

Masonry Mock-ups

by Kristina Pompura, Parks Canada Architect

The Province House NHS conservation project features a large team of specialists, working in focused areas of expertise. One of the most labour-intensive aspects of the project is the masonry. In this article, Parks Canada Architect Kristina Pompura takes us through the team's process of planning, assessing and rebuilding the exterior and interior stone walls.

Before proceeding with the overall repairs to the stone walls of Province House NHS, the architects, masons and masonry conservators work together on site to assess in-situ conditions and decide upon final remedial measures. To do this, the masons prepare “mock-ups” of several masonry repairs.

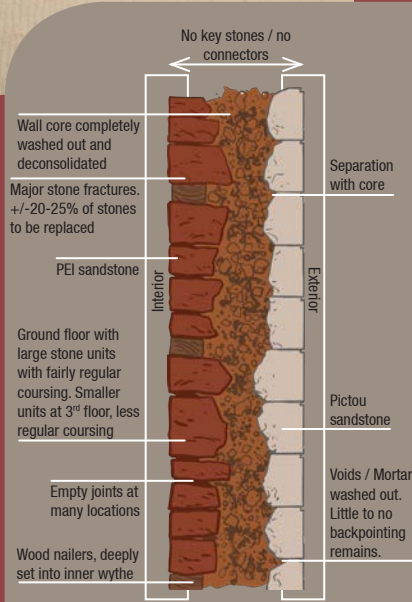
Mock-ups serve to evaluate existing conditions of the masonry and mortar and to establish the scope and procedures to follow for the repairs to the exterior walls of Pictou stone and the interior walls of local PEI sandstone. Each mock-up is reviewed with the team and together they arrive at a solution. The image below showcases a section of exterior masonry wall and a typical deterioration that has taken place.

Mock-ups include:

- Cleaning methods on the Pictou stone
- Stone consolidation: repairs and replacement
- Dismantling and rebuilding of the interior PEI sandstone and the Pictou stone



Meredith Thompson of RJW Stonemasons, cleaning stones on an exterior wall (January 2019)



- Mortar removal and replacement
- Removal /reinstatement of brickwork

Once an agreement is reached regarding conditions and repair procedures, masons reference the approved mock-ups to guide their work as they proceed through the building.

On-site evaluations by the masons, architects and masonry conservators is an ongoing practice. Although key masonry conditions and overall remedial repairs are defined during the mock-up phase, the masonry walls of Province House will continue to reveal their secrets throughout the work.



“The Story of Confederation” in the upper foyer, Confederation Centre of the Arts, ©Parks Canada

Quick Tips for Visitors

While Province House NHS is closed for conservation work, Parks Canada continues to tell the story of the site and the Charlottetown Conference of 1864, in collaboration with Confederation Centre of the Arts.

Explore “**The Story of Confederation**” exhibit at the Confederation Centre of the Arts (upper foyer), which includes an impressive replica of the Confederation Chamber. Free admission.

Be sure to see Parks Canada’s award-winning film, “**A Building of Destiny**” about the 1864 Charlottetown Conference, playing next to the Chamber replica at Confederation Centre.

Hours of operation:
November to May Saturdays only from 10:00 am to 3:00 pm

Please contact chamber@confederationcentre.com or call 902-628-6118, if arriving with a group of 20 or more.

Contact Us

Parks Canada is committed to sharing the story of the important conservation project at Province House National Historic Site.

To learn more, visit our website:
www.parkscanada.ca/provincehouse
or contact us:

Email: pnipe.peinp@pc.gc.ca

Phone: 902-566-7050

Mailing Address:
2 Palmers Lane
Charlottetown, PE C1A 5V8



Province House
National Historic Site

Stone by Stone Province House Conservation Project

Province House National Historic Site is currently undergoing an extensive conservation project. Built more than 170 years ago, Province House is a complex building and presents the unique challenge of rehabilitating the structure, while respecting its heritage character-defining elements.

The Government of Canada is investing in Province House NHS to conserve this historic structure, which is both the birthplace of Canada and the seat of Prince Edward Island’s Provincial Legislature. This project began in 2015 and is slated to be open to the public again in 2022. Full details of the project can be found on our website:
www.parkscanada.gc.ca/provincehouse.

This periodic newsletter will showcase the story of Province House and the efforts to save this iconic piece of our cultural heritage.

Working with the Community

- Students from Holland College’s Heritage Retrofit Carpentry program will have an opportunity to leave their mark on Province House NHS. In the fall of 2019, the class will begin conservation work on two of the original windows from the site.
- The popular Province House: Virtual Reality experience was offered again this summer, created in collaboration with students from the University of Prince Edward Island’s Faculty of Sustainable Design Engineering.



PLC Site Consultant Brian Willis leads a group of Holland College students on a site tour (2019).



Photo courtesy of the Government of Prince Edward Island, 2013



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South portico, photo courtesy of the Government of Prince Edward Island (August 2009)

Ongoing Conservation Work

Phase two of the Province House conservation project continues in full force, with detailed work underway on the building’s exterior walls, structural interior walls, foundation, floors and roof.

Public Service and Procurement Canada (PSPC) is managing this important project on behalf of Parks Canada and in October 2017, they awarded the contract for construction management services for phases two and three to PCL Constructors Ltd.

Conservation work on the north and south porticos will soon be completed. These porticos are temple-like porches that shelter the central entrances on both sides of the building. Priestly Demolition, the contractor undertaking this work, braced the porticos and used a hydraulic jacking system to lift each individual column up in order to replace the foundation. The eight columns were lifted individually. The north and south porticos were then worked on simultaneously throughout the spring, summer, and fall of 2019.

RJW Stonemasons arrived on site in January 2019 to begin preparations for masonry work. They completed assessments of the interior and exterior walls and are now carrying out the required masonry repairs.

You may have noticed that parts of the building have been sheltered by white sailcloth. This was done to create favourable conditions for the masonry work. The covering provides an ambient temperature of at least 10 degrees Celsius during the colder months, which permits the mortar to cure properly. Some sections of sailcloth were removed to allow better air flow in warmer months, and some new sections may be added on the east for protection from direct sunlight, again to allow the mortar to cure properly.

As mentioned in previous issues of this newsletter, disassembled windows from Province House have been sent to Ultimate Construction’s workshop in Barrie, Ontario. They recently finished the first set of window repairs (see photo). The frame and

sash are made of Douglas fir. The first shipment of completed windows is scheduled to be back at Province House by this fall. Two windows have remained on PEI and will be conserved by students from Holland College’s Heritage Retrofit Carpentry program, beginning in the fall 2019. An expert conservator will be working with students in this exceptional training experience.

Looking forward, Parks Canada is also beginning to develop the new visitor experience offer for Province House National Historic Site. We are considering what visitors will do at the site once it is reopened, what themes and messages will be explored, what stories need to be told, and how. An interpretive plan for the site will also be developed, and early next year, work will begin on the design for new interpretive exhibits.



Repaired window frame and sash (April 2019)



East exoskeleton fully clad with sailcloth (June 2019)

The Rocky Road to Stone on PEI

by Jon Stone, Senior Communications Advisor, PSPC

Sourcing local materials that reflect the heritage of Province House NHS can be challenging at times. Here are some insights from Jon Stone of PSPC on the process of sourcing Island sandstone.

When Province House National Historic Site was built, sandstone was the material of choice. Sandstone is solid, durable, and fireproof, all important qualities when building a structure you want to last. Perhaps most importantly, sandstone was close at hand and readily available to Isaac Smith and his team in 1843 as they worked to erect the grand structure in the center of Charlottetown.

A quarry in Pictou, Nova Scotia provided the exterior stones which are now most readily identified with the building. Although this quarry was exhausted many decades ago, a nearby quarry in Wallace, NS has been able to provide a very similar “cousin” for the project. This stone shows slight variations in colour and has a similar fine texture, allowing it to be tooled and finished to fit with the original blocks.

Finding the “right” stone for the interior of the Province House project proved more challenging. A quarry in PEI originally supplied the building’s structural inner walls or “wythe.” This red Island sandstone was also used in the foundations of buildings constructed during the 1800s throughout the province and it is a highly-prized reclaimed material today. As the interior walls of Province House NHS are conserved, the majority of the original Island stones will be reused, with some new material needed to replace what has deteriorated beyond the point of salvage.



Greg Shaw, Parks Canada and Tim Chandler, Public Service and Procurement Canada (November 2018)

The task for the project team became where to find this “new” Island sandstone for the interior walls. Crushed red sandstone for road construction in PEI is ubiquitous, but no stone quarries for structural building purposes exist. Structural function also required any new stone to be compatible with what was already there. It couldn’t be significantly harder or softer than the existing, and had to share petrographic qualities with the original.

With all of the known sources for the original Island sandstone either exhausted or lost to history, it took some geological detective work - and a bit of good luck - to uncover suitable stone in the hills of Kelly’s Cross, near Crapaud PEI in 2018. Petrographic testing has confirmed the stone’s qualities, and this new stone will be used in the interior walls of the building. In this way, we will continue to keep a part of Prince Edward Island at the heart of Province House itself.

Fast Facts

- Province House National Historic Site was built between 1843 and 1847. It is both the historic birthplace of Canada and the seat of Prince Edward Island’s Provincial Legislature.
- The first session of the Prince Edward Island Legislature was held in the building in January 1847. It is Canada’s second oldest active legislative building, after Nova Scotia’s “Province House,” which opened in 1819.
- Province House is owned by the Province of Prince Edward Island and is operated as a national historic site by Parks Canada, thanks to an agreement signed with the Province in 1974.
- A major restoration project was undertaken by Parks Canada between 1979 and 1983 to restore a portion of the building to the 1864 period.
- Between 2011 and 2013, additional renovations were done in advance of celebrations in 2014 to mark the 150th anniversary of the Charlottetown Conference.

