the '60s. In the '80s, the attic was closed off and a beam was added in the kitchen. Recent conservation works include the stabilization of the foundation by setting the building on concrete blocks, improving perimeter drainage, renewing the roof with contemporary asphalt shingles, and restoring the board and batten siding on the south and north-east elevations. The enclosed porch was removed in 2008.

Currently, the asphalt shingle roof is supporting significant moss growth on both the north and east elevations while moisture ingress through the attic has occurred, deteriorating the ceiling finishes. The discontinuous roof line at the south-east corner would suggest a previous addition on the east elevation has been removed.



Photographs 5 - 7 – (*left to right*) moss growth on the north eaves, ceiling damage associated with building displacement and moisture ingress, damaged and deteriorated east wall

The walls a clad with a variety of finishes that are in fair condition except the south end of the east wall that is in very poor condition with loose pieces of wood, dysfunctional doors, and large holes through the assembly; one partially patched with a sheet of plywood. The former porch opening on the north elevation is infilled with plywood while the other windows appear to be in fair condition with deteriorating details.

The supporting timber structure appears in good condition except at the south end of the east elevation where the outer joist has failed, resulting in differential settlement.

The interior was observed to be haphazardly filled with random materials and debris exacerbating building deterioration and compromising interior air flow and drying.

Photographs 8 - 10 – (*clockwise from top left*) renewed timber foundation structure on concrete pad footings, deteriorated exterior joists resulting in building displacement

The Workers House was generally found to be in fair condition though in need of remediation work. It is recommended that if the roof is found to be currently leaking, it be addressed with the installation of temporary sheet metal or the renewal of the asphalt shingles to eliminate persistent moisture ingress and related deterioration. The east elevation should be repaired to close up the damaged and exposed wall assembly and prevent moisture ingress into the building. The window sills should be restored where signs of moisture ingress into the wall assembly are evident. The damaged floor joists should also be replaced to prevent further building displacement and the possibility of progressive failure. If material is to be stored in this building, it is important that it be organized and well-spaced to facilitate airflow, reduced moisture storage, and allow for the onset of assembly deterioration and displacement to be readily observed.

Table 1 – Workers House - Renewal Recommendations		
1	Renew the roof with sheet metal cladding or asphalt shingles.	High
2	Rebuild the east elevation, installing protective cladding.	High
3	Repair the damaged and deteriorated floor joists.	High
4	Renew the window sills.	Low
5	Organize and reduce interior material storage, removing all accumulated debris. Regularly ventilate the interior air space.	Medium

5.2 Arnold McLean House

Originally built in 1920's as a two room house with a living room / kitchen adjoining a bedroom, a kitchen addition was added in 1927 along with another bedroom and the finishing of the attic. In the 1930's, the new bedroom was converted into a bathroom and the attic was converted into a bedroom. In 1948, the front door was relocated and the living room window was enlarged. Recent conservation works include the replacement of the interior carpet with plywood in 2003 to protect the original wood floor beneath and the replacement of the cross beams and some rafters, the rebuilding of the chimney and repair of the adjacent floor joists in 2010.

Photograph 12 – debris accumulation on the roof and in the gutter

Built adjacent to a couple of large trees, Organic debris and growth is accumulating on the cedar shingle roof and filling the gutter over the front door. At least one branch was observed to be resting on the roof. Despite this, the roof appeared to be performing as required with no observed interior moisture ingress and related deterioration.

The walls are protected with a cedar shingle cladding that flares out at the base. The shingles on the north elevation are noticeably larger in size, possibly identifying assemblies that were added at a later date. These shingles are showing minor, localized deterioration while the east elevation is severely deteriorated at the base. The south elevation is in good condition while a corner of shingles on the west elevation is damaged exposing the framing behind. The windows were all observed to be in fair condition with varying degrees of debris accumulation on the sills and associated deterioration.

The supporting timber structure, beams on posts on concrete blocks, appeared to be in good condition as did the perimeter skirting.

The interior is set up as an exhibit space for visitors to experience as they pass through. Signs of interior moisture ingress and related deterioration were not observed.

Photographs 13 - 16 – (*clockwise from top left*) deteriorated wall cladding, sound building frame and footings, debris on the window sills

Having been formerly used as the site caretakers' house, the A. McLean House is generally in good condition. It is recommended that the roof and gutters be regularly maintained, removing accumulated organic growth and debris, and that the lower hanging tree branches be trimmed up to improve the drying capacity of the cedar shingles. The wall cladding should be repaired where damage and deterioration are exposing the framing assembly behind. The window sills should also be regularly maintained having accumulated debris removed and if necessary, the sills renewed.

Table 2 – Arnold McLean House - Renewal Recommendations		
6	Remove growth and debris from the roof and gutters and cut up all branches in close proximity to the roof.	Medium
7	Repair all damaged and deteriorated cedar shingle cladding.	Low
8	Renew the window trim	Low

5.3 Arnold McLean Garage

Little documentation has been sourced on the history of this garage excepting that the Canada Parks Services report recorded it being in good condition in 1990.

Currently the building is in a state of advanced deterioration and close to structural collapse. The roof structure is exposed to the elements while the south-west corner of the building is submersed in standing water.

The cedar shingle roof over the main garage has been protected with a tarp that is loosely held in place and heavily damaged. With the severe deterioration of the shingles and the damaged tarp, the roof structure is exposed to moisture ingress and the associated deterioration. The lean-to on the west side is protected with sheet metal cladding held down with timber scraps and debris. Given the low-slop and accumulation of debris, the onset of deterioration of the sheet metal is unavoidable with a number of holes already observed.

Photograph 18 - 20 – (*clockwise from top left*) damaged roof tarp, holes through the main, cedar shingle roof and the lean-to, sheet metal roof

The board and batten wall cladding and the windows both appear to be in fair condition with only minor localized deterioration, particularly along the base of the wall. The garage doors to the east bay were observed to be off their hinges, one leaning against the building and the other haphazardly hanging.

The timber footings are set directly on grade with water encroaching on the southwest corner. It appears that a ditch has been excavated along the south and east elevations to divert moisture accumulation but footing failure and associated building settlement are still evident.

The two outer bays have dirt floors with the east bay occupied by a tractor and the west or lean-to bay storing scrap and tables. The centre bay has a wood floor that appeared to be in fair condition. Materials, debris, and artifacts were observed in the centre bay.

Photograph 21 & 22 – (*top to bottom*) the north elevation with a tractor in the east bay and the displaced doors, a ditch along the east elevation

The condition of the A. McLean Garage is critical with potential assembly failure imminent. As with all buildings, it is important that the garage stay dry and have the capacity to dry out to best minimize moisture related deterioration. The primary recommendation is to reset the building on a new foundation assembly, out of the encroaching water, and if necessary, drain the adjacent accumulation of water away from the area. The deteriorated roof assembly must also be addressed with the renewal of the original assembly using new materials or with the installation of temporary, protective cladding. Tarps must only be considered a short term, seasonal measure, understanding that once moisture gains access beneath them, it cannot easily escape and the tarp can actually make conditions worse. Simultaneously with the restoration of the foundation and the roof, the building structure should be reviewed and addressed as necessary to ensure that it remains stable and safe to enter. Following these efforts, conservation works can be completed including the restoration of the original doors and the repair of any localized wall and window deterioration that may be affecting the integrity of the building structure. The open concept of the garage building allows it to constantly vent the interior space.

Table 3 – Arnold McLean Garage - Renewal Recommendations		
9	Renew the roof cladding and address any roof structure deterioration	Critical
10	Reset the building on a new foundation out of accumulating water.	Critical
11	Complete a structural review of the building and address any necessary upgrades	Critical
12	Restore the garage doors	Low

5.4 Office

The Office building was originally constructed in 1929 as a two room cabin. In the '40s or '50s, a rear addition was added. When Canada Parks Service reviewed the site, the Office was found in poor condition with widespread wood rot and a tree undermining the footings. Minor works were completed in 2001 with more extensive restoration work completed on the addition, footings, front porch and interior in 2011.

The main and entrance porch roofs are currently protected with a modified bitumen sheet membrane while the rear addition is covered with sheet metal. Both roofs are supporting organic growth and debris but otherwise appear to be performing as expected. The exposed rafter ends were observed to be deteriorating suggesting that the overhang of the roof is not sufficient to prevent moisture drainage onto them. The chimney appears in fair condition but could be cleaned and repointed to reduced accumulating organic growth and associated deterioration.

Photograph 24 – debris runoff on the rafter tails

The walls and windows all appeared to be in good condition, reflecting the extensive restoration effort put into them in 2011.

The restored foundation posts and concrete footings appeared to be in good condition. Lacking the perimeter skirting, there is positive ventilation beneath the building. Grade is however starting to accumulate at the north-west corner and along the west and north edges of the entrance porch putting the base timber at risk of moisture related deterioration. A large tree is also growing in close proximity to the west elevation, exacerbating the impact of the accumulating grade. Material debris was also observed to be stored beneath the building.

Photograph 25 & 26 – *(left to right)* grade accumulation along the north elevation

The interior, as observed through the windows, appeared to be in good condition with no observed signs of moisture ingress or deterioration.

With the extensive restoration work completed in 2011, the Office generally appears to be in good condition. Organic debris accumulation on the roof and the encroachment of grade at the north-west corner are the only noteworthy items of concern. It is recommended that these two circumstances be addressed and integrated into the regular management of the building to prevent the onset of serious deterioration.

Photograph 27 –grade encroaching on a foundation post.

Table 4 – Office - Renewal Recommendations		
13	Remove organic growth and debris from the roof and repoint the chimney.	Medium
14	Pull back grade from the north-west corner of the building and monitor the encroachment of tree roots	Low

5.5 Robert Barlett McLean House

The building was in such poor condition when reviewed by the Canada Parks Service, being near the point of collapse, that is was recommended it be documented and deconstructed for possible future conservation.

Today, following the recommended reconstruction, the building serves as a site office and public washroom facility.

The cedar roof on the north and south-west elevations appear to be in fair condition though supporting accumulating organic growth. The shallow pitch of the south-west roof, too shallow for cedar shingles, is exacerbating the accumulation of debris. The modified bitumen membrane over the porch and the south-east corner appears to be in good condition. A timber gutter redirects runoff away from the south-west edge of the roof.

The variety of siding profiles protecting the wall assemblies all appear to be in good condition with the only noted damage appearing along the west base of the north elevation. The windows and their perimeter trim also appear to be well maintained.

Concrete foundation walls and a central pony wall on strip footings support the building while a concrete slab finishes the crawlspace floor. Timber skirting maintains the historic appearance on the exterior. The crawlspace is ventilated with several openings. The supporting structure appeared to be in good condition.

Photographs 29 - 31 – (*top to bottom*) debris accumulation on the low-sloped cedar shingle roof, damaged wood cladding, concrete foundation and crawlspace slab.

The interior, from what could be observed through the windows, appeared to be in good condition with no signs of moisture ingress or deterioration. Being in regular use, it is expected that any signs of interior deterioration would be reported to site management.

Having been reconstructed to form a contemporary office space on site, the R.B. McLean House is in good condition with no signs of serious deterioration. The low-sloped roofs and gutter collect organic debris that should be should be regularly removed. The cedar shingles on the low-sloped roof should also be replaced with the more appropriate modified bitumen membrane. The damaged siding could also be repaired.

Table 5 – Robert Barlett McLean House - Renewal Recommendations		
15	Clean roof of organic debris and replace low-sloped cedar shingles with a modified bitumen membrane.	Medium
16	Repair damaged siding	Low

5.6 Root House

Originally built in 1937, the Root House underwent extensive restoration after the Canada Parks Services found it to be near collapse and supporting a fallen utility pole.

Currently a steeply sloped, sheet metal roof with generous eaves and overhangs protects the wood frame structure. The roof structure supporting the sheet metal appeared to be in good condition.

The wood clad walls appeared in good condition with only a few pieces of siding showing minor edge and end damage and deterioration. The door appeared to be original, at least in design, with dimensional lumber hinges. The building is without any windows.

Creosote blocks at the building corners were observed to be providing foundational support. They appeared to be in good condition from what could be seen. Beyond this, little could be observed of the footings. The building appeared level indicating the footings have not failed. It was noted that the building was constructed over a tree root that will likely, over time, impact its slope and stability.

Photographs 33 - 36 – (*clockwise from top left*) sheet metal roof cladding overhang, deteriorated siding, building base constructed over a tree root, a creosote block footing

The interior space with wood shelves holding a few items of historical interest, appeared in good condition with no signs of moisture related deterioration or other damage.

Having been extensively restored, the Root House appears to be in good condition with no signs of damage or deterioration. It is simply recommended that the building be monitored over time to prevent undue impact from the tree root and the encroachment of grade at the perimeter.

5.7 Cookhouse

The Cookhouse was originally built in 1927 with a dining room, kitchen, bedroom, and an open air pantry on the north side. A few years later, a second bedroom was added. In 1990, the Canada Parks Service found the Cookhouse to be in very poor condition with failing posts and wall framing, a heavily deteriorated roof, and a tree growing into the side of the pantry. Posts, floor beams and the subfloor were replaced, several walls were reframed, the front porch was repaired and a temporary metal roof was installed. Since this conservation effort, the large tree growing into the pantry was removed, the west porch was reconstructed, the floors were restored, the rear walls were reclad, and the temporary roof was replaced with replicated period shingles. In 2010, the interior walls and ceiling of the dining room were finished with donna conna board.

Currently, the asphalt shingle roof is note-worthily deteriorated and protected with haphazardly secured tarps. A large tree remains in close proximity with its lower branches resting on the roof. Roof plank deterioration was observed at the south-east corner while the donna conna ceiling finish of the dining room, and the wood ceiling of the bedroom are supporting organic growth and failing.

Photographs 38 - 40 – (*clockwise from top right*) loose roof tarps, deteriorated wood and donna conna ceilings

The walls are protected to the exterior with board and batten siding that appeared to be in fair condition with a number of loose and missing battens. The plank siding on the north and south additions appeared to be in good condition. A number of windows were observed to be lacking

perimeter trim and sills and in some cases, accumulating organic debris at their base. In general though they appeared to be in fair condition


Photographs 41 - 42 – *(left to right*) missing window trim and debris accumulation at the base, missing batten

The supporting foundation structure is a combination of dimensional and round timbers on dimensional and round posts generally appearing to be set on concrete footings. No signs of deterioration or building settlement were noted though grade was observed to be encroaching on some of the posts and along the north porch.

The interior space, open to allow visitor access, exhibits what the space may have historically looked like. Apart from the deteriorating ceilings and generally appearing unkempt, it appeared to be in fair condition.

It is critical that the roof assembly be addressed to prevent further deterioration of the supporting structure and adjacent assemblies. The asphalt shingle cladding can either be renewed or protected with the installation of a temporary sheet metal roof. With the onset of organic growth in the interior, it is important that all affected materials be removed as such growth can present a health hazard and cannot be effectively stopped or removed from the affected material. All tree branches in close proximity to the roof should be trimmed up and encroaching grade be pulled back from the perimeter building assemblies. Following these efforts, conservation works addressing the deteriorated cladding and window perimeters can be completed and consideration can be made to restore the interior finishes. It is also important to regularly ventilate the interior space to control moisture accumulation and reduce its negative impact.

Table 7 – Cookhouse - Renewal Recommendations		
17	Renew the roof assembly with new cladding, repairing all uncovered deterioration to the supporting structure	High
18	Remove all deteriorated interior materials	High
19	Cut up all branches in close proximity to the roof and pull back grade from the footings and porch perimeter	Medium

5.8 Bunkhouse

Constructed in 1946, the Bunkhouse was found by the Canada Parks Service to be in poor condition in the 1990. The roof and back wall had failed with deteriorated studs, rafters and footings. These failed elements were all replaced in the initial renewal effort and a temporary metal roof was installed. In 2003 and 2007, further restoration work was completed.

The 'temporary' sheet metal roof is now starting to corrode and a number of panels were observed to be loose. Along the back elevation, the sheet metal was installed with excessive overhang and one panel has buckled. An abridged gutter, determined to not be original to the building, has been installed over the front door.

Photographs 44 - 46 – (*clockwise from top left*) lifting and buckling sheet metal roof, settled and deteriorating timber footing assembly

The walls are protected with wood cove siding and trim. The front elevation is painted brown with white trim. The windows on the front and side elevations are hung sash operables while a wood frame door provides passage into the building. Excepting for the boarded over door and window on the back elevation, the wall and window assemblies appear to be in good condition.

The building is supported on a timber structure set on heavy timber footings. A deteriorated and loose footing assembly was observed at the north-east corner.

The interior is set up to exhibit historic living condition, with beds, side tables and artifacts on display. Apart from some minor staining on the donna conna finish, the interior appears dry and in good condition.

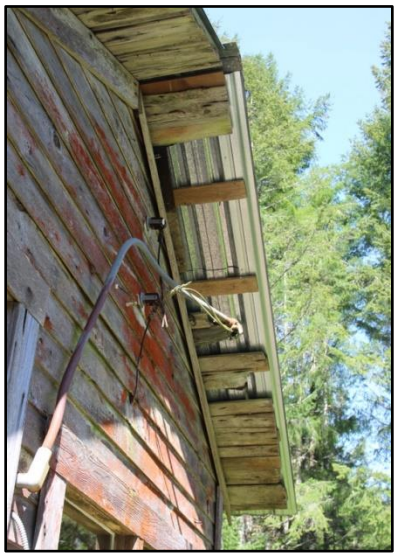
The Bunkhouse is in fair to good condition with observed deterioration limited to the NE footing and a missing back door and window. It is recommended that the roof be fastened down and that the excessive overhang be cut back from the rear elevation. The deteriorating footing should also be renewed or addition material installed to provide the necessary support. At some future time, the rear window and door could be restored.

Table 8 – Bunkhouse - Renewal Recommendations		
20	Fasten down the sheet metal roof and cut back the excessive overhang	Medium
21	Renew the deteriorating NE footing	Medium
22	Restore the rear window and door	Low

5.9 Teacherage

Built in 1924, the Teacherage was initially built with a kitchen and living room up front and a bedroom in the back. In 1934, the interior walls were removed to create a single room. In 1990, the building was found to be in fair condition with restoration works limited to some new posts, beams and joists, new porches and a roof tarp. The roof was later renewed with a contemporary sheet metal assembly while the foundation and porches were renewed in 2011.

The sheet metal roof appeared to be in fair condition with the onset of surface corrosion and some flashing repairs completed along the ridge. The wood structure supporting the roof had some noteworthy deterioration but the interior of the building appeared to be dry and free of moisture related deterioration.



The wood siding appeared to be in good condition accepting along the base of the building, particularly adjacent to the north porch, where deterioration was evident. The window is missing in the west elevation while the east window is supporting moss growth. The east door was found to be off its hinges, inside the building while the north door, adjacent to the porch, is significantly deteriorated along the base.

The building is supported by a timber foundation and treated timber and concrete blocks. The foundation structure appeared to be in good condition though organic growth is not managed along the perimeter. The front porch is in good condition but the side porch appears to be sloping towards the building, exacerbating the deterioration of the adjacent door and siding.

Photographs 48 - 50 – (*clockwise from top right*) deteriorated timber roof structure, north porch with adjacent door and cladding deterioration, perimeter growth

The interior, open to the exterior with the missing window and door, appeared to be in good condition. A central stud wall has been installed to provide additional bracing for the roof structure. The wood ceiling does not appear to be original while deteriorating floor planks, possibly original, are overlaid with new material. Miscellaneous materials are stored in the building including chairs, a bike, and landscaping equipment.

Photographs 51 & 52 – (*left to right*) interior stud wall, overlaid, deteriorating floor planks

Having been relocated at least once, the Teacherage currently appears to be in good condition on a sound foundation with limited, observed deterioration. It is recommended that the north porch be addressed, sloping it away from the building to reduce backsplash against the base of the building. Organic growth around the perimeter should be cut back to allow the base of the building to vent and dry while the east window sill should be cleaned of organic growth to prevent deterioration. Consideration for future conservation works would include the renewal of the doors and windows to reduce moisture ingress into the building, and a further investigation of the roof structure.

Table 9 – Teacherage - Renewal Recommendations		
23	Slope north porch away from building	Medium

Logging

5.10 Log Dump

Restored in 1990, the Log Dump is a timber structure that facilitated the placement of the cut trees into the mill pond. Rough cut, round logs are set on a supporting log and slope into the pond. Given the exposure and abuse this structure likely experienced, it is likely the members were regularly replaced as they deteriorated and broke over time.

There are currently 6 sloping logs set on a notched base log. The sloping logs, despite the accumulation of debris between them, are in fair condition with the expected level of exposure related deterioration. The base log is significantly decayed at the ends and splitting apart.

Given its exposure and positioning into the edge of the pond, the Log Dump is a feature that will continue to deteriorate over time. This will necessitate the eventual and continual, replacement of the timber members. When it was last restored, the slope was reduced to accommodate current concerns pertaining to the fish in the pond. If possible, consideration should be given to restore the original geometry of the structure.

Table 10 – Log Dump - Renewal Recommendations		
24	Monitor the timber members, removing debris and growth between them to reduce the rate of decay and replacing them when they become unstable	Low

5.11 A-Frame

The A-Frame was rebuilt in 2004 with a new log structure supporting the original hardware.

The assembly, set on treated timbers, appeared to generally be in good condition with no significant deterioration observed beyond the ongoing corrosion of the mechanical equipment. The two side roofs, providing protective cover for the operators, are sagging under their own dead load suggesting inadequate structural support. This is likely exacerbated under snow loads conditions.

Photographs 55 & 56 – (*left to right*) The cabin of the A-Frame with the wing roofs

Ongoing use and maintenance of the A-Frame would enhance the durability and life expectancy of this structure. Alternatively, a contemporary roof structure could be erected over the mechanical end to protect it from exposure to the weather and associated corrosion. It is likely that the structure of the wing roofs is original and that the angled position is what they originally looked like. Regular monitoring and maintenance of these roofs will keep them in place while modest structural upgrades would reduce maintenance requirements and possible failure.

Table 11 – A-Frame - Renewal Recommendations		
25	Monitor the mechanical assembly and protective structure, completing maintenance and renewal work when necessary.	Low

5.12 Garage

Built circa 1944/45, the west roof was raised around 1951 to accommodate higher trucks. Shortly after, the maintenance pit was dug deeper. In 1990, the building was found to be in poor condition and near collapse. The posts and foundations were replaced, the walls repaired and a new roof was installed.

The renewed asphalt shingles are now beyond their expected service life with extensive deterioration and organic growth observed. The cedar shingles on the rear lean-to roof are also covered with moss and organic debris. The main roof structure is unconventionally framed with discontinuous members and seemingly random bracing. Moisture ingress is occurring in a number of locations, most notably where the raised roof transitions to the main roof. A number of material and assembly failures were observed including a significant hole in the roof, fraying tension cables, and deteriorating post bases.

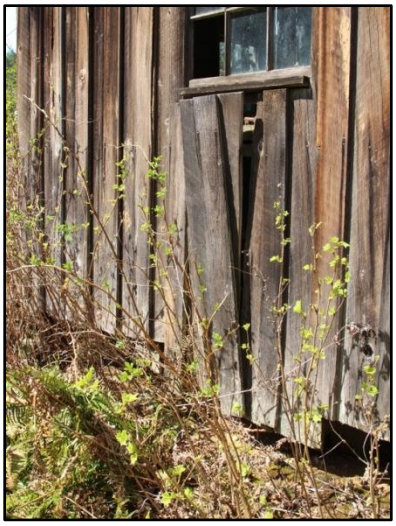
Photographs 58 - 60 – (*clockwise from top left*) deteriorated asphalt shingles, unconventional roof framing, moisture staining on the structural assembly

The wall assemblies, despite the unchecked organic growth occurring around the perimeter, appear to be in fair condition with only localized damage and deterioration observed.

The floor assembly adjacent to and over the pit appears to be failing with loose and displaced floor planks. Further review of the floor could not be completed with the vehicles parked on the assembly. A review of the perimeter grade showed it to be sloping towards the front of the building. This may be contributing the observed post failures.




Photographs 61 - 68 – (*clockwise from top left*) failed roof cladding, frayed tension cable, unabated growth along the east elevation, localized siding failure, displaced and collapsed floor planks, post base failure, overgrown, braced lean-to structure

Despite the renewal work completed in the 90's when the building was found to be near collapse, the Garage is once again in very poor condition with signs of structural settlement, moisture ingress and related deterioration. The unconventional framing and bracing along with the settlement indicates that the building may not be stable. It is recommended that a comprehensive structural review of the building be undertaken to ensure its safety and stability and to determine what structural renewal work may be required. In addition, the roof should be replaced to eliminate moisture ingress into the building and reduce further member deterioration while the surround grade and organic growth should be pulled back from the building to allow the base assemblies to dry out and reduce their rate of deterioration.

Table 12 – Garage - Renewal Recommendations		
26	Complete a structural review of the building to determine any necessary renewal and reinforcing works that may be required	High
27	Renew the roof, replacing the existing shingles or installing a temporary sheet metal roof.	High
28	Pull back grade and organic growth from the building perimeter	Medium

5.13 Gasoline & Oil Shed

When reviewed in 1990, the Gasoline & Oil Shed appeared to be in stable though poor condition.

Currently, the corrugated sheet metal roof appeared to be in fair condition with many of the fasteners observed to be lifting, allowing the sheet metal to move in the wind. The edge of the roof over the front porch appears to have sustained impact damage in the past while the structural framing supporting it appears to have been recently renewed.

The south wall is in good condition, protected by the porch roof while the remaining walls, without this protection, are significantly weathered with localized damage and organic growth and debris encroaching at the base. The windows, without sill plates or trim, allow water to pass in between the sash and wall assembly.

Photographs 70 - 73 – (*clockwise from top left*) Loose corrugated roofing, encroachment of growth and debris, a window pane set in the wall, the front porch with a missing support post

The existing post and beam foundation appears to be in fair condition though perimeter deterioration could not be affirmed with the encroachment of growth and grade. The front porch is missing a support post and is subsequently noticeably sagging.

The interior space appeared to be storing fuel drums. With observations limited to looking through the windows, it was difficult to ascertain the condition of the interior space but no signs of obvious deterioration were observed.

The Gasoline & Oil Shed appears to be in fair condition. The roof, though loose, is in good condition and should simply be refastened down to the roof structure. The deteriorated wall elements could be repaired while the windows, could be discretely trimmed, if historically appropriate, to reduce moisture ingress through the wall assembly. The accumulated debris and organic growth should be removed from the building perimeter to facilitate drying and reduce the rate of deterioration. The support post beneath the front porch should also be reinstated to avoid undue stress on the porch assembly.

Table 13 – Gasoline & Oil Shed - Renewal Recommendations		
29	Refasten the roof to the roof structure	Medium
30	Renew the deteriorated and deficient wall and window assemblies	Low
31	Reinstate the missing porch post	Low

5.14 Machine Shop

The Machine Shop was originally built in 1952. In its report in 1990, the Canadian Parks Service noted that the building was in good condition, already on an unconfirmed concrete foundation.

Today, the corrugated metal roof is in good condition though many of the panels are loose with the fasteners either pulling up or punching through the sheet metal. Some of the rafter tails were also observed to be deteriorated.

The board and batten wall cladding is in fair condition being largely coated with creosote or other petroleum product. Typical base perimeter deterioration is occurring where organic growth and debris are starting to encroach. A number of battens were observed to be loose or missing while horizontal planks are supporting organic growth and starting to deteriorate. Most of the windows are untrimmed, allowing moisture ingress in between the sash and the wall assembly.

Being set on a concrete slab on grade, the building foundation is in good condition.

Photographs 75 - 77 – (*clockwise from top left*) loose corrugated roof sheet, deteriorating cladding at base of wall, untrimmed window opening

It was not possible to review the interior and determine whether or not moisture was getting past the roof and wall assemblies. It is known that the building is still in active use, storing a fire truck and mechanics tools and supplies, and as such interior deterioration would be expected to be reported to the site manager.

The Machine Shop is in good condition with no observed deterioration of significance. The corrugated roof should be refastened to the roof structure and the encroaching organic growth and debris should be pulled back from the wall perimeter. Addition conservation work could include the renewal of the wall assembly, reinstating the loose and missing battens.

Table 14 – Machine Shop - Renewal Recommendations		
32	Fasten down the corrugated roof to the roof structure	Medium
33	Renew the wall cladding, reinstating the loose and missing battens	Low

5.15 Parts Shed

The Canada Parks Service found the Parts shed to be in fair and stable condition when it was reviewed in 1990.

Today, the corrugated metal roof is heavily corroded, loose, and missing a number of fasteners.

The board and batten siding appears to be in fair condition while the west window is missing a trim board at the head.

The skidding timbers on which the shed is set are themselves supported by heavy logs. Both appeared to be in good condition. Planks set in front of the main door to support miscellaneous parts and machinery are starting to buckle under the load with a failed support post. It is not likely that these planks are original to the shed that was designed to be pulled through the forest. Organic growth around the perimeter is persistent with trees growing up against the east end.

Photographs 79 - 82 – (*clockwise from top left*) corroded and loose corrugated roofing, missing window trim, organic growth and the building perimeter, misc. parts stored on buckling planks

The interior space, from what could be observed through the windows, appeared to be in good condition with no observed evidence of moisture ingress and associated material deterioration.

The Parts Shed is in fair condition with limited deterioration. It is recommended that the roof cladding be renewed, restoring the original assembly or reinstating the corrugated metal cladding. The existing assembly may have a few serviceable years remaining if it is refastened to the roof structure. The organic growth around the perimeter should also be removed to reduce base deterioration and allow the building assembly to dry more effectively.

Table 15 – Parts Shed - Renewal Recommendations		
34	Renew the roof cladding restoring the original material or reinstating the existing corrugated metal.	Medium

5.16 Boom Shack

The Boom Shack provided a station from which the dumped logs could be organized and aligned to be brought up the log haul.

The Boom Shack building no longer exists, with only a piece of mechanical equipment on a floating dock identifying where it was once located. The mechanical equipment and dock are both deteriorating with the onset of corrosion and wood decay.

Photographs 84 & 85 – *(left to right)* Deteriorating wood planks, corroding piece of mechanical equipment

Given the exposure and position within the pond, what is remaining of the former Boom Shack will continue to deteriorate over time. It is recommended that the planks of the wooden dock be replaced to retain the sense of location of the former building. The deterioration of the mechanical equipment could be addressed by installing a protective cover on the dock or should the opportunity arise, restoring the original Boom Shack.

Table 16 – Boom Shack - Renewal Recommendations		
35	Renew the deteriorating planks on the wood dock	Medium

5.17 Blacksmith Shop

Built in 1926, the building is essentially unchanged from when it was first constructed excepting for the dirt floor lean to that was added in the 1930's. By 1990, the building was in very poor condition, storing debris and supporting a fallen tree. One corner was near collapse.

The corrugated sheet metal roof, screwed down to the roof structure, appears to be in good condition with no apparent leaks observed. The lean to roof is still clad with cedar shingles, possibly original, beneath the sheet metal. Given the low-sloped pitch of the lean-to roof, organic debris can and is accumulating on the sheet metal. Due to previous deterioration, a number of rafters over the lean –to have been twinned to provide adequate structural support.

The building is an open air structure with a braced post front wall and a partial height rear wall. The gapped planks on the side and rear walls provides modest protection against the elements. The wall cladding and timber support structure appeared to be in good condition with limited deterioration observed at the north west corner. The unsympathetic repairs to the bases of the front posts suggest that deterioration was an issue in the past. Loosely installed, sliding sash fill in two wall openings on the south elevation.

Photographs 87 & 88 – (*left to right*) organic debris accumulation on the sheet metal roof, unsympathetic post repair and sliding sash

The beams and posts supporting the structure are set on concrete pads and protected with sheet rubber to reduce moisture migration and associated decay. Wood skirting protects the foundation supporting the lean-to. Debris accumulation and organic growth around the building was observed to be limited.

Photographs 89 & 90 – (*left to right*) protective sheet rubber between the timber structure and concrete footings

The interior is set up to demonstrate what the original blacksmith environment would have looked like while the mill was in operation. The equipment, tools and benches all appeared to be in good condition suggesting the building is providing functioning, protective cover.

Having been previously restored and recently in operation, the Blacksmith Shop was observed to be in good condition. It is simply recommended at this time that the roof assembly be regularly maintained removing the accumulating debris and cutting up the adjacent tree branches. Perimeter growth and debris, although modest at this building, should also be constantly maintained. Consideration can also be given to future conservation works, restoring the appearance of the original post structure on the front elevation.

Table 17 – Blacksmith Shop - Renewal Recommendations		
36	Maintain the roof assembly removing debris and low hanging branches	Low

5.18 Boiler House

The Boiler House or Power House as it has been formerly named, is a two building complex. It was observed to be in critical condition when reviewed by Canada Parks Service in 1990. The east building appeared stable, protected with loose, corrugated sheet metal panels. The west building, constructed of laminated timber walls, had a failed roof assembly and was precariously supported by timber piles.

Both buildings are currently protected with a corrugated sheet metal roof assembly, the one on the east building being double layered. The roof assemblies appeared to be in fair condition showing minor surface corrosion. The chimney openings through the roofs are rough cut and unsealed, potentially allowing moisture into the buildings. The roofs rely on sheet rubber lined, wood frame gutters to direct moisture away from the building and prevent it from entering the adjacent Mill.

Photographs 92 - 94 – (*clockwise from top left)* Double layer roof assembly over the east building, gaps between the roof cladding and chimney, sheet rubber lined, wood frame gutters

The upper walls of the east building are a braced, round timber assembly extending down to grade and protected with vertical corrugated sheet metal panels while the lower foundation walls, supporting the floor assembly and boiler above, appeared to be a lime or cementitious brick. The vertical, corrugated sheets appeared to be unrestored, looking in similar condition to what was captured on the Canadian Parks Service photographic record. The brick foundation, held in place with corroding structural steel members including rails, is deteriorating with many of the bricks spalling and eroding. This may be associated with the age of the assembly but also likely

exacerbated with the use of cementitious repointing mortar. Despite the condition, the upper walls appear to be largely preventing moisture ingress into the building while access is not possible to the lower level containing the 'fire pit'.

The upper walls of the west building are constructed of stained, laminated timbers set on a heavy timber floor structure that is supported on a concrete foundation and concrete piers. The concrete foundation is partially clad with wood siding to maintain a historic appearance. With no signs of exterior deterioration but having no access to either interior space, it is assumed that the wall assemblies are performing as expected. As a building in active use, it is expected that it would be reported to the site manager if otherwise.

Photographs 95 - 98 – (*clockwise from top left*) corroding sheet metal wall cladding, spalling and eroding brick foundation, laminated timber walls

Knowing that the Boiler House has been in operation until last year, generally serviced, and without signs of significant deterioration, it is simply recommended that the brick foundation walls be repointed with a lime mortar and that the corrugated sheet metal wall is maintained in place. Reviewing the roof assembly during a rain event can determine if there is moisture ingress and if the gutter assemblies are performing as expected. Restoring the operation of the Mill would significantly benefit the maintenance and durability of the Boiler House.

Table 18 – Boiler House - Renewal Recommendations		
37	Repoint the brick foundation	Medium

5.19 Millwright's Shed

When reviewed in 1990, the Millwrights Shed, or the Bearing Shop as it was then identified, was in poor but stable condition. The roof was covered with moss, the windows were boarded over, and the door was simply an opening. Significant work was put into restoring this building including relocating it closer to the Mill.

The corrugated roof, screwed down to the roof structure, appeared to be in good condition with limited surface corrosion. Without access to the interior, it was not possible to determine if there were signs of moisture ingress or related deterioration but from what could be observed through the windows, the roof appeared to be performing as expected.

The walls assemblies generally appeared to be in good condition. Some of the shiplap plank siding appeared to be benefitting from the protection of a petroleum stain while a number of planks on the east elevation are starting to curl. The north elevation has material stored against it and organic growth encroaching the base. The windows are without sills and trim which allow moisture to pass in between the sash and wall assembly. The glazing putty on the window sash was also observed to be deteriorating.

Photographs 100 - 102 – (*clockwise from top left*) material debris and organic growth against the north elevation, deteriorating glazing putty and gap between the sash and cladding, timber post set on rubber pad on concrete footing

The timber foundation is set on rubber pads on concrete footings. Despite the material storage and organic growth on the north elevation, the foundation appeared to be in good condition.

The interior space, from what could be observed through the windows, appeared to be in good condition with no observation of moisture ingress or material deterioration.

The Millwright's Shed appeared to be in good condition with no observed significant, deterioration. Consideration could be given to installing perimeter trim around the windows, if historically correct, to reduce moisture ingress into the wall assembly and building. Both the material storage and organic growth against the north foundation should be removed.

Table 19 – Millwright's Shed - Renewal Recommendations		
38	Remove material storage and organic growth from north elevation	Low

5.20 Log Haul

The Log Haul is used to facilitate retrieving the raw logs from the log pond and bringing them up into the Mill. It is a heavy timber structure clad with a steel plate on the hauling surface

The steel plate is showing signs of surface corrosion. This would be expected given its exposure to the weather. Many of the exposed heavy timbers adjacent to the steel plate and the walking plank up the south side are severely deteriorated with plant growth and the proximity of the pond at the lower end exacerbating this.

Photographs 104 - 107 – (*clockwise from top left*) corroding steel plate and deteriorating side timber, deteriorating side timbers with encroaching organic growth, deteriorating side timber and organic growth over walkway, severely deteriorated walkway

The heavy timber support structure appeared to be in fair condition with no observation of significant deterioration. The timber posts are set on grade and as such will remain vulnerable to moisture related decay.


Photographs 108 & 109 – (*left to right*) timber footings set on grade being overgrown and deteriorating

Given its exposure and positioning into the edge of the pond, the unchecked organic growth around it, and the ceasing of mill operations, the Log Haul is in fair condition though it will continue to deteriorate over time. This will necessitate the ongoing maintenance of the exposed timbers. Without regular use, the steel plate itself will also start to deteriorate more rapidly. It is recommended that the severely deteriorated heavy timbers and adjacent walkway be renewed immediately to preserve the integrity of the Log Haul and minimize the impact of deterioration on those members less affected. The timber footings should be regularly monitored to ensure structural stability.

Table 20 – Log Haul - Renewal Recommendations		
39	Replaced deteriorated timbers and renew the deteriorated walkway	High

5.21 Mill

The centrepiece building of the site, the Mill signified the start of the site and as of last year was the last building to be in active use. Given this, it has also received the most conservation attention to maintain both its operability and appearance.

In 1927, the basic structure of the Mill as it exists today was constructed. This included the primary saws and the steam engines. Over the following two decades, the planer was built at the south end of the Mill while a crane was installed over the lumber deck to assist with loading timber onto railcars and trucks. In the late 40s, a Cranemobile replaced the overhead crane. Shortly after, the foundations were rebuilt. The green chain was added in 1959 leading to the reorientation of the Mill and the adjacent rail line. Following 35 years of neglect since the 1965 closure, the Mill was restored to operational condition for the grand opening of the historic site in 2000.

The roof over the Mill comprises corrugated sheet metal panels on a timber frame. The panels were further corroded at the east end of the Mill suggesting the west end was more recently renewed. The roof over the planer building also incorporates corrugated metal panels but utilizes a double layer assembly much like the Boiler House. The purpose of this assembly may be to control rising temperatures in the summer time.

Photographs 111 & 112 – (*left to right*) renewed west roof, double roof over the planer

The Mill roof is held up with a variety of timber truss assemblies, those over the west end of the building appearing to be prefabricated or at least pre-designed. The south-west corner, not fully protected by the sheet metal roof, was repaired in the past with new timber members spliced into the existing trusses. At the time of review, the trusses were being supported by steel struts, installed to assist with carrying any potential snow loading over the winter season. The remaining roof structure is more typically a series of beams and braces supported on posts with no obvious

load path through the assemblies. Many of the individual pieces had splice repairs addressing previous deterioration. The structural performance of some of these splices is of concern. A series of heavy trusses and additional shoring posts were noted over the main saw. Other than past repairs including the splicing, there were no signs of significant deterioration or potential failure. However, the random framing and splicing makes the performance of the roof structure indeterminate. It is recommended that a review of the roof be considered to determine where upgrading and additional permanent support would enhance the safety and durability of the structure.

Photographs 113 - 117 – (*clockwise from top left*) repaired south-west corner structure, reinforcing struts, random timber roof structure, roof structure over the east end of the mill, old truss chord splice

The wall assemblies are simply a series of braced posts with no wall cladding protecting the interior of the mill. A number of supporting posts were observed to not be lining up with the load path of

the roof structure. The posts and beams appeared to be in fair to good condition exhibiting the same frequency of splicing as the roof structure as well as the same indeterminate load capacity.

A heavy timber structure, typically on concrete footings, supports the building below the main floor. Most of the beams appeared to be simple spans with no observed splice repairs. A number of interior members appeared to be stained with a petroleum product, quite likely as a result of being adjacent to machinery. In addition, the interior of the foundation structure exists in a cool and damp environment. Despite the typical concrete footings, a number of posts did appear to be set on grade or have grade encroaching at their bases. It is recommended that the ventilation potential of the Mill foundation be maximized and any debris associated with operations or otherwise be regularly removed from accumulating against the timber members.

Photographs 118 & 119 – *(top to bottom)* repaired wall post, deteriorating foundation post base

The Mill is a complex structure that has evolved over the years of its operation and has been renewed with a variety of repair materials and methods. While understanding this multilayer evolution is a natural progression of this historic building and possibly in itself historically significant, some circumstances warrant further review and possible member renewal to ensure the safety and durability of the building while being mindful of its complex story.

It is recommended that consideration be given to complete a structural review of the building to address possible safety/durability concerns and potentially eliminate the need for seasonal reinforcement. The foundation should be cleaned of detrimental debris and ventilated as well as naturally possible. The continued operation and conservation of this building has prevented the onset of significant deterioration in the recent past and it is essential that these circumstances be maintained to ensure the continued existence and long term durability of the Mill.

Table 21 – Mill - Renewal Recommendations		
40	Complete a review of the Mill structure	Medium
41	Remove deleterious debris from the foundation members	Medium
42	Continue the ongoing review and renewal of the building assemblies of the Mill	Medium

5.22 Green Chain

Following the review of the Canada Parks Services that found it to be in a state of severe deterioration, the Green Chain was fully restored and, until just recently, operational.

Despite the complete renewal of the timber structure, its exposure combined its' with numerous horizontal joints and posts being set on grade make it vulnerable to moisture related deterioration.

Currently however, the timber structure and steel mechanisms appeared to be in fair to good condition with a limited number of posts and timber joints observed to have decayed and failed. The steel workings of the assembly are starting to deteriorate with the lack of use increasing the rate.

Photographs 122 & 123 – (*left to right*) failed timber joints

Given the exposure and design of the Green Chain, it is particularly vulnerable to moisture related deterioration and will have to be regularly maintained with the continual replacement of the timber members. It is recommended that the failed members be replaced to prevent collateral decay and progressive structural failure. It would be of significant benefit to the assembly as a whole to renew operations, reducing the rate of deterioration on the mechanical assemblies while continuously maintaining the overall structure.

Table 22 – Green Chain - Renewal Recommendations		
43	Renew the failed timber joints	High

5.23 Lumber Deck

The Lumber Deck was continuously evolving over the course of Mill operations, accommodating the increasing volume of production and the means of transporting the material off site. At its largest, the deck extended from the Mill into the currently adjacent forest. When it was restored in the '90s, the project was only able to realise the renewal of 30% of the deck area in its effort to maintain the character of the Mill operation.

Today, the Lumber Deck was observed to be aging but there were no observed signs of deterioration or failure. The supporting timber structure beneath the deck is set primarily on concrete pad footings though some timber footings were observed. A number of the beam joints were observed to be protected with a sheet membrane while a number of original beams that were retained were observed to be supporting minor organic growth. Some of the timber footings were observed to be decaying at their bases. The environment beneath the deck was noted to be quite cool and damp. This condition, combined with the accumulation of sawdust on the grade and around the footings, exacerbates moisture related deterioration of the timber members

Photographs 125 - 128 – (*clockwise from top left*) renewed timber deck structure, organic growth on original timber beam, deteriorating post base, , deteriorating timber footing

The Lumber Deck appeared to be in good condition despite some localized deterioration. It is recommended that the deck and support structure be regularly reviewed and that the deteriorating posts and footings be renewed. In addition, accumulating sawdust and grade should be pulled back from any timber members that might be negatively affected by them.

Table 23 – Lumber Deck - Renewal Recommendations		
44	Renew deteriorating timber posts and footings	Medium
45	Pull accumulated sawdust away from vulnerable timber elements	Medium

5.24 Waste Burner

The Waste Burner comprises three structures; the elevated Waste Sheds, the Conveyer Belt, and the fenced 'Burn' Pile.

The elevated Waste Sheds appeared to be in good condition with a number of chute gates still operational. The corrugated roof was observed to be in fair condition with general extensive surface corrosion. One panel was however observed to have flipped over exposing the roof structure. The timber support structure of the sheds, now set on concrete footings and protected with membrane pads, had been renewed in the past with new materials simply spliced on the end of the posts. Possibly suitable for gravity loads, the structural repairs appeared vulnerable to lateral loading.

Photographs 130 - 132 – (*clockwise from top left*) Corroded, corrugated metal roof with flipped panel, spliced posts supporting the Waste Sheds

The timber Conveyor Belt frame has also been set on concrete footings. Apart from the deterioration of the frame bases despite the appearance of chemical treatment, the support frames generally appeared to be in good condition. The steel terminus of the frame adjacent to the Burn Pile appeared in fair condition with observed deterioration limited to the surface corrosion.

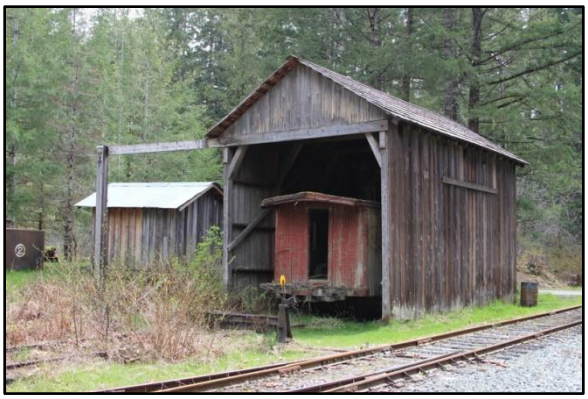
Photographs 133 - 135 – (*clockwise from top left*) treated and deteriorated timber post base of a Conveyor Belt frame, corroded steel frame, corroded and dilapidated Burn Pile structure

The Burn Pile is contained with corrugated sheet metal panels set on end and supported by a dilapidated steel post frame. The construction of the enclosure was simply intended to contain the debris and the spread of flame without utilizing design or construction elegance. Many of the corrugated panels and support posts were observed to be displaced. The current condition of the enclosure, aside from the possibility of some unstable members, adequately demonstrates its purpose.

The Waste Burner is generally in good condition. It is recommended that all of the assemblies be regularly monitored for deterioration and member failure. The posts supporting the Waste Sheds should be renewed with full length members or reviewed to ensure adequate structural capacity while the displaced corrugated roof panel should be reinstated and fastened down. The Conveyor Belt frame posts will require renewal in the near future either splicing on new ends or replacing the entire post. The public should also be prevented from getting within close proximity of the Burn Pile enclosure.

Table 24 – Waste Burner - Renewal Recommendations		
46	Renew Waste Shed post with new, full length posts	Low
47	Reinstate corrugated sheet metal roof	Medium

5.25 Locomotive Shed



The Locomotive Shed was found to be in fair condition when reviewed by the Canada Parks Service with noteworthy deterioration limited to displaced timber footings. Recent conservation works include the installation of new roof shingles in 2010.

The cedar shingle roof appeared to still be in good condition with no signs of moisture passing through the assembly. The timber frame trusses supporting the shingles also appeared sound with no signs of deterioration observed.

The two cross braced, post and beam walls are protected with vertical planks. Deterioration of these walls appeared to be limited to the ends of the planks where evidence of moisture uptake and associated organic growth was observed.

Photographs 137 - 139 – (*clockwise from top left*) timber roof structure, deteriorated wall planks, organic growth along the east wall

Timber beams set on grade comprise the existing wall footings. Aside from the onset of minor rotation, the beams appeared to be fine at the time of review. However, being set on grade and covered with organic growth, they are vulnerable to moisture related deterioration.

The Locomotive Shed is in good condition with limited deterioration localized to the base of the walls and the timber footings. It is recommended that the footings be renewed with concrete assemblies and that the perimeter organic growth be pulled back from the walls.

Table 25 – Locomotive Shed - Renewal Recommendations		
48	Renew the timber footings with concrete assemblies	Medium

5.26 Dip Tank

Previously located at the north-west corner of the mill in the 1930's, the Dip Tank was moved to its current location around the 1960's.

The Dip Tank is a heavy timber structure set on timber footings adjacent to the railway tracks. The deck leading to the tank and the tank itself are both severely deteriorated with numerous timber failures and extensive organic growth and accumulation in and about the tank. Given the exposure and current condition of this structure, total failure appears imminent.

Photographs 141 - 144 – (*clockwise from top left*)
Overgrown and deteriorated tank wall and adjacent deck, completely deteriorated and failed support beams

It is recommended that if there is an interest to conserve this structure, all organic growth and debris be removed from within and around it, all deteriorated timber elements be replaced with new timbers, and, if necessary, the support structure be set on new concrete footings. Once the conservation work is complete, the deck and tank should be regularly maintained, eliminating organic growth and debris accumulation.

Table 26 – Dip Tank - Renewal Recommendations		
49	Removal of all organic growth and debris and fully restore the entire structure	Critical

5.27 Fish Ladder

The current Fish Ladder was built in the '90s as a reconstruction of the original fish ladder.

Constructed of heavy timber posts, beams, and planks, the ladder is a two phase water way with the north side providing the ladder and the south side providing an overflow channel.

As with all of the exposed timber structures, the constant wetting and accumulation of organic debris makes the ladder vulnerable to accelerated decay. Many of the side planks, support posts, and cross beams were observed to be failing. Though not at imminent risk, without conservation work, failure of the side walls and ladder structure could occur over the next few years.

Photographs 146 & 147 – (*left to right*) structural deterioration of the planks and timbers

Given its current condition and potential for exponential increase in deterioration, it is recommended that the Fish Ladder be fully restored, replacing all damaged and deteriorating timber members. Regular review of the structure should then be completed, removing all accumulated and encroaching organic debris and growth.

Table 27 – Fish Ladder - Renewal Recommendations		
50	Removal of all organic growth and debris and fully restore the entire structure	High

5.28 First Aid Shack

When reviewed by Canada Parks Services in 1990, the First Aid Shack appeared to be in stable condition. At the time, it was located nearer the main Mill and had a heavy timber enclosure behind it. Since then, the building has been haphazardly relocated nearer to the Locomotive Shed in the Markets & Transportation zone. Without a foundation or footings, the building structure appeared unstable with the floor structure heavily deteriorated.

The nailed in place corrugated roof appeared to be in fair condition with a panel bent down at the eaves and buckled mid-span. It would appear that an object fell against the edge of the roof to create this condition. Many of the roofing nails also appeared to be popping leaving a number of the panels loosely held in place. Half of the trim at both roof gables was noted to be missing.

Photographs 149 - 151 – (*clockwise from top left*) buckled corrugated roof panel, damaged wall siding, missing trim on the north window

The cove profile, cedar siding protecting the walls generally appeared to be in good condition with some observed damage at the base of the east wall. A number of siding lengths on the north elevation were observed to be curling out of position while a piece at the peak is missing. The door and west window appeared to be in good condition while the north window is missing its perimeter trim. There is also an opening with an unknown purpose at the lower east corner of the north wall.

With the haphazard relocation of the building, it is not currently set on footings. This is contributing to its instability and exacerbated deterioration of the floor structure.

The First Aid Shack, despite its relocation without a proper foundation or footing, appeared to be in fair condition.[1] Setting the building on a new concrete foundation and floor structure in a suitable location within the context of the site as a whole is the primary recommendation for this building. It is also recommended that the damaged roofing panel and east wall siding be renewed. Consideration could also be given to renewing the fascia and north window trim.

Table 28 – First Aid Shack - Renewal Recommendations		
51	Rebuild the wood frame floor structure and set the building on a sensibly located concrete foundation	Critical
52	Repair the buckled roof panel and reset the fasteners	Medium
53	Renew the east siding	Medium
54	Restore the north window trim	Low

[1] It is noted that at the time of writing, the First Aid Shack was report to have been demolished.

5.29 Sand Shed

The Sand Shed, at least a substantial reproduction of the original building, appeared to be in very good condition.

The corrugated sheet metal roof is set on a rafter assembly supported by a pair of king post timber trusses and the end walls. Excepting a crack in one of the truss cords, the roof appeared to be in good condition.

Board and batten wood siding protects the braced frame wall structure. No damage or deterioration of the siding or structure was observed. A window opening is set in the south elevation while a door opening provides access on the east side. Both openings are without associated assemblies.

The wood frame floor structure supporting the building is set on round logs on concrete 'sonotube' footings. The foundation assembly appeared to be in good condition with only minor encroachment of organic growth.

Photographs 153 - 155 – (*clockwise from top left*) Cracked truss chord, braced frame wall structure, log timber on concrete footings

The Sand Shed and its current condition requires no recommendations beyond consideration for a window and door to fill their respective openings (if in the original building), to reduce moisture ingress into the building.

Table 29 – Sand Shed - Renewal Recommendations		
55	Reconstruct a window and door for the building openings	Low

5.30 Further Considerations

Despite the work of the Canada Parks Service / Parks Canada conserving the site as a whole and restoring many building that were in critical condition, a number of other buildings have disappeared since the writing of their condition assessment. Though a record has been made and their reconstruction at some future time possible, this assessment has highlighted another number of buildings that are at risk of the same fate. It is recommended that these at-risk buildings, if they cannot be conserved due to budgetary constraints, be measured and documented for potential reconstruction based on these records.

At this time the conservation focus for this site is stabilization and reduction of further deterioration. Should these recommendations be fully addressed, plans can be developed towards more detailed renewal work, restoring both the existing buildings and eventually the buildings that have been lost over time. Such conservation plans depend significantly on the amount of revenue that can be made available for capital works. Due to the magnitude of the site, budget planning for long term renewals is not recommended.

Right now, it is fundamentally important that the buildings stay dry with adequate roof protection and the ability to become dry if made wet. Accumulated and encroaching debris should be regularly removed from the building roofs, gutters, and other horizontal surfaces including the window sills. Tree branches must be trimmed up if they come in close proximity to the building and its roof. Building perimeters and footings should remain free of grade and growth with removal measures carefully executed so as to have no impact on the fabric of the building. Building interiors should not be storing unnecessary material or debris and they should be regularly monitored for elevated humidity level and vented as necessary. Any tarps installed to prevent moisture ingress through the roof assembly must be considered short term, seasonal measures as they can contain moisture that does get by them and make the deterioration conditions even worse than if they were not installed in the first place.

It is recommended that all conservation work on site be undertaken with a uniform approach and that all those with vested interest in such work be included in the review of proposed projects to ensure the site is not renewed based on the ideas and interest of individual groups.

6.0 Recommendations

Renewal recommendations have been provided for all identified buildings with the goal of ensuring the conservation of the site as a whole.

6.1 Recommended Maintenance & Renewal Summary

The recommendations summarized in Table 30 would enhance the performance and long term durability of the building and structural assemblies, and in turn extend their expected service life.

Table 30 – Recommended Maintenance	
Clean roof assemblies and gutters of accumulating organic debris and growth	Annually
Clean windows sills and horizontal trim of organic debris and growth	Monthly
Pull back encroaching grade and organic growth from building perimeter	Monthly
Trim up tree branches	Annually
Ventilate interior space	Weekly

It is important to note that the Recommended Maintenance summarized above would simply maximize the durability and expected performance of the existing structures without improving their current condition or that of the associated materials or the building. The various ages, exposures, and life expectancy of the assemblies and components determine the expected times of renewal.

The recommendations summarized in Table 31 would address current areas of material / assembly deterioration and deficiencies that are compromising the performance, durability and safety of the building.

Table 31 – Recommended Renewals		
Workers House	Renew the roof with sheet metal cladding or asphalt shingles.	High
Workers House	Rebuild the east elevation, installing protective cladding.	High
Workers House	Repair the damaged and deteriorated floor joists.	High
Workers House	Renew the window sills.	Low
Workers House	Organize and reduce interior material storage, removing all accumulated debris. Regularly ventilate the interior air space.	Medium
A.McLean House	Remove growth and debris from the roof and gutters and cut up all branches in close proximity to the roof.	Medium
A.McLean House	Repair all damaged and deteriorated cedar shingle cladding.	Low
A.McLean House	Renew the window trim	Low

A.Mclean Garage	Renew the roof cladding and address any roof structure deterioration	Critical
A.Mclean Garage	Reset the building on a new foundation out of accumulating water.	Critical
A.Mclean Garage	Complete a structural review of the building and address any necessary upgrades	Critical
A.Mclean Garage	Restore the garage doors	Low
Office	Remove organic growth and debris from the roof and repoint the chimney.	Medium
Office	Pull back grade from the north-west corner of the building and monitor the encroachment of tree roots	Low
R.B.McLean House	Clean roof of organic debris and replace low-sloped cedar shingles with a modified bitumen membrane.	Medium
R.B.McLean House	Repair damaged siding	Low
Cookhouse	Renew the roof assembly with new cladding, repairing all uncovered deterioration to the supporting structure	High
Cookhouse	Remove all deteriorated interior materials	High
Cookhouse	Cut up all branches in close proximity to the roof and pull back grade from the footings and porch perimeter	Medium
Bunkhouse	Fasten down the sheet metal roof and cut back the excessive overhang	Medium
Bunkhouse	Renew the deteriorating NE footing	Medium
Bunkhouse	Restore the rear window and door	Low
Teacherage	Slope north porch away from building	Medium
Log Dump	Monitor the timber members, removing debris and growth between them to reduce the rate of decay and replacing them when they become unstable	Low
A-Frame	Monitor the mechanical assembly and protective structure, completing maintenance and renewal work when necessary.	Low
Garage	Complete a structural review of the building to determine any necessary renewal and reinforcing works that may be required	High
Garage	Renew the roof, replacing the existing shingles or installing a temporary sheet metal roof.	High
Garage	Pull back grade and organic growth from the building perimeter	Medium

Gasoline & Oil Shed	Refasten the roof to the roof structure	Medium
Gasoline & Oil Shed	Renew the deteriorated and deficient wall and window assemblies	Low
Gasoline & Oil Shed	Reinstate the missing porch post	Low
Machine Shop	Fasten down the corrugated roof to the roof structure	Medium
Machine Shop	Renew the wall cladding, reinstating the loose and missing battens	Low
Parts Shed	Renew the roof cladding restoring the original material or reinstating the existing corrugated metal.	Medium
Boom Shack	Renew the deteriorating planks on the wood dock	Medium
Blacksmith Shop	Maintain the roof assembly removing debris and low hanging branches	Low
Boiler House	Repoint the brick foundation	Medium
Millwrights Shed	Remove material storage and organic growth from north elevation	Low
Log Haul	Replaced deteriorated timbers and renew the deteriorated walkway	High
Mill	Complete a review of the Mill structure	Medium
Mill	Remove deleterious debris from the foundation members	Medium
Mill	Continue the ongoing review and renewal of the building assemblies of the Mill	Medium
Green Chain	Renew the failed timber joints	High
Lumber Deck	Renew deteriorating timber posts and footings	Medium
Lumber Deck	Pull accumulated sawdust away from vulnerable timber elements	Medium
Waste Burner	Renew Waste Shed post with new, full length posts	Low
Waste Burner	Reinstate corrugated sheet metal roof	Medium
Locomotive Shed	Renew the timber footings with concrete assemblies	Medium
Dip Tank	Removal of all organic growth and debris and fully restore the entire structure	Critical
Fish Ladder	Removal of all organic growth and debris and fully restore the entire structure	High

First Aid Shack	Rebuild the wood frame floor structure and set the building on a sensibly located concrete foundation	Critical
First Aid Shack	Repair the buckled roof panel and reset the fasteners	Medium
First Aid Shack	Renew the east siding	Medium
First Aid Shack	Restore the north window trim	Low
Sand Shed	Reconstruct a window and door for the building openings	Low

The performance of the assemblies and associated durability of the building would be enhanced once the items of this table are fully addressed.

7.0 Conclusion

The McLean Mill National Historic Site is generally in good condition given the history, environment and magnitude of the site. In addition to the recommended overall mainatnenace that should be performed on site, the most significant deterioration and associated urgent recommendation is to address the structures near a state of collapse including the A. McLean Garage and the Dip Tank. Following this, it is recommended that the failed roof assemblies be addressed including the Cookhouse and the Workers House and to that those buildings with uncertain stability be further investigated including the Garage and Mill. Once these buildings have been addressed, further conservation measures can be undertaken to restore the remaining structures and enhance their durability over the long term.

8.0 Disclaimers

This report identifies the current general condition of the site at the time of its review by JDA and has been prepared in accordance with generally accepted engineering practices. No warranties, either impressed or implied, are made as to the professional services provided under the terms of the scope of work included in this report.

The findings presented in this report are based upon the visual observation of the site and structure while the recommendations are based upon the observations and generally accepted building restoration and conservation practice. These findings and recommendations cannot extend to portions of the building that were not, or could not, be reviewed.

The intent of this report is to assess the current condition of the site. Comments pertaining to the structure and surrounding landscaping are provided where they could be observed and where they pertain to the condition of the buildings and the assemblies themselves. Structural analysis of any structure was not completed and no claims to the structural integrity of any structure under vertical or lateral load conditions can be implied from this report.

It must be recognized that the act of performing a condition assessment cannot ensure that all and every condition of the building, its materials, assemblies and systems be expected to be identified and that some conditions may go undetected. As a professional organization, JDA endeavours to provide an assessment that is thorough and an associated condition report that the client can base its maintenance and renewals budget on for the near future. Those conditions that remained hidden during the review may arise at a future time necessitating an adjustment to the findings, recommendations and opinions of probable costs presented in the report.

JDA does not provide services normally performed by other consultants including the identification of mould, fungus, mildew, asbestos, or other pollutants and contaminants. Our policy has the industry standard exclusions relating to these substances. The Client agrees that JDA shall have no liability for any cause of action relating to them.

This report was prepared for the City of Port Alberni and Jamie Morton, Manager of Museum, Heritage& Culture. Excepting the McLean Mill Society, it is not for the use or benefit of, nor may it be relied upon, by any person or entity without written permission of JDA and the City of Port Alberni.

It is trusted that the information in this report satisfies your expectations and requirements. Please do not hesitate to contact us should you have any questions or comments pertaining to this report and its associated recommendations.

Sincerely,

John Dam, Principal
Building Conservation Engineer
B.A.Sc., M.Sc., P.Eng., CAHP

APPENDIX A – GLOSSARY

Appendix A - Glossary

The following glossary is intended to assist with the understanding of technical terms used in this report that may be unclear or unknown.

Air Barrier: A material/component that controls the flow of air through an assembly, limiting the potential for heat loss and condensation.

Alligatoring: A condition of paint or aged asphalt brought about by the loss of volatile oils and oxidation due to exposure to solar radiation. Ultimately the result of the limited tolerance of such paint or asphalt to thermal expansion or contraction, a pattern of cracks is produced resembling an alligator hide.

Assembly: a grouping of components and materials which when organized together form a product that, in the case of a building, functions to prevent the unwanted transfer of environmental conditions.

Belt Course: An ornamental projecting band or continuous moulding along a wall. Often set in line with window sills to help make them more visually prominent.

Building Envelope: A collection of assemblies that contain an enclosed space, providing separation between the conditioned and unconditioned environments. The basic assemblies of the building envelope control the movement of air, moisture and heat.

Building Paper: Organic sheet material saturated with asphalt to create a moisture resistant barrier.

Butt Joint: A joint formed by to surfaces connecting perpendicular to each other with no overlap.

Cladding: A component of the building envelope that protects the building from its exposure to weather, primarily controlling the infiltration of moisture.

Control Joint: A joint in a material component/assembly directing the location where movement occurs in the component/assembly. This movement may occur due to thermal or moisture related expansion or shrinkage.

Cornice: Any horizontal decorative moulding that crowns a building (or furniture element). The function of a projecting cornice on a building is to throw rainwater free of the building's walls. A cornice can be considered synonymous with eaves if the eaves are finished with decorative moulding.

Delamination: The separation of a material into layers. In the case of masonry material, this is typically manifested by the separation of the outer, exposed layer from the main body of the material.

Deleterious: Causing harm or damage. In the case of moisture transport, the result would be the deterioration of the material/assembly through which the moisture is passing.

Face-Seal: A building envelope assembly that depends on the outer surface to control the infiltration of moisture and air from the unconditioned environment providing no allowance for the failure of the control in the system.

Finial: An element marking the top or end of some object, often formed to be a decorative feature. It is often employed to emphasize the apex of a dome, spire, tower, roof or gable or any of various distinctive ornaments at the top, end, or corner of a building or structure. Where there are several such elements they may be called pinnacles.

Flashing: sheet material, typically metal, used to control to movement of moisture over or behind the cladding of the building envelope.

Glass:

- **Float:** Glass made by allowing it to solidify on molten metal.

Hygrothermal: Pertaining to the movement of heat and moisture.

Italianate (architectural style): Typically a two-story building with six basic categories - box with a hip roof; box with a centered gable; L or U plan; L plan with a tower, and a front gable. Often identifiable by their wide projecting cornices with heavy brackets and richly ornamented windows, porches, and doorways. Brick and wood clapboard were the most common building materials used with brick being more expensive. The ornamentation was typically wood. Roofs were low pitched, often with a square cupola on top. Projecting eaves with large brackets in a variety of shapes and spacing dominated the cornice. Arranged singly or in pairs, the brackets were usually underscored with wide decorative bands and sometimes further elaborated with panel moldings. Window sashes typically had one-over-one or two-over-two glazing and trimmed with exuberant variations. Doors occurred in as much variety as windows. Paired and single doors were both common, often announcing themselves with a large, elaborate hood supported by brackets. Italianate doors were the first to have large panes of glass in the door itself in lieu of sidelights with small panes. Porches were restrained in their size and decoration, compared to other Victorian styles, and often only one story. The most common type of porch column was a square post, usually 6" square with beveled or chamfered corners.

Lite: A piece or pane of glass.

Membrane: A layer of material that serves as a barrier between two environments. It can be designed to be selectively permeable to specific particles.

Modified Bitumen: A product created by adding polymers to asphalt to improve its flexibility, flatten its temperature susceptibility curve (i.e. more flexible at lower temperatures, more stable at higher temperatures) and provide greater toughness.

Mortice: An opening cut in a member to receive the projected end of an adjoining member, often used to connect the stiles and rails of a window sash. The opening can be stubbed or cut through, closed at the bottom or open.

Mullion: A horizontal or vertical member that supports and/or separates panel items such as glass panes.

Pilaster: An architectural element providing the appearance of a supporting column, articulating an extent of wall but remaining ornamental in function.

Purlin: A horizontal structural member spanning between beams or trusses to support a roof deck.

Rafter: A sloping roof member that supports the roof covering and extends from the eaves to the ridge or the apex of the roof. A common rafter is one which runs square with the wall plate and extends to the apex. A hip rafter extends from the outside angle of the wall plate towards the apex of the roof while a valley rafter extends from the inside angle of the wall plate towards the apex of the roof.

Re-point: To renew the pointing or the external part of the mortar joint in a masonry wall.

Riven: To divide into pieces.

Sash: The window frame, including mullions if used, to receive a pane(s) of glass.

Scupper: An opening through a building wall allowing for the movement of moisture off of a horizontal roof surface.

Service Life: The period of time in which a material can be expected to perform its function without undue or unforeseen maintenance or renewal.

Soffit: The underside of a horizontal surface, typically referring to the area beneath the roof eaves or a balcony.

Spall: The detachment of a delaminated component from its base material

Tenon: A projection of a member, typically reduced in size, to fit into the opening of adjoining member. Often used to connect the styles and rails of a window sash. A tenon can be stubbed or through.

Truss:

- **Scissor:** A truss with which the bottom chord members cross each other, connecting to the angled top chords at a point intermediate on the top chords' length, creating an appearance similar to an opened pair of scissors. Scissors trusses are used almost entirely to support a pitched roof, where a sloping or raised ceiling surface is desired.

Verandah: A roofed, open-air gallery or porch, often partly enclosed by a railing and frequently extending across the front and sides of the structure.

Wainscoting: A term originally applied to high quality riven oak boards but now referencing wall coverings constructed from rigid or semi-rigid components; traditionally interlocking wood, but could be of other materials. In previous times it may have served the function of increasing interior comfort though now it is often more decorative in purpose.

Window:

- **Awning:** An operable sash with a hinge(s) along its top edge allowing the bottom to swing out.
- **Casement:** An operable sash with a hinge(s) along one side allowing the opposing side to swing out.
- **Fixed:** A sash that is fixed in place.
- **Hopper:** An operable sash with a hinge(s) along the bottom edge allowing the top to swing in.
- **Hung -Single:** An operable sash that slides up and down within the window frame. Typically the lower of two sash. The sash can be weighted or sprung to ease operation.
- **Hung-Double:** Operable sash within a window where both upper and lower sash can slide up and down within the window frame. The upper sash can have horns on the stiles to prevent dropping below the lower sash. The sash can both be weighted or sprung to ease operation.
- **Slider:** A sash that slides open to one side within a window frame
- **Transom:** The window over a horizontal bar or beam, typically over an opening in the wall beneath.

APPENDIX B – MATERIAL DETERIORATION

Appendix B – Material Deterioration

Building materials all succumb to inevitable deterioration over time, exacerbated by exposure to inclement conditions including prevailing moisture, solar radiation, organic growth and pest infestation. 506 Government Street, constructed of traditional building materials and erected in close proximity to the ocean, is vulnerable to a full variety of these deterioration mechanisms. These mechanisms are briefly described for reference to existing and/or potential conditions that may occur.

Deterioration of Wood

Wood and water are generally compatible with wood being able to effectively absorb and release moisture in equilibrium with its surrounding micro-climate. However, if the exposure to and absorption of moisture are disproportionate over the wood member or the wetting period outpaces the corresponding drying period, problems can set in.

Wood dimensionally adjusts in relation to absorbed moisture levels – as it dries it will shrink and as it is wetted it will expand. This dimensional variance is impacted by the material properties of wood and its' relative exposure. Dimension change of significance is typically associated to both radial and tangential directions relative to the grain pattern, both of which can lead to cracking of the wood member. This cracking can be worse if the wetting pattern is predominantly on a single surface where only a portion of the member is undergoing dimensional stress. Once cracking is initiated, an increased area of wood is exposed to moisture and the protective barrier of wood is breached with moisture being able to pass through the open crack.

The moisture content of wood also has a direct impact on the initiation and sustaining of organic growth. Wood is considered 'dry' with up to 19% moisture content by weight. Under these circumstances, the wood is 'safe' from sustaining organic growth. At 28% moisture content, the wood fibres can be considered fully saturated and dimensional 'growth' will have reached its maximum. Sustained moisture at these levels will result in the onset of organic decay. Once decay has started, the moisture content can then drop to just 19% and still sustain organic decay.

It is important that dry, clean wood does not reach the fibre saturation point in wood construction, but if it does, the wood must be brought below 19% to stave off progressive decay. Even at this point though the organic decay processes may have been established and the wood remains vulnerable to moisture exposure unless the area is repaired and the details addressing the source of moisture exposure have been addressed.

Though cracking of wood members is a mechanism of deterioration, the primary durability hazard with wood is bio-deterioration. Wood in buildings is a food source for a variety of fungi and insects, both having the ability to destroy the cellular structure of wood and correspondingly reduces its' strength and structural ability upon which the building relies. The process of bio-decay follows a series of events initiated with fungal/insect colonization and concluding with cellular consumption and fibre disconnectivity. Fungi spores and insects can be around much of the year – a part of the natural

environment. Once in contact with wood, they can utilize it as a food source but only under favourable moisture and temperature conditions. For much of the year, the North American west coast provides a favourable temperature leaving the only control being the source of moisture.

The sources of moisture include:

- rain water through direct exposure or through leaking drainage systems
- high humidity levels
- retained construction moisture either from the material itself or adjacent materials

Moisture can also be transported in and around wood through:

- liquid flow (bulk moisture transport)
- capillarity flow through the structure of wood
- air movement or vapour pressure differential transporting humidity

Liquid movement and capillarity flow are the most important sources for wood saturation and subsequent triggers for decay in buildings. The focus for moisture control is therefore typically in shedding rainwater and preventing exposure and absorption of ground water.

To effectively combat moisture exposure it is good to consider durability, defection, drainage, and drying.

- Durability is primarily considered at the onset of construction but must also be given attention during conservation. Good quality materials simply perform better and last longer than their poor quality counterparts.
- Deflection must be understood during the design phase though lapses in this consideration must be addressed during any conservation work. If the building does not deflect rain water well, consideration for redesign or the acceptance of continued maintenance must be given.
- Drainage is as simple as directing away all water that impacts the building. Do not let the building or its surrounding environment 'store' water.
- Drying is very important but often overlooked when building comfort is addressed. Air flow and heating contribute significantly to removing moisture by picking it up and transporting it away. If either mechanism is altered in a building, the corresponding positive effects they provided may no longer be present.

Protection of buildings from moisture is an important design criterion if proper, durable construction and restoration is to be assured. The capabilities of wood must be well understood and then articulated in the design, construction and restoration efforts.

Deterioration of Bitumen Roofing

Bitumen as a roof material has been used for centuries in various forms and applications and by many cultures. It is easy to apply and provides the sought after water proofing qualities necessary for protective cover over or on a building. Its' durability has been its biggest challenge however, particularly under exposure to the sun and its ultraviolet rays.

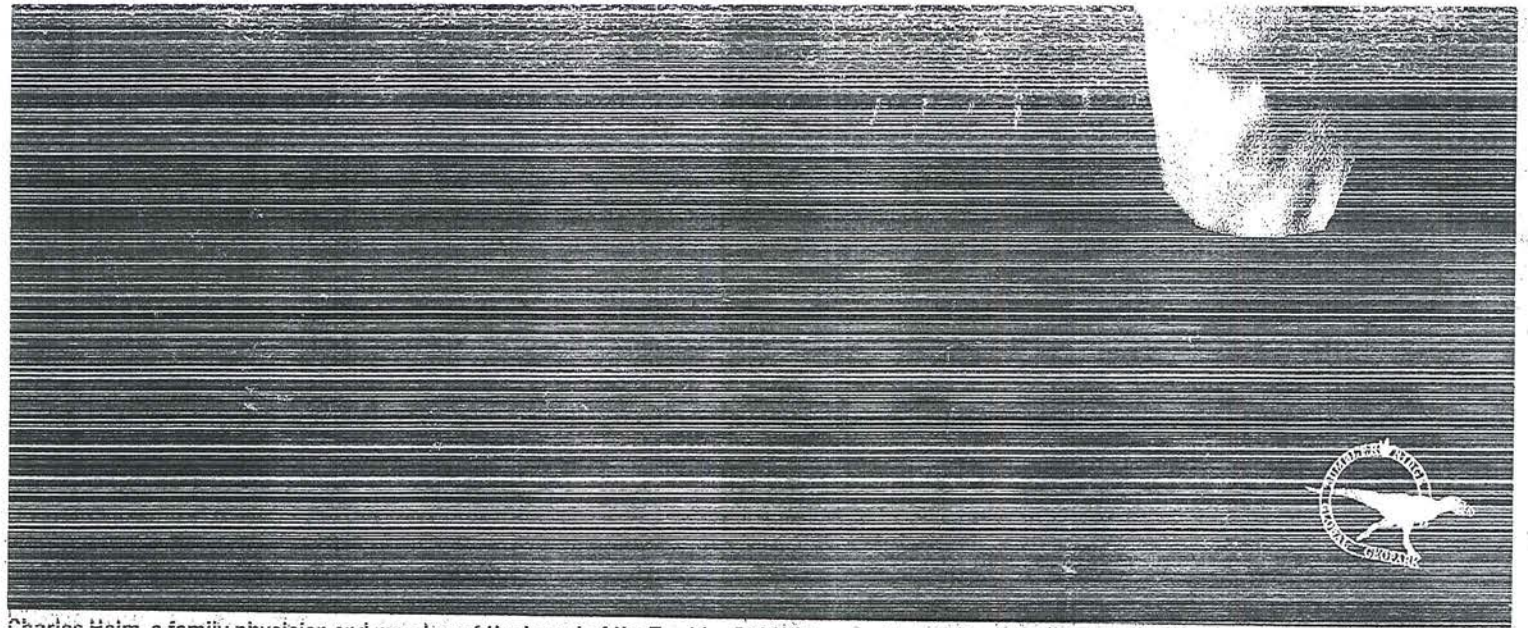
Bitumen roofing, either asphalt shingles or modified bitumen sheet membrane, deteriorates over time like all materials with the most significant aging factor being exposure to the sun. The sun's radiation will initiate the deterioration process of asphalt roofing the day it is applied. The asphalt will soften and dimensionally adjust which can lead to the migration and possible thinning of the material and displacement of the protective granule surface. When this protective granule surface deteriorates, the waterproofing asphalt material is increasingly exposed resulting in an increasing rate of deterioration. Exposure to the sun also accelerates the dissipation of the asphalt volatiles, resulting in a drying product that becomes increasingly susceptible to cracking. This cracking opens up the surface of the membrane and once again increases the rate of deterioration. With asphalt shingles, this deterioration will eventually lead to cracking and loss of the shingles themselves. With sheet membranes on low sloped roofs, deterioration will eventually result in membrane displacement and moisture ingress. Unfortunately, these deterioration mechanisms are a part of the material and at best can be modified to improve durability and performance.

Water ponding on a low-sloped roof exacerbates the effect of UV degradation of the membrane accelerating its' deterioration. In addition, ponding water has a greater opportunity to take advantage of weaknesses in the membrane and migrate into the individual layers or past the membrane entirely. In both cases, blistering of the membrane could occur where the top or all of the sheets of a multiple sheet assembly rise(s) off the supporting surface through the expansion of moisture turning into vapour. This debonding results in a loose laid membrane that is more vulnerable to wind uplift and subsequent tearing. If the membrane incurs too many blisters or becomes increasingly debonded, it becomes increasingly vulnerable to bulk moisture ingress into the roof assembly and the building itself.

In addition to deterioration associated with solar radiation and ponding water, the asphalt roof can be degraded by the growth of organic material on its surface. This growth that tenaciously bonds itself to the surface of the shingle or membrane is actually bonding to the protective granules, wrapping itself around and beneath them. Continued unfettered growth will result in the debonding of the granule surface exposing the vulnerable asphalt membrane. The organic growth will then move on to the next granulated area with which to bond itself to. The exposed asphalt is now vulnerable to the mechanisms previously mentioned.

Beyond ensuring the roof is correctly installed by a qualified contractor, the best course of action is to regularly maintain the roof surface, keeping it free of debris and ponding water. This regular visual review and maintenance will ensure the longest possible lifespan of the roof.

From Jim deRuo



Charles Heim, a family physician and member of the board of the Tumbler Ridge Museum Foundation, fears there's a "very real risk," the area's paleontology assets may be lost if the local dinosaur museum is forced to close. *THE CANADIAN PRESS*

Tumbler Ridge dinosaur museum faces closure after funding denial

DIRK MEISSNER

VICTORIA A dinosaur museum in the tiny northeast British Columbia community of Tumbler Ridge is facing a struggle against extinction as local politicians and residents feud over funding, operation, and development of the potential tourism gold mine.

The District of Tumbler Ridge council denied the museum its annual funding grant of $200,000 last month, essentially leaving the non-profit, largely volunteer-run society with few options but to shut down.

Tumbler Ridge Mayor Don McPherson said that after almost 20 years of providing grants to the museum, council needed to express unhappiness with the operation, and withholding the money was the best way to do that.

"We had some issues about how this was being spent," he said in an interview. "It's a lot of money. We funded this museum for about 18 years. It's to the tune of about $2.5 million."

An April 10 open letter from the council to the community explained the district's attempts over the past decade to get the museum to change its operations from science-based to tourism-friendly.

"Council feels that the museum needs to be a place that children can go to have fun," the letter says.

McPherson said council also wanted the museum to co-ordinate its activities with the area's United Nations Educational Scientific Cultural Global Geopark, which recognizes the Tumbler Ridge area for its unique geological heritage and natural attributes.

Tumbler Ridge, with a population of about 2,700 people, is located almost 1,200 kilometres north of Vancouver. It was once a thriving coal-mining community, but most of the mines in the area are no longer operating.

The discovery of dinosaur footprints, fossils and bones in and around Tumbler Ridge in 2000 sparked local interest in recreating the ailing mining town as a tourism destination similar to the Tyrrell Museum of Paleontology at Drumheller, Alta.

In 2003, a vacant school building became the home of the museum and the Peace Region Paleontology Research Centre, funded locally and by federal diversification grants.

Researchers discovered a field of fossilized remains near Tumbler

board of the Tumbler Ridge Museum Foundation, said he fears the community's dinosaur dreams are in danger of disappearing.

"I think it's really precious for people to try and work together for a solution and that we don't lose this," he said. "I think there's a very real risk that it's all going to fall apart and we're going to lose everything."

Helm said the society is looking far and wide for creative solutions to reopen the museum.

Mike Bernier, the member of the legislature for Peace River South, said the dinosaur issue is bigger than the small town.

"My argument has always been, these are provincial assets," Bernier said.

He said the provincial government should be funding the operation.

Acting Tourism Minister Lana Popham said in a statement that her ministry is monitoring the situation, but she made no promises of funding.

"I have instructed staff to research all the options available to support the museum, and to reach out to the museum's new president to ensure that he is aware of all options," Popham said. "Our government recognizes the tourism opportunity that Tumbler Ridge provides."

Paleontologist Richard McCrea, who has worked on many of the area's archeological digs and helped to maintain the museum exhibits, said the council appears prepared to sacrifice much of the scientific foundation of the museum in favour of an amusement park facility.

"Obviously, "I'm close to this and it's a bit of a heartbreaking thing for us," he said.

The Canadian Press

ENTERED

January 14, 2019

Attention: Mayor and Council for the City of Port Alberni

With respect to forthcoming discussions to be held at Committee of the Whole meetings, or at budget meetings regarding the McLean Mill and railway operations, please consider the following letter as input into those discussions.

Effective February 8, 2018, Ministerial Order **M 037,** issued by the Minister of Municipal Affairs and Housing, authorized a change to the letters patent of the Cherry Creek Waterworks District for the purpose of a boundary extension of the Cherry Creek Waterworks District to include the McLean Mill property, owned by the City of Port Alberni, and located in the Beaufort Electoral Area.

- Does this mean that drinking water at the McLean Mill property is obtained by a service connection to the Cherry Creek Waterworks District?

- If so, are invoices for water issued to the City, or to the McLean Mill Society?

- If the City is paying the invoices, to which budget line, or object number, are these invoices assigned?

- What amounts have been paid for water in fiscal 2017 and 2018?

Certain potential deficiencies with the sewerage system at the McLean Mill property have been raised by the public. I am in receipt of a letter from Dr. Paul Hasselback, Medical Health Officer for the Central Vancouver Island Area, in which he informs me that he is working with the City to resolve certain of these issues.

- What is the status of progress regarding the identification and resolution of issues related to the sewerage system at the McLean Mill property?

- Are invoices for septic system work at the McLean Mill property issued to the City, or to the McLean Mill Society?

- If the City is paying the invoices, to which budget line, or object number, are these invoices assigned?

- What sum of money was spent on the septic system at the McLean Mill property in fiscal 2018 for such items including but not limited to inspections, parts and maintenance of any kind, and for the regular pumping of the tanks?

- Are there anticipated expenses to be incurred in fiscal 2019 for any further work on the sewerage system that may be required?

- If expenses are anticipated, what is the estimate, and please provide a description of the scope of work that may be required to satisfy any deficiencies with the sewerage system at the McLean Mill property.

At the December 10, 2018 meeting of council, the questions I had asked about railway maintenance expenses in my letter to Council for the October 9, 2018 meeting were not answered by the City, but were instead referred to the MMS for response. However:

- It was council for the City of Port Alberni that authorized the creation of the McLean Mill Society.
- Council is the "governing mind" for the sole member of that Society, the sole member being the City of Port Alberni.
- The MMS directors are appointed to their MMS board positions by the council for the City of Port Alberni.
- The City owns the McLean Mill property and assets located there.
- The City owns the locomotives and much of the railway rolling stock.
- The City owns the round-house and train station.
- The City owns a section of the railway corridor.
- It was the City's C.A.O. who, on August 14, 2017, presented to Council and the public, a 10-year Railway Maintenance Plan. The MMS presented no such plan.
- In a Rail Track License Agreement between the City and the Island Corridor Foundation, it is the City who is identified as the party responsible for all rail-track maintenance during the 10-year term of the License Agreement, and a statement in the C.A.O.'s report of August 14, 2017 supports this, as it says, "The Rail Track Use Agreement requires that the City is responsible for rail inspections, maintenance, and capital improvements."
- Finally, it is Council for the City of Port Alberni that authorizes and allocates annually, significant amounts of public money towards the McLean Mill/railway operations. Thus, it seems clear that the City has much more than

just an “arm’s length” responsibility for the railway, which means the public should reasonably expect it would be the City who would provide answers to questions about maintenance expenses for the railway.

- So, what is the amount of spending that has occurred on railway trestle bridges and rail track maintenance in fiscal 2018?

- Is the city committed to following each year’s spending in the Maintenance Program as presented to the public in 2017, or should the public expect more or less maintenance spending on the rail line in 2019 and beyond?

- Has contacting Technical Safety BC, or Provincial Railway Regulators been considered in order to obtain from them an opinion as to the near or mid-term prospects for operating Heritage Railways using old technology locomotives, and more specifically, old steam locomotives such as the Number 7 locomotive, especially within the construct of an ever evolving regulatory environment and how those regulations will get applied to old technology? If not, such opinion should be sought, as there is no point in spending large sums of money on the railway if regulatory changes in the not too distant future may force railway operations to cease earlier than may currently be planned for as a result of that regulatory environment.

At the December 10, 2018 council meeting, one of the conclusions in a report from TerraWest Environmental dated October 20, 2018, recommended that further testing of the wider McLean Mill property be done to attempt to identify the source of the contaminants in the mill pond. I am presuming that in the interim, a soil testing firm has been retained for additional testing of the wider area of the McLean Mill property as was recommended be done at the direction of TerraWest in their report to the City late last year.

- What is the status currently, for the soil testing at the McLean Mill property?

- If it appears that more than the $200,000 in contingency will be required to pay for all expenses related to the soil contamination issue, and if there is no clarity on potential remediation expenses at this time, is it prudent to maintain the status quo and continue to budget and spend public money on the venture without some clarity as to the potential financial exposure to the City for soil remediation issues?

Late last year, the City received a letter from Mr. Baldwin of the Ministry of Forest, Lands and Natural Resources, in which Mr. Baldwin communicated to the City his concerns about compliance and permitting deficiencies regarding work being done currently, or previously approved work going uncompleted, in and around the dam at the mill pond.

- What is the status of progress towards resolution of the deficiencies at the dam at the McLean Mill pond as articulated in Mr. Baldwin's letter to the City late last year?

- What are the expenses to date for materials and labour specific to resolving the issues at the dam?

- If the City is paying the invoices, to which budget line, or object number, are these invoices assigned?

- Are there any other anticipated expenses in addition to the previous that might be incurred by the City in fiscal 2019 in order to bring all of the issues with the dam to a resolution that is satisfactory to Mr. Baldwin?

- If expenses are anticipated, what is the estimate, and please provide a description of the scope of work that may be required to satisfy any deficiencies with the mill pond dam at the McLean Mill property.

During most of fiscal 2017, it was mentioned several times in chambers by the Council of the day, and by some members of that council on social media, about how the financial reporting of the MMS was so much better than anything we had had in the past. But then the reporting frequency and substance of that reporting began to fade in late 2017. For fiscal 2018, we had just one financial report from the MMS.

It should also be noted that Society Covenant 3.1 (c) in the Operation and Management Agreement between the City and the MMS, compels the MMS to provide at the end of each fiscal year, "a record of daily, monthly, and seasonal visitor statistics." The detailed visitor data for fiscal 2017 has not been presented to council to date, and the data wasn't presented at the MMS AGM held on April 30, 2018 either.

Council is about to make budgetary and operational decisions for the City for fiscal 2019, including budgetary decisions for the McLean Mill and railway.

- Will there be financial data made available to the council and to the public from the MMS, so that more informed decision making and discussions regarding McLean Mill and railway operations can take place?

- Will visitor data for 2017 and 2018 be made available and presented to the council and to the public by the MMS, as per the terms in a signed Operating Agreement that makes this a requirement of the MMS to do so?

Informed decision making regarding McLean Mill and railway operations cannot happen if substantive amounts of data are not made available for discussion, or if only certain data is chosen for discussion, while other data is omitted. I believe that the City, including Council, needs to acknowledge that they have more responsibility for this file than has actually been acknowledged in recent years. And, I'm not the only person who sees it this way. Instead, it's been the well intentioned volunteers who've shouldered the burden of responsibility for the operation of these particular public assets, while truthfully, being inadequately funded to do so. The result of the absence thus far of a thorough, realistic review of what this project is probably going to need in continued funding for ongoing operational requirements, or for necessary infrastructure investments made towards remaining operationally viable in the future, is that volunteers appear to have become the public face for why things aren't getting better. That's unfair, as it is not the volunteers' fault that political decisions made over the years have been to only apply what is essentially financial Bandaids to the project, notwithstanding that millions of dollars have already been spent on the venture to date with arguably, questionable results.

Regardless if there is fear of the notion, a deep dive to identify what is realistically required for the ongoing operational and infrastructure requirements to keep operations going, has to be taken, even if the end result is identification of expenses for those items that appear to be too large to continue. This means that everything operational and infrastructure wise needs to be on the table for discussion. There is real money, public money that is being spent here. In the end, whether a decision is reached that reduces, maintains or increases spending on the mill and railway, that decision should only happen because it was arrived at after a thorough review of all of the available data, after tough questions were asked to seek that data, and good information was obtained as a result – thus, making it a decision informed more by reality than altruism.

Respectfully submitted,
Roland Smith

APPENDIX A – GLOSSARY

Appendix A - Glossary

The following glossary is intended to assist with the understanding of technical terms used in this report that may be unclear or unknown.

Air Barrier: A material/component that controls the flow of air through an assembly, limiting the potential for heat loss and condensation.

Alligatoring: A condition of paint or aged asphalt brought about by the loss of volatile oils and oxidation due to exposure to solar radiation. Ultimately the result of the limited tolerance of such paint or asphalt to thermal expansion or contraction, a pattern of cracks is produced resembling an alligator hide.

Assembly: a grouping of components and materials which when organized together form a product that, in the case of a building, functions to prevent the unwanted transfer of environmental conditions.

Belt Course: An ornamental projecting band or continuous moulding along a wall. Often set in line with window sills to help make them more visually prominent.

Building Envelope: A collection of assemblies that contain an enclosed space, providing separation between the conditioned and unconditioned environments. The basic assemblies of the building envelope control the movement of air, moisture and heat.

Building Paper: Organic sheet material saturated with asphalt to create a moisture resistant barrier.

Butt Joint: A joint formed by to surfaces connecting perpendicular to each other with no overlap.

Cladding: A component of the building envelope that protects the building from its exposure to weather, primarily controlling the infiltration of moisture.

Control Joint: A joint in a material component/assembly directing the location where movement occurs in the component/assembly. This movement may occur due to thermal or moisture related expansion or shrinkage.

Cornice: Any horizontal decorative moulding that crowns a building (or furniture element). The function of a projecting cornice on a building is to throw rainwater free of the building's walls. A cornice can be considered synonymous with eaves if the eaves are finished with decorative moulding.

Delamination: The separation of a material into layers. In the case of masonry material, this is typically manifested by the separation of the outer, exposed layer from the main body of the material.

Deleterious: Causing harm or damage. In the case of moisture transport, the result would be the deterioration of the material/assembly through which the moisture is passing.

Face-Seal: A building envelope assembly that depends on the outer surface to control the infiltration of moisture and air from the unconditioned environment providing no allowance for the failure of the control in the system.

Finial: An element marking the top or end of some object, often formed to be a decorative feature. It is often employed to emphasize the apex of a dome, spire, tower, roof or gable or any of various distinctive ornaments at the top, end, or corner of a building or structure. Where there are several such elements they may be called pinnacles.

Flashing: sheet material, typically metal, used to control to movement of moisture over or behind the cladding of the building envelope.

Glass:

- **Float:** Glass made by allowing it to solidify on molten metal.

Hygrothermal: Pertaining to the movement of heat and moisture.

Italianate (architectural style): Typically a two-story building with six basic categories - box with a hip roof; box with a centered gable; L or U plan; L plan with a tower, and a front gable. Often identifiable by their wide projecting cornices with heavy brackets and richly ornamented windows, porches, and doorways. Brick and wood clapboard were the most common building materials used with brick being more expensive. The ornamentation was typically wood. Roofs were low pitched, often with a square cupola on top. Projecting eaves with large brackets in a variety of shapes and spacing dominated the cornice. Arranged singly or in pairs, the brackets were usually underscored with wide decorative bands and sometimes further elaborated with panel moldings. Window sashes typically had one-over-one or two-over-two glazing and trimmed with exuberant variations. Doors occurred in as much variety as windows. Paired and single doors were both common, often announcing themselves with a large, elaborate hood supported by brackets. Italianate doors were the first to have large panes of glass in the door itself in lieu of sidelights with small panes. Porches were restrained in their size and decoration, compared to other Victorian styles, and often only one story. The most common type of porch column was a square post, usually 6" square with beveled or chamfered corners.

Lite: A piece or pane of glass.

Membrane: A layer of material that serves as a barrier between two environments. It can be designed to be selectively permeable to specific particles.

Modified Bitumen: A product created by adding polymers to asphalt to improve its flexibility, flatten its temperature susceptibility curve (i.e. more flexible at lower temperatures, more stable at higher temperatures) and provide greater toughness.

Mortice: An opening cut in a member to receive the projected end of an adjoining member, often used to connect the stiles and rails of a window sash. The opening can be stubbed or cut through, closed at the bottom or open.

Mullion: A horizontal or vertical member that supports and/or separates panel items such as glass panes.

Pilaster: An architectural element providing the appearance of a supporting column, articulating an extent of wall but remaining ornamental in function.

Purlin: A horizontal structural member spanning between beams or trusses to support a roof deck.

Rafter: A sloping roof member that supports the roof covering and extends from the eaves to the ridge or the apex of the roof. A common rafter is one which runs square with the wall plate and extends to the apex. A hip rafter extends from the outside angle of the wall plate towards the apex of the roof while a valley rafter extends from the inside angle of the wall plate towards the apex of the roof.

Re-point: To renew the pointing or the external part of the mortar joint in a masonry wall.

Riven: To divide into pieces.

Sash: The window frame, including mullions if used, to receive a pane(s) of glass.

Scupper: An opening through a building wall allowing for the movement of moisture off of a horizontal roof surface.

Service Life: The period of time in which a material can be expected to perform its function without undue or unforeseen maintenance or renewal.

Soffit: The underside of a horizontal surface, typically referring to the area beneath the roof eaves or a balcony.

Spall: The detachment of a delaminated component from its base material

Tenon: A projection of a member, typically reduced in size, to fit into the opening of adjoining member. Often used to connect the styles and rails of a window sash. A tenon can be stubbed or through.

Truss:

- **Scissor:** A truss with which the bottom chord members cross each other, connecting to the angled top chords at a point intermediate on the top chords' length, creating an appearance similar to an opened pair of scissors. Scissors trusses are used almost entirely to support a pitched roof, where a sloping or raised ceiling surface is desired.

Verandah: A roofed, open-air gallery or porch, often partly enclosed by a railing and frequently extending across the front and sides of the structure.

Wainscoting: A term originally applied to high quality riven oak boards but now referencing wall coverings constructed from rigid or semi-rigid components; traditionally interlocking wood, but could be of other materials. In previous times it may have served the function of increasing interior comfort though now it is often more decorative in purpose.

Window:

- **Awning:** An operable sash with a hinge(s) along its top edge allowing the bottom to swing out.
- **Casement:** An operable sash with a hinge(s) along one side allowing the opposing side to swing out.
- **Fixed:** A sash that is fixed in place.
- **Hopper:** An operable sash with a hinge(s) along the bottom edge allowing the top to swing in.
- **Hung -Single:** An operable sash that slides up and down within the window frame. Typically the lower of two sash. The sash can be weighted or sprung to ease operation.
- **Hung-Double:** Operable sash within a window where both upper and lower sash can slide up and down within the window frame. The upper sash can have horns on the stiles to prevent dropping below the lower sash. The sash can both be weighted or sprung to ease operation.
- **Slider:** A sash that slides open to one side within a window frame
- **Transom:** The window over a horizontal bar or beam, typically over an opening in the wall beneath.

APPENDIX B – MATERIAL DETERIORATION

Appendix B – Material Deterioration

Building materials all succumb to inevitable deterioration over time, exacerbated by exposure to inclement conditions including prevailing moisture, solar radiation, organic growth and pest infestation. 506 Government Street, constructed of traditional building materials and erected in close proximity to the ocean, is vulnerable to a full variety of these deterioration mechanisms. These mechanisms are briefly described for reference to existing and/or potential conditions that may occur.

Deterioration of Wood

Wood and water are generally compatible with wood being able to effectively absorb and release moisture in equilibrium with its surrounding micro-climate. However, if the exposure to and absorption of moisture are disproportionate over the wood member or the wetting period outpaces the corresponding drying period, problems can set in.

Wood dimensionally adjusts in relation to absorbed moisture levels – as it dries it will shrink and as it is wetted it will expand. This dimensional variance is impacted by the material properties of wood and its' relative exposure. Dimension change of significance is typically associated to both radial and tangential directions relative to the grain pattern, both of which can lead to cracking of the wood member. This cracking can be worse if the wetting pattern is predominantly on a single surface where only a portion of the member is undergoing dimensional stress. Once cracking is initiated, an increased area of wood is exposed to moisture and the protective barrier of wood is breached with moisture being able to pass through the open crack.

The moisture content of wood also has a direct impact on the initiation and sustaining of organic growth. Wood is considered 'dry' with up to 19% moisture content by weight. Under these circumstances, the wood is 'safe' from sustaining organic growth. At 28% moisture content, the wood fibres can be considered fully saturated and dimensional 'growth' will have reached its maximum. Sustained moisture at these levels will result in the onset of organic decay. Once decay has started, the moisture content can then drop to just 19% and still sustain organic decay.

It is important that dry, clean wood does not reach the fibre saturation point in wood construction, but if it does, the wood must be brought below 19% to stave off progressive decay. Even at this point though the organic decay processes may have been established and the wood remains vulnerable to moisture exposure unless the area is repaired and the details addressing the source of moisture exposure have been addressed.

Though cracking of wood members is a mechanism of deterioration, the primary durability hazard with wood is bio-deterioration. Wood in buildings is a food source for a variety of fungi and insects, both having the ability to destroy the cellular structure of wood and correspondingly reduces its' strength and structural ability upon which the building relies. The process of bio-decay follows a series of events initiated with fungal/insect colonization and concluding with cellular consumption and fibre disconnectivity. Fungi spores and insects can be around much of the year – a part of the natural

environment. Once in contact with wood, they can utilize it as a food source but only under favourable moisture and temperature conditions. For much of the year, the North American west coast provides a favourable temperature leaving the only control being the source of moisture.

The sources of moisture include:

- rain water through direct exposure or through leaking drainage systems
- high humidity levels
- retained construction moisture either from the material itself or adjacent materials

Moisture can also be transported in and around wood through:

- liquid flow (bulk moisture transport)
- capillarity flow through the structure of wood
- air movement or vapour pressure differential transporting humidity

Liquid movement and capillarity flow are the most important sources for wood saturation and subsequent triggers for decay in buildings. The focus for moisture control is therefore typically in shedding rainwater and preventing exposure and absorption of ground water.

To effectively combat moisture exposure it is good to consider durability, defection, drainage, and drying.

- Durability is primarily considered at the onset of construction but must also be given attention during conservation. Good quality materials simply perform better and last longer than their poor quality counterparts.
- Deflection must be understood during the design phase though lapses in this consideration must be addressed during any conservation work. If the building does not deflect rain water well, consideration for redesign or the acceptance of continued maintenance must be given.
- Drainage is as simple as directing away all water that impacts the building. Do not let the building or its surrounding environment 'store' water.
- Drying is very important but often overlooked when building comfort is addressed. Air flow and heating contribute significantly to removing moisture by picking it up and transporting it away. If either mechanism is altered in a building, the corresponding positive effects they provided may no longer be present.

Protection of buildings from moisture is an important design criterion if proper, durable construction and restoration is to be assured. The capabilities of wood must be well understood and then articulated in the design, construction and restoration efforts.

Deterioration of Bitumen Roofing

Bitumen as a roof material has been used for centuries in various forms and applications and by many cultures. It is easy to apply and provides the sought after water proofing qualities necessary for protective cover over or on a building. Its' durability has been its biggest challenge however, particularly under exposure to the sun and its ultraviolet rays.

Bitumen roofing, either asphalt shingles or modified bitumen sheet membrane, deteriorates over time like all materials with the most significant aging factor being exposure to the sun. The sun's radiation will initiate the deterioration process of asphalt roofing the day it is applied. The asphalt will soften and dimensionally adjust which can lead to the migration and possible thinning of the material and displacement of the protective granule surface. When this protective granule surface deteriorates, the waterproofing asphalt material is increasingly exposed resulting in an increasing rate of deterioration. Exposure to the sun also accelerates the dissipation of the asphalt volatiles, resulting in a drying product that becomes increasingly susceptible to cracking. This cracking opens up the surface of the membrane and once again increases the rate of deterioration. With asphalt shingles, this deterioration will eventually lead to cracking and loss of the shingles themselves. With sheet membranes on low sloped roofs, deterioration will eventually result in membrane displacement and moisture ingress. Unfortunately, these deterioration mechanisms are a part of the material and at best can be modified to improve durability and performance.

Water ponding on a low-sloped roof exacerbates the effect of UV degradation of the membrane accelerating its' deterioration. In addition, ponding water has a greater opportunity to take advantage of weaknesses in the membrane and migrate into the individual layers or past the membrane entirely. In both cases, blistering of the membrane could occur where the top or all of the sheets of a multiple sheet assembly rise(s) off the supporting surface through the expansion of moisture turning into vapour. This debonding results in a loose laid membrane that is more vulnerable to wind uplift and subsequent tearing. If the membrane incurs too many blisters or becomes increasingly debonded, it becomes increasingly vulnerable to bulk moisture ingress into the roof assembly and the building itself.

In addition to deterioration associated with solar radiation and ponding water, the asphalt roof can be degraded by the growth of organic material on its surface. This growth that tenaciously bonds itself to the surface of the shingle or membrane is actually bonding to the protective granules, wrapping itself around and beneath them. Continued unfettered growth will result in the debonding of the granule surface exposing the vulnerable asphalt membrane. The organic growth will then move on to the next granulated area with which to bond itself to. The exposed asphalt is now vulnerable to the mechanisms previously mentioned.

Beyond ensuring the roof is correctly installed by a qualified contractor, the best course of action is to regularly maintain the roof surface, keeping it free of debris and ponding water. This regular visual review and maintenance will ensure the longest possible lifespan of the roof.