[RE] Connection: Bringing Purpose Back to the Waterfront

Redevelopment of McArthur Island, Carleton Place, Ontario

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ABSTRACT

This thesis will examine the 'values' based approach to redeveloping a cultural landscape. **By reinterpreting past values, can the waterfront be re-established as an asset for the culture of today?** The theme of continuity and the idea of evolution are used to develop a mix use design proposal for McArthur Island, Carleton Place, Ontario. Adaptively reusing both the building and the site, to restore life to this waterfront.

Currently, there is a fundamental shift underway in regards to how heritage should be preserved. It is becoming realized that it is not enough to focus solely on the conservation of the site, purely for the sake of preserving its material elements. To properly preserve, means reinterpreting the values present on site and in context, and connecting them both back to society in a relevant way.

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INTRODUCTION

For centuries the 'purpose' of the river has been shifting and changing to meet the economic and social needs of the communities it serves. At a time when we as a culture, are not actively engaging with the waterfront, we need to establish this connection, and discover what the purpose of the waterfront will be going forward.

As in most settlements, a site on the water meant industry, prosperity, transport and growth. Water acted as the fuel to drive production and attracted population, which untimely lead to further urban development. It is known that advancements in technology lead to the abandonment of many of these industry sites along waterways across North America. Industry became de-centralized within communities, and often left completely. At this time no one thought of the water in terms of

'beauty', it was simply understood as a means of survival and economic gains.

Adaptive reuse projects in urban industrial sites are not new. There are many examples where a vacant site has been rehashed to fulfill a unique niche within the urban fabric. However, the original connection to the landscape and to the water is not reinvented, even though this connect is fundamental to the historical context of the site. Typically, projects are built facing into the water, yet they do not really connect the visitor to the water itself. You see the water, you hear the water, but the water is not actively used, or engaged with. This is unlike centuries before where water was used to sustain life. Not only the life and the spirit of the individual, but of the community as a whole.

It is believed that a false natural state is deemed more environmentally responsible then what is currently

on the site, be it a mill, factory, or vacant lot. Many examples can be found where municipalities have reserved their waterfront as parkland. In an attempt to 'green' the waterfront, many downtown centres are now faced with vast quantities of ambiguous park space, that do not reflect their unique history. Not only does this purpose not bring function back to the waterfront, it is erasing the cultural evolution that occurred along the water's edge. To simply 'turn the clock back' and try to restore the waterfront to a 'natural' place would be forgetting the nearly six thousand years of history that occurred on waterfronts across Canada.

These lands were hunted and fished, sacred and ceremonial . They were logged, exploited, used, lived and worked on. Mills were constructed upon them, a mill run was dug, water was controlled and manipulated. To return this land to a 'natural' park like state would be

impossible, it has been influenced too heavily by the hand of man. This site calls for a more active and engaging purpose, that reflects what has valued before; both the tangible heritage as well as the unseen.

Post industrial waterfronts remain vacant and unused, and that is their biggest threat. The best way to ensure the preservation of these sites is to repurpose them, making them relevant and needed in society today. It is important to conserve these sites, as historic places help define who we are and give us a sense of place. These sites provide a story which links us together as Canadians.¹

To reconnect people back to their waterfront will mean introducing a new purpose that is relevant to the community it serves today, yet still reflects upon the

¹ Christina Cameron, "The Spirit of Place: The Physical Memory of Canada ", Journal of Canadian Studies 33, no. 1 (2000): 1.

history it is built upon. By understanding and interpreting the site as a cultural landscape rather than a sum of individual parts, a values based approach to conservation can be taken.

A shift in the way historic sites are looked at and approached is happening now. In the past, a collection of buildings would have been looked at on an individual level in terms of their heritage value. However, this is changing, it is now understood that the cultural context in which the historic building or site is placed is part of its historic significance. Research is bringing light to not only what a cultural landscape is, but how can these sites be repurposed in a relevant way².

This new approach, introduced as the 'The New Paradigm' by ICOMOS president Gustavo Araoz argues

that the value of historic sites are no longer found in the 'bricks and mortar', but rather value can be found in the unseen, or intangible history³. To decipher the intangible value behind the material objects, will give insight on to how the property could be redeveloped, but still convey historic meaning.

A values based approach to conservation recognizes that historic sites are in constant flux, they need to change and adapt in order to function and survive in today's society, and on, into the future. This constant change is just part of their evolution.

By taking this approach to interpreting the site, the evolution of this cultural landscape can continue, and the relationship between the community and the water can be re-established.

² Christina Cameron, 89.

³ Gustavo Araoz, "Preserving heritage places under a new paradigm", Journal of Cultural Heritage Management and Sustainable Development, 1 (2011): 55.

INTERPRETING A CULTURAL LANDSCAPE

As awareness of heritage conservation continues to grow, so do the issues surrounding classifying and identifying what a heritage site is. In recent decades a change has emerged in how we look at an historic place. According to Christina Cameron, the basis for heritage conservation in Canada was originally rooted in the idea of the historic object. "If we return to our starting point, centennial year 1967, historic places were often seen as individual buildings, usually grand public buildings, or residences associated with the rich and famous"⁴. The importance of a place was considered to be within the foot print of the building itself, and little consideration or thought was given to the surrounding area or context.

This notion that an historic place reflects a specific point in time rather than a natural evolution based on the changing and growing needs of the user, is limiting and often stagnant. Sites are developed through time and through use or function. Historic sites are rather a collection of elements, both manmade and natural, all contributing to a greater understanding of the sites' historic significance.

With a mix of typologies, time periods, and natural elements all resting on a single site, it can become difficult to separate one aspect from another. To better define entire areas which hold heritage significance throughout, the term cultural landscape can be applied.

Understanding a heritage site as a cultural landscape is often overlooked. Typically a physical element on the site, such as a building, would be identified as significant, with little consideration for the

⁴ Christina Cameron, 87.

context that lay between each. As knowledge surrounding cultural landscapes grows, so does the belief that heritage is a collection of elements. "They are understood to be significant to the evolution of human society within the constraints and opportunities of the natural environment; World Heritage guidelines require that they be substantial, intelligible, and clearly defines geo-cultural regions".⁵

The context to which these elements sit in context are part of the story of the site. Historic sites should be seen as an overall composition rather than individual pieces. Conservation as a practice has to be careful to not under evaluate the significance of the contextual setting. Components that make up a landscape such as a tree, fence line, water source, or out building could be

considered marginal from a preservation standpoint.

However, these elements provide insight and understanding to the human and natural evolution that occurred⁶. Natural elements such as vegetation or geographic formations can also be considered to hold heritage value, since they physically reflect interaction between man and nature. Organic elements such as plants or trees grow, die, decompose, eventually leading to new growth. This process is natural, and part of the continual evolution of the site.

"Studying cultural landscapes entails understanding the natural and manmade components of the environment and the ways in which they have changed over time."⁷

A cultural landscape could have created by one person at one particular time, or it may have evolved

⁵ Christina Cameron, 88.

⁶ Richard Longstreth, "Introduction" Cultural Landscapes. (Minneapolis: University of Minnesota Press, 2008), 2.

⁷ Richard Longstreth, 5.

organically over a period of time.⁸ The idea of constant evolution over time is critical within a cultural landscape. The landscape is ever changing as the need of the culture change and adapt. This changing nature is what proposes the biggest challenge when looking to conserve a cultural landscape. While preserving a building tends to focus on a more static or restorative approach, conserving a landscape should allow for continuation and growth.

Examples of these landscapes are prevalent around the world. Many countries have been taking an active stance on preserving this mix of nature and human influence for thousands of years⁹. In regards to North America, and in particular Canada, there is a perception

that perhaps we do not have such landscapes, and this is because our perception of history starts three hundred years ago. Much later than most of the world¹⁰. However, early history does exist in Canada. The First Nations used and manipulated the landscape in ways relevant to their cultures at that time.

This is the case on McArthur Island in Carleton Place, Ontario. This twelve acre, manmade island, sits in the Mississippi River, near the centre of town. It is a post industrial waterfront, the site of a former woolen mill. The sites history predates its industrial use by thousands of years. The act of 'using' this waterfront can be traced back to First Nations groups for which it held spiritual and material significance. The landscape is dotted with natural and manmade elements which signify the ever

⁸ Ontario Heritage Trust, "Cultural Heritage Landscapes", (Toronto: Ontario Heritage Trust:, November 2012), 2.

⁹ Lesley Head, "Cultural Landscape and Environmental Change", (New York: Oxford University Press, 2000), 13.

¹⁰ Lesley Head, 13.

evolving connection between people on the site and the water.

The idea that a landscape can be a form of heritage is still considered a new concept. It was in 1992, that UNESCO adopted guidelines to recognize a landscape as a heritage site. The term 'cultural landscape', can only be loosely defined because it is meant to embrace any relationship between man and nature. Three categories were developed to assist in the classification of these sites. The first category, is defined as a landscape created intentionally by man. This includes groups of buildings, monuments, or garden. Opposite, is the organically evolved landscape. Here initial contact between man and nature occurred due to various circumstances including economic, social, or

religious factors.¹¹ Once this landscape was constructed, the process stopped at some point in the past, or the process was restarted as a way of keeping tradition alive. Thirdly, an associative cultural landscape, is one that may or may not have historic physical elements. These places are still considered cultural landscapes through their association with religious, artistic, or cultural use of the place. The need to keep the definition of a cultural landscape vague is to allow it to be applied in various ways.¹² Using this idea, I will be referring to McArthur Island as a cultural landscape for the purpose of this thesis.

¹¹ Susan Buggy, " An Approach to Aboriginal Cultural Landscapes", (Ottawa: Historic Sites and Monuments Board of Canada, 1999), 14.

¹² Nora Mitchell, Mechitila Rossler, Pierre-Marie Tricaud, " World Heritage Paper 26: Cultural Landscapes", (Paris, UNESCO: December 2000), 18.

FIGURE 1: Features of the Site.

McArthur Island can be interpreted as a cultural landscape, since the site has evidence of human intervention dating back to six thousand years. A cultural landscape is a combination of both natural and manmade elements. The site is of interest to the local town council, the town has bought up strips of waterfront, and land adjacent to the form rail line (shown in green). At the corner of Mill and Princess Street, is currently an municipal yard (shown in grey) used for parking and storage. Local residents would benefit from a redevelopment scheme for McArthur Island, but also Mill Street in general.

On McArthur Island, it is clear to see the impact man has had on nature. It fits into category one, a landscape intentionally created through interventions by man¹³. Physical evidence is present all over the site. It takes the form of hackberry trees, stone mills, turbines, railway lines, and the mill runs. Clearly man intended to use this site in an active way, and there is a long history with evidence reflecting these uses.

The desire does exist to conserve these unique landscapes. The issue lies with what to do with them. Similarly to heritage buildings, there is no bigger threat to a heritage site than to lie vacant and unused¹⁴. To redevelop a site such as this, attention had to be given to insure the character defining elements of the site remain intact. The new development should be thought of as

continuing the story presented in the landscape.

Providing new opportunities to discover and appreciate the natural and built environment.

Water, the Nexus to Settlement

The town of Carleton Place, located in Lanark County, province of Ontario, sits prominently along the shores of the Mississippi River. The Mississippi is Carleton Place's most valuable resource, and has been fundamental in the town's settlement, growth, and development. European settlement began here around 1819, through government land grant opportunities encouraging new immigrants to settle in the newly surveyed townships of Upper Canada¹⁵. However, it is

¹³ Nora Mitchell, Mechtilla Rossler, Pierre-Marie Tricaud, 20.

¹⁴ Jean Carroon, Sustainable Preservation: Greening Existing Buildings, (Hoboken: John Wiley & Sons, 2010), 63.

¹⁵ Howard Morton Brown, "Explain How Lanark County was Named", Carleton Place Canadian, November 9, 1961, available online, <http://carletonplacelocalhistory.wordpress.com/>, visited February 2014.

also known that this region supported life for centuries before this¹⁶.

Carleton Place is governed by their own town council. The town underwent municipal incorporation in 1870 to separate themselves from the rest of Beckwith Township. To the south, is Beckwith Township, Drummond to the west, and Mississippi Mills to the North. This region, thirty minutes west of Ottawa is still primarily rural, with small community and medium sized towns dotted throughout. The geography is typical to the greater Ottawa area, flat plains, fertile soil, and dense forest. The presence of the Mississippi River allowed this area to sustain life, and eventually grow into an hub of economic activity.

The Mississippi River is part of a larger waterway passing through eastern Ontario. The system flows from Dalhousie Lake, in the Lanark Highlands to the Ottawa River, and it includes Mississippi Lake and many feeder lakes and creeks. When settlement came to the area, the plots along the river were seen as more valuable and claimed first. The river, being part of a larger waterway stretching from the Lanark Highlands to the Ottawa River was also realized as the most efficient way of transport. Roads had not been constructed in the area, however, portage trails around rapids along the waterway had been for years and well established.

It is documented that First Nations peoples had been present in the area for centuries prior to European settlement. During the years leading up to the waves of immigration throughout the nineteenth century, the Mississippi River was completely in the hands of the

¹⁶ Howard Brown.

Mississaugas, who were a subgroup of the Algonquin Anishinaabe Nation. The name 'Mississaugas' comes from the Anishinaabe word for (those at the) wide mouth river.¹⁷

By the early nineteenth century, European settlements was well established to the south of the Rideau River. At this point, North of the Rideau still remained a traditional hunting and fishing grounds for the Mississaugas.

The Mississaugas were a group of nomadic people. They originated in southern Ontario, north of Lake Ontario, in the area now known as Mississauga, part of Toronto.¹⁸ They travelled the same routes each year, from southern Ontario, to up and along the Ottawa River. As the seasons changed they would follow their

food supply, being sure to store and gather enough to sustain themselves over winter. The Mississippi system was a common travel route since it contained a variety of fresh water conditions. These include deep water depth for fishing, as well as shallow marsh lands ideal for growing rice.¹⁹ It is believed the Mississaugas would harvest large quantities of rice while passing down the River.

The First Nations were also responsible for establishing the portage routes known throughout the Mississippi waterway, making the system easily navigable by water. Where Carleton Place currently stands, used to be a thirty foot rapid, and as a result, a portage around the rapids were cleared. The portage route ran along what is now Mill Street, this stretch of

¹⁷ Lorraine Norrgard, "Ojibwe Waasa-Inaabidaa Documentary Series" We Look In All Directions, 2010.

¹⁸ Anishinabek Nation: Union of Ontario Indians, History, 2008.

¹⁹ Lockhart, Beckwith: Irish and Scottish Identities in a Canadian Community (Carleton Place: 1991) 79.

water and long portage would have been well travelled and easily remembered by members of the band. Often they would plant along portage routes since they knew they would not be able to forget the spot. There was no other way around such a rapid, so they could be ensured to pass by this trail again.

The rapids at what became Carleton Place was a known stopping point on route to the Ottawa River.

Portage routes became known as meeting points, since anyone looking to pass up or down the river at this point would need to pass on shore in order to avoid the rapids. Knowing they would come across this spot again, the Mississaugas planted Hackberry trees along the portage trail. The fruit from these trees was eaten to treat a number of common medical conditions. These included a variety of cases including the common cold, or cramps. It is uncommon that this species (*Celtis Occidentalis*)

would grow north of Lake Erie, it is presumed the Mississaugas people purposefully would have planted in areas of importance to them.²⁰ Carleton Place has the largest population of Hackberry trees in Ontario and it is believed that this collection of trees along Mill Street has been growing continuously for over five thousand years. A mature strand this large of Hackberry Trees makes this site unique not only to the Ottawa area, but to anywhere in Ontario²¹.

As the European population moved into the Carleton Place area, the Mississaugas were forced to remain north of the river. As industry settled in along the river, the Mississippi River was travelled less and less by the Mississaugas. In 1819, all First Nations rights surrounding this land were surrendered in a treaty signed

²⁰ Howard Brown.

²¹ Howard Brown.

by officials and members of the Mississaugas in Kingston, Ontario.

After settlement, the first industry that was established in the area was logging. The bush surrounding the Mississippi, and west towards Lanark was plentiful with large mature Spruce and White Pine.²² Timber was in high demand for the building industry. Not only in Ontario, but also abroad. Logs were cut at these camps and floated along the Mississippi system to the Ottawa River, where they would eventually end up in Ottawa and sold²³. As industry evolved, mills were established to saw the logs into lumber. It was the most efficient way to keep up with demand. In the 1859, the railway came to Carleton Place. With it, it brought an advent of change to local industry. No longer did

producers have to rely on the water or the limited road network to get their products to the larger economic centers²⁴. As immigration to the area had slowed, and industrial and commercial growth was remaining stagnant. Carleton Place pushed to be along the Brockville Ottawa line of the Canadian Pacific Railway in hopes that it would refresh and stimulate the local economy. The railway meant the small town could produce and export their wares easily and more efficiently. With this, many more mills opened along the Mississippi waterway, and they were producing wool, cloth, timber, and flour²⁵. Not only was Carleton Place the largest centre in Lanark County, it became the largest incorporated town in all of the Ottawa Valley.

²² Al Lewis, Ian White, Lena Bobier, Terry Skillen, Jean Purcell, History and Genealogy of the Ottawa Area, 2011, visited October 2013, www.bytown.net/carletonplace.htm

²³ Lockhart, 90.

²⁴ Howard Brown.

²⁵ Lockhart, 92.

By the mid 1870's, Carleton place was seen as a bustling community. The Canadian Pacific Railway had established a large rail yard to service trains between Ottawa, Toronto, and Brockville. Hundreds of rail workers moved with their families to Carleton place²⁶. At this point in time, there were three main employers in town, these included CPR, the Findley's Foundry, and the McArthur Mill which now operated as the Baits and Innis Woolen Mill²⁷. Baits and Innis became well known across Canada through their catalogue sales program. They manufactured high quality wool and flannel products, and specialized in blankets and undergarments.

The layout of residential neighbourhoods were roughly organized around the three employers. The Foundry workers to the north of the river, the rail works in

row housing surrounding the tracks and yard, and the mill employees in single family homes organized in a grid pattern, to the south of the river.²⁸

Towards the end of the nineteenth century the town had essentially everything a larger urban center might have. Commercial activity including shops, hotels, taverns, and photography studios lined Bridge Street. Services were well established, including a grand town hall, Post Office, high school, and hospital.²⁹

The connection between the residents and the water has always remained prevalent. As the twentieth century approached, a new industry in Carleton Place took root. A spike in population was a result of wealthy Ottawa residents buying cottages and summering along

²⁶ Jennifer Irwin, Director, Carleton Place & Beckwith Heritage Museum, interview by author, Carleton Place, Ontario, September 29, 2013

²⁷ Lockhart, 88.

²⁸ Jennifer Irwin.

²⁹ Jennifer Irwin.

the Mississippi. With them, they brought a new use for the water, the desire for sport and recreation.³⁰

As people with money and leisure time began populating the area, new uses for the waterway developed. Sailing yachts and motor boats appeared on the lake in vast numbers. In 1904, the town bought a strip of waterfront property originally considered prime for industry, and decided to establish Carleton Place's first park. The park today still remains drawing many to its beach front. The idea of the river as a means of sport was brought on by the shift in the Carleton Place demographic. This shift lead to the establishment of clubs and societies including The Carleton Place Canoe, beginning operations in 1893, it held its first regatta on the Mississippi at Lake Park.

Similarly to elsewhere in Ontario, the twentieth century brought hardships for small town industry. By the 1960's many of the milling operations in the area were closed, this included Baits and Innis. Mills of this size closed because they could not compete with factories producing quantities at much larger scales. Bates and Innis closed the doors in the mid 1950's, laying off over one hundred employees.

³⁰ Howard Brown.

>1800

Documented as a portage route for the Mississaugas Ojibway First Nation. The Mississippi waterway was a food source and a means of transport to the Ottawa River.

A grove of Hackberry Trees are evidence of the areas Aboriginal connection.

1819

The land was given by the government to the Morphy's, one of Carleton Place's founding families. They kept the land until 1839 when they began selling parts off.

1870-71

McArthur Mill is built by William Willoughby. A well established local Irish stone mason.

1853

John Morphy sold any rights to the land he still possessed to Frances Brookes Jessop for five shillings. Mary Morphy gave up her share of the land for an additional five shillings.

1858

Jessop sells the land to Archibald McArthur

Late 1860's

The mill race was built just prior to the mill.

1884

After a recession during the 1870's, Gillies, Sons & Co. buys the mill. Photo shows the Gillies staff, circa 1889.

1890's

Mill Street became the industrial hub for Carleton Place. Beckwith farmers would make their way here with their yields.

1896

An agreement is made between the local millers, ensuring McArthur's would maintain the same water level behind the dam. In order to ensure water power at the other mills.

1907

After laying idle for three years the town of Carleton Place buys the mill and sells it to the Bates & Innes Co. whom begin making felts, blankets, and other wool items.

1920

Brick extension was added to the original stone mill in order to accommodate more machinery personal.

1940

A steam plant is added to power machinery.

Late
Bates &
the mill's
decades

1800

1830

1860

1890

1920

FIGURE 2: Timeline of McArthur Mill.

A visual timeline representing the historic evolution of McArthur Island, comparing major developments concerning the land, water, and the building itself. The site can be understood as a cultural landscape, a mix of man and natural elements as well as tangible and intangible histories. The site represents the constant evolution the waterfront has faced, as it has been adapted to fulfill the needs of the culture of the time.

Preserving the Values on Site

As part of every cultural landscape, there are both tangible and intangible heritage components. The tangible components are easily identified as the 'built' or physical elements compose the site. Harder to identify, are the intangible, as these can be any portion of heritage not existing in the physical realm. They include traditions, knowledge, language, but also history, function, setting, and place in time³¹. The values based approach states, that a cultural landscape is more than simply a sum of physical parts, and in order to truly preserve a historic site, efforts need to be focussed on preserving values, not exclusively physical elements³².

To preserve a site for the sake of saving it, without preserving any original values, is an inappropriate and

insensitive solution³³. The historic importance lies in the values present on site, whether they be material or intangible. Values on a specific site are always changing and reflect the needs or mindsets of the culture inhabiting that place at that point in time.

“The changeful nature of cultural landscapes present substantial obstacles to preserving them...preservation should be adaptive and continual.”³⁴

Debate has arisen regarding 'tolerance to change'. This phrase was coined by Aaroz, referring to the ability for heritage to grow, adapt and evolve based on the needs of its surrounding context. "Heritage needs to be part of a process which is inherently dynamic by responding to the evolving needs of society at any given

³¹ Julian Smith, Editorial No. 3: On Cultural Landscapes, 2013, www.willowbank.ca, accessed on January 17, 2014, 3.

³² Julian Smith, 3.

³³ Julian Smith, 3.

³⁴ Randall Mason, "Management For Cultural Landscape Preservation," in Cultural Landscapes, ed, Richard Longstreth (Minneapolis: University of Minnesota Press, 2008), 158.

time"³⁵. Changing and adapting heritage to meet the needs of what society needs while respecting the original values of the site is a challenge put forth by Aaroz.

Traditionally, conservation had taken a 'bricks and mortar' approach to preserving a cultural landscape³⁶. Where each element on site would be identified, restored, or adaptively reused, with little consideration of maintaining the original intangible value the element represented. The value of a building does not only lie in its material form, but also in its intangible history. Often the economic pressures of real estate empowers over preserving the unseen aspects of the site, such as historic use or function. however, a designing for an adaptive reuse based on values will look for opportunities

to carry core values into the new project, and present them in a new and relevant way³⁷.

To untimely preserve the values on a site, any interventions done have to address unseen history³⁸. Using this approach, a successful intervention will be based on preserving values, to come with inventive and compatible alternative use that celebrates the place's intangible history.

Determining Values

McArthur Island, as it stands, boosts several elements that allow it to be understood as a cultural landscape. Each physical element represents something intangible, this could be a cultural shift, or a change in use of the site, and all together they combine to make a fabric of natural, unseen and constructed elements. To

³⁵ Gustavo Aaroz, 57.

³⁶ Julian Smith, 3.

³⁷ Julian Smith,3.

³⁸ Gustavo Aaroz, 59.

design based on value is one approach taken to in preserving cultural landscapes. This approach aims to protect the unique aspects that make this site worth protecting, while still acknowledge that the site will need to grow and adapt to continue to offer benefit and purpose to the surrounding community. The redevelopment proposal will look at both the tangible and the intangible elements that make up the site.

The cultural evolution of the cultural landscape can be understood through analyzing key elements on site. Each of these elements represent a relationship between the inhibitors of the island and the Mississippi River, at that specific point in time. They represent the intangible heritage the site holds, and any new inventions on site should be consistent with the values presented in these elements.

Cultural landscapes provide experiences that help us to understand ourselves as individuals, communities and as a country. Their preservation can lead to a better quality of life and an overall sense of identity for the local community. The project aims to redevelop and reinterpret several of the character defining elements, both tangible and intangible that makes up the cultural landscape of McArthur Island.

	First Nations	Early European	Twentieth Century	The future
Interpretation of the Water/ Site	Believed that water provided and sustained all life. It provided their food, means or transport, but most importantly it represented the 'spirit' that flows through every living thing.	Saw the water as a means to an end. To the settlers, any vacant land meant it was theirs for the taking. As settlements grew natural resources were exploited and adapted to better serve their economic needs.	Relatively under used, the mill itself was used to house small commercial ventures, the surrounding area is vacant.	To once again be actively used and engaged with. To allow the community to connect back to this original resource.
Character Defining Elements: Changes made to the Built/ Natural Environment	Established portage routes, planted hackberry trees for medical purposes.	The landscape was changed and the mill race was dug to better utilize the flowing water. The mill was constructed, and expanded as the need to produce more product increased	Minimal adaption to the mill, while the landscape see a general lack on upkeep, returning it to what appears to be a natural green space.	Adaptively reusing the mill and site to allow the community to reconnect with the waterfront.
Evolution	Used the site a place to grow and provide medical treatment along the established portage routes.	Continued to develop the waterfront for more efficient industrial process, until the value of water driven industries became obsolete.	Until use is re-established on the site the evolution of the waterfront is at a standstill.	To give back to community in ways that re-established the value of water in today's culture.
Tangible Histories	-Portage trails -Hackberry trees	-B&O Railway Lines -Mill Race & Turbines -1871 original mill -Surrounding mills	-1927 Brick addition to mill	- To reconnect the community to the waterfront through reinterpreting the past values on site
Intangible Histories	-Spiritual Connection to water -Healing properties within nature	-Water as the catalyst of settlement -Development of local industries	<ul style="list-style-type: none"> - The community is disengaged with the water - The story of the Hackberry trees is being forgotten -The mill is not seen as an 'useful' asset to the community 	

Reinterpreting these elements means presenting their value in a way relevant to today's culture. The project will take a five pronged approach to adaptively reusing this landscape in a way that is sustainable for the community. The project will focus on bring historical, economical, recreational, education, and ecological renewal to downtown Carleton Place. The new program of a community based recreation centre, along with the other mixed use components of the program will bring use back to the site and the water, this 'use' or function is what will reestablish the connection to the water.

Water as A Healer

The Hackberry trees, originally planted over six thousand years ago by members of the Mississaugas First Nation bring both a spiritual and healing function to the site. The way these people connected with the water

was a fundamental part of their culture. They are nomadic peoples by tradition, following the water ways through the region during the warm months meant securing their food supply for the coming winter. These migratory routes would be followed year after year and would ensure one region would never be depleted of its natural ability to sustain life. Water was valued as the provider of all life.

Water was understood as the giver of life, nothing could be sustained without it, this translates into a number of natural healing properties and applications in which water can have a healing effect on people.

"Water is what sustains us. Water is what brings us into this world, and water is what keeps us in this physical world. And so it's our life."³⁹

³⁹ Jan Longboat, Water is Life, quoted in Kim Anderson, Aboriginal Women, Water, and Health (Atlantic Centre of Excellence for Women's Health, October 2010), 7.

The most fundamental water based treatment was the cleanse. It was believed that a person collected dirt and impurities on their body as they walked around in their everyday life⁴⁰. Bathing, or cleansing in 'natural' water could rid the body of these toxins, restoring life to all the bodily systems. The culture had a spiritual connection to the water, they believed 'spirit' was in the water, and as the water passed over your body the 'spirit' would now be part of you. It was through water that the body could be truly purified, ridding oneself of all the things not needed by the body.

Water was known to sustain not only human life, but all life in the universe. Indirectly, water provided everything that life needed. Medicine and natural healing came in many forms, drinking water was the most basic

preventative measure. The Hackberry trees planted along the shore were also sustained by the water. The trees, just like the people absorbed the water, and in turn produced leaves and berries that were used to make teas and salves to treat common ailments.

Hydrotherapy

The story of the healing properties associated with the Hackberry trees and the spiritual connection the culture had to the water needs to be preserved for future generations. Currently, the grove of trees adjacent the island is referred to as Hackberry Park. Consisting of only a plaque, benches and a few picnic tables, the park does little to explain why these trees are being protected. In their current state they provide little value or no benefit for the town. The values based approach to heritage conservation tells us that simply to preserve the trees in

⁴⁰ Kim Anderson, 22.

their physical form is not enough.⁴¹ The intangible history, the connection to the water, is not being told or understood by the community.

The idea of water as a healing element will continue in the new proposal. Instead of healing in a spiritual sense, the water will now physically heal through the process of hydrotherapy.

“Historically, thermal spas are the most authentic spa experience as they are based on the basic definition of spa, *health through water*.”⁴²

This practice is a regular part of many cultures, and is seen as both therapy and leisure. It was also seen as something social, an opposite mindset to our North American traditions. Stress reduction is a primary benefit

of hydrotherapy, as well as improved circulation, joint motion, and organ function.

To provide an opportunity to unwind and relax, is something that could benefit the community immensely. Having a facility such as this accessible to any individual is something the region does not currently have. As part of the experience visitors would also be able to try natural healing products made from native plants including the Hackberry. Plants including lavender, sunflower, mustard seed, and clover ground up to make moisturizers or rubs, or used in food or beverages. In this way, the water, and its healing properties are reinterpreted as hydrotherapy. This allows for the community to connect with the water and to actively engage with the river to foster an understanding how the site was previously used.

⁴¹ Gustavo Araoz, 59.

⁴² Robert Henry, "Spa: The Sensuous Experience" (Malgrave: The Images Published Group, 2008), 18.

Water as a Producer

As the culture on the island shifted, so did the value of the water. By 1820, the First Nations who had travelled through these parts of centuries were being crowded out due to waves of immigration⁴³. When first settlement came to the area, the connection between the users of the site and the water changed. No longer was connection about healing of spirituality, the water was now seen as an economic means to an end.

Although, to some extent, the water still needed to sustain life, the value of the water lied in its power to fuel local industry. The river passing by Carleton Place is fast moving, ideal conditions for milling. It was not long until mills were established on both sides of the river⁴⁴.

In the case of McArthur Island, the natural flow of the river did not present the maximum flow needed to power a mill of that size. In order to better harvest the water, and control the flow, McArthur dug the mill run to force a higher volume of water through a narrow passage, increasing the rate of flow.

At this point in time, Carleton Place as a community was trying to establish itself as a industrial centre. In order to ensure their economic survival, local industry had to produce material in quantity.

The water was harnessed for its power, confined by the narrow mill run, and the turbines. It was also used for cooling machines, mixing dye, and eventually producing steam to further power more equipment. Once the raw wool had been bleached stretched, washed and dyed, all using water, the waste from these processes would be reintroduced to the river. The river was relied

⁴³ Lockhart, 125.

⁴⁴ Lockhart, 124.

upon to take all by products and toxins out of site and mind. The water was valued in terms of its usefulness.

How fast could it flow, how much power could be created, and ultimately how much material could the mill produce.

In keeping with a values based design approach to adaptively reusing McArthur Island, both the values present on site should be readdressed to be made relevant to this community again. The tree and the mill sit as physical reminders of the site's heritage, but what is not evident when looking at these objects is the intangible or unseen history.

Hydroponics

The water meant power to the early settlers, and with power came the ability to produce. The act of 'producing' sustained the community and helped it to grow and evolve, jobs were made in the mill, but the

economic benefits of producing quality wool were far reaching.

If the mill saw success in what it produced, so did the local farmers who were able to get higher dollar for their raw material. It created demand for more trains heading to larger markets such as Ottawa. In turn it allowed the Canadian Pacific Railway to expand its train yards in Carleton Place, creating more jobs.⁴⁵ Since wool is no longer relevant for Carleton Place today, we can shift and begin producing something else via the water.

Growing through hydroponics is an ancient technique. It is believed that many cultures including the Egyptians, the Aztecs, and the ancient Babylonians all practiced hydroponic gardening.⁴⁶ Hydroponics is the science of growing plant life in water rather than in soil.

⁴⁵ Howard Brown.

⁴⁶ James Schmidt, John Gerber, J.W. Courter, J.D. Bulter, Hydroponics as a Hobby, (Chicago: University of Illinois: 1985), 15.

The plants will grow off the phosphorus naturally found in both the collected river and rain water, producing yields of organically grown fruits vegetables, and herbs. The hydroponic gardens will be inside the mill and will allow for production year round. The 400 square foot indoor solarium could see yields of up to seventy heads of lettuce a week, based on similar models and statistics.⁴⁷

The plants are grown in soilless containers and include regular vegetables including leafy greens, root vegetables, and fruits as well as native species used in the spa. Any plant can be grown in this fashion, so the crops could change with the season, or with local demand.

Compared to growing in soil, hydroponic plants grow approximately eighteen times faster, producing

higher yields.⁴⁸ The fruits and vegetables produces, are of higher quality, and more nitrous, this is because no harmful chemical pest or herbicide are used in the process. Further research is discovering that hydroponics is a more sustainable form of farming. Since the water can all be recycled, and no run off is produced, it is better for the environment. Hydroponics uses one tenth the amount of water compared to traditional farming.⁴⁹

The hydroponic system can be understood as a closed ended circuit, where the water will enter through either the constructed wetland or as collected rain water, be purified, then continue inside the mill. The water will be directed to the atrium on the basement, here it will be divided. Some will be pumped through the recreation centre to be used in grey water conditions, such as to

⁴⁷ RTKL Architects, The Looper 2013 SnoLeaf Competition. <http://the-looper.com/about.html>. Accessed on March 13, 2014

⁴⁸ RTKL Architects.

⁴⁹ RTKL Architects.

flush toilets. The rest will continue through the hydroponic loop in the solarium to produce organic, locally grown, fruits and vegetables.

As the gardens are growing, the plants are cleaning the water, which will eventually be returned to the river with lower phosphorus levels. Upwards of 230 000 gallons of water could be purified through the system each year.⁵⁰ Helping to improve water quality while providing for the community.

The crops produced would be consumed or sold on site, or donated to local food banks or farmers markets. Seeds and sampling could also be collected and distributed to community gardens. Having the waterfront once again produce something of value for the

community would foster and promote its value as a useful resource.

"Under this paradigm, the value of a heritage place can rests on a specific traditional use or a habitation pattern that is important or even indispensable to the well-being of a community."⁵¹

In terms of McArthur Island the evolving use of the waterfront is what can be taken as underlining value which connected each period of history back to the site. As the site sits now, unused, the evolution of the landscape has stopped.

To adapt the traditional values present on the site, and reinterpret them in a way that can benefit the community will not only preserve the history of the mill, but present the history as a way that is accessible and engaging.

⁵⁰ based on stats from SnoLeaf 2013, design competition. The Looper. www.the-looper.com/about. accessed on March 10, 2014.

⁵¹ Gustavo Araoz, 59.

FIGURE 3-6: Tangible Heritage Elements.

- 3) Bark from the Hackberry tree, known for its rough texture.
- 4) The McArthur Mill and adjacent mill run.
- 5) A mural advertising oil & grease along Mill Street.
- 6) B&O railway bridge, connecting the site and the town on a regional and national level.

CONNECTING BACK TO THE WATERFRONT

As you proceed right down Mill Street towards McArthur Island, physical evidence of this areas layered history is everywhere. Signs and murals advertising gasoline and oil are still seen, as well as two old mills and the railway bridge. The tangible history is obvious, the intangible history, the relationship each culture had with the water, is what is being lost.

Further down the street is the railway line crossing. The street crosses under the tracks, through the original underpass built in 1859 for the B&O Railway. The railway line now sits quiet, as the tracks were decommissioned six years ago. The story of the sites Aboriginal importance is evident also. A small park has been established around the grove of Hackberry trees along with a plaque describing their significance. Dotted in

between historic old mills and home are new residential infill projects, small park spaces, and several parking lots. Carleton Place's town council has purchased the land known as Hackberry Park, and the strip of waterfront property along Princess Street, directly across from McArthur Mill⁵². It is understood that this waterfront is significant to the historical development of the town, and there is a desire to establish the area as a community asset.

The culture of the area has always been centred along the waterfront. To reconnect to the river will give a deeper sense of community and place. The mill and island at the end of the street are privately owned. The mill in recent years has been rented out to a variety of local groups including an arts and music school, high

⁵² Trish Dyer, "Carleton Place Downtown Developemnt", The Millstone, January 16, 2012.

tech start ups, and real estate offices. Currently the building is underutilized, it could hold the potential of being a significant asset to the community. The island, except for the mill and a few outbuildings is vacant. Since the majority of the island is deemed as a flood plain development on the island is limited.

Within the greater community there is a desire to see this island kept in the public domain⁵³. McArthur Island is a popular place to take walk or to enjoy a warm summer afternoon by the water, several small trails make their way along the shore line, taking you around the twelve acre island. Even with this activity, the relationship between visitors and the water is passive. Unlike how the site was used previously, the water now is not used in

any capacity. If this site remained private, experiencing these things may become more difficult.

It is clear the site needs a new use. No longer is the site a portage route, nor an industrial hub. Carleton Place and surrounding area continues to grow and change, and the waterfront too should change⁵⁴. The mill is underused, and if continues in this way it will end up in a state of disrepair. Ultimately the heritage value the island offers could potentially be lost.

⁵³ Trish Dyer.

⁵⁴ Trish Dyer.

FIGURE 7: The Existing Culture of Re-Purposed Mills.

Many existing mills along the waterway have undergone adaptive reuse and become re-established as part of the community again. According to author Jean Carroon, there is no bigger threat to heritage than to sit vacant and unused.

These projects are excellent examples of adaptive reuse, however they do not address the intangible aspects of the sites.

Along the Mississippi there is a well established culture of repurposing former mills. Currently there is a condo building planned for the site, an issue that has brought much debate to local residents. The proposal calls for the new construction residential building adjacent to the mill as phase one. Phase two would see extensive renovations to the mill itself, turning it into mixed use, retail and light commercial on the ground floor, and residential above.

Not only does the current proposal detract from the heritage aspects of the site, it neglects to understand the site as a cultural landscape. Here, the composition of manmade and natural elements represents the relationship between the inhibitors and the waterfront. The site needs a new program, and in keeping with the onsite values of actively using and engaging the water, the water needs a new function.

The Water Revalued

By restabilising value in the water, visitors and the community at large will be able to reconnect to the waterfront in an active and engaging way. The waterfront will once again become a 'hub' for the community, a place to gather and to interact. The program for the site will include a mixed use design consisting of recreational, residential, and retail components. The hydroponic garden will provide a constant supply of fresh produce to local restaurants and food banks. As well as providing seeds and saplings to local green houses and individuals within the community.

The new facility on McArthur Island will engage with and sustain the community on several levels. Apart from historical, the project aims to improve or establish the economic, ecological, educational, and recreational conditions currently found in Carleton Place.

Historical	The proposal will provide a means to keeping this site accessible to the public, while maintaining historic elements which help define the community's identity. The evolution of the waterfront is an ever changing. Tangible and intangible elements are present of site, and reflect the previous use of the waterfront. To redefine what a waterfront is for the twenty first century is just the next step in the island's story. Changes to the historic site should be embraced and should help connect residents back to this resource they have become detached from. Without change the evolution of the waterfront will end.
Economical	The site would be self supporting, but also community supporting. Instead of the water producing individual wealth for the mill owner, wealth of a more modest means will now be shared within the community. Individuals, local food banks, and community groups would now benefit. Partnerships could form between local retailers and restaurants and the hydroponic garden. As well as between recreation groups, local yoga studios, or health industries for use of the hydrotherapy pools.
Recreational	The project will recreational space as part of the community. This will include programmed space such as a the gym, sauna, and pools, but also unplanned flex space. The flex space is a multipurpose area which could be rented to community groups for different functions such as for performances, group meetings, or fitness classes. The second aspect of the project would be to create a link between the well established recreational trail system already existing within Carleton Place. The Mississippi Walking trail passes by the site, this trail could be expanded to a regional scale by incorporating the former CPR line that runs adjacent to the site.
Educational	The proposal would allow for interaction between the visitor and the water, leading to a better understanding of the value of water, and how it drove community settlement. Although the proposal is not a literal translation of how water has been used, it provides a setting that allows for the visitor to actively engage, interpret, and ultimately experience these values first hand.
Ecological	The project looks to give back to the waterway and the environment, by purifying the water on site. Both the users of the facility and the environment benefit. For years environmental conciseness has fallen to the way side as industry and progress were deemed of greater importance. The project would reinterpret 'process' as a way of giving back to the river, and to the community. The mill would be producing organic fruits and vegetables as supporting community efforts such as food banks.

FIGURE 8: Giving Back to the Community.

The project aims to create relationships and links between existing community groups such as schools, recreational sites, and businesses. To fully reconnect this community to their waterfront means to actively engage them with the processes happening onsite. To find a purpose for the mill that benefits the community in a meaningful way, as well, reflects that the historic values present on site will be embracing the values based approach to heritage conservation as it can be applied to community redevelopment.

FIGURE 9: [RE] Using the Water.

The recreation centre will function as a closed looped circuit where water enters, is purified, used, and returned to the river. The value in the power of water as a producer is reinterpreted, using the same water to power this process, now the mill is producing fresh produce, instead of wool. Providing benefits for the user, the environment and the overall community. The facility would also provide natural swimming pools, in which visitors could experience the benefits of hydrotherapy. Both the hydrotherapy pools and hydroponic gardens would be providing services that the community needs. Bringing purpose back to the waterfront.

Case Study

There are countless examples where waterfronts have been redeveloped, only to have the visitor passively look at the water, not use the water. In particular, I looked for projects that involved using the water again. Perhaps for a different use than what was originally intended for on the site, but a more relevant use that reflected society today.

By falsifying the waterfront with green space, when in fact there is nothing natural about an industrial waterfront, is cutting off all association between the historic evolution and current development. Secondly, I looked for landscape design, that encouraged human intervention. Often there is a need to revert the waterfront back to 'green' space, because that is what is felt to be natural. However, by doing this the history of the site is

glossed over and lost. I looked into landscapes that offered a unique perception of nature versus industry, and celebrated industrial pasts.

Flussbad Project

The Flussbad Project not only improves the quality of life for the residents of Berlin, but will make a positive ecological impact on the city of Berlin, Germany.⁵⁵ This project is truly a redevelopment because of the multi disciplinary approach taken while planning the project. The project has three distinct parts, there is a community, environmental, and historical aspect, which together aims to bring purpose back to an unused waterfront.

The Kupfergraben Canal is a man made channel off of the River Spree. Currently the river water is not of

⁵⁵ Davide, "Berlin Urban Renewal Project", Sustainable Architecture Magazine, 1 (2011): 23.

suitable quality for swimming. The Flussbad Project, by Realities-United aims to create a natural swimming pool in the heart of the city, which not only utilizes an unused portion of the downtown but also gives back to the environment while purifying the water. This project is not just a pool, it will be a place to bring residences and tourists together to participate in swimming, leisure, walking and biking, rejuvenating this part of the city.⁵⁶

The project proposed a 745m long natural swimming pool running passed the historic Museum Island, a UNESCO heritage site⁵⁷. The success of this project lies in its ability to provide community and recreation space in the urban centre that respects the surrounding heritage context. The project consists of the natural pool, lockers, change rooms and pool access

stairs, as well as several engineering elements that ensure the pool water is up to drinking quality standards. The river is divided into three distinct parts. The re-naturalized river, this induces introduces natives plants aback to the shorelines. The filter basin cleanses the water, and finally the swimming pool.

The water in the River Spree is not currently of safe swimming standards. One interesting aspect of this project is that it will give back to the environment by purifying the water not only for swimming but also for the general good of the environment. In order to achieve this, a 390m long marsh will be constructed up river of the swimming area. Here, pipes will bring river water through layers of sand, gravel, and plant material, purifying it to a safe level, then allowing it to flow into the swimming pool. This system has the capacity to clean 0.5 cubic m/second; ensuring fresh water is always flowing to the

⁵⁶ Holcim Foundation, Urban Renewal and Swimming Precinct: Project Summary, October 24, 2012, <http://www.holcimfoundation.org/>, accessed October 29, 2013.

⁵⁷ Holcim Foundation.

pool. An end wier, then regulates the flow of the pool water back into the River Spree. A flood canal is also in place, so that if the River Spree were to flood, polluted water would not overflow the marsh system and contaminate the pool water.⁵⁸

In order to respect the historic context surrounding the canal, all programmatic spaces, such as locker rooms, showers, washrooms ect, are incorporated into existing heritage buildings. This prevents the need to build new in this already dense fabric.

Designing and creating urban space was another important goal of the project. The marsh land acts as a natural wildlife sanctuary in the center of the city, this area also boarders a current park and adds natural green space to the surrounding built context. This eco friendly

recreation facility will bring back use to the area of the city that is currently underutilized. Although this project is not yet completed, experts say it is viable and easy to construct. In 2011, the designers won a Holcim Award, Gold Standing, for the sustainable urban renewal project⁵⁹

Construction is planned for 2018, and once complete, the Flussbad will be the longest recreational swimming pool in the world.⁶⁰ Although the Kupfergraben Canal was never intended for swimming, this new intervention will give people a reason to value their waterway again. This example not only connects the visitor to the natural setting and the water, but also gives back to the environment, again fostering the importance of water, our most valuable resource.

⁵⁸ Realities: Urban, FLUSSBAD: Urban Renewal and Swimming Pool, (Berlin, 2012), 2.

⁵⁹ Holcim Foundation.

⁶⁰ Davide, 24.

The Looper

The Looper, designed for the 2013 SnoLeaf Competition takes the notion that waterways are similar to Brownfield sites, in terms of needing remediation.⁶¹ The Looper is a recycled river barge that would navigate the rivers and inlets of the Puget Sound, and in particular the Snohomish River. The barge would collect water, use it to fuel hydroponic gardens, then release it back into the river in a improved state.

"The Looper challenges the idea of a greenhouse and leverages one very simple concept: the growing of plants inherently cleans an ecosystem."⁶²

A sustainable, net zero, greenhouse would be constructed on the recycled river barge. The barge would mostly run of solar power, but would need to plug in a

specific docking points along the route to repower. The greenhouse design aims to capture both sunlight and rain water.

The barge would be run as a volunteer co-op, where community members would take turns tending to the hydroponic gardens. The river water would pass through the gardens on board, producing fruits, vegetables, and small fish to give back to the communities.

The barge would travel the extent of the river. Cleaning the water, and strengthening community relationships. The project was conceived to be a way to foster community building, while improving environmental state of the river. In theory this concept would be applied on a global scale, where every river could have a barge purifying and producing.

⁶¹ RTKL Architects.

⁶² RTKL Architects.

Design Proposal

When looking at a heritage site we tend to see either natural heritage or cultural heritage. It is rare to see an adaptive reuse project achieve a link between these two. The evolution which has happened over time depicts a shift from valuing the natural, to valuing the industrial qualities of the water and the site in general. This proposal looks to reestablish both these values, creating an experience on the island unique to this site.

The design is focused around the intent to actively, rather than passively engage with the water. By doing so, the visitor to the island will understand the sites long history of using and manipulating the water. The intangible history, referring to the connection between the culture of the time and the water will be reestablished, through reinterpreting the values of healing and producing. The water will once again heal and produce,

but in a way that is relevant for our time period. "It is about preserving a message, not a place or material."⁶³

The building itself is large, 66 000sqft, and structurally in good condition. The structure has evolved as the needs of the user have changed. Three distinct building conditions can be seen as a result . This offered a natural way to break up the program into public and private areas, while maintaining the integrity of the structure. The original building is the 1871 stone mill, this is what will house the recreation centre. It was inside this portion where the water would have been utilized to produce the wool. The 1920's brick addition, with its high ceilings and large windows will become housing units. And thirdly, the stone addition out the front, originally the mill office built in the 1890's, will become the retail space.

⁶³ Gustavo Araoz, 59.

Site Plan Evolution

The design intent for the project is to link the values of the past with a proposal for the future for the Island. Upon analysing site plans it is clear to see how the values on the island have adapted and changed.

Prior to the early 1800's, the island, primarily in the hands of First Nation members saw little material change. To them, the value of the site was based on their relationship to nature and to the water. Figure 20 depicts the physical areas of values for this culture, being the river of greatest value, the Hackberry trees second . Other intangible values are associated with the site, such as season migration, traditions, and narratives. Water sustained all life, and as this site became established as a place of significance, values including healing, medicine, and knowledge became rooted here.

"Aboriginal landscapes cannot be approached as material heritage, but rather in terms of an enduring relationship between culture and place."⁶⁴

Unlike the First Nations inhabitants, tangible evidence from the European settlement still exists. To them, the value was not their relationship with nature, but rather how they could control and utilize nature, and in particular this site. In general, when settlers saw what appeared to be vacant land, they felt the need to stake claim to it. To construct physical elements to portray their ownership over the site. There was little consideration for the fact that these lands were not vacant, but rather inhabited in a non materialistic way.⁶⁵ Figure 22, the proposed site plan aims to bridge this gap between the tangible and intangible, culture and nature.

⁶⁴ Lisa Prosper, "Wherein Lies the Heritage Value? Rethinking the Heritage Value of Cultural Landscapes from an Aboriginal Perspective", (Ottawa: George Wright Forum, 2007), 119.

⁶⁵ Lesley Head, 25.

FIGURES 10: Island Site Model.
Site model depicting current state.

FIGURE 11: Site Plan Prior to 1800.

Prior to 1800, the value of the site is its connection to the water, as a means for transport, travel, hunting and fishing, and spirituality. This relationship with the place does not result in material or built forms, but in the connection, understanding, and respect for nature that prevalent in

FIGURE 12: Site Plan Post 1850.

After the industrialization, the value seen in the site was still its ability to connect with the water. This changed relationship to the site reflects this culture's desire to use both the river and the surrounding land as a means to produce.

FIGURE 13: Proposed Site Plan.

The new relationship between today's culture and the site should reflect both the past values of water being a producer and a healer. The proposal will allow for visitors to experience the island, and understand how the site had previously been used.

FIGURE 14: Main Floor Plan.
Scale 1:800

FIGURE 15: Basement Floor Plan.

The basement is at the same level as the river, and it is here where physical interaction between the visitor and water occurs. The hydrotherapy cycle provides visitors the natural healing benefits of the water. This cycle starts and ends at the atrium, considered the heart of the project. In the atrium, the water too finishes its cycle of hydroponic production and is returned to the river in an improved state.

Scale 1:6800

FIGURE 16: Second/ Third Floor Plan.

Both the second and third floors act as multipurpose rentable space for community groups. This gives the community a meeting place, but also could provide revenue for the facility. The new circulation core would extend to these floors, providing openness and fluidity between the levels. The vertical light well passes through these floors, giving the sensation that you are in the middle, between the collecting of rain water, and the river.

Scale 1:800

The shed behind the mill will be repurposed into a three seasons pavilion, providing onsite storage of outdoor recreation equipment, covered bike parking for visitors, and outdoor market space or for summer events. create a distinct entry into the new centre.

The project will promote connections within the community and foster a culture of walking and cycling in the downtown. A pedestrian bridge will provide safe access to the island, and link the facility to the Mississippi River Walk Trail. Landscaping improvements to the front of the mill will be done using native species of plant life, as well as permeable pavers for all hard surface areas.

“Buildings are unique in their longevity compared to other industrial products. Therefore [existing] building stock must be looked upon as an unexploited asset”⁶⁶

The following chart list the programmatic elements being added to the site, and describes their impact on the tangible and intangible values of the site.

As the visitor moves through the repurposed mill, opportunities to reconnect with the water and the surrounding site will be evident. Upon entering the ground floor of the recreation centre, one will immediately become aware of the old versus the new intervention, as well as the mixing of interior versus exterior spaces. The ground floor will contain the administration area to the right, and a temporary gallery or museum area to the left. Here a mix of historic documents, photographs, or artifacts concerning Carleton Place can be displayed in tandem with contemporary art local artists are currently producing.

⁶⁶ Jean Caroon,

FIGURE 17: Front Courtyard.

The new courtyard introduces visitors to the central concept of healing through natural interventions.

FIGURE 19: Ground Floor Gallery.

The gallery provides multipurpose space that is easily adapted as the needs of the community change. Currently it could be used as a link between contemporary and historic.

	New Program	Consisting of...	Changes Made on the Site	Relationship to Tangible Element	Relationship to Intangible Value
Land:	Establishing Recreational Walking Trails	-trails -Landscaping -Adding inter	-Establishing trails on the island , as well as adding interpretive signage relating to the cultural and natural history of the site	-Allows the island to continue to offer green space in the centre of town. The trails could link to the existing Mississippi River walking trail, and possibly the former railway line.	- Strengthens relationship between community and nature , Conceived here by the First Nations use of the site -The interpretive signage will pass along knowledge of nature - Experience of exploring the island through the trail network will offer a reference for understanding hunting and gathering, portage, and nomadic traditions
	Providing an Outdoor Pavilion	-Recreation space -Outdoor market -Covered bike parking	-Adaptively reusing the existing shed located behind the mill to provide some outdoor space	-The shed is a physical reminder of the site's industrial past	- Forcing a new alternative use upon the specific typology demonstrates the evolution of the waterfront is not over
Building:	Repurposed as a Recreation Centre	- Multipurpose space - Gym - Locker rooms - Gallery/ museum - Administration	-Renovation and addition to the 1871 stone mill	-Providing a new use to engage the community and the building once again. The recreation centre will enforce the idea of the former Baits and Innis mill as an community asset	- A portage trail was a place of meeting , it was where everyone would have to stop in order to pass the rapid, the multipurpose space reinforces this notion of a community 'centre' - Providing space for events, or ceremonies to occur on the site
	Adding Retail Space	-Rentable retail or office space	-Renovation of the 1890's front addition to the	-The front addition was added in the 1890's as an office for the mill. The original safe is still	- The island, and adjacent Mill Street were at one the 'hub' of economic activity . Adding retail

			original mill	located inside	would create a draw for people to return back to the downtown
	Addition of Residential Units	- Units -Lobby -Entrance and parking	-Renovation of the 1920's brick addition to the original mill	-This addition was added to accommodate as the mill grew its production. The units could be sold, and used to fund the community based aspects of the project	- Bringing residential units to this site would provide the people needed to support the recreation and retail components -It would also provide a sense of community on the island
Water:	Hydrotherapy Pools	- Hot, cold, and temperate pools - Steam room and sauna - Multipurpose atrium - Therapy rooms	-Renovations to the basement level of the original mill, and a portion of the waterfront directly behind the mill	-Physically connecting the visitor to the water in an engaging, rather than passive way	-The pools will provide the community the healing benefits found in hydrotherapy. Providing a reference for understanding the traditions of natural medicine, and the healing value of water
	Hydroponic Gardens	- Interior Solarium -Hydroponic beds and cells - Roof deck	-Addition to ground floor of mill	-Providing 'nature' in the downtown, that does not try to artificially naturalize the waterfront. These gardens and wetlands will not exist just for aesthetic purposes, but to provide a service to both the community and to the environment as a whole	-The hydroponic loop will produce and provide for the community. Reestablishing the value in water as a producer

The majority of this floor is to be consumed with the cafe, both the seating area, and also the kitchen, prep, and bar. The menu will change throughout the year, with a focus on locally grown produce, as well as using crops produced through hydroponic gardens. Here visitors are presented with the final product, the fresh produce. If they continue past the cafe, they will experience the process of bringing fresh produce to the table.

Elements including the washrooms and fire stair will remain in their existing locations. New circulation including a elevator and stair will be added to the south west corner of the mill. Here an atrium space will deliver light throughout the floors. The only new addition to the building will be a solarium added to the ground floor, this will act as both an extension to the cafe, but will also be where the hydroponic gardens will be located. Visitors will

be able to make the connection between the food served and the process of making it using water.

As one continues down to the basement level they are further introduced to the cycle of the water. The bottom of the atrium is like the heart of the proposal. Here is where water is collected before being moved throughout the mill for secondary usage, or through the hydroponic tanks. The atrium is also the final step in the cycle, where the water is finely filtered and polished before being returned to the river. The atrium is to be a quiet space, and place for reflection, and relaxation before entering the hydrotherapy cycle. Here one can relax in the lounge, surrounded by the sound of running water.

The basement level contains program elements relating to the hydrotherapy centre, including change rooms, treatment rooms, a gym, steam room and sauna.

Hydrotherapy works through a cycle, which takes the body from extreme hot to cold. Providing benefits including stress and tension relief, increased joint movement, and cardiovascular health.

The second and third floors of the mill will become rentable multipurpose space. Here community groups or local businesses will be able to rent space as needed. Currently the space is open concept, but it could be divided up to accommodate longer term tenants, such as clean water agencies or conservation groups.

Section and Elevation

The major changes to the mill can be seen best through section, this includes incorporating a skylight and light well extending from the roof, down to the basement level. This element will incorporate the addition of a new elevator and stair.

The skylight will function in two ways. It will bring light into the third floor, and the descending light well, and it will also collect rain water. The light well, is a vertical shaft passing through each floor. It is located under the skylight, and will funnel the light down to the lower levels. The light well will also contain the roof drain pipe bringing rain water down to the atrium to be added into the hydroponic cycle.

The light well would be constructed of locally sourced recycled wood, lined on the inside with a reflective coating. The light reaching the lower level will, grow the native plants such as lavender or clover used in therapeutic treatments within the centre. These plants as they grow, will be polishing the water as it completes the hydroponic cycle and is returned to the river through the floor channels in the atrium.

FIGURE 19: Cross Section Through Mill.
Scale 1:600

FIGURE 20: Design Proposal.

The added solarium, allows for an adaptable indoor/ outdoor space to house the hydroponic gardens. The new addition would be clad in wood, brick, and stone, all locally found recyclable materials.

COMPLETING THE CYCLE

The river and rain water will enter a closed circuit where it will be used, filtered, used further, then returned to the river. Through this system an estimated 230 000 gallons of water will be purified and reintroduced⁶⁷, which will have long term benefits to the communities the river serves.

Collect

The water, will be collected through a constructed wetland to the south of the mill. Here water will begin passing through layers of plant matter, sand and gravel. The water passing by the island does not freeze during the winter, this will allow for a constant supply of water year round. Although the river water is not considered

⁶⁷ Based on a comparison from, RTKL Architects, [The Looper Project](#) .

'potable' for consumption, it is considered safe for swimming without any treatment.⁶⁸ Even when the plant matter in the wetland freezes during the winter months the water will still be of high enough quality to be used in the pools. In the winter months, the water will not flow through the layers of the wetland, inside the perforated pipes which extend past the river's edge back out into the open water. The water does not freeze in this portion of the river, and the pipes will continue to collect.

Filter

As the water passes through the constructed wetland, it enters a series of four zones. Each zone has a different depth of water, allowing the ecosystem to support a variety of plant life. The more varied the plant

⁶⁸ Mississippi Valley Conservation Authority, [Watershed Report Card](#), (Carleton Place: 2013), 1.

life is in the wetland, the more successful the system will be as a whole in terms of absorbing pollutants.⁶⁹

The water in the Mississippi river is monitored by the Mississippi Valley Conservation Authority. In 2013, the authority rated the water as being 'good' quality, based on the Ontario provincial water grading standards. The Mississippi waterway is divided into eleven watersheds, each tested yearly for surface water, ground water, and forest condition.⁷⁰

Common pollutants found in the Mississippi are caused by local industry, agriculture, and exhaust from vehicles collected in the river through run off from paved surfaces⁷¹. The watershed in which Carleton Place is located showed higher concentrations of phosphorus, this is due to the higher population found in this area.

⁶⁹ Realities : Urban, 5.

⁷⁰ MVCA, 2.

⁷¹ Stantec Consulting Ltd. Town of Carleton Place Water Treatment Plant Capacity Expansion Mastr Plan, (Ottawa 2011), 11.

Phosphorus is naturally in lakes and rivers, and contributes to a healthy ecosystem.⁷²

In order to offset the phosphorus level, the conservation authority suggests improving or reestablishing shore line planting, plant life can absorb the phosphorus, lowering the overall counting to a natural level. Watershed within urban areas tend to score lower, this may be due to higher amounts of phosphorous reaching the water because of both increased run off in paved urban areas and minimal riparian buffer at the water's edge to filter the nutrients⁷³. The riparian buffer zone is a strip of land along the water's edge. This zone should be kept in a natural state. Native plants and trees form a buffer which stops surface run off containing pollutants from entering the water.

⁷² MVCA, 2.

⁷³ Stantec Consulting Ltd.,11.

FIGURE 21: Plan and Section Through Wetland.

FIGURE 22-24: The River in Winter

22) The water passing the island is fast moving all year round.

23) The water condition during the winter months.

24) The water does not freeze due to the constant motion caused by the rapids. The fact that the water was fast moving and non freezing was crucial in the decision to building the mill in this spot. The mill would have used the water as power year round.

The local conservation authority works with the municipalities and landowners to encourage better land use management practices, promoting shoreline. Their efforts include planting and providing education on the benefits of these actions. With the reintroduction of native species along the shorelines the issue can be resolved before it escalates in the future to a level beyond repair.⁷⁴

The passing of the water through the artificial wetland would assist in the reduction of harmful nutrients in the water. The nutrients having been removed will benefit the environment.

After the water has trickled through the wetland it is heated and pumped into the hot, temperate, and cold pools. The pools will allow the visitors to experience the benefit and therapeutic properties the water has to offer.

Once the water has flowed through the hot, temperate, and cold pools, it will pass through the sauna and steam room, once again being used in different forms. The water will end up at the atrium, on the basement level of the mill. This space can be understood as the heart of the project. From here, the water will be pumped up through the vertical light well and distributed to the above floors, where it can be used for secondary purposes throughout the recreation centre, such as flushing toilets. Rain water will also be collected via the skylight, and funneled down to the basement level through the light well. Once there, it will be added in with the river water.

⁷⁴ MVCA, 2.

Figure 25: Plan of Interior Solarium and Hydroponic Beds.

FIGURE 26: Hydroponic Tank and Cell Detail.

Use

Since the cycle of water will be in constant flow, water will be pooling and collecting in the atrium, waiting to be used again. Some of the water will be pumped throughout the facility to be used in the washroom. Once the water has entered the cycle is not removed, until it is reintroduced to the river.

Hydroponics is the act of growing plant life in a water base, rather than in soil. The plants benefit for the extra nutrients in the water, and through absorption they purify the water. This process can benefit the community not only through bioremediation, but through the practical sense of producing using water. Fresh produce will be produced by the community centre, and sold onsite or distributed to local cafes, farmers markets, or food banks.

To enter the hydroponic gardens the water is pumped from the atrium to the interior solarium, this

space is essentially a greenhouse, that offers an education experience, along with being a remediation tool. The water circulates through the hydroponic beds and cells. The water is in constant motion preventing the water from segmenting. The beds consist of shallow containers of water, no more than 15cm deep. A floating tray gives support to the plants, as their roots hang down in the water. This system is ideal for leafy greens and small vegetables, such as varieties of lettuce, herbs, beans, peppers or fruits such as berries. The trays can be stacked, providing more space, and thus produce more yields.

The hydroponic cells, are deeper tanks designed for plants with larger root masses. These tanks will contain more of a mix of both plant material and fauna (water bugs, snails, and small fish) all of native species. The waste from these organisms is converted naturally to

FIGURE 27: Interior Solarium.

The interior solarium that offers an education experience, along with being a remediation tool. Visitors experience firsthand how the water is actively being used to produce fruits and vegetables.

nitrates and is absorbed by the plants. Depending on the changing quality of the water, additional minerals may need to be added into the beds to promote growth. Once the clean water has made its way through each of the tanks, it flows back to the atrium

Return

The final step of the cycle is to polish the water before returning it to the river. Once the water is back in the atrium it enters the floor channels. This filter will be based in the original mill channels cut into the floor of the mill.

These channels would have originally been for supply water to the internal turbines powering the mill. These channels are literally cut into the basement floor and extend down to the river level. The channels will be repurposed in to tiered wetland. A tray will be attached to

the inside of the channel. The tray will be filled with tiers of pea gravel, acting as a filter. The gravel, sand and plant matter will filter out any impurities in which the water may have collected while cycling through the pools and gardens. The water will always be kept under a 10cm layer of pea gravel, to ensure no contact is made between visitors and the filtering water. This pea gravel layer will also control any stagnant odor.

Plants can grow in an aggregate such as pea gravel and still be considered hydroponic, since the transfer of nutrition is still coming from the water, not the planting material. As the water drops from one tier to the next, it will pass through 10cm of pea gravel, 40cm of sand, with plant matter throughout, then 20cm of coarse gravel before reaching the perforated drainage pipe. Once the water is in the pipe it drains out the side of the mill back into the river.

FIGURE 28: Atrium.

This space can be understood as the heart of the project. From here, the water will be pumped up through the vertical light well and distributed to the above floors, where it can be further used throughout the recreation centre.

FIGURE 29: Section Through Atrium.

FIGURE 30: Seen and Unseen

The site's many elements represent, or are the tangible or intangible histories. The project concludes by making the intangible, tangible. This concept provides unique opportunities to experience some of the intangible values, making the site relevant to Carleton Place today.

Conclusion

The function of the river has been shifting and changing to meet the economic and social needs of the community it serves. At a time when we as a culture, are not actively engaging with the waterfront, we need to re-establish this connection, and discover what the purpose of the waterfront will be going forward.

To challenge the conventional view of heritage conservation and instead look to a values based approach to bring purpose back to the site; the design demonstrates how elements from within the surround cultural landscape can influence not only the design, but the function of the building.

Cultural landscapes are fundamental to our understanding of ourselves, our communities, and our nation. On sites such as McArthur Island, where many traditions occurring here were intangible, there is little or

no physical evidence to preserve. This requires a values based approach to be taken

To decipher the original value behind a physical elements, will bring light to the non physical values present. By using a values based approach, preserving the value behind the object is what is important, not necessarily the physical element itself.

To conserve based on values, means investigating what are the underlying values portrayed on the site, and how these can be presented in a relevant way to today's community. Previously on the site, the water has always been valued. It sustained life and drove industry, but ultimately the common intangible value, spanning through each culture, was the relationship between the culture of the time and the water.

The proposal aims to reinvent to the connection between the island's visitors and the water, by forcing the

buildings users to be actively engaged with the water. Through this engagement, the user will benefit from both the water itself, and what the water is able to produce.

The project will take a five pronged approach to redeveloping the site while creating something sustainable for the community. By addressing the historic, ecological, recreational, economic, and educational possibilities the could project offer the community, it will draw people back to the waterfront in an active way.

The mill and the island are currently static, the evolution of the site has stopped. It is underused, and it is this lack of use that poses the biggest threat to any heritage property. As Araoz writes, to established a traditional use of function of a site is one of the most effective ways to revitalize through the values based

approach.⁷⁵ Conservation as a whole has to be able to except change. A cultural landscape is constantly changing and the conservation approach taken should not limit growth or change, as that would stop the natural evolution of the site.

This is not your typical bricks and mortar conservation. Instead of simply preserving the collection of Hackberry trees on site, this proposal calls for a more active engagement, leading to the visitor to have a more in depth understanding of why these trees were plants, and what value do they offer. The hydrotherapy pools will provide visitors with an opportunity to experience the healing and wellness powers of water, in a way that is relevant for the twenty-first century.

⁷⁵ Gustavo Araoz, 57.

Same can be said for the mill itself. Yes the mill, mill race, and turbines are all there for visitors to see, but this alone does not fully explain the industrial value of water. To have the visitors experience the cycle of water working throughout the mill will give them a clearer understanding of the power of water and why communities settled around this resource.

After seeing the mill, eating in the cafe or visiting the market, visitors will make the connection between the mill as a site for production, and the final product, the fresh produce. One of the original functions of the river was a food source. Both for the Mississaugas and the European settlers, this concept becomes revived in this modern day model. The community will benefit not only from the environmental regeneration that will occur as a result, but the gardens will offer support to local food banks and businesses.

"any landscape is composed not only of what lies before our eyes... but what lies within our heads."⁷⁶

By preserving the intangible, allows for the tangible to hold more meaning. Reconnecting the waterfront not only with its heritage but to the greater community. 'Healing', an intangible value derived from one of the original occupations of the site, becomes the reason behind not only the design interventions, but the proposed program. The proposal would aim to heal the land, building, and water, but also the mind and spirit. Through the reinterpretation of existing values, the site can be reconnected to the community, allowing visitors the opportunity to experience the intangible.

⁷⁶ Susan Buggy, 15.

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