# Where the River Flows Fast

by Andrea Barei

A thesis presented to the University of Waterloo in fulfilment of the thesis requirement for the degree of Master of Architecture

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## AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

#### ABSTRACT

Kashechewan, a flood-prone remote First Nation in northern Ontario, is the focus of this thesis. It is an exploration into the factors that have contributed to the community's decline and current state. By looking at how these factors influence built form, the principles, possibilities, and concepts that are latent within it are used to re-establish ways in which the people can view, value, and act upon the land to create lasting change. The discussion has larger implications about how we, as Canadians, live with the land and built forms, and react to one another both as a collective, and as individuals. It is an attempt to dissolve the distinction between 'aboriginal' and 'colonizer' to open up greater design possibilities.

Composed as a series of explorations into the physical and spiritual form of the community, this thesis weaves together three parts of its larger story connected with the thread of narrative poem. Part I opens a discourse that considers the impact of the system and establishment of Aboriginal Reserves on the community. Part II explores the notion of remoteness alongside methods of movement and transportation of people and materials. Part III engages the ephemeral, discussing memory and the meaning of transient moments. Stemming from these streams of exploration, three individual designs are proposed. The first explores flood-resilient architecture as a sensitive response to the river and engages the future expansion of the community beyond the walls of the dike. The second envisions an integration of movement into a centralized community hub. The third lays out an approach to abandoning the site while preserving its sacred spaces. In each case, the design explores built form as a tool for fusing back together the spirit of the land and the narrative of the people. Through the metaphor of flooding as a conversation between the light and the dark, this thesis looks at the history of abuse between aboriginal and colonizer, and the current abuse of substance and soul from which an architectural premise moves forward.

The thesis attempts to embrace the complexity and difficulty of designing with such inherent obstacles to overcome by taking inspiration from the simple and sublime beauty of the place and distilling it into built form.

### ACKNOWLEDGEMENTS

It is an understatement to say that this thesis would not have been possible without the contributions, guidance, and support of;

Dr. Elizabeth English, thesis supervisor - the water Dr. William Woodworth, thesis advisor - the sky Rick Haldenby, thesis advisor - the earth

You have each contibuted not only your insight and encouragement, but have become truly engaged in the discussion and its continued importance.

In addition, I am grateful for the help and guidance of Dereck Revington during the start of my thesis, and Ted Shore, external reader, for his support and insight during its finish.

Mom, Dad, Steven, Patrick - you guys have shaped me into the person I am today. May we take many more canoe trips together.

Thank you all.

To the people of Kashechewan

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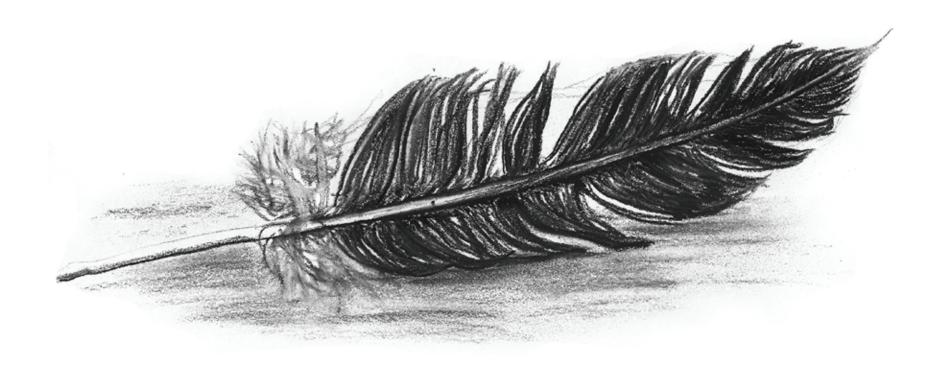
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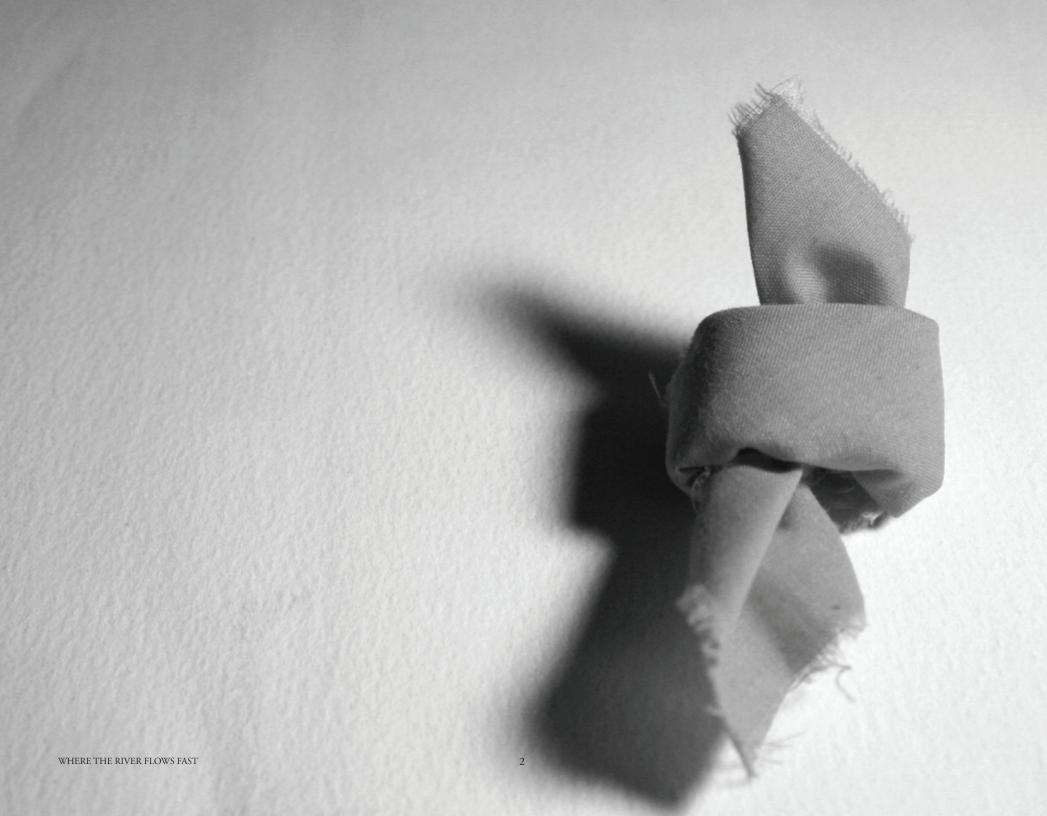
## APPENDIX

116-145 fig. a1 - a332 The Buildings of Kashechewan All Appendix A photographs by author



"...but in its smallness it had its rights. The other was great, but in its greatness it had no greater rights than the rights of the small, because the right is the same for everyone".

-Louis Riel, 1886



#### PREFACE

#### Development

The idea for this thesis stemmed from my lifelong love of water. I've always had an affinity for waters of all sorts; rivers, lakes, streams, oceans, pools, bathtubs etc. If there is water around, then I am engaged with it in some way. During my time off between undergraduate and graduate studies I completed a competition for flood-resilient housing in the Philippines. It was from this competition that I decided to dedicate my master's studies to researching areas affected by flooding.

The importance of tying this study back to my home – back to Canada – led me down many paths. Dr. Elizabeth English listened patiently to my plight about finding the right site and then invited me to look into the community of Kashechewan. She had recently discovered that they have faced the threat of flooding for many years and have experienced numerous evacuations.

With some preliminary research I decided that it was, indeed, an ideal area in much need of innovative design. My experiences with Kashechewan have taken me in many directions, as there are more issues at play than just flooding. The breadth and scope of my inquiry have deepened the more I come to know about this unique place.

#### Background

Two years ago I had my Italian citizenship recognized through my paternal side. This was an emotional time for me, bringing pride and a flood of memories to my family. Italian weddings, half-phrases tossed around in the Furlan dialect, and a strong sense of familial ties surrounded my upbringing. It was this strong cultural connection that led me to claim my citizenship for the undergraduate term in Rome.

Both sides of my family have dabbled in genealogy, tracing our ancestry back to the 1700s with tenuous connections to the 1600s. There are dusty folders of birth and death certificates, black and white photographs, letters, and grave stone rubbings in many family members' basements. It wasn't until I began considering my thesis topic that I realized the importance of not only my Italian heritage, but also my mother's

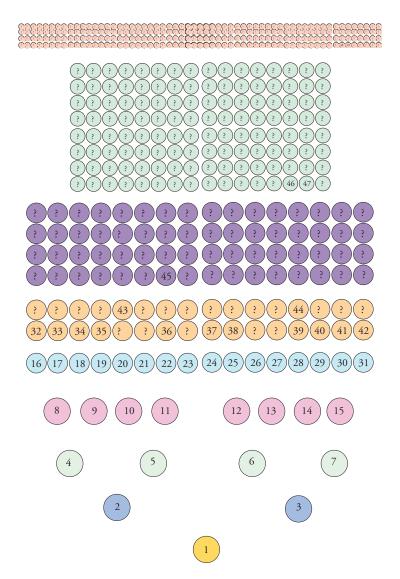
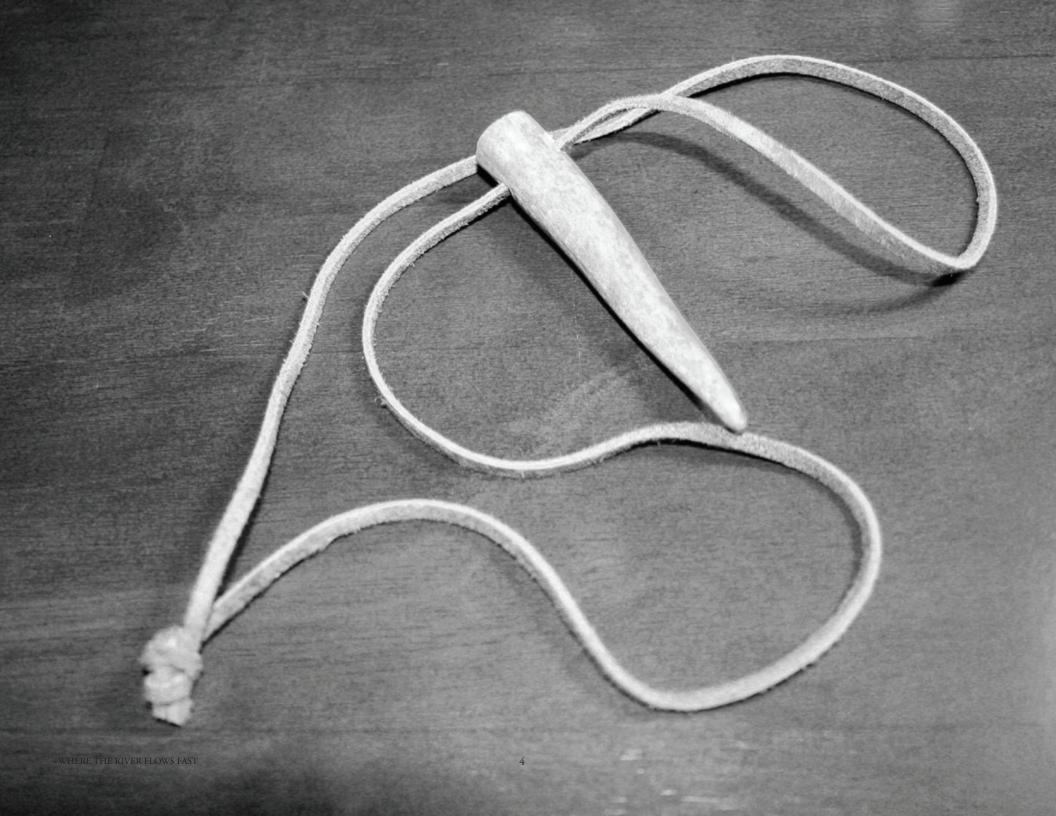


Fig. 2 -Above - Illustration of my direct lineage. The most concrete line leads all the way back to my Metis ancestors. Recognized at the time as simply a 'Potawotamie Indian', this nameless woman (number 49) is but one root amoung countless other unknowns. Fig. 3 - Opposite - A tobacco tie, a gift from Dr. William Woodworth.



Scottish/Irish/French/English background. When people ask about my heritage it's always easier to say 'I'm half Italian' than to explain my extensive maternal lineage.

When fleshing out my thesis, I realized the importance of getting to know more about my own background. Noting the cultures from which my line traces, framing an idea of the difficulties that my ancestors faced, and looking at the places that shaped the lives of these people that I'll never know have given me a new outlook on my past.

Approaching design for a community where I knew little of the culture and even less about the land was daunting. What connection do I have to this remote place I have never heard of, let alone been to? How can I even begin to understand the continuing struggle faced by the people of Kashechewan? And the even more pressing question, What can I possibly design that could make a difference? Uncovering my own indigeneity has allowed me to begin to answer these questions. Humility, compassion, and openness have enabled me to approach the community in a genuine (if somewhat naïve) attempt to understand and address their needs architecturally.

#### **Gifts**

During the process of establishing a connection with community leaders and members in Kashechewan, I faced numerous challenges. I was warned away from writing about this place from people within the school community, professionals in the field of architecture and planning, and even people remotely related to Kashechewan such as the travel agent and a northern worker I spoke with. This did not deter me; if anything, it strengthened my resolve. This opposition highlighted the need to learn more about our cultural trepidations with discussing the sensitive issue of indigenous and non-indigenous relationships in the context of a particular community. Many people have vested interests in working with First Nations communities, which can limit the possibilities for people that want to engage in authentic participation. Appreciating the scope of these challenges was the first gift that I received, intangible though it may be.

The gifts that I received from Dr. William Woodworth, a tobacco tie, a deer horn necklace, and a reflecting stone, helped me stay connected to my purpose throughout the duration of my trip. These tangible symbols of his cultural identity were constant reminders to me to engage in the native way of knowing. By this, I mean remaining open to interactions and sensations without dismissing anything as trivial, unimportant, or insignificant.

Fig. 4 - Opposite - A deer horn necklace from Dr. William Woodworth symbolizing the deer clan of the Haudenosaunee.



While in Kashechewan, Dr. Elizabeth English brought along Mardi Gras beads to give away, a symbol of her continued and extensive efforts to develop amphibious architecture for the Lower Ninth Ward in New Orleans. These small gifts brought smiles to many children's faces and were a fun way to open up conversation and interaction.

Eric Haldenby provided strong support from the School of Architecture and was a voice of constant encouragement (as he has been throughout my years at the university). He helped make it possible to present to the secondary school in Kashechewan and also to provide the school with some architectural supplies. In addition, he helped bring together people from different backgrounds whose unique gifts and talents complemented each other and ultimately directly inform this thesis.

One of the most unusual gifts involved as a part of the trip was the delivery of a car alternator from a garage in Kitchener. This saved the cost of shipping it to Kashechewan and also expedited its delivery. This delivery insured us a ride from the airport. This small kindness on my part was returned tenfold with information and insight into the community, help getting oriented, a car tour around Kashechewan and its outlying areas, and welcome company.

Perhaps the most important gift of all was the permission received from chief Jonothan Solomon to come and visit Kashechewan. At what is one of the most challenging times of year during the spring breakup, he accepted my request to come and experience the community. The trip would not have been possible without this acceptance, the guidance, and suggestions of many people intimately involved in working with northern First Nations in Ontario.

Fig. 5 - Opposite - A reflecting stone, borrowed from Dr. William Woodworth for the duration of the trip to Kashechewan.

# PART I

Treaty No. 9

### PRESSURE BUILDING

The river;
Encased for months between earthen walls
And frozen roof
Struggles to break free from its bonds.
Pressure builds as the ice can no longer
Keep its solid form and breaks up, swept
Downstream with the fast waters.

There is a bend; a pinch.
Ice blocks begin to build up
Restricting the flow,
Thwarting again the efforts of
The river.
Entrapped, it begins to rise,
Building upwards and upwards, pressing
Against its shell.

River blood seeps out onto the land,
Saturating the earth as it
Finds a new path.
The ice, no longer contained,
Flows over the bank as
The river mounts its final charge
Flowing faster than ever
Eager to escape the long winter.

The land is helpless, A casualty of the war Between states.





#### TREATY NO. 9

#### The Numbered Treaties

At their most fundamental level, the numbered treaties were used by the government to secure the 'surrender' of lands by those of aboriginal descent in exchange for certain rights. The treaties intent (what was written) and spirit (what was understood) are two very different things that have generated years of ongoing mistrust, anger, and debate. Signed between 1871 and 1921, the treaties set aside specific lands for the aboriginal people (reserves) and claimed that the rights of the First Nation people to make their livelihood on the land would not be interfered with. In return, they were given cash, schools, health-care, and a promise of an allowance for money and supplies. Many original terms agreed to were oral, but there have been numerous revisions as they were not all included in written form. Some First Nations are even now opting out of the treaty obligations as they have hindered rather than helped many groups.

The aboriginal peoples and the Canadian government entered the Treaty negotiations hoping to achieve dichotomous ends. Concerned over white settlement and diminishing buffalo herds, the Indians sought to use the concessions granted them under the Treaties to ensure their cultural survival. The government, on the other hand considered the Numbered Treaties a means of achieving the goal of their Indian policy namely bringing about the assimilation of the Indian into Euro-Canadian society<sup>2</sup>

The idea contained within the 'Indian Policy' that an entire culture, existing for thousands of years before the first European explorer arrived, could be assimilated into a new culture creates an intense clash that has not abated over the years. As John Raulston Saul notes in his book A Fair Country - Telling Truths about Canada, this assimilation, which would involve the disappearance of the aboriginal worldviews and faith, along with their supporting culture and languages, was thought of as an act of generosity on the part of the colonizer.

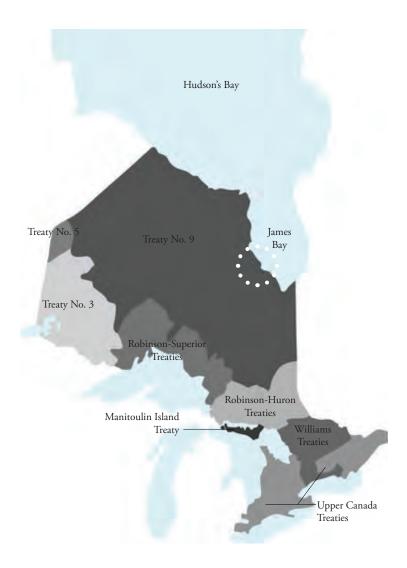


Fig. 7 - Breakdown of areas in Ontario by treaty agreement. Treaty No. 9 represents the largest area, where Kashechewan First Nation is located.

13 PART I | TREATY NO. 9

<sup>1</sup> Hookimaw-Witt, J. 1997. Keenebonanoh keemoshominook kaeshe peemishikhik odaskiwakh [We stand on the graves of our ancestors] Native interpretations of treaty #9 with Attawapiskat elders. Ontario: Trent University. 10.

<sup>2</sup> Whitehouse, D. 1994. The numbered treaties: Similar means to dichotomous ends. Past Imperfect 3 (1994): 25-45.



Fig. 8 - The Albany River fingers as it approaches James Bay. Fort Albany is located to the south in the photo, and Kashechewan is just a few kilometres North and across the river. There is no roadway connecting the two communities during the summer.

The very system that, to some extent, protects the rights of aboriginal people fosters hesitative and limited discussion and interaction. This reluctance to engage with the issue on a deeper level has a dual result; it ensures ethical interaction with indigenous studies while continuing to reinforce the idea of suppression in terms of limitation, division, and victim-hood.<sup>3</sup> As daily activities such as going to school, building new homes, and addressing health concerns are all governed on reserves in some way by the results of the treaties, as well Indian and Northern Affairs Canada (INAC), the division between First Nations and other Canadians is strengthened.<sup>4</sup> Part of the difficulty in moving forward and beginning to repair our relationships stems from the lack of understanding about our ancestors' original contact.

Many look at the First Nations people 'at worst as a problem, at best as people facing problems and asking the rest of us for land, money, special rights'. This unfortunate but accurate reflection of a common sentiment is a major hurdle to overcome. Without a direct memory of the history or any active participation in the discussion, it is easy for many to claim no part of the issue. It's perceived as something too difficult to change, before our time, and not our responsibility. It is this mentality that fosters racism and neglect towards Aboriginal people today. It also leads to resentment when Aboriginal people attempt to reclaim their rights as hosts of their culture with unrestricted access to their resources and homelands.

#### Kashechewan and Treaty No. 9

The First Nations people had been living on the land since long before the arrival of settlers. The Cree people's traditional ways of life on the harsh terrain that surrounds James Bay involved moving across the land during various hunting seasons. The people were protected from the spring floods by remaining inland, and accessed the bay during the remaining spring, summer, and fall months to hunt geese in the marshes.<sup>6</sup>

### Kashechewan First Nation, with a population of approximately 1900, is located

- 3 Dr. William Woodworth, personal correspondence, (20 March 2011).
- 4 Many terms are used throughout this thesis including aboriginal, indigenous, indian, native, and First Nation. Celia Brown reflects on this ever-shifting terminology and suggests that importance is placed on using phrasing that accurately represents the way that people prefer being referred to as, and proper titles. Brown, Celia. Indigenous Thought, Appropriation, and Non-Aboriginal People. Canadian Journal of Education 33, 4 925-950. Ottawa: Canadian Society for the Study of Education, 927.
- 5 Saul, J. R. 2008. A fair country: Telling truths about Canada. Toronto: Viking Canada. 22.
- 6 Aboriginal Ontario; Historical perspectives on the First Nations. 1994., eds. Edward S. Rogers, Donald B. Smith. Toronto: Dundurn Press. 299.



Fig. 9 - Communities along James Bay

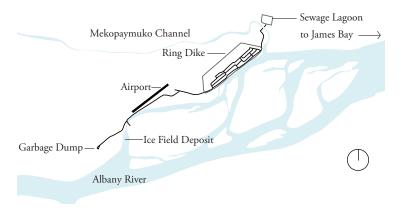


Fig. 10 - Location map of Kashechewan



Fig. 11 - The commissioners' entourage at Fort Albany at the signing of Treaty No. 9.



Fig. 12 - Canada's Economic Action Plan sign at the entrance to the community from the airport road. 2011

within the area of what is now Ontario, divided by Treaty no. 9, signed at Fort Albany in 1905. At the time the treaty was signed, the community of Kashechewan was a part of the Old Fort Albany settlement, located on an island between the two modern day communities of Fort Albany and Kashechewan. It wasn't until the religious division in the community caused a rift that the Anglican portion of Old Fort Albany relocated across the river. There is still a great deal of tension between these two communities, and they function as autonomous bands on the Albany Reserve.<sup>7</sup>

The Hudson's Bay Company originally established the Old Fort Albany settlement as a fur trading post in 1670.8 This was a time of reciprocal learning and trading of not only commodities, but also information, culture, and ways of life. The marriages among the company members and the native women tied these two groups together through their children. Saul remarks that 'the Hudson's Bay Company built its networks – for more than two hundred years one of the world's largest commercial and political structures – in good part through interracial marriages". This unification of purpose and life was, at the time, mutually beneficial.

Part of understanding different cultures, especially in the initial interactions of people, comes from the expression of architecture and the unique responses to the built environment. The Fort Albany post was described as being a 'strong work with four bastions and 43 guns'. <sup>10</sup> The houses constructed for company members in this area were typically two storey dwellings with windows and siding. These buildings were a static signifier of colonization and a direct representation of the settlers built forms. Drawings of the area depict these European style homes against the backdrop of the traditional teepee construction of the indigenous people. It was here, at Old Fort Albany, amidst the cultural constructions and intertwined relationships, that Treaty No. 9 was signed.

The signing of the treaty came about largely because of the dire situation that the native people found themselves in with the dissolution of the fur trade and the encroachment of surveyors, railway construction, and white trappers.<sup>11</sup> The immediate positive effects of the treaty are few compared to the negative

<sup>7</sup> Kashchewan First Nation community profile. 1999. Retrieved January 27, 2011, from http://www.aadnc-aandc.ac.ca/ena/1100100028859.

<sup>8 (</sup>Rogers, 289).

<sup>9 (</sup>Saul, 11).

<sup>10</sup> Payette, P. 2010. Posts in Northern Ontario. Retrieved June 23, 2011, from http://www.northamericanforts.com/Canada/on-north.html#albany.

<sup>11 (</sup>Hookimaw-Witt, 32).

consequences. The colonizers did not get what they had wanted (assimilation of the 'Indian'), and the indigenous people had their way of life irrevocably altered when they were simply seeking protection of their traditional culture.

An example of the poor regard given to the indigenous people during these times is shown by the surrender of land to the Dominion by the Hudson's Bay Company in 1870 that occurred *prior to the signing of the treaties!* These land surrenders meant nothing to the indigenous people living on the land, as they had not been included in these discussions in any way.<sup>12</sup> When negotiating the terms of the treaty, it can be contested that not only was the language used a barrier to understanding but also many of the colonizer's concepts such as land ownership were not even translatable as ideas.

Understanding the treaties is important to the discussion of aboriginal reserves and land claims today. It is a fundamental part of what leads to the built form of the communities and the ways in which they are expressed architecturally. The repercussions of Treaty No.9 find a direct reflection in the community of Kashechewan.

#### Life in Kashechewan from an Outsider's Eyes

Traveling to Kashechewan was an attempt to get to know it as a place, to become more familiar with the people and customs, and to experience a very different part of the country with an open mind. However, as Dr. William Woodworth reflects, "colonization informs the conversations of all non-native people even when unintended, and the dominating 'language' of our profession is deeply imbedded in the very values by which native people have been oppressed – our usual approach is by its nature offensive". According to Saul, the way to negate this naturally offensive approach is by removing ourselves from the ownership of thought and instead "seeing ourselves as part of the place". He goes on to say that we are then "reconciled to the place and thus to the other by widening the circle. Each place has a truth about it. Through reconciliation you find out what that is". The search for the truth about Kashechewan required actually experiencing it in person, rather than simply relying on vague and contradictory stories.

Saul discusses the idea that the North, observed from people in the South, seems



Fig. 13 - Original Treaty No. 9 document, 1905.

<sup>12 (</sup>Hookimaw-Witt, 30-31).

<sup>13</sup> Dr. William Woodworth, personal correspondence, (16 April 2011).

<sup>14 (</sup>Saul, 103).



Fig. 14 - Newest housing development style where we stayed for the duration of our trip. This house represents the 'highest quality' of housing on many of the reserves in northern Ontario.



Fig. 15 - The Northern Store, where everything from groceries to hunting gear can be purchased.

to be a distant responsibility or burden. It is a place that most people will never visit, and rarely think of. There is also the notion that to live or design in these remote places is to promote unsustainability as we "are urban dwellers now, high-tech and post-modern". This is yet another way that people become distanced from participating in the discussion of re-imagining not only our relationship to indigenous people, but also to the land that we so often seek to tame.

It is impossible to get to know fully a place from brief experience, but as architects we are often required to quickly grasp and understand complex relationships of both people and place in order to design. It is not about the appropriation of ideas, forms, or concepts, but rather about understanding the significance of these things to the people in an attempt to resolve all of these influences into a built proposition. As Brown discusses in her paper on Indigenous Thought, Appropriation, and Non-Aboriginal people,

Focusing on the meanings that arise from being in a place with the people; learning the language of the people; watching, listening, and maybe eventually doing as ways of learning (fragments of) an additional culture; perhaps even learning a secondary discourse are all integral... <sup>16</sup>

Experiencing the community, not only by reading but also through actual participation in some small way begins to open up the discussion<sup>17</sup>. A visit to Kashechewan in early May meant seeing it in a single state, without the richness of the seasons. It is an in-between time. The ice has broken up and the last few stragglers remain. Nothing has begun to grow. It is cold when the sun is gone, but warm when it finally comes out. The dust is overwhelming.

The first thing that greets many upon arriving to Kashechewan is the airport. It is utilitarian in the extreme - a simple trailer. It completes its obvious function without fuss allowing passengers a place to sit while waiting, a desk from which to fill out the necessary paperwork, and open space for receiving numerous flown-in packages. Approaching the community from the airport gives a sense of entering an encampment, surrounded by the walls of the dike. They shelter the community from the temperamental waters of the Albany River but sever any visual connection

<sup>15 (</sup>Saul, 47).

<sup>16</sup> Brown, C. H. 2010. Indigenous thought, appropriation, and non-Aboriginal people. Canadian Journal of Education 33, 4 925-950. Ottawa: Canadian Society for the Study of Education. 928.

<sup>17</sup> The trip taken to Kashechewan was from the morning of 3 May 2011 to the evening of 6 May 2011. It was undertaken with the permission of Chief Jonothan Solomon, and the research for the trip received ethics clearance from the University of Waterloo (ORE#17171) on 21 April 2011.

to the land and river around. The shape and form of the community is clearly based on a colonized idea of order and has the feel of a suburban development. Saul points out that "reserves were first pushed to integrate an inappropriate urban concept. They were then condemned, more or less by the same people, for complying". In an effort to address this condition and to have a plan for the future, the community is currently undergoing a 'capital planning study', required by INAC to release funds for development (including houses, municipal services, education, recreation etc.). 19,20

The most central buildings in the daily life of the community are the personal homes (shared by multiple families in many instances as the number of houses is severely inadequate), the Northern Store from which grocery and sundry items can be purchased, the schools for the children, and the church. These latter examples also happen to represent the most 'well constructed' buildings in the community. They are functional and utilitarian, serving specific purposes with little thought to design. From the exterior the roads are filled with bleak repetitions of suburban typologies. Improvements have been made in an effort to raise the performance level of the buildings, and new and innovative solutions are proposed to accommodate the growing population. However, many of the buildings remain severely sub-par: "From press board siding to single pane glass, the homes are neither appropriate for the severe winter conditions to which they are exposed, nor are they designed to accommodate the needs of the families for whom they were built". On top of the low quality of the homes, they also are insufficient to house the population adequately.

There is an overwhelming proportion of sub-standard houses in the community. In an attempt to understand not only the single instances of buildings, but to learn more about the way the community functions as a whole, a comprehensive study was done to view and record all of the buildings within the community. The complete set of images can be viewed in the Appendix. The significant lack of housing, due in large part to the bureaucracy of INAC and contrary to the continued efforts of the



Fig. 16 - One of the portable style school rooms that make up the St. Andrew's elementary school. These buildings are surrounded by chain link fences with basketball nets in between each classroom unit.



Fig. 17 - Faith Temple Pentecostal Church, located on the southwest outskirts of the community.

<sup>18 (</sup>Saul. 81).

<sup>19</sup> Kashechewan First Nation. 2010. Retrieved February 6, 2011, from http://www.kashechewan. firstnation.ca/node/29.

<sup>20</sup> A meeting was held on 15 April 2011 at the offices of the firm conducting the Capital Planning Study. They were originally hired to look at both the design for the existing community, and also to review the possible sites for relocating the community. In the end, the funding for studying the relocation options was rescinded.

<sup>21</sup> Caruso, J. 2005. First Nation housing - The challenge and the opportunities. Accessed March 13, 2011, from http://www.northernontario.org/ Politics/FirstNationHousing.htm.



Fig. 18 - Kashechewan children with protest signs following the E.coli contaminated water issue in 2005. © CBC News



Fig. 19 - Above - Garbage in the drainage ditch after the spring thaw. Fig. 20 - Opposite - Abandoned house showing the many layers of previous repairs and patchwork.

Chief and Council, is a situation that needs to be rectified. It is one among many urgent issues facing the community.

Diabetes is a major health concern in many First Nations communities. The most inexpensive food to purchase is sugar laden, processed food, which is cheaper than anything healthy. The switch from a traditional diet to one governed by the expensive, imported food at the Northern Store has lead to the prevalence of the disease. The Public Health Agency of Canada, in partnership with Health Canada's First Nations and Inuit Health Branch (FNIHB) is working towards addressing the issue of nutrition and education within First Nation communities. The problem was obvious during the brief visit to Kashechewan. The small corner stores offer rows of sugary sodas, chips, and candy bars. Many of the houses have ramps built for the wheelchair bound residents, but the community itself is anything but easily accessible for people with disabilities.

In addition to dietary concerns, water has also become a tainted issue. In the late 90's a water treatment plant was opened up in Kashechewan with an intake a mere 150 metres downstream from the sewage lagoon. In October of 2005 a sample was taken and a boil-water advisory was put on the community due to the high levels of E.Coli bacteria. When medical staff revealed that there was impetigo, scabies, and skin rashes, a state of emergency was declared. Rather than immediately evacuating the community, bottled water was shipped in by INAC to accommodate the community's drinking, cooking, and bathing needs. It eventually took just under one month to evacuate the community.<sup>23</sup> The cost of flying the bottled water into the community is coincidentally the same as the construction cost to build one new house.<sup>24</sup> For the cost of evacuation, numerous houses could be built. Since this time improvements have been made, but the possibility of recontamination is still present.

Contaminated water problems in Kashechewan find a visual metaphor in the form of the water treatment building and the disconnection between the community and the sewage lagoon. The water treatment facility is a rectangular corrugated steel building just inside the dike. A blank wall faces the street, covered in graffiti

<sup>22</sup> Health Canada. First Nation, Inuit, and Aboriginal Health. Retrieved September 1, 2011 from www.hc-sc.gc.ca/fniah-spnia/diseases-maladies/diabete/index-eng.php.

<sup>23</sup> Uncertain future worries Kashechewan leaders. 2005. Retrieved July 24, 2011, from www.wawataynews.ca/node/275.

<sup>24</sup> Ontario reserve decrees First Nation water crisis. 2005. CTV News. Retrieved February 6, 2011, fro http://www.ctv.ca/CTVNews/Canada/20051021/kashechewan\_watersafety\_20051021/.





Fig. 21 - Water treatment facility located in the north east corner of the dike.



Fig. 22 - Leftover metal from the bridge to the sewage lagoon. The road continues on in the distance across the creek.

disguised by painted hearts.<sup>25</sup> It is a secretive and grimy building. The corrugated steel piping that once connected the community across the creek to allow workers access to the sewage lagoon was removed by Natural Resources Canada.<sup>26</sup> It lies on the shore now, a broken and twisted piece of metal, a visual representation of the state of Kashechewan.

This litany of serious concerns contributes to the community's issue with suicide; as difficult and personal an issue as it is to discuss, it is a signifier for the overall health of Kashechewan. Most notably in 2007 twenty-one young people in Kashechewan attempted to end their lives, including a child as young as nine years old. While suicide, having been a growing concern in First Nations throughout Canada, was not an unknown problem, this mass suicide attempt was unprecedented. With many First Nations, drug and alcohol abuse are a common outlet for many people and may have an influence on this statistic. Kashechewan has bootleggers that bring in alcohol and drugs although it is officially a dry community.<sup>27</sup> As NDP member Charlie Angus stated in a press release, "what future is there for the young people in Kashechewan? The grade school is shut down. There is no community centre for young people. This is not a regional shame. It is not a national shame. Kashechewan has become an international symbol of utter hopelessness". 28 It became so dire that there were even reports of international aid agencies stepping in. This report, documented in 2007, also highlights the hopes of the community for their relocation to a new site. Now, in 2011, four years after this news release, Kashechewan is still facing the same issues.

The nameless, faceless number 21 permeated the visit to Kashechewan. Who were these people that found themselves so mired in hopelessness that they banded together in an attempt to end their lives? Did they pass by on the street, going about their business? From afar this news is unsettling, but to be present in the place where it occurred is another feeling entirely. The physical distance from these tragedies makes it much easier to increase the emotional distance from them as well. People will spare them a moment of thought, and then remind themselves that "these difficulties, even tragedies, are all caught up in complex negotiations involving civil servants and lawyers over money and land'.<sup>29</sup>

During the time that this mass suicide attempt occurred, the elementary school

- 25 These red hearts are commonly seen throughout the community. They cover up existing graffiti and are the brightest and most expressive element in the entire community.
- 26 The circumstances as described by Kashechewan community members.
- 27 As pointed out by community members.
- 28 News Release, NDP Communications. 2007. NDP calls for immediate action on suicide crisis in Kashechewan.
- 29 (Saul, 4).

was shut down because of dangerous mould contamination, among other issues. It subsequently burned down (arson perhaps), and the children were without a school. The intention was that a new school would be built shortly following, during the fall of 2007.<sup>30</sup> Portables were provided as a temporary measure while awaiting the construction of the new building. Kashechewan in May 2011 still had portables functioning in place of an actual school. This can be considered as part of those previously mentioned complex negotiations, or can be more accurately seen as yet another example of a inadequate and inappropriate fix for a growing community.

Uncovering the layers of complexity posed by the lasting implications of the treaty can seem like a fruitless and impossible task. What is clear is that after all of the years of band-aid solutions and half measures, things have not improved for many First Nations people in any substantial way. But it is not hopeless. A "willingness to reimagine progress would actually put us in the forefront of an international movement. That reimagining is exactly what people are reaching for...."<sup>31</sup> Ingenuity, and a concentrated effort on the part of all participants (indigenous and non-indigenous people alike) can take these layers of complexity and distill them into a singular vision that respects the past, present, and future lives of the community.

The built environment created by the continuing struggles, uninspired static typologies, and functionalist designs in no way speak to a reimagining of relationships.<sup>32</sup> Hans Carlson in his book on the Cree of James Bay suggests, "it's important to remember that, by definition, environments are also specific places that must be capable of sustaining physical bodies as well as the more abstract cultural soul".<sup>33</sup> What exists currently in the community hinders both the health of the physical body and the vitality of the spiritual soul. This reflection on Kashechewan, as seen by the eyes of an outsider, doesn't seek to place blame, rather, it attempts to bring the issues to the forefront so that the discussion can be developed, and change can take place. Critically analyzing difficult situations can be hard because it seems like any positive change, no matter how small, is a good thing. But these small changes can give a false illusion of progress.

These complex webs of daily cultural, social, and physical concerns occur right alongside the power and relentlessness of the Albany River. Juxtaposed against this natural force, the community appears even more fragile and bleak.

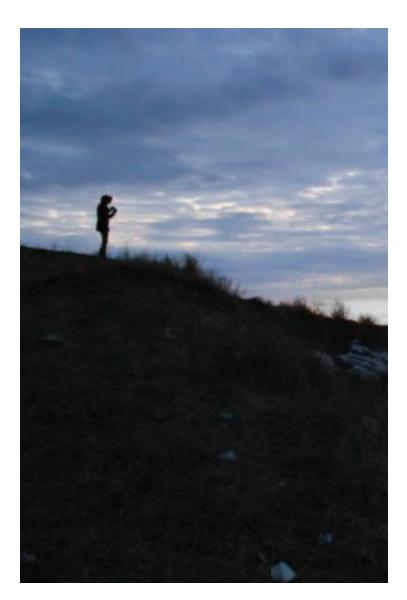


Fig. 23 - A lone figure standing on top of the dike.

<sup>30</sup> Paradis, S. 2007. Kash plan addresses classroom shortage - New school to house all students. Timmins: Timmins Daily Press.

<sup>31 (</sup>Saul, 4).

<sup>32</sup> The state of the community's buildings, landscape, and design are all indications of the deepseated cultural contamination.

<sup>33</sup> Carlson, H. M. 2008. Home is the hunter. Vancouver, BC: UBC Press.



Fig. 24 - Top - Panoramic view taken from the southwest corner of the dike looking across at a small island, and Kakago island beyond.

Fig. 25 - Bottom - Panoramic view taken from the middle of the dike looking across at Kakago island.



25 PART I | TREATY NO. 9



Fig. 26 - Aerial photograph of ice deposits up on the mainland near Moosonee. The scale is difficult to discern from the airplane, but it appears that the icebergs have crushed the small trees alongside the river.



Fig. 27 - Ice along the shore during spring breakup in 2008 when Kashechewan was evacuated due to flooding concerns. © Paul Lantz

#### The River

The Albany River was known in Cree by the name Chichewan meaning 'many rivers form one which flows to the ocean'. The name for the community stems from its intimate relationship with the river, and was originally supposed to be Keeshechewan meaning 'where the river flows fast'. The casual ways that we refer to proper names of places in Canada does a disservice to the indigenous people that lived on those lands, and fished in those waters. James Bay' and "Albany River' were both named by the British after the same person, James, Duke of York and Albany, who later became King James II of England. The name of a place embodies both our historical relationship with it and our connection to it as a place, but "we never really ask ourselves why so many of our provinces, cities and towns, our rivers and lakes, have Aboriginal names, as do our animals, birds, fish, pieces of clothing and means of transport; why there is an Aboriginal presence in the cadence of much of our popular music, particularly in Acadie and Quebec; why Aboriginal art seems to fit us like a glove". In much the same way we take for granted the British renaming of traditional indigenous places, like the Albany River.

Each year the river freezes over and remains in its solid state from mid fall until the spring breakup. As the second longest and largest river in Ontario, it drains an area of 135,200 square kilometres and discharges 1,420 cubic metres of water per second into James Bay.<sup>37</sup>

Kaschechewan is located directly on this massive river's flood plain.

In Cajete's book on *Native Science*, he discusses the concept of renewal as an important aspect of the indigenous paradigm.<sup>38</sup> The annual flooding of the river signifies the return of geese to the land, and also "allows not only a cleansing of the river systems but also a redistribution of nutrients... during this brief period of the year, when flooding produces vital fertilization... Flooded areas are also crucial spawning areas... and they are areas of new growth when the waters recede".<sup>39</sup>

- 34 Confirmed by residents in Kashechewan as the correct meaning of the word. The exact occasions surrounding the misspelling of the community are unknown. The word Kashechewan has no meaning in Cree.
- 35 Kudelik, G. n.d. Albany River. The Canadian Encyclopedia. The Historical Dominion Institute. Retrieved September 1, 2011 from thecanadian

encyclopedia.com/index.cfm?PqNm=TCE&Params=A1ARTA0000112.

- 36 (Saul, 40).
- 37 (Kudelik).
- 38 (Cajete, 56-78).
- 39 (Carlson, 41).

The people living on the land understood this naturally occurring cycle, and they accommodated their patterns of settlement to the seasonal changes. With the onset of fur trading and the posts established by HBC, the settlements gradually became more permanent. With the signing of the treaty and the subsequent confining of the communities onto reserves, the locations of these settlements on the flood plain were solidified.

Between 2006 and 2009 over 3.5 million dollars were invested in improving the dike and other flood protection measures. In 2007 the government signed a \$200 million dollar deal that included increased funds for further flood protection. In 2010 the dike was reinforced with concrete blocks (total contract cost \$5.6 million) in an effort to prevent the erosion of the dike, which was occurring at a rate of 1 foot per year. The action of the ice along the surface dislodged many of the blocks after the first spring following their installation. The break-up was considered to be a mild one. It is likely from the failure of the first year that the blocks will continue to become dislodged over the years, and may eventually fail completely. A concrete plant was built near Kashechewan expressly for the manufacturing of the blocks. Projects like this one provide much needed jobs for many of the people in the community, and also foster a sense of progress. These dike 'improvements' came after the community was evacuated because of flooding in 2004, and again in 2006 and 2007. In 2008, the community was evacuated yet again. The service of the support of the people in the community was evacuated because of flooding in 2004, and again in 2006 and 2007. In 2008, the community was evacuated yet again.

Whether the blocks function or not, the river rose to within just two feet of the top of the dike in 2009. While the concrete blocks may aid against the dike failure, the community still faces the possibility of the water level rising above the dike. Instead of continuing to struggle against protecting Kashechewan in the existing location, the idea of relocation has been mentioned multiple times.

The idea of taming or bending the natural behaviour of the land to suit human purposes is not a native one. It stems from an urban viewpoint that 'the land is seen as separate from the city and is not known...the land is to be feared. Therefore, however severely it is minded or pulped, so much the better. Humans are cutting it down to size. We are taming it. Thus severe exploitation makes us, a frightened and insecure people, feel superior".<sup>42</sup> This isn't to say that modern methods of design and environmental protection don't have a place within native communities



Fig. 28 - Concrete blocks, installed in 2010, protect the dike from yearly erosion. This image shows the dike after its first winter. Many blocks have shifted but the overall system seems to be functioning as intended.



Fig. 29 - Many of the blocks along the lower edge have been dislodged by the massive ice chunks. None of the blocks are tied back to the dike, they just rest on the surface.

<sup>40</sup> These results were determined from a visual examination of the dike.

<sup>41</sup> Chidley, D. 2008. Anxiety deepens as floods force another Kashechewan evacuation. Accessed January 27, 2011, from www.cbc.ca/news/canada/story/ 2008/04/28/ontario-flood.html.

<sup>42 (</sup>Saul, 283).

– if anything, it is these communities that can benefit the most from innovative design. Hans Carlson reflects on this misconception stating that "often there is a tacit assumption that the older practice is always somehow 'more native' and that if native people have moved away from that older practice then they have somehow forfeited their ability to define their environments and their rights on the land'.<sup>43</sup>

During the winter season the river becomes part of the network of ice roads connecting remote northern communities. It acts as a resource during the summer for fishing and transportation of goods into the community from barges in the bay.

#### **Ongoing Discussions**

With the pressing matters in the community and the funding delays, there is a sense of immanence that doesn't allow for lengthy reflections on every issue. When studies do occur, the results don't seem to echo accurately the sentiments of the people. Alan Pope, from INAC, authored a report in 2006 that advised INAC to relocate the Kashechewan Reserve to Timmins, and also made a series of other recommendations based on his findings. <sup>44</sup> Kashechewan hired their own representative, Emily Faries, to complete a similar report that more accurately reflected the desires of the people. <sup>45</sup> This document is owned by the community and has not been made available to the public. It has never been perfectly clear which option most people prefer; improvement of the existing community, relocation to Timmins, or relocation a few kilometers upriver to higher ground.

These choices, listed as if they are easy to decide upon by checking a tick box, embody a series of complex factors including funding, culture, history, feasibility, and collective choice. The difficulty of knowing there is a serious decision to make would be draining for community residents, and added to this choice is the weight of the other improvements that are needed within the community. The abandoned and dilapidated buildings throughout stand in contrast to the construction of new buildings and infrastructure, mirroring the indecision for the future. Ironically, the most prominent of these buildings is the old church, which now functions as a gathering place for the community's children in the late afternoons and early evenings. It also appears to have been the most architecturally detailed and

Fig. 30 -Opposite - Abandoned church where groups of kids congregate to hang out and play in the evenings. This facade faces the dike, where the photo was taken from, and affords the kids a measure of secrecy from the community on the other side...

<sup>43 (</sup>Carlson, 17

<sup>44</sup> Pope, A. 2006. Report on the Kashechewan First Nation and its people. Gatineau, Quebec: Indian and Northern Affairs Canada.

<sup>45</sup> Emily Faries is a professor in the Native Studies department at the University of Sudbury. She has authored numerous papers on decolonizing aboriginal research, and also historical papers from the native viewpoint. She holds four degrees and is a First Nation person of the Cree nation.





Fig. 31 - One row of the teacher's housing. The reflectivity of the windows is caused by the sheets of plexi-glass that are screwed overtop the exterior frame in an effort to protect the windows from rocks and other objects thrown by kids. This is a huge fire safety issue.

considered building in the community and has the greatest presence, as ramshackle as it is.

Part of the difficulty in coming to a decision about what will become the 'place' of the community of Kashechewan stems from the native idea that "a person's conclusions are not perceived, even by that person, as products of his own making. Instead, it is understood that they are somehow visited upon him. The sense of being an architect of one's conclusions is replaced by a sense of having merely made oneself open to receive them". <sup>46</sup> Cajete's book on native science reinforces this idea, as he discusses the relevance of the native way of knowing. He states that 'sooner rather than later Western society will realize that Native peoples are not simply vestiges of the past and sources of interesting and even beautiful ideas, but rather they are very much alive today, and their economic and political issues must be addressed on their own terms". <sup>47</sup> The people of Kashechewan, led in part by their chief, council and dedicated community members, have already begun this transformative process by taking charge of their own affairs and working with their own consultants (such as Emily Faries).

This transformative process begins, in large part, with educating and instilling cultural aspirations in the children of the community. By pursuing self-governance in education, Kashechewan took another step towards addressing its own issues. The Hishkoonikun Education Authority that deals with the schools in Kashechewan, founded in 1990, mandates a high level of education for its youth on its own soils. Traditional ways of life, historically, have been forced out of the classroom beginning with the advent of the residential school system. Recently, the schools have begun to employ more educators from within their own communities that have both traditional and modern knowledge to impart.

This positive change is not yet reflected in the design of the schools and related buildings. The teachers from the south that do come to work in the community are housed in what is referred to as 'the teachers' housing'. It is one street within the community that is noticeably different than its surroundings. There is a portion of a chain link fence that prevents people from cutting through the street.<sup>49</sup> The windows on the houses have Plexiglas screwed onto the outside to deter children

31



Fig. 32 - The Francine J. Wesley Secondary school

<sup>46</sup> Ross, R. 2006. Dancing with a ghost: Exploring aboriginal reality. Toronto: Penguin Canada.

<sup>47 (</sup>Cajete, 9).

<sup>48</sup> The HEA also has a Facebook page where they communicate with students and community members. It had become a forum for discussing issues with both funding and education in general.

<sup>49</sup> The colonized idea of land ownership is still not embraced by the members in the community, evidenced by their freedom to walk across any open lands, including people's yards.

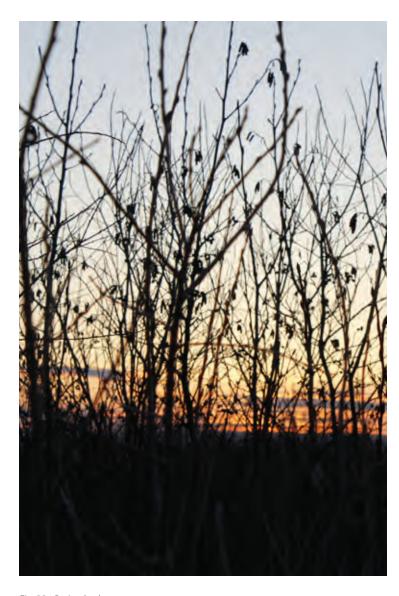


Fig. 33 - Spring buds at sunset.

from throwing rocks (a common pastime). The Francine J. Wesley Secondary School was constructed in 1999 and has had one minor addition. There was an attempt to represent the form of a goose with the building, but beyond that there is very little inspiring about the architecture itself. The inside of the building is more welcoming than the exterior, due in large part to the cultural artwork created by the students, under the guidance of their native art teacher, on the walls in the hallways.

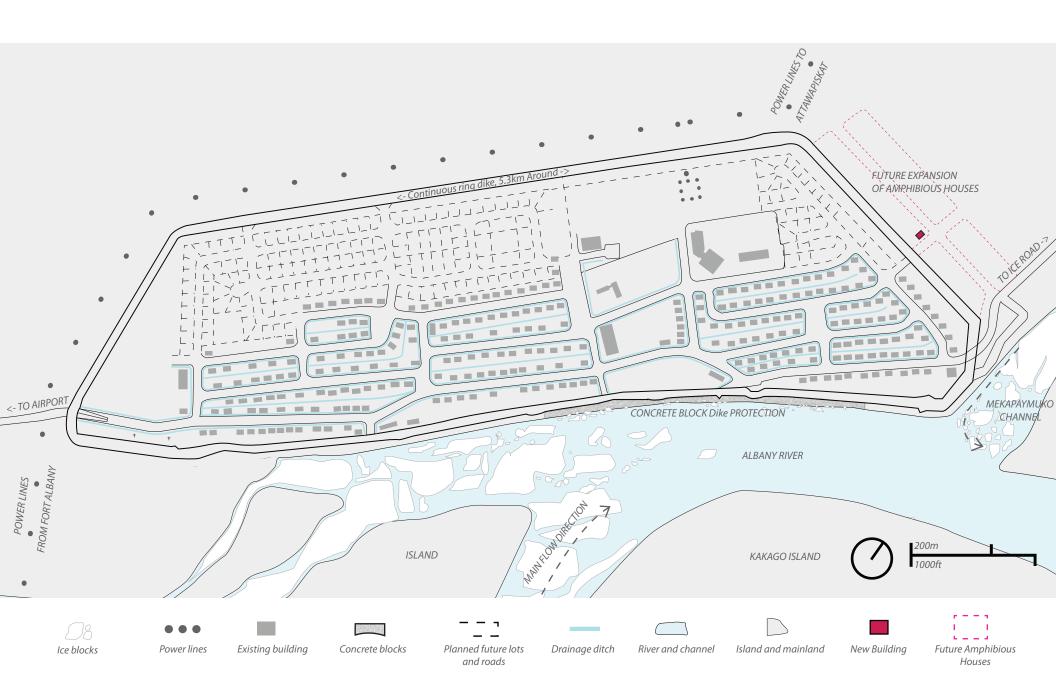
It is evident that something fundamental needs to change in order for the community to progress. Saul describes the process of transformation that needs to occur through a development of our relationships; "in Cree alone, you find a vast array of concepts central to these protocols — concepts that describe how people can live together. These are not in the first instance about ownership or competition or control. They are about sustainable human relationships. More important still, they are about harmony in a world in which humans are only one element among a vast panoply of dynamic forces". <sup>50</sup> This harmony is no longer visible to the eye in Kashechewan.

On a spiritual level, it is possible that the overall health of the community is dependant upon its relationship with the land; the constant struggle of the community to repel the naturally occurring flood cycle can be seen as a metaphor for their struggles with the government. In both instances there are many benefits to be gained from close contact, but at the same time an overwhelming presence of either can lead to setbacks. Creating a balance between people and river, community and government, will enable new and lasting relationships. This development, when expressed through the built form of the community, can act as a silent signifier and visual representation of this multi-faceted change.

50 (Saul, 51).

# PART I - DESIGN PROPOSAL

Let it Flood



### LET IT FLOOD

Ice is one of the most dangerous components of flooding in northern communities. The size and mass of the ice chunks can devastate buildings. This design proposes an amphibious house that floats during a flood and then returns back to the same position when the waters recede. Speaking to both the danger of ice, and also to the future expansion of the community, the amphibious house is located beyond the walls of the dike. The flow direction of the river and the angle of the dike are taken advantage of to shield the amphibious house beyond from the fast moving water and ice. Instead, the land outside the dike becomes slowly saturated and the building rises with the river.

The amphibious house is not intended to be lived in during a flood event. No road access and cut-off services make remaining in the house untenable. As the flooding typically occurs during the spring goose-hunting season, the design takes advantage of the fact that many community members are further inland and upriver during this time. The amphibious house ensures that when people do return, their homes and possessions have remained intact.

While the idea of an amphibious house is not a new one, we know of no examples where they have been implemented in climates as cold as in Kashechewan. The design of the amphibious system pulls from the existing foundation building practices within the community, and uses existing amphibious building solutions to provide the house with buoyancy and vertical guidance.

Existing houses can also be retrofitted to make them amphibious as well. By using a single case-study house, the system could be evaluated to determine whether the extra expense is justified, and more importantly, whether the system will work in this situation.

The amphibious house speaks to life alongside the river on a floodplain in a more natural way, working with the water rather than against it. Instead of relying on only one method of flood protection, the amphibious house addresses what happens in the eventual, and perhaps soon, event of a major flood.

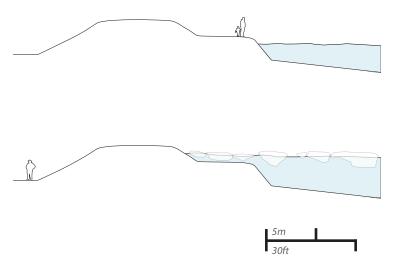


Fig. 34 - Opposite - Community plan showing the relationship of the river to the community, the areas of ice build-up, and the dike reinforcing.

Fig. 35 - Above - Section through the dike. The top illustration shows the average level of the river, and the lower illustration shows the spring condition at two feet below the top

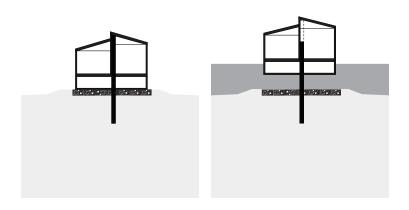
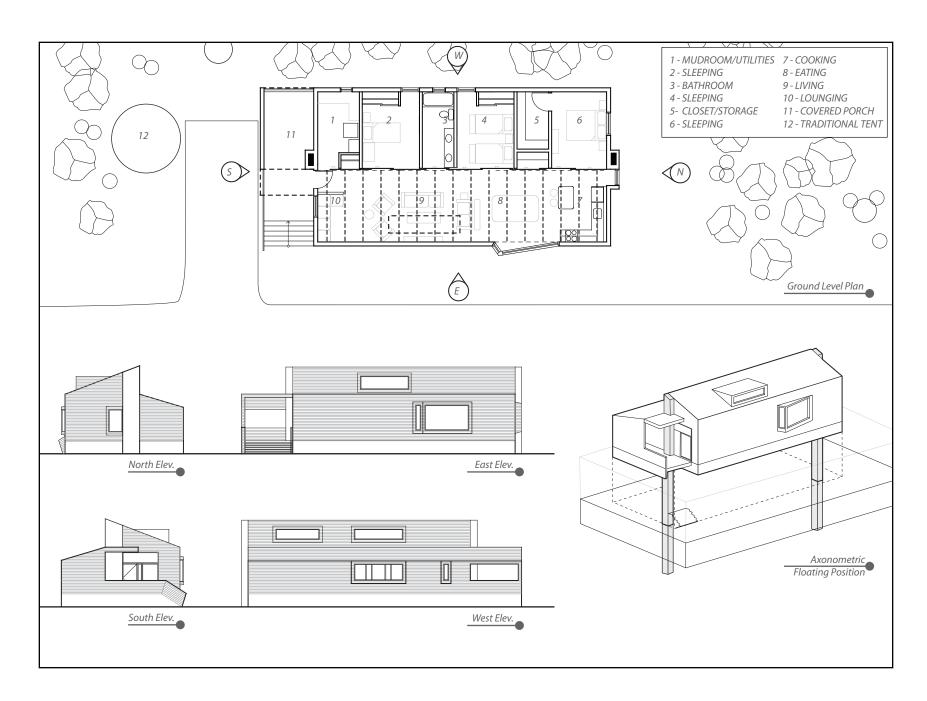


Fig. 36 - Diagram illustrating the house resting at grade on a foundation of gabion baskets, and its position during a flood. The dashed lines indicate the location of the vertical guidance posts.

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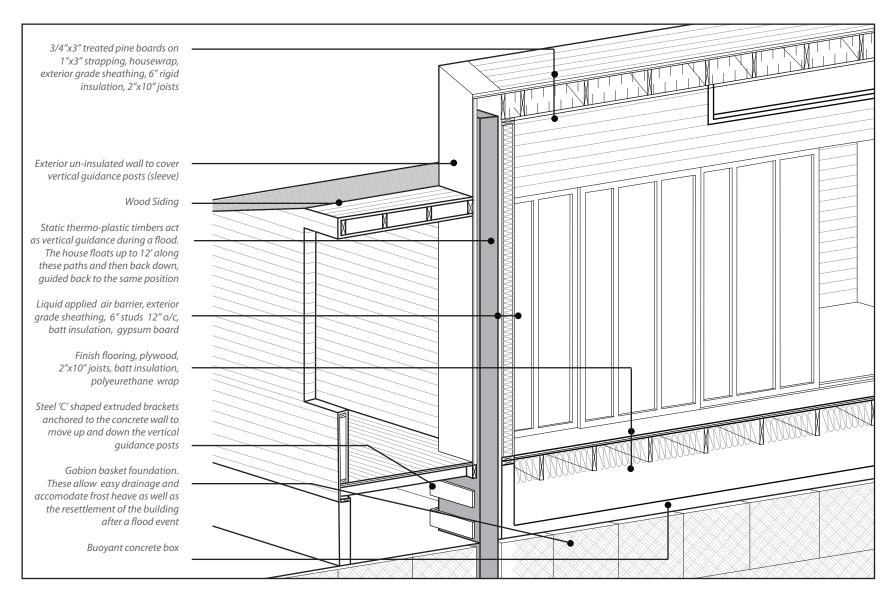


Fig. 37 - Opposite - Ground level plan and elevations. The house is designed simply to make use of typical building practices, but incorporates light, orientation, and space planning in an innovative way.

Fig. 38 - Above - Axonometric detail depicting the vertical guidance system with the buoyant concrete crawlspace.

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Fig. 39a - Treated pine is used extensively throughout both the interior and exterior of the house, creating an enveloping feeling with the simple beauty of wood. The vertical guidance sleeves are expressed on the exterior, while a generous porch allows items to be stored outside to float during a flood as well as for social gathering during the summer.



39

Fig. 39b - Selective fenestrations allow multi-directional light that marks the passing of time within the house and creates a different feeling throughout the seasons. A mix of solid and semi-translucent sliding screens separate the private spaces of the house from the communal spaces, but can be opened up to create one large interior space.

# PART II

Methods of Movement

### RIVERWAY

Inhabitants in the void Between the steel planes Of River and Sky Move quickly along The liquid surface.

Along the river's length a paddle whispers,
A motor hums.
It is the highway of the north,
Navigated by the spirit
And years of intimate contact.
It changes attitude daily,
Indifferent to any desires

But its own. It allows free movement along Its length, but can exact a steep toll On a whim.

It is the edge on which
We tread lightly,
Conscious of the world above
But wary of the workings
Below.





#### METHODS OF MOVEMENT

#### Remoteness

The relative inaccessibility of many First Nations communities in northern Ontario means that they experience more than just a cultural separation from the rest of the province. The distance puts these communities out of mind for most. Also, in our modern cities and even in many architectural discussions there is a notion that taking too much interest in these vast, empty regions means regressing into a romantic wilderness view of Canada – one that we, as modern people, imagine belongs only in the past. This perspective attempts to negate somehow the fact that most of Canada's landmass can still be considered today as part of this 'wilderness'. It also represents a fear of the unknown land.

Kashechewan is located approximately 500km from its closest urban centre, Timmins. The nearest communities are Fort Albany a mere 8 kilometers away across the river and islands, Attawapiskat, approximately 85 kilometers to the north, and Moosonee, 118km southeast.<sup>2</sup> In addition to the centralized communities, there are also family hunting camps throughout the area. The traditional lands that the Cree once inhabited stretch far beyond the current boundaries of the reserve. Until the mid 1900s, most of the Cree spent their years in the bush living with the land.<sup>3</sup> Remoteness is constantly looked at as a negative quality, and also as something to be overcome. While the internet now allows for First Nations to become more connected with the outside world it still does not shrink the physical distance between the small communities in the north and the dense population in the south.<sup>4</sup>

A common question posed by outsiders to people in remote places like Kashechewan is 'why don't you just move'? The question is borne out of misunderstanding and years of cultural contamination. It is true that a number of people do choose to move off the reserves for many reasons, but the culture still remains rooted to the place of the ancestors.

## Experience by Plane

- 1 (Saul 47)
- 2 Kashchewan First Nation community profile. 1999. Retrieved January 27, 2011, from http://www.aadnc-aandc.gc.ca/eng/1100100028859.
- 3 (Carlson, 47).
- 4 Lynch, M. First nations get connected. Northern Ontario Business Vol. 22: 3.



Fig. 41 - Northern workers heading out from Timmins. The majority of people on the airplane were construction workers, and nurses with their patients.

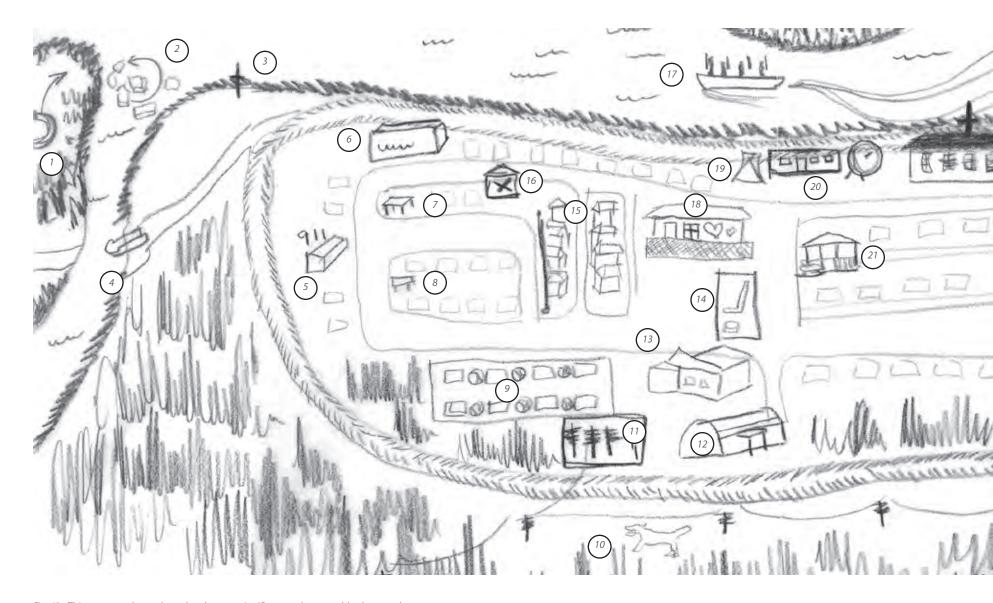
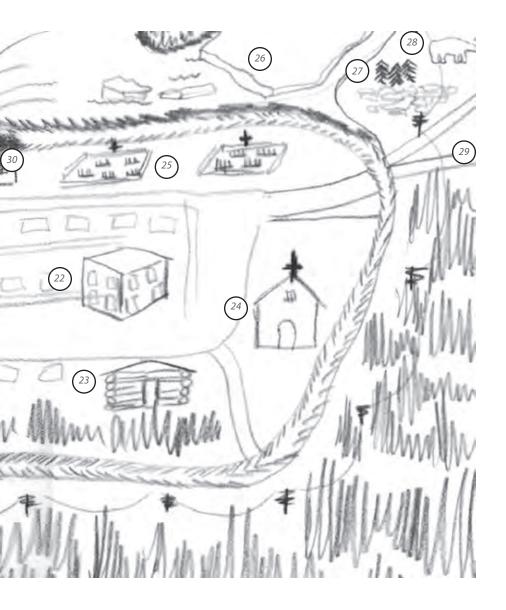
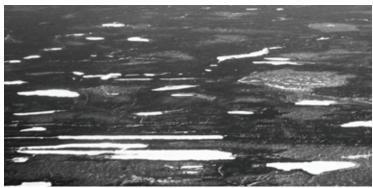


Fig. 43 - This conceptual map demarkes the most significant and memorable places and experiences from the trip to Kashechewan. It is not accurate in the true sense of the word, but it represents a very distinct and personal way of reflecting on the community.



- 1 Where the sun rises
  2 Churning, rotating ice
- Grave marker with necklace
- Twisted metal piece
- 5 NAPS police station
- (6) Water treatment facility
- 7 'Triana's Playground' memorial
- 8 Jail fire memorial
- Elementary school portables
- (10) Wolves
- 11 Power transformer station
- 12 The Northern Store
- 13 High school
- (14) Blue arena
- (15) Teachers' housing rows

- 16 Josephine's Inn (no vacancy)
- (17) Hunters returning
- (18) Hishkoonikun Education Authority
- (19) New teepee
- (20) The Band Office (with satellite dish)
- (21) Residence for the week
- (22) Abandoned 2 storey building
- 23 Log house
- New Pentecostal Church
- 25 Old and new cemeteries
- Solid sheet of ice on the river
- Field of ice on the land
- The dump (with bear)
- (29) Road to airport
- 30 Abandoned church





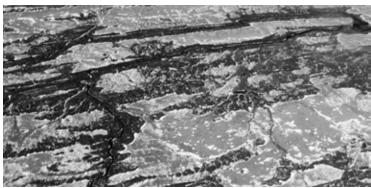


Fig. 43 - Three aerial views of the changing landscapes flying north from Toronto - Timmins - Moosonee - Fort Albany - Kashechewan.

The most direct way to get to any place is in a straight line through the air. For many, the experience of getting on a plane in one location and off in an entirely new place is a common one. This method of transportation separates our natural connection to the earth in favour of a spiritual out-of body perspective on the world. This mode of travel has the ability to abstract the land more than any other. In the words of poet and Prime Minister Pierre Elliot Trudeau; "Travel a thousand miles by train and you are a brute; pedal five hundred on a bicycle and you remain basically a bourgeois; paddle a hundred in a canoe and you are already a child of nature".<sup>5</sup> It can only be inferred what becomes of one traveling by plane. While this insight does not include a reference to travel by air, it sets up a comparison for the various methods of human transportation. In each instance, the speed at which travel occurs as well as the physical separation from the land plays a role in their status. At each level we detach ourselves further from the experience of the natural world.

Traveling to Kashechewan from southern Ontario requires taking an airplane unless you are the extremely adventurous sort. Short hops in turbo propeller planes at low altitude allow one to consider the gradual change in the landscape from metropolitan area, to suburb, to farmland, to forest, and then to muskeg - the saturated lands of the north. It is truly amazing to witness the network of roads, so orthogonal and precise at the onset, turning into flowing pathways that maneuver around the obstacles in the land, ultimately disappearing completely. Travel by plane affords us this special perspective and we find solace in the fact that the land "...once so strange and unknown – reveals itself" when "...what we actually find is only an illusion of human order, a screen behind which lies the unceasing cry of the wild". This illusion of order is disrupted by the increasingly varied patterns of the landscape. Huge stretches of land show evidence of the action of glaciers from thousands of years ago, while the waterways running alongside them change shape and pattern where they meet up with the constructions of nature's carpenter, the beaver.

The entire experience of this landscape from the plane is one of detachment, where usually the only sounds are the hum of the engines, the murmurings of in-flight movies, and the cries of babies. Forms blur together on the ground and lose all sense of scale. In James Corner's book, Taking Measures Across the American Landscape, he discusses this phenomenon of aerial objectivity stating, "the inescapable

- 5 Trudeau, P. E. 1944. Exhaustion and fulfillment: The ascetic in a canoe. Canada: Wilderness Canada.
- 6 Corner, J. S. 1996. Taking measures across the American landscape, eds. MacLean A. S., Van Valkenburgh, M. New Haven, Conn.: Yale University Press.

assumption of a viewpoint in representation is never neutral or without agency and effect; representation provides neither a mirror reflection of things nor a simple and objective inventory". While the experience of the land from a plane is not a representation of the landscape in itself, it can be seen, in essence, as consistent with a map or plan view. In these types of drawings the viewer assumes the same vantage point as in a plane and can make judgments and assumptions based on this outlook.

The aerial "view and method for exploring the world starts with a detached 'objective' view to create a factual blueprint, a map of the world. Yet, that blueprint is not the world. In its very design and methodology, Western science estranges direct human experience in favor of a detached view". Traditional practices of mapmaking for the indigenous people were not centered on accurate measurement; they instead reflected a deeply understood sense of human experience. Physical measures were used to create maps that would demonstrate what were considered the important features of the landscape, and were drawn in such a way as to indicate the relative difficulty of traversing, or the impact/magnitude of the feeling of a particular location. Maps were thus imbued with the indigenous peoples' special understanding of the land and human interaction upon it.

The experience of the land from the detached viewpoint of the air would have been considered a very spiritual experience to an indigenous person of the past and would have represented an out-of-body encounter whereas today it is simply thought of as a commonplace sensation.

Within the airplane itself, detachment is again experienced because of the inactivity of the participants. No one, other than the pilot and co-pilot, has any direct relationship with the outcome of the flight. From the time the plane is boarded until it touches down in its final location, the inhabitants are pulled along without any sense of connectedness or authority – they are simply passengers. The same can be said for traveling in any enclosed vehicle that severs connection to the outside world, but this sensation is the most saturated on an airplane.

In the summertime Kashechewan can be accessed by plane or boat only, and during the winter it can be accessed by ice road and plane. During the transition seasons of spring and fall, there is a period of time where the community can only be accessed by



Fig. 44-The view from the airplane flying across the river. The landing gear stayed down for the duration of the flight between Fort Albany and Kashechewan as it is a brief five minute flight.

<sup>7 (</sup>Corner, 18).

<sup>8 (</sup>Cajete, 24).



Fig. 45 - Helicopter used to transport patients, respond to emergencies, and drop off supplies in the various northern communities.



Fig. 46 - Small Air Creebec plane with regularly schedule service between Timmins, all the way up north to Peawanuck.

air. This makes travel to and from these remote communities very expensive. Each of the northern communities in Ontario has had an airstrip built to accommodate not only the personal travel but also the delivery of goods. Prior to the construction of the airstrips, bush planes equipped with pontoons or skis would make the flights but during the spring and fall they could not land and thus could not be relied on regularly. Now, in addition to the planes, deliveries of supplies can also be hoisted up by a helicopter and then dropped off without it ever touching down, providing the ability to access people and camps outside the community itself.

Many of the people that make the regularly scheduled flights north are either in healthcare traveling with patients, or workers who do construction and maintenance projects on the reserves. These people seem to have established a communal sense of purpose. The further north the plane went, the more it seemed as though everyone knew each other. The flight attendant appeared to pick up conversations with people where they had left off the week before. Camaraderie on the plane increased as people shared remarks and observations about the landscape below.

In most instances an airplane's take-off cannot be visually connected to its point of departure. The short five-minute flight from Fort Albany to Kashechewan allows for a unique phenomenon: upon landing in Kashechewan, the dust cloud created by the plane's take-off in Fort Albany is still visible across the river. The size of it, increasing and changing directions with the wind, dwarfs the community. This ephemeral sensation sparks a realization of the impact and magnitude of this type of travel.

The dust could is also a tangible reminder of the historical connection between the people in Fort Albany and Kashechewan.

<sup>9</sup> There is an Air Canada Jazz flight from Toronto to Timmins, followed by an Air Creebec flight that lands first in Moosonee, then Fort Albany, then Kashechewan, and continues up the coastline to the communities of Attawapiskat and Peawanuck daily. The total cost of the flight was around \$2000CAD.

10 Aboriginal Ontario; Historical perspectives on the First Nations. 1994., eds. Edward S. Rogers, Donald B. Smith. Toronto: Dundurn Press.



Fig. 47 - View back toward Fort Albany across the Albany River. The dust cloud was left behind during takeoff and was still visible during the landing in Kashechewan.



Fig. 48 - The community's tractor pulling wrecked cars to the dump.



Fig. 49 - A car alternator that a very important contact in Kashechewan requested I bring to them from their garage in Waterloo. It makes for an unusual gift, but nonetheless is part of what made the trip to Kashechewan possible.

#### **Experience by Automobile**

Travel by car, similar to travel by plane, "allows a sense of power and separation, a sense of hubris, that is not possible in a canoe or on a sled. Engines have a sound that breaks the quiet of the bush; they speak out and comfort humans by assuring them that they can still hear something familiar. In their own way, they are telling a story about all of us; or maybe it's better to say that they are pushing people towards changing the story they tell about the land". While this sensation is especially evident on smoothly paved highways going upwards of 100 kilometers an hour, it can still be experienced in the slower-paced daily activities within the walls of the dike. Instead of giving people power over nature, car travel seems to allow them to achieve a sense of power and separation from their own community.

Orientation to place was part of a sacred process of understanding the land in many indigenous traditions. Movement around and within the environment enabled this understanding to develop. Looking at the world from different perspectives is a vital part of infusing spirit into our relationships with the land. Car travel tends to dilute the process of orientation as the driver has little to do besides follow the pathways (usually roads) already in place.

Even though there is no year-round road access to Kashechewan, many people have either a van or a truck. Practicality means that there are few cars as they have more difficulty coping with the ice, snow, and mud, as well as having less room for family members and supplies. Vehicles allow the people of the community easier access to groceries, help with transporting goods, and a quick way to get to work. The other main purpose of vehicle ownership in Kashechewan is the ability during the winter to leave the community and drive over the ice road to other places such as Moosonee. Ironically, this gives the winter a sense of freedom, whereas summertime is felt as a time of confinement for people who don't have the means to leave the community by plane. There is no 'mechanic' in Kashechewan, so as with many remote places people need to rely on themselves and develop knowledge in a variety of fields to service their own needs. Reciprocity between community members allows for direct exchanges of expertise that serve to tie people together and create a sense of reciprocal dependency.

The community appears to have been laid out specifically for cars, as expensive as it is to bring them up north. Part of its resemblance to a suburb stems from the constant presence of wide roads that more readily accommodate vehicular traffic

<sup>11 (</sup>Carlson, 6).

than pedestrian traffic. There are expansive parking lots that appear to accommodate three times as many cars as exist in all of Kashechewan.

The shells of old cars along the sides of the street are a testament to their importance and continued use. Used until they fall completely apart, the cars are then disassembled for parts to be reused in new vehicles. In many places throughout the community a wrecked car will be sitting beside another of the same make and model. By purchasing the same car, the owners can swap parts directly between the vehicles. The empty carcasses of the old cars then sit discarded, becoming forts and playgrounds for children.

Taking quiet evening drives around the community is another pastime, similar to walking around the dike. Very few people, if any, choose to wear seatbelts within the community. Accidents do happen, as with any place cars are present, but even still, the attitudes towards driving are much more laid back. Kids will help hoist each other up into truck beds to be delivered back to school after lunchtime at home. A school bus makes the trip around the community in the morning and the evening to pick up the smaller children. The Nishnawbe-Aski Police Service officers regularly drive around town, patrolling to try to help ensure the safety of the people and to lend a hand to anyone needing assistance.

Instead of seeing roadways connect the remote communities around James Bay, the only visual cue to their connectedness is the power lines that stretch out through the bush. The car, with all of its embodied freedom and power, is confined to life during the summer within the community, a prisoner of its reliance on level surfaces and clear paths for driving.



Fig. 50 - A child playing atop a wrecked car.



Fig. 51 - View looking down one of the streets. Photographing all of the buildings in order required walking up and down each street at least twice. The amount of dust kicked up by passing cars made for a long days walk.



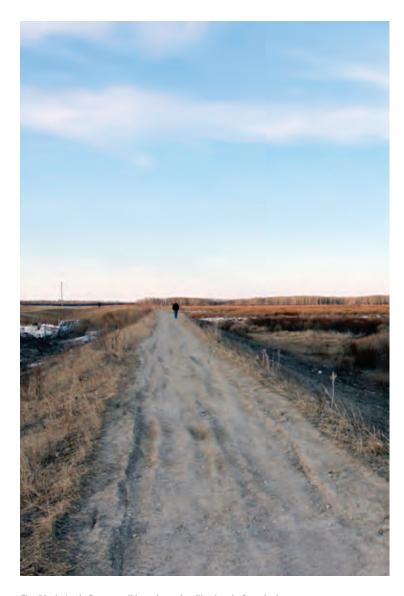


Fig. 52 -A single figure walking alone the dike, just before dusk.

## **Experience by Foot**

Travel by foot remains the most instinctive method of movement. The natural cadence of walking has an irreplaceable, rhythmic connection to the earth. Through the body the experience of the land takes on a new meaning; it becomes internalized and physical. The body, "as the source of thinking, sensing, acting, and being" integrates within itself the experience of moving on the land. Walking is taken for granted because it is something that most of us do daily without thought. <sup>12</sup> Connections between the body and the land have the power to increase spiritual sensation. We cannot help but participate with the earth when we walk across it, whether it is the natural landscape or the man-made world.

Constant walking in any terrain can be very draining, especially when there is a strong purpose or faraway destination. In modern times we rarely engage out ability to walk as a method of transportation if it takes us more than fifteen minutes in any direction. After a certain point, it ceases being a pleasurable activity and the muscles begin to burn in protest while blisters form on the feet. When the body reaches this point of exhaustion, it becomes mind over matter; the psyche takes over when the body decides that it can go no further.

Each step taken, whether it is across the landscape in the north or across a street in the south, forces a momentary imbalance. Shifting weight from foot to foot changes our viewpoint on the world imperceptibly. Subtle changes in the topography require even more active balancing. The land being acted on in turn acts on the body, sensed through the muscles and skin. Interpenetration of the body and the earth, a fundamental aspect of Native science, happens on "many levels, including the air we breathe, the carbon dioxide we contribute to the food we transform, and the chemical energy we transmute at every moment of our lives from birth to death". <sup>13</sup> Even after death our relationship with the land is not over; it is simply beginning again in the form of new life.

Active participation with the natural world was a fundamental part of life for indigenous people: a part of life that urban dwellers have largely done away with. As Cajete discusses in his section on the Psychology of Place, "the psychological and spiritual qualities of Indigenous people's behaviour reflected in symbolism were thoroughly informed by the depth and power of their participation mystique with

<sup>12 (</sup>Cajete, 25).

<sup>13 (</sup>Cajete, 25).

the Earth as a living soul". <sup>14</sup> Referring to 'the land' even sets it up as a symbol in itself, representing the cycle of life, mystery, and even danger.

In traditional times, resources in northern Ontario were insufficiently concentrated to allow for long-term occupation of a site<sup>15</sup>. Movement - lots of it - was required to simply sustain life. Intricate relationships between the patterns of movement of the Cree and the game animals they hunted were formed in reference to the land. Unique methods of interacting with the terrain were used as a means of survival. This involved understanding patterns of weather, movement of animals, and changing landscapes.

Modern-day measurement, while detailed and precise, does not speak to the spirit of a place as traditional measures do. These measures "were the concrete experiences of everyday life. Such measures were situated in the specific and were not necessarily applicable to other circumstances; they signified the value of a particular quantity along with its situational quality". Walking situates the body in direct reference to its surroundings in a way that travel in any form of vehicle cannot. This constant and direct connection with the land for a traditional native people enabled them to "accurately read the innumerable variables which each season, day and hour presented. Those variables, however, presented patterns that, over time and with great attention, one could learn to recognize. Reading those patterns to determine when 'the time was right' was the essential life skill". Intimately experiencing the land through the act of walking meant maintaining the ability to sense subtle shifts in the environment that brought an indication of a particular happening or occurrence.

Kashechewan can be measured through the experience of walking, as it is entirely traversable in a short amount of time. With about a 5km perimeter distance, the dike is ideally sized for exercise as well as a casual stroll. As a raised pathway it provides views out over the river and the surrounding land. To the north is the forest, home to the grey wolf, and to the south the dike descends down into the river. Stories are told about the wolves coming out of the forest to mount the dike and sneak into the community to scavenge. For an outsider, it would take willpower and an adventurous spirit to depart from the relative safety within the walls of the dike and set off into the surrounding unknown. People strolling along this threshold at dusk appear as shadowy sentries protecting the community from the outside world.

- 14 (Cajete, 186).
- 15 (Rogers, 280).
- 16 (Corner, 27).
- 17 (Ross, 21).



Fig. 53 - Walking around the dike is a common past time for both exercise and entertainment. Pictured: Laura Pellow.



Fig. 54 - Boots - the footwear of choice for all seasons.



Fig. 55 - Above - Hunters returning from goose hunting on one of the nearby islands on a motor powered canoe.

 $\it Fig.\, 56-Opposite-A sunken canoe beneath a canoe tethered to the shoreline, stuck in the churning ice where the small creek meets the river.$ 

# **Experience by Canoe**

Canoes are a signifier of the underlying relationship between indigenous and non-indigenous people today. They are a truly Canadian icon with heritage stemming from the Native peoples. Metaphorically, the canoe symbolizes balance, the edge between worlds, proper relationships between divergent entities, weightlessness, and when inverted also represents shelter, containment, and even architecture. It is "an ark, a lifeboat, an island, a raft". 18 As a cultural icon, the canoe, above all others, has had the ability to move past appropriation of an Aboriginal element and into the collective identity of the nation. Daniel Francis delves into the myth of the wilderness in his chapter on the Ideology of the Canoe. He suggests, "the canoe, and the story of transformation it embodies, does not belong solely to the Aboriginal people. [It is] also [a] central emblem of non-Native Canadian culture. Ever since the first European traders and colonists arrived in Canada, the canoe journey into the wilderness has been a consistent theme of our history and our culture". 19 Culturally iconic, the canoe finds its way into literature, art, advertising, and storytelling.

Travel by canoe caught on quickly when the European settlers first arrived as they could easily see that it was the most appropriate means of moving around the terrain. The highways and streets of today were once the rivers and lakes of the past. Canoeing was the "principal means of transport – personal, governmental, military and commercial – for several centuries". <sup>20</sup> Canoeing in the sense of transportation is a different concept than canoeing as a pastime or hobby. Trudeau, who arguably spent more time experiencing traditional native cultures than any other Prime Minister, past or present, even undertook many canoe expeditions himself. Reflecting on the length and intensity of one he asserts, "what is essential at the beginning is the resolve to reach the saturation point. Ideally, the trip should end only when the members are making no further progress within themselves. They should not be fooled, though, by a period of boredom, weariness or disgust; that is not the end, but the last obstacle before it. Let saturation be serene!". <sup>21</sup>

By saturating oneself in the experience of the river, a direct relationship is formed and understood between the body of the person and the sensation of canoe and paddle. On land we are required by our physiology to traverse upright, guided by

- 19 (Francis, 128).
- 20 (Saul, 38).
- 21 (Trudeau, 2).

<sup>18</sup> Francis, D. 2002. National dreams: Myth, memory, and Canadian history. Vancouver: Arsenal Pulp Press.



our feet. In the canoe our arms, shoulders, and backs are allow to take over and work hard to propel the canoe along the water. <sup>22</sup> Switching between these limbs changes the rhythm of movement and alters our body-mind response to the environment. Portage becomes the ultimate connection between the mind and body, and the land and water. Carrying the canoe above head while traversing across the land activates both the arms above head and the legs below. Reaching out in opposite directions reinforces our place between the earth and sky.

Our collective fascination with the canoe stems from our base desire to be connected with the environment, with the 'wild' in some deeply felt way. In a similar fashion to travel by foot, canoeing requires a constant engagement of the body and a conscious balancing act. It necessitates awareness of the conditions around and an ability to detect subtle changes in patterns that can warn of dangers or hazards. "People who canoe understand that each river is in fact a multitude of rivers; even the same short stretch is subject to surprising change. The sensed aspects of the river which combine and re-combine to show a constantly changing face are perceived not as characteristics of a river, but as spirits within and of the river". Native science recognizes this as a true reflection of an experiential idea. Drawing from the Native viewpoint in these terms is not about romanticizing thoughts. It is about recognizing that there are other forces at play within the world that represent themselves on the spiritual plane of understanding.

Multiple spirits 'within and of the river' were present in the changing form and feeling of the Albany River during the trip to Kashechewan. It never appeared the same. Fluctuating temperatures from day to day would refreeze sections of the river and thaw them again the next day. At some points the water was as calm as glass. Ten minutes would pass by and the river would appear choppy and fast. The dike slopes down gradually in some areas and disappears beneath the waters, allowing boats to be brought down and launched.

The point of access between the land and water is a central threshold of a journey. The departure point needs to be ideal; it must have easy entry to the water, be located somewhere accessible from the land, and allow for one to board the canoe without tossing it over in fast-flowing or churning waters. Having years of intimate relationships with the rivers, streams, and lakes, traditional Cree hunters were able to judge the conditions of a place through both physical and emotional cues. This enabled them to understand the right time to depart on a journey and gave them

<sup>22 (</sup>Francis, 149-150).

<sup>23 (</sup>Ross, 95).

the ability to determine the best stopping points along the way.

Springtime represents an important season to the Cree hunters in Kashechewan. It marks the return of the goose, a dietary staple. The islands of the river are ideal hunting locations. They use a modernized canoe, powered by an outboard motor. While this seems to move away from the notion of the 'Aboriginal canoe', it is a necessary and prudent method of maintaining the ability to bring home enough game to feed families. It doesn't mean that it is any less 'native'; in fact, the experience of seeing hunters returning from an island in the powered canoe with upright guns visible against the backdrop of the trees was a very beautiful moment.

Green canoes like the ones the hunters returned in are seen throughout the community. Some are in people's front yards while others have been either discarded or forgotten down by the river, still tied to a tree or stump on the land. The ones that are functional are used throughout the summer months for hunting, fishing, and trapping. They can be seen going out in the early morning and coming back in the evenings. Returning from a days work in the bush, the first thing that greets the hunters when they return is the imposing expanse of the dike with its fresh concrete walls. Upstream from the community are small outposts and places where the hunters have established regular connection points to the land. From some of the nearest locations, the gunshots can be heard ringing out over the water.

Traditional canoe trips are taken out into the land as part of family experiences for many of the youth in the community. They are taught traditional practices like hunting and fishing while listening to stories and anecdotes from the past. Learning firsthand traditional knowledge at a young age encourages the students to have respect for their culture. In the same way, the experience of canoeing for children in camps to the south, while a fun time full of laughter and play, can also be a new and unique experience of connecting with the land and water.

Our continued fascination with the canoe represents our history of relationships with and reliance on the indigenous people of the land. The many different forms of canoes, from the traditional birch bark forms of the indigenous people to their modern fibreglass counterparts, have had the power to provide "a healthy adventure, an opportunity to escape the mundane realities of urban living and lose oneself in physical exercise. Canoeing is good medicine for whatever ails you".<sup>24</sup>



Fig. 57 - The green and red canoe commonly seen in front of many homes, next to a hand made log fence.



Fig. 58 - Prints left behind in the mud by a car, a person walking, a dog, and a bicycle.

#### Traces of our Travels

Truly experiencing a place is a spiritual and connected sensation. "You cannot be part of a place if you feel you cannot engage with it". 25 Travel by plane and vehicle separates us from this connection to the environment and doesn't allow engagement on a deep level. Undoubtedly of utmost importance in today's world, motorized travel gives a sense of disconnectedness from the land that increases feelings of mastery, power, and severance. Flying in the air and speeding across the ground give us a new perspective on the land, one that intrigues us and captures our imaginative spirit.

Compared to travel by plane and vehicle, travel by canoe and foot represent a direct connection to the surrounding environment. These methods actively engage not only our bodies, but also our mental capacity to understand subtle shifts in the surroundings and to experience the world from a natural point of view. The way that we first experience a place sets up our initial relationship with it; if we touch down in a new place, safely inside an airplane, we lose all sense of the landscape between our departure and arrival points. In the same way, when traveling by highway we develop a skewed viewpoint of the relative scale and meaning of the surrounding areas.

Other ways of movement across the land and water, like hang-gliding, ski-dooing, snowshoeing, and kayaking are all variations on the themes of movement by plane, car, foot, and canoe. While one is not necessarily more essential than another, each has the power to alter perceptions about what the land is and how we, as humans, understand and respond to it. No matter what method of movement we prefer or tend towards, "we can never fully escape our attachments – and our responsibilities – to the landscape, but neither should we stop dreaming".<sup>26</sup>

Instead, by embracing all of the ways that movement can occur, the mind can be opened to the possibilities afforded by experiencing the land, and experiencing place, from these different perspectives. Recognizing that within each form there is the power to connect and disconnect, engage and disengage, and understand and obscure, we can become more adept at ascertaining the true sensations manifested in a particular place.

Traces of our presence on the land are left behind as reminders of our relationship

<sup>25 (</sup>Saul, 284).

<sup>26 (</sup>Corner, 13).

with the earth. The footprint left behind in fresh mud, the shadow of a plane, the wake of a boat, the dust stirred up by a car; all these carry within them tangible evidence of the way our movements can disturb and affect the environment, even subtly. Transient fleeting moments like these embody the soul of our interconnectedness with the land and our inescapable responsibilities to the earth as both native and non-native people alike.



Fig. 59 - The shadow cast by the airplane when the sun finally came out from the clouds.



 $\textit{Fig. 60 - The expanding wake from a canoe \ disturbs the surface of the water and then \ dissipates.}$ 

# PART II - DESIGN PROPOSAL

Beacon/Hub



# BEACON HUB

Celebrating the dike as an ally to the community, this design proposal consolidates each of the methods of movement into a centralized hub, integrated within the dike. It functions as a mechanic shop for the repair of cars and boats, an access point for cars to reach the drivable level of the dike, access point to the water for boat launching, a gathering place for pedestrian traffic, and a beacon for airplanes announcing their arrival to Kashechewan. The hub is located along one of the central roads in the community, just east of the existing band office, adjacent to the dike. By formalizing an entrance point between the community and the river, the design creates a visible connection from within the dike that is associated with the river beyond. From the level of the water, it is a recognizable entrance for boats.

The construction of the building makes use of the community's new concrete plant to create the permanent structure of the base building, the mechanic shop. The back of the building is integrated within the dike. On the opposite side, the main garage door allows access for cars requiring minor repairs. To the left, another garage door is accessed by cars and boats requiring more lengthy tuning. The space is illuminated naturally by a single window that provides light into both the office and the work area, while the roof is supported by pre-fabricated wood trusses.

In stark contrast to the somewhat banal and simple design of the mechanic shop, the tessellated canopy seems to overcome the plain building, touching down lightly at one point, then soaring above to create the semi-sheltered public space along the top of the dike and building. Constructed out of wood beams and coloured cell-cast acrylic, the unusual canopy design still considers the available tools, workforce, and the very real construction consideration of shipping in materials. The acrylic is lighter than glass (reducing the cost of shipping), and stronger (reducing breakage).

During the day, the space beneath the canopy is bright and vibrant. At night, exterior lights located on the columns and roof illuminate the canopy from within, creating a colourful beacon that can be seen from both night-time air traffic, and from within the community.

This design proposal speaks to the difference between the existing, functional design of the buildings, and the possibilities to uplift the community through innovation.

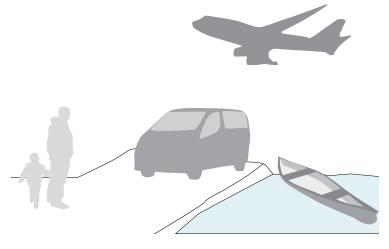


Fig. 61 - Opposite - Site plan showing the location of the design proposal and the directions taken by boats.

Fig. 62 - Above - Conceptual diagram showing all of the methods of movement discussed central to the community.

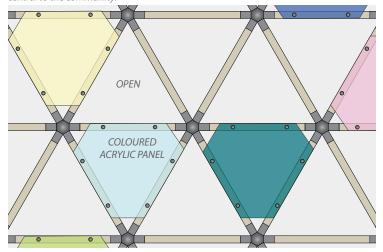
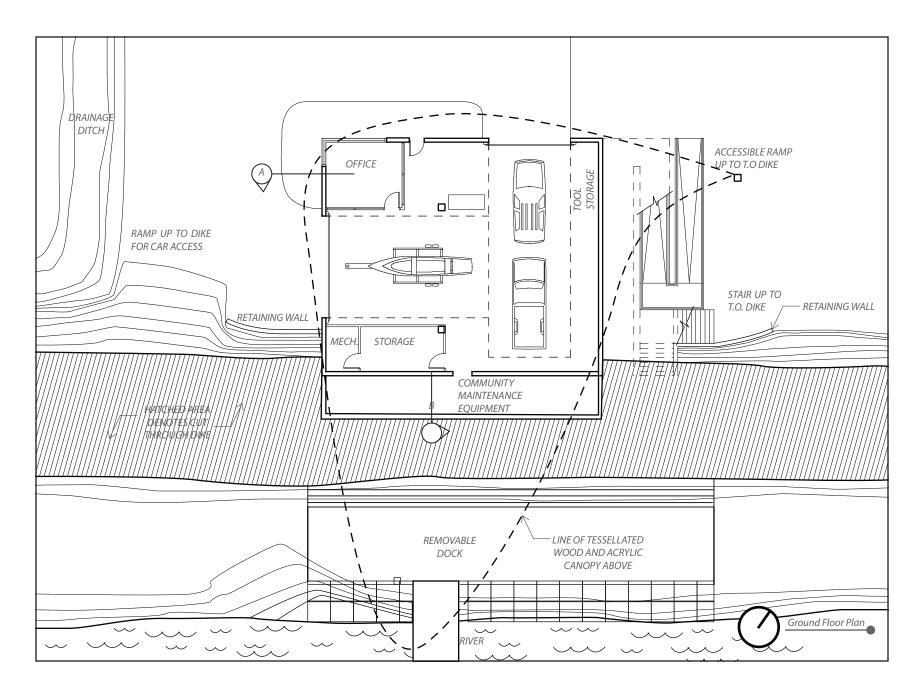


Fig. 63 - Detail of wood and acrylic canopy.



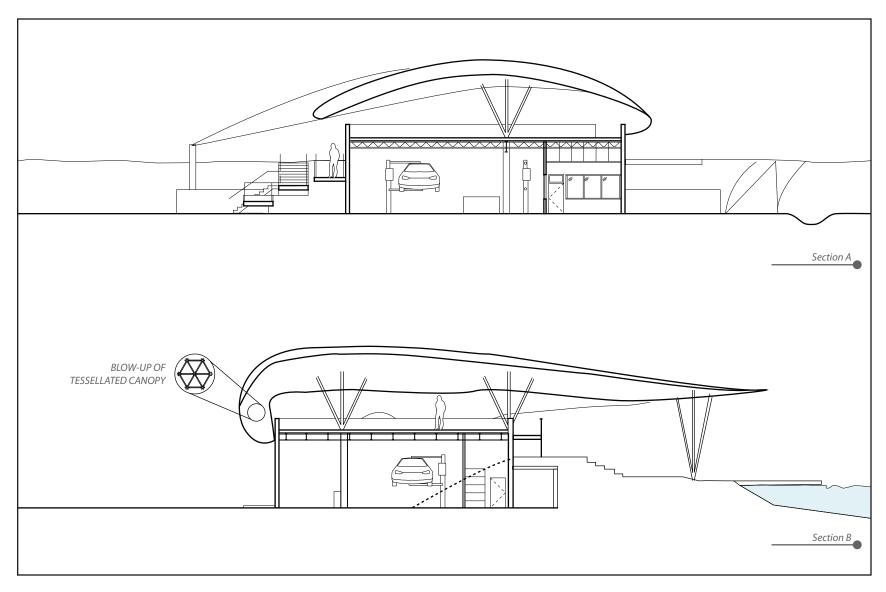


Fig. 64 - Opposite - Ground level plan cut through the existing dike. The new entry points for automobiles and boats are simply graded to make access easier.

Fig. 65 - Above - Sections illustrating the relationship of the mechanic shop and canopy to the dike.



Fig. 66a - The canopy reaches up and over the mechanic shop creating sheltered public space at the roof level, and soars over each level of the dike to connect the river back to the community. The area directly infront of the mechanic shop is formalized to become a gathering space. The vertical element of the satellite tower addresses the sky.



Fig. 66b-Terraced concrete blocks allow access directly to the water while helping protect the dike. A removable floating dock provides both a launch point. The canopy gradually dissolves as it reaches towards the river until it becomes just a frame.

Part III

Memory and Meaning

# SUNRISE SEAL

We walked along the dike,
Solid under foot but feeble against the vastness,
Without a sound.
All matter seemed to emanate from the sun,
Clinging to this life-bringer,
Liquid gold that challenged the frost
To remain. And a single seal
Making its morning journey to the bay
Cast gilded ripples off its slick head,
Eerily alive

In the dead calm of morning. My gaze
Was pulled along with the expanding wake,
Fluid and fragile,
Trailing out and coming to a finish
When it met the ice, resonating for
A second and then no longer.

Churning at Creek's mouth and River's elbow,

The ice gazed jealously at the seal.

Unable to break free

From its perpetual rotation, it was mocked

By the freedom it did not have.

The ice would remain

Locked into its fate

As the glancing rays moved high enough

To melt even the most resolute.

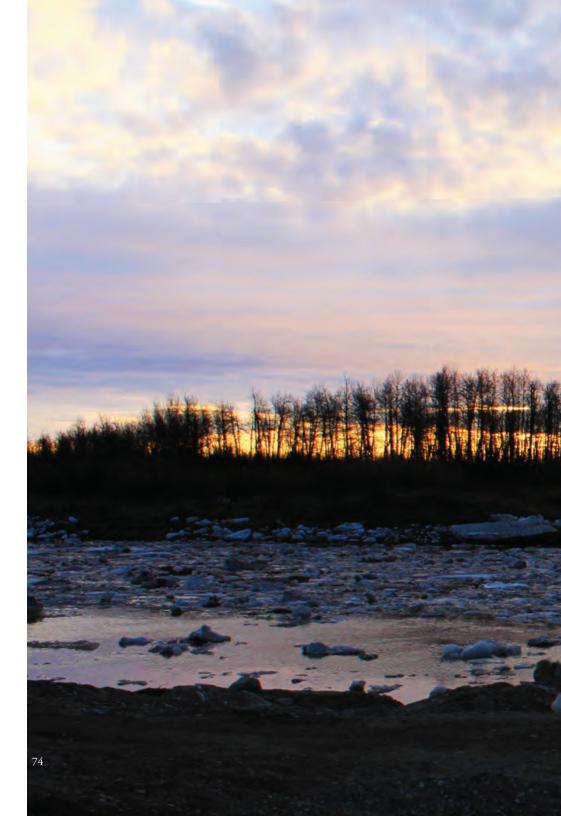






Fig. 68 - One of two cemeteries near the entrance over the dike from the airport.

### MEMORY AND MEANING

#### All the Ancestors

People who came before us are all, in the larger scheme of things, our ancestors. Descendants of the first indigenous peoples in Canada still walk on the earth today just as their predecessors did centuries ago. Destinies intertwined, people and the land were once inseparable. Only now, in modern times, have we tried to sever our connection to the land by denying our own indigenous ancestral relationship with it.

Reestablishing a balanced position between people and the land requires recognizing the spirit of the ancestors that is still present. Opening up to the spiritual plane can require a shift in thinking on the part of the Western science proponent; this does not necessitate a rejection of scientific thought, rather, it asks for an opening up to other ways of knowing. Clearly shown by the numerous man-made disasters around the world, the "depth of our ancient human participation with nature…has been lost and must be regained in some substantial form in modern life and modern science". Regaining ancestral connections to the land will enable the discourse between indigenous and non-indigenous people to develop and strengthen.

Concerned with only one plane of knowledge, the Western model of science attempts to mold and shape the environment to the will of humans. Contrary to this approach, the Native person knew that respecting and understanding the land provided great opportunity. Any successful endeavor "required waiting until all of the physical variables promised optimum opportunity, all the preparatory thought promised optimum performance and, just as importantly, all the preparatory spiritual dedication promised optimal cooperation from the spirit world".<sup>2</sup> Only then was the time right for action – not when a person simply deemed it to be, or attempted to change the environment to suit their purpose.

The Cree people of Kashechewan have maintained their traditional knowledge and connection to their ancestors in the face of discrimination, racism, and misunderstanding. Redeveloping the physical form of the community can allow for a better reflection of their modern indigenous culture.



Fig. 69 - A grave marker where the creek meets the river, perhaps in memory of someone lost to the waters. A necklace adorns the cross, and other small keepsakes lie on the stone

<sup>1 (</sup>Cajete, 5)

<sup>2 (</sup>Ross, 45)



Fig. 70 - An aeresol can rests on top of the charred remains of a log next to the springs from what used to be a mattress.

#### **Ablaze**

Fire is a signifier of life and a captivating force that holds within it both spiritual mystique and physical sensation. Sun, the first fire, is a sacred part of the creation story for many native groups and is depended upon by all life on earth. Cultural ceremonies, myths, and history all engaged with the sun. Personification of the sun makes it relatable to the human experience while tying it back to the notion that the ancestors are a part of the natural world. Experiences that changed the daily patterns of the environment, like solar eclipses, were meaningful and spiritual. For an indigenous person, relating to this phenomenon in some way was a central part of connecting with the spiritual world. David Suzuki talks about the indigenous response to peculiar patterns stating that when a Native person "...encounters a sudden winter snowstorm, the shimmering northern lights in the heavens, or some other vivid display of nature's repertoire, he or she might understandably be more inclined to address the natural world by asking, 'Who did this?' and 'Why? 'rather than 'How does that work'". The difference embodied in these questions represents the fundamental schism between Native science and Western science. Bringing these streams of knowledge together has the potential to activate a new way of knowing.

Whether you view it from a Native or Western science perspective, fire is a reckoning force, the use of which dates back millennia. The hearth remains one of the central concepts in modern architecture, even as few homes are now built with wood burning fireplaces. Reliance upon fire for heat, especially in northern climates, has only recently begun to make way for the artificial heat provided by electricity. Beginning in 1989, all new homes in Kashechewan were heated by electricity. Houses built prior to 1989 rely on wood burning stoves. Homes throughout the community show the continued need for fire, with huge piles of chopped firewood stacked in their yards. Wood continues to be hauled from the surrounding forests for the purpose of heating. A common joke in the community, based in truth, is that the larger the size of the wood pile, the more well-off the family.

Traditionally, "fire was such a benefit in the northern boreal forest that the Cree were known to burn areas deliberately to encourage the growth of grasses and herbaceous plants, though these human-made fires did not always bring the desired results". The same practice can still be seen in Kashechewan today. Burning grasses that grow



Fig. 71 - Sun, the first fire.



Fig. 72 - Charred remains left by an unknown source on the concrete blocks lining the edge of the dike.

<sup>3</sup> Knudtson, P. 2006. Wisdom of the elders. Eds. David T. Suzuki. Vancouver B.C.: Greystone Books. 69.

<sup>4</sup> Kashechewan First Nation. 2010. Retrieved February 6, 2011, from http://www.kashechewan.first-nation.ca.

<sup>5 (</sup>Carlson, 42).



Fig. 73 - All that remains of the old elementary school by the dike, burned down after being condemned due to toxic mould and other issues.

along the dike and in yards encourages new spring growth to rise up from out of the ground without having to fight through dead plants. These fires, when unattended, can burn out of control and threaten to spread to surrounding areas clearly not intended to burn (like houses). The small local fires in the community can become just as unpredictable and uncontrolled as the extensive northern boreal forest fires of the past.

Just as fire gives life it takes life away. Encouraging new growth by burning away the old, fire disintegrates matter into smoke and gas and ash and heat. It is the quickest method of releasing elements back into their separate states. Ashes and charred remains throughout the community evidence the importance of fire. In some places it is the grasses that have been burned. Other places show possessions that were burned for unknown reasons. Charcoal smears on the concrete blocks of the dike are an even bigger unknown as nothing is left but ash. Fire is also used as a disposal method for the natural waste left behind by hunting – the goose feathers and discarded portions of animals. Burning these physical remains is a step in the process of the preparation of the animal for preservation and consumption.

Fire represents a serious threat to the community while providing much needed heat in winter. Recently installed in the community, fire hydrants give the illusion of the ability for people to fight fires when they do occur, but no actual fire-fighting facilities are available. At best, when there is a fire one of the volunteer firefighters needs to connect a fire hose to the hydrant and attempt to douse the flames. With no fire hall or engines, residential fires can quickly turn fatal even with the most well intended protection measures. Finally, an ambulance bay is being constructed in Kashechewan that will also house the fire facilities. Some of the building supplies have already arrived and construction will begin during the summer of 2011.

In the last decade there have been two serious fires in addition to other smaller, less significant ones. Two men perished in a fire at the police station in 2007. Spreading quickly, the flames consumed the building and the officers on duty at the time were unable to release the people from the cells, sustaining burns themselves in their efforts to save the lives of the young men. High heat caused the makeshift padlocks on the cells to fuse together, trapping the men inside to die. A monumental plaque was installed on the site of the fire in memory of the two lives. This was a devastating time for the entire community that shed light on the substandard conditions of the

<sup>6</sup> Kashechewan First Nation. 2010. Retrieved February 6, 2011, from http://www.kashechewan.first-nation.ca.

Frwin, S. 2006. Deaths in Kashechewan fire blamed on poor jail conditions. Toronto: The Star.

buildings yet again.

Earlier on in June of 2005 the elementary school, once located beside the dike in the centre of the community, burned down completely.<sup>8</sup> It had been condemned because of dangerous levels of toxic mould, so there was no one occupying it at the time. Arson may have played a role in the fire; even though the severely deteriorated conditions of the building were far below any standard, there had been rumors about reopening it rather than constructing a better facility or even making extensive repairs to the old one.

Fire in Kashechewan has a duality that reflects the nature of the community members as modern-indigenous people. It is birth and death, renewal and destruction, friend and foe. Its use traditionally unites people together in their common need for sustenance, warmth, and companionship. The spiritual side of fire still captivates both Native and non-native people today. A sense of community relationship, nurtured by reliance on a single fire, is seen in traditional gatherings and events. As Cajete suggests, "Relationship is the cornerstone of tribal community, and the nature and expression of community is the foundation of tribal identity.... The community is the place where the 'forming of the heart and face' of the individual as one of the people is most fully expressed; it is the context in which the person comes to know relationship, responsibility, and participation in the life of one's people". Being just one person in a group around a fire is a metaphor for the interconnections between all people on this earth, going about living under one sun.

Fire ignites imagination, as the flames seem to bend and flicker, guided by the spirits within. What was once there is gone in an instant, leaving the viewer to wonder if they really did see a figure within the flames or an echo of a memory. For an indigenous person, fire was the tangible presence of the spirits of the ancestors in the natural world, concentrated together into a passion-filled and energetic entity. Sitting around a fire and sharing stories and food is a way that we have traditionally remained connected to both other people sharing the encounter and to all the ancestors that experienced the same thing long ago. Containment of fire in all sorts, from fireplaces and bonfire pits to barbeques and candleholders, gives a sense of power over this unpredictable force. Our fear only heightens when these fires become infernos, burning out of our human control. Then, no longer a source of pleasant reflection and quiet contemplation, fire takes on a new meaning. It reminds



Fig. 74 - A memorial to the two young men, Ricardo Wesley and Jamie Goodwin, who perished in a fire at the sub-standard police station.



Fig. 75 - 'Triana's Playground', named in memory of a departed child.

<sup>8</sup> Paradis, S. 2007. Kash plan addresses classroom shortage - New school to house all students. Timmins: Timmins Daily Press.

<sup>9 (</sup>Cajete, 86).

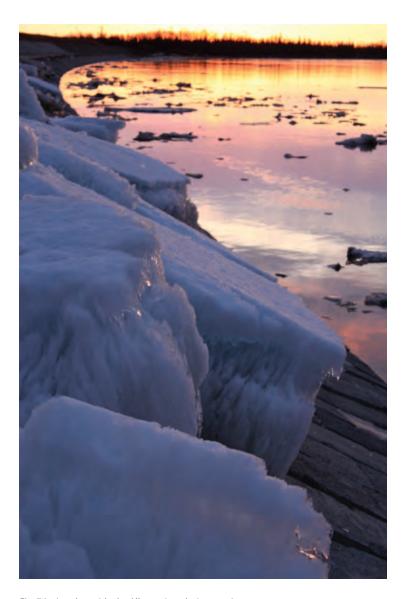


Fig. 76 - Ice alongside the Albany river during sunrise.

us of our inability to have complete control over our environment and our fragility as beings among panoply of complex forces.

## Breakup

The spring ice breakup in Kashechewan is one of the first indicators of the arrival of warmer weather. It is a period of time that the residents look forward to both with both anticipation and fear. It is a sight not only to behold, but also to hear and feel. The cracking action of the ice rings out across the flat landscape, shaking the ground beside the river. As ice piles up in all of the bends, kinks, and pinch-points in the river, the water begins to swell and backup just as the ice continues to fracture and pile up. What was previously a smooth, flat sheet, capable of allowing cars and tractors easy ice road access, becomes an intensely varied and intricate surface of all different shapes and forms. Great exhilaration accompanies this time of year when the Albany River is in intense upheaval.

While the ice breakup is a beautiful experience, it also carries with it the threat of flooding. The dike, installed to combat this massive force, has not proved adequate at fully protecting the community from the water. The community has had to pick up everything and evacuate four times in the past ten years. Floodwaters are not the only component that the community needs to be wary of; the destructive power of the massive blocks of ice prompts an even greater fear.

The Cree people living on the lands in the past before fur trading began would traditionally not be in the area of the breakup where flooding was known to occur. This simple understanding of self-preservation by avoiding areas known to flood has been disregarded, replaced by bending the processes of the earth to our own conveniences. With new ideas and designs that enabled us to build our cities wherever we chose, we continue to increase the notion that we (humans) are more powerful and inventive that nature itself. As we were "no longer needing to continually adapt ourselves to whatever circumstances were thrown at us by the natural order, we began instead to focus upon skills of manipulation and mastery. As we became less dependent upon accurately reading natural variables, we became less involved in pattern-reasoning". Traditional reasoning that made the obvious but important connection between flat, easily saturated land beside the mouth of a major river, and the inappropriateness of living in that area during flood-prone times of year, has been put aside in favour of Western notions of convenience and mastery.

10 (Ross, 99).



Fig. 77 - New sheets of ice formed over the river during the night when the temperature dropped down low. The river was noticeably different every day.



Fig. 78 - A field of ice deposited on what is known as the North Channel, a portion of the river that remains dry during the summer, only flooding during breakup season. The ice is left behind when the waters recede.

Goose hunting season begins roughly at the same time that the breakup occurs. Migration of the birds back to the North is a time of celebration and hard work. Many families in Kashechewan earn a living off of traditional activities like hunting and fishing. A good hunting season is important to ensure the prosperity of the family. To this end, many families remove their children from school at this time of year for one to two weeks to hunt from traditional campsites throughout the land. It is now an official cultural holiday for the people in the community. The act of temporarily relocating when the threat for flooding is high shows the continued understanding of the power of the river. The camps, located from ten to fifty miles outwards of the community, are in areas safe from the floods. While the remaining people in the community are on constant watch for flooding, they have some solace that family members are safely ensconced in the hunting camps.

Evacuating the people that remain in the community during this time is an expensive and difficult process. The severity of the breakup is extremely hard to predict, as it is dependant upon numerous factors such as the amount of traffic across the ice roads in the winter and the rate of seasonal heat increase, among other complex variables. Huge aircraft carriers transport people to surrounding communities and even to cities as far south as Stratford, where they are then put up in school gyms, hotels, and community facilities. People who have family members outside the community have the option of staying with them. Weeks can pass by before the water recedes and the community is deemed to be safe for people to return. If homes are damaged then the return is further delayed. Evacuations disrupt the lives of the people and cause the children to lose valuable classroom time.

Saul discusses our feelings of inability to change situations like this, reflecting "we confuse simply doing our job, managing situations or focusing on the short-term with the concept of action. Perhaps this is because so many of us are somehow employed or feel employed rather than feel that we are free to act. And that atmosphere of order impinges on our real desire as individuals, as citizens, to get things done". Clearly the issue of flooding is a very real threat and undeniable danger. But for whatever reason we seem unable to deal with this problem in Kashechewan adequately. This begs the question: could this inaction stem from a deep and innate understanding that the river is master of the land in this area?

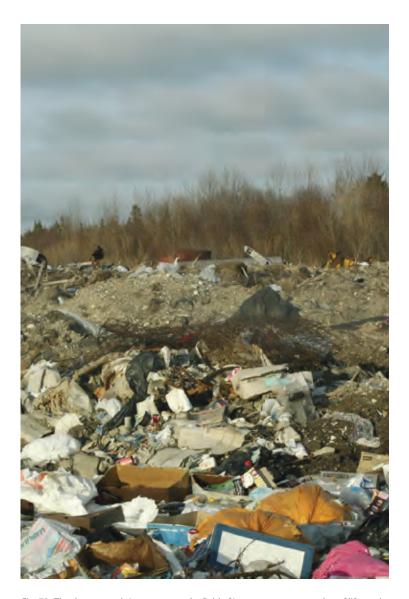


Fig. 79- The dump stands in contrast to the field of ice, a permanent marker of life on the land. This area is a popular spot for black bears to forage for food.

<sup>11</sup> This information comes from personal conversation with community members in the band office and also at the education authority.

<sup>12</sup> As per discussion with community members.

<sup>13 (</sup>Saul, 303).

Perhaps "the modern obsession of being in control and the dream of eliminating uncertainty through control of nature... must give way to the reality of moving creatively with the flow of events, which is the true reality of the universe". <sup>14</sup> Memory of both the flood and the unsettling feelings surrounding the threat of flooding in Kashechewan are not a unique situation for northern communities located on these powerful rivers; in fact, the situation in Kashechewan is reflected in the even more northern community of Peawanuck (once Winisk). Testament to the consequences of inaction, avoidance, and shortsightedness, the memory of what happened to Winisk should be more than adequate to propel either the relocation or redesign of Kashechewan.

The Weenusk First Nation, population 180, was located on the Winisk River in northern Ontario in what is now known as Polar Bear Provincial Park. In May of 1986 the river flooded its banks and devastated the Cree village. The village was completely destroyed by a wall of fast moving water and ice. Two lives were lost. Many more could have also been taken by the ice and water if it hadn't been for quick hands and frantic efforts of the community members.

Fur trade had certainly played a role in encouraging the settlement of the nomadic Cree hunters in this area around the mouth of the river, but it was really the NATO radar base, built in 1955 that solidified the location of the community in Winisk. <sup>16</sup> Many people abandoned traditional living in favour of working on the base. Similar to Kashechewan, the area that they settled on had once been a summer camping ground, providing the people with quick access to the bay. The airport across the river from the community could not be accessed during the freeze and thaw periods, so the only means of emergency transportation was a helicopter located 200 miles away.

The flood did not come as a surprise. Numerous bank overtoppings, and floods of 1966 and 1974 were spectacular and well documented.<sup>17</sup> One such flood washed some of the homes far out into the bush. Expecting that the community was to be relocated, improvements to housing and infrastructure were stopped in an effort to save resources for the impending move. Money became (and always was) an issue for the Federal government when considering the relocation. Instead of embracing the community's desire to move to sites that they had selected, the government suggested moving the community across the river to the location of the old radar station among a number of other less costly, imperfect solutions.

- 14 (Cajete, 189).
- 15 Feherty, B. 2006. Peawanuck: The promised land. Canada: BookSurge Publishing. Xiii.
- 16 Long, J. S. Who got what at Winisk?. Beaver 75, no. 1 (1995): 23-31.
- 17 (Feherty, 16).

Action was only taken on the issue of relocation once it was too late. The waters of the Winisk River had burst suddenly into the community and brought along the massive, fast-moving chunks of ice. After the destruction, the water finally stabilized at a level of 6 feet above the ground. The terror of the people, wondering if their family members had survived, must have been great. People that had been in the water, narrowly escaping death, also had to deal with the onset of hypothermia. Following the disaster, a new community plan for Peawanuck was created in a mere three days that stood up to significant scrutiny. The concentrated efforts of the Weenusk First Nation to start fresh and rebuild their community enabled people to be re-housed by fall.

The inappropriate initial site of the community was shortsighted and based on a colonized idea of progress in national defense. Instead of recognizing that the conveniences of living in that location in the past no longer applied, the federal and provincial governments were content to bide their time in providing support for the relocation of the community. Now, after the devastation of the life-claiming flood prompted change, the Weenusk First Nation lives contentedly in Peawanuck.

Kashechewan, in many ways, faces the same issue as Winisk once did, but at a much larger scale. The investments already made in improving the existing community make it difficult - if not impossible - to continue to argue for relocation. The current Capital Planning Study underway in the community is now only focusing on the future of the community at the existing site. Winisk serves as an easily relatable warning that is not being heeded.

Within the Western paradigm of knowledge and with the advances of modern technology, "we are no longer able to participate with nature with our whole being – we cannot hear its subtle voices or speak the language of nature. Herein lies the disregard modern people feel for nature – when something no longer exists in your perceptual memory it also no longer matters". <sup>19</sup> Ice breakup and subsequent flooding of land has much more than just a 'subtle voice'; it has a roar, a thundering announcement of its power and force that we still seem unable to hear.

<sup>18 (</sup>Feherty, 80).

<sup>19 (</sup>Cajete, 22).



Fig. 80 - A group of children pose, happy to have some attention from unfamiliar faces. In the distance: Dr. Elizabeth English and our Kashechewan contact beginning their journey around the dike



Fig. 81 - Kids posing outside of their home. They were adamant that they wanted to be in the picture and had such pride in their house. They also made sure that many pictures were taken of their house without them in it as well.

#### The Pride of Kashechewan

The new generation of Kashechewan Cree - the children - has the ability to take on the challenge of re-envisioning their community.

So often the discussion of the politics of Native education centers on the Residential Schools that came about as "the expression of a deep and growing Euro-Canadian anger at the refusal of the noble ancestor to reach for his full apotheosis by disappearing". <sup>20</sup> Residential Schools fostered forgetting traditional values in favour of Western notions of knowledge. The statement of apology issued in 2008 on behalf of the Government of Canada is a small step towards recognizing the deep scars the system has left on the Aboriginal people.

Unfortunately, we focus too often on the negative issues instead of highlighting many of the achievements. We don't often "talk about the seven thousand Aboriginal students in universities and colleges in Saskatchewan and the thousands in other provinces". The Hishkoonikun Education Authority in Kashechewan tries to educate its students in both the traditional way of knowing alongside Western science in an attempt to open up the possibilities of post-secondary education. While most Aboriginal students that make it to post-secondary education return to aid their communities with their knowledge of law, policy, and finance, very few return with knowledge of the profession of architecture.

During a presentation for high-school students on the possibilities of pursing architecture, the students were asked to draw an image that represented their ideal house. Many chose to make humorous reference to popular television houses (like the pineapple under the sea), while others depicted improved versions of the typology already existing within the community. Elevation, plan, and perspective drawings were all choices of representation made by the students. Only a single scholar, the most vocal and engaged of all, chose to draw a traditional indigenous dwelling – the teepee.

The conscious choice to represent not only the indigenous dwelling, but to also label it with the benefits shows that the value placed on traditional ideas is still present within the younger generations. Pride in tradition alongside the development of knowledge will enable the people of Kashechewan to regain complete control over their own community, and their future.

<sup>20 (</sup>Saul, 32)

<sup>21 (</sup>Saul, 22-23)



Fig. 82 - Interpretations from the high school students at the Francine J. Wesley Secondary School about their dream house. Even in the drawings that are obviously intended to be humourous, there is still something interesting.





Fig. 83 - Opposite: Traditional cooking tent, well maintained Fig. 84 - Above: Newly assembled cooking tent



Fig. 85 - Above - Cooking tent in need of a new roof Fig. 86 - Opposite - Cooking tent beside the dike.





Fig. 87 - Moose antler carving of a moose by local sculptor, Sydney Friday.



Fig. 88 - Wolf carving by Sydney Friday.

#### **Culture Continued**

Traditional native teepees have been 'modernized' in Kashechewan through the use of plywood and polyethylene tarps in addition to other materials. The original form and function of the structure remains intact with a central fire and a hole that allows smoke to rise up and out. Goose-hunting season is one of the times of year when these tents are used most often to cook and preserve meat and many families have one set up in close proximity to their house. When Hans Carlson spoke with the Cree people around James Bay, he found out that "in talking to people about their tents, it's clear...that in addition to being aesthetically pleasing to them, these spaces open the mind to the bush in a way that a house cannot. Within the tent you are in contact with the earth beneath and the forest outside, even as you are protected from them". <sup>22</sup> This connection to the land during the preparation of game, which was taken through the practice of hunting in the bush, is a direct sign of traditional values.

For many years people have tried to insinuate that Native science, tradition, and ways of knowing are somehow inadequate and even wrong when compared to Western ideals, notions, and beliefs. As such, there was enormous pressure placed on Aboriginal people to change and adapt their way of life. Even after centuries of continued force, traditional practices remain strong and are continuing to deepen. Cajete asserts, "the native individual is spiritually interdependent with the language, folk history, rituals, and geographical sacredness of his or her people". The appearance of Kashechewan contradicts the strong undercurrent of continued culture in the form of the maintenance of the traditional language and dialect, the beautiful artwork of artist Sydney Friday, the singing of traditional songs during celebrations, and the continued reliance on the land for sustenance.

Sydney Friday created the moose antler carvings that are proudly displayed in the band office and other community buildings. Working with the antlers given to him by the hunters, he uses imagery of the natural world to pull forms and shapes out of the dense horn. His carving room is a brightly lit space filled with intricately detailed full racks, small horn sections an inch in diameter, and a myriad of assorted carving tools. In a traditional way, he selects the most appropriate medium available and depicts features that convey the strong vitality and essence of whatever is being portrayed.<sup>24</sup> In essence, the artwork he creates represents a Native way of knowing.

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<sup>22 (</sup>Carlson, 51).

<sup>23 (</sup>Cajete, 86).

<sup>24 (</sup>Cajete, 46).

Animals, both in the representational form of artwork and the physical form of the hunt, play a central role in the life of Kashechewan. Artistic representation focuses around the animals that have the greatest impact on the lives of the people, including moose, geese, wolves, and fish. Animals play a central role in understanding the relationship between humans and the natural world.

In addition to the wild animals of the north, numerous dogs have also made the land their home. The dogs themselves are 'owned', in some respect, by individual families in the community. Small doghouses in yards indicate where one or more may spend the night, but most are left free to roam around the community. They play the role of companion, guard, and comedian. During times of economic strife or meager hunting seasons, the dogs form packs that roam around the community scavenging for food. When they begin attacking people and children, many of the dogs must be put down. While unfortunate, it is a reality of life in Kashechewan.

Natural cycles of life and death of people and animals are directly connected to place. Kashechewan, and certainly the much greater area surrounding it, have been home to these cycles for centuries. They are places where cultural memory remains intact. For non-indigenous people, there is a hope that "if we learn once again to feel, see, hear, smell, and taste the world as our ancestors did, we may remember something truly wonderful about nature in humans". <sup>25</sup> Through an acceptance of different world viewpoints, we may be able to resolve the issues between indigenous and non-indigenous people and re-envision the way that we live and design on the land. Until this happens, "we are likely to continue misinterpreting their acts, misperceiving the real problems they face, and imposing, through government policies, potentially harmful 'remedies'". <sup>26</sup> The policy of imposing 'solutions' exacerbates the problem because it does not deal with the issues directly.

Kashechewan faces very real frustrations with INAC, the Indian Act, and the federal government. It is more than simply a matter of money, practicality, or policy. It is about acceptance of other ways of knowing. Native and non-native relationships had the power to enhance and inform the lives of both parties during first contact. We often forget this, mired down as we now are in distrust and misunderstanding. It is becoming evident that "we cannot continue our massive interference with the natural equilibrium without having that interference come back to haunt us in very concrete and life-threatening ways. It may be telling us that we are indeed dependent upon harmony within the ecosystems which both surround and nourish



Fig. 89 - The first dog approaching, with the strange dual eye colour common - but unnerving - among huskies. This dog later turned out to 'belong' to the guidance counsellor at the high school, who was a great resource during the trip.

<sup>25 (</sup>Cajete, 23).

<sup>26 (</sup>Ross, 49).



Fig. 90 - Staircase to anywhere moved just off the landing strip at the Kashechewan airport.

us, and that the destruction of that harmony can only result in our own destruction as well. It may be telling us that Native attitudes like accommodation and respect must quickly replace those of mastery and manipulation".<sup>27</sup> The visual embodiment of our strained relationships with each other and with the natural world is reflected in the conditions of this settlement.

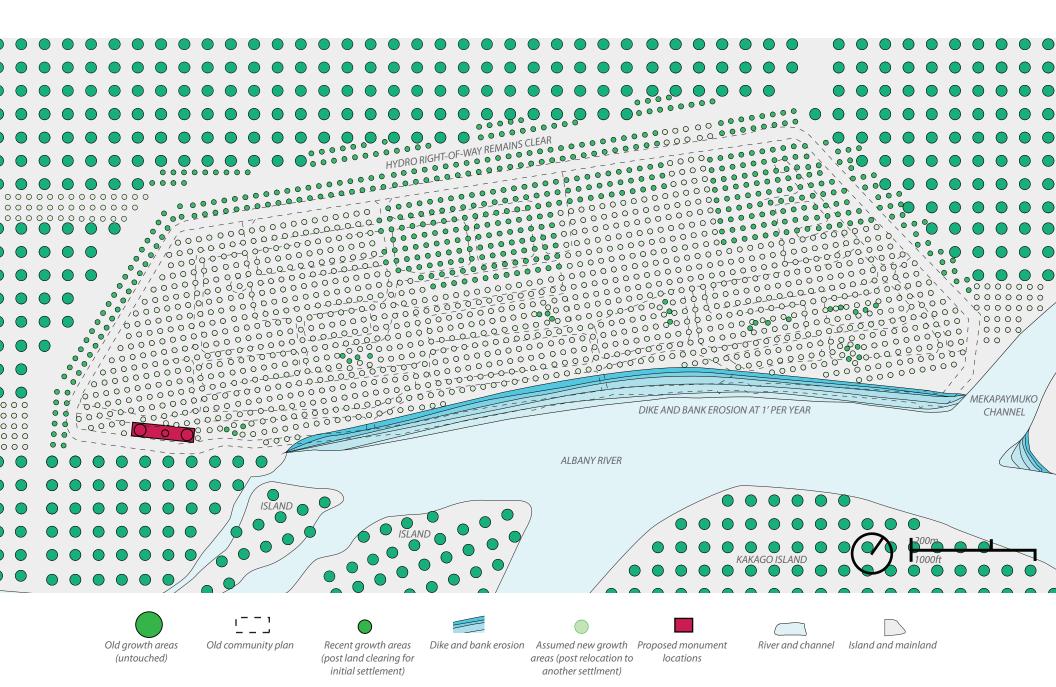
Memory, in the larger sense as a collectively held notion, has shown us many times over that attempting to become master over nature can produce devastating and dire consequences. The traditional knowledge passed down generation to generation by indigenous people speaks to a clear understanding of how to live with the land. There is so much that we must learn from one another in order to recreate harmony with the natural world. In our attempts to overcome natural phenomena to build cities and generate progress, we have set ourselves up for disaster, not just in Canada, but also throughout the world.

Architecture has the power to express culture, to embody spirituality, and to provide the basic functions of shelter. The profound challenge facing Kashechewan calls for a sophisticated approach to the multidimensional problems in the community itself, and at a larger scale, to the relationship between indigenous and non-indigenous people. While buildings cannot solve these issues that have roots far beyond the scope of any one discipline, architecture can speak to change in ways that words alone cannot.

27 (Ross, 76).

## PART III - DESIGN PROPOSAL

Remembering



#### REMEMBERING

One of the most profound decisions facing the community is whether it should develop in its current location or begin anew elsewhere, whether it be in Timmins or at various sites further upriver on the reserve. Difficult economic prospects and the continual threat of flooding are both factors that could lead to the eventual decision to abandon the existing site. This proposal respects the existing burial sites of the community and preserves their location for future visitation.

The design encourages the environmental regeneration of the site along with the creation of two burial mounds connected by a pathway from one of the existing cemeteries to the other, with a space for ritual and reflection in between. It is a special place where stories can be shared about the ancestors and the community before it was moved. It accommodates simple considerations such as a place to sit, a place for fire, some shelter, and a welcoming feeling. The mounds, formed in part out of the old concrete dike protection blocks, are infilled with earth and each level of the tiered mounds are planted. The use of the blocks is a direct reference to the old community, while the planted tiers speak to the natural regeneration of the site and the new life of the community elsewhere. Trees are planted within the keys of the concrete blocks that make up the paving and are reminiscent of the urban grid once overlaid on the community.

The names of those buried at the cemeteries are inscribed in rings that encircle each tier. Hollows within the rings provide space for flowers to be planted and sentimental objects to be left for loved ones. The central space circles around a large fire pit. From within the circular semi-sheltering walls, the two monumental mounds are visible.

With the removal and repurposing of the concrete protection blocks on the dike, the river is free to erode away the dike and return the land to a natural floodplain. In an effort to encourage the regrowth of plants, the existing buildings are de-constructed, salvaged, and removed. Tree planting and seed spreading further encourage regrowth. Animals and plants that thrive in this climate will begin to repopulate the community. This process of transformation is a one that takes years, but will, in the long term, maintain the memory of Kashechewan for future generations while preserving the sacred spaces.

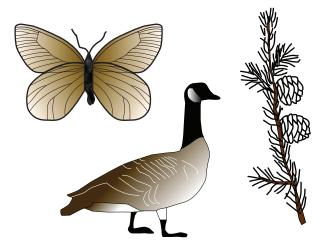


Fig. 91 - Opposite - Community plan showing vegetation and areas of erosion. Fig. 92 - Above - The Melissa Butterfly, the Canadian Goose, and the White Spruce. These are common species found throughout the James Bay region that are reintroduced into the community with the departure of people.

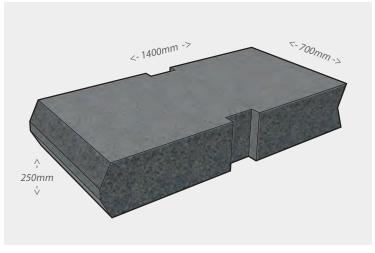
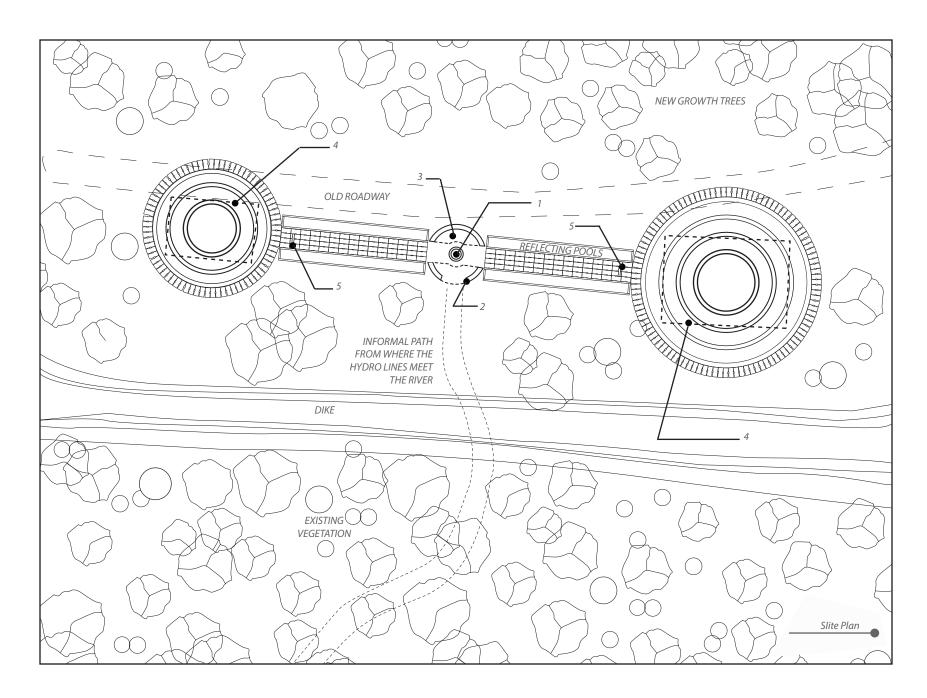


Fig. 93 - Existing modular concrete dike reinforcement. In total, there are 15000 of these concrete blocks used to protect the most vulnerable parts of the dike from the erosion of the Albany river. These are sealed and polished to a mirror finish to reflect the sky.



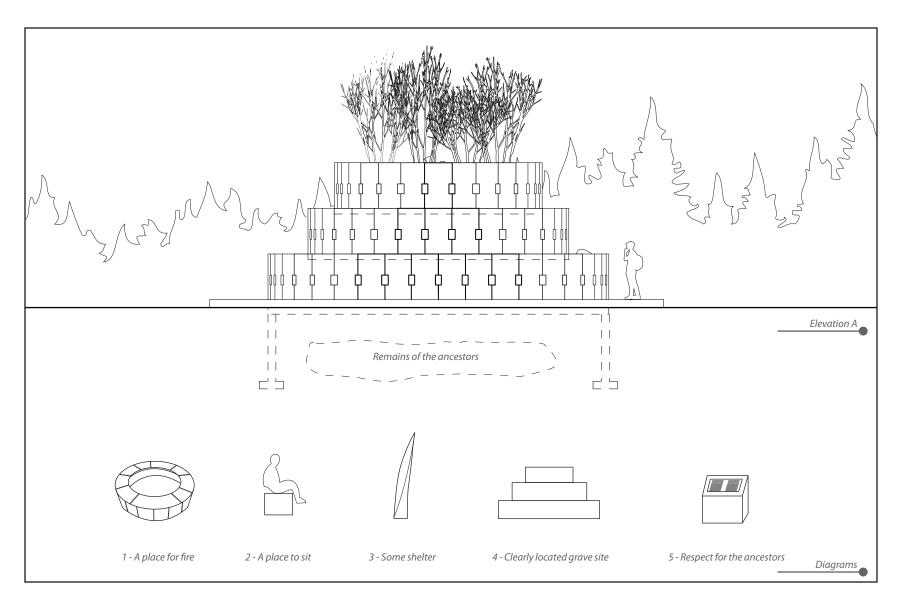


Fig. 94 - Opposite - Site plan showing portions of the old community's infrastructure (the dike and the road). The monuments are located at the sites of the old cemeteries.

Fig. 95 - Above - Elevation of the small monument, and diagrams illustrating the simple considerations.



Fig. 96a - Solid stone and porus concrete form the central space between the two monuments. Moss and plants grow on the vertical components that provide shade and shelter from the wind. A central fire is visible from both of the monuments.



Fig. 96b - Each of the three tiers of the burial monuments is planted with bushes, trees, and hardy grasses. With each passing year new plant growth naturalizes the concrete and grows freely without maintenance. A plaque at each monument memorializes the people buried there and tells the story about the people of Kashechewan.

Conclusion

#### CONCLUSION

Kashechewan is a unique place, that while facing many challenges, also has inherent beauty and possibility. This thesis is an attempt to outline some of the dark and difficult issues while opening up the mind to the spiritual manfestations within the buildings to achieve a deeper understanding of the conditions on remote northern First Nations. Just as the discussion between Native and non-native people has two very distinct sides to the story, so does the story of Kashechewan.

Three very distinct proposals were put forward that begin to address some of the very divergent issues that the community faces, insetad of presenting a single comprehensive scheme or solution, t. They are not intended to be read together to create a united proposal. What each section has in common is an attempt to better the lives of the people living there through design and innovation. They engage deeply with the conversation of whether it is feasible for the community to remain in its current place or if relocation is a better option. The designs represent a specific approach to the situation with princples that could be expanded upon to create further change, not only in Kashechewan, but in other communities like Fort Albany and Attawapiskat. The fundamental issues that the designs address respectively are the concerns of housing and flooding, the lack of public gathering space and issues of remoteness, and community relocation and environmental regeneration. These proposals act as a conclusion to each of the written portions, highlighting the verbal desciptions with unique and plausible designs.

Design in this community has the potential to spark interest and bring about a change of attitude in the general population. The current built form of the community speaks volumes about the issues that it faces, from lack of funding and housing shortages, to water pollution and unemployment. An innovative design proposal can reflect, on a worldwide scale, a positive change in our relationship with Native People and a much-needed shift in thought.

Kashechewan is a place that seems to have been given up on by many in the past and present, but as Pierre Elliot Trudeau said, "It is our future in which we will find our greatness".

May Kashechewan be on the brink of finding its own greatness.

## BIBLIOGRAPHY

### BIBLIOGRAPHY

- Aboriginal Ontario; Historical perspectives on the First Nations. 1994., eds. Edward S. Rogers, Donald B. Smith. Toronto: Dundurn Press.
- Building things that matter. March 2010 Volume 6 Issue 1. Alerie crew working in Kashechewan. 27-30.
- Chief says residents can return to kashechewan. 2008. Retrieved May 3, 2011, from www.cbc.ca/news/canada/story/2008/04/29/kasheshewan-evacuees.
- Drinking water system at the Kashechewan First Nation .2005. Toronto: Ministry of the Environment.
- Dwelling as a figure of thought. 2005. ed. Cornelissen, H. Amsterdam: SUN.
- Kashchewan First Nation community profile. 1999. Retrieved January 27, 2011, from http://www.aadnc-aandc.gc.ca/eng/1100100028859.
- Kashechewan First Nation. 2010. Retrieved February 6, 2011, from http://www.kashechewan.firstnation.ca.
- Ontario reserve decrees First Nation water crisis. 2005. CTV News. Retrieved February 6, 2011, from http://www.ctv.ca/CTVNewsCanada/20051021/kashechewan\_watersafety\_20051021/.
- Royal commission on Aboriginal Peoples: Presentation by Chief Dan Koosees, Kashechewan First Nation (via translator). University of Saskatchewan Archives, Native Law Centre fonds, Reference Library, RCAP vol. 29 (Box 4). Retrieved August 20, 2011, from http://iportal.usask.ca/index.php?sid=293682962&id=190 97&t=details&having=1205846.
- *Uncertain future worries Kashechewan leaders*. 2005. Retrieved July 24, 2011, from www.wawataynews.ca/node/275.
- Albrecht, G., Sartore, G., Connor, L., Higginbotham, N., Freeman, S., Kelly, B., Stain, H. 2007. *Solastalgia: The distress caused by environmental change.*
- Akwesane Notes. 2005. Basic call to consciousness. Tennessee: Native Voices.

- Battiste, M. 2001. *Protecting Indigenous Knowledge and Heritage: A Global Challenge*. Saskatoon: Purich Publishing Ltd.
- Bogue, R. 2010. *Deleuzian fabulation and the scars of history*. Edinburgh: Edinburgh University Press.
- Brennan, R. 2007. *Why Kashechewan is staying put.* Retrieved March 10, 2011, from www.thestar.com/printarticle/243772.
- Brown, C. H. 2010. *Indigenous thought, appropriation, and non-Aboriginal people.*Canadian Journal of Education 33, 4 925-950. Ottawa: Canadian Society for the Study of Education.
- Cajete, G. 1952-. 2000. *Native science : Natural laws of interdependence*, ed. st ed. Santa Fe, N.M.: Clear Light Publishers.
- Carlson, H. M. 2008. Home is the hunter. Vancouver, BC: UBC Press.
- Caruso, J. 2005. First Nation housing The challenge and the opportunities.

  Accessed March 13, 2011, from http://www.northernontario.org/
  Politics/FirstNationHousing.htm.
- Chatwin, B. 1940-1989. 1987. *The songlines*. New York, N.Y., U.S.A.: Penguin Books.
- Chidley, D. 2008. *Anxiety deepens as floods force another Kashechewan evacuation*. Accessed January 27, 2011, from www.cbc.ca/news/canada/story/2008/04/28/ontario-flood.html.
- Canada Mortgage and Housing Corporation (CMHC). 1995. Sharing successes in Native housing: Highlights of the CMHC housing awards symposium on Aboriginal housing. Canada: Canada Mortgage and Housing Corporation.
- Corner, J. S. 1996. *Taking measures across the American landscape*, eds. MacLean A. S., Van Valkenburgh, M. New Haven, Conn.: Yale University Press.

- Cutcliffe, J. R. 2005. Toward an understanding of suicide in First Nation Canadians. Crisis: The Journal of Crisis Intervention and Suicide Prevention 26 (3): 141-5.
- Dragland, S. 1994. Floating voice: Duncan Campbell Scott and the literature of Treaty 9. Ontario: Anansi.
- Dutta, A. 2007. The bureaucracy of beauty: Design in the age of its global reproducibility. New York: Routledge.
- Rogers, E., Smith, D.B. 1994. *Aboriginal Ontario: Historical perspectives on the first nations*. Toronto: Dundurn Press.
- Ellis, C. D., Scott, S, Algonquian Text Society, and Inc ebrary. 1995. Âtalôhkâna nêsta tipâcimôwina; Cree legends and narratives from the west coast of James Bay.
- English, E. 2009. Amphibious foundations and the Buoyant Foundation Project:

  Innovative strategies for flood-resilient housing. Paper presented at the 2009

  International Conference on Urban Flood Management, Paris, France.
- Erwin, S. 2006. *Deaths in Kashechewan fire blamed on poor jail conditions*. Toronto: The Star.
- Faries, E., Moeke-Pickering, T., Hardy, S., Manitowabi, S. 2006. *Keeping our fire alive: Towards decolonizing research in the academic setting*. WINHEC (World Indigenous Nations Higher Education Consortium) Journal.
- Faries, E., Fiske, J., Kenny, C., Voyageur C. 2003. *A wholistic framework for Aboriginal policy research*. Status of Women Canada.
- Faries, E., Pashagumskum, S. 2002. *History of Quebec and Canada: A Native perspective*. Ontario: Nortext Publisher (Cree School Board).
- Feherty, B. 2006. *Peawanuck: The promised land*. Canada: BookSurge Publishing.
- Francis, D. 2002. *National dreams: Myth, memory, and Canadian history*. Vancouver: Arsenal Pulp Press.
- Gladwell, M. 2005. *Blink: The power of thinking without thinking*. New York: Little, Brown and Co.

- Health Canada. First Nation, Inuit, and Aboriginal Health. Retrieved September 1, 2011 from www.hc-sc.gc.ca/fniah-spnia/diseases-maladies/diabete/indexeng.php.
- Hookimaw-Witt, J. 1997. Keenebonanoh keemoshominook kaeshe peemishikhik odaskiwakh [We stand on the graves of our ancestors] Native interpretations of treaty #9 with Attawapiskat elders. Ontario: Trent University.
- Hughes, T. 1983. River, ed. Peter Keen. London: Faber.
- James Bay Winter Road. 1983. *Universal transverse mercator projection zone 17 North American datum*. Retrieved July 20, 2011 from http://jamesbay winterroad.com/mnrwinterroadmap.pdf.
- Jung, C. G. 2010. *Synchronicity: An acausal connecting principle.* Trans. R. F. C. Hull. Princeton, New Jersey: Princeton University Press.
- Knudtson, P. 2006. *Wisdom of the elders*. Eds. David T. Suzuki. Vancouver B.C.: Greystone Books.
- Kudelik, G. n.d. *Albany River*. The Canadian Encyclopedia. The Historical Dominion Institute. Retrieved September 1, 2011 from thecanadianencyclopedia.com/index.cfm?PgNm=TCE&Params=A1AR TA0000112.
- Long, J. S. 1995. Who got what at Winisk?. Beaver 75, no. 1 (1995): 23-31.
- \_\_\_\_\_. 1986. *The Reverend George Barnley and the James Bay Cree.* The Canadian Journal of Native Studies VI, 2(1986): 313-331.
- Lynch, M. First nations get connected. Northern Ontario Business Vol. 22: 3.
- Ministry of Natural Resources. 2010. *Biodiversity; Hudson's Bay lowlands*. Ontario: The Queen's Printer.
- Ministry of the Environment. 2005. *Technical report: drinking water system at the Kashechewan First Nation*. Ontario: The Queen's Printer.

- Morrison, J. 1986. *Treaty research report 1905-1906*. Retrieved July 8, 2011, from http://www.aadnc-aandc.gc.ca/eng/1100100028859.
- News Release, NDP Communications. 2007. NDP calls for immediate action on suicide crisis in Kashechewan.
- Paradis, S. 2007. Kash plan addresses classroom shortage New school to house all students. Timmins: Timmins Daily Press.
- Payette, P. 2010. *Posts in Northern Ontario*. Retrieved June 23, 2011, from http://www.northamericanforts.com/Canada/on-north.html#albany.
- Pope, A. 2006. Report on the Kashechewan First Nation and its people. Gatineau, Quebec: Indian and Northern Affairs Canada.
- Powe, B.W. 2006. *Towards a Canada of light*. Ed. Crean, P. Ontario: The Queen's Printer.
- Riel, L. 1886. The Queen vs. Louis Riel. Ontario: The Queen's Printer.
- Ross, R. 2006. *Dancing with a ghost: Exploring aboriginal reality*. Toronto:Penguin Canada.
- Saul, J. R. 2008. A fair country: Telling truths about Canada. Toronto: Viking Canada.
- ——. 1993. Voltaire's bastards. Toronto, Ontario: Penguin Group.
- Trudeau, P. E. 1944. *Exhaustion and fulfillment: The ascetic in a canoe.* Canada: Wilderness Canada.
- Tulving, E. *Episodic memory: From mind to brain*. Annual Review of Psychology: XVI.
- Whitehouse, D. 1994. *The numbered treaties: Similar means to dichotomous ends.* Past Imperfect 3 (1994): 25-45.
- Wiebe, R., and Johnson, Y. 1998. Stolen life; The journey of a Cree woman.

# Appendix

The Buildings of Kashechewan









Fig. a6 - House

Fig. a7 - House

Fig. a8- House



























Fig. a12 - House









Fig. a15 - House

Fig. a16 - House with accessible ramp and shed













Fig. a19 - House

















Fig. a24 - House

Fig. a21 - House with shed



































Fig. a33 - Snack Shop





Fig. a28 - House with accessible ramp

Fig. a36 - House











Fig. a46 - House

























APPENDIX | THE BUILDINGS OF KASHECHEWAN















































































Fig. a72 - House































Fig. a84 - House

Fig. a81 - House

Fig. a82 - House































Fig. a97 -House with basement



Fig. a101 - House

Fig. a102 - House

Fig. a103 - House









Fig. a100 - House























Fig. a106 - House



































Fig. a120 - House



WHERE THE RIVER FLOWS FAST





Fig. a121 -House

Fig. a122 - House











Fig. a125 - House

Fig. a126 - House

Fig. a127 - House

Fig. a128- House











Fig. a130 - House

Fig. a129 - House

Fig. a132 - House with accessible ramp









































Fig. a144 - House





























Fig. a152- House with accessible

Fig. a149 - House

















Fig. a156 - House

Fig. a155 - House

Fig. a153 - House

130





Fig. a160 - House





Fig. a161 - House

Fig. a162 - Hishkoonikun Education Authority





























Fig. a168 - House



Fig. a169 -House





















Fig. a178 - House Fig. a179 - House with cooking teepee





Fig. a173 - House

Fig. a174 - House

Fig. a176 - House

Fig. a177 - House



















Fig. a188 - House











Fig. a184 - Arena











Fig. a198 - House

Fig. a199 - House

Fig. a200- House











Fig. a195 - House

Fig. a196 - House

















Fig. a204 - Nursing station









Fig. a205 - Nursing station build-ings





Fig. a206 - Francine J. Wesley Secondary School

Fig. a207 - Teacher's housing

Fig. a208 - Teacher's housing













Fig. a211 - Teacher's housing

Fig. a212 - Teacher's Housing

















Fig. a213 - House



Fig. a216 - St. Andrew's School, primary grades







Fig. a219 - Shed

Fig. a220 - House























Fig. a224 - Current Nishnawbe-Aski Police Service (NAPS) station























Fig. a229 - House with basement











Fig. a234 - House

Fig. a235 - House

Fig. a236 - House













Fig. a237 - House v







Fig. a239 - Water intake facility

Fig. a240 - Multi-family housing

APPENDIX | THE BUILDINGS OF KASHECHEWAN

















Fig. a242 - Water intake facility

Fig. a243 - House with shed





Fig. a246 - House with accessible ramp

Fig. a248 - House















Fig. a249 - House

















Fig. a252 - House





























Fig. a264 - House

Fig. a261 - Shed





Fig. a266









Fig. a269 - House

Fig. a270 - House

Fig. a272 - House













Fig. a275 - House with accessible ramp

Fig. a276 - House with accessible ramp



Fig. a273 - House

140













Fig. a287 - House

Fig. a288 - House with basement



























APPENDIX | THE BUILDINGS OF KASHECHEWAN





































Fig. a300 - House

Fig. a297 - House

Fig. a296- Dog house





Fig. a303 - Hous

















Fig. a307 - Teepee/cook tent











Fig. a309 - House with accessible ramp





Fig. a312 - House

143









Fig. a317 - House

Fig. a320 - Shed































144























