

PRESQU'ILE POINT LIGHTHOUSE (PPL):
RESTORATION ENGINEERING RECOMMENDATIONS FROM
PRESQU'ILE POINT LIGHTHOUSE PRESERVATION SOCIETY

PRESENTATION TO ONTARIO PARKS



Presented by:

The Board of Directors – Presqu'ile Point Lighthouse Preservation Society
2015-April

PRESQU'ILE POINT LIGHTHOUSE (PPL):
RESTORATION ENGINEERING STUDY

Introduction

After completion of the initial restoration engineering study completed by the Scheinman Heritage Consultant, PPLPS has continued on doing further research from other sources and are now ready to present to Ontario Parks, our recommendations related to the restoration project.

The full report from Scheinman has already been presented to Ontario Parks.

The Objective of PPLPS

Our (PPLPS) Society's objective (as per our by-laws) is stated as follows:

“To evaluate the condition of the lighthouse, determine the steps that are required to arrest the deterioration of the building, both internally and externally, and bring it back to the beautiful and commanding presence it once enjoyed”.

To date we have had our 2014 preliminary report on the condition of the lighthouse given the examination and review by the Consultants and subsequent review by another consultant. As a result, we can only make recommendations on what we know now, recognizing that we may encounter some surprises along the way which will require additional dollars.

One thing we have certainly learned is that different Consultants have different views on how to approach this project... one suggests that “restoration” is the best route to go while another suggests that “preservation”. And, there is even talk about “rehabilitation” (*if public were to be allowed into the lighthouse.*)

Our task has not been easy and we look forward to working with Ontario Parks in the next step as we drive towards the next step of preparing details for the RFP for the actual preservation process.

PPLPS Recommendations

While there are many technical conservation items that will be common to any approach to restoring the Lighthouse, the first crucial decision is in regard to the overarching vision for the future of the historic site. There is a ‘world of difference’ between an option which, essentially, conserves the 1894-95 timber stabilized lighthouse, and that which attempts to restore the building to its original form/appearance with stone walling exposed.

After much discussion at the Board level of PPLPS, we are now offering our recommendations to Ontario Parks for the preservation and restoration of the lighthouse.

Historical Authenticity

There has been much talk about whether to remove the shingles and return to the original limestone structure or alternatively, repair the sheathing and replace the shingles. Given, that the present timber girt shingle clad version of the structure has stabilized and weather protected the unstable stone structure since 1894 – for more than 120 years; we are suggesting that this is the route we take in addition to some other improving structural deficiencies and, of course, replacing the original cupola. We make these decision, not only due to most consensus, but also, it is the lower cost route to take.

Mr. Scheinman’s report also reported “*Conversely the original stone structure appears never to have been completely stable (due to the level of workmanship/quality control/detailing) and began its deterioration almost from the moment it was completed. It remained in its original form only for 54 years before having to be wrapped in timber. Thus, while acknowledging the interest inherent in the original appearance of the building the shingle clad treatment must definitely be considered to be historically authentic to the historic site and with perhaps an even greater claim for being preserved*”.

Another important consideration in choosing between these major options is the comparative future maintenance and monitoring required by various scenarios.

Lastly in this discussion, it is worth noting that, as viewed during the investigation it was evident that the stone had been historically coated with a lime wash thick enough to obscure the stone coursing, quoins etc. Thus the authentic appearance of the exposed stone walls would likely be as a whitish mass rather than as crisply defined coursed stonework.

The following is a cost summary presented by the Consultants we have been in contact with. It is interesting that as part of our followup discussions with other consultants, some feel Mr. Scheinman’s costs may be on the high side in some areas. That is why we need permission to go to the next step or Phase 11 of our project, which is the preparation of the Engineering Drawings with further refinements in costing, and preparation of the RFP based upon our recommendations.

Preliminary Costing for PPLPS Budget Purposes

1)	Restore exposed stonework at base <ul style="list-style-type: none"> Includes: replace stone step; Jahn repair of cracks; break out concrete shoulders, investigate, conserve stone, possibly re-pour concrete,; repoint joints and clean vertical cracks; premachink corners; pinning at cracked quoins and minor dismantle and rebuild 	\$35,000
2)	Replace Sheet metal base with shingle coverings <ul style="list-style-type: none"> Includes investigation but assume complete renewal to allow for improved detailing , e.g. - no exposed fasteners etc. 	7,500
3)	Metal roofing replacement <ul style="list-style-type: none"> Includes necessary new support mechanisms as required for a new cupola 	\$24,000
4)	Interior stonework conservation allowance <ul style="list-style-type: none"> includes repointing, minor dismantle and rebuild focused around window areas 	\$35,000
5)	Replacement of rotted timber lintels	\$10,000
6)	Replacement of decayed/damaged interior floor structures	\$29,000
7)	Investigation and possible use of external stainless steel helical (spiral) masonry ties installed at specific centres to improve earthquake stability	\$100,000
8)	Investigation and possible use of external stainless steel helical (spiral) masonry ties installed for window supports	\$90,000
9)	Plaster Conservation/Finishing <ul style="list-style-type: none"> includes repair of missing, damaged and/or cracked areas; removal of recent graffiti; finishing 	\$35,000
10)	Cleanup area of junk and debris <ul style="list-style-type: none"> assumes treatment as hazardous waste 	\$5,000
11)	Improve Grading (<i>directly around lighthouse</i>)	\$3,500
12)	Temporary Works <ul style="list-style-type: none"> Includes establishment of construction road into the site and staging area for materials and equipment, sensitive to flora and fauna and reversible 	\$35,000

13)	Allowance for wall planking repairs	\$30,000
14)	Complete Renewal & Disposal of wood shingle cladding <ul style="list-style-type: none"> • <i>assumes Blue Label Certigrade Western Red Cedar</i> 	\$170,000
15)	In shop dipping or painting of shingles with <i>ins-situ</i> touch up	\$25,000
16)	Access: (Scaffold and/or lifts)	\$70,000
17)	Cupola & Lantern construction & installation – <i>see Point #2 below</i>	\$125,000
18)	Recommended window options – <i>see Point #3 below</i>	\$45,000
19)	Incorporate louvers for ventilation with the windows and/or where ever is required to solve the moisture problem.	\$10,000
20)	Construction of one “window” through the new shingles to show original stone work near bottom of lighthouse	\$2,500
21)	Construction of four “windows” through the new interior plaster to show original graffiti	\$6,000

Total of ‘all’ construction costs \$877,500

Other “Hidden” Costs (as suggested by consultants)

- 1) Contingency: 15-18% of construction costs
- 2) General Contractor’s Overhead and Profit: 18% - 20%

Other Project Requested by PPLPS

1) **Environmental Cleanup** of lighthouse basement – *responsibility of Ontario Parks*- however, we are prepared to work with one local consultant in the evaluation process. This will require an Environmental Assessment of the site, before the work starts.

2) **Lantern/Cupola Option**

As noted earlier the restoration of a Lantern to the lighthouse would be historically appropriate regardless of the period treatment. Originally comprised of cast iron panels with glazing and a stepped pedestal base its most distinctive feature was its ogee shaped roof culminating in a ball finial. The 1876 Report of William Sherwood, Inspector of Lighthouses, confirms that the lantern was 9’ in diameter with glazing comprised of 10 ½” x 13” lights. It also provides information on the nature of illumination in that period.

This treatment could be replicated based on the combination of historic photos, Baird's specs and comparable surviving lanterns. While cast iron (or preferably the lighter aluminum could form the wall panels the roofing would be undertaken in a non-corroding solderable sheet metal as would the cladding of the pedestal. As any 'new' load is a concern as applied to this sensitive structure consideration might be given to the wall panels being cast in aluminum – non-corroding and much lighter than steel/iron. Regardless, the roof joists would be strengthened in this scenario. Obviously the base of the lantern would have to be integrated with the roof cladding in a weatherproof manner.

And, we would need to address any concerns about the migratory issues related to our bird population in terms of the covered light beacon.

Assume **\$85,000.00** for fabrication and installation of cupola shell. Assume **\$125,000.00** as actual working light.

3) **Window Options**

The lancet windows were an important, if problematic, component of the original design. As discussed the problem was associated with their size and alignment at each cardinal elevation. However, if carefully designed, it would be possible to feature a full lancet window at each floor level (above main), though offset from the floor below and above, culminating with a view out to the lake from the 5th floor. Design would have to compensate for the greater area in which the planking was discontinuous, ensure that the area around the opening was flashed and sealed to be weather-tight and tempered glass used as vandalism has been known to be an issue.

Obviously this is not a true 'period' treatment but does convey something further in regard to the nature of the original design.

Assume **\$45,000.00** to implement this approach.