**Abandoned Cultural Heritage and Identity:
The Rehabilitation of the Prince of Wales Bridge**

by

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Abstract

Abandonment is a complicated issue. There are spaces inside the city which are ignored by the society and collectively marginalized. This fate can befall many buildings, from the very old to the newly built to the unfinished. Abandoned heritage is a conflicted term. How can heritage, which implies having a recognized value in it, be abandoned? In this thesis, this term attempts to represent the potential these historic places have. Indeed there are many sites that have stood the test of time but that are left out of the collective memory. Often, after these places are forgotten and abandoned, they are claimed by people who have interest in them and they are developed in a top-down interpretation through which their flexibility as places full of opportunity is lost. They are fixed into an idea, their history is translated according to privately developed requirements. However, abandoned heritage sites are important for collective identity. They are spaces which represent a clean slate for creative fulfillment of current needs, while at the same time

provide a link of continuity with the past. Looked from this point of view this thesis asks: Could these places be redeveloped in a way that will provoke public interest and provide a platform for public opinion? Could they become a bottom-up structure of interpretation in which the redefinition happens in a gradual way that is rooted in disclosing identities and opinions? How can these anti-sites surface again on the city map? Is there a way they can become a full participant in the urban life and to be welcomed back into the personal and collective memory of the city dwellers? Could they be seen instead in a positive light as an opportunity to create social capital and sense of place?

The site chosen for the thesis is the Prince of Wales Bridge in Ottawa, built in 1881. The bridge has been abandoned for a couple of years now even though it serves such an important connection between Ottawa and Gatineau. The aim would be to look for ways to bring life to the bridge while at the same time preserving its significance and character, providing a minimal approach intervention that is adaptable and removable, creating interest in the structure which will ultimately help towards its preservation and its rehabilitation.

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Introduction

In the Introduction, the nature of abandonment and heritage is explored and the design proposal is introduced.

In Part 1, the link between heritage, sense of place and identity is explored, and through those the nature of city-making and public spaces in terms of historic sites.

In Part 2, a comparison is made between two contemporary Canadian examples- the Toronto Evergreen Brickworks and the proposed Zibi development in Ottawa.

Part 4 is dedicated to presenting all the compiled information related to the site of the design proposal. This includes the location, setting, the history of the site and the city, the present state and uses, and future developments in the area.

Part 5 explains the design proposal. Principles and guidelines of the proposal are developed based on a completed Nara grid, condition assessment and a statement of significance. The idea of temporary urbanism is explored in more detail.

Abandonment

On the scale of individual properties, abandonment is an issue of maintenance as well, especially when it comes to historic buildings that require more constant and specialized repair. David Leatherbarrow explains that the rule of thumb of abandonment is such: “if repairs will cost half of the value of the building, don’t bother. This is the point at which owners either demolish the place (...) or they let it stand empty.”¹

Abandonment happens everywhere- in many cities around the world, places are empty and declining. There are many reasons why a building may find itself to be without any users or owners. Abandonment has its roots in a number of issues, mainly a combination of social, economic or environmental factors. Some famous large scale examples include New Orleans after hurricane Katrina and Detroit after deindustrialization of the automobile manufacturing, both being heavily affected by social issues as well.

In the case of industrial buildings, abandonment is related to the outdated production methods that used to happen inside them. Across the US, industrial decline and suburban development have led to the ‘hollowing-out’ of the inner-city areas, leaving large amount of vacant spaces.² With the introduction of new technology and processes, the old ones become ineffective or uneconomic.³ Electronics have replaced mechanization, oil and nuclear power have replaced coal and wood, jobs moved far from the hands of owners, resulting in deterioration of once vibrant production areas.⁴ As opposed to the age of handcraft that built with organic materials, industry built in steel and concrete, and it often was large structures, that have been left to the following generations as a memory of the

past.⁵

Recently a renewed interest in the industrial aesthetic has emerged. They are a cultural heritage sites that are interesting and successful projects are done to revitalize them. The Highline, the Brickworks in Toronto, the Distillery District and others are just some examples of the more famous rehabilitation projects. Today, it is no longer the production inside them that draws people to them, but the industrial buildings themselves.

Abandoned places often bring up negative connotations in the mind of the city dweller. They can be seen as

places that are an eyesore and even as dangerous places that are falling apart and providing a setting for unwanted activity. However, they are also places of great potential. Being abandoned not only from people but also being absent in the collective memory, they are in fact places full of surprises. They effectively belong to no one and at the same time to everyone. Often located in central areas, they could provide a creative fulfillment of current neighborhood needs. They provide a shell, a setting, and in the case of historic structures- a connection with the past, and their potential for creative place-making should be made known to everyone.

Design Proposal

Recent heritage perspectives parallel trends in urbanism that deal with temporality and accept change as an issue to manage, not rejecting it as a negative. By linking these two concepts: “abandoned heritage” and “temporary urbanism”, an attempt is made to look at the bigger picture of how to revitalize abandoned spaces. The reason for focusing on abandoned sites, is that they are infact places of great opportunity, where there is a great potential to be explored and for meaningful architectural interventions to happen. “Temporary urbanism” relies on the communities

around it to sustain it and to participate in it, in fact a community involvement is what makes it relevant and what makes it a “bottom-up” structure. Abandoned heritage, on the other hand is exactly the opposite- it is lacking a community. The thesis will attempt to create interest in the public by building on cultural heritage’s inherent capacity for social capital and identity creation through an enhanced sense of space. The architectural intervention will aim to bring people to the site and to create a public that will in a way adopt the abandoned place and create a sense of ownership or connection to it. By using temporary architectural interventions, the intention is to bring the heritage site into the life of the city again and to create interest around it, so that there will be a more public decision about its preservation and its rehabilitation.

*Figure 1:
Bridge Design Proposal Collage*

Figure 2,3:
Bridge Design Proposal Collage

Works Cited:

Introduction

1. Brand, Stewart. *How Buildings Learn* (New York, NY: Viking, 1994), 112
2. Bishop and Williams. *The Temporary City* (New York: Routledge, 2012), 24
3. Treib, Marc. "Remembering Ruins, Ruins Remembering". In *Spatial Recall*, ed. Marc Treib (New York: Routledge, 2009), 202
4. Ibid
5. Ibid

Part I: Cultural Heritage and Identity

Cultural Heritage

The Council of Europe in the Faro Convention of 2005 defines cultural heritage as “a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time.”¹ The treaty also states that cultural heritage has the potential to be used as a resource for ‘sustainable development and quality of life in a constantly evolving society’ and that “everyone, alone or collectively, has the right to benefit from the cultural heritage and to contribute towards its enrichment.”² Cultural heritage is a key ingredient in the improvement of quality of life and it is beneficial not just for small groups of privileged individuals but for the whole of society.

Social Capital through Sense of Place

Cultural Heritage Counts for Europe is a report that researches a very wide range of studies in Europe done to assess the impact of cultural heritage. The report states that there is a “general tendency towards a more integrated and holistic approach of immovable heritage.”³ CHCfE bases their values on four pillars- the economic, social, cultural and environmental, and while the economic studies still predominate, the number of social and cultural impact studies have increased in the last 20 years.⁴ The societal function of cultural heritage is what

has been emphasized from the 1990s onwards, as opposed to the economic dimension which has been the main focus of studies in the 1980s.⁵ Nevertheless, the fundamental theme of the report is sustainable development, and how the long term impacts of heritage can be determined based on qualitative and quantitative studies of economic, social, cultural and environmental aspects.

The CHCfE report states that there are many beneficial social aspects of the existence of cultural heritage. It outlines how there are long term and qualitative aspects of cultural heritage, which cannot be measured in economic terms that are equally important as economic reasons and provide a ground for their conservation. One of these is the connection between the historic built environment and social capital. That connection occurs through what architects refer to as *genius loci*, or sense of place.⁶ An enhanced sense of place, through the presence of historic buildings, will provide a context in which people can create meaningful and strong interactions.⁷ An increased social capital on the other hand is a desirable condition in a city- it has beneficial outcomes by creating strengthened communities.⁸

Figure 4: Holistic approach to sustainable heritage development

Thus cultural heritage is an important factor in city-making by building social capital- it acts as a community hub and provides opportunities for bonding and bridging between all kinds of groups of people- new and old time residents, young and old, different ethnic and religious groups.⁹ It provides a platform where people can interact and have a meaningful experience together as a group. This is one of the 10 key findings of the CHCfE report- cultural heritage builds social capital and also social cohesion in communities across Europe; as well it provides a framework for participation and engagement, and fosters integration.¹⁰ This is the potential that abandoned cultural heritage sites have- from empty and uninhabited they can become a vital city-making places that can bring social cohesion and neighborhood improvement through increased strengthened connections and an enhanced sense of place.

How does cultural heritage create social capital though? One of the first studies to show a solid connection between historic environment and social capital is done by a research team working for English Heritage. They have shown a more robust link between the two by conducting large scale surveying and modelling of their

results. They set out to prove that people in more historic built environments have a stronger sense of place (which they define as identification with an area) and that people in more historic built environment have higher levels of social capital.¹¹ The research was done on a large group of both teenagers and adults, through phone interviews and questionnaires and while the results were weaker for teenagers they were still able to show a positive link between the above mentioned concepts. Their final results showed that sense of place was directly influenced by historic built environment, while social capital was indirectly influenced through sense of place.¹² They concluded that the relationship between historic built environment and sense of place is not only about living in a more historic area but it is also as much about people being interested in their built environment.¹³

The concept of social capital is directly connected to the concept of resilience, the quality of being able to adapt to external and internal shocks using local resources.¹⁴ Resilient cities is mostly a term relating to flexibility, inclusivity, integration, reflection, resourcefulness and redundancy.¹⁵ In fact part of UNESCO's Sustainable

Goals initiative is to make cities inclusive and resilient and to strengthen efforts to protect and safeguard the world's cultural and natural heritage.

¹⁶ The term can be applied as well to large and small communities that try to tackle the issue of abandonment where all of these terms are of great importance. In fact resilience in the face of abandonment is how it should be tackled, where instead of permanent solutions more fluid and flexible short term inclusive activities build social capital which according to Lazzaretti is a contributor to economic stability.

¹⁷ She says that culture is no longer a “flywheel for economic development” but instead it is recognized in industrialized and developing countries as a driver of economic development.

¹⁸ A new phase characterized by the “societal function of cultural heritage” is recognized, where the primacy of social aspects over economic aspects in cultural policies is explicitly being acknowledged. ¹⁹ “Arts and culture have the power to connect people and become a strategic tool for safeguarding of the identity and authenticity of places and local communities” ²⁰

to social and cultural aspects as well.

Research done by Bradley et al, among others, has shown that there is a connection between sense of place, social capital and historic built environment. Moreover, resilience in the face of abandonment could be a great opportunity for the creation of social capital and its benefits would be driving economic development, strengthening communities and connecting people.

The impact of cultural heritage is not just economic but it extends

Heritage Interpretation

As historic artifacts age more and more, their original use and function is lost to the contemporary viewer. Heritage interpretation, telling the story in a compelling and educational way, is needed when the meaning behind the object is completely lost. Heritage interpretation is the tour guide, the museum exhibition, the various media in use and it is often related to the tourism industry. While it is needed, the interpretation is usually a one-way direction of information sharing, the range of the information and the way it is transmitted carefully selected by an expert

source which is meant to be accepted by the public as authoritative.¹¹ Silberman in his essay "Heritage interpretation as a public discourse" makes an interesting suggestion: instead of a one way monologue, interpretation can have a wider societal function as a "deeper reflection on the rights and proper role of the non-expert public in shaping an ever evolving vision of the past."¹² Ashworth makes the case that heritage is a social construct- it is defined by society which is choosing what to preserve and what to discard based on the demands of the present.¹³ The history of the heritage site will only be understood through the lens of today, which is constantly changing, and in the same way interpretation of the heritage is a dynamic concept.

The alternative suggested is that of "public interpretation": an activity where all understandings are encouraged to be openly expressed, each enriching all the others with unexpected insights about the significance and value of heritage.¹⁴ The place of heritage interpretation is close to other important social debates, because if cultural heritage is indeed "unique and irreplaceable property" of great importance 'for all the peoples of the world'¹⁵ then it should be the subject of informed debate and reflection in the public sphere.¹⁶ In this new

paradigm of interpretation as a shared and ongoing public activity, many voices could be heard.¹⁷ The informed and inclusive collaboration of the public will ensure that there is a connection of all members of a community to both the past and the future, and that the expression of the evolving collective identity will be facilitated by professionals and non-professionals alike.¹⁸ In these terms, it becomes a part of civic engagement.¹⁹ It becomes the responsibility of everyone to be involved in the heritage discourse.

Applied to the revitalization of abandoned sites, this type of heritage interpretation represents a more plu-

ral approach that takes into account the opinions and understandings of whoever wants to share them. Instead of creating a fixed interpretation of the site developed by few people, this new paradigm gives way for a more comprehensive and gradual reintroduction of the abandoned site into the life of the city.

Cultural Heritage and Identity

MEMORY, CONTINUITY and THE COMMON WORLD:

Pallasmaa in his essay "Space, Place, Memory and Imagination" says: "One who cannot remember can hardly imagine because memory is the soil of imagination. Memory is also the ground of self-identity, we are what we remember".²⁰ By taking this position, the relevance of memory applies not only to the past but to the future as well. The way the past is perceived gives the framework for how to look forward to the future and it also gives an important base

for the structuring of an identity, our future self-definitions are rooted in our experiences of our past.

Memory is important in self-identification, not only at the scale of the individual but as a group of people as well. Collective groups, and even nations, share experiences of the physical world resulting in memories that "constitute their collective identities and sense of togetherness."²¹ Memories are thought of as internal mental processes that happen in the private world of an individual, but at the same time they are externalized in the objects around us.²² The significance of familiar or peculiar objects, that have more of a social meaning rather than strictly utilitarian one, in the process of remembering is why people like to collect them, because they not only reinforce the memories but also reinforce the sense of self.²³ In this sense, it is quite accurate that the poet Wallace Stevens says "I am what is around me" and, even more appropriately in the built world, Noel Arnaud states "I am the space, where I am."²⁴ From here it is easy to make the connection to the city spaces and in the case of this thesis, heritage sites, which are the physical objects that externalize the memories made by the city dwellers. Heritage sites are important because as

they are the physical representations of memory; they are a “factor in constructing a collective identity.”²⁵ As Arendt says, that is where people retrieve their sameness and identity “by being related to the same chair and the same table.”²⁶

The collective understanding of the past brings about an abstracted memory of history, which is overlaid with personal recollection. As Jorge Otelo-Pairos recalls in “Mnemonic Value and Historic Preservation”, his visit to the Lincoln Memorial in Washington, D.C. as a child was of remembrance to him not because of the interesting history interpretation, but rather because of his uncle’s bee striped tank top which stood out against the whiteness

*Figure 5:
Landschaftspark Duisburg-Nord:
Climbing Garden*

*Figure 6:
Landschaftspark Duisburg-Nord:
Bike Paths*

of the marble building.²⁷ Even more so at sites such as the Landschaftspark Duisburg-Nord which are adaptively re-used the visitor experiences the site in a way which is dramatically different than back when the industrial site was used for the purpose it was created- a steel production facility and a workplace.²⁸ Today even if the visitor has an awareness of the original function of the structures, his experience and memory creation is not the same. To the modern visitor, the site is a park, the meaning of it is accrued in a far different way than it did for a worker who has put so much personal effort, time and engagement.²⁹ Surely, the intensity and the kind of experience is not the same. As the structures drift further into the

*Figure 7:
Landschaftspark Duisburg-Nord:
Abandoned Ironworks Facilities*

past, the visitor today will no doubt require an extra layer of interpretation of the history, and even then the memory reconstruction will never be the same as it would have been of a person going to work everyday from morning to evening, or the reality of “the lives lost and bodies maimed, and the mountains of pollutants (...) injected into the soil and the atmosphere.”³⁰ If this is the case with all historic structures that have changed their original function, then that brings up a question of the realistic memory identification related to any historic place. When the actual reality of the history will never be truly revealed to following generations, then how is it that one can claim to align him or herself with a group of people in the

past when they haven’t shared the same memories? The answer to this important question of self-identification may lie in a feeling of continuity of history, and while they haven’t directly shared the same experiences of the same site in the same moment of time, there is still a sense of a collective identity and that identity is not only continued but redefined with every generation by experiencing the built environment. Even when the place is abandoned it hasn’t broken apart from this continuity, as it still maintains a connection to the past.

According to Ashworth who is interpreting Lowenthal’s “The past is a foreign country”, heritage sites’ sense of antiquity conveys the status of an-

*Figure 8:
Landschaftspark Duisburg-Nord:
Rehabilitated structure: Light installation*

Figure 9: Warsaw in 1944. 85% of the capital city was destroyed during the Nazi occupation. ³¹

tedence and also underpins the idea of continuity. ³³ If there was something that existed before that means that society has progressed, the now is product of that before. Secondly, Ashworth states that urban artifacts acquire cultural status because “they fulfil the need to connect the present to the past in an unbroken trajectory”. ³⁴ The past provides a sequence, allowing us to “locate our lives in linear narratives that connect past, present and future.” ³⁵ While it gives a sense of familiarity, enrichment and sometime escape, it is more

Figure 10: Warsaw after the reconstruction. The rebuilding of the city was the initiative of the inhabitants and the support of the whole nation. It is a manifestation of the will to ensure the survival of Polish culture. ³²

importantly, a source of validation and legitimation. ³⁶

IDENTITY and BUILT WORLD:

Identity could be a broad research topic, however in the theme of this thesis, identity is limited to its collective, social aspect and its relation to the built world. More specifically the way we construct the built world, the shared social space defines our collec-

tive identity and vice versa- our identity further on shapes our built world, moving in a never- ending circle. According to Arendt, "whatever touches or enters into a sustained relationship with human life immediately assumes the character of a condition of human existence." ³⁷ The way the common built world is shaped is crucial to the way the inhabitants of a city identify themselves.

In such a definition, identity cannot be a fixed set of characteristics specific to a group of people, but it is also a social construct that is also used to relate to other people and other groups. ³⁸ Thus identity is very connected to the sense of the other. It is relational, as it needs another person or group to determine similarity or distinctness, identifying with or against someone. ³⁹ This is illuminated by the pluralities existing in a city and especially a multicultural city of the contemporary world, each culture identifying with certain objects or traditions. Culture, being embodied in the material and the social world, is one of the principal means by which "identities are constructed, sustained and transformed." ⁴⁰ The social and common places in the city are the areas where the transformation of identity happens because these are the places

where many cultures, identities and opinions come together. Thus the way we experience these shared places is the way our future identities as a group of people will be defined. This brings up an important question that is fundamental to the development of this thesis: How can we take accountability of the circle of identity so that the identities we construct are done so by as public and as plural means as possible?

RE-IDENTIFICATION:

The common world that we share with other people is important as the place where different pluralities come together. What contrasts that is an abandoned place which is completely empty of inhabitants that will project their identity towards it. That is why this thesis argues that the revitalizing of abandoned places plays an important role in identity formation. These places are at one moment completely empty, dead not only in their absence of inhabitation but also in their absence in collective memory, and in the next they are made alive again, a full participant in the city life once more. That is why when put into this larger context of people and time, the way these places are reintroduced into the public understanding

is crucial. What kind of identity shaping is happening when interpreting abandoned heritage? Is accepting an already defined idea predetermined by economic forces a legitimate source of identity creation? Instead can heritage rehabilitation be a public discourse? Could it be used to improve neighborhoods, create social capital and strengthen communities? While until now the perspective of heritage studies was focused on the object, recently the focus is instead on humans and their environment. The ability of heritage to relate to the social and cultural realms, to the performances and practices that help people to create and protect a sense of identity, is just as important to be realized.⁴¹

To illustrate these ideas more

clearly, a comparison is made between two case studies which have very different approaches. What they have similar between them is that they are both industrial remains set along a beautiful landscape, which constitutes the main attraction to these places. They achieve the rehabilitation through a sustainable aspect of the new program and through the introduction of a population. The Zibi development on the Chaudiere Islands in Ottawa is an example of top-to-bottom approach that creates a marketable identity that could be purchased. The Evergreen Brick Works contrasts that by allowing the site to slowly and gradually be changed through a more bottom-up approach of self-disclosure and redefinition by community participation through time.

Figure 11: Identity Creation

Works Cited: Part I

- 1.** “Framework Convention on the Value of Cultural Heritage for Society.” Faro: Council of Europe. 2005. http://www.coe.int/t/dg4/cultureheritage/heritage/Identities/default_en.asp
- 2.** Ibid
- 3.** “Cultural Heritage Counts for Europe”. CHCfE Consortium. 2015, 93 www.encatc.org/culturalheritagecountsforeurope
- 4.** Ibid, 14
- 5.** Ibid, 97
- 6.** Ibid, 29
- 7.** Ibid, 29
- 8.** Ibid, 152
- 9.** Ibid, 29
- 10.** Ibid, 29
- 11.** Bradley, D., Bradley, J., Coombes, M. and Tranos, E. “Sense of Place and Social Capital and the Historic Built Environment” (Report of Research for English Heritage, 2009), 4
- 12.** Ibid, 49
- 13.** Ibid, 50
- 14.** Luciana Lazzaretti. “The resurge of the ‘societal function of cultural heritage’. An Introduction”. *City, Culture and Society*. 3, no. 4, (2012): 229, accessed August 2016. <http://www.sciencedirect.com/science/article/pii/S1877916612000781>
- 15.** “City Resilience Framework”. ARUP and the Rockefeller Foundation. Accessed July 2016. <https://www.rockefellerfoundation.org/app/uploads/City-Resilience-Framework1.pdf>
- 16.** “Goal 11: Make cities inclusive, safe, resilient and sustainable”. United Nations Sustainable Development Goals. Accessed July 2016. <http://www.un.org/sustainabledevelopment/cities/>
- 17.** Luciana Lazzaretti. “The resurge of the ‘societal function of cultural heritage’. An Introduction”. *City, Culture and Society*. 3, no. 4, (2012): 230, accessed August 2016. <http://www.sciencedirect.com/science/article/pii/S1877916612000781>
- 18.** Ibid, 229

- 19.** Ibid, 230
- 20.** Ibid, 230
- 21.** Silberman, Neil. "Heritage Interpretation as a Public Discourse: Towards a New Paradigm". In *Understanding Heritage: Perspectives in Heritage Studies*. (Berlin/Boston: Walter de Gruyter, 2013), 24
- 22.** Ibid, 23
- 23.** Ashworth, G.J, and Brian Graham, *Introduction to Senses of Place: Senses of Time*. (Burlington, USA: Ashgate Publishing Company, 2005), 4
- 24.** Silberman, Neil. "Heritage Interpretation as a Public Discourse: Towards a New Paradigm". In *Understanding Heritage: Perspectives in Heritage Studies*. (Berlin/Boston: Walter de Gruyter, 2013), 25
- 25.** Ibid, 25
- 26.** Ibid, 25
- 27.** Ibid, 30
- 28.** Ibid, 30
- 29.** Ibid, 30
- 30.** Pallasmaa, Juhani. "Space, Place, Memory and Imagination: The Temporal Dimensions Of Existential Space". In *Spatial Recall* (New York: Routledge, 2009), 17
- 31.** Ibid, 26
- 32.** Ibid, 25
- 33.** Ibid, 25
- 34.** Ibid, 25
- 35.** "Cultural Heritage Counts for Europe". CHCfE Consortium. 2015, 152
- 36.** Arendt, Hannah. *The Human Condition*. (Chicago: University of Chicago Press, 1998), 137
- 37.** Otero-Pairos, Jorge. "Mnemonic Value and Historic Preservation" In *Spatial Recall* (New York: Routledge, 2009), 249
- 38.** Treib, Marc. "Remembering Ruins, Ruins Remembering". In *Spatial Recall* (New York: Routledge, 2009), 212
- 39.** Ibid, 212
- 40.** Ibid, 215
- 41.** "Historic Centre of Warsaw". UNESCO World Heritage List. Accessed June 2016. <http://whc.unesco.org/en/list/30>
- 42.** Ibid
- 43.** Ashworth, G.J, and Brian Graham, *Introduction to Senses of Place: Senses of Time*. (Burlington, USA: Ashgate Publishing Company, 2005), 9
- 44.** Ibid, 9

- 45.** Ibid, 9
- 46.** Ibid, 9
- 47.** Arendt, Hannah. *The Human Condition*. (Chicago: University of Chicago Press, 1998), 9.
- 48.** Van Dam, K.I.M. "A place Called Nunavut: Building on Inuit Past". In *Senses of Place: Senses of Time* (Burlington, USA: Ashgate Publishing Company, 2005), 107
- 49.** Ibid, 107
- 50.** Ibid, 108
- 51.** Albert, Marie-Theres, *Introduction to Understanding Heritage: Perspectives in Heritage Studies* (Berlin/Boston: Walter de Gruyter, 2013), 8

Part 2: Case Studies

Case Study I: Zibi

The examples in the following pages will provide an illustration how some revitalization of abandoned places applies to the mentioned concepts in the previous chapter of cultural heritage and social capital, heritage interpretation and collective identity. Pendelburry in his paper “Cultural Heritage a Force for Social Inclusion” makes a distinction between two ways through which cultural built heritage can contribute to social inclusion, which he defines as the opposite of social exclusion (improving neighborhoods, cultural problems, tackling issues of discrimination).¹ The

first one is by focusing on the cultural built heritage as a historic place and the second one is cultural built heritage used as an opportunity space where regeneration might happen.² The latter is the case of the Zibi proposal in Ottawa’s Chaudiere Falls. The Zibi project represents a top-to-bottom approach of revitalization and heritage interpretation by creating a marketable product, “a world-class sustainable community and redevelopment.”³ It is one of a kind place in Ottawa where one can “live an exceptionally unique and balanced lifestyle combining the best of urbanity and healthy living principles with a vibrant waterfront.”⁴ Part of the project’s intention is to build new zero-waste sustainable residential, commercial and office building, along with the rehabilitation and adaptive reuse of the derelict industrial heritage.

The Chaudiere Falls and Chaudiere Islands, where the proposal is located, has a very long and important history for Ottawa and Canada. The Algonquin Ashinabe tribes are the first ones to inhabit the area, dating back for 10,000 years.⁵ The falls were important for their religion as a place to worship and have ceremonies.⁶ Thousands of years later, in the early 1800s, the area was also the first European settlement

Figure 12:
Offering tobacco near the Falls

in Ottawa and surroundings, started by Philemon Wright, who founded the city of Gatineau.⁷ A few decades later with the construction of the Rideau Canal, the town grew more and gathered French and English speaking workers at the lumber and paper mills.⁸ What is on the Chaudiere site today are the remains of the industrial past of the area, empty of inhabitants. Some of the buildings are designated while others are not, slowly falling apart, and the area as a whole is not designated as a heritage site. The location of the site is very important, since it is located on the Ottawa River between the Province of Ontario and the Province of Quebec. Together with its history, its importance to the collective identity to many groups

is undeniable, even if they are no longer present on the islands.

Heritage structures and places are an essential part of navigating self-identification and that is why the connection to so many different groups is what makes the Chaudiere Islands site so important. It is almost a microcosm of the Canadian nation building, representing French, English and Aboriginal points of view. Instead of a “melting pot”, like the American perspective, the Canadian narrative of multiculturalism is understood more as a “salad bowl”, which means a mosaic of multiple cultural identities co-existing and being unified by the fact that they are all different.⁹ This makes for an interesting

Figure 13:
Chaudiere Falls with buildings in 1823

process when it comes to identity definition. Heritage, by its very definition and original meaning of an inheritance, implies that there is also the existence of disinheritance.¹⁰ By definition what is heritage for some could not be considered heritage for others, or even the same heritage could be contested and be claimed by more than one group of people in a different way.¹¹ The concept of disinheritance is closely related to Arendt's definition of plurality, the condition of reality of all humans when they are existing together and have simultaneous, innumerable perspectives of the common world, "for which no common measurement or denominator can ever be devised."¹² According to her, we are

all equal but distinct, because while "we are all the same, that is, human, (...) nobody is ever the same as anyone who ever lived, lives or will live."¹³ However, plurality is a needed condition, it is a requirement for actualizing human freedom. For one to speak and act, he needs to do that in the presence of an audience with different point of views which makes it a meaningful activity.¹⁴ By making his or her opinions and actions known to others, by facing another differing opinion and by reflecting, one is able to better define himself.

*Figure 14:
Aerial view of Chaudiere Falls*

*Figure 15:
Shopping at Zibi*

Thus there are two possible outcomes of the inherent dissonance that comes with heritage. The first one is to allow the disinheritance, even if it is unintentional, trivial and concealed, to exist and become a dividing factor. The second one is to see the different point of views as an opportunity for discourse and as a starting point to overcome differences and build a new identity. This is the kind of an opportunity that the Chaudiere Islands site presents.

As already mentioned in Part 1, cultural heritage has the capacity to build positive social connections and social capital through sense of place. Thus the Chaudiere site has the oppor-

tunity to do redefine identity by two means, first through the inherent capacity of heritage to build social capital and secondly as a platform to bridge different cultures, reconcile the past and overcome differences. The proposal for the Chaudiere site, Zibi, however, makes the focus of the future project not the rich tangible and intangible heritage, but it fits them together with other more marketable catch-phrases like sustainability, water-front access, bike friendly, etc, into a more complete commercial product that can be purchased

and consumed. While the project will include trilingual street signage, in English, French and Algonquin, public plazas dedicated to aboriginal heritage, construction workers of Algonquin descent, the proposed upscale project will most likely not be used by aboriginal people.¹⁵ This revitalization scheme is close to what Pendelburry addresses as an “opportunity space”, where revitalization can occur.¹⁶ He says culture built heritage can bring “a physical quality to regeneration that is not easily reproducible, but where the emphasis is not upon intrinsic historic nature, rather cultural built heritage is an opportunity space in which regeneration may occur.”¹⁷ The Zibi proposal gives a predefined definition of the site to its

future inhabitants. Instead of an open discourse, a more bottom-up approach of heritage interpretation, that will support the feeling of continuity and identity, the project gives a top-down interpretation of the site and brings together people on the grounds of consuming a marketable product in a historic background. Chaudiere Falls is an important site to the history of Canada and Ottawa and its reinterpretation in the public conscience should be done in a meaningful way so it overcomes different point of views, builds social capital, provides a feeling of continuity and creates a new identity that brings people together.

Case Study 2: Brickworks

Pendelburry states that the impacts of social inclusion or combatting social exclusion are many. They can be measured as outputs such as more jobs and improved environment, or less tangible change such as reinforcing identity and developing community confidence.¹⁸ According to him, both ways to revitalization, as historic place and opportunity space, bring about social inclusion but in a different way. Revitalization focused on historic place extends involvement, changes definitions and widens access, while revitalization focused on opportunity space helps towards neighborhood renewal and physical and economic regeneration. (Figure 16) It could be said that the latter produces more tangible results, while

the former more intangible which are equally or even more important as Lazzaretti argues. Her point is that the societal function of cultural heritage is being more and more recognized as a driving force for economic development and not the other way around as it was previously.¹⁹

According to Pendelburry, a new model of partnership building can contribute to a more sustainable revitalization. He says that partnership building has been key in urban regeneration by involving multiple stakeholders.²⁰ This can be said about an already completed project in Toronto called the Evergreen Brickworks. It is a minimum intervention, more bottom-up approach of heritage interpretation of abandoned industrial heritage. The history of the Brick Works is not as complicated as the Chaudiere Islands in Ottawa. It was a brick factory in use from 1889 to 1985 and fell into disrepair afterwards with no use.²¹ The rehabilitation of the site included the restoration of 16 structures with one additional new LEED Platinum building that houses Centre for Green Cities.²² Note that the site has kept a minimum intervention approach and the addition of only one new building, only slightly changing the look of the site without any drastic and major disruptions. It

Figure 16:
Centre for Green Cities: Evergreen Brickworks

is a gradual change which is being promoted as a new model of city-building, in which what is important is the process of redefinition itself, rather than set in stone “preordained solutions.”²³ That is why the programming of the site is flexible as well. There are many uses for the site such as a farmer’s market, conference and gathering spaces, ice rinks and a remediated brownfield park.²⁴ The reason people are drawn to the site is no longer the production of clay and brick but the cultural built heritage itself has become the recourse, “an amazing landscape and raw space full of opportunity.”²⁵ Thus people are being brought together on the account of the place providing interesting public programming with the feeling of an historic place. The new inhabitants of the abandoned site are connected to history, nature and city-making.²⁶ That is they are responding to the flexibility of the historic place by influencing social cohesion and social capital (as Pendelburry says, cultural built heritage plays a role in attaching people to society by linking them to society’s ideas and values²⁷), and redefining the city through a feeling of continuity of time and identity. According to Arendt, creating the world around us in turn will condition us.²⁸ The Brick Works site is important to the redefinition of identity, because

instead of the top-to-bottom approach of creating an identity and buying into it, this is a more gradual way of self-realization, which is rooted in the idea of disclosure, or appearing in public. When disclosing oneself to others, there is an acknowledgement from others, a two-way process of determining identity.²⁹ When taking initiative and appearing in public, amidst the plurality of others, this way of determining identity is contrasted with the acceptance of an already defined identity, prepared by economic forces.

Figure 17: Ladders of CBH (cultural built heritage) and Social Inclusion

CBH as Historic Places :

1. *Combating social exclusion*
2. *Extending involvement*
3. *Changing Definitions*
4. *Widening Access*

CBH as Opportunity Space for Regeneration :

1. *Combating social exclusion*
2. *Neighborhood renewal*
3. *Physical and economic regeneration*

Works Cited: Part 2

- 1.** Pendlebury, J., Townshend, T. and Gilroy, R. "The Conservation of English Cultural Built Heritage: A Force for Social Inclusion?". *International Journal of Heritage Studies*. 10, no. 1, (2004): 12, accessed July 2016. www.tandfonline.com/doi/pdf/10.1080/1352725032000194222
- 2.** Ibid, 12
- 3.** "Home". Zibi. 2016. Accessed April 2016. <http://www.zibi.ca/>
- 4.** Ibid
- 5.** "Development on Ottawa River draws divide in indigenous communities". MacGreggor, Roy. *The Globe and Mail*. February 20, 2015. Accessed on April 2016. <http://www.theglobeandmail.com/news/national/development-on-ottawa-river-draws-divide-in-indigenous-communities/article27419438/>
- 6.** "Chaudiere Falls in the Outaouais Region". Boucher, Louise N. *Encyclopedia of French Cultural Heritage in North America*. 2007. Accessed April 2016. http://www.ameriquefrancaise.org/en/article-719/Chaudi%C3%A8re_Falls_in_the_Outouais_Region.html
- 7.** Ibid
- 8.** Ibid
- 9.** Tunbridge, J. E and G. J Ashworth. *Dissonant Heritage*. (Chichester: J. Wiley, 1996), 186
- 10.** Ibid, 20
- 11.** Ibid, 21
- 12.** Arendt, Hannah. *The Human Condition*. (Chicago: University of Chicago Press, 1998), 57
- 13.** Ibid, 8
- 14.** Ibid, 184
- 15.** "Development on Ottawa River draws divide in indigenous communities". MacGreggor, Roy. *The Globe and Mail*. February 20, 2015. Accessed on April 2016. <http://www.theglobeandmail.com/news/national/development-on-ottawa-river-draws-divide-in-indigenous-communities/article27419438/>
- 16.** Pendlebury, J., Townshend, T. and Gilroy, R. "The Conservation of English Cultural Built Heritage: A Force for Social Inclusion?". *International Journal of Heritage Studies*. 10, no. 1, (2004): 12, accessed July 2016. www.tandfonline.com/doi/pdf/10.1080/1352725032000194222
- 17.** Ibid, 12
- 18.** Ibid, 12
- 19.** Luciana Lazzaretti. "The resurgence of the 'societal function of cultural

- heritage'. An Introduction". *City, Culture and Society*. 3, no. 4, (2012): 230, accessed August 2016. <http://www.sciencedirect.com/science/article/pii/S1877916612000781>
- 20.** Pendlebury, J., Townshend, T. and Gilroy, R. "The Conservation of English Cultural Built Heritage: A Force for Social Inclusion?". *International Journal of Heritage Studies*. 10, no. 1, (2004): 22, accessed July 2016. www.tandfonline.com/doi/pdf/10.1080/1352725032000194222
- 21.** "A Brickyard's Rebirth as a Green City Centre". Young, Pamela. CF&D, pp. 12-13. Accessed April 2016. http://dtah.com/wp-content/uploads/2012/05/2012-02_EvergreenBrickWorks_CFMD.pdf
- 22.** Ibid
- 23.** "Centre for Green Cities- The Evergreen Brick Works". Diamond Schmitt Architects. 2016. Accessed April 2016. <http://dsai.ca/projects/centre-for-green-cities-evergreen-brick-works>
- 24.** "A Brickyard's Rebirth as a Green City Centre". Young, Pamela. CF&D, pp. 12-13. Accessed April 2016. http://dtah.com/wp-content/uploads/2012/05/2012-02_EvergreenBrickWorks_CFMD.pdf
- 25.** "The Brick Works _ from academia to practice". MacIvor, W. ERA Architects. 2010. Accessed April 2016. <http://www.eraarch.ca/2010/the-brickworks-from-academia-to-practice/>
- 26.** "Centre for Green Cities- The Evergreen Brick Works". Diamond Schmitt Architects. 2016. Accessed April 2016. <http://dsai.ca/projects/centre-for-green-cities-evergreen-brick-works>
- 27.** Pendlebury, J., Townshend, T. and Gilroy, R. "The Conservation of English Cultural Built Heritage: A Force for Social Inclusion?". *International Journal of Heritage Studies*. 10, no. 1, (2004): 22, accessed July 2016. www.tandfonline.com/doi/pdf/10.1080/1352725032000194222
- 28.** Arendt, Hannah. *The Human Condition*. (Chicago: University of Chicago Press, 1998), 184.
- 29.** Ibid, 178-9

Part 3: Site Description

Site Location

The Prince of Wales Bridge is located on the Ottawa River. To the South it is close to a neighborhood called Mechanichsville. Mechanicsville is a neighbourhood whose beginnings date back to the 1870s, and has been home to many of the workers in the mills and rail yards on the Ottawa River. ¹ Mechanicsville is on the Ottawa River and is on the North of Hintonbourg and to the east of Wellington which are neighbourhoods that have recently undergone transformation and are now desirable places to live in the city.

Crossing the Ottawa River, the neighborhood on the other side is part of Centre-Ville- the downtown area of Hull, part of the city of Gatineau. This neighborhood is the oldest one in the region, settled when Philemon Wright chose to remain close to the Chaudiere Falls in 1800. ² From then on until the 1950s the character of the settlement was of industrial nature and the population were mainly workers. ³

On the Gatineau Side the bridge is accessed by a bike path and the abandoned rail continues further North, where it passes through a residential neighborhood and a main road intersection. On the Ottawa side, there is a bike path that passes under and around the bridge. The rail continues further South where it is discontinued for a short distance and then continued by the O-train line. The O-train line extends all the way to the South end of the city. This, together with its continuance to the North, is what makes the Prince of Wales Bridge such an important connection.

The Prince of Wales bridge provides beautiful views towards the east- the Parliament buildings and downtown Ottawa. It also gives a clear view of Gatineau, Lebreton flats and the Chau-

diere Falls. Towards the west there is a view of the Ottawa River with a series of small islands.

On Lemieux Island there is a water purification plant built in 1916, which provides drinking water for the city of Ottawa. In the same year the city authorized a dead-end siding (track section distinct from the main line), built by the Canadian Pacific Railway. The plant itself is not accessible to the public, however the grounds around it are and there are big open spaces on the island. The accessible part of Lemieux Island is on the river and provides very scenic views.

*Figure 18:
Lemieux Island Park at dusk*

*Figure 19:
Site Location Map*

Past: Rail History

When the Prince of Wales Bridge was constructed, it was part of a wide network of rail that was important for the city of Ottawa. Rail was the only way to deliver goods and the main mode of transportation between cities. In fact, in 1915 the rail lines in the City of Ottawa, which was only spanning to about 3 miles around City Hall, were carrying about 4600 passengers a day on an average of 65 passenger trains. ⁴ Freight traffic amounted to 289 cars. ⁵ The railway lines that ran into the city of Ottawa in 1915 were the Canadian Pacific, Canadian Northern Railroad, Grand

Trunk Railroad, Ottawa and New York Railway. ⁶

Because of the importance of rail at that time, cities throughout North America found it difficult to dictate to rail companies where to locate their lines, stations and rail yards. ⁷ It was, actually, the other way around- up until 1914 the rail companies dictated to cities the locations of rail lines. ⁸

The first real efforts of the city of Ottawa to plan the development of the city, including the rail lines, was done in 1914 by the Holt Commission, which favoured a centrally located station with as few lines into and out of it as possible. ⁹ There were no real consequences of that commission on the rail lines except the creation of the Union Station in downtown Ottawa. ¹⁰

The next change came with the Greber Commission in 1947 and the plan it made for Ottawa. ¹¹ The Greber Commission favoured removing all rail lines from the centre of the city and replacing them with a ring of track around the build up area of the city. ¹²

Figure 20:
All time railway maps of Ottawa

Past: Bridge History

“The Prince of Wales Bridge is a reminder of the great epoch of railway building in the 1860s and 1870s.”¹³ Railway activity was buzzing in Quebec in the 1850s and the years after.¹⁴ It was opened by the Quebec, Montreal, Ottawa and Occidental Railway on the 17th January 1881.¹⁵ It was the Quebec government that stood behind the QMO&O committing itself to connecting Quebec with Hull by rail.¹⁶ The bridge connecting Ottawa and Hull was important because the Quebec government had hopes that in time it will sell the QMO&O to the Canadian Pacific

*Figure 21:
Prince of Wales Bridge shortly after
opening*

*Figure 22, 23:
Chaudiere Falls before being dammed
with the bridge in the background*

*Figure 24:
The bridge c. 1928*

*Figure 25:
A train passing the bridge c. 1910*

Railway.¹⁷ The line from Montreal to Hull was completed in 1877 and there was a daily train service.¹⁸ The ferry to cross the Ottawa river cost 25 cents.¹⁹ The money for the Prince of Wales bridge was let by the Quebec government- a \$193 000 contract to construct a bridge and legislation to establish an Ottawa terminus.²⁰

The contract for the piers was awarded to H.J. Beemer of Montreal, who started work on May 20, 1879 with thirty men who were levelling the ground.²¹ By July, the labour force included up to 300 men, a 36-foot steam yacht and a 55-foot scow-steamer which were carrying the stones to the piers.²² In June some of the workers went on strike demanding higher wages from 85 cents to \$1.10.²³ The target completion date was December.²⁴ The project was delayed because of low ground in several spots including Lemieux Island which needed extensive filling.²⁵

In October, a problem arose with the construction of pier number 2, when it was discovered that the flat rock on which it was laying was infact unsupported, jutting out of the island.²⁶ Work was stopped until the problem was resolved.²⁷

In December 1879, the first problems with rapid flowing water arose.²⁸ A loaded barge with clay and 35 men drifted downstream towards the Chaudiere Falls and narrowly missed going through the falls.²⁹ Work resumed in February 1880, however there were problems again with high water and the proximity of the Chaudiere Falls.³⁰

The bridge spans between Ottawa and Hull and in the middle touches on Lemieux Island. Infact the bridge consists of two spans- one from Ottawa to Lemieux Island and another from Lemieux Island to Hull. From Hull to Lemieux Island the bridge spans a total of 1209' (369m) with 6 footings and 7 trusses.³¹ The bridge between Ottawa and Lemieux Island spans 943.5'(288m) and has 5 footings and 6 trusses.³² The length of the trusses from Gatineau to Lemieux Island are : 163' 9" (49.9m), 258' 7" (78.8m), 138' 8" (42.3m), 153' 9" (46.9m), 153' 7" (46.8m), 153' 7" (46.8m), 153' 8" (46.8m) and the length of the trusses from Lemieux Island to Ottawa are: 6 spans of 153' 9" (46.9m) each.³²

Currently the bridge is a Pratt Truss system. When it was originally constructed the truss structure was Whipple truss which is very similar to

*Figure 26:
An aerial view of the bridge and Lemieux Island*

Pratt truss except the diagonal bracing spans two bays (see figure 24 and 25). The original trusses were lighter and the original spans had become too weak for the heavier locomotives of the 20th century, replacing them with the popular Pratt truss.³³ The tops of the piers were lowered to allow room for the new heavier spans.³⁴ By February 1927 the \$750 000 work was completed without interrupting traffic.³⁵ Appendix 2 shows the blueprints of the truss replacement. The previous “Phoenix span”, named after the construction company, has thinner and more decorative elements. It also has a narrower and shorter clearance than the replacement spans.

Subsequent use of the bridge in the 1980s included an excursion train from Wakefield to Ottawa, the information booklet for which is in Appendix 1.

The bridge was acquired by the Canadian Pacific Railway on February 25, 1882.³⁶ The last passenger train to cross it was in 1981, and it has been in disuse since 2001 when it was used to transport material for the construction of the O-train.³⁷ It was purchased by the city of Ottawa in 2005 with the intention of being part of a future light rail system.³⁸

Figure 27:
Prince of Wales Bridge Site Plan from March 27, 1879

Present: Current Uses

Main points of access to the bridge are from a bike path on the Ottawa side and a bike path on Gatineau side. While on Lemieux Island, one can access the bridge as well. The bridge is currently closed to the public, however it is in use by many who choose to take a shortcut and walk or bike to either side of the river. ³⁹ Others find it a desirable place to hang out and enjoy the views, while the scenic environment has made a backdrop to many photoshoot sessions. ⁴⁰ It has been extensively marked by graffiti. It should be noted that while there are people who use the bridge as a pedestrian walkway, the bridge itself is not equipped for use- it does not have railings and there are big gaps in the rail ties, with fast moving water underneath. ⁴¹

*Figure 28:
A couple having dinner*

Site Analysis

Figure 29: Figure ground map of Ottawa region around site

Figure 30: Bridges crossing the Ottawa River, all other bridges are open to cars and pedestrians

Figure 31: Boundary between City of Ottawa and City of Gatineau, also between Ontario and Quebec

Figure 32: Highways, secondary and residential roads highlighted in green and according to line thickness

Figure 34: Bike and pedestrian paths

Figure 35: Parks in the area; Outlined with yellow is Gatineau Park

Figure 36: Important buildings nearby:

<i>City of Ottawa Water Purification Plant</i>	<i>Chaudiere Islands Industrial Remains</i>
<i>Government offices</i>	<i>Museum of War</i>

Figure 37: Transportation

	Major Roads		O-Train Light Rail Line ⁴⁴
	Major Bus Routes ^{42,43}		Bayview Station ⁴⁵

Figure 38: Future developments:

Zibi by Windmill ⁴⁶

Lebreton Flats by Rendezvous Group ⁴⁷

Innovation Centre at Bayview Yards ⁴⁸

Light Rail Phase 1 ⁴⁹

Light Rail Phase 2 ⁵⁰

Figure 39: Land use

Industrial/ brownfield
Residential

Offices/ government
Commercial
Educational

Mechanicsville

Centre-Ville

Figure 40: Demographics ^{51, 52}

Works Cited: Part 3

- 1.** “A Brief History of Mechanicsville”. Mechanicsville Community Association. Accessed May 2016. <http://www.mechanicsville.ca/history/>
- 2.** “Historique du centre-ville”. Vision Centre-Ville Gatineau. Accessed May 2016. <http://visioncentreville.com/fr/vision-centre-ville/historique-centre-ville.php>
- 3.** Ibid
- 4.** Love, David Ross Neil. The effect of the railway on the development of Ottawa, 1914-1948. (Ottawa: Carleton University, 1969), 26
- 5.** Ibid, 26
- 6.** Ibid, 2
- 7.** Ibid, 4
- 8.** Ibid, 4
- 9.** Ibid, 34
- 10.** Ibid, 34
- 11.** Ibid, 38
- 12.** Ibid, 38
- 13.** Brault, Lucien. Historic bridges between Ottawa and Hull. (Ville de Hull and City of Ottawa, 1989), 23
- 14.** Ibid, 23
- 15.** “125th Anniversary of the Opening of the Prince of Wales Bridge”. Colin Churcher. Colin Churcher’s Railway Pages. January 2006. Accessed May 2016. www.railways.incanada.net/Articles/Article2006_01.html
- 16.** Brault, Lucien. Historic bridges between Ottawa and Hull. (Ville de Hull and City of Ottawa, 1989), 23
- 17.** Ibid, 23
- 18.** Ibid, 23
- 19.** Ibid, 23
- 20.** Ibid, 23
- 21.** Ibid, 24
- 22.** Ibid, 24
- 23.** Ibid, 25
- 24.** Ibid, 24
- 25.** “125th Anniversary of the Opening of the Prince of Wales Bridge”. Colin Churcher. Colin Churcher’s Railway Pages. January 2006. Accessed May 2016.

www.railways.incanada.net/Articles/Article2006_01.html

26. Brault, Lucien. Historic bridges between Ottawa and Hull. (Ville de Hull and City of Ottawa, 1989), 25

27. Ibid, 25

28. 125th Anniversary of the Opening of the Prince of Wales Bridge”. Colin Churcher. Colin Churcher’s Railway Pages. January 2006. Accessed May 2016. www.railways.incanada.net/Articles/Article2006_01.html

29. Ibid

30. Ibid

31. Ibid

32. Ibid

33. Ibid

34. Ibid

35. Ibid

36. Brault, Lucien. Historic bridges between Ottawa and Hull. (Ville de Hull and City of Ottawa, 1989), 26

37. 125th Anniversary of the Opening of the Prince of Wales Bridge”. Colin Churcher. Colin Churcher’s Railway Pages. January 2006. Accessed May 2016. www.railways.incanada.net/Articles/Article2006_01.html

38. Ibid

39. “Prince of Wales Bridge to be re-sealed off after swarmings”. Judy Trinh. CBC News. August 28, 2015. Accessed May 2016. <http://www.cbc.ca/news/canada/ottawa/prince-of-wales-rail-bridge-to-be-re-sealed-off-after-swarmings-1.3207071>

40. Ibid

41. “Prince of Wales Bridge”. Capital Gems. 2016. Accessed May 2016. <http://www.capitalgems.ca/prince-of-wales-bridge.html>

42. “OC Transpo Maps”. OC Transpo. 2016. Accessed May 2016. <http://www.octranspo1.com/maps>

43. “Transit Maps”. STO Societe de Transport de l’Outaouais. 2012. Accessed May 2016. <http://www.sto.ca/index.php?id=283&L=en>

44. “Where?: Where are the Stations?”. O-Train Confederation. 2016. Accessed May 2016. <http://www.ligneconfederationonline.ca/the-plan/where/>

45. Ibid

46. “Home”. Zibi. 2016. Accessed April 2016. <http://www.zibi.ca/>

47. “Rendezvous Lebreton Group”. Lebreton Flats Ottawa- Gatineau: Canada’s Capital Region. NCC CCN. Accessed May 2016. <http://www.ncc-ccn.gc.ca/planning/master-plans/lebreton-flats/rendezvous-lebreton-group>

- 48.** “Why Bayview Yards?”. The Innovation Centre at Bayview Yards. Accessed May 2016. <http://www.thebayviewyards.com/about-us/>
- 49.** “Where?: Where are the Stations?”. O-Train Confederation. 2016. Accessed May 2016. <http://www.ligneconfederationline.ca/the-plan/where/>
- 50.** “Where: Stage 2 LRT”. Stage 2 Etape. 2016. Accessed May 2016. <http://www.stage2lrt.ca/where/>
- 51.** “Données démographiques et socioéconomiques”. Ville de Gatineau. 2016. Accessed May 2016. http://www.gatineau.ca/portail/default.aspx?p=histoire_cartes_statistiques/donnees_demographiques_socioeconomiques
- 52.** “Ottawa Neighborhood Study”. 2016. Accessed May, 2016. <http://neighbourhoodstudy.ca/>

Part 4: Project Description

Heritage value

The bridge has been an important part of the history, development and growth of the City of Ottawa. Once it was opened it served an important link in a network of busy railway lines that brought people and goods in and out of the bustling capital. The bridge is a remnant of the industrial past of the city and as a part of the larger Canadian railway network, it represents the history of a young and growing Canadian nation.

This year the bridge turned 135 years old. Its robust structure is still standing although years of disuse has left it with numerous graffiti markings

and in needs of repair. The location across the Ottawa river is without a doubt one of unusual beauty. The views that open up to the East and West are some of the best opportunities to view the river, Chaudiere Falls, Parliament Hill, Ottawa and Gatineau all at the same time. The structure of the bridge with its straight linear corridor and repeating structural elements contributes to the appeal of the place. Together with its abandoned and graffiti marked state, it is of interest to various groups of people- photographers, romantics, urban enthusiasts and friends. Many also find the importance of the structure in its location and connection to bike paths, bus routes, and existing train tracks.

This is a place full of potential. Its history, its location and its current uses are just part of the reason why this structure should have a more prominent place in the public discourse. How can the bridge be introduced back into the life of the city while still respecting its heritage significance? The bridge is not a designated heritage structure but in the following pages, guidelines to its rehabilitation are prepared to follow heritage values as per a completed Nara Grid, Statement of Significance and a preliminary Condition Assessment all completed by author.

NARA GRID for the PoWB

(prepared by author)

	Dimensions of Heritage			
	Artistic	Historic	Social	Scientific
Form and Design	Straight linear corridor with industrial aesthetic	Whipple truss system later replaced with similar Pratt truss. First railway bridge to cross Ottawa river ¹	Allowed transportation of goods and people across the river	The Pratt truss system is sturdy and withstands heavy loads. In total there are 13 spans and 11 piers ⁵
Material and Substance	Original materials present. Many surfaces have graffiti markings	Original 1926 superstructure and rail, original 1881 piers ²		Heavy steel structure with rivet connections
Use and Function		Most direct connection between Ottawa and Montreal when it was constructed ³	Currently used for jogging, biking, jumping in the water, hanging out, photoshoots, etc	
Tradition and Techniques	Industrial aesthetic of exposed steel and connections	Constructed with technologies and techniques from the 1880s and 1920s		
Location and Setting	The bridge location provides unobstructed views towards Parliament Hill, Chaudiere Falls, Ottawa River	Part of the Quebec, Montreal, Ottawa and Occidental Railway, became part of Canadian Pacific Railway in 1882	Link between Gatineau and Ottawa that is used as a quicker connection to either shore, also touching at Lemi-uex Island	Spans distance of 640m over the Ottawa River ⁵
Spirit and Feeling	One of few industrial structures remaining in Ottawa	Part of a wider network of railways that operated in Ottawa ⁴	Great lookout spot and place to enjoy the scenery	The truss system and the piers provide an appreciation of engineering

Statement of Significance of the PoWB

(prepared by author)

Description of Historic Place:

The Prince of Wales Bridge is a bridge crossing the Ottawa River, connecting Ottawa and Hull. It crosses the river in two spans- one from Ottawa to Lemieux Island which is 943.5' long and one from Lemieux Island to Hull which is 1209' long. ⁶

Heritage Value:

The Prince of Wales bridge's significance lies in its construction, its historical context and the survival of it as a whole original structure and its detailing. The bridge is an example of construction technology in the end of the 19th century and in the beginning of the 20th when the superstructure was replaced with heavier members. ⁷ The bridge was built in a time when railway was a major economic force in Canadian history. ⁸ It was part of the Quebec, Montreal, Ottawa and Occidental Railway, opened on 17th January 1881 and later, in 1886, was acquired by the Canadian Pacific Railway. ⁹ The historical importance of the bridge is that it provided the shortest distance between Ottawa and Montreal. ¹⁰ It is also one of the few remaining structures of the industrial era in Ottawa. The last passenger train to pass the bridge was in 1981. ¹¹ The last freight train to cross was in 2001 during the construction of the adjacent O-train line. ¹²

Character Defining Elements:

- Whipple truss system which was later replaced in 1926 by the similar Pratt truss system with heavier members; ¹³
 - Original 1881 stone piers; ¹⁴
 - Landing at Lemieux Island;
- A single track with standard gauge with an inside guard rail; ¹⁵
 - Riveted connections;
 - Original 1926 steel members; ¹⁶

Visual Assessment Checklist for the PoWB

(prepared by author)

1. Access and Safety

- Universal Access	Poor	Moderate	Great	N/A
- Tripping hazard	Poor	Moderate	Great	N/A
- Railings condition	Poor	Moderate	Great	N/A
- Path on bridge	Poor	Moderate	Great	N/A
- Appropriate entrances	Poor	Moderate	Great	N/A
- Appropriate lighting	Poor	Moderate	Great	N/A

2. Material

- Concrete/Stone Piers

- Damage
 - Graffiti
- Deterioration
 - Cracks
 - Spaling
 - Efflorescence

- Defect

- Steel superframe

- Damage
 - Graffiti
- Deterioration
 - Corrosion/ rust
- Defect

- Rivet connections

- Damage
 - Graffiti
- Deterioration
 - Corrosion/ rust
- Defect

- Tracks

- Damage

Figures 41- 44: Bridge details

- Graffiti/ Staining
- Deterioration
 - Warping/ not entirely straight
 - Vegetation

- Wooden boards

- Damage
 - Graffiti
 - Missing pieces
- Deterioration
 - Warped/ Deformed
 - Checks
- Defect

*Figures 43 - 45:
Bridge details*

3. Other

- Electrical/ telegraph wiring added on superstructure
- Iron decoration on North and South Entrance saying “Prince of Wales”
 - Missing letters
 - Missing decorative elements

Figures 44 - 51: Bridge details

Principles and Guidelines of Rehabilitation

(prepared by author)

1. Follow the value assessment and protect character defining elements
2. Follow the Canadian Standards and Guidelines
3. Use an approach of minimal intervention
4. Make any new addition removable and not damaging to structure
5. Provide opportunity for interpretation of the history of the bridge
6. Keep industrial character of site
7. Preserve structural integrity
8. Make structure safe and well lit for visitors
9. Provide adequate viewing platforms
10. Promote community activities and public use of spaces
11. Keep current uses of site along with new ones
12. Provide amenities such as shelter, washrooms and storage
13. Ensure better accessibility- parking, connections to nearby paths, bus stations and universal access to structure
14. Reinforce metal work where needed with appropriate replacements
17. Protect and repair deteriorated areas on site

Standard 3 in the Canadian Standards and Guidelines for the Conservation of Historic Places calls for an approach of minimal intervention, even when the project is one of rehabilitation, in which case, minimum intervention means limiting the proposed new use, addition or changes.¹⁷ Standard 11 states that the heritage value and character in new additions and new construction should be conserved and that the new work on the site should be “physically and visually compatible with, subordinate to, and distinguishable from the historic place.”¹⁸

Design Proposal: Goal of Intervention

To make the bridge a part of the life of the city again, an approach of minimal and temporary intervention is taken. Through this intervention the intent is to create more awareness of the site's existence, knowledge of its potential and through those to provide an opportunity for its history interpretation and its future. By making the bridge accessible and safe to visit, linger and explore, a connection is created between its visitors and the abandoned place. This in turn contributes to a sense of place, through which social capital is created, and when there are strong connections between a community it is beneficial for the city in many different ways. As the CHCfE report states: "regeneration of cultural heritage strengthens the cultur-

al value of the area, plays a vital role in raising the attractiveness of the place as well as contributes to its economic prosperity." ¹⁹ By letting the site be transformed gradually, a more indirect approach of creating identity is proposed. Instead of proposing a definition of the place, it is the public interactions on the bridge that will be shaping the identity through interaction with the cultural heritage. The idea is to make the place available to be known by the public, to become a familiar spot in the mental map of the city, to provide a platform for discussion about its rehabilitation.

The Prince of Wales bridge has been in disuse since 2001- already 15 years, and while there were plans about its future, it has remained empty for a long time. In the beginning the bridge was to be used as an extension to the O-train line into Gatineau. ²⁰ While that idea has been abandoned, recently there were other plans to make the bridge into bikeway, ²¹ a pedestrian walkway by removing the tracks, ²² and another one to make the bridge a part of a network of light rail that connects the smaller towns around Ottawa. ²³ Obviously the two most recent plans are contradicting each other, as the removal of the tracks would remove the opportunity to reuse the bridge as a railway. However these

Figure 52: Identity Creation through Cultural Heritage

are plans that are being drawn up by few people, while the majority of the Ottawa and Gatineau dwellers are unaware even of the existence of the structure. The proposed architectural intervention will have two goals: to promote awareness that this abandoned historic place exists and to provide a way to come to a decision about its future, while using its temporary abandonment as an opportunity to create social capital and identity between Ottawa and Gatineau.

Since the approach is one of minimal intervention- to keep the structure with as little change, so it will have the same opportunities for rehabilitation in the future, the thesis proposal will make

use of what is already on the site- the existing tracks, and the program will reflect of how the site is used currently in its abandoned state- walking, hanging out, enjoying the views. The width of the bridge is 5.11m so while there will be an opportunity to take a bicycle on the bridge, it will be only a walking path, so that it could accommodate the other uses as well. The proposed intervention will be used throughout the year with seasonal use- in summertime it will be a place to sit and walk and in wintertime it will provide shelter from the winds and a straight linear skating rink. To do this, each truss of the bridge will be filled up with about eleven four meter long "cars" that will be rolled on

and assembled one after the other. The summer cars will have seats, tables, and other program elements in them, while the winter ones will just be a path, which would be made into a long linear skating rink. The assembly and disassembly will happen every fall and spring and the unused structures will be stored in a temporary facility at Lemieux Island, which will be located at the end of an already existing siding track. To provide services such as washrooms, refreshments and snacks another structure will be located at Lemieux Island along the

main track. It will connect to the existing paths in the dog park on the island and to the parking lot. This structure will be the main entrance to the bridge if coming with a car, and another entrance for walkers and bikers will be at the south of the bridge, close to Bayview Station. The proposal is for the whole bridge, however since the structure is the same from Ottawa to Lemieux as it is from Lemieux to Gatineau (the only difference being the length and number of trusses), illustrated here will be just the Ottawa to Lemieux portion.

Figure 53: Design proposal concept diagram

Figure 54: Exploded axonometric with program

Design Proposal: Why temporary?

Temporary interventions are seen as secondary to the “real thing”, a substitute for the fully adequate, however that temporal limitation is also what makes them perfect for things that may be inconceivable in the long term.²⁴ Not only that but they can bring liveliness in the urban experience and fill the gaps that are temporarily created in the city as it so often happens.²⁵ The word temporary is hard to provide definition for. It means finite time, but how long exactly? Depending on what it is being compared to it could be a long time and it could be a short time.²⁶ The Prince of Wales bridge was only temporarily left with no use, but 15 years have already

passed. This might mean a lot in terms of a human life, but in terms of its 135 years of existence, it could be said that it is only temporarily abandoned.

A city is never at an end state, it is never finished evolving.²⁷ It is made of many historic layers which exist in a “rich mosaic of contrasting architectural sites.”²⁸ However when planning for the city, it is almost always a three-dimensional activity, while four-dimensional cities are the reality.²⁹ That characteristic of cities however, to gradually or drastically change in the future is never seen as a key component of them.³⁰ Economic uncertainty, vacancy, new technology- these are some of the things that push cities to change and they could be some of the reasons why cities need to plan flexibly in the fourth dimension as well.

*Figure 55:
Cineroleum inside*

The Cineroleum is a project done by a group of artists, designers and architects. The group takes one derelict station in London as their project and creates a temporary cinema there. It is a hand-built cinema with a program of 15 brief screenings.³¹

The project is interesting because it is a use of an abandoned site that is very unusual and delightfully surprising. The project was executed in this way: fabric was attached to the perimeter of the gas station and was suspended during shows to create a sense of enclosure in the typically open gas station spaces. Inside, there were rows of wooden, hand-crafted seats, a screen and a projector.³²

The designers commented on their project: “It grew out of a general idea that it would be nice to do something, to actually create a building. It

was put together on a budget of just 6500 pounds, in just three weeks, primarily constructed from donated and found materials and drawing on free labour from networks of friends and supporters. With 4000 petrol stations currently lying derelict in the UK, the project demonstrates their potential for transformation into exciting and unusual spaces for public use.”³³

*Figure 56:
Cineroleum outside*

*Figure 57:
Cineroleum deployment diagram*

Figure 58: Site plan

A

Figure 59: South entrance close to Bayview Station. Existing bicycle and pedestrian path is to connect with the adjacent bridge

B

Figure 60: Lemieux Island entrance. Accessible by car and walking. Existing road and parking serve the Ottawa Water Purification Plant

C

Figure 61:
Entrance to the bridge from Lemieux Island through the new pavilion.

Design Proposal:

Figure 62:
Individual “car” diagram.
Frame made with 2x4 lumber,
covered with shell made of 2x1

To make the bridge safe and accessible a series of units (called cars from now on) are rolled onto the bridge. They have small rail wheels and are made of wood. The units are self sufficient: they provide platform to walk, 1.2 m railing, recessed floor lights, electrical plugs, and each one has a different program inside. In addition, because they are rolled on the bridge individually, each season they can be assembled in a different sequence. The site always changes.

Figure 63:
Modular Plan. Each season the cars are assembled in a different sequence resulting in a different space

Figure 64: Deployment diagram 1. The cars unfold on the bridge after they are rolled on by a hi-rail, a special vehicle that has regular road tires and is also equipped with rail wheels.

Figure 65: Deployment diagram 2. The cars fold into a box, making them easier to store in the Lemieux Island temporary storage, taking up half of the width and the same height

Figure66: (above)
Each 4x4.8m car
has a different
program in its
center. The two
1.2m walking
paths are on both
sides of the pro-
gram. When the
car folds it makes
a 2.4x 1.2 m box.

Figure 67: Types of cars

Cars have different program elements in them, except empty Car #7 which is used for both summer and winter

Figure 68 Seasonal change. 4x5m “cars” are rolled onto the bridge using the existing tracks. The summer cars (in yellow here) are present together with the empty cars (in blue) from April to September. In September the summer cars are pushed back and more empty cars are rolled on from storage using the existing siding track. The process repeats in the Spring.

Seasonal Change: Summer

During the summer the bridge transforms into a lively venue full of activity. It is an ideal place to spend an afternoon picnicking, jog across or bring the workplace outside. The different cars provide opportunity to sit and linger, to shop at a local artisan market or to catch a movie and a beautiful sunset. The empty cars can also be transformed into a kids playground, a splashpad or an impromptu beach. As an opportunity to make some profit for the maintenance of the project, the market spots can be rented out, the different cars could be booked in advance for groups and local coffee shops or restaurants can rent a car and serve their products.

Figure 69: Render with Long Section and Plan

Garden car

Figure 70: Garden render and diagram

Seating

Figure 71: Seating render and diagram

Artisan market

Figure 72: Artisan market render and diagram

Workspace

Figure 73: Tables render and diagram

Figure 74: Cinema render and diagram

Empty cars

a. Playground assembled on site

c. Pop-up beach with optional sand box

b. Picnic area

d. Pop-up cafe

Figure 75: Empty cars with flexible uses

1. Car framing: 1x1 and 2x4 framing sandwiched between 2x1 shell
2. 8" caster rail wheel
3. Handles for the car and lock location
4. Connection bolt between two cars
5. Hinge rod with a pneumatic damper to ease the opening of the cars

Figure 76: Short Section with details (applicable for all cars)

Seasonal Change: Winter

During winter time all the empty cars are rolled onto the bridge to provide an unbroken, linear, no obstruction path. The path is lined with tarp and flooded with thin layer of water, which freezes and turns into a skating rink much like an easy DIY backyard skating rink. The water is pumped on to the bridge from the river and in spring it is collected and taken to the water purification plant to remove accumulated pollutants. Since the bridge is in an exposed location on the river, a folded deployable polycarbonate shell is attached to the top of the cars to protect from the strong winter winds.

Figure 77: Winter shell deployment

Figure 78: Winter shell paper model ³⁴

Figure 79: Winter exterior render

*Figure 80:
Folded shell made of polycarbonate sheet*

1. Shell canopy connection to car
2. Skating rink assembly ³⁵

The overall amount of water needed for to cover the floor of the cars is 134.4 cubic meters for the bridge between Ottawa and Lemieux Island (134 400L). By comparison the amount of water a Canadian uses per year is 93800L according to Environment Canada. ³⁶

Figure 81: Winter short section ice rink

Figure 82: Winter short section ice rink render

On Lemieux Island: theStation

The two structures on Lemieux Island are to provide amenities for the project at the bridge. The storage is 22x32m and it is used to store the extra summer or winter cars, the winter shell canopy and auxiliary equipment such as forklift, water pump and maintenance tools. TheStation is a pavilion that contains a cafe, skate rental and washrooms. As there is a park already on the island this structure can be built for a long term use for the park visitors as well. The idea is that the pavilion's roof will collect water to use in the washrooms and will have a septic tank with a stabilization pond nearby, similar to the already existing one for the water purification plant.

Figure 83:
theStation render

Figure 84:
The Station Cafe and storage diagram

Figure 85:
Deployment of a single car with table and chairs

*Figure 86:
3d printed part of truss with car inside*

Figure 87: CNC site model

Figure 88:
CNC site model

Works Cited: Part 4

- 1.** 125th Anniversary of the Opening of the Prince of Wales Bridge”. Colin Churcher. Colin Churcher’s Railway Pages. January 2006. Accessed May 2016. www.railways.incanada.net/Articles/Article2006_01.html
- 2.** Ibid
- 3.** Ibid
- 4.** Brault, Lucien. Historic bridges between Ottawa and Hull. (Ville de Hull and City of Ottawa, 1989), 23
- 5.** 125th Anniversary of the Opening of the Prince of Wales Bridge”. Colin Churcher. Colin Churcher’s Railway Pages. January 2006. Accessed May 2016. www.railways.incanada.net/Articles/Article2006_01.html
- 6.** Ibid
- 7.** Ibid
- 8.** Ibid
- 9.** Brault, Lucien. Historic bridges between Ottawa and Hull. (Ville de Hull and City of Ottawa, 1989), 23
- 10.** 125th Anniversary of the Opening of the Prince of Wales Bridge”. Colin Churcher. Colin Churcher’s Railway Pages. January 2006. Accessed May 2016. www.railways.incanada.net/Articles/Article2006_01.html
- 11.** Ibid
- 12.** Ibid
- 13.** Ibid
- 14.** Ibid
- 15.** Ibid
- 16.** Ibid
- 17.** “The Standards & Guidelines for the Conservation of Historic Places in Canada”. HistoricPlaces. 2016. Accessed April 2016. <http://www.historicplaces.ca/en/pages/standards-normes.aspx>
- 18.** “The Standards & Guidelines for the Conservation of Historic Places in Canada”. HistoricPlaces. 2016. Accessed April 2016. <http://www.historicplaces.ca/en/pages/standards-normes.aspx>
- 19.** “Cultural Heritage Counts for Europe”. CHCfE Consortium. 2015, 20
- 20.** 125th Anniversary of the Opening of the Prince of Wales Bridge”. Colin Churcher. Colin Churcher’s Railway Pages. January 2006. Accessed May 2016. www.railways.incanada.net/Articles/Article2006_01.html

- 21.** “Bikeway for Prince of Wales Bridge Put on Hold”. Jon Willing. Ottawa Citizen. December 9, 2015. Accessed May 2016. <http://www.ottawasun.com/2015/12/09/bikeway-for-prince-of-wales-bridge-put-on-hold>
- 22.** “Ad to Convert Rail Bridge Over Ottawa River Posted Early, City Says”. Alistair Steele. CBC News. February 2, 2015. Accessed May 2016. <http://www.cbc.ca/news/canada/ottawa/ad-to-convert-rail-bridge-over-ottawa-river-posted-early-city-says-1.2940839>
- 23.** “Waiting for the Godot: How Long Will It Take to Create Mooserail?”. Peter Gabany. Moose. May 2, 2016. Accessed May 2016. <https://www.letsgomoose.ca/waiting-for-godot-how-long-will-it-take-to-create-moose-rail/>
- 24.** Bishop and Williams. *The Temporary City* (New York: Routledge, 2012), 5
- 25.** Ibid, 7
- 26.** Ibid, 6
- 27.** Ibid, 19
- 28.** Ibid, 19
- 29.** Ibid, 19
- 30.** Ibid, 19
- 31.** Ibid, 151
- 32.** Ibid, 151
- 33.** Ibid, 151
- 34.** Adroves, Esther, Rivas. *Deployable Structures*. (Laurence King Publishing, 2015), 105
- 35.** “Make a cheap backyard skating rink”. instructors. Instructables. Accessed May 2016. <http://www.instructables.com/id/Make-a-cheap-backyard-ice-skating-rink/>
- 36.** “Residential water use in Canada”. Government of Canada. Environment and Climate Change Canada”. February 2016. Accessed August 2016. <https://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=7E808512-1>

Conclusion

The importance of heritage lies beyond the economic gains which it often brings. The presence of historic buildings is very much linked to social capital and identity. They provide an anchor for the human experience by being a physical link to the past and give a sense of continuity. Preserving historic structures should be viewed as a step towards community building, realizing that economic gains are stronger when they are based on social functions.

Abandoned heritage is important even though it is seen as valuable by very few people. Yet it is a crucial part of the city. It provides a shell and opportunity for great city-making interventions based on history and heritage. While abandonment is rarely seen as something desirable in the city, there is in fact something very important about it- it is inevitable. How can these important but empty of inhabitants places be addressed? How can their potential be revealed?

Cultural heritage can create a sense of place through which social capital is created and it can provide an opportunity for public interpretation. These in turn build new memories and connections that create identity in the people who interact with them. The thesis attempts to take control of the identity creation through the historic built

environment. The top-down interpretations give a predefined identity that is often to be purchased. Is there another, more public way to address heritage interpretation? Can it become an act of public interest?

This thesis proposes a more bottom-up approach of heritage interpretation. Through the temporary architectural intervention, the public is invited to come and explore the abandoned site, raising awareness of its importance. When a more permanent decision comes forward made by more inclusive discussion, the intervention is removed and the structure remains intact like it never happened.

The Prince of Wales Bridge is important for the city of Ottawa. It not only is a historic structure built in the railway boom in the early years of the Canadian nation, it is also located on a scenic and beautiful river. The bridge provides a crucial connection between the two cities of Ottawa and Gatineau and also the two provinces, and that is what makes it such an important place for social capital and identity creation. However this important place is not known by many people. The bridge is “temporarily” out of use for 15 years now and this thesis provides a “temporary” intervention that could aid in deciding its future.

Appendix I: Wakefield Excursion

MANIWAKI SUBDIVISION

This line was started as the Ottawa & Gatineau Valley Railway Co. in 1871. The goal was the junction of the Gatineau and Deser Rivers at the town of Deser (just beyond Maniwaki). The incorporation lapsed and was renewed by the Province of Quebec in 1879. The first of four subsidies was for fifty miles of construction. A federal charter was obtained in 1887 and construction commenced in 1889. Some 20 miles were completed northward from Hull in that year. By 1892 Farrelton had been reached. 1893, Kazabazua; 1894, Wright. That same year the name was changed to Ottawa and Gatineau Railway Co. Gracefield was reached in 1896. In 1901 the Ottawa and Gatineau Railway became the Ottawa Northern and Western Railway which in 1902 amalgamated with the Pontiac and Pacific Junction. In 1902 the line was completed to Maniwaki and, along with the Interprovincial Bridge Co., was leased to Canadian Pacific.

The subsequent history of the line has been relatively uneventful, with perhaps the single exception of 1926. In that year a major track relocation took place as a result of the construction of the Gatineau Power Company dam at Chelsea. The flooding of the old roadbed between Chelsea and Kirk's Ferry required the construction of a new line which was opened for traffic in December 1926.

This line has been freight only since January 1963 and most of the stations have gone. Their names however were familiar to generations of cottagers and residents alike who travelled the line frequently.

SUBDIVISION DE MANIWAKI

Ce fut en 1871 que les promoteurs de l'Ottawa & Gatineau Valley Railway Co. rêvaient déjà d'atteindre un point au confluent des rivières Gatineau et Deser, soit au village de Deser, un peu au-delà de Maniwaki. L'incorporation bien que retardée tout d'abord, fut renouvelée par la province de Québec en 1879. La première de quatre subventions adjugeait la construction de cinquante milles. Une charte fédérale fut obtenue en 1887 et la construction débuta en 1889 et quelque vingt milles furent complétés au nord de Hull la même année. En 1892 elle atteignait Farrelton; en 1893 Kazabazua; en 1894 Wright, et cette année-là le nom changea à celui de l'Ottawa & Gatineau Railway Co. En 1896, elle atteignait Gracefield. En 1901 le nom changea de nouveau à celui de l'Ottawa Northern & Western Railway Co. et celle-ci en 1902 complétait la ligne jusqu'à Maniwaki, puis vint ensuite sa location comprenant et la PPI ainsi que l'Interprovincial Bridge Co. au CP Rail.

L'histoire subséquente de la ligne était sans incident, à l'exception peut-être de l'an 1926. À cette année il y a eu une relocalisation de la voie ferrée à cause de la construction du barrage de la Compagnie Gatineau Power à Chelsea. L'inondation de la ligne entre Chelsea et Kirk's Ferry nécessita la construction d'une voie nouvelle inaugurée en décembre 1926.

Depuis janvier 1963 cette ligne n'y est que pour le transport des marchandises, et la plupart de ses gares ont disparu. Leurs noms cependant étaient familiers à plusieurs générations de résidents et d'habitants de maisonsnettes qui utilisaient fréquemment la ligne.

IRONSIDE. HULL — (point milliaire 3)

Flag station, siding for the mine, named for the Hull Iron Mine. A deposit of magnetic iron ore has been known since 1826 when the Hull Mining Co. was formed to operate it.

CHELSEA — (point milliaire 6.5)

Named by Thomas Brigham Prentiss who came from Chelsea, Vermont. Chelsea station used to be a busy, well-kept depot. Senator Connolly reminisces: "No one could forget the garden at the station, Mr. Merrifield. I suppose the CPR paid him but the station garden was his own, a thing of beauty and he guarded it with his life. Not even Sir William Van Horne could have trespassed on its lawns without a warning from Mr. Merrifield."

TENAGA — (point milliaire 8.2)

There used to be a watering tank for the train here and passengers alighted at "The Tank". Wishing to give the stop a more elegant sounding name a Spanish word meaning "Indian Water Jug" was anglicised to TENAGA.

IRONSIDE. HULL — (point milliaire 3)

Gare porte-pavillon, située aux abords de la mine. Elle doit son nom à la Mine Hull Iron. En 1826, la société Hull Mining Co. fut créée pour exploiter un gisement de pierre d'aimant.

CHELSEA — (point milliaire 6.5)

C'est Thomas Brigham Prentiss, originaire de Chelsea au Vermont, qui a nommé cette ville. La gare de Chelsea était une gare achalandée et bien entretenue. Le sénateur Connolly raconte: "Personne ne pourra jamais oublier M. Merrifield, le jardinier de la gare. Il recevait, sans doute, un salaire du CP, mais le jardin de la gare était le sien, une véritable merveille dont il s'occupait toute sa vie. Même pas Sir William Van Horne ne pouvait se permettre de passer sur le gazon sans que M. Merrifield ne lui dise de faire attention".

TENAGA — (point milliaire 8.2)

Il y avait là un réservoir d'eau pour le train et les voyageurs avaient coutume de descendre au "Réservoir". Pour donner à cet arrêt un nom à consonnance plus élégante, on a utilisé le mot espagnol désignant un "pichet d'eau indien", tenaga.

Today's trip will take you over some historic railway lines. Some date from the days of the early rail pioneers. Some were built during the expansion period of Canadian railway history. Others were built in recent years.

MUSEUM ELLWOOD JUNCTION

On leaving the grounds of the Museum, the train traverses the whole line of J.R. Booth's Canada Atlantic Railway constructed between 1880 and 1882. At Hawthorne, we swing off into freight-only territory over the Walkley Line which, together with the Walkley Yard, came into operation in 1955 as the initial stage of the NCC's railway relocation program in the National Capital Region. In October, 1967, CP Rail also moved here from its downtown yards.

CHAUDIÈRE SUBDIVISION

At Ellwood Junction, we turn north and run along the old Chaudière Extension of the St. Lawrence & Ottawa Railway Co. toward Prince of Wales Bridge. We run over new trackage as we travel by the campus of Carleton University and through one of the longest tunnels in Eastern Canada under the Rideau Canal and Dows Lake to the site of the old Ottawa West Yard. Here we pick up the alignment of the old Quebec, Montreal, Ottawa & Occidental Railway.

Aujourd'hui, le parcours du voyage s'effectue sur certaines lignes historiques, dont, quelques-unes remontent au début du chemin de fer. Certaines furent construites pendant la période moyenne d'expansion de l'histoire ferroviaire au Canada, tandis que d'autres furent construites durant les années récentes.

MUSÉE ELLWOOD JUNCTION

Après avoir quitté le Musée, le train parcourt toute la ligne du Canada Atlantic Railway construit par J.R. Booth entre 1880 et 1882. À Hawthorne, nous entrons dans le secteur réservé au transport de marchandises, au-delà de la ligne Walkley qui, en même temps que la gare de triage Walkley, commença à être exploitée en 1955, à titre de première étape du programme de la C.C.N. visant à déplacer les voies ferrées de la région de la capitale. En octobre 1967, le CP Rail a également quitté ses gares de triage de l'ouest d'Ottawa pour s'installer ici.

SUBDIVISION DE CHAUDIÈRE

À Ellwood, nous nous orientons vers le nord sur le parcours de l'ancien embranchement de Chaudière du St. Lawrence & Ottawa Railway Co. vers le point du Prince de Galles. À ce point, le parcours s'effectue sur une nouvelle voie modernisant ainsi l'ancienne; et nous passons près de l'emplacement de l'université Carleton; dans le corridor souterrain du canal Rideau et Lac Dows sur le pont du Prince de Galles qui enjambe la rivière des Outaouais près de l'ancienne gare de triage d'Ottawa-ouest, où nous parcourons la voie moderne du Québec, Montréal, Ottawa Occidental Railway.

The Q.M.O. & O. is an excellent example of the amalgamations that were so much a part of the 19th century railway scene. It started in 1853 as the North Shore Railway linking Montreal and Quebec City. In 1856 it acquired shares in the Lake Huron, Ottawa and Quebec Junction Railway, which planned to build westward from Arnprior or Pembroke and it was associated with the Montreal and Bytown, amongst others. In 1887 the Montreal-Ottawa-Aylmer portion was bought by CP Rail.

LACHUTE SUBDIVISION

Once across Prince of Wales Bridge we find ourselves on a stretch of line formerly owned by the Q.M.O. & O., taken over by CP and then sold to the Pontiac Pacific Junction Railway Co., in 1888 — 1890. The western end of PPJ was intended to cross the Ottawa at Pembroke. The eastern end was at Hull and the early service of the line linked that town with Aylmer. In 1894 PPJ entered into an agreement with the Ottawa & Gatineau Railway Co. concerning the construction of a bridge linking Ottawa with Hull. By 1898 this had become the Ottawa Interprovincial Bridge Company whose bridge is still standing and in use for road traffic only since the opening of the Union Station. In 1902 the PPJ and the Ottawa and Gatineau Railway amalgamated as the Ottawa, Northern and Western Railway Company whose lines now form the Maniwaki Subdivision of CP Rail.

Le Q.M.O. & O. est un exemple frappant des fusions intégrées au domaine ferroviaire à l'époque du 19^e siècle. Ce fut en 1853 que le North Shore Railway relia Montréal et Québec et qu'en 1856 il devint détenteur des actions du Lac Huron, Ottawa & Québec Junction lequel projetait de pousser la construction en direction ouest depuis Arnprior ou Pembroke et qu'alors il était déjà l'associé entre autres d'ailleurs, du Montréal et Bytown. En 1887 le CP Rail absorbait le tronçon Montréal-Ottawa-Aylmer.

SUBDIVISION DE LACHUTE

Ayant traversé le pont du Prince de Galles, nous roulons sur une partie de la ligne qu'appartenait anciennement le Q.M.O. & O. absorbé par le CP et vendu à la Pontiac Pacific Junction Railway Co. entre 1888 et 1890. L'extrémité ouest de la ligne PPJ devait traverser la rivière des Outaouais à Pembroke. À Hull, son extrémité est se reliait au tout début à Aylmer. Par suite d'une entente conclue en 1894 entre la PPJ et l'Ottawa & Gatineau Railway Co. en vue de la construction d'un pont devant relier Ottawa et Hull, le pont actuel fut complété en 1898 par l'Ottawa Interprovincial Bridge Co. Ce pont est toujours sur place et réservé à l'usage de la circulation routière depuis l'ouverture de la nouvelle gare d'Ottawa. En 1902 la PPJ fusionna avec l'Ottawa & Gatineau Railway Co. pour fonder l'Ottawa, Northern & Western Railway Co. dont les lignes forment maintenant la subdivision de Maniwaki qui relève du Pacifique-Canadien.

Appendix 2: PoWB blueprints

Appendix 3: Presentation Layout

Appendix 4: Process Work

Works Cited:

--- "A Brief History of Mechanicsville". Mechanicsville Community Association.
Accessed May 2016. <http://www.mechanicsville.ca/history/>

Adroves, Esther, Rivas. Deployable Structures. Laurence King Publishing, 2015.

Albert, Marie-Theres, Introduction to Understanding Heritage: Perspectives in Heritage Studies. Edited by Marie-Theres Albert, Roland Bernecker and Britta Rudolph. Berlin/Boston: Walter de Gruyter, 2013.

Arendt, Hannah. The Human Condition. Chicago: University of Chicago Press, 1998.

Ashworth, G.J, and Brian Graham, Introduction to Senses of Place: Senses of Time. Edited by G.J. Ashworth and Brian Graham. Burlington, USA: Ashgate Publishing Company, 2005.

Bishop and Williams. The Temporary City. New York: Routledge, 2012.

Bradley, D., Bradley, J., Coombes, M. and Tranos, E. "Sense of Place and Social Capital and the Historic Built Environment". Report of Research for English Heritage. August 2009. Accessed July 2016. http://hc.historicengland.org.uk/content/pub/sense_of_place_web.pdf

Brand, Stewart. How Buildings Learn. New York, NY: Viking, 1994.

Brault, Lucien. Historic bridges between Ottawa and Hull. Ville de Hull and City of Ottawa, 1989.

Boucher, Louise N., "Chaudiere Falls in the Outaouois Region". Encyclopedia of French Cultural Heritage in North America. 2007. Accessed April 2016. http://www.ameriquefrancaise.org/en/article-719/Chaudi%C3%A8re_Falls_in_the_Outaouais_Region.html

- “Centre for Green Cities- The Evergreen Brick Works”. Diamond Schmitt Architects. 2016. Accessed April 2016.
<http://dsai.ca/projects/centre-for-green-cities-evergreen-brick-works>
- Churcher, Colin. “125th Anniversary of the Opening of the Prince of Wales Bridge”. Colin Churcher’s Railway Pages. January 2006. Accessed May 2016. www.railways.incanada.net/Articles/Article2006_01.html
- Churcher, Colin. “Bridges: 2.2 Prince of Wales Bridge”. Colin Churcher’s Railway Pages. March 2016. Accessed May 2016.
http://www.railways.incanada.net/circle/Findings_Bridges.htm
- “City Resilience Framework”. ARUP and the Rockefeller Foundation. Accessed July 2016. <https://www.rockefellerfoundation.org/app/uploads/City-Resilience-Framework1.pdf>
- “Cultural Heritage Counts for Europe”. CHCfE Consortium. 2015. Accessed October 2015. www.encatc.org/culturalheritagecountsforeurope
- “Données démographiques et socioéconomiques”. Ville de Gatineau. 2016. Accessed May 2016.
http://www.gatineau.ca/portail/default.aspx?p=histoire_cartes_statistiques/donnees_demographiques_socioeconomiques
- “Framework Convention on the Value of Cultural Heritage for Society.” Faro: Council of Europe, 2005. Accessed May 2016. http://www.coe.int/t/dg4/cultureheritage/heritage/Identities/default_en.asp
- Gabany, Peter. “Waiting for the Godot: How Long Will It Take to Create Moose rail?”. Moose. May 2, 2016. Accessed May 2016.
<https://www.letsgomoose.ca/waiting-for-godot-how-long-will-it-take-to-create-moose-rail/>

--- “Goal 11: Make cities inclusive, safe, resilient and sustainable”. United Nations Sustainable Development Goals. Accessed July 2016. <http://www.un.org/sustainabledevelopment/cities/>

Government of Canada. “Residential water use in Canada”. Environment and Climate Change Canada”. February 2016. Accessed August 2016. <https://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=7E808512-1>

--- “Historic Centre of Warsaw”. UNESCO World Heritage List. Accessed May 2016. <http://whc.unesco.org/en/list/30>

--- “Historique du centre-ville”. Vision Centre-Ville Gatineau. Accessed May 2016. <http://visioncentreville.com/fr/vision-centre-ville/historique-centre-ville.php>

--- “Home”. Zibi. 2016. <http://www.zibi.ca>

instructors. “Make a cheap backyard skating rink”. Instructables. Accessed May 2016. <http://www.instructables.com/id/Make-a-cheap-backyard-ice-skating-rink/>

Lazzaretti, Luciana. “The resurgence of the ‘societal function of cultural heritage’. An Introduction”. *City, Culture and Society*. 3, no. 4, (2012): 229-328, accessed August 2016. <http://www.sciencedirect.com/science/article/pii/S1877916612000781>

Love, David Ross Neil. *The effect of the railway on the development of Ottawa, 1914-1948*. Ottawa: Carleton University, 1969.

MacGregor, Roy. “Development on Ottawa River draws divide in indigenous communities”. *The Globe and Mail*. February 20, 2015. Accessed on April 2016. <http://www.theglobeandmail.com/news/national/development-on-ottawa-river-draws-divide-in-indigenous-communities/article27419438/>

- MacIvor, W. "The Brick Works _ from academia to practice". ERA Architects. 2010. Accessed April 2016.
<http://www.eraarch.ca/2010/the-brickworks-from-academia-to-practice/>
- "OC Transpo Maps". OC Transpo. 2016. Accessed May 2016.
<http://www.octranspo1.com/maps>
- Otero-Pairos, Jorge. "Mnemonic Value and Historic Preservation" In *Spatial Recall*, edited by Marc Treib, 239-259. New York: Routledge, 2009.
- "Ottawa Neighborhood Study". 2016. Accessed May, 2016.
<http://neighbourhoodstudy.ca/>
- Pendlebury, J., Townshend, T. and Gilroy, R. "The Conservation of English Cultural Built Heritage: A Force for Social Inclusion?". *International Journal of Heritage Studies*. 10, no. 1, (2004): 11-31, accessed July 2016.
www.tandfonline.com/doi/pdf/10.1080/1352725032000194222
- Pallasmaa, Juhani. "Space, Place, Memory and Imagination: The Temporal Dimensions Of Existential Space". In *Spatial Recall*, edited by Marc Treib, 20-39. New York: Routledge, 2009.
- "Prince of Wales Bridge". Capital Gems. 2016. Accessed May 2016.
<http://www.capitalgems.ca/prince-of-wales-bridge.html>
- "Rendezvous Lebreton Group". Lebreton Flats Ottawa- Gatineau: Canada's Capital Region. NCC CCN. Accessed May 2016.
<http://www.ncc-ccn.gc.ca/planning/master-plans/lebreton-flats/rendezvous-lebreton-group>
- Silberman, Neil. "Heritage Interpretation as a Public Discourse: Towards a New Paradigm". In *Understanding Heritage: Perspectives in Heritage Studies*,

edited by Marie-Theres Albert, Roland Bernecker, Britta Rudolff,
22-33. Berlin/Boston: Walter de Gruyter, 2013.

Steel, Alistair. "Ad to Convert Rail Bridge Over Ottawa River Posted Early, City Says". CBC News. February 2, 2015. Accessed May 2016.
<http://www.cbc.ca/news/canada/ottawa/ad-to-convert-rail-bridge-over-ottawa-river-posted-early-city-says-1.2940839>

--- "The Standards & Guidelines for the Conservation of Historic Places in Canada". HistoricPlaces. 2016. Accessed April 2016.
<http://www.historicplaces.ca/en/pages/standards-normes.aspx>

--- "Transit Maps". STO Societe de Transport de l'Outaouais. 2012. Accessed May 2016. <http://www.sto.ca/index.php?id=283&L=en>

Treib, Marc. "Remembering Ruins, Ruins Remembering". In *Spatial Recall*, edited by Marc Treib, 194-218. New York: Routledge, 2009.

Trinh, Judy. "Prince of Wales Bridge to be re-sealed off after swarmings". CBC News. August 28, 2015. Accessed May 2016.
<http://www.cbc.ca/news/canada/ottawa/prince-of-wales-rail-bridge-to-be-re-sealed-off-after-swarmings-1.3207071>

Tunbridge, J. E and G. J Ashworth. *Dissonant Heritage*. Chichester: J. Wiley, 1996.

Van Dam, K.I.M. "A place Called Nunavut: Building on Inuit Past". In *Senses of Place: Senses of Time*, edited by G.J. Ashworth and Brian Graham, 105-117. Burlington, USA: Ashgate Publishing Company, 2005.

Willing, Jon. "Bikeway for Prince of Wales Bridge Put on Hold". *Ottawa Citizen*. December 9, 2015. Accessed May 2016.
<http://www.ottawasun.com/2015/12/09/bikeway-for-prince-of-wales-bridge-put-on-hold>

- “Where: Stage 2 LRT”. Stage 2 Etape. 2016. Accessed May 2016.
<http://www.stage2lrt.ca/where/>
- “Where?: Where are the Stations?”. O-Train Confederation. 2016. Accessed May 2016.
<http://www.ligneconfederationonline.ca/the-plan/where/>
- “Why Bayview Yards?”. The Innovation Centre at Bayview Yards. Accessed May 2016.
<http://www.thebayviewyards.com/about-us/>
- Young, Pamela. “A Brickyard’s Rebirth as a Green City Centre”. CF&D, pp. 12-13. Accessed April 2016.
http://dtah.com/wp-content/uploads/2012/05/2012-02_EvergreenBrickWorks_CFMD.pdf

Image sources

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