

ICOA1536: REGENERATING THE HEART OF RURAL ONTARIO: NEW LIFE FOR OLD MILLS

Subtheme 01: Integrating Heritage and Sustainable Urban Development by engaging diverse Communities for Heritage Management

Session 2: Management, Documentation

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Abstract: Old mills are at the heart of most towns in Ontario, and mark the start of the industrial boom which provided good middleclass jobs for nearly everyone for over a century. However, from 2002-2012, Ontario lost over 300,000 manufacturing jobs equivalent to 30% of the industry. Typical of many rural post-industrial communities in Canada, Smiths Falls is left with the challenges of a shrinking population and underused industrial buildings.

This thesis explores innovative ways to adaptively reuse a 19th century mill complex in Smiths Falls in a way that positively impacts the region by reconnecting the community with their industrial heritage. The project uses the four-pillar model of sustainability to investigate the role of social equity, cultural vitality, economic prosperity and environmental balance in the rehabilitation process and how this contributes to community resilience.

The methodology integrates a bottom-up community approach within the structure of the ICOMOS-TICCIH Dublin Principles. The first step is documenting and understanding the local context including engagement with multiple stakeholders (local youth, indigenous groups, and visitors). Next, is planning to protect and conserve values of the site, and thirdly, proposing an intervention which meets the needs and desires of the community. The final step is to interpret the local industrial cultural landscape within the larger context of the Rideau Canal World Heritage Site.

This study of the mills in Smiths Falls could serve as a case study and model for the rehabilitation of other industrial sites in rural North America and beyond.

Key words: *community, sustainability, equity, development*

Introduction

The Town of Smiths Falls is representative of the nation-wide trends including the collapse of small-town industry, and rural-to-urban migration. For example, between 2007 and 2012, the Town's three largest employers closed leaving 40% of the adult workforce without a job. How can a holistic sustainable approach to reusing industrial heritage improve resilience in rural communities overcoming the effects of deindustrialization? This architectural thesis proposes to reuse the Wood's Mill Complex and interpret the surrounding industrial cultural landscape as a means of renewing interest, investment and delight to Smiths Falls.

Methodology

The methodology is adapted from the 2011 charter for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes, (called the 'Dublin Principles') developed by ICOMOS-TICCIH. The research takes place on two scales and follows the four steps of the Dublin Principles (Figure 1). This paper will focus on the community scale. The scope of the research includes a broad look at the entire Hornet's Snie industrial cultural landscape with a deeper focus on the Wood's Mill Complex.

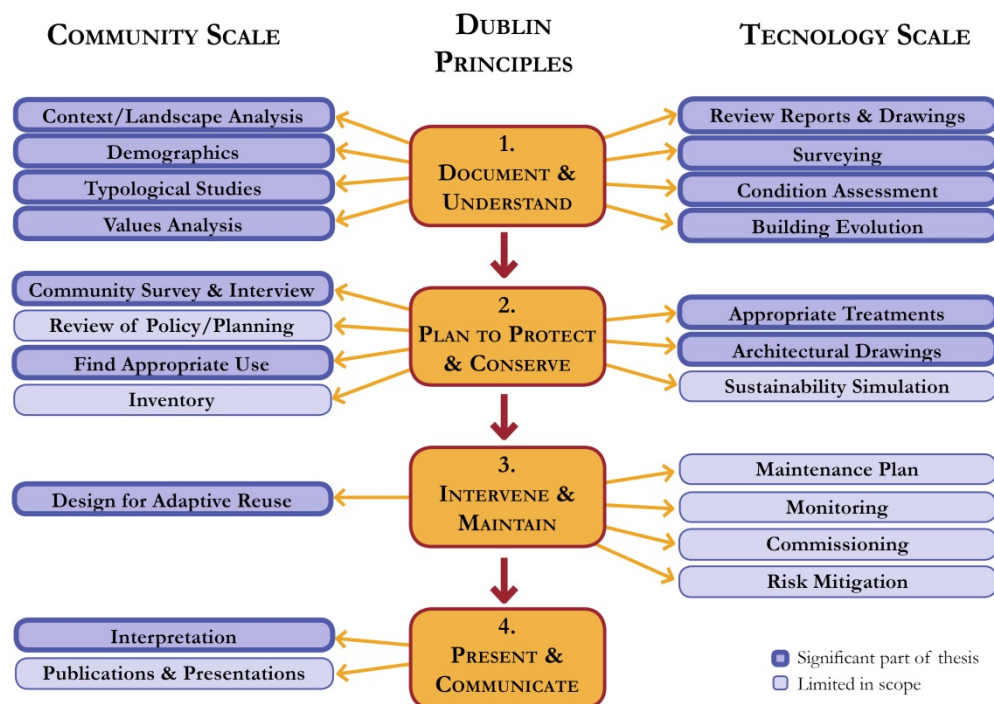


Fig.1– Methodology based on the Dublin Principles

In the face of turbulent change, resilient communities are capable of anticipating risk, limiting impact, and rapidly bouncing back through survival, adaptability, evolution, and growth.¹ The guiding principle of the ‘Building Resilience: Practical Guidelines for the Sustainable Rehabilitation of Buildings in Canada’ is that <<heritage conservation contributes to creating a sustainable built environment and resilient communities>>².

Sustainable development is often said to depend on the three pillars of social equity, environmental responsibility and economic viability; however, this can only be realized once it becomes a wholeheartedly embraced part of our culture³. Accordingly, the increasingly recognized fourth pillar of cultural vitality builds on the notion of community resilience by emphasizing creativity, innovation, diversity and well-being.⁴ Heritage conservation improves community resilience when it embraces and strengthens each of the four pillars.

Step 1: Document and Understand

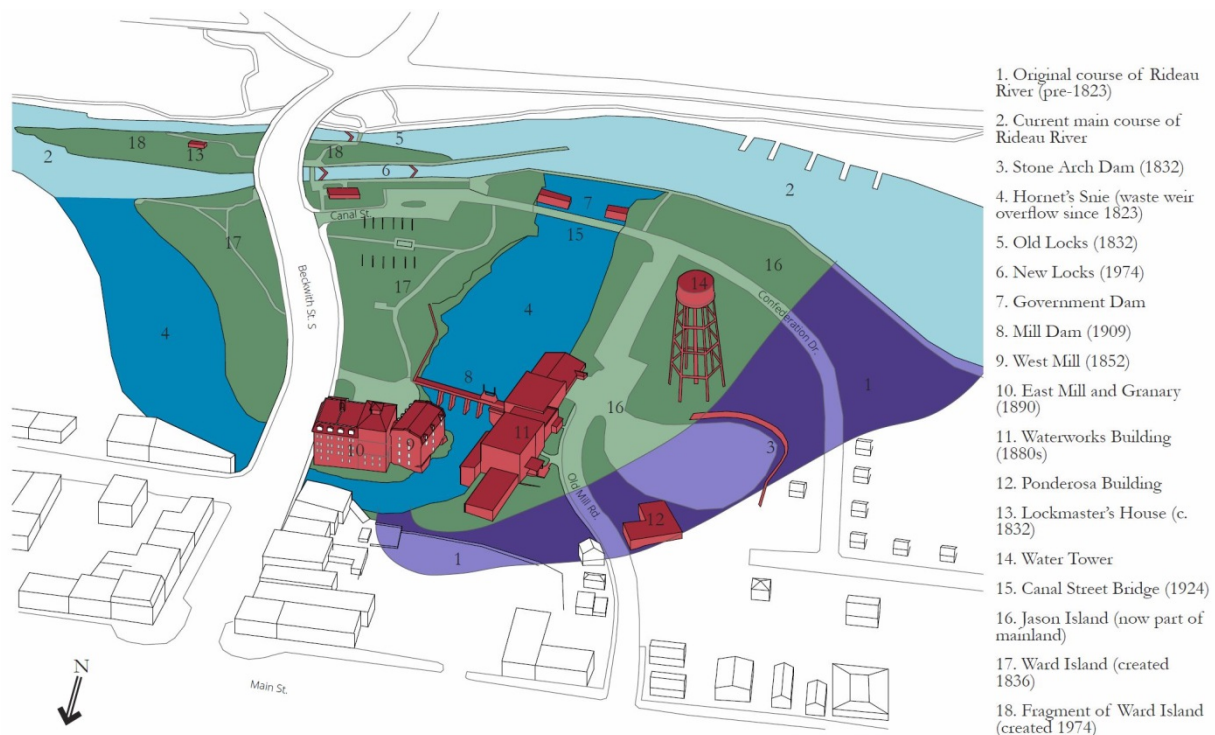


Fig.2– Character-defining elements of the Hornet's Snie Industrial Cultural Landscape

The goal of heritage conservation is to protect and enhance tangible and intangible values of places that matter. By conserving the character-defining materials, forms, spatial configurations, uses and cultural associations of the cultural landscape, the heritage values are preserved (figure 2).

¹ Plodinec, 2009

² Federal Provincial Territorial Ministers of Culture and Heritage, 2016

³ Hawkes, 2001

⁴ Ibid.

Smiths Falls is located in eastern Ontario, Canada on the Rideau River at the site of what was formerly a significant waterfall. It is the traditional territory of the Algonquin people and was likely a place of importance for gatherings and fishing. While there are no known promises made to the Algonquin people with regards to land acquisition for constructing the Rideau Canal, it is likely that the Algonquin people assisted in the project. However, upon completion of the Canal and with the establishment of the colonial government, indigenous people were effectively pushed out of the Rideau Corridor (P Larivière 2016, personal communication 19 December).

Many elements within the Hornet's Snie Industrial Cultural Landscape are designated for their heritage values, although the landscape as a whole is not officially recognized. UNESCO recognizes the Rideau Canal for its Outstanding Universal Value as the best-preserved slack water canal in North America dating from the early 19th century and as a canal used for a military purpose of the fight to control the northern portion of the American continent⁵. The West Mill and East Mill are Recognized Federal Heritage Buildings for their historical associations, architectural and environmental values⁶. Parks Canada purchased the Wood's Mill Complex in 1981 and in 1990 rehabilitated the East Mill for their offices and opened the Rideau Canal Museum in the reconstructed Granary. The West Mill remains vacant and still contains some original milling equipment (figure 3).



Fig.3– Section through a point cloud of the West Mill and mill dam

Step 2: Plan to Protect and Conserve

Water is the lifeblood of the Rideau Canal⁷. And the Mill is the heart of the town at the heart of the Rideau Canal. In the beginning, it harnessed water to provide food and timber to the early settlers. The

⁵ UNESCO World Heritage Centre, 2016

⁶ Canada's Historic Places, 2008

⁷Kim Whytock & Associates Inc., 2013

village grew up around the mill because it was the source – it pumped life, energy and ingenuity into its surroundings and brought people together.

Culture arises from these interactions between people which promotes well-being and creativity. Furthermore, addressing the needs of the locals promotes social equity. Providing a destination for visitors increases material prosperity through a more diverse economy. The natural environment is sustained by adapting historic buildings to support contemporary values and needs. Striving to enhance these pillars of sustainability encourages innovation and promotes resilience. <<An innovative society is open-minded, curious, compassionate and lively; it respects and embraces difference. In so being, it is able to meet every challenge and adapt to changing circumstances>>⁸.

To propose an economically viable and socially sustainable architectural program, it is essential to consult the people who live and visit Smiths Falls. A survey was circulated in the Parks Canada office, posters, and through social media which yielded 15 responses. In addition to revealing the desires of locals and visitors, this exercise provided valuable insights such as the need to support youth with regards to homelessness and substance abuse.

Since projects with multiple uses have been shown to attract tourists and encourage residents to return often⁹, the mills will accommodate a variety of uses under the theme of ‘innovation and industry’. The flagship museum will be revitalized to attract repeat visitors throughout the year with hands-on workshops and virtual reality canal building simulations. A ‘makerspace’ brings together people with shared interests to create, invent, and learn while benefiting from shared ideas, knowledge and equipment (such as 3D printers, design software, carpentry tools, etc.). This is complemented by affordable, low-risk co-working offices, mentorship and business training to promote entrepreneurship in the creative industries. An art gallery allows makers to exhibit and sell their creations while the banquet hall accommodates larger events.

An incremental phased approach to development allows project to adapt and grow with the town. This is cost-effective, reduces risk of the capital investment, and is easier to manage. Additionally, the ‘grassroots’ approach integrates better with the social and cultural identity of the community. For this reason, it is proposed that Parks Canada’s offices initially remain in the East Mill. As the makerspace grows and more businesses start up, they may expand into this area and or the vacant buildings nearby.

Step 3: Intervene and Maintain

The primary conservation treatment for the Hornet’s Snie Industrial Cultural Landscape is rehabilitation¹⁰. This includes: adding infrastructure to transport water to the West Mill to generate electricity; adapting the mill dam to a pedestrian bridge; installing gardens to filter storm water; improving pedestrian and vehicular circulation. Other treatments include restoration of the Canal Street Bridge and preservation of trees, parkland and parking lots.

Rehabilitation is also the primary treatment of the Wood’s Mill Complex. Major alterations include: replacing the granary façade to provide daylight and views; a new entrance vestibule; and refitting the basement to generate 500 kW of hydroelectric power (figure 4). Other minor rehabilitation treatments include: levelling the West Mill floors, improving the sustainable performance of the building envelope.

⁸Hawkes, 2001

⁹ Berens, 2011

¹⁰Federal Provincial Territorial Ministers of Culture and Heritage, 2016



Fig.4 – Vignette of new millrace, pedestrian bridge over the mill dam and entrance vestibule

Step 4: Present and Communicate

Interpretation contributes to the sustainable conservation of heritage sites by promoting public understanding and participation in ongoing conservation efforts¹¹. The goal of interpretation is to communicate the meaning and facilitate appreciation of the Hornet's Snie Industrial Cultural Landscape for a wide audience while safeguarding its tangible and intangible values.

The Rideau Canal Visitor Centre is the primary facility dedicated to interpreting the outstanding universal values of the Rideau Canal. Bridging the gap between the history of the entire Rideau Canal and the former manufacturing landscapes of Smiths Falls, visitors participate in the act of making by building canoes and snowshoes using indigenous techniques. Furthermore, the history of milling technology and waterpower is explained in the basement of the West Mill, in the presence of the historic and modern equipment while watching the water flow through the building. A 'river' of little blue star flowers illustrates the original course of the Rideau River through the park.

The building itself can be thought of as a laboratory, a place of experimentation, observing, refining, and improving. Art installations created by building users visualize energy generation and consumption to raise awareness and promote efficient use of resources.

¹¹ ICOMOS, 2008

	Current Problems	Proposed Solutions	Demonstrated in the Project
Economic	sudden loss of most manufacturing jobs; lack of year-round jobs	diversify the economy through heritage tourism	enhance museum with unique year-round learning experiences; maintain Parks Canada offices for initial phase of development
	lack of diversity in the local economy	encourage innovation and entrepreneurship; provide business training	provide affordable, low-risk co-working spaces with private offices, computers, software; banquet and events space; art gallery/shop
	high unemployment rate, high dependency on social assistance (welfare)	provide opportunities to learn new skills and start new businesses; create new business and social enterprises	makerspace, digital fabrication lab and computer lab provide opportunities to learn marketable skills
	lower tax base due to shrinking population	make town more desirable place to live (see social and cultural)	maintain and enhance cultural heritage values of the Wood's Mill Complex and industrial cultural landscape
	vacant storefronts in central business district	Encourage business start-ups to locate in downtown core	provide affordable, low-risk co-working spaces, private offices and access to computer laboratory
Environmental	vacant buildings	repurpose buildings for contemporary use	rehabilitate vacant West Mill for public use; install hydroelectric station in West Mill basement (500 kW)
	carbon emissions and climate change	sustainably retrofit building envelope; generate clean renewable electricity	analyze inherently sustainable features; test and investigate retrofit options; install hydroelectric turbine (500 kW)
	landfill waste and pollution	encourage a culture of reuse and repair	minimal intervention approach to rehabilitation; providing tools and expertise at the makerspace for do-it-yourself projects and upcycling
Social	youth (homelessness, addictions, pregnancy)	give youth 'something to do;' provide job opportunities for youth; build cross-generational relationships	makerspace and computer lab provide opportunities to engage in art, learn new skills, and build intergenerational relationships with locals and visitors
	youth moving away to large urban centres	Engage youth to create vision for community; collaborate with local schools.	spaces dedicated to arts, technology and business accompanied by mentoring to equip youth to build local careers
	intolerance for minority groups	celebrate diversity; foster relationships between indigenous and non-indigenous people; interpret heritage values from multiple perspectives	snowshoe and canoe-building workshops to showcase indigenous techniques
	shrinking population and workforce	make town more desirable place to live and visit	conducting a survey of locals and tourists to understand and meet their needs and desires
Cultural	vacant industrial/heritage buildings	repurpose buildings for contemporary use	maintain and enhance cultural heritage values of the Wood's Mill Complex and industrial cultural landscape; encourage entrepreneurship
	difficult to understand industrial heritage	interpret local industrial heritage and the evolving industrial cultural landscape	use flowers to trace the historic path of the river; restore the flow of water through mill basement; emphasize movement of water throughout design
	tourism industry shuts down outside of summer boating season	enhance museum so it is more desirable for repeat visits; diversify tourist experience to include the arts	makerspace and computer labs to host workshops; banquet and events space with flexible layout; art gallery and shop; canoe- and snowshoe-building workshop
	lack of educational opportunities for artists	promote interaction and reciprocal learning between residents and visitors	art gallery/shop for locals to sell their creations; makerspace, computer lab and workspaces for visitors and locals to share ideas

Fig. – How rehabilitation of the Wood's Mill Complex could build resilience in Smiths Falls.

Conclusion

Repurposing the Wood's Mill Complex and interpretation of the Hornet's Snie Industrial Cultural Landscape can build resilience in Smiths Falls as a source of employment and diversifying the economy. Giving new life to underused buildings can restore cultural vitality, especially when the new program supports the needs of the community. Reusing buildings brings inherent environmental benefits by reducing landfill waste, reducing demand for virgin materials, and maintaining cultural values. Memory and intangible heritage are essential components of cultural vitality. Although these are distinct from the building fabric, the tangible built heritage acts as an anchor for the intangible and can generate new memories and new values by engaging people in new ways. The proposed project can help create resilience in Smiths Falls by enhancing each of the four pillars of sustainability (figure 5). In this way, a holistic sustainable approach to reusing industrial heritage can contribute to renewed interest, investment and delight in rural communities.

Bibliography

- Algonquins of Ontario. (2013). Our Proud History. [online][Accessed December 20, 2016]
- Berens, C. (2010). *Redeveloping Industrial Sites: A Guide for Architects, Planners, and Developers*. Hoboken: Wiley. p. 102.
- Canada's Historic Places. (2008). West Mill [online]. Canadian Register of Historic Places. [Accessed January 4, 2017].
- Federal Provincial Territorial Ministers of Culture and Heritage. (2016). *Building Resilience: Practical Guidelines for the Sustainable Rehabilitation of Buildings in Canada*. Ottawa: Library and Archives Canada. p. iv.
- Federal Provincial Territorial Ministers of Culture and Heritage. (2010). *Standards and Guidelines for the Conservation of Historic Places in Canada*. Ottawa: Library and Archives Canada. p.15.
- Hawkes, J. (2001). *The Fourth Pillar of Sustainability: Culture's Essential Role in Public Planning*. Melbourne: Common Ground. p. 23-25.
- ICOMOS (2008). *Enane Charter for the interpretation and presentation of cultural heritage sites*.
- ICOMOS, TICCIH, (2011). *Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes*.
- Kim Whytock & Associates Inc. (2013). *Rideau Canal Heritage Corridor Visitor Experience Opportunities Concept: Executive Summary*.
- Plodinec, M.J. (2009). *Definitions of resilience: An analysis*. Community and Regional Resilience Institute CARRI.
- Rubin, J. (December 30, 2013). "The future looks bleak for Ontario's manufacturing sector." *The Globe and Mail*.
- The Rideau Roundtable. (2016). Facts about the Rideau [online]. [Accessed December 28, 2016].
- Town of Smiths Falls. (2012). Smiths Falls Strategy to Welcome Newcomers [online]. [Accessed November 30, 2016].
- UNESCO World Heritage Centre. (2016). Rideau Canal [online]. [Accessed December 28, 2016].

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