Camp Kawartha Site and Facilities
Master Plan

FINAL

dtah

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LIFEGUARD

Camp Kawartha Site and Facilities
Master Plan

Contents

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Executive Summary

Camp Kawartha is a year-round facility with a long history as a summer camp with programming based on environmental sustainability. Over the last few decades, the Camp's programming has continued to grow and strengthen, but its infrastructure and facilities have fallen significantly behind. In order to compete with other camps in the region and to ensure the long-term sustainability of the camp, significant retrofits, new construction and maintenance are required.

This challenge is additionally compounded by the high expectations that potential camp users have when considering where to spend their time and money. The requirement to stay competitive suggests a more comprehensive overhaul to bring the Camp into the future for coming generations of campers and other guests.

The biggest challenge facing the Camp is twofold: The current undesirable physical condition of many of the existing facilities and the desire to operate year-round.

Camp Kawartha's Master Plan documents the current state of the Camp's physical resources and programming, identifying aspects that are working well now, and challenges the Camp faces going forward. The intention of this report is to provide Camp Kawartha's Board of Directors with a guiding vision that will help the Camp achieve its goals while being consistent with its Mission Statement.

The goals of Camp Kawartha can be summarized as follows:

- Become a provincial leader in the delivery of environmental and outdoor education programming;
- Increase the overall peak capacity of the site;
- Demonstrate sustainability in all aspects of the Camp's operation;
- Improve the ability to provide year-round programming and rentals;
- Improve facilities to become competitive with other camps in the region; and,
- Develop a distinctive brand focused on environmental education and sustainability.

Along with the appendices, this document summarizes the consultation process that unfolded during the spring of 2012 and responds to feedback received following workshops and presentations. This Plan begins by introducing the purpose and intentions of the project, followed by a section documenting the existing physical conditions, the current program and the business

"Camp Kawartha, a not-for-profit, charitable organization dedicated to quality year-round outdoor, environmental and leadership opportunities for children and adults, develops positive stewards of our natural and human communities."

Camp Kawartha Mission Statement, 2011-2016

development context. This is followed by a section of guidelines and principles, including precedents from other Ontario summer camps.

The report provides a demonstration plan that illustrates a series of physical proposals geared towards achieving the goals of the Camp, outlined above. The key elements of this demonstration plan can be summarized as follows:

- An expanded central hub to include new, interconnected dining, kitchen, dormitory and washroom/support facilities;
- A new parking area located near the existing main entry drive combined with a new camp workshop and storage facility;
- A renewed and expanded east cabin cluster to complement the existing west cabin cluster;
- An enhanced upper and lower “common” area, intended to improve the natural character and identity of the camp;
- A site-wide ecological restoration effort; and,
- Selective demolition, removal and upgrades to the balance of existing facilities.

Following the demonstration plan, a short section outlining potential programming implications related to the proposals describes how these physical changes could impact the operations of the Camp and improve year-round rental and programming opportunities.

A detailed cost estimate (order of magnitude) has been put together for each of the proposals outlined in the demonstration plan. The results of this cost estimate have been summarized in this report, with the full estimate included in the Appendices.

The last section of the report outlines fundraising opportunities and provides advice regarding next steps for implementation. Marketing will play an important role in arranging financing and communicating changes to those familiar with the camp.

The challenges identified in this report will not be easily addressed and will require more consideration, analysis, and funding to implement. As this process is likely to unfold over many years, a carefully-planned phasing strategy will assist in establishing fundraising targets and phasing physical upgrades into manageable pieces.

This Plan is intended to be the start of a process which aims to build a better Camp Kawartha that will be strong and sustainable, fostering future generations of stewards for our environment.

1.0 Introduction

1.1 Study Purpose / Objectives

The objective of the Camp Kawartha Site and Facilities Master Plan is to establish a cohesive vision and long term planning strategy to guide the environmentally sustainable development of the Camp site and its facilities. The plan includes options for upgrading, expanding and/or replacing existing facilities, as well as recommendations for the development of new facilities as required.

More specifically, the goals of the Master Plan are to:

- Ensure that Camp Kawartha operates as a leading environmentally sustainable and environmentally-focused summer residential camp, year-round Outdoor Education Centre and weekend rental facility;
- Provide the Board and Management with the necessary information and guidance, as well as innovative solutions, to continue to be environmentally-responsible and financially-prudent stewards of the Camp Kawartha site and facilities; and
- Ensure that Camp Kawartha's site and facilities are developed in a versatile and sustainable manner that accommodates and enhances current and future program offerings and uses.

The Master Plan includes a thorough investigation of the existing conditions of the camp, an understanding of the Camp's business and programming targets for the next 20 years, and a demonstration of how these targets might be met with a combination of existing building and facility upgrades, expansion or replacement, and the development of new facilities as deemed necessary to meet the vision and long-term plan of the Camp.

Images from Camp Kawartha's earliest days as a Rotary Club camp founded in 1921.

1.2 Existing Conditions

Camp Kawartha is located 26 km northeast of Peterborough, off Highway 28 on the south shore of Clear Lake, at the intersection of Birchview Road and Camp Line Road. The site is comprised of two parcels–the lakefront camp site of 5 hectare, and the "Range," a larger parcel of 73 hectares, across Birchview Road from the camp, which contains 4 km of hiking trails and temporary overnight camping sites used by Camp Kawartha.

The focus of this Master Plan is on the 5 hectares lakefront property where the majority of the Camp's structures and activities are held. This property contains areas of level ground separated by a steeply sloped section of rocky terrain where the existing Rotary Hall, Dining Hall and Kitchen facilities are located. The principle administrative facilities of the camp are located closer to Birchview Road, while the camper facilities, including primary cabin clusters, are located adjacent to Clear Lake at the bottom of the hill. The property is densely wooded, except for the two main gathering spaces, which have been cleared in order to allow sunlight penetration and sporting activities to take place. Flanking the property are private residential lots.

The existing condition of the structures on the Camp Kawartha property has been thoroughly documented in the Existing Building Condition Assessment, included in the Appendices of this report. In general terms, the existing buildings are in varying states of repair, and can be characterized as a mixture of purpose-built and donated wood frame and straw bale structures interspersed within the forest and surrounding the principal outdoor gathering spaces of the camp. These buildings lack a unifying character, and are in many cases insufficiently insulated for efficient four-season use. Plumbing is generally centralized, except for a few outhouses and composting toilet facilities, which are located in the western half of the site.

Power is distributed between buildings using a combination of overhead and buried wiring. The water supply is drawn from the lake to a pump house at the lake's edge where it is filtered and UV treated before being stored in cisterns within the main washroom building. The septic system is comprised of pumps and settling tanks located northeast of the dining hall and a field bed located beneath the upper common.

Selected images from the Existing Building Condition Assessment review, January 31, 2012.

1.3 Existing Programming / Business Challenges

Camp Kawartha's programming is excellent. It is very comprehensive, in that it caters to all ages and all interests and operates in all seasons. The programming is innovative, utilizing the most current approaches to outdoor education (taught at the Ontario Institute for Studies in Education (OISE), Trent University and other teacher training institutions). Programming staff members are entrepreneurial–they constantly investigate new business opportunities, with a view to enhancing the Camp's programming, while also contributing to its bottom line.

Camp Kawartha's programming is comprised of the following:

- Summer camp – the Camp's flagship program;
- Outdoor education – a fall, winter and spring program for visiting school groups; and,
- Weekend rentals – rental space and programming for groups wanting to host conferences, workshops, retreats and other gatherings.

In addition, there are integrated programmatic connections with the Camp Kawartha Environment Centre at Trent University in Peterborough – a day-visit facility operated by the Camp for schools and other groups.

The Camp Kawartha programming is unique in many respects. It provides the classic summer camp experience, but it also immerses participants in activities that foster environmental stewardship. Because of its small size, Camp Kawartha provides an intimate experience unlike many of its competitors. The Peterborough facility and the affiliation with Trent University are additional points of differentiation for the organization.

The Camp is challenged by ageing infrastructure, which puts it behind competitors. Staff report that out-of-date facilities have resulted in the loss of business, with certain groups choosing other camps. This is particularly true for cold weather programming where groups (customers) have a strong preference for comfortable and modern sleeping quarters with connected bathrooms. Ageing infrastructure has also resulted in higher operating costs (electric heat in uninsulated cabins), higher maintenance/repair costs and workplace safety issues (the kitchen). The question of how to fund and phase upgrades to facilities presents a major challenge for the Camp.

Numerous activities currently offered as part of Camp Kawartha programming.

1.4 Business Development Context

Demand for Camp Kawartha's programming is strong. While enrolment has softened as a result of recent economic circumstances, the long-range experience is one of almost continuous growth. There is a strong attachment to the Camp's landscape and the emphasis on environmental stewardship is current with public interest in environmental issues.

Staff have been nimble in responding to camp industry market trends (interest in shorter programs, programs for those with special needs and curriculum-based programs). Further, staff are entrepreneurial in their approach–successful in securing additional program funding through grants, creating fee-for-service programs (corporate team-building) and establishing partnerships. The Camp is well-governed, as documented in its 2011 to 2016 Strategic Plan.

The operations of Camp Kawartha are stable and sustainable. Revenues are consistent at approximately $1.2 to 1.4 million per year. The summer camp program generates a surplus that more than covers its expenses. The surplus generated by the outdoor education program is more modest but the impact is nevertheless positive.

The challenge faced by Camp Kawartha is related to capital spending requirements – the routine and extraordinary expenditures that any facility requires. The Camp's operations have not provided enough of an annual surplus to adequately reinvest in the site – the revenue is enough to cover operations, but not to bank for future development. As a result, there is a backlog of required capital investment. The challenge is exasperated by the fact that participant expectations have grown.

Camp Kawartha can take comfort in the fact that it is not alone. A number of camps surveyed for this study (including Kinark, YMCA Wanakita) have had challenges with ageing infrastructure. The need to update and upgrade facilities is common in Ontario's camp industry.

Camps do compete for business, but the competition is not aggressive. If anything, Ontario camp directors collaborate and exchange information on business trends, supported by the Ontario Camps Association. Consumer decisions about which camp to attend are most likely related to program, reputation, location, landscape and facilities. Thus, having facilities that are modern and, at the very least, on par with what others have to offer is important.

Select images from the Design Workshop held at the Camp Kawartha Environment Centre at Trent University, March 2, 2012.

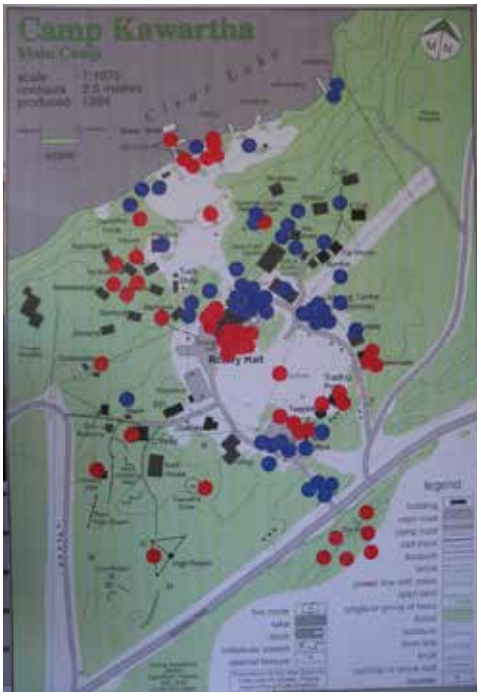
1.5 Synopsis of Master Plan Working Process

Following the engagement of the consultant team, a site visit was conducted on January 31, 2012, during which each building on site was reviewed by architectural, structural, and mechanical/electrical engineers to determine its current status. At this time, the existing programming of the Camp and its business development ambitions were reviewed by the team and members of the Camp's executive committee. The resulting details are summarized within the Existing Building Condition Assessment and minutes of Meeting #1 included in the Appendices of this report.

A second meeting was scheduled with the larger Camp Kawartha community, including board members, staff, former campers, and other stakeholders on March 2, 2012. This meeting was organized in the form of a design workshop, where the consultant team presented their research to date, including a summary of the Existing Building Condition Assessment, a review of their current programming and how capital improvements might be funded. They then assisted the group in brainstorming collectively on what outcomes the research suggested, how to articulate the aims and ambitions for the Camp's future, and how best to reflect these goals in the Master Plan. The resulting details from this design workshop are provided within the minutes of Meeting #2 included in the Appendices of this report.

Meetings #3 and #4 proceeded during the months of March and May 2012 to refine the components of the Master Plan, presenting diagrams of the overall site illustrating proposed new buildings, removed/reconfigured buildings, changes to the camp's main entrance, vehicular paths, pedestrian paths and landscaping. The proposal contained within this Master Plan is a result of refinements and revisions based on Steering Committee feedback received during and subsequent to these two meetings. The presentations from Meetings #3 and #4 are also contained within the Appendices of this report.

Camp Kawartha Site Concept Diagram



Panel from Workshop #1

- Red dots: Favourite parts of Camp Kawartha
- Blue dots: Least favourite parts of Camp Kawartha

2.0 Principles, Guidelines and Standards

2.1 Master Plan Framework

This Master Plan sets up the key principles that will guide the physical development of the Camp into the future. Most of the changes will be gradual and incremental, and this document is intended to provide guidance to inform that process as it unfolds.

The Master Plan framework refers to the core ideas that guide the overall direction of the plan. In the case of Camp Kawartha, the primary guiding principles of this framework are twofold: the development of a leading edge, sustainable camp and the enhancement of character.

The concept of sustainability comes through all aspects of life at the camp, and all future aspects of the camp both in terms of program focus as well as physical modifications to the facilities should share in the pursuit of building a self-sustaining, green-focused learning environment.

The pursuit of a clear identity for Camp Kawartha will be part and parcel with the development of a consistent character. A conscious approach to editing the look and feel of the facilities as they evolve will greatly improve the overall impression that is made on users.

During the consultation process, the physical makeup of other facilities in Ontario that provide examples of both of these principles was reviewed. Additional information and precedents can be found in the appendices.

Boundless Camp, Palmer Rapids, Ontario

Boundless Camp reorganized themselves with the addition of a new camp hub. The hub is built with simple durable materials, many of which are rapidly renewable. Their camp hub interconnects a main lodge, a small storage building and a sleeping wing and a sauna.

Moorelands Camp, Dorset, Ontario

Natural light and a predominantly wood aesthetic create an inviting space that is very unique and memorable. Moorelands also has an ongoing cabin replacement program based on a prototype developed by University of Toronto architecture students.

Ganaraska Forest Centre, Cambellcroft, Ontario

With an 80-person capacity, this building follows LEED (Leadership in Energy and Environmental Design) principles, incorporating a solar thermal water system, green roof areas, recycled plastic roof tiles and biomass technologies.

2.2 Sustainability

Camp Kawartha's commitment to environmental sustainability is impressive. The redevelopment of the camp is an opportunity to further incorporate and demonstrate sustainability.

The reasons:

- Sustainable building/site design saves energy, water and other resources, and reduces operating costs;
- Sustainable building materials are more durable and less toxic than conventional materials;
- Sustainable building/site design sets up the opportunity to support educational programming related to environmental stewardship.

A variety of systems and building material choices can demonstrate sustainability–from low-tech to high-tech and from tried-and-true to emerging/innovative. Straw bale construction is already a successful part of the camp. Other less obvious choices, such as high quality insulation, are equally effective. Sustainable design can be beautiful, and reflect a contemporary architectural aesthetic which takes advantage of natural lighting, ventilation, and the spectacular views the Camp Kawartha site has to offer.

Hands-on experiences are often the most successful and rewarding learning opportunities, whether they involve ecological restoration, the building of a structure or the composting of materials to feed a garden. All of these are memorable ways of demonstrating sustainable practices and encouraging environmental stewardship.

The proposals outlined in the demonstration plan suggest the employment of a number of sustainable practices. These are addressed in more detail in each section and reflected in the costing. They include:

- Well-insulated new and upgraded facilities that minimize energy use, provide generous amounts of natural daylight, have strong connections to outdoor spaces and are built of durable materials;
- Renewable and recycled and non-toxic materials;
- Solar thermal water heating (space heating and domestic hot water);
- Water collection and grey water recycling; and,
- Passive ventilation.

2.3 Character

Character relates to the impression and feeling that is derived from the physical characteristics of a particular place. The character of a place leaves an impression that visitors and staff take away from their time there, and informs their memories of the place. This sense of character influences the decisions that potential campers and rental customers make when they visit the site. The character of a place should be easy to describe, and generally consistent. This applies to both the form and materials of the buildings as well as the landscape of the site.

While Camp Kawartha feels like a summer camp, its character suffers from mismatched building aesthetics and conditions and a general lack of a cohesive organizational structure.

The character of the Camp can be improved by following these guidelines:

General maintenance: Try to address upkeep as it is required. When something feels broken or mistreated, it will often be further neglected. If a building is no longer serving its purpose and cannot be easily maintained, the character of the Camp may be better served by removing it.

Consistency: Be consistent, and build on what is working for the Camp. When building new or renovating existing structures, consider the other elements and materials of the nearby buildings. Try to build consistency in the materials and the way in which they are used to limit the palette so that the character of the built form holds together. Using a similar approach to materials and construction methods also makes maintenance easier. Build on the character of the most distinctive and memorable aspects of the existing Camp. (e.g. the West Cabin Cluster).

Selectivity: Be selective about any future donated buildings, as they each comes with its own character, which can affect the overall character of the Camp.

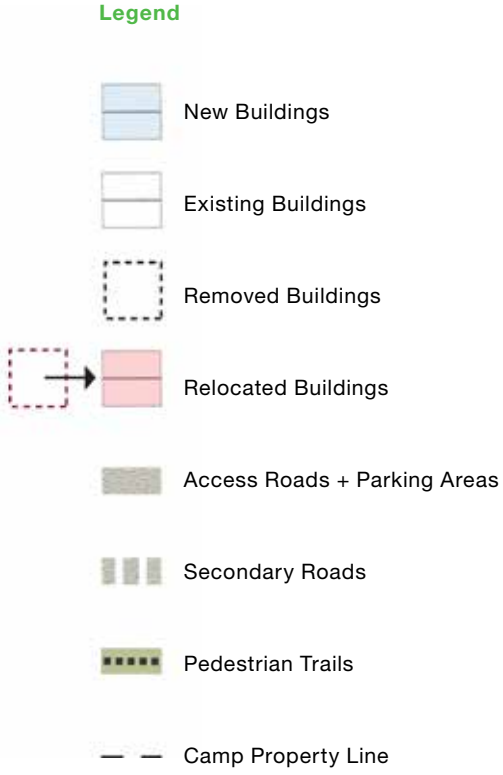
Landscape: Use landscaping and planting strategies to define outdoor spaces with appropriate groundcover materials. Develop a consistent approach for the pedestrian pathways across the site.

Dining Hall at YMCA Pine Crest Camp, Torrance, Ontario

Mississauga Cabin, West Cabin Cluster

3.0 Demonstration Plan

The demonstration plan is a visual representation of Camp Kawartha including proposed upgrades to facilities. The intention is to paint a picture of how the Camp could evolve to meet the goals of growing capacity during all four seasons and upgrading facilities to accommodate more frequent and diverse group rentals. The key components of the demonstration plan are described in the following subsections and have each been costed in a preliminary (order of magnitude) estimate which is summarized in Section 5.0.



These components are schematic in nature and vary in scale and in priority. Some of the improvements suggested in the Demonstration Plan (West Cabin Cluster, Ecological Restoration and Selective Building Removals) can be implemented right away or may already be happening, while other components require more detailed consideration, fundraising and design prior to implementation.

The expansion of the Central Hub (3.3) is certainly the largest of the considered interventions, but it brings with it the benefits of a centralized efficient four season structure that will enable the camp to be more competitive in securing year round rental income.


CLEAR LAKE
EAST CABIN CLUSTER
LOWER COMMON
WEST CABIN CLUSTER
CENTRAL HUB
UPPER COMMON
ROAD FIRE ESCAPE
TEDFORD LANE
STAFF SUPPORT
BIRCHCLIFF DRIVE
SITE ENTRANCE / PARKING / WORKSHOP
BIRCHVIEW ROAD

3.1 Site Circulation

The initial site analysis suggested that the majority of the Camp's programming and daily operation focused on one principal axis connecting the Upper Common to the Lower Common and lake edge. Along this axis are the Camp's main indoor gathering spaces, including the Rotary Hall, Dining Hall, and Kitchen facilities, as well as the main outdoor green spaces used for group activities and games. Flanking this main axis are the East and West Cabin Clusters, used by staff, campers and visitors throughout the year.

This axis also represents the principal view upon entering the Camp facility. In this Master Plan, new gathering facilities are proposed along this axis, including the proposed Central Hub and associated outdoor amphitheatre. The improved Upper and Lower Common are better defined by landscaping and pedestrian paths. The existing parking lot facility is relocated adjacent to Birchview Road to remove it from the principal view and facilitate bus and vehicular parking as close to the entrance as possible.

The Upper Common, the focal point of Camp activities in the summer months, will be the first element a visitor sees upon entering the property and thus help to establish a new identity for the Camp focused on the natural world. This open green space is proposed to be improved and defined by increased landscaping around its perimeter, which in turn screens some of the more utilitarian buildings currently surrounding the Upper Common from view.

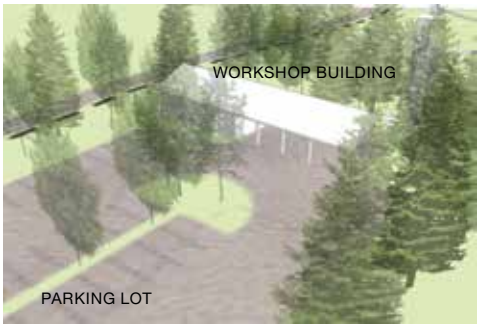
Access to Clear Lake, the focal point of the buildings located below the Central Hub, is simplified through a continuous pathway from the Camp entrance. Flanking buildings address this pathway and reinforce the connection between elements on the main axis of the Camp.

3.2 Site Entrance / Parking / Workshop

The current site entrance from Birchview Road is characterized by a marked gravel driveway accessing the main parking lot adjacent to the Upper Common and administrative offices of the Camp.

In order to improve the utility of the parking lot, as well as a visitor's first impression upon entering the camp property, the primary parking lot for the camp has been relocated west of the main entrance drive adjacent to Birchview Road, and expanded to accommodate +/- 50 cars and two to three buses at any one time. The lot is configured with one-way in and out entrances accommodating school bus turning radii. Curb-side pick-up and drop-off is accommodated along the northern edge of the parking lot, allowing visitors to access the camp on foot without having to cross a line of traffic. A small amount of parking for administrative staff is maintained adjacent to the main office.

Along the western boundary of this parking lot the construction of a new structure accommodating the site's maintenance needs is proposed in the form of a large workshop (used principally for wood-working and repairs), a material storage shed, and a maintenance vehicle storage garage.



Top: Facing west from above main driveway.

Above: The Workshop, as seen facing southwest.

Parking Lot / Workshop Plan

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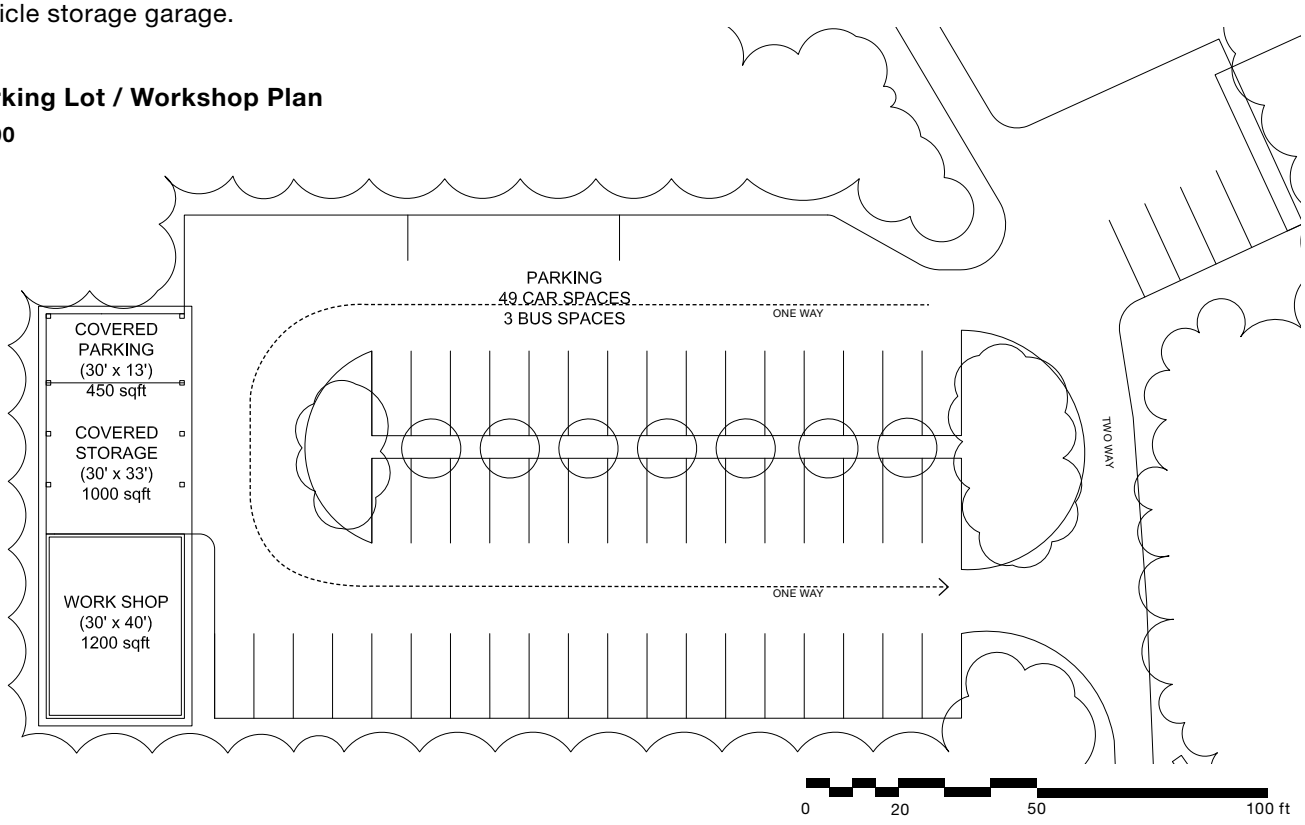


3.3 Central Hub

The proposed Central Hub building is to provide the Camp with centralized dining, kitchen, gathering, health and dormitory functions to support expanded four-season programming.

Maintaining the existing Rotary Hall building, the new hub proposes a revamped dining hall, sized to accommodate 200 people seated at tables, with the opportunity to expand this seating into Rotary Hall as necessary to accommodate larger groups. The dining hall will be accessible (built to match the floor level of Rotary Hall) and is characterized as a bright and welcoming space with an open-truss roof and ample natural lighting. A line of patio doors opens this dining hall up to an exterior deck overlooking the lake.

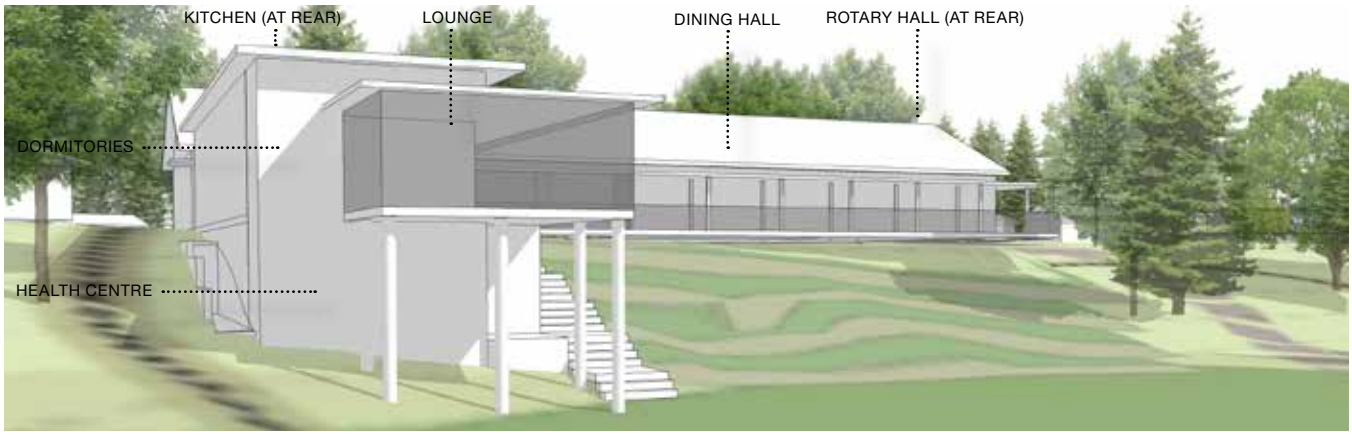
Adjacent to the new dining hall is a new commercial kitchen facility, the design of which is based on recommendations from Kaizen Food Service consultants, and includes a new walk-in freezer, outdoor cooking area, and concealed garbage storage. An extensive "porch" element is proposed to connect the new hub facilities and the existing Rotary Hall as a means of providing a cohesive aesthetic treatment and facilitating the development of an important social space for the hub, as well as providing a good transition from inside to outside.

New washroom facilities will be provided to serve the dining hall, and will include shower facilities to support the adjacent dormitory wing which stretches toward the north and is interconnected with all other elements of the hub. This new dormitory wing will accommodate between 45 to 50 persons in modules of eight-person bunk rooms. Accessed from a hallway overlooking new outdoor amphitheatre seating facing the Lower Common, this new dormitory wing provides

Top: The Central Hub as seen facing northwest.

Above: The Central Hub as seen facing east. The wing seen protruding to the right is the existing Rotary Hall.

Below: The Cental Hub, looking south from the Lower Common.



Camp Kawartha with upgraded four-season camp programming and space rental opportunities that rival those of other Camps and resorts in the area.

The Camp Nursing Station (infirmary) is located in the lower level of the dormitory wing, along with a mechanical room housing the main pump equipment providing potable water for all of the camp's facilities.

Construction Methodology: We are proposing that the Central Hub be constructed at a single floor elevation to maximize accessibility and flexibility. The majority of the building is proposed as a slab-on-grade construction with the exception of the dormitory wing, which would have some excavation to accommodate a lower level.

Sustainability Features:

- Energy efficient building envelope;
- Solar thermal for space heating (propane boiler back up);
- Grey water recycling and low-flow plumbing fixtures; and,
- Renewable and recycled materials (wood and composite decking).

Materiality / Character: The materials used for the construction of the Central Hub should be generally similar to those historically used in other structures around the Camp. We are suggesting a simple palette of wood walls, polished concrete floors, durable metal rooflines and glazed openings with efficient windows to open the building to the wonderful views around the site.

Central Hub Site Plan
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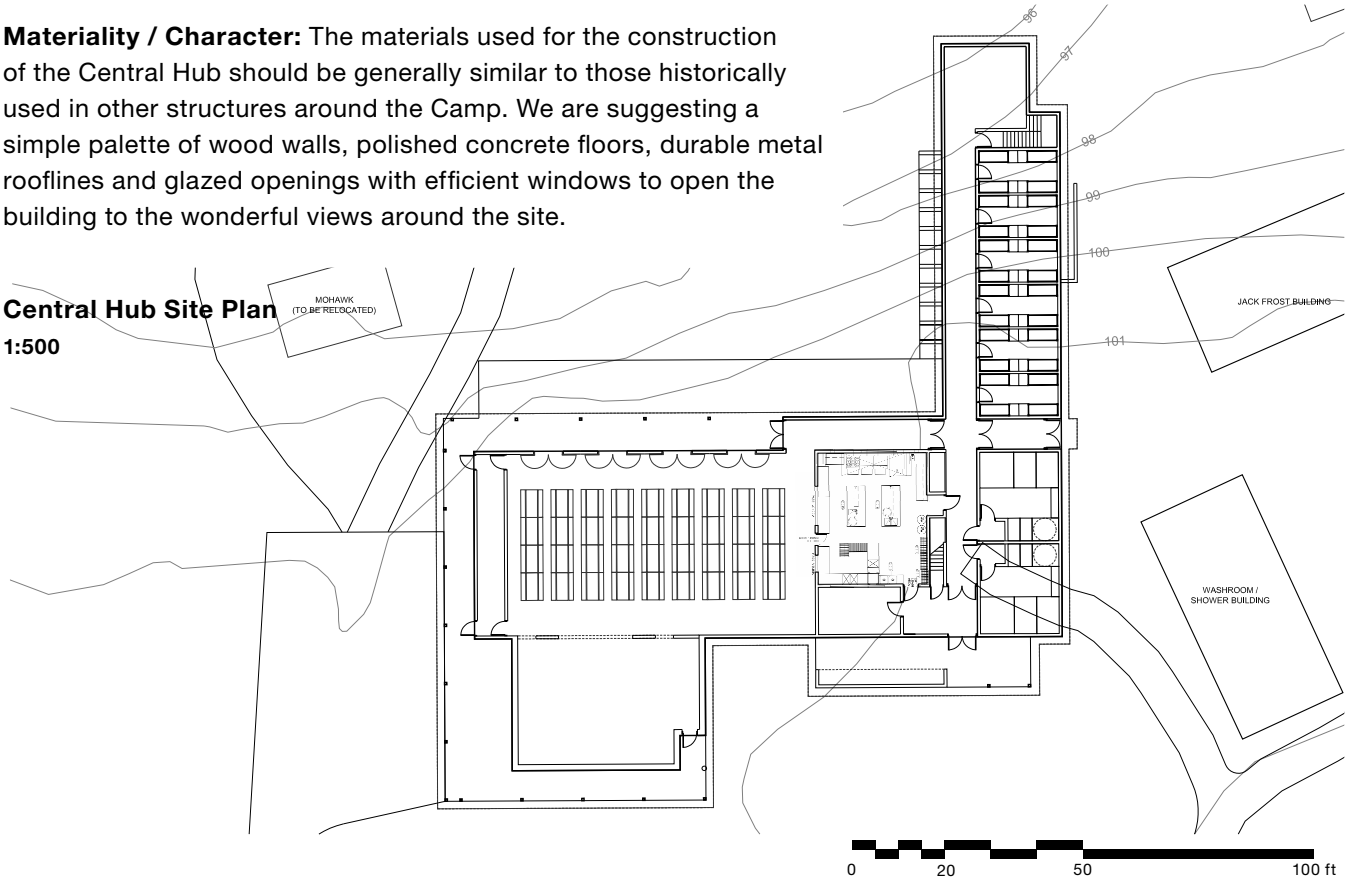

Central Hub Demolition Plan

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Central Hub Foundation Plan

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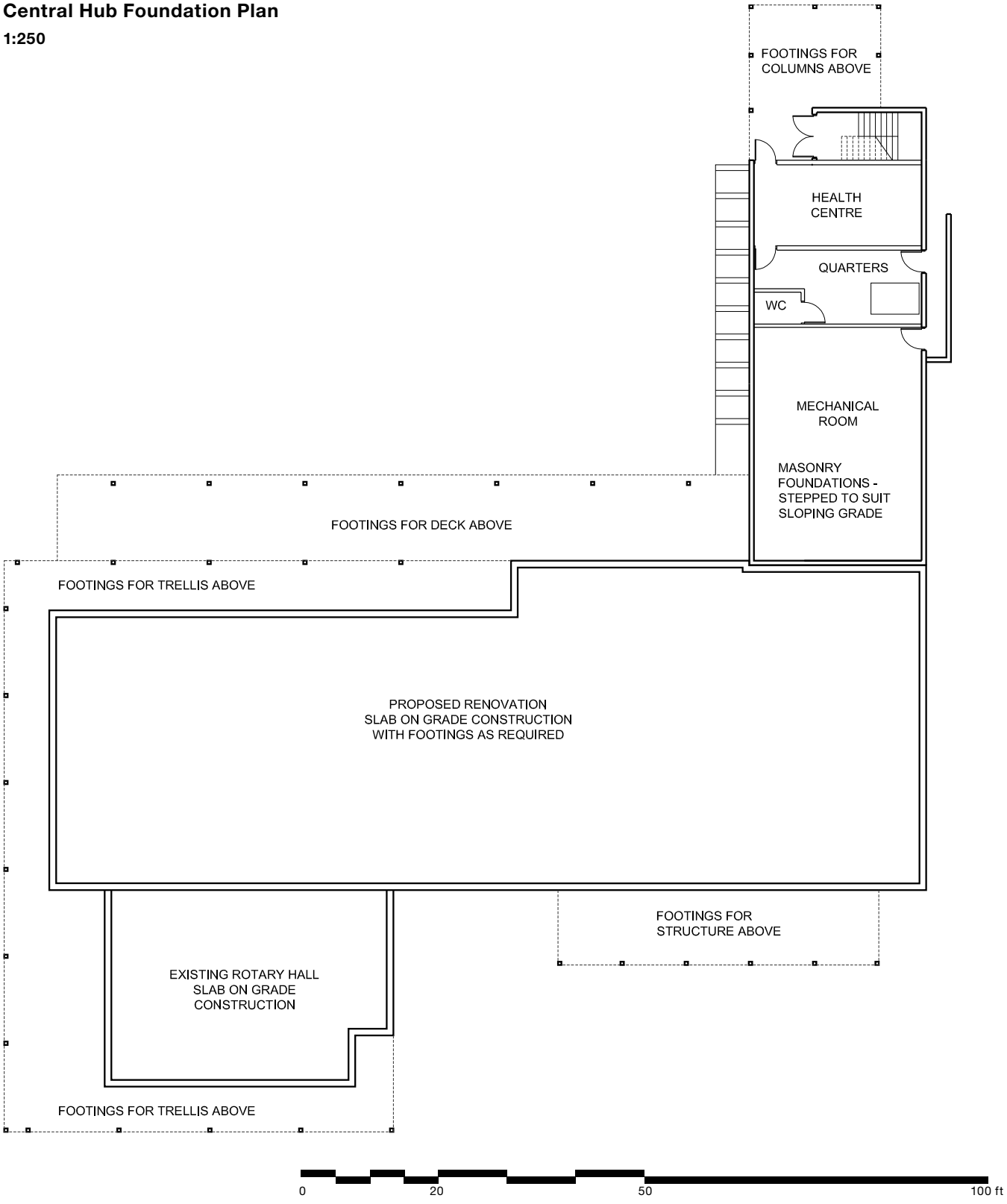

Central Hub Ground Level Plan

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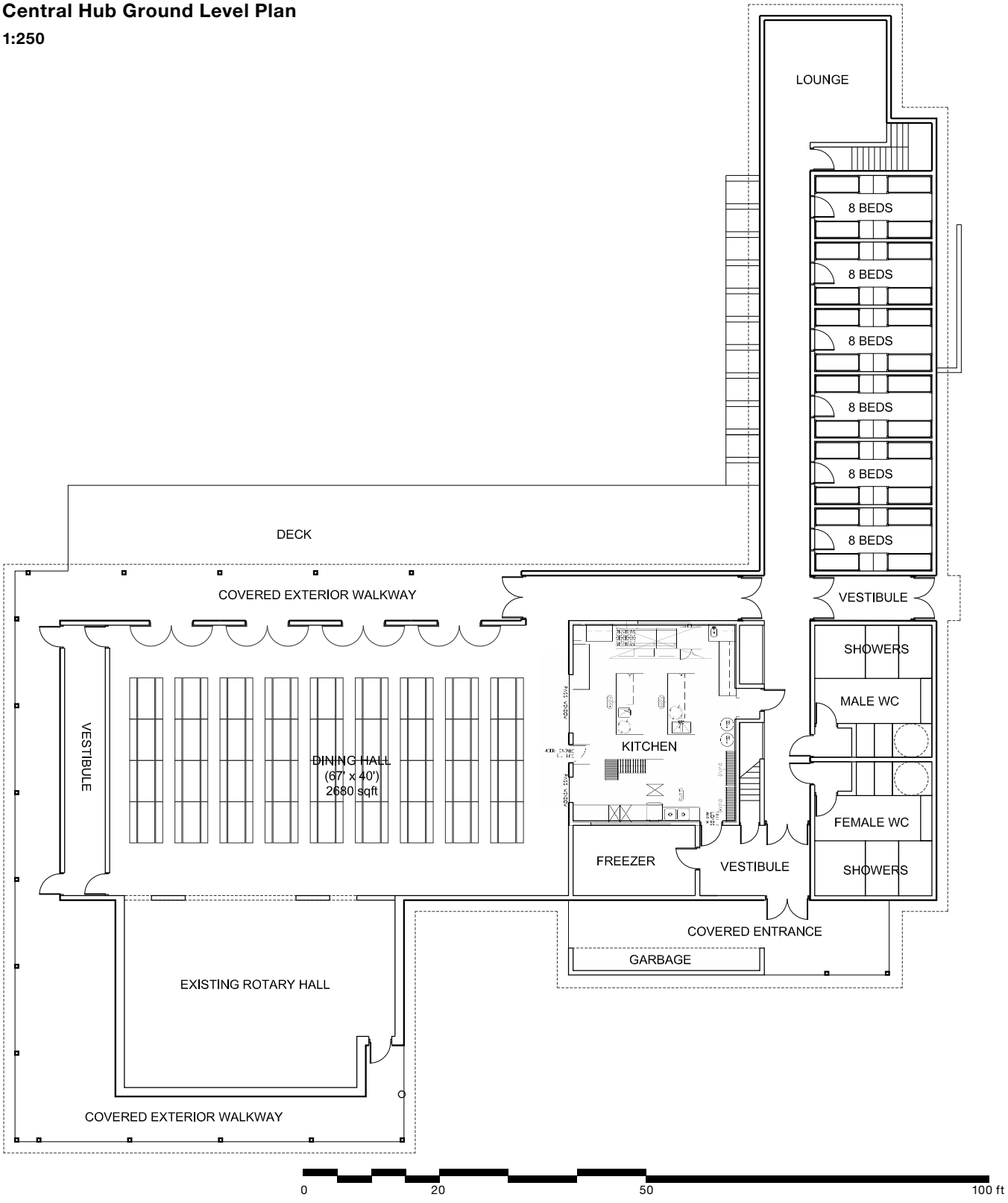

Central Hub Second Level Plan

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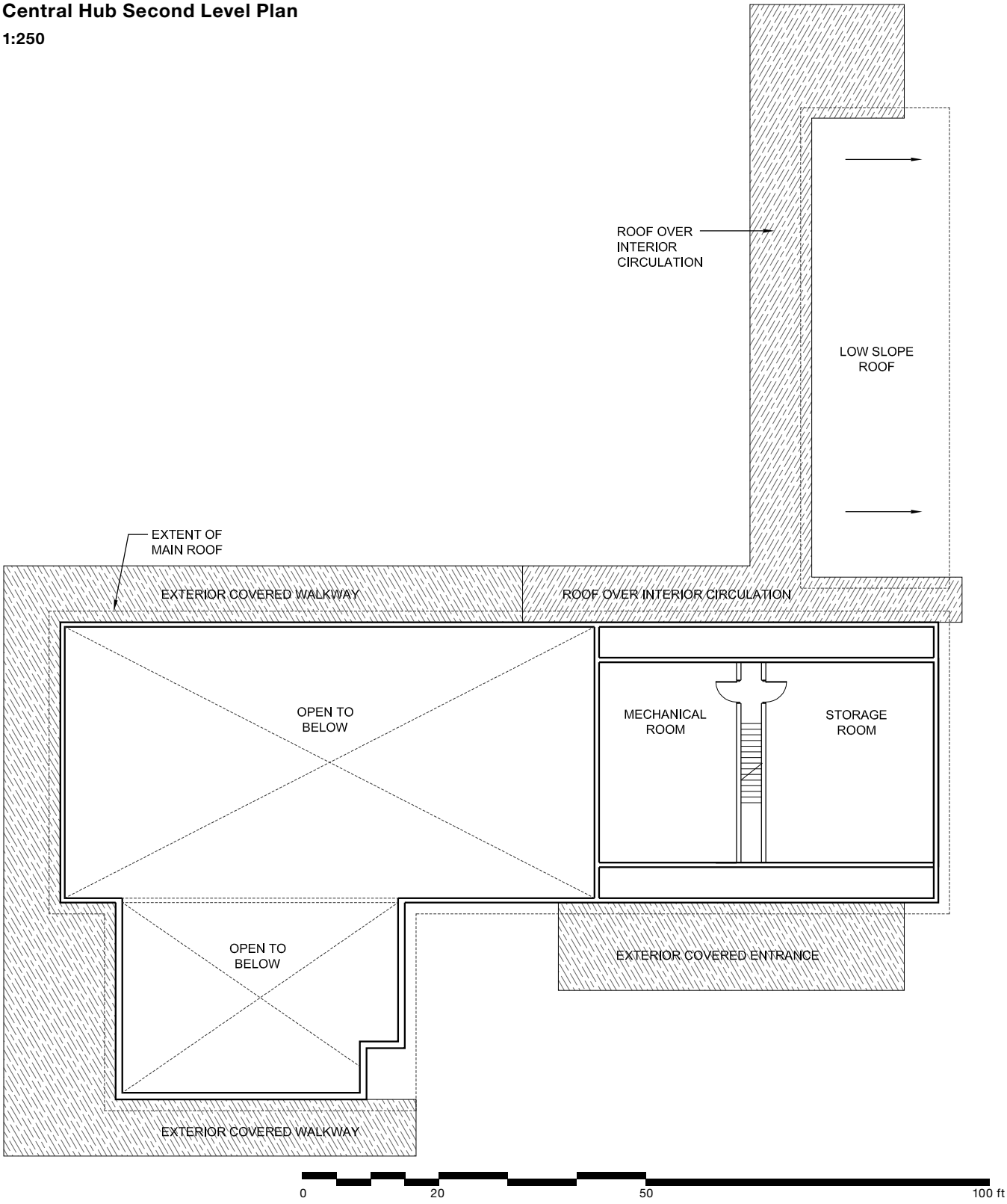
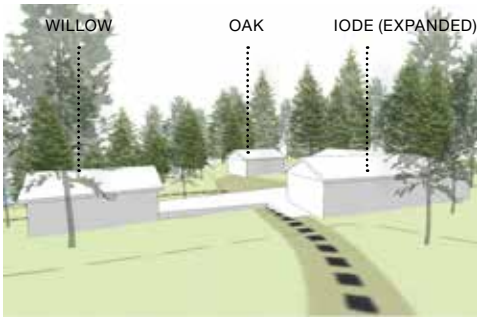
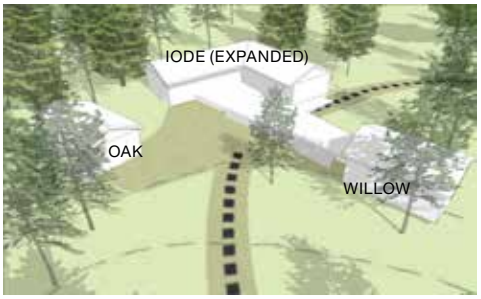


3.4 East Cabin Cluster

The East Cabin cluster, composed of the IODE, Willow and Oak cabins, is currently considered to be a non-desirable area due to the lack of intimacy and connectivity between the cabins, and the difficulty of negotiating the rocky landscape between the three buildings. The cluster is proposed to be expanded to accommodate up to 50 persons in renovated, fully-winterized enclosures reusing the existing cabin framing and in some cases relocating the main entrances of cabins. Central to this plan is the IODE cabin, one of the more contemporary and robust cabins on the Camp Kawartha property, which is to be expanded to accommodate 30 persons as well as a composting toilet. Accessibility will be achieved by interconnecting the expanded IODE and Willow cabins with a large wooden deck that helps to negotiate the difficult grading between the buildings, and connects to the main footpath to the Upper Common. An additional new footpath will be defined from this cluster to the Lower Common, to reduce the erosion and damage to the forest floor due to a lack of defined path between these two areas of the camp.





Top: The East Cabin Cluster, seen facing north. The Willow Cabin is connected to the expended IODE Cabin via a deck.

Above: The East Cabin Cluster, seen facing south.

East Cabin Cluster Plan
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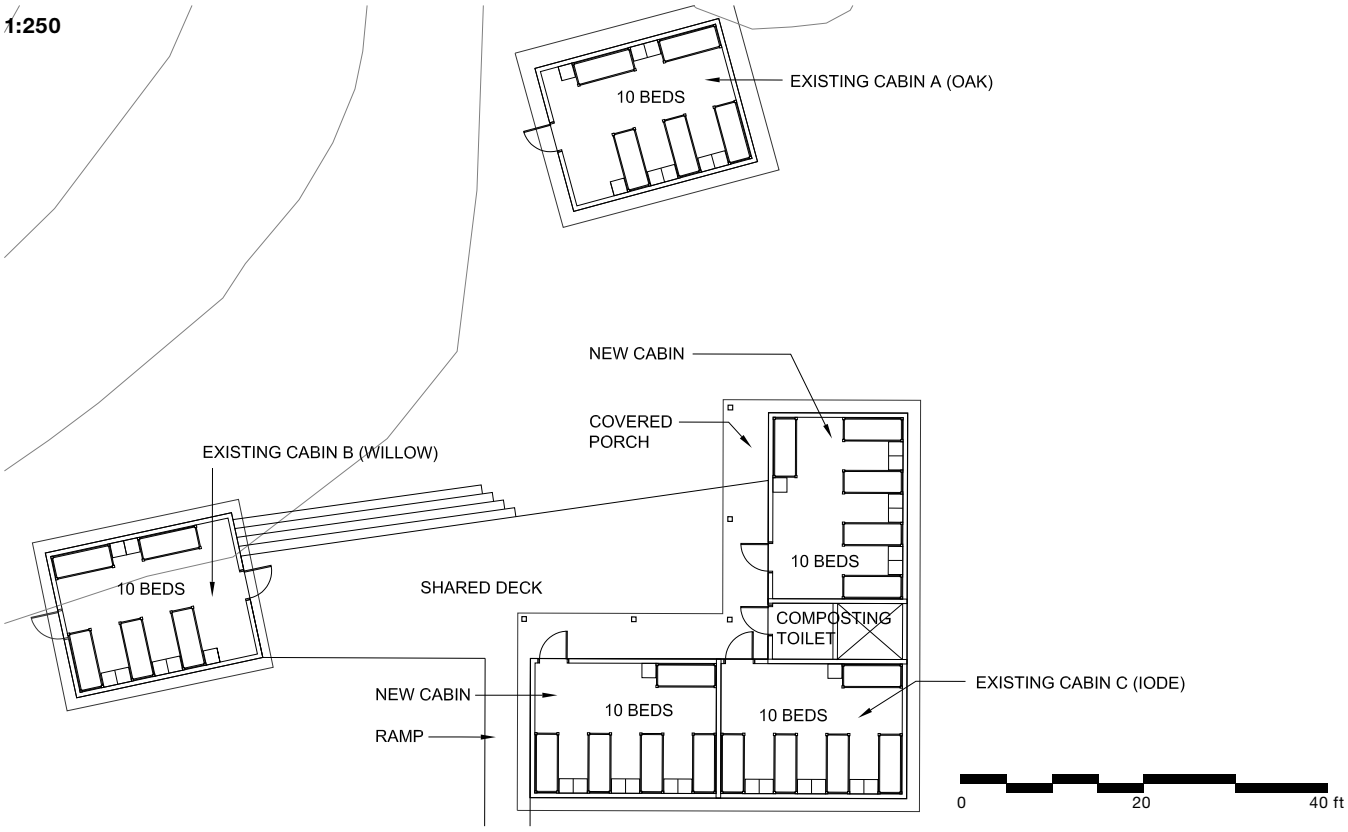
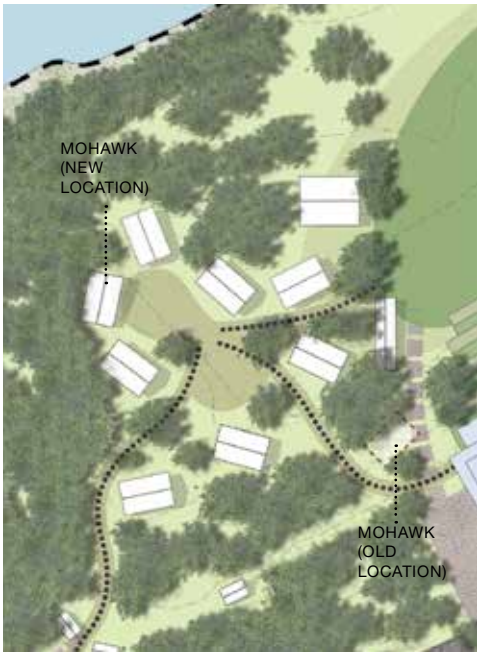


3.5 West Cabin Cluster

The West Cabin Cluster is by far the most popular area of the Camp, due in part to the cohesive character and intimate scale of the cabins, their proximity to one another and the gathering space formed at their centre. The long-term intention is for these cabins to remain, and be renovated over time to improve their energy efficiency and comfort. As part of the demonstration plan, the Mohawk Cabin is proposed to be relocated down into this cluster, helping to define its northern edge adjacent to the lake.

While the retrofits to some of the cabins that have begun are a good start, it is important that the retrofits acknowledge the cabins' heritage character, as they are the clearest remaining link to the history of the Camp. Consideration should be given to improving the natural light and ventilation characteristics of these cabins. In future, the approach to maintenance and retrofits for this cluster should be consistent. This can be achieved by continuing to use consistent exterior materials, including doors and windows, as this has the most impact on the look and feel of the cluster as a whole.



Plan view of West Cabin Cluster, with relocated Mohawk Cabin. No other new buildings are to be added in this area.

3.6 Upper Common

The Upper Common is the largest contained open space with the 5 hectare main Camp, and establishes the first impression of the Camp upon arrival. The Upper Common hosts field sports and other outdoor activities and should continue to serve this function in the future. The appearance and function of the Upper Common can be improved by reinforcing the edges of the common with trees, plantings, pathways and seating that will define and enclose the central green space and screen from view some of the more utilitarian buildings around its perimeter.

Image of Existing Upper Common Area.

Due to the nature of being an open space with good solar access, one consideration is to incorporate gardens into the pathways around the perimeter of the Upper Common to provide educational opportunities related to growing food. It is recommended that this happen on the north side of the Common. This side has the best location with respect to sunlight and is also closest to the existing greenhouse (another demonstration site for agriculture).

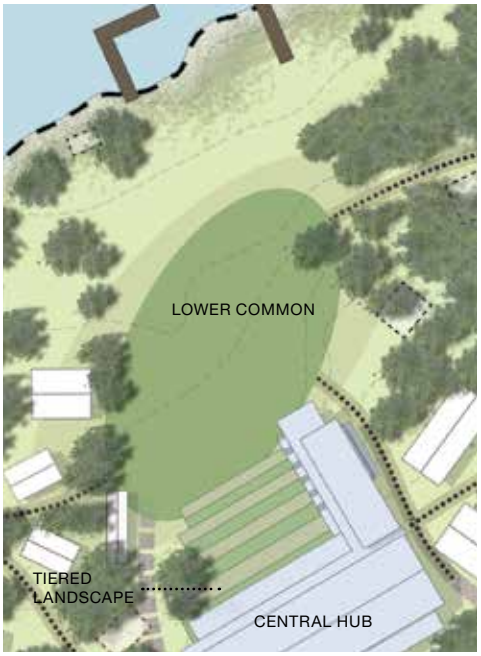
This landscape improvements suggested above should correspond with or follow any work proposed to the existing septic field. This is located under portions of the Upper Common and would likely need to be enlarged and/or replaced to accommodate the increased capacity of the site proposed in this Master Plan.

3D representation of preliminary conceptual arrangement for the Upper Common, seen facing north.

3.7 Lower Common

The Lower Common is the threshold between the Camp and Clear Lake. It presents the best open views of the Lake found on the site. Groups gather on the Lower Common for campfires, volleyball, water-related activities and other events. The functionality of this space can be improved through shoreline restoration and pathway development that defines access points to the water. An accessible pathway to the water's edge is also desirable, but implementation of a ramped access will require sensitivity to potential erosion.

A tiered landscaped feature is proposed to link the Central Hub to the Lower Common, which will serve as a natural amphitheatre for group events and gatherings. This intervention should be designed to protect the existing slope from erosion and establish a more formal path to the Lower Common. Implementation of this feature is contingent on the relocation of the existing septic equipment that is currently located on the slope adjacent to the proposed dormitory wing. It is suggested that this work be coordinated with both the Central Hub and septic system upgrades, but could also happen in a future phase, if the capacity of the existing system is found to be sufficient for current uses.



Plan view of preliminary conceptual arrangement for the Lower Common.


Image of existing Lower Common area.

3.8 Selective Building Removals

During the existing building assessment, a number of structures were identified as either being beyond repair, no longer serving a function, or generally detracting from the overall character of the camp. In addition to this analysis, several buildings have been recommended for removal following feedback from workshop sessions.

Factors in determining building removal include:

- The overall quality and condition of the building;
- The location with respect to views and proximity to other buildings; and,
- The current function (or lack thereof) versus intended purpose.

A number of small shed buildings (Tripping Shed, Tripping Kitchen, Wood Sheds, Bunkie Cabin) have been identified for removal as a way of clarifying the organization of the camp. At present, the functionality of these sheds suggests reorganization into a unified servicing zone, as part of the proposed Workshop structure adjacent to the proposed entry parking area.

The existing Infirmary and the Spurway Cabins have been identified for removal due in part to their location–interrupting views to the lake - but also as a result of structural or safety issues related to the physical conditions of these structures. The functions presently performed by these buildings are proposed to be replaced by the construction of the Central Hub and the West Cabin Cluster.

These suggested removals are recommendations, and with the exception of buildings that pose a safety risk, the timing of their demolition should be appropriate to their functions being replaced through other improvements around the Camp.

Given these recommendations, consideration should be given to the cessation of any significant investment in the structures identified here, in order to direct resources more efficiently into other aspects of the Camp, which are more likely to remain for longer periods of time.

As time passes and buildings continue to age, it is likely that more structures may be identified for removal. For guidance on how to decide what to keep and what to remove, refer to the discussion of character in Section 2.

Tripping Kitchen

Tent Platform as makeshift storage building

Tripping Shed

Pump House

3.9 Ecological Restoration

Camp Kawartha stakeholders have identified the need to restore degraded natural environments throughout the site. The Camp's shoreline has come up frequently, as have a number of the site's wooded areas.

Ecological restoration can be a relatively simple process. Projects are low-cost, work can be phased over many years and implementation can be done using volunteers (i.e., members of the Camp Kawartha community). Funding for projects, especially plant material, is relatively easy to secure. It is often possible to rely on government agencies (municipalities and conservation authorities, for example) for technical support. Further, ecological restoration work is full of "teachable moments" that will link directly to the summer camp program's environmental education curriculum.

Ecological restoration plans should be prepared by a professional ecologist. Without this guidance, it could be possible to do more harm than good, if the wrong plant species or restoration techniques are used. To save money, Camp Kawartha should consider engaging instructors and students of the joint Trent University-Fleming College program in Ecological Restoration. A great class project might be an assessment of the site, along with an inventory of ecological restoration opportunities/projects. Detailed plans could then be created for individual projects by smaller groups of students.

Ecological restoration often requires that public access be limited within areas of work (typically temporary fencing is erected). This is to allow for plant material to become established or for natural regeneration to occur over a few seasons or years. Camp staff should identify a number of natural areas that can be closed for a year or two as candidate sites for a first phase of implementation.

Typical ecological restoration activities include:

- Natural regeneration (leaving natural systems to develop);
- Planting with native trees, shrubs, wildflowers and aquatic plants;
- Invasive species removal;
- The creation of structural habitat features (bird and bat boxes, basking logs, stumps, etc.); and,
- Erosion control along shorelines, etc.

Ecological restoration will enhance the wildlife habitat value of Camp Kawartha's forests, meadows and aquatic habitats. It will improve

the natural environment, but will also support the Camp's goal of fostering environmental stewardship among program participants.

Shoreline restoration: Access to the water is a major amenity for the Camp, but the water's edge is also a particularly sensitive ecological area. Measures should be taken to improve and clarify access to the water's edge while protecting slopes from further erosion. It should have the effect of making it easier and safer for everyone to get to the water, ideally with a gradual sloping pathway to improve accessibility. Areas for water related activities should be designated and separated from naturalized areas to encourage wildlife habitat establishment and growth.

3.10 Septic System

While it currently performs adequately, the septic system used at the Camp is antiquated and will need to be upgraded if the goals of increasing capacity and implementing year-round occupancy are to be implemented.

Relocating the tanks to an area between the existing washroom building and the proposed Central Hub is recommended to provide direct adjacencies to existing and proposed toilets as well as easy maintenance access. Further, the relocation of the pump equipment to the mechanical room of the Central Hub will open up space between the Hub and the Lower Common for improved access and the formation of a special tiered landscape feature.

4.0 Implications to Programming and Capacity

Winterization of the East Cabin Cluster and Central Hub creates new year-round programming opportunities for Camp Kawartha. These opportunities are obvious to Camp staff (outdoor education, weekend rentals, ecotourism, etc.). The challenge is to expand these programs at a scale that allows for their efficient delivery.

Additional Camp staff should be organized as flexibly as possible (in part-time positions, etc.) until the economies of scale of the new Camp Kawartha are understood. The ramp-up of new programs can be gradually phased in, so as to minimize risks to the operating budget.

Dining Capacity: Currently, group dining space in the Dining Hall is limited to approximately 100 people. The Master Plan calls for the demolition of the Dining Hall and its replacement with the new Central Hub complex, which would incorporate the existing Rotary Hall. The new dining hall in the Central Hub Complex would be able to serve 200 people at once, plus an additional 50 in Rotary Hall, for a total of 250 people at maximum capacity.

Sleeping Capacity: The total present sleeping capacity of the Camp appears to fluctuate somewhat, due to seasonal change and the presence of some temporary or overflow beds. Camp Kawartha's summer peak occupancy amounts to nearly 185 people, including 125 campers and 60 staff. Currently, most of the sleeping capacity on site is housed in non-winterized or partially-winterized cabins. The legal capacity of the site is set at 175 by the Township of Douro-Dummer.

The Master Plan proposes the eventual demolition of the Spurway, Maple and Bunkie Cabins, for a loss of 14 beds. The addition of the dormitory wing as part of the new Central Hub complex, and the expansion of the IODE Cabin as part of the winterization of the East Cabin Cluster, amounts to a net increase in sleeping capacity of 55 beds. The new total summer sleeping capacity will be approximately 235, including 69 beds in new, winterized buildings with internal plumbing facilities. The Camp will need to seek a corresponding increase to its legal capacity from the Township.

Any increase in Camp capacity has capital cost implications that must be taken into consideration. These will not only be in the form of building costs, but also in expanding water and sewage services to suit the expanded occupancy of the site.

There is no easily definable upper limit to the future capacity of

the Camp, as long as services are expanded apace. However, any substantial horizontal growth of the built area will challenge the forested character of the Camp, and put pressure on its natural habitats.

Very long-term growth of the camp, beyond the scope envisioned by this Master Plan, would be best accommodated by the further consolidation of multiple existing small buildings into larger ones, or a movement toward two- or three-storey structures.

Investment should first be directed toward the most prominent areas of the Camp, for example the Upper Common. Certain buildings surrounding that space that are currently not functioning well, and/or detracting from the overall character of the Camp (for example, the Estate Cabin) could be replaced over time with new dormitory facilities. Such new facilities should be properly winterized, include their own plumbing, be able to accommodate a larger number of campers and be designed to accentuate the character of the Camp Whatever the approach, the Camp's traditional intimate feeling must be maintained as a crucial factor in setting Camp Kawartha apart from its competitors.

The Camp should introduce presently planned improvements with a marketing campaign. This need not be costly: it simply needs to get the "new and improved" message across to those who are considering Camp Kawartha for future environmental education experiences.

5.0 Capital Cost Estimate

As part of this Master Plan, quantity surveyors were engaged to provide guidance with respect to costing proposed components.

A Class D order of magnitude cost estimate is a method that is often used in feasibility or early design stages of a project in order to provide a sense of the general range of implementation costs. For example, the intention of the estimate is to predict the median bid cost of implementing all proposed upgrades to within +/-25%. The estimate is based on the drawings and diagrams that illustrate the demonstration plan, along with an outline of materials and construction methods it is assumed would be used.

One consideration is the use of staff for maintenance and minor construction projects. Certain components (East and West Cabin Clusters, building removal etc.) could potentially be accomplished by maintenance staff. This will reduce the costs of those components, but for the purposes of this exercise, this labour has not been included, as it would be difficult to accurately predict or factor it into a standard estimate.

Upgrades to the West Cabin Cluster are minor in nature (with the exception of the reallocation of the Mohawk Cabin within the Cluster) and are mostly already underway. Therefore this work has been omitted from the estimated costs below.

A summary of the estimated costs, including key soft costs, is shown below. For the full breakdown of the hard construction costs including all assumptions and methods for determining costs, see the details located in the Appendices.

Summary of Estimated Costs		
Central Hub Addition and Renovation		$2,337,000
East Cabin Cluster		$183,000
Entry and Parking / Workshop		$319,000
Landscape Restoration		$130,000
Septic System Upgrade		$436,000
Total Hard Construction Costs		**$3,405,000**
Allowance for Consultants	@ 10%	$340,500
Permits and Approvals	@ 1%	$34,050
General Project Contingency	@ 5%	$170,250
Total		**$3,949,800***

*Fundraising Costs and HST not included

6.0 Funding Opportunities and Next Steps

Funding Opportunities

The options for funding capital investment include:

- Operating surpluses;
- Fundraising;
- Partnerships/tenants;
- Debt financing; and,
- A combination of the above options.

Operating surpluses at Camp Kawartha exist, but are not generous (approximately $100,000 in 2011). Many organizations struggle with this (including Kinark, Evergreen). Organizations can attempt to establish aggressive goals for generating larger surpluses and diverting funds into a capital reserve. An industry rule of thumb capital reserve target is 2% of replacement value per year. Camp Kawartha should consider establishing more aggressive goals vis-à-vis operating surpluses and capital reserves.

Fundraising is always difficult, especially for organizations that do not have dedicated fundraisers on staff (including YMCA Wanakita, Evergreen). However, Camp Kawartha has had considerable success with fundraising – from foundations and through special events. Camp Kawartha should consider increasing its fundraising activities in future. Funding tends to follow vision – so Camp Kawartha should "dream big" when imagining its future. Fundraising for capital can follow from this, starting with those most familiar with the Camp. In particular, the Ontario Trillium Foundation should be cultivated for a large capital ask (YMCA Wanakita has been successful with Trillium). Any large-scale capital campaign should be preceded by a campaign feasibility study. Fundraising will be enabled through the participation of volunteers (board members and/or close friends who agree to take a leadership role in donor cultivation) as well as, in time, dedicated fundraising/development staff.

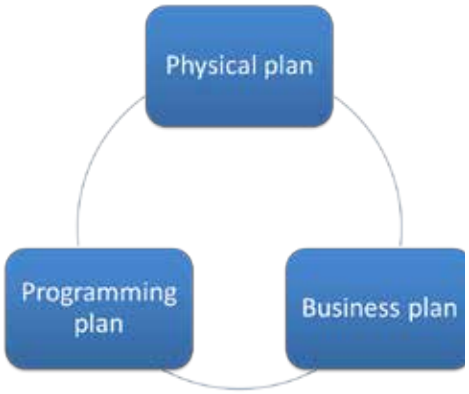
Camp Kawartha has had success in establishing partnerships. Examples include corporate team-building partnerships with local resorts and a recent pitch to the PVNC Catholic School Board. Within the context of capital upgrades, partners have the ability to pay rent and/or contribute to capital. Partnerships have been used by other camps (Kinark) and are the basis for facilities such as the Evergreen Brick Works. Potential program synergies associated with partnerships are an added benefit. Camp Kawartha should consider issuing a request for proposals from potential partners/tenants.

Issued broadly, it could generate partner interest that extends beyond those currently known to the Camp.

Debt financing is used by many organizations (including Kinark, Evergreen). It requires two integrated business models: one for the borrowing; and one for the operating revenues that would be available to repay the debt. Debt financing can be risky if anticipated revenues are not completely reliable. Decisions related to debt financing require appropriate due diligence. Ultimately, there are two aspects of risk that need to be considered: the risks associated with investing borrowed money; and the risks associated with not investing. Camp Kawartha should consider debt financing as a tool, and should secure additional professional volunteer resources to assist with due diligence and risk analysis–in the form of new board members and/or external advisors.

Funding for the East Cabin Cluster work may be found through a combination of operating surpluses and fundraising. The Ontario Trillium Foundation is an obvious prospect. Small-scale debt financing may also be worth considering. In addition, these tools may be used for a portion (a first phase) of the Dining Hall/Central Hub project.

Full implementation of the Dining Hall/Central Hub project will likely require the use of partnerships and/or debt financing.



Next Steps

The challenge for Camp Kawartha has been to rethink the site's physical plan, while making corresponding adjustments to the Camp's programming and business plans. Unfortunately the process is not linear. Instead, it is iterative, requiring that all three plans be reviewed, more or less concurrently, as in the diagram above-right.

The Camp must keep this process in mind as it works on implementation of this Master Plan. This Plan may trigger refinements to the Camp's program and business strategies–which may in turn trigger refinements to the Plan. Refinements are normal–the sign of an organization with integrated thinking related to its physical, programming and business health.

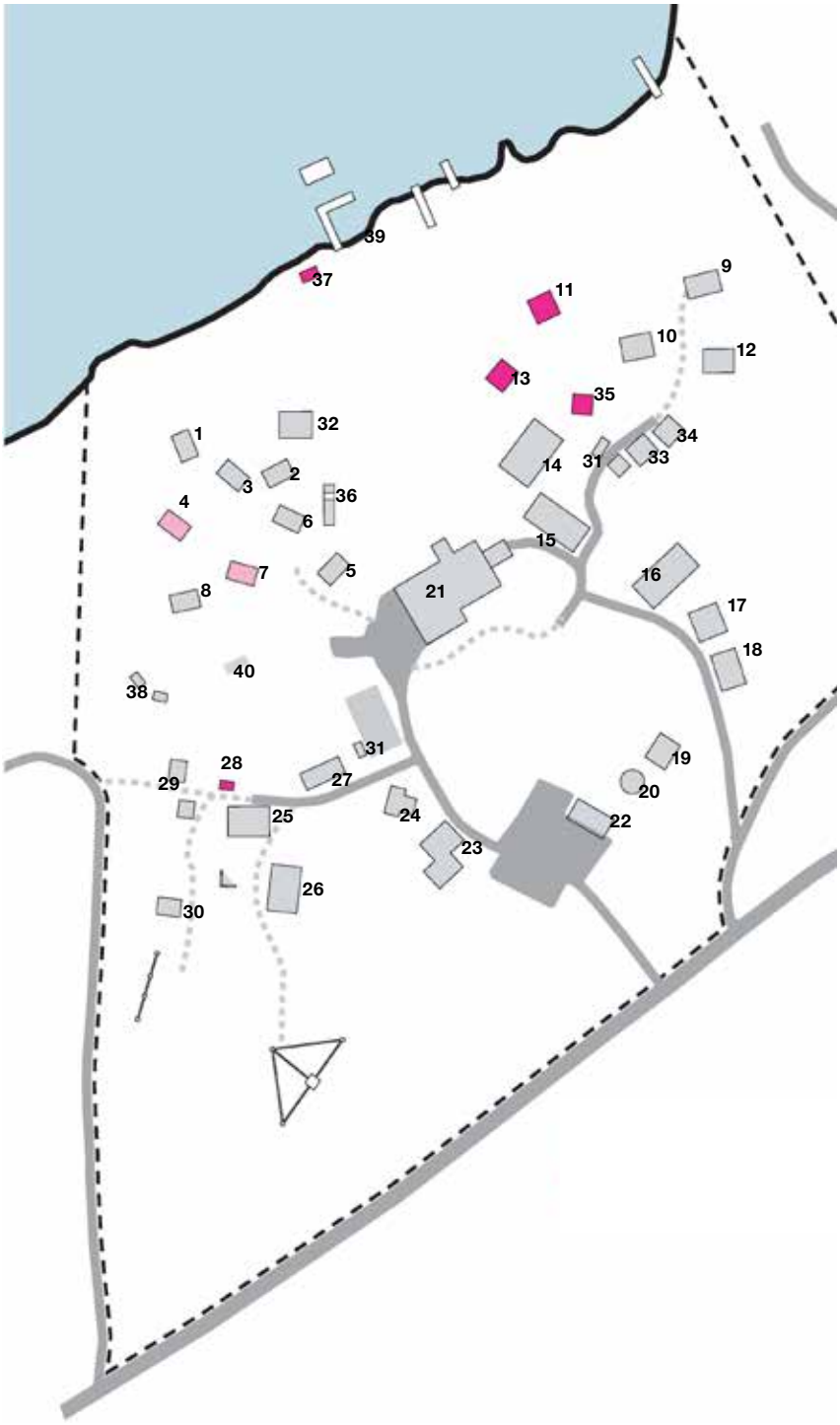
Appendices

Camp Kawartha Site and Facilities
Master Plan

Existing Building Condition Assessment

Buildings and Structures

1. Algonquin Cabin
2. Huron Cabin
3. Iroquois Cabin
4. Mississauga Cabin
5. Mohawk Cabin
6. Ottawa Cabin
7. Seneca Cabin
8. Siniwick Cabin
9. Oak Cabin
10. Willow Cabin
11. Spurway Cabin
12. IODE Cabin
13. Infirmary (Health Centre)
14. Jack Frost Centre
15. Washroom Building
16. Comstock Learning Centre
17. Estate Cabin
18. Greenhouse
19. Trading Post
20. Teepee
21. Rotary Hall / Dining Room / Kitchen
22. Main Office
23. Outdoor Education Office
24. Gainey Cabin
25. O'Reilly Cabin
26. Staff House (Director's Cabin)
27. BEL Cabin
28. Maple Cabin
29. Tent Platforms (2)
30. Ropes Shed
31. Wood and Storage Sheds
32. Kiwanis Cabin
33. Bunkie Cabin
34. Gazebo - Tripping Cabin
35. Cedar - Trip Storage
36. Tuck Shop
37. Pump House
38. Outhouses (2)
39. Boat House
40. Composting Toilets



Buildings rendered in pink indicate significant structural concerns outlined in the condition assessment.

Summary of Findings

Small Sleeping Cabins - Buildings 1-8, 28, 33
These eight original sleeping cabins have significance in their character, and in their location on the site. The arrangement and proximity of these buildings to one another creates a sort of gathering space in the centre of this cluster, which brings a positive sense of community to those using the buildings. Aside from those that have been recently renovated, these cabins are generally not well suited to winter use, and some have fairly serious structural issues that must be addressed.

The Maple Cabin and the Bunkie Cabin are very small sleeping cabins, which at times serve as storage space. The Bunkie Cabin has in the past been used to house the camp director in summer months.

Large Sleeping Cabins - Buildings 9-12, 27,32
These buildings are slightly larger than the cluster of eight smaller cabins but generally similar in style and quality. The all have various issues, some requiring structural attention, and none are particularly comfortable in winter months. These cabins each have a few small windows which limit the amount of natural light and fresh air coming into the cabins. The location of many of these cabins is very dispersed and separated from the main area of the camp.

Donated Cabins - Buildings 17,19,23,24,25,26
Many of the structures on site have been donated and transported to the camp over the years. These buildings are all unique from one another, and bring with them a wide range of size, style, quality and materials. These generally are used for staff accommodations, but some (estate cabin) house campers and some (trading post) facilitate programming. Similar to the larger sleeping cabins, these are arranged in a dispersed manner.

Programming and Support Buildings - Buildings 14,16,18,19,20, 21
These are the buildings that house indoor programming spaces for campers. The spaces and activities are widely varied and are generally clustered around the playing field area.

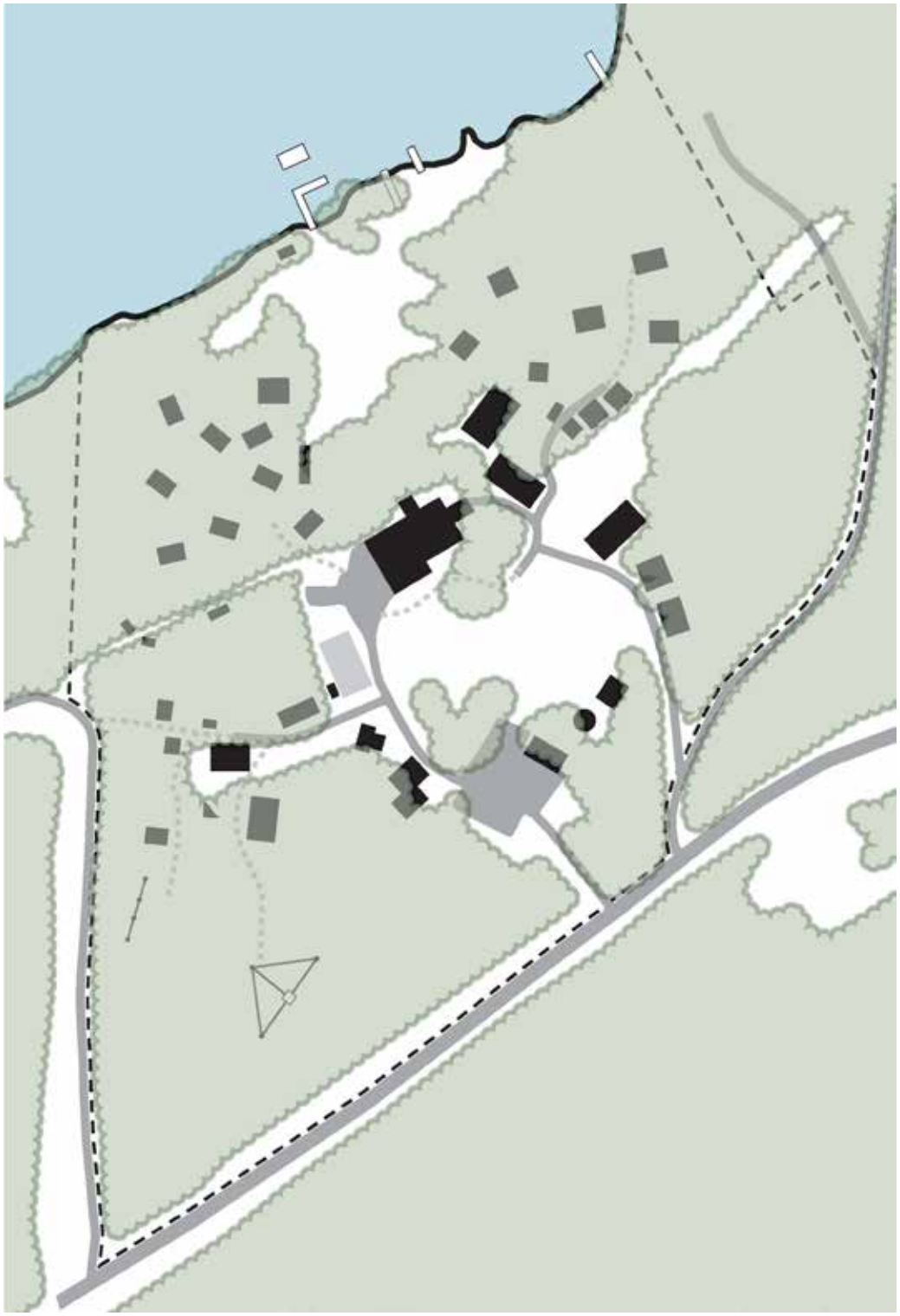
The relatively new rotary hall is at the heart of the camp and is the largest single space on site. The rotary hall has been integrated into existing kitchen and dining hall, both of which could use further upgrades to improve their quality and functionality.

Administrative and Staff Buildings - Buildings 13,22,23
These buildings house regular daytime staff, most of whom work throughout the entire year. The main office is a very new straw-bale building in great condition, and the outdoor education building is a donated building currently under renovation. The infirmary is a building of similar appearance to the large sleeping cabins, however it has some major issues that should be a priority to address.

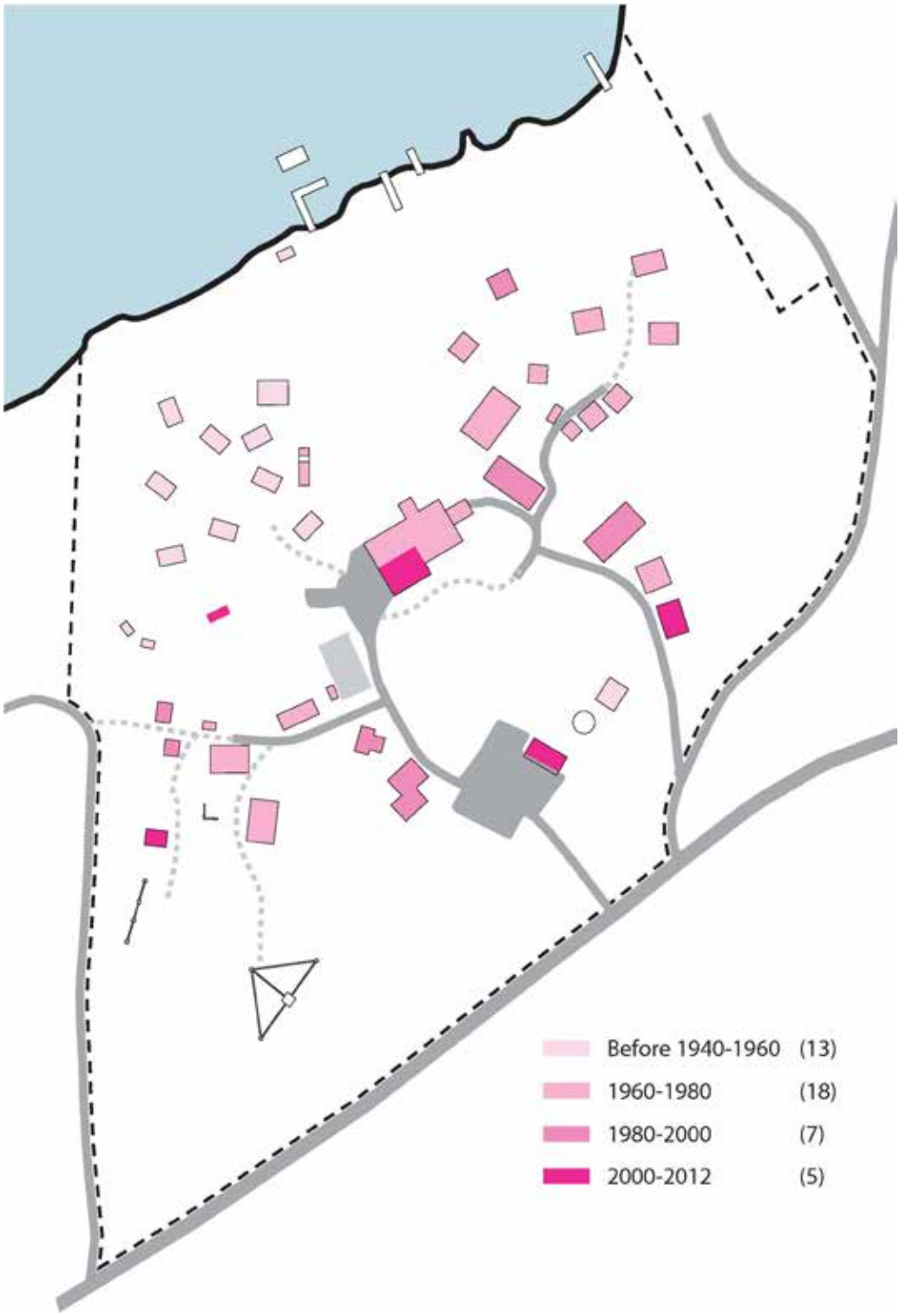
Servicing Buildings - Buildings 13,36,37,38,40
These buildings provide infrastructure to the site, and are mostly in good condition with the exception of the pump house which should be carefully reviewed or replaced sooner than later.

Storage Buildings - Buildings 28,29,30,31,35,39
These buildings are dispersed around the site and range from freshly constructed medium sized storage buildings to small wooden sheds to old cabins in disrepair. Storage is also incorporated into many of the other buildings on site (Comstock Learning Centre, Jack Frost Centre etc.).

Extent of Tree Canopy



Building Age



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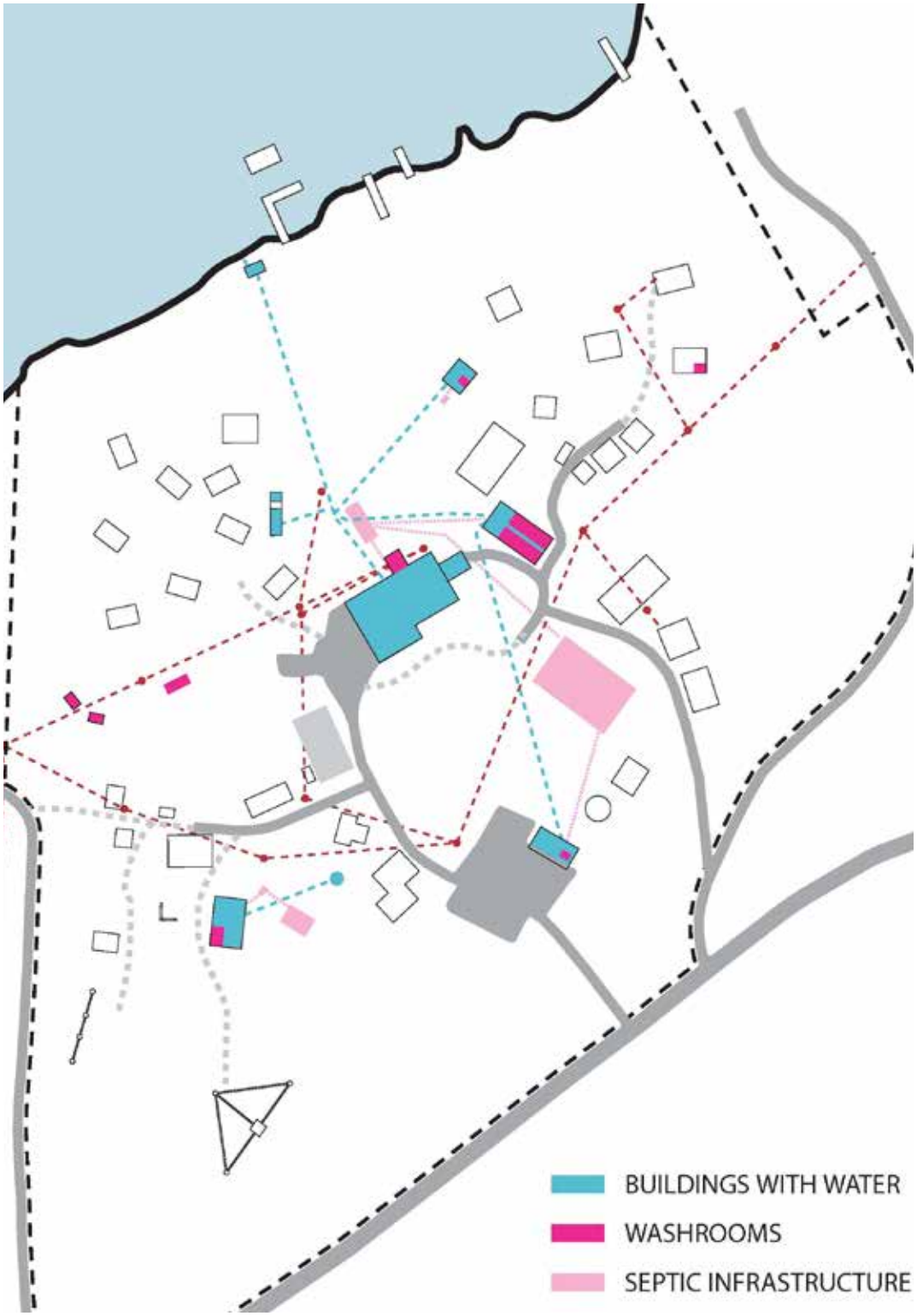
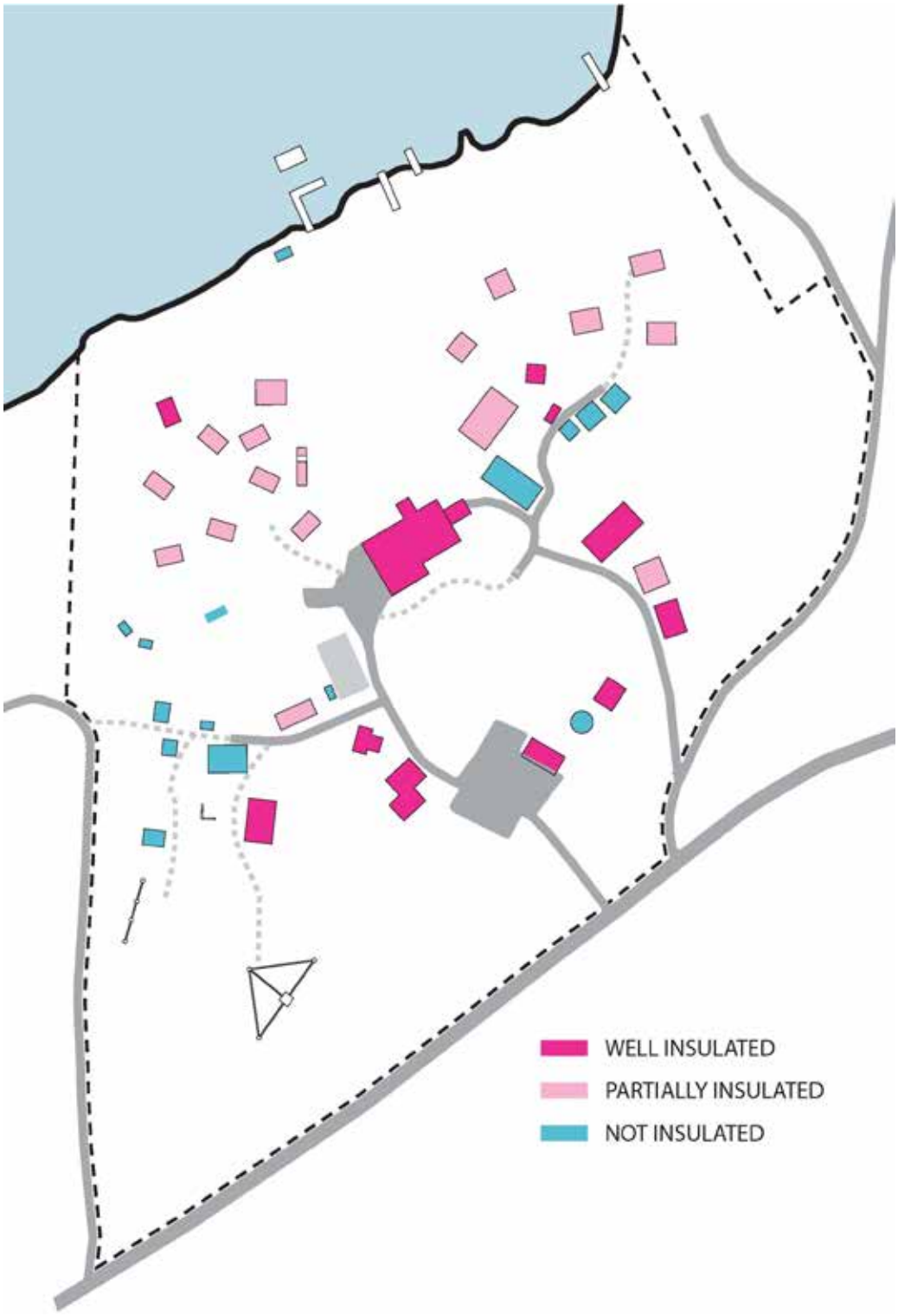
Site Infrastructure



Building Winterization



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1. Algonquin Cabin

Age: 1929
Size: 240 ft²
Occupancy: Sleeps 7 (3 sets of bunks+1 single bed)

Architectural:

This cabin has recently upgraded structure, insulation, electrical services and interior finishes. Well insulated walls, roof and floor (+/- R20). Plywood skirting has been removed. Floor insulation is now protected from below with plywood sheathing. New windows and a new door - door has been relocated to south gable end - this opens onto a new entrance porch. Original roof in poor condition. New, vented and insulated roof scheduled to be installed. This cabin contains personal storage boxes for users. Similar size and configuration as Huron, Iroquois, Ottawa. Painted wood siding in fair condition

Good Condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: 6 - CMU piers on 18x18x3" concrete paver footings. Recommend reinforcing by installing additional pier and footing at mid span of centre 6x6 beam.

Floor: 2 – lines of 2x6 @ 16"c/c Floor Joists on 6x6 centre beam (short direction) and new 6x6 PT sill beams. Floor bouncy. Recommend reinforcing by installing new CMU pier and pad footing at mid-span of centre beam.

Walls: 2x3 @ 16"c/c with ship lap sheathing ext. and OSB plywood int. Door moved to gable wall.

Roof: Reinforced with 2x10 @ 24"c/c and 2 – 2x6 Collar Ties @ 6'-0"c/c. This appears to be structurally acceptable.

Porch: New/large porch has been installed.

Mechanical / Electrical:

30 amps overhead electric services with a breaker panel. Electrical wiring is fairly new. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

2. Huron Cabin

Age: 1929
Size: 240 ft²
Occupancy: Sleeps 7 (3 sets of bunks+1 single bed)

Architectural:

Walls and roof have a basic level of insulation, no vapour barrier present. Attic space venting at gable ends. Insulated plywood skirting has been removed. Older windows (slider) with screens. New entrance door - door has been relocated to south gable end - this opens onto a new entrance porch. This cabin contains personal storage boxes for users. Similar size and configuration as Algonquin, Iroquois, Ottawa. Painted wood siding in fair condition.

Fair to poor condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: 6 - CMU piers on 18x18x3" concrete paver footings. Recommend reinforcing by installing additional pier and footing at mid span of centre 6x6 beam.

Floor: 2 – lines of 2x6 @ 16"c/c Floor Joists on 6x6 centre beam (short direction) and new 6x6 PT sill beams. Floor bouncy. Recommend reinforcing by installing new CMU pier and pad footing at mid-span of centre beam.

Walls: 2x3 @ 16"c/c with ship lap sheathing ext. and OSB plywood int. Door moved to gable wall.

Roof: Reinforcement is under way – to be 2x10 @ 24"c/c and 2 – 2x6 Collar Ties @ 6'-0"c/c.

Porch: New/ large porch has been installed.

Mechanical / Electrical:

30 amps overhead electric services with a breaker panel. Electrical wiring is fairly new. No ventilation system. This cabin is under renovation at time of visit. Electric Heat, Smoke detector and Fire extinguisher.

3. Iroquois Cabin

Age: 1929
Size: 240 ft²
Occupancy: Sleeps 7 (3 sets of bunks+1 single bed)

Architectural:

Walls and roof have a basic level of insulation, no vapour barrier present. Attic space venting at gable ends. Insulated plywood skirting has been removed. Older windows (slider) with screens. New entrance door and exterior casing. New entrance porch. This cabin contains personal storage boxes for users. Similar size and configuration as Algonquin, Huron, Ottawa. Painted wood siding in fair condition

Fair to poor condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: 6 - CMU piers on 18x18x3” concrete paver footings. Recommend reinforcing by installing additional pier and footing at mid span of centre 6x6 beam.

Floor: 2 – lines of 2x6 @ 16”c/c Floor Joists on 6x6 centre beam (short direction) and new 6x6 PT sill beams. Floor bouncy. Recommend reinforcing by installing new CMU pier and pad footing at mid-span of centre beam.

Walls: 2x3 @ 16”c/c with ship lap sheathing ext. and OSB plywood int. Door moved to gable wall.

Roof: Reinforcement is under way – to be 2x10 @ 24”c/c and 2 – 2x6 Collar Ties @ 6’-0”c/c.

Porch: New/ large porch has been installed.

Mechanical / Electrical:

30 amps overhead electric services with a breaker panel. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

4. Ottawa Cabin

Age: 1929
Size: 240 ft²
Occupancy: Sleeps 7 (3 sets of bunks+1 single bed)

Architectural:

Walls and roof have a basic level of insulation, no vapour barrier present. Attic space venting at gable ends. Insulated plywood skirting has been removed. Older windows (slider) with screens. New entrance door - door has been reloacted to south gable end - this opens onto a new entrance porch. This cabin contains personal storage boxes for users. Similar size and configuration as Algonquin, Huron, Iroquois. Painted wood siding in fair condition

Fair to poor condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: CMU piers on some concrete paver footings (not exposed to view). Like to recommend reinforcing by installing additional pier and footings as required.

Floor: Likely 2 – lines of 2x6 @ 16”c/c Floor Joists on centre beam (short direction). Floor bouncy. Recommend reinforcing by installing new CMU piers as noted above.

Walls: 2x3 @ 16”c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Tied roof 2x4 @ 24”c/c and 2 – 2x4 Ceiling Ties @ 24”c/c.

Porch: Older /poor condition.

Mechanical / Electrical:

30 amps overhead electric services with a breaker panel. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

5. Mohawk Cabin

Age: 1929
Size: 240 ft²
Occupancy: Sleeps 7 (3 sets of bunks+1 single bed)

Architectural:

Walls and roof have a basic level of insulation, no vapour barrier present. Floor is not insulated. Attic space venting at gable ends. Plywood skirting around perimeter is insulated, but not venting properly, this has become potential nesting for rodents. Original single pane window (casement)) with screened storm window. Wooden door with storm/screen door. This cabin contains personal storage boxes for users. Similar size and configuration as Mississauga, Seneca, Siniwick. These 4 cabins have a more generous ceiling height than Cabins 1-4. Painted wood siding in fair condition

Fair condition.

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: CMU piers on some concrete paver footings (not exposed to view). Like to recommend reinforcing by installing additional pier and footings as required.

Floor: Likely 2 – lines of 2x6 @ 16”c/c Floor Joists on centre beam (short direction). Floor bouncy. Recommend reinforcing by installing new CMU piers as noted above.

Walls: 2x3 @ 16”c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Tied roof 2x4 @ 24”c/c and 2 – 2x4 Ceiling Ties @ 24”c/c.

Porch: New/smaller porch has been installed on concrete deck footings.

Mechanical / Electrical:

60 amps overhead electric services with a breaker panel. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

6. Mississauga Cabin

Age: 1929
Size: 240 ft²
Occupancy: Sleeps 7 (3 sets of bunks+1 single bed)

Architectural:

Walls and roof have a basic level of insulation, no vapour barrier present. Floor is not insulated. New metal roof, fascia and soffit. Trim to be completed at north gable end. Attic space venting at gable ends. Older windows (slider) with screens. Wooden door with storm/screen door. This cabin contains personal storage boxes for users. Bunks in this cabin have been built in and reinfoced. Similar size and configuration as Mohawk, Seneca, Siniwick. These 4 cabins have a more generous ceiling height than Cabins 1-4. Painted wood siding in fair condition.

Fair to poor condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: CMU piers on some concrete paver footings. Like to recommend reinforcing by installing additional pier and footings as required.

Floor: Likely 2 – lines of 2x6 @ 16”c/c Floor Joists on centre beam (short direction). Floor bouncy. Some upgrades to sill plate. Recommend reinforcing by installing new CMU piers as noted above.

Walls: 2x3 @ 16”c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Tied roof 2x4 @ 24”c/c and 2 – 2x4 Ceiling Ties @ 24”c/c. This roof has been strapped and new metal roof installed.

Porch: Old/poor condition. REPLACE.

Mechanical / Electrical:

30 amps overhead electric services with a breaker panel. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

7. Seneca Cabin

Age: 1929
Size: 240 ft²
Occupancy: Sleeps 7 (3 sets of bunks+1 single bed)

Architectural:

Walls and roof have a basic level of insulation, no vapour barrier present. Floor is not insulated. Attic space venting at gable ends. Plywood skirting around perimeter is insulated, but not venting properly, this has become potential nesting for rodents. Older windows (slider) with screens. Wooden door with storm/screen door. This cabin contains personal storage boxes for users. Similar size and configuration as Mohawk, Mississauga, Siniwick. These 4 cabins have a more generous ceiling height than Cabins 1-4. Painted wood siding in fair condition.

Fair to poor condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: CMU piers on some concrete paver footings (not exposed to view). Likely to recommend reinforcing by installing additional pier and footings as required.

Floor: Likely 2 – lines of 2x6 @ 16”c/c Floor Joists on centre beam (short direction). Floor bouncy. Recommend reinforcing by installing new CMU piers as noted above.

Walls: 2x3 @ 16”c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Tied roof 2x4 @ 24”c/c and 2 – 2x4 Ceiling Ties @ 24”c/c.

Porch: Old/poor condition.

REPLACE.

Mechanical / Electrical:

60 amps overhead electric services with a breaker panel. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

8. Siniwick Cabin

Age: 1929
Size: 240 ft²
Occupancy: Sleeps 7 (3 sets of bunks+1 single bed)

Architectural:

Walls and roof have a basic level of insulation, no vapour barrier present. Floor is not insulated. Roof venting at gable ends. Plywood skirting around perimeter is insulated, but not venting properly, this has become potential nesting for rodents. Newer windows. This cabin contains personal storage boxes for users. Similar size and configuration as Mohawk, Mississauga, Seneca. These 4 cabins have a more generous ceiling height than Cabins 1-4. Painted wood siding in fair condition.

Fair to poor condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: CMU piers on some concrete paver footings (not exposed to view). Likely to recommend reinforcing by installing additional pier and footings as required.

Floor: Likely 2 – lines of 2x6 @ 16”c/c Floor Joists on centre beam (short direction). Floor bouncy. Recommend reinforcing by installing new CMU piers as noted above.

Walls: 2x3 @ 16”c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Tied roof 2x4 @ 24”c/c and 2 – 2x4 Ceiling Ties @ 24”c/c. It appears as though rafters are water damaged and require remediation.

Porch: New/smaller porch has been installed on concrete deck footings.

Mechanical / Electrical:

No access at time of visit, assumed to be similar to other Mohawk, Mississauga, Seneca cabins. Electric Heat, Smoke detector and Fire extinguisher.

9. Oak Cabin

Age: 1988
Size: 348 ft^2
Occupancy: Sleeps 12 (5 sets of bunks+2 single beds)

Architectural:

Original Roof, replacement scheduled for Spring/Summer. Walls, roof and floor have a basic level of insulation, no vapour barrier present. Attic space venting at gable ends. Plywood skirting around perimeter not well vented, this has become potential nesting space for rodents. Original single pane windows (slider) with screened storm window. Wooden door with storm/screen door. This cabin contains personal storage boxes for users. Painted wood siding in fair condition

Fair condition

Structural:

Wood Framed Structure on Sonotube Pier Foundations.

Foundations: 10 – 12” Sonotube piers.

Floor: 2 – lines of 2x8 @ 16”c/c Floor Joists on centre beam (long direction).

Walls: 2x3 @ 16”c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Likely a tied roof 2x4 @ 24”c/c and 2 – 2x4 Ceiling Ties @ 24”c/c (not exposed to view).

Porch: Old porch in fair condition.

Mechanical / Electrical:

30 amps overhead electric services with a breaker panel. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

10. Willow Cabin

Age: 1988
Size: 348 ft^2
Occupancy: Sleeps 12 (5 sets of bunks+2 single beds)

Architectural:

Original Roof, replacement scheduled for Spring/Summer. Walls, roof and floor have a basic level of insulation, no vapour barrier present. Attic space venting at gable ends. Plywood skirting around perimeter not well vented, this has become potential nesting space for rodents. Original single pane windows (slider) with screened storm window. Wooden door with storm/screen door. This cabin contains personal storage boxes for users. Painted wood siding in fair condition.

Fair condition

Structural:

Wood Framed Structure on Sonotube Pier Foundations.

Foundations: 10 – 12” Sonotube piers.

Floor: 2 – lines of 2x8 @ 16”c/c Floor Joists on centre beam (long direction).

Walls: 2x3 @ 16”c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Likely a tied roof 2x4 @ 24”c/c and 2 – 2x4 Ceiling Ties @ 24”c/c (not exposed to view).

Porch: Old porch in fair condition.

Mechanical / Electrical:

30 amps overhead electric services with a breaker panel. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

11. Spurway Cabin

Age: 1985-86
Size: 322 ft^2
Occupancy: Sleeps 10 (4 sets of bunks+2 single beds)

Architectural:

Original Roof, replacement scheduled for Spring/Summer. Walls, roof and floor have a basic level of insulation, no vapour barrier present. Attic space venting at gable ends. Plywood skirting around perimeter not well vented, this has become potential nesting space for rodents. Original single pane windows (slider) with screened storm window. Wooden door with storm/screen door. This cabin contains personal storage boxes for users. Painted wood siding in fair condition.

Poor condition

Structural:

Wood Framed Structure on Sonotube Pier Foundations.

Foundations: 10 – 12" Sonotube piers. It was noted that the N/E pier is significantly out of plumb.

Floor: 2 – lines of 2x8 @ 16"c/c Floor Joists on centre beam (long direction).

Walls: 2x3 @ 16"c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Likely a tied roof 2x4 @ 24"c/c and 2 – 2x4 Ceiling Ties @ 24"c/c (not exposed to view).

Porch: Old porch in poor condition. Foundation supports are unacceptable.

This building requires immediate review and structural remediation.

Mechanical / Electrical:

60 amps overhead electric services with a breaker panel. Site lighting timer. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

12. IODE Cabin

Age: 2004
Size: 384 ft^2
Occupancy: Sleeps 10 (4 sets of bunks+2 single beds)

Architectural:

(IODE) International Order of the Daughters of the Empire. Wheelchair accessible. Composting Toilet that is currently unused due to the high level of maintenance required. Original Roof. Walls and floor have a basic level of insulation, no vapour barrier present. Ceiling is well insulated, attic space venting at gable ends. Original single pane windows (double hung) with screen. Metal entrance door. This cabin contains personal storage boxes for users. Painted wood siding in fair condition.

Good condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: CMU piers on concrete paver footings.

Floor: Likely 2x8 @ 16"c/c floor joists supported by flush centre beam. Floor bouncy. Recommend reinforcing by installing new CMU piers below centre beam as required.

Walls: 2x3 @ 16"c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Clear spanning roof trusses.

Porch: Newer porch with wheelchair ramp in good condition.

Mechanical / Electrical:

100 amps overhead electric services with a 32 circuits breaker panel. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

13. Infirmary (Health Centre)

Age: 1960's
Size: 456 ft^2
Use/Occupancy: On site clinic, nurses quarters.

Architectural:

Interior air quality issues with moisture, mold potential. Grading issues with wood very close to grade and water coming down the site causing rot. Wood skirting around the perimeter, commonly find rodents living in the crawlspace below. Roof has water penetration issues, moss growth and requires regular attention, Poor windows, soffit, and fascia. Painted wood siding in fair condition. Poor condition

Structural:

Wood Structure on CMU Piers on Concrete Paver Footings.

Foundations: Stacked CMU piers on some concrete paver footings. Likely to recommend reinforcing by installing additional pier and footings as required and replacing some piers that are stacked out of plumb.

Floor: 2x8 @ 16"c/c Floor Joists on several cross beams (short direction). Floor bouncy. Rotted rim joists at entry deck and where the floor framing is in contact with the ground at the rear inside corner where the L-shaped building returns.

Walls: 2x3 @ 16"c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Tied hip roof 2x4 @ 24"c/c with 2x4 Ceiling Joists @ 24"c/c.

Porch: The front porch is in fair to poor condition and requires remediation. This building requires immediate review and structural remediation.

Mechanical / Electrical:

Overhead electrical power supply. Washroom and hand sink is installed in this building. The sanitary sewer in the building is connected into the septic system. Water is fed from the pump house to the building via in-ground distribution box. Window AC unit is installed in the office area (this is used only when absolutely necessary). Electric baseboard heaters is installed. There is no ventilation system in the building.

14. Jack Frost Centre (Long House)

Age: c1966 (1986 addition)
Size: 1152 ft^2
Use: Nature, Arts+Crafts Rooms, Equipment Storage

Architectural:

The long house was built in two sections, the first part (1966) being the western half which faces the lake and houses educational displays, Arts and Crafts. The second part of the building (1986) is used for storage of recreational equipment. The floors of these two sections are at different heights to suit adjacent grading. Roof on original half of the building was replaced in 2006, good condition. No soffit visible, fascia is fair to poor condition. Stained wood siding in good condition. Building is not well insulated. Attic space venting at gable ends. Original single pane windows wood/aluminum and are either fixed or have sliders with screens. Entrance doors are wooden and Metal.

Generally in fair condition

Structural:

Wood Framed Structure on Sonotube Piers.

Foundations: 14-16" sonotube piers appear to be in sound condition. There appears to be evidence of settlement along the centre line of the building where the craft room floor slopes to this line of bearing.

Floor: 2x8 @ 16"c/c Floor Joists on five 3 – 2x10 beams. As noted above – the floor/building is sloped to the centre line (wall between pre-existing and 1986 addition). Some rot damage to the sill/rim joist of the original building in several locations.

Walls: 2x3 @ 16"c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Likely a tied roof 2x4 @ 24"c/c with 2x4 Ceiling Joists @ 24"c/c. There is a noticeable sag in the ceiling joists above the museum room.

Porch: The rear covered porch is founded on CMU foundations with PT lumber blocking.

Mechanical / Electrical:

100 amps overhead electric services with a 30 amps breaker panel. Electric baseboard heaters. No ventilation system.

15. Washroom Building (Colosso)

Age: 19??

Size: 1248 ft²

Use: Showers / washrooms, potable water storage.

Architectural:

Roof - shingles, good condition, insulated with batts. Windows - vinyl good condition (awnings). Stained wood siding in good condition. Floor - slab on grade, blown-in insulation within walls. 4 showers for each gender, (1 of 4 are accessible). 5 toilets for each gender, (1 of 5 are accessible). Recently upgraded shower finishes and partitions. Double wall down centre of the building for servicing.

Structural:

Wood Framed Structure on Concrete Slab on Grade.

Foundations: Concrete slab on grade in good condition. Possible slab thickening at edges to support load bearing walls above.

Floor: Slab on grade. The service corridor between the boys and girls bathrooms has a clear crushed stone floor (no slab).

Walls: 2x6 @ 16"c/c exterior load bearing walls with ship lap sheathing ext. and OSB plywood int. Interior walls are not load bearing.

Roof: Clear spanning roof trusses in good condition.

Porch: None.

Mechanical / Electrical:

200 amps overhead electric services with a breaker panel. A 1,300 gallon reservoir tank with circulating pump & well tank is provided for the treated domestic water system. The domestic water pipe in tied back to the kitchen dining room system in the other building. The water treatment system consisted of UV lamps, chlorine tank with injector, water filters and pressure tank. The sewer is connected into the septic system. Exhaust fans is provided in each washroom. Humistat. Three (3) 60 gallon electric hot water tank with 4.5 KW heating element.

16. Comstock Learning Centre (Hangar/Workshop)

Age: 1992-93

Size: 1800 ft² (2 levels)

Use: Maintenance facilities with classrooms above.

Architectural:

Two storey buildings, approximately 12' ground floor ceiling height with a clear span for the second floor structure and a garage door opening towards the playing field. Lower level is used as maintenance shop and materials and equipment storage, upper level is used as classroom space. 2x6 framing with R20 insulation. Original roof in good condition. Fire rating between ground floor and second floor. Poor acoustic separation between ground floor and second floor. Stained wood siding in good condition. Vinyl windows and metal doors in good condition

Structural:

Wood Framed Structure on CMU Foundation Walls on Concrete Strip Footings.

Foundations: Founded on 8" CMU block foundation walls – presumably on concrete strip footings. Good condition.

Floor: Workshop ("Hanger") slab on grade in fair condition with some shrinkage cracking with little to no (1/8" max) differential settlement.

Second level framing is clear spanning – which may be wood floor trusses or beams and wood joist infill. Floor feels very solid and in good condition.

Walls: Stud wall framing with OSB sheathing and cedar plank siding.

Roof: Likely roof trusses. No apparent sagging and roof appears to be in good condition.

Porch: Stairs and cantilevered entry deck in good condition.

General: Built – early '90s. Sound structural condition.

Mechanical / Electrical:

A 200 amps panel is located in the workshop, this panel feeds power Gainey, Estate and the Log Cabin. Electric heaters is located on the second floor only. There is no permanent heater installed on the ground floor, construction heaters used during winter month. No ventilation system. No water supply or bathrooms.

17. Estate Cabin

Age: 1960's (Donated and moved to site in 19??)
Size: 384 ft^2
Sleeps 11 (5 sets of bunks+1 single beds)

Architectural:

Wheelchair accessible, 2 room building. Shingled Roof on main building - 2 years old, periodic water penetration issues, corrugated roof over porch, poorly joined to main roof. Walls, roof and floor have a basic level of insulation, no vapour barrier present. Attic space venting through a button vent on roof top. Original single pane windows (slider on west room, fixed in east) with screened storm window. Newer steel Entrance door. This cabin contains personal storage boxes for users. Painted wood siding in fair condition. Fair condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: Founded on CMU piers on concrete paver footings. Porch framing is founded on timber footings.

Floor: Slightly bouncy. Likely 2x8 joists. Porch in decent condition. Verandah roof is supported on posts on porch rim joists that are deflecting as there is no footing below these bearing points.

Walls: 2x2 furring on 2x3 @ 16"c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Likely 2x4@24"c/c with roof ties. No excessive sagging (roof or ceiling).

Porch: Wheelchair accessible. Good condition.

General: Decent condition. Good surface drainage makes timber foundations feasible short term.

Mechanical / Electrical:

100 amps underground services is fed from the Learning Centre. This service is surfed to Greenhouse and Trading Post, 60 amps each. Electric Heat, Smoke detector and Fire extinguisher.

18. Greenhouse

Age: 2005
Size: 280 ft^2
Use: Food production, living machine / solar demo

Architectural:

Strawbale +/-R40 (14"-16" thick walls). Metal roof in good condition. Windows - polycarbonate south facing - not operable, small operable vinyl window above entrance door. Standard insulated steel entrance, not well sealing within frame. Insulated Slab on grade. High humidity levels could pose an issue to indoor air quality - appears to be affecting the interior finish of the straw bale walls. Generally good condition, except for humidity/air leakage issues. Addresss humidity levels or protection of interior materials.

Structural:

Straw Bale Building on Slab on Grade.

Foundations: Frost protected slab on grade. Slab thickens at edges below load bearing walls above.

Floor: Slab on grade in good condition.

Walls: Three walls constructed of 14" load-bearing straw bale with plaster finish (total assembly @ 16"). Wood stud pony wall below green roof. All in good condition although straw bale walls are susceptible to mold due to poor ventilation.

Roof: 2x8 @ 24"c/c supported on built up 2x12 ridge beam.

Porch: Wood deck seems temporary and door threshold is unfinished.

General: Built – 2005. Sound structural condition.

Mechanical / Electrical:

8 circuits 60 amps panel is installed fed from underground service. Portable electric heater. General lighting with ceiling fan. No outdoor ventilation, no humidity control, no drain. Humidity level is quite high at time of visit.

19. Trading Post

Age: 19?? (Donated and moved to site in 19??)
Size: 500 ft^2
Use/Occupancy: Overflow sleeping cabin, demo.

Architectural:

Roof - Shingles on roof, condition unknown

Wood Windows - single pane with exterior storm panes.

Walls - Log construction, not insulated

Floor - Uninsulated

Wood stove for heating

Structural:

Log Framed Structure on Stone or CMU Foundations.

Foundations: Unknown – not exposed to view.

Floor: Wood joists. Floor is quite bouncy. Like most buildings on the site, the floor framing would not meet the structural requirements of the OBC but serves its purpose and will likely continue to do so for the short term (i.e. 5 – 10 years).

Walls: Horizontally spanning log walls. In good condition.

Roof: Timber pole roof rafters with no ridge board. There are no collar or ceiling ties. Presumably the log walls are able to span horizontally to resist outward thrust of roof loads.

Porch: Wood porch is in good condition.

General: Reasonable structural condition.

Mechanical / Electrical:

60 amps underground electric services with a 24 circuit breaker panel.

It was reported that the underground cable does not have sufficient coverage and running very close beneath the ground which can post an hazard.

Smoke detector is installed.

Log fire place is installed as means of heating.

20. Teepee

Age: 19??
Size: +/-200 ft^2
Use: Programing space

Architectural:

N/A

Structural:

N/A

Mechanical / Electrical:

N/A

21. Rotary Hall / Dining Room / Kitchen

Age: 19?? (Addition 2006)

Size: 456 ft^2

Occupancy/Use: Seats 100? Main interior gathering hall, dining and food preparation facilities

Architectural:

Rotary Hall

A tall square space with generous height and great natural light. New vinyl windows within wood framing. Thick Straw bale walls with cementitious finish, up to the level of the eaves. Above the level of the eave, the gable wall is a wood frame with wood interior and exterior cladding. Wheelchair accessible. The Rotary hall portion of the building is in very good condition

Dining Room / Kitchen

A long shorter space with great views to the lake, opening to a porch on the north side. Vinyl Windows with low operators (sliders), Steel patio doors, good condition. Dining Room ceiling is panels with painted wood trim. Kitchen ceiling is drywall/plaster. Roof, walls, floor, attic insulation? Floor was being reworked and refinished at time of visit. Adjacent to the dining room is a furnace room and a series of washroom. Furnace room is currently open to adjacent spaces. Due to floor refinishing, kitchen was very full of equipment at time of visit, generally the space was confined and cluttered. The adjacent walk in freezer seems to be in good condition. Safety concerns were raised about electrical arrangement in the kitchen. A review of the safety within the kitchen should be considered a high priority. Generally kitchen/dining room are in fair to poor condition

Structural:

Two Buildings: Dining/Kitchen (D/K) – Wood Framed Structure on Sonotube Piers. Rotary Hall (RH) – Straw Bale Walls on Slab on Grade.

Foundations D/K: Large (14-16") Sonotube piers. CMU piers on some concrete paver footings used to support rear additions (W/C and storage).

Foundations Rotary Hall: Likely constructed on thickened slab

Kitchen

Dining Room

Rotary Hall

on grade edge or frost protected foundation walls on strip footings.

Floor D/K: Likely 2x8 @ 16"c/c floor joists. Floor bouncy. Recommend reinforcing by installing new CMU piers as required.

Floor RH: Slab on grade in good condition.

Walls D/K: 2x3 @ 16"c/c with ship lap sheathing ext. and OSB plywood int.

Walls RH: 14" Straw bale walls with ½" plaster in good condition. Some shrinkage cracking in plaster noted.

Roof D/K: Clear spanning king trusses – gable ends.

Roof RH: Clear spanning scissor trusses and hand framed over the D/K roof.

Porch D/K: Older porch off the kitchen is in fair condition as is the rear access stair servicing the bathrooms off the dining area.

Mechanical / Electrical:

Oil furnace is used to heat ½ of the building with a 200 gallon oil tank located in the exterior; Minimal duct distribution from the furnace to the occupied space. There is no fresh air intake grille. The other ½ of the building is heated by suspended electric heaters, except for the Rotary Hall which has a wood stove. Fire alarm panel is installed with heat detectors in the ceiling; Emergency lighting & exit signs is installed through-out the building; a 600 amps overhead services is fd from the overhead pole with sub-panels feeding the kitchen area. A 18 KW generator is installed and connected to a manual transfer switch into a 60 amps emergency powered panel located in the kitchen. Water is supplied from the washroom building. Two (2) 80 gallon with 4.5 KW heating element domestic hot water tanks is located in the kitchen. Kitchen exhaust hood is installed under the cooking equipment with a roof mounted exhaust fan. There is no fire suppression system installed in the kitchen exhaust system. Hoes Bibb is installed on the side of the building fed directly from the pump house, untreated.

22. Main Office

Age: 2007?
Size: 1066 ft^2
Use: Main administrative office and gift shop.

Architectural:

Straw bale construction with plaster finish. Generally in good condition, a few cracks in the south east corner of the building. The building is well insulated wall and roof assemblies (+/-R40). Metal roof in good condition, soffits are a combination of wood and perforated metal. Newer vinyl windows and new insulated steel entrance door. Radiant system in slab which is supported by solar collectors on roof. Generally very good condition

Structural:

Wood Post and Beam with Straw Bale Infill Building on Slab on Grade.

Foundations: Frost protected slab on grade. Slab thickens at edges below load bearing walls above.

Floor: Slab on grade in good condition.

Walls: Walls are constructed of 14" infill straw bale with plaster finish (total assembly @ 16"). Bales infill wood post and beam construction. Some significant cracking of interior finishes occurs in the rear of the building around window openings. These do not appear to be structural in nature but are in our opinion due to shrinkage.

Roof: Scissor trusses in good condition.

Porch: Extension of slab on grade.

Mechanical / Electrical:

Evacuated type solar panel is installed coupled with a in-slab hydronic heating system equipment with circulating pump. System is not in operation at time of visit. Potable electric heaters was plugged in as primary heating at time of visit. Domestic water is supplied to this building from the washroom building. Washroom facility is provided for this building. Sanitary sump pump is installed to pump the sewage back to the distribution box for the septic system. There is no ventilation system installed in this building other than ceiling fans. Emergency lighting & smoke alarm detectors is installed.

23. Outdoor Education Office

Age: 19?? (under renovation at time of visit)
Size: 764ft^2
Use: Outdoor education staff offices

Architectural:

New porch in good condition

Newer windows and entrance door

This rear room of this building was under renovation at the time of visit.

Stained wood siding in good condition

Structural:

Wood Framed Structure Currently Being Renovated on CMU Piers on Concrete Paver Footings and Slab on Grade Foundations.

Foundations: CMU piers on some concrete paver footings (not exposed to view). Likely to recommend reinforcing by installing additional pier and footings as required.

Floor: 2x6 @ 16"c/c Floor Joists on four beams (lines of bearing). Floor bouncy in office. Addition being renovated has new slab on grade.

Walls: 2x3 @ 16"c/c with ship lap sheathing ext. Studs have been mold abated in the addition portion of the building.

Roof: Likely a tied roof 2x4 @ 24"c/c with 2x4 Ceiling Joists @ 24"c/c.

Porch: Not Reviewed.

Mechanical / Electrical: Not reviewed.

24. Gainey Cabin

Age: 19?? (Donated and moved to site in 19??)
Size: 702 ft^2
Occupancy: Sleeps 19 (9 sets of bunks + 1 single bed)

Architectural:

Roof in good condition. Attic is insulated with 6” batts and blown in insulation, wall insulation not determined, no vapour barrier present. Floor is built up with 1.5” of rigid foam insulation. Painted wood siding on original building, vinyl siding on addition at rear of building. 2 skylights in rear addition. Original single pane windows (slider) with screened storm window. Entrance door is metal sliding patio doors opening onto a deck. This cabin contains personal storage boxes for users. Plywood /drywall interior

Fair to good condition

Structural:

Wood Framed Structure on CMU Foundation Walls.

Foundations: Perimeter CMU walls on (assumed) concrete strip footings.

Floor: 2x8 @ 16”c/c Floor Joists. Floor is bouncy.

Walls: Likely 2x4 @ 16”c/c with shiplap siding.

Roof: Tied hip and gable roof: Likely 2x4 @ 24”c/c and 2 – 2x4 Ceiling Ties @ 24”c/c. (not exposed to view).

Porch: Porch/Deck has been installed and founded on stacked CMU footings.

Mechanical / Electrical:

60 amps underground electric services with a breaker panel fed from an overhead hydro pole. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

25. O’Reilly Cabin

Age: 19?? (Donated and moved to site in 19??)
Size: 960 ft^2
Occupancy: Sleeps ??

Architectural:

An all wood structure building, the O’Reilly cabin has a beautiful interior.

Due to the nature of its construction, this building is uninsulated and therefore not used much during the winter.

Roof is in good condition

Screened porch in good condition

Stained wood siding (board and batten) in fair condition

Structural:

Relocated Wood Framed Structure on CMU Blocks on Some Paver Footings.

Foundations: CMU blocks placed as required on some concrete paver footings.

Floor: 2x8 @ 16”c/c Floor Joists. Some are supported mid-span with a CMU block.

Walls: Post and beam construction with 1x6 cedar plank infill walls.

Roof: 4x4 @ 24”c/c ceiling joists supported at ridge on interior load bearing wall.

Porch: Similar to main cabin but enclosed with mosquito netting.

Mechanical / Electrical:

60 amps underground electric services with a breaker panel fed from an overhead hydro pole

No heat, ventilation system and no winterized.

26. Staff House (Director's Cabin)

Age: 19?? (Donated and moved to site in 19??)
Size: 1025+Loft ft^2
Occupancy: Sleeps 7

Architectural:

Walls and roof have a basic level of insulation, metal Roof in good condition, vinyl siding in good condition. Window are single pane - poor condition, skylight in main living space. Wooden door with storm/screen door. Drywall interior, carpeting in some of the bedrooms and in the loft. Acoustic ceiling tile/drywall ceilings. This building has a 3 piece washroom and a kitchenette (sink, stove, microwave, fridge). Fair condition (a history of issues with rodent infestation.)

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings. Foundations: Likely to recommend reinforcing by installing additional pier and footings as required. Floor: Likely 2x8 @ 16"c/c floor joists. Floor bouncy. Recommend reinforcing by installing new CMU piers as noted above. There is a second level loft that was not accessible – floor framing is likely 2x6 and a portion cantilevers over a load bearing wall. Walls: Post and beam construction with some infill walls and 2x4 @ 16"c/c load bearing walls. The loft guards are structurally inadequate and require remediation or replacement. Roof: Tied roof 2x4 @ 24"c/c and 2x6 Ceiling Ties @ 8'-0"c/c. Porch: Older /poor condition.

Mechanical / Electrical:

Washroom facility is provided by this building. The domestic water is fed from a well located in front of O'Reilly building. Stand-alone septic system is provided for this building. Electric baseboard heaters is provided in the building. Pressure tank, chemical treatment & UV lamp is provided to treated the well water with equipment located in the vanity in the washroom. Exhaust fan is provided for the bathroom and ducted to the exterior. Underground 100 amps feed to a breaker panel. Electrical hot water tank is installed. Smoke alarm detectors is installed. Log fireplace is installed.

27. BEL Cabin

Age: 19??
Size: 560 ft^2
Occupancy: Sleeps 14 in 2 rooms

Architectural:

Originally built for storage but converted to a sleeping cabin, this building has generous amount of area relative to the number of beds. Original Roof in fair condition. Walls and roof have a basic level of insulation, no vapour barrier present. Floor is built up with 1.5" of rigid foam insulation. Painted plywood siding with small battens at seams. Attic space venting in soffits. Original single pane windows (slider) with screened storm window. Wooden door with storm/screen door. This cabin contains personal storage boxes for users.

Fair to good condition

Structural:

Wood Framed Structure on CMU Piers on Some Paver Footings.

Foundations: Perimeter CMU blocks as required on some concrete paver footings (not exposed to view).

Floor: Full spanning 2x8 PT (pressure treated) @ 16"c/c Floor Joists. Some are supported mid-span with a CMU block.

Walls: 2x3 @ 16"c/c with plywood sheathing ext. and OSB plywood int.

Roof: Likely a tied roof 2x4 @ 24"c/c and 2 – 2x4 Ceiling Ties @ 24"c/c. (not exposed to view).

Porch: New/smaller porch has been installed on concrete deck footings.

Mechanical / Electrical:

60 amps underground electric services with a breaker panel. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

28. Maple Cabin

Age: 19??
Size: 80 ft^2
Occupancy/Use: Sleeps 2 - currently used for storage

Architectural:

Roof in fair condition

Original single pane windows with screens.

Wooden door with storm/screen door in poor condition

Exposed wood / plaster interior.

Building is not insulated

Floor structure is located very close to grade.

Painted wood siding in fair condition

Poor condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: Poorly founded on wood shims and CMU blocks. Likely to recommend remediating existing footings.

Floor: Some 2x6 @ 16”c/c floor joists have been reinforced. Floor bouncy. Recommend reinforcing remainder of joists where they are rotted at ends.

Walls: 2x3 @ 16”c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Tied roof 2x4 @ 24”c/c and 1x6 Ceiling Ties @ 24”c/c.

Porch: Older /poor condition.

This building requires immediate review and structural remediation.

Mechanical / Electrical:

30 amps underground electric services with a breaker panel.

No ventilation system.

29. Tent Platforms (2)

Age: 19??
Size: 640ft^2 each
Use: Storage

Architectural:

One of the tent platforms has been converted to an ad-hoc storage building. The other tent platform was not visible (snow cover) at time of visit.

The enclosed tent platform is a simple wood frame structure with a tarp roof and basic board and batten siding on exterior walls

Not insulated

No windows

Door not operating properly.

Structural:

Temporary Wood Framed Structure on Deck Footings on Concrete Pavers.

Foundations: Braced timber posts on concrete deck footings on concrete pavers.

Floor: 2x6 @ 16”c/c floor joists on centre beam. Solid floor.

Walls: Braced post and beam construction with vertical batten board siding.

Roof: Tarp on 2x6 @ 24”c/c roof joists supported by 2-2x8 ridge beam (post at centre).

Porch: Older /poor condition. Has heaved to impede door operability.

Mechanical / Electrical:

Drainage should be consider diverting the rain water run-off away from the tents.

30. Ropes Shed

Age: 201?
Size: 1248 ft²
Use: Equipment storage

Architectural:

Uninsulated storage building

Metal roof in good condition

Pressure treated board and batten siding in good condition

Metal entrance door and single vinyl window double hung with screen in good condition.

Structural:

New Wood Framed Structure on Concrete Paver Footings.

Foundations: Concrete Paver Footings.

Floor: Full spanning 2x10 PT @ 16”c/c Floor Joists.

Walls: 2x4 @ 16”c/c with vertical board and batten plank sheathing.

Roof: Roof trusses in good condition.

Porch: None.

Mechanical / Electrical: Not applicable.

31. Wood and Storage Sheds

Age:
Size: Varies
Use: Wood and miscellaneous storage

Architectural: Not applicable.

Structural: Not applicable.

Mechanical / Electrical: Not applicable.

32. Kiwanis Cabin

Age: 1950's-60's
Size: 273 ft²
Occupancy: Sleeps 5 (1 sets of bunks + 3 single beds)

Architectural:

Walls, roof and floor have a basic level of insulation, no vapour barrier present. Attic space venting at gable ends. Plywood skirting around perimeter not well vented, this has become potential nesting space for rodents. Original single pane windows (slider) with screened storm window. Wooden door with storm/screen door in poor condition. Screened verandah on north side is in poor condition, some screening is missing, flooring in bad shape. Stained wood siding in good condition.

Generally fair to poor condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: CMU piers on some concrete paver footings (not exposed to view). Likely to recommend reinforcing by installing additional pier and footings as required.

Floor: Likely 2 – lines of 2x8 @ 16"c/c Floor Joists on centre beam (short direction). Floor bouncy.

Walls: 2x3 @ 16"c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Tied roof 2x4 @ 24"c/c with 1x4 Collar Ties and 2x4 Ceiling Ties @ 24"c/c.

Porch: The rear covered porch is founded on CMU foundations with PT lumber blocking.

Mechanical / Electrical:

New electric heater. 30 amps overhead electric services with a breaker panel. Both smoke alarm detectors should be interlocked such that when any one of the detector is activated, both should sound. No ventilation system.

33. Bunkie Cabin

Age: 19??
Size: 160 ft²
Occupancy: Sleeps 2 (2 single beds)

Architectural:

Walls, roof and floor have a basic level of insulation, no vapour barrier present.

Attic space venting at gable ends

Original single pane windows (slider) with screens.

Wooden entrance door

Painted wood siding in good condition

Exposed structure and v-joint pine interior in good condition.

Roll vinyl flooring not connected to flooring.

Generally fair to poor condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: CMU piers on some concrete paver footings. One footing needs to be replaced immediately (front right). Likely to recommend reinforcing by installing additional pier and footings as required.

Floor: Likely 2x6 @ 16"c/c floor joists. Floor bouncy. Recommend reinforcing by installing new CMU piers as noted above.

Walls: 2x3 @ 16"c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Tied roof 2x4 @ 24"c/c and 2x4 Ceiling Ties @ 24"c/c.

Porch: Older /poor condition.

Mechanical / Electrical:

30 amps underground electric services with a four circuits breaker panel. No ventilation system. Electric Heat, Smoke detector and Fire extinguisher.

34. Gazebo - Tripping Cabin

Age: 19??

Size: 192 ft^2

Use: Prep kitchen used for preparing meals for outtrips

Architectural:

Uninsulated food preparation shed.

Fridge + Freezer equipment

Basic ventilation via fan to exterior

Painted plywood interior

Exterior siding is painted plywood with thin battens at seams.

Covered storage area on one side of building - corrugated roof.

Generally fair to poor condition.

Structural:

Wood Framed Structure on CMU Piers on Some Paver Footings.

Foundations: Perimeter CMU blocks as required on some concrete paver footings.

Floor: Full spanning 2x8 @ 16”c/c Floor Joists. Bouncy floors.

Walls: 2x3 @ 16”c/c with plywood sheathing ext.

Roof: Tied roof 2x4 @ 24”c/c and Ceiling Ties @ 24”c/c.

Porch: None.

Mechanical / Electrical:

100 amps overhead electric services with a 60 amps breaker and 12 circuits breaker panel.

No ventilation system

Kitchen sink with drain spilled on grade outside the cabin.

Water to the sink is fed from a garden hose

35. Cedar - Trip Storage

Age: 19??

Size: 195 ft^2

Use: Storage

Architectural:

Uninsulated storage structure

Building interior was not accessible at time of inspection.

Roof, Soffit, Fascia in poor condition

Wood windows and doors in poor condition

Painted wood siding in fair condition

Concerns about mold and structural fatigue due to rot were expressed.

Very poor condition. Remove building, or conduct a review of indoor air quality and structural safety immediately

Structural:

Wood Framed Structure on CMU Piers on Some Paver Footings.

Not reviewed as the site superintendent has condemned the building due to mold and extent of rotting to the building’s structure.

This building requires immediate review and structural remediation.

Mechanical / Electrical: Not applicable.

36. Tuck Shop

Age: 19??

Size: 100 ft^2

Use: Shower, handwashing and cleanup facility

Architectural:

Two buildings connected by a covered washup area.

- The ‘tuck shop’ which sells snacks one day per week during summer

- a basic wood clad and wood frame shower building with 3 showers per gender.

Hot water tanks in tuck shop? Good opportunity for basic solar hot water

Exposed wood construction

Generally good condition

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: Founded on various CMU blocks, stone and rubble. Generally poor.

Floor: Very bouncy. Steel WShapes appear to be installed to reinforce floor and support pump equipment. A portion of the floor structure is in contact with grade which may cause wood to rot.

Walls: 2x3 @ 16”c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Likely 2x4@24”c/c with roof ties.

Porch: Rickety

General: Very poor condition.

Mechanical / Electrical:

40 gallon domestic hot water tank. Water supplies to the shower from the distribution box. No sewer connection for the shower. No access to some room at time of visit.

37. Pump House

Age: 19??

Size: 100 ft^2

Use: Lake source water pump and purification equipment

Architectural:

This small pump house building is within very close proximity to the lake and houses critical site infrastructural equipment. Generally, the building is in very poor condition.

Vinyl windows and steel entrance door

Walls - 2x3 uninsulated

Floor - in contact with grade, uneven.

Structural:

Wood Framed Structure on CMU Piers on Concrete Paver Footings.

Foundations: Founded on various CMU blocks, stone and rubble. Generally poor.

Floor: Very bouncy. Steel WShapes appear to be installed to reinforce floor and support pump equipment. A portion of the floor structure is in contact with grade which may cause wood to rot.

Walls: 2x3 @ 16”c/c with ship lap sheathing ext. and OSB plywood int.

Roof: Likely 2x4@24”c/c with roof ties.

Porch: None.

General: Very poor condition.

This building requires immediate review and structural remediation.

Mechanical / Electrical:

1.5 HP pump is used to supply water to the site. Water treatment system consisted of UV (Ultraviolet) lamp, micro filter, chlorine tank with injector, water softener, triplex filtration system and pressure tank. 12 circuit electric panel. Baseboard heater.

38. Outhouses (2)

Age: 19??
Size: 2 x 60 ft^2
Use: Outhouses - Three stalls for each gender

Architectural:

Original Outhouses. Three stalls in each building

Uninsulated, ventilation through screened openings at high level

Wood frame on concrete base.

Concrete base has access from back of building for cleanout

Structural:

Wood frame on concrete foundation

Mechanical / Electrical:

NA

39. Boat House

Age: 20??
Size: 128 ft^2
Use: Boating equipment and life jacket storage

Architectural:

Small shed for equipment storage. Good condition.

Structural:

Wood Framed Structure on Concrete Pier Footings.

Foundations: Founded on precast concrete deck footings.

Floor: Wood joists – not exposed to view. Floor was slightly bouncy.

Walls/Roof: 2x3 prefab trusses with OSB sheathing and cedar board cladding.

Porch: Dock access in good condition.

Mechanical / Electrical: Not applicable.

40. Composting Toilets

Age: 2011- (Structure not completed at time of review)
Size: 60 ft^2
Use: 3 Composting Toilets

Architectural:

Board and batten siding, vinyl windows above each door

Portion of new construction that is completed appears to be in good condition, Building currently unfinished and therefore not yet operational

Structural:

Wood frame structure on CMU foundation

Mechanical / Electrical: Not applicable.

Minutes from Meeting #1

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PROJECT	Camp Kawartha Master Plan	A-21161
DATE	January 31, 2012	
ATTENDANCE	Jacob Rodenburg, Cathy Romano, Paul Patterson - Camp Kawartha Joe Lobko, Megan Torza – DTAH David Stonehouse – Evergreen	
DISTRIBUTION		

ITEM	GENERAL ISSUE	ACTION
1.1	**Camp Existing Conditions:** • Buildings on the camp property split into 4 different groups: oldest camp cluster (at lake), newer camp cluster (around Health Centre), Staff House cluster, and admin building cluster around central green • Mechanical / Electrical infrastructure updated by volunteers, often not built in accordance with OBC. • Plumbing only in certain buildings, most cottages not provided with plumbing connections. Heat tracing used on some lines to allow for 4-seasons use. Water source from lake via pump house at lake edge. Some repairs conducted recently to the filtering system, which includes a UV filter plus chlorination. • Power supply from Birchview Road via overhead lines through right-of-ways into the property. Main feed 3-phase system powering main panel within the Dining Hall. Distribution from this panel a mixture of overhead and underground connections. Typical cabin has a 60-amp panel, some with breakers, some without. • Road access available to Dining Hall, O'Reilley Cabin and Director's Cabin, and encircling the central green. • Property management team includes 2 full-time staff. Funding allows for part-time/contract staff from time to time. • Maintenance and renewal fund: $90,000/year, not including staff. • Septic system constructed in 1985 (nearing the end of its life cycle. The site also has two outhouses and three composting toilets. Further notes on the existing conditions of the camp included in forthcoming Existing Building Condition Assessment.	Info.
1.2	**History of the Camp:** • 1921 camp founded as Rotary Boys Summer Camp • 1950's became a YMCA summer camp • New dining hall built in 1960's, as well as the cluster of oldest cabins at the lake edge • Non-profit entity created to run camp in 1985. Focus of the camp became all-season camping • New cabins were built and/or moved to the site in the coming years • Many cabins were winterized in the 1980's to support this new	Info.

mission. Nature-based programming on site since 1985.
- 2004 Rotary Hall constructed with straw bale construction. Later Greenhouse and office were built using the same construction.
- Trent University environmental education centre established.
- Mission: to promote stewardship, teaching kids to be good stewards of the environment; to connect kids and educators with nature; to be the greenest camp in Ontario.

1.3 **Capacity of the Camp:** Info.

- Typical summer 125 campers and 60 staff
- 25-100 persons on site during the remaining months of the year
- License from the township allows for 175 persons on site at any given time.
- Limitations to occupancy include the capacity of the potable water and sewage systems, as well as the capacity of the kitchen and dining hall.
- Winter use is limited by winterized common area space.

1.4 **Why have Camp Kawartha begun this Master Planning process now?** Info.

- Camp Kawartha aims to be the Greenest Camp in Ontario – recognized that the existing camp facilities did not reflect or reinforce this ambition.
- Declining enrolment in outdoor education programming over the last few years due in part to the lack of winterized facilities with plumbing
- Governance issues within the board – have not yet achieved consensus around a shared vision moving forward

1.5 **What are the current programs run at Camp Kawartha?** Info.

- Summer Camp: revenue $770,000/year (2011)
  - Overnight camp: 125 campers in each 4-week session, utilize 13 cottages plus tent platforms
  - Day camp: 24 campers in each week-long session, 5-8 year olds – recreationally focused. Utilize classroom building and Dining Hall – campers bring their own lunches.
  - 3-phase leadership camps (pre-leadership for students aged 13-14, pre-councillor for students aged 14-15, leaders in training for students aged 15-16)
  - Environmental focus for all camp sessions could be improved
  - Enrolment decreasing somewhat – common across all Ontario camps
- Weekend Rentals (non-summer): revenue $86,000/year (2011)
  - Users ideally aligned with the camp's environmental mandate
  - Users chosen through selective marketing
  - Decline in bookings over the last few years
  - Site provides a place for gatherings, a range of services including catering and overnight accommodations
  - Group sizes between 25-100 max. Most common group size between 30-40
  - 30-40% of groups want Camp Kawartha staff to provide programming
  - Conferences can be hosted within Dining Hall, Rotary Hall, Classroom Building, Jack Frost Centre
  - Winterized cabins with washroom facilities a major limitation
  - Three models: DIY accommodation; accommodation plus kitchen service; accommodation plus kitchen service plus

programming.

- Ecotourism (non-summer):
  - Ambition to host ecotourism excursions in partnership with the Canadian Canoe Museum (voyageur trips on the lake), ropes course groups, outdoor survival camps/training, cross country skiing trips, etc.
  - Looking at partnering with local resorts in the area – resort would provide the accommodations and Camp Kawartha would provide the programming.
- Outdoor Education (non-summer): revenue $350,000/year (2011)
  - Typical campers grade 5 – university, 60 different programs
  - 2600 people participated in OE programming last year
  - Programming includes historical skills development, ecology, history, arts programming, recreation, leadership development and team building
  - Average group size 30-35
  - Typical group arrives Monday and stays to Wednesday morning, another groups arrives Wednesday afternoon and departs Friday
  - Day-programming also available
  - Sharing washroom and shower facilities between groups an issue – groups must be within the same age group at a minimum and have to grant permission to share with other groups
  - GTA biggest market for Outdoor Ed programming, Ottawa and Peterborough less of a market than they used to be.

1.6 **What is the camp's operating reserve?** Info.

- Typically $200,000 in the bank as a float + $100,000 Baker bequest + $100,000 potential new bequest – not yet confirmed
- Ideally 10% of income per year is reserved for maintenance and upgrades

1.7 **What do you like about the Camp**? Info.

- Beautiful setting, sloping to the lake. Beautiful woods across the road filled with wetlands, fields, alvar.
- Camp a very tightly knit community, small and intimate in size. Felt like its own little village.
- Central green important – where students are welcomed, where kids play, where end-of-day gatherings are held
- Sunsets over the lake as seen from the cabins
- Small fire circle at the eastern edge of the property very intimate and surrounded by the forest
- Important buildings include the Rotary Hall, office, log cabin and oldest cabin cluster

1.8 **What don't you like about the Camp?** Info.

- Buildings generally unkempt and in need of significant improvement
- Not enough demonstration of sustainable best practices to support programming ambitions
- Would like to see a "green residence" for group excursions
- Lake shoreline hard to access, some areas of the shoreline are in need of restoration
- Characterless buildings don't communicate the ambition or quality of the camp

- Traffic on Birchview Road, and the noise it generates, is a problem
- Noise problems with neighbouring private residential properties – particularly difficult to monitor weekend camp rentals.
- Buildings should be “teaching moments” to educate re: stewardship.

1.9 **How does the Trent University Environment Centre operate?**

- Operates environmental educational programming for 3000 kids/year, including 30 workshops on sustainability
- Eco-mentorship program established by Trent, curriculum created by Jacob Rodenburg in partnership with Trent.
- Building built by Sir Sanford Fleming Students with $100,000 grant from the Gainey Foundation. End cost $345,000.
- Building composed of 1 large classroom, smaller office, washroom and kitchen facilities. Construction straw bale, thatch roof, potable rainwater system, 2100 square feet total.
- Annual budget for the facility works to break even at the end of the year. Fed by enrolment fee plus income from a Micro-FIT installation.
- New focus on environmental arts programming

1.10 **Potential Growth Enablers:**

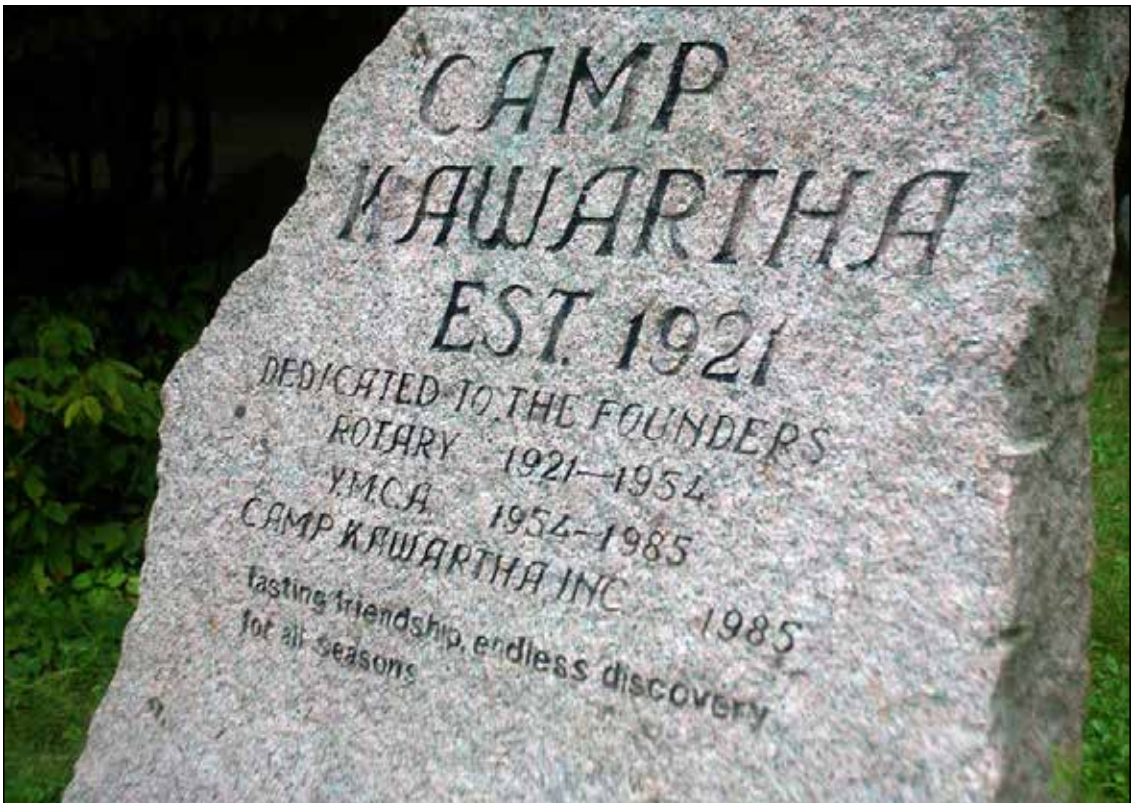
- Increase in operating revenue (surpluses)
- Debt financing against promise of increase in operating revenue
- Partnerships with other organizations or tenants
- Donations and grants (through new Alumni program, for example)
- Sale of land (discussed but dismissed)

1.11 **Other Camps and Facilities to Look At:**

- Camp Moshava
- Camp Tawingo
- Camp Wanakita
- Kinark Outdoor Centre
- Ganoraska Forest Centre
- Ontario Educational Leadership Centre
- Camp Maple Leaf

End of Minutes of Meeting No. 1

Presentation from Design Workshop



Camp Kawartha **Site and Facilities Master Plan**

Workshop Agenda:

10:00 – 12:00	Introduction to Consultant Team and Objective of Master Plan
	Review of Existing Condition Assessment
	Review of Business Plan and Programming
	Precedent Slideshow of Ontario camps and other similar facilities
12:00 – 1:00	Lunch
1:00 – 3:00	Group Discussion on the Future of the Camp
	Review of Next Steps
	Adjournment

Camp Kawartha Site and Facilities Master Plan

Camp Kawartha Site and Facilities Master Plan

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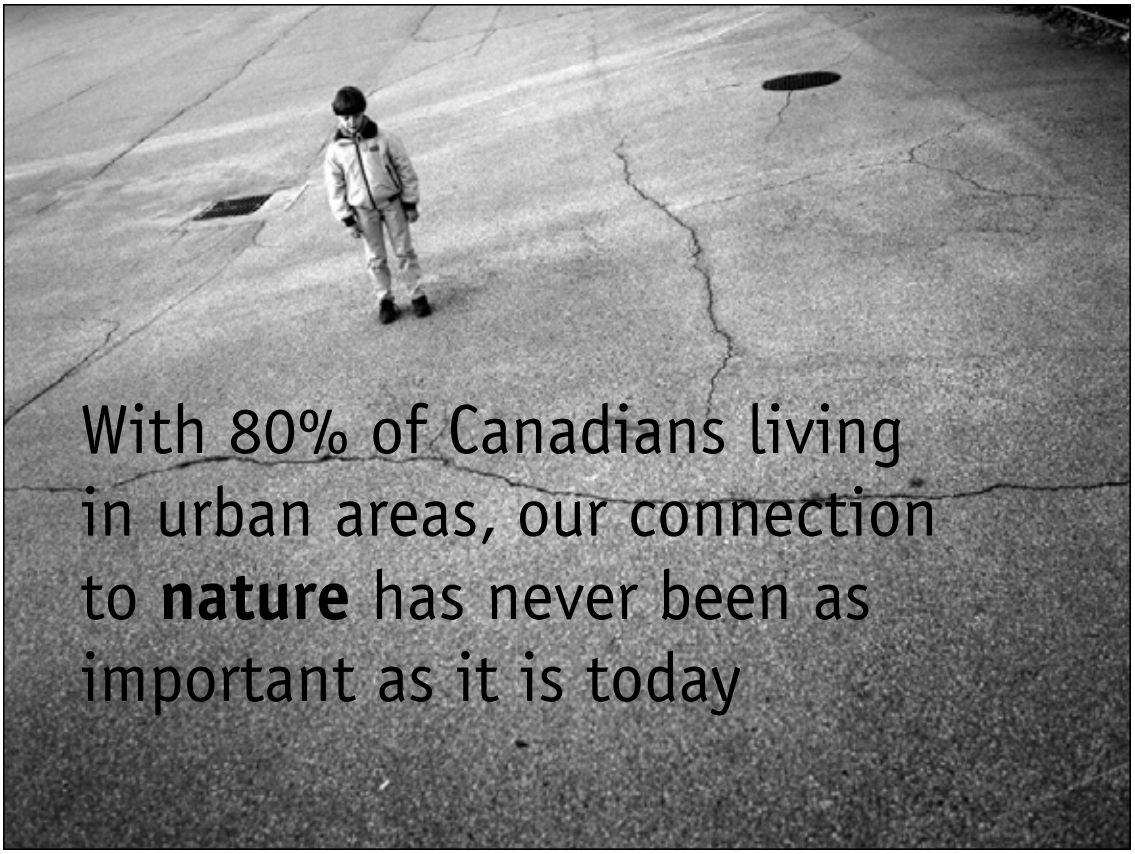
Camp Kawartha Site and Facilities Master Plan

Camp Kawartha Site and Facilities Master Plan

EVERGREEN

Imagine your city with nature



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a **national charity** with offices in Vancouver and Toronto, and a network of 15 associates in cities and towns across Canada

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Working with schools

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LEARNING GROUNDS
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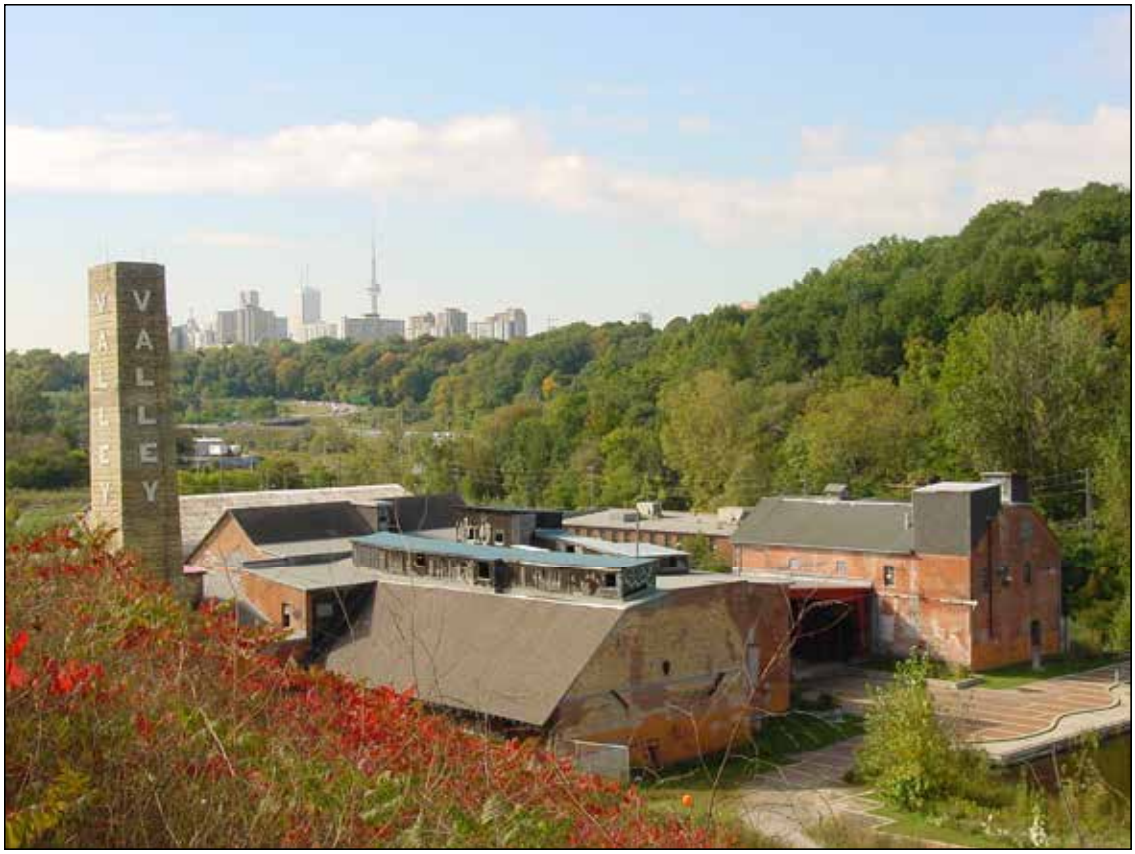
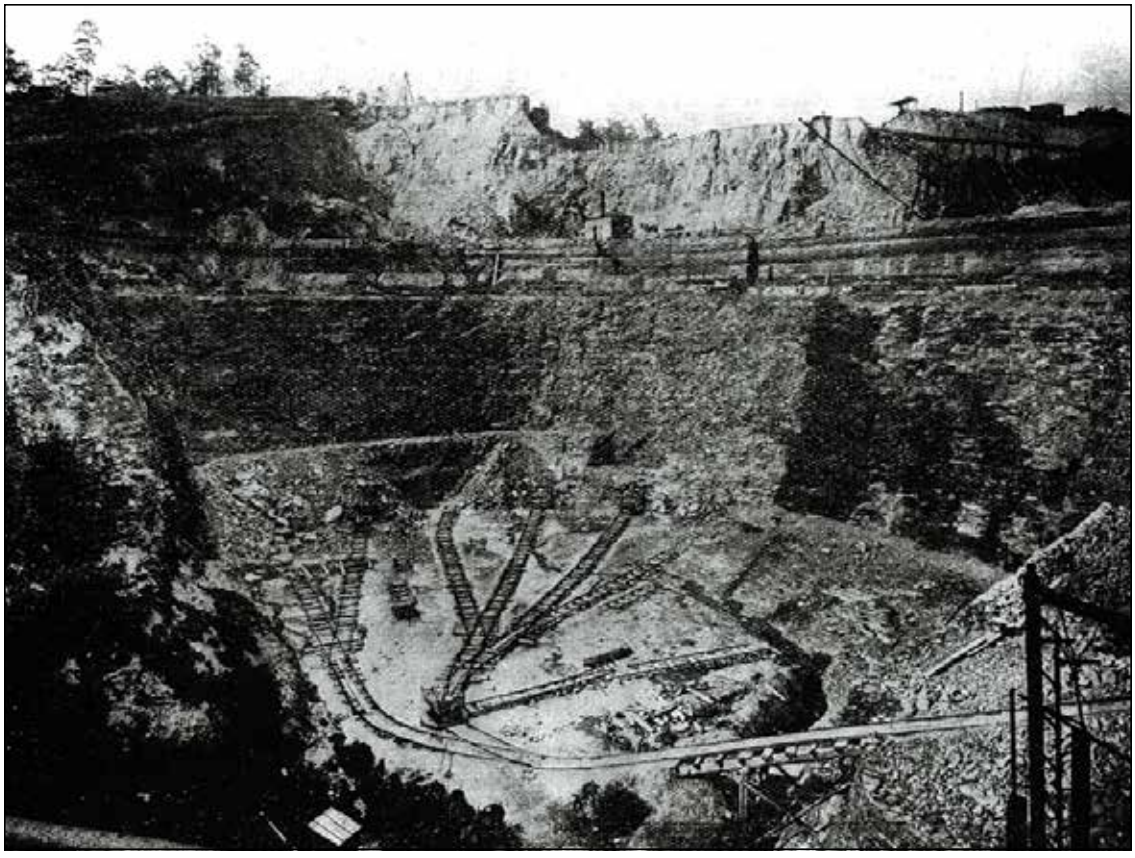
BEFORE


AFTER

EVERGREEN
BRICK WORKS


VALLEY




KOERNER GARDENS


Staff

Why are we here?

The purpose of the Site & Facilities Master Plan is to assist the Camp Kawartha Board and Management **prepare a cohesive vision and long range plan (20 years) to guide the environmentally sustainable development of the Camp Kawartha site and facilities**, including upgrading and expansion or replacement of existing facilities as well as development of new facilities as needed.

Strategic Plan 2011 – 2016

5-year Action Plan for <u>Summer Camp</u>

- To incorporate environmental focus, intimate size, personal development and leadership skills into brand
- To enhance programming
- To more effectively track camper levels and certification
- To enhance safety management at Summer Camp
- Build on excellence in staffing
- Develop and extend partnerships
- Modernize and upgrade facilities

Strategic Plan 2011 – 2016

5-year Action Plan for <u>Outdoor Education</u>

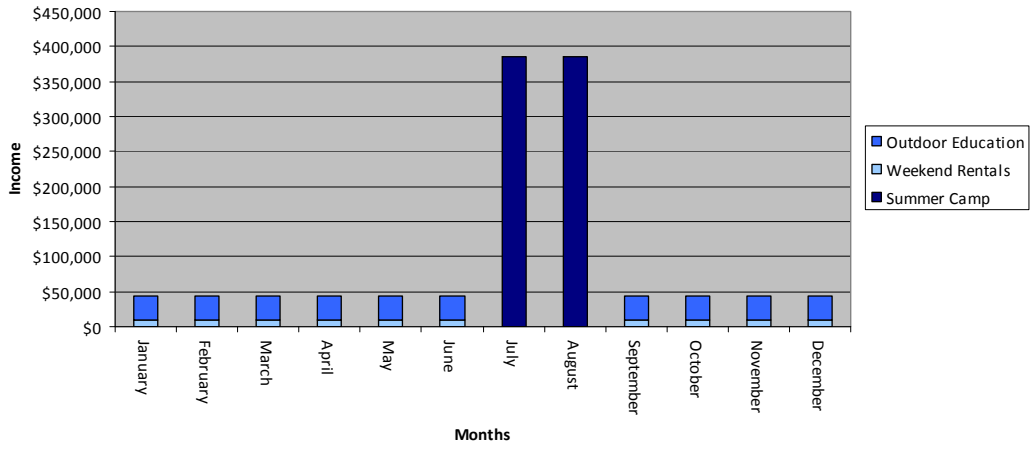
- Emphasize environmental education brand
- Refine marketing plan
- More effective use of local media
- Consider pricing each year
- Provide teachers with fundraising resources and ideas
- Position centre as an educational facility
- Establish targets for increasing bookings
- Diversify client base
- Formalize safety protocols

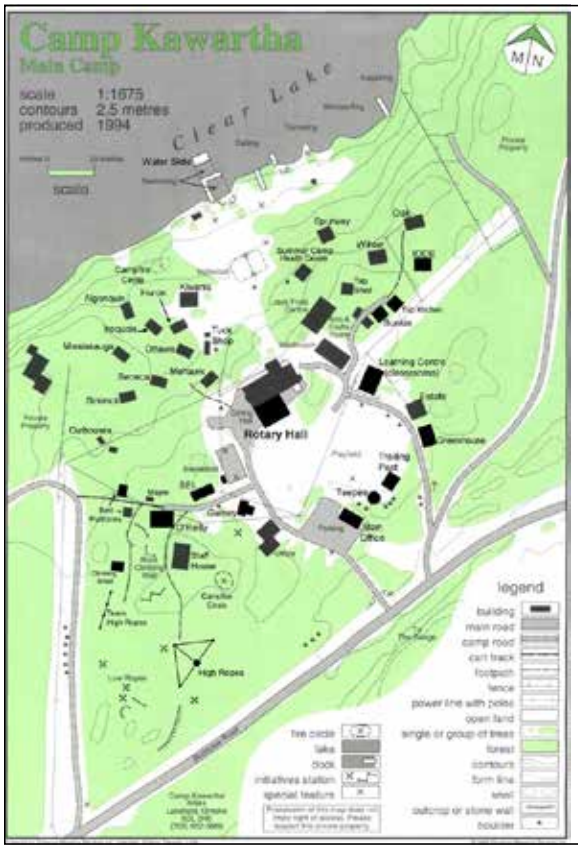
Strategic Plan 2011 – 2016

5-year Action Plan for <u>Facility Rentals</u>

- Enhance Marketing Strategy
- Develop a plan to upgrade facilities
- Develop a response to weekend site security issues
- To recruit quality part time staff
- Obtain feedback for Facility Rentals
- To obtain more trained kitchen help
- To review liability risks to camp and Board of Directors by rental activities
- Explore ways to accommodate a greater diversity of groups and programming needs

Annual Revenue (2011)





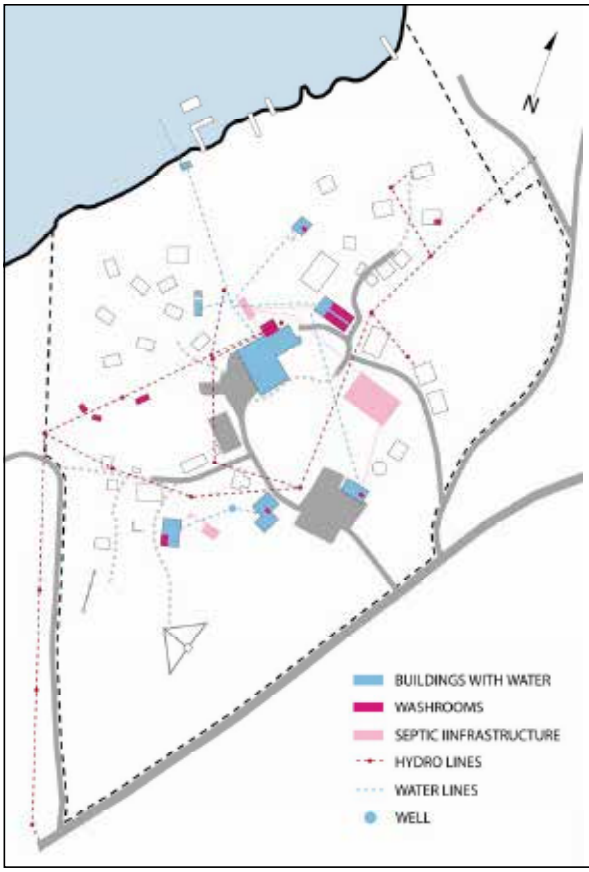
Existing Condition Assessment

• current state of buildings and infrastructure on site

• full report to be delivered as part of Master Plan work

• incorporates commentary on camp's architectural, structural, mechanical, electrical and civil infrastructure

Camp Kawartha Site and Facilities Master Plan



Infrastructure

• how is power, water and sewage handled currently on site

Camp Kawartha Site and Facilities Master Plan

Sewage System

- Current water usage - ~12,000-15,000 L/day

- System built in 1986 based on old capacity
  - 110 people (100 campers and 10 staff)
  - Total peak sewage volume = 110 * 200 L/day = 22,000L
- System components installed:
  - total length of tile piping - 660 m
  - septic tank/ holding tank capacity - ~27,000L

- Typical Life Span of a Leaching Bed: 25-40 years
  - year round use - 25-35 years
  - seasonal use - 30-40 years*
  - *leaching bed has time to recover during the off season

Sewage System

- Current capacity
  - 185 people (125 campers + 60 staff)
  - Total peak design volume = 185 people x 200Lpd = 37,000Lpd

- Required septic system components
  - total length of tile piping - 1,110
  - septic tank/ holding tank capacity - 111,000L (37,000L x 3)

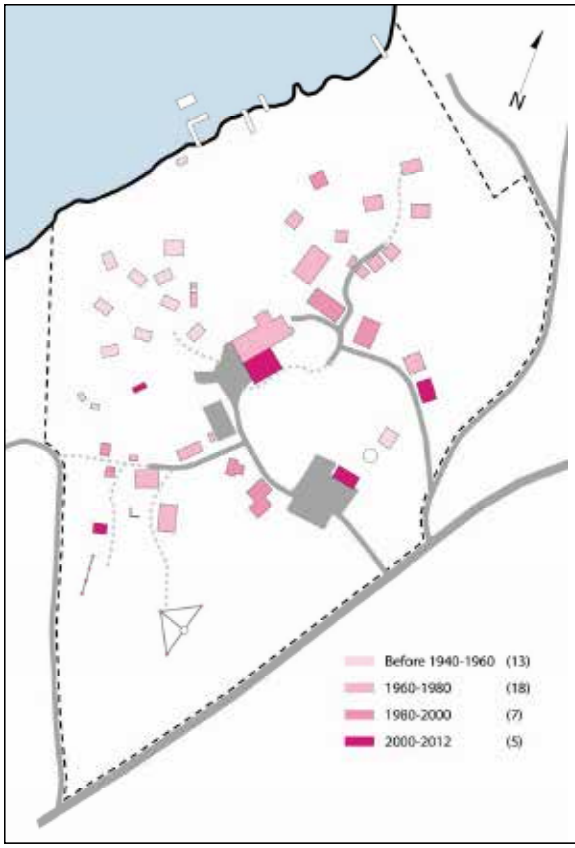
Sewage System Conclusions

- existing system undersized to current standards
  - septic tank sized for <1.5x the peak design volume
  - existing tile field undersized by ~40% based on current usage and current OBC design standards

- system functioning as designed since only processing ~75-80% (~11000L/day) of average daily water usage, but also due to
  - ongoing/ regular maintenance of septic tanks (2-3 pumps out per year) and regular inspections of septic bed
  - water conservation strategies (offline showers, composting toilets)
  - seasonal usage - system recovering during the offseason

Sewage System Conclusions

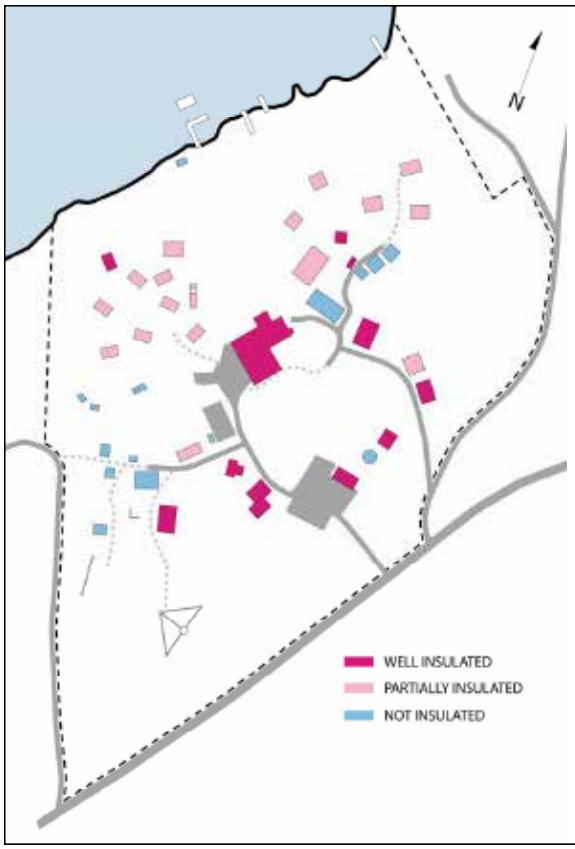
- remaining life expectancy - 5 to 15 years based on:
  - continued ongoing maintenance of system
  - continued seasonal usage
  - 100% summer occupancy
  - 85% spring and fall
  - 10% winter
  - water conservation practices



Building Age

• chronology of the buildings on site by decade – relates to level of maintenance required

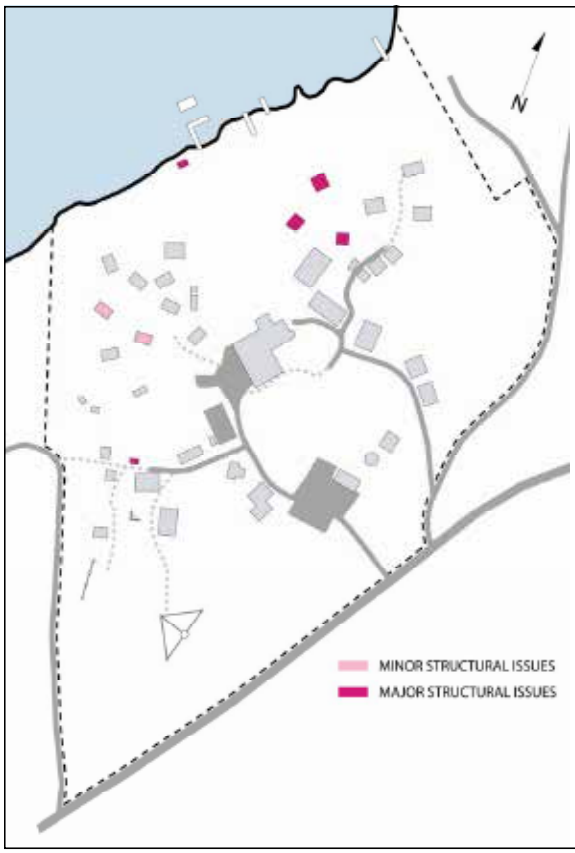
Camp Kawartha Site and Facilities Master Plan



Winterized

• which buildings are insulated and provided with a heat source, and therefore usable during shoulder and winter seasons

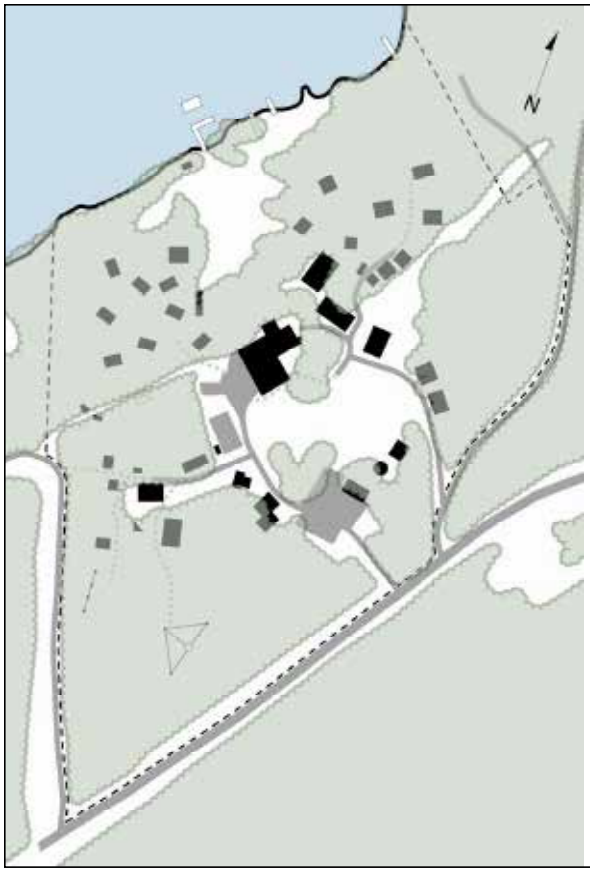
Camp Kawartha Site and Facilities Master Plan



Structural Issues

• which structures are in need of major or minor structural repairs

Camp Kawartha Site and Facilities Master Plan



Tree Canopy

• what areas of the camp have access to direct sunlight, and what areas are tree covered

Camp Kawartha Site and Facilities Master Plan

Sample Building Assessment

• Seneca Cabin FAIR

- Typical to the original 8 sleeping cabins, sleeps 7 people.
- Roof + walls (2x3 studs) are partially insulated, floor is not, crawlspace beneath is prone to rodent infestations. Wood framed structure on concrete block piers on concrete paver footings - reinforcement of foundation support is recommended
- Porch is in poor condition – recommend replacing.
- Newer windows than many of the other older cabins
- 60 Amp overhead electrical services with breaker panel (exposed)
- Baseboard Heating
- No ventilation system

Sample Building Assessment

• O'Reilly Cabin GOOD

- Donated cottage with exposed cedar post and beam construction, generally in good condition.
- Building is not insulated and therefore not used during winter months.
- **Floor:** 2x8 @ 16"c/c Floor Joists. Some are supported mid-span with a CMU block.
- **Walls:** Post and beam construction with 1x6 cedar plank infill walls.
- **Roof:** 4x4 @ 24"c/c ceiling joists supported at ridge on interior load bearing wall.
- **Porch:** Similar to main cabin but enclosed with mosquito netting.
- 60 amps underground electric services with a breaker panel fed from an overhead hydro pole
- No heat or ventilation system

Sample Building Assessment

• Learning Centre GOOD

- Wood frame structure insulated to R20, vinyl windows, roof in good condition.
- Ground level workshop ("Hangar") slab on grade in fair condition, is a tall clear spanning ground floor space with garage door opening to playfield, floor feels very solid and in good condition.
- 8" conc. block foundation walls in good condition.
- A 200 amps panel is located in the workshop – this panel feeds 2-3 other buildings (Gainey, greenhouse, trading post)
- Electric heaters is located on the second floor only.
- No permanent heater installed on the ground floor, construction heater used during winter
- No ventilation system

Camp Kawartha Site and Facilities Master Plan

Sample Building Assessment

• Health Centre POOR

- Building requires immediate review and structural remediation
- Air quality and moisture concerns, crawlspace infestations are commonplace.
- Roof, soffit and fascia are in poor condition
- Foundation: Concrete block piers on concrete paver footings, some piers that are stacked out of plumb.
- Floor is bouncy. Rotted rim joists at entry deck and where the floor framing is in contact with the ground
- Front porch is in fair to poor condition and requires remediation.
- WC + hand sink. Electric baseboard heaters is installed, window AC unit is installed in the office area. No ventilation system.

Camp Kawartha Site and Facilities Master Plan

Sample Building Assessment

- Kitchen FAIR/POOR

- Kitchen is tight for the amount of equipment and fixtures within the room.
- Floors are bouncy, recommend reinforcing by installing new concrete block piers as required.
- Building is heated by a combination of an oil furnace and suspended electric heaters. There is no apparent fresh air intake grille.
- Kitchen exhaust system does not have an integrated fire suppression system
- Fire alarm panel with heat detectors in the ceiling, emergency lighting & exit signs is installed through-out the building;
- Main electrical supply to the site - 600 amps with sub-panels for the kitchen.
- 18 KW generator is installed and connected to a manual transfer switch into a 60 amps emergency powered panel located in the kitchen.

Select Recent Capital Investments

$90,000/year invested in the maintenance and upkeep of existing buildings on site

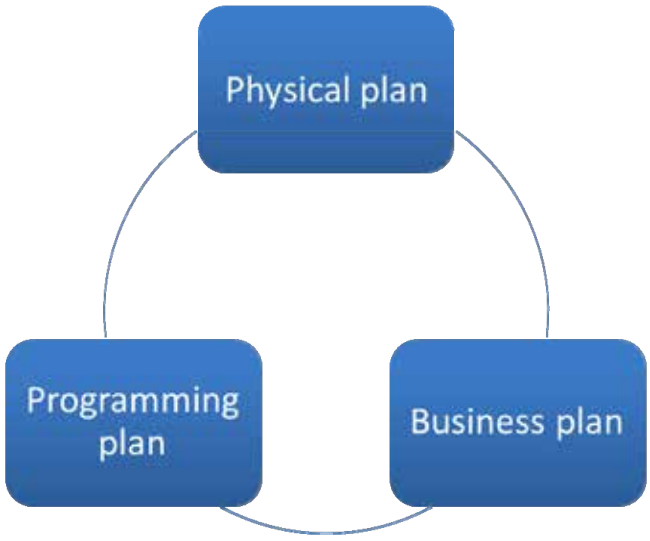
- Climbing Shed (2010)
- Dining Hall Flooring Replacement (2012)
- Composting Toilets (2012)
- Select building refurbishment (2012)






Programming and Business Development Assessment

The Challenge



Program is Excellent

- Comprehensive
  - All ages
  - All interests
  - All seasons
- Innovative
- Rooted in theory (education and training)
- You make a difference (testimonials)
- Doing too much?

Program is Unique

- Classic summer camp experience
- Environmental stewardship
- Two facilities
- Affiliation with Trent
- Intimate experience
- History and tradition

Strong Demand

- Long-range growth
- Recent economic downturn a concern
- Attachment to landscape and experience
- Public interest in environmental stewardship
- Staff nimble enough to respond to market trends (special needs, curriculum-based programs, shorter programs)

State of the Business

- Stable/sustainable
- Staff are entrepreneurial
- Challenge is capital spending requirements:
  - Routine
  - Extraordinary
- Funding for reinvestment

In Good Company

- Other camps and centres in same boat:
  - Ageing infrastructure = extraordinary capital spending requirements
  - High revenue activities come with higher expectations
  - Revenue enough to operate but not to save
  - Distance from markets a challenge

Ways to Fund Capital

- Operating surpluses
- Fundraising
- Partners/tenants
- Debt financing
- Above, in combination (diversity is good)
- Implementation:
  - Incremental
  - As opportunities come up
  - Proactively

Operating Surpluses

- Exist but are not generous
- Many struggle with this (Kinark, Evergreen)
- Organizations can attempt to establish aggressive goals:
  - For operating
  - For capital
- For capital, rule of thumb is 2% of replacement value per year

Fundraising

- A tough go; others agree
- Larger camps have the infrastructure (YMCA)
- Camp has had considerable success with program fundraising
- Money follows impact and vision: so dream big
- But reality check important: feasibility study or equivalent for capital campaign

Partners/Tenants

- They could pay rent or contribute to capital
- Basis of Evergreen Brick Works
- Your work with resorts (teambuilding)
- Your pitch to PVNC Catholic Board
- Approach used by other camps
- Program synergies interesting
- Look sideways for fit!
- Go fishing – issue RFP?

Debt Financing

- Used by many
- Requires two integrated models:
  - Borrowing
  - Revenue (less expenses) to repay debt
- Scary if revenues not 100% certain
- Requires appropriate due diligence

Conclusion

- Document the big moves (think big)
- Also document the incremental moves (think practical)
- No magic bullet
- A combination of approaches (diversity is good)
- Remember the triangle
- You are in good company
- You are very good at what you do
- This is hard, enjoy the process

How do we do it?

• Master Plan to establish a cohesive **vision** and **long range plan** for the sustainable development of Camp Kawartha

• Vision to be compelling, supportable and achievable

• Long range plan to include recommendations that can be implemented incrementally, as well as bigger moves that can be realized over time as resources become available

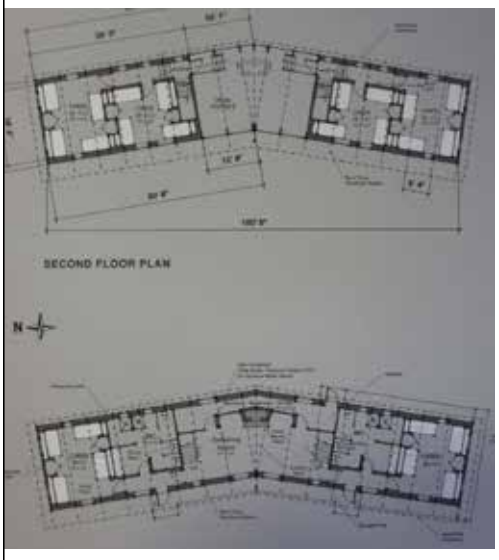
How to proceed?

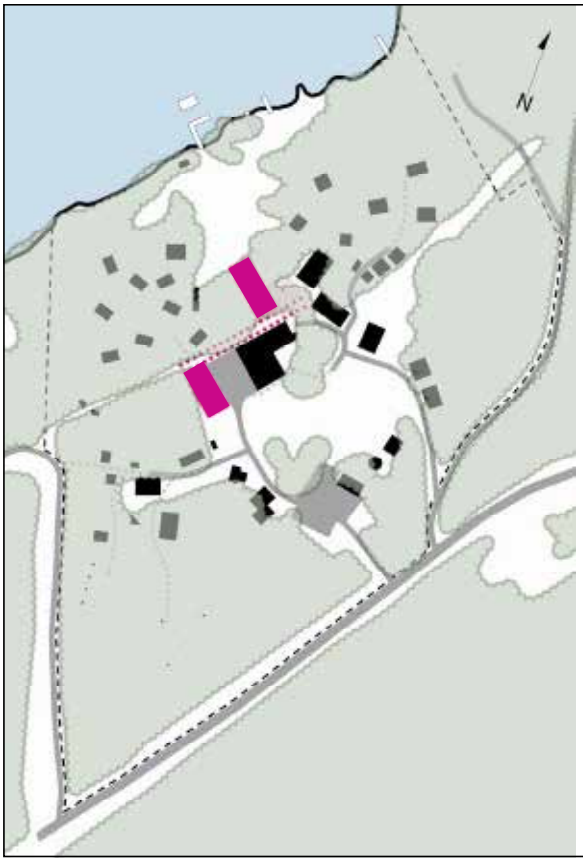
• **Steady as She Goes**: Incremental upgrades over time as necessary to maintain current operation

• **A Bigger Move**: More substantial investment in the property – ex. the development of a new "hub" facility that would replace existing structures while expanding the programming potential and client base of the camp, particularly during shoulder and winter seasons (Sept-June), combined with strategic investment in the rehabilitation in existing facilities

A Bigger Move?

• Proposed 2-storey residence and gathering space (3,000 sq.ft., estimated budget $275,000 – $325,000)





A Bigger Move?

- Create central hub on site adjacent to central playing field
- Provide wings for sleeping, gathering, eating and storage – all with integral plumbing
- Leave areas at the perimeter of the camp for outdoor play and ecological restoration

Camp Kawartha Site and Facilities Master Plan

What do other camps in Ontario look like, and how do they operate?

Camp Kawartha Site and Facilities Master Plan

Moorelands Camp, Dorset, Ontario

• Since 1912 Moorelands has worked with Toronto's children and youth affected by poverty

• staff to camper ratio 1:2

• 100 campers per 8-day session (6 sessions in summer only)

• 8 campers + 2 staff per sleeping cabin

• camp program focuses on character and skill development - respect, responsibility, caring, citizenship, trustworthiness and fairness

• activities include swimming, canoeing, kayaking, arts & crafts, archery, sports and team building exercises

• ongoing cabin replacement program – initial cabin prototype by U of T Architecture students

• won Governor General's Award for Architecture 2002

Boundless Camp, Palmer Rapids, Ontario

• staff to camper ratio 2:5

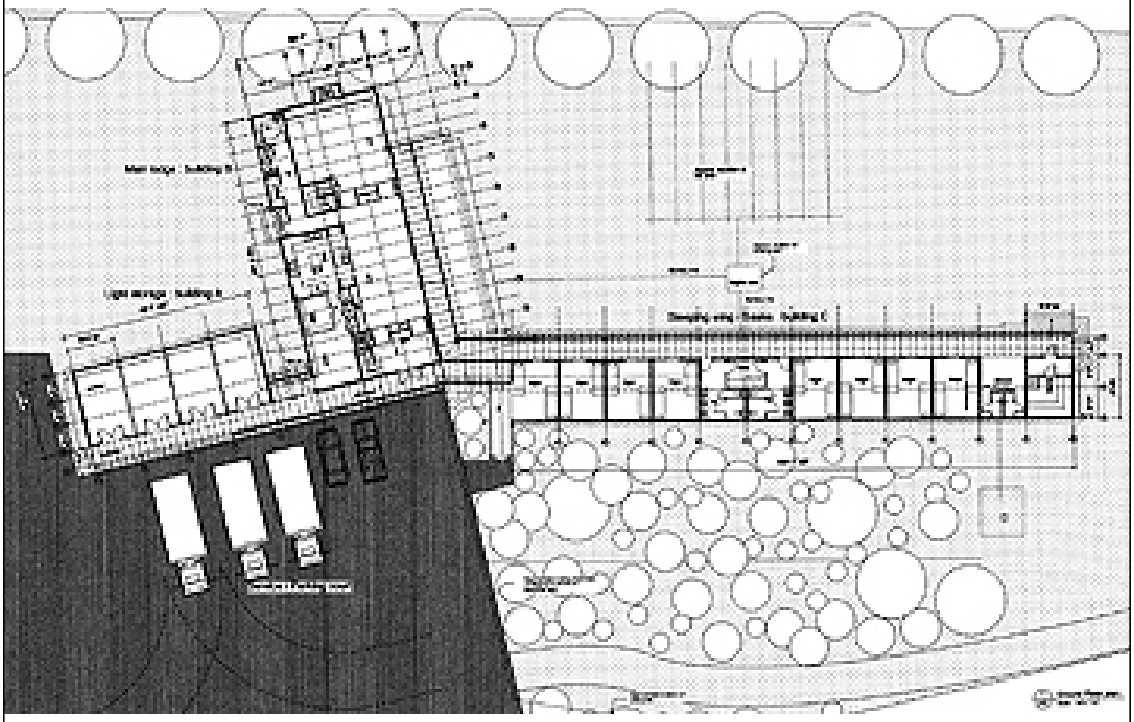
• 80 camper capacity in 1-week and 2-week sessions

• certified as an independent school by Ministry of Education

• camp program focuses on improving the lives of marginalized youth, adults and children at risk through a unique combination of counseling, social rehabilitation, alternative education and outdoor adventure

• budget for new camp hub $ 730,000

Boundless Camp, Palmer Rapids, Ontario



Camp Kawartha Site and Facilities Master Plan

YMCA Pine Crest Camp, Torrance, Ontario

- staff to camper ratio 1:4
- 1-week or 2-week sessions, 300 people (including staff) on site during summer
- most camp activities in groups of 8-10, cabins hold 8 campers and 2 staff
- camp program focuses on opportunities for social development, group interdependence, interpersonal problem solving and leadership development. Holistic approach to environmental stewardship and education integral part of camp experience
- activities include swimming, canoeing, kayaking, arts & crafts, archery, climbing and snorkeling
- Pine Crest Outdoor Centre provides educational programming during fall, winter and spring

Camp Kawartha Site and Facilities Master Plan

YMCA Camp Wanakita, Haliburton, Ontario

- staff to camper ratio 1:8
- 1-week, 2-week or 4-week summer sessions; year-round outdoor group programming
- 90 cabins (some winterized, some with WC), 2 dining halls, 4 indoor program centres, centralized washrooms/showers, 400 campers in residential camp + 100 staff + family camp (160 participants) on a typical summer day
- activities include swimming, canoeing, kayaking, arts & crafts, archery, climbing and snorkeling
- Outdoor Programs include Sunship Earth programming, school group programming, get-away weekend programs

Camp Kawartha Site and Facilities Master Plan

Kinark Outdoor Centre, Minden, Ontario

- staff to camper ratio 2:3
- 5-day sessions for up to 100 children and youth between 9-15 years of age who require specialized social and behavioral support due to Autism Spectrum Disorder diagnosis
- Kinark Sustainable Living Centre provides educational programming year-round
- Outdoor Centre also provides year-round programming tied to school curriculum including adventure-based learning and sustainability

Camp Kawartha Site and Facilities Master Plan

Camp Tawingo, Huntsville, Ontario

• summer residential camp, day camp, Outdoor Centre and Tawingo College (independent K-8 day school)

• 220 Acres of secluded & private forests, with close to 2000 feet of lakefront, plus two beaches, large playing fields, creeks & streams, a junior mountain

• Activities include swimming, boating and outtripping, nature, arts/crafts and sports

Camp Kawartha Site and Facilities Master Plan

Camp Moshava, Ennismore, Ontario

• 400 acre campground on Buckhorn Lake

• Jewish overnight summer camp for ages 7-16; 2, 4, and 6-week sessions

• Site includes expanded private beach on Buckhorn Lake with many water activities including water skiing, banana boating and canoeing, a full sports field offering a range of popular sports as well as archery, the Log, The Swing and golfing.

• Programming also includes science, videography, dance, Red Cross swim instruction and a full range of activities accommodated in a 600-sq-ft indoor Recreation Centre

Camp Kawartha Site and Facilities Master Plan

Ganaraska Forest Centre, Cambellcroft, Ontario

• includes Learning Gallery, Great Hall, Learning Studies, Dormitories and Administration

• sleeping capacity for 80 persons

• 5, 3 or 2-day programs are available as well as single day use educational programs

• Centre is equipped with a commercial-class kitchen

• Oak Ridges Moraine Information Centre integrated into facility, which serves as a focal point of the Oak Ridges Moraine for Eastern Ontario

• green features include: solar thermal, biomass, propane and combination boilers, green roof areas and recycled plastic roof tiles

• budget $4,000,000

Camp Kawartha Site and Facilities Master Plan

Ontario Educational Leadership Centre, Longford Mills, Ontario

• 71-hectare site

• camp focused on leadership development for grades 6-12

• typical course 1-week duration, May-Oct.

• courses on different areas of interest e.g. fine arts, music, athletics, diversity education, student government & environmental advocacy

Camp Kawartha Site and Facilities Master Plan

Camp Maple Leaf, Pigeon Lake, Ontario

- 1-week residential summer camp (July-Aug) for children ages 8-14 from military families and families facing economic or social barriers
- programming focused on the development of self-confidence, self-esteem, problem solving skills, leadership and conflict resolution

What other facilities might we look to for inspiration?

L'Arche Daybreak, Richmond Hill

• Founded in 1969 in Richmond Hill, Ontario, L'Arche Daybreak is the oldest L'Arche community in North America, welcoming men and women with intellectual disabilities and the assistants who live, work and learn with them.

• New chapel and retreat centre planned together – chapel constructed in 1999.

• chapel budget $ 2,500,000

Camp Kawartha Site and Facilities Master Plan

Atlantic Centre for the Arts, Florida

• exceptional artists' residency program with outreach programs to promote arts education to the local community by providing exhibition opportunities for outstanding Florida artists and educational programs for children and adults

• program includes black-box theater, painting and sculpting studios, recording studios, a dance studio, a library and various support spaces

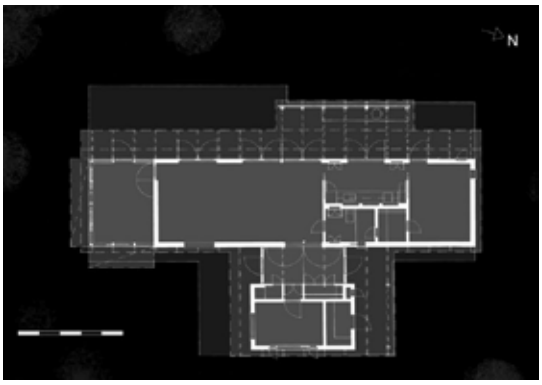
• design includes 6 buildings interwoven into an indigenous Florida jungle landscape, linked by an elevated boardwalk

Camp Kawartha Site and Facilities Master Plan

Cabin Prototype, Sweden

• designed by Stockholm, Sweden-based architecture firm WRB

• The wood cabin design is divided into zones, the use of which depends on the weather. The main living areas are well insulated and heated during the winter months for a cozy and comfortable socializing space, while an adjoining veranda and hallway are glass walled, and heated only by the sun and used during the warmer months of the year



Cabin Prototypes, Washington

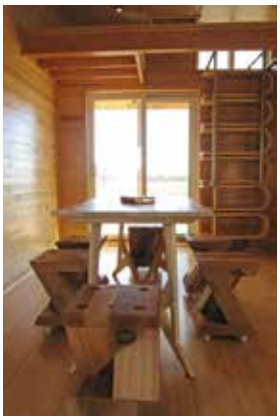
• designed by Oleson Kundig Architects

• Simple steel frame cabins elevated from the ground and capable of being shuttered completely when not in use.

Wintergreen Cabin, Washington

- designed by Balance Associates
- Simple wood frame cabin on concrete base
- sloping site allows for ground floor utility rooms embedded into hillside

Camp Kawartha Site and Facilities Master Plan



Prefab Sustainable Cabin, Texas

- designed and constructed by students from Texas Tech. Univ.
- prefabricated dwelling as a model of sustainability and a laboratory to test and quantify sustainable architectural concepts
- the performance of solar panels tested and measured, and the data collected compared to the performance of competing products
- prefabricated dwelling as a laboratory will produce data on sustainable components, materials, and water harvesting technology that will help future architects to make crucial and lucrative design decisions, and help them to envision how to retrofit existing homes with sustainable technology

Camp Kawartha Site and Facilities Master Plan

Signal Shed, Oregon

• The original Signal Shed was conceived as an prefabricated, affordable, practical and low-impact shelter for accessing the wilderness of Northeastern Oregon.

• 130 square feet, not counting the deck

• designed by Ryan Lingard and built in a couple weeks for roughly $ 10,000

•Includes a wood stove, metal roof, cedar rainscreen, reused windows, portable toilet, and operable shutters.

Camp Kawartha Site and Facilities Master Plan

Prefab Cabin for two families, Muskoka

• designed by Kohn Shnier Architects

• two-family cottage comprised of seven prefabricated modules that took only 8 weeks to construct in a factory and install on site

Camp Kawartha Site and Facilities Master Plan

Yorkshire Ecolodges, England

• 18 timber-framed lodges in the National Park at Aislabeck, Yorkshire

• evergreen sedum roofs, biomass heating, use natural spring water for drinking and showers

Camp Kawartha Site and Facilities Master Plan

YMCA Paradise Lake, Paradise Lake, ON

• environmental learning centre and a residence building located on a 70 acres of diverse landscape

• residence sleeps 40 people, replacing some existing out-of-date cabins

• residence incorporates passive heating, cooling, and ventilation, usage of photovoltaic cells to capture solar energy, reused building materials, and on-site processing systems for water and waste

Minutes from Meeting #2 - Design Workshop

du Toit Allsopp Hillier

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e: admin@dtah.com

PROJECT	Camp Kawartha Master Plan	A-21161
DATE	March 3, 2012	
ATTENDANCE	See attached list	
DISTRIBUTION	Jacob Rodenburg, Cathy Romano, Consultants	

ITEM	GENERAL ISSUE	ACTION
1.1	**Presentation** • Slides presented during the workshop have been attached to these minutes. • Photographs of the collages and the property assessment have also been provided as figures 1-6 below for reference.	Info.
1.2	**What is your favourite part of the Camp Kawartha property (red)** • **Rotary Hall** – nice space, well designed, good meeting place for the entire camp, building as teaching space, warm and inviting, solid/stable construction • **Rear Porch at Dining Hall** – good view of lake, bird feeders offer educational opportunity, elevated vantage point over lower areas of camp, traditionally the gathering place for campers prior to a meal • **Lake Edge/Beach** – provides an important face for the camp, entrance to camp for campers coming to site on boat, lake activities a big part of camp life • **Main Office** – green features good advertisement for the camp, provides a great greeting place for new campers and parents • **Trading Post** – central hub for fur trade games, learning environment specifically designed to allow campers to imagine themselves in another time in history, facilitates role-playing games • **Tee-Pee** – unique space, useful for storytelling and other group activities • **Greenhouse** – represents connection between environmental stewardship and food production, useful teaching tool, lots of potential to expand food-centred programming • **Playfield** – wide open space, good sense of place, big part of the lifeblood of the camp • **Camp Fire Circle (upper)** – nice intimate space for 25-30 people to gather around the camp fire • **High-ropes** – culmination of leadership training, very memorable part of camp experience for many campers, new storage shed is great • **Range** – gateway to 180 acres of land used for overnight trips, hikes and learning programming, important part of programming all year round, no need for signage, would be improved by a storage facility for overnight gear plus roofed gathering space	Info.

1.3 **What parts of Camp Kawartha do you like the least (blue)** Info.

- **Main Entrance** – signage insufficient, no sense of arrival, missed opportunity
- **Parking Lot** – disorienting, disorganized, not a nice welcoming gesture, reminds campers of an urban atmosphere (which they're trying to forget), would be better if it were naturalized
- **Learning Centre/Hangar** – an eyesore, big building not very attractive but commanding the principal view for campers upon arrival, acoustics an issue between ground and second floor uses, washrooms not nearby, access to the second floor an issue, not accessible
- **Kitchen** – functional and safety issues
- **Dining Hall** – low ceiling, rectangular shape doesn't facilitate group gathering, utilitarian, too small for entire camp to gather
- **Eastern Cabins (Willow, Oak, IODE)** – hodgepodge of buildings, not good flow between them or down into the lower camp green space, rocks between the buildings as hazard
- **Kayaking Area** – not easy to access, narrow, hard to carrying kayaks to the water, could be improved because cove of land creates calmer water than at main beach
- **Campfire Circle (lower)** – nice space but could be improved by creating an amphitheatre that could accommodate more campers in a more organized fashion
- **Trip Shed/Kitchen/Storage** – facilities would be better combined into one enclosure
- **Emergency Hill** – issues of erosion and safety – no clear pathway from eastern camp down to the waterfront

1.4 **What words/images describe Camp Kawartha today?** Info.

- The 5 panels produced to respond to this question are included as figures 2-6 below for reference.

1.5 **What should Camp Kawartha look like 10 years from now?** Info.

Ambitions:

- Want to maintain the intimate feeling of the camp
- Having a facility exclusively for teachers would be a selling point re: overnight trips and facility rentals
- Trend in environmental education growing – Camp Kawartha should endeavour to meet this demand – look at attracting school groups from farther afield (London area, Quebec)
- Important to reach as many kids as possible
- Better facilities = increased number of users
- People and the spirit of the camp the most important selling feature
- Need to be able to recruit good members to the board of directors
- Would like to incorporate entire property in the planning discussion
- Diversity of operations – need to maximize the opportunities for staff and users to utilize the camp for a variety of purposes
- Want to position the camp as a leader in environmental stewardship
- Place needs to be inspiring

Concerns:

- Concern about school boards trending towards not having overnight trips due to budgetary constraints
- Future of the camp facilities needs to be coordinated so that maintenance efforts on site are not expended on elements of the camp that are likely going to be phased out
- Year round use very important – if the camp were to close for 3-4 months during the winter there would be struggles to find good staff
- Would like to see more staff involvement in the process of planning the camp's future
- Debt financing is least desirable tool for capital reinvestment: "We should not spend money until it is in the bank." Decision to pursue debt financing would require additional due diligence, perhaps with assistance of an outside financial advisor

1.6 **Next Steps** Info.

- Consultant team to prepare master plan options
- Consutant team to meet with members of project steering committee to narrow options

End of Minutes of Meeting No. 2

Site Plan Workshop
March 3, 2012 - Environment Centre

Last Name	First Name	Board/Staff/Stakeholder?	Notes:	
Adamek	Peter	Retired Board		y
Adams	Ryan	staff	SC Staff (Evack)	Y
Bishop	Mike	staff		y
Brant	Craig	Staff	OE/EC Staff	y
Cockburn	John	Board	Board Member	y
Copson	Karen	Staff	Office Staff	y
Dobbin	Bill			y
Duffin	Kirk	Stakeholder		y
Fortin	Neil	staff	OE Staff	y
Huffman	Jason	Staff	SC	y
Hyland	Dave or Judy	Stakeholder	Either Dave or Judy will be in attendance	y
Kennedy	Amanda	staff	OE Staff	y
Lasenby	Fiona	Staff	SC	y
Lasenby	Doreen	Board		y
McKittrick	D'Arcy	Board		y
Owen	Sherri	Staff	OE Staff	y
Patterson	Paul	Staff	Maintenance Staff	y
Ramey	Susan	Stakeholder		y
Rodenburg	Jacob	Staff	Executive Director	y
Romano	Cathy	Board		y
Ross	Adrienne	staff	SC Staff (Suds) - Bringing 3 1/2 month old daughter	y
Smith	Lisa	Board		y
Strassburg	Adam	Staff	SC Staff	y
Sucee	Carol	Staff	Office Staff	y
Weiss	Rebecca	staff	Office Staff	y
White	Don	Board		y
White	Fiona	Board		y
Hobday	Terry		Retired Teacher	y
Koeslag	Peter	Board		y
Poell	Holly	Staff	Summer Camp Staff	y
Phelan	Jack		Summer Camp Staff (by Skype)	y
				Yes 31

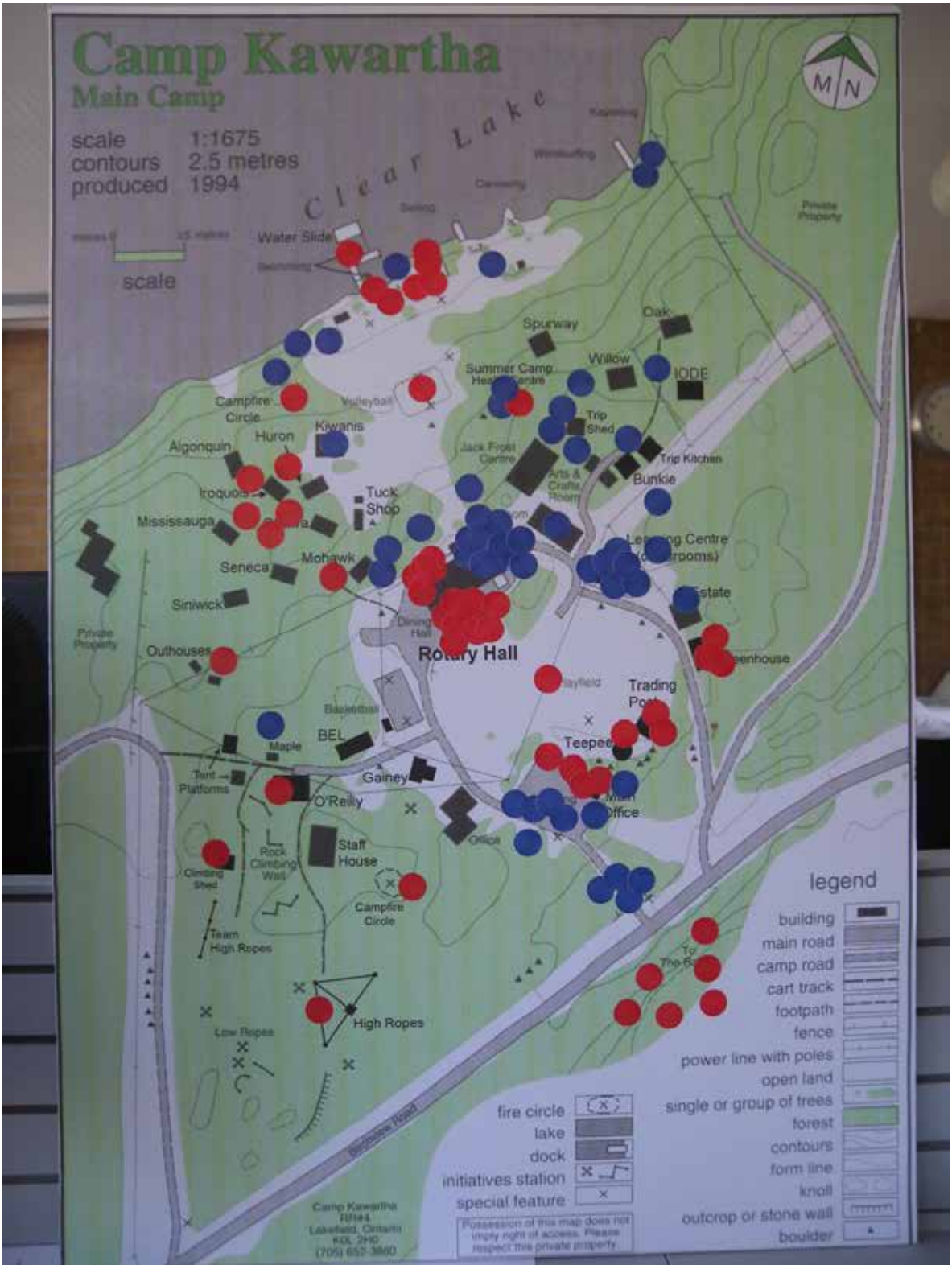


Figure 1: **What is your favourite part of the Camp Kawartha property (red)? What parts of Camp Kawartha do you like the least (blue)?**

Figure 2: **What words/images describe Camp Kawartha today?**
Panel 1

Figure 3: **What words/images describe Camp Kawartha today? Panel 2**

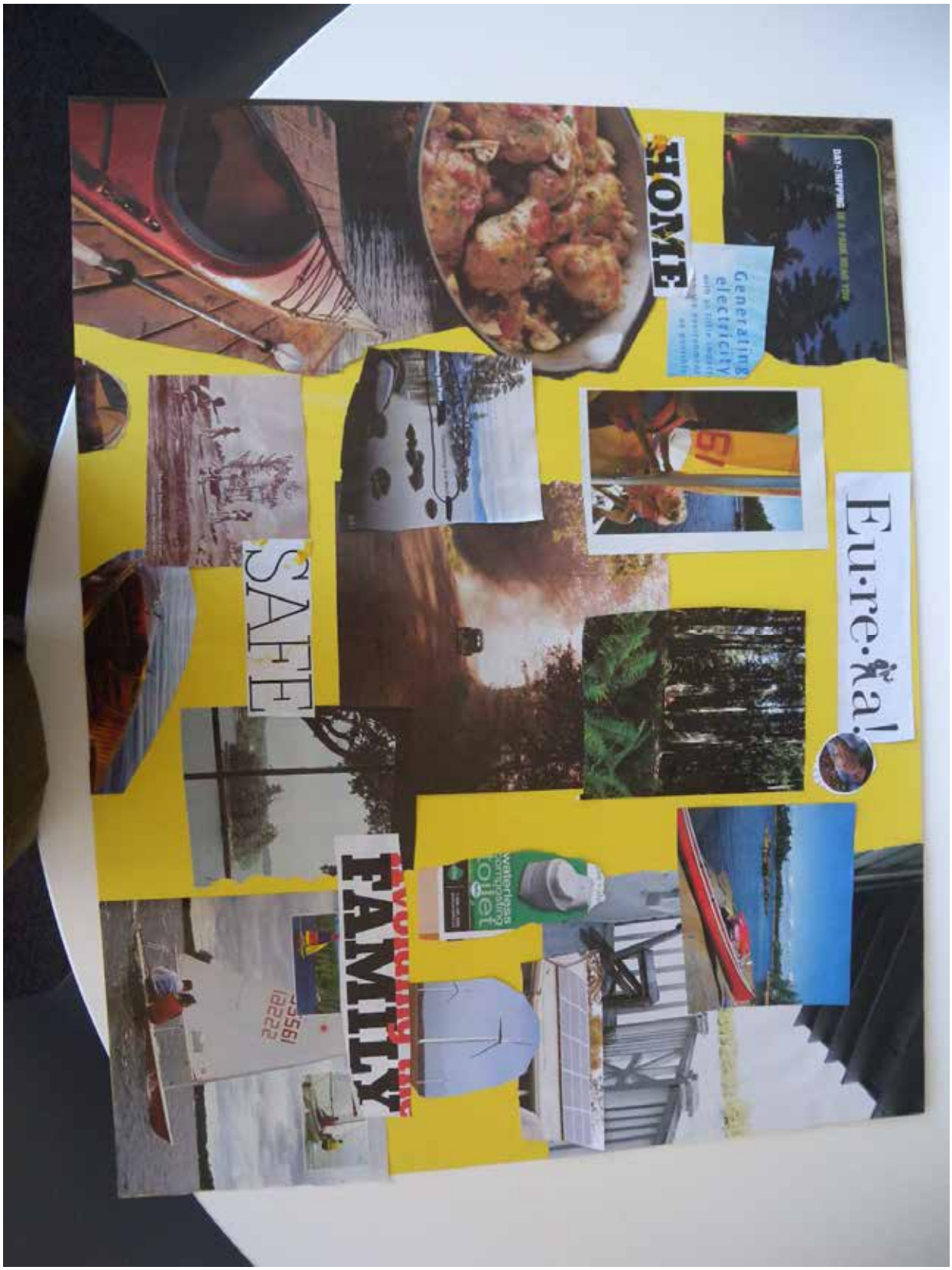


Figure 4: **What words/images describe Camp Kawartha today? Panel 3**

Figure 5: **What words/images describe Camp Kawartha today? Panel 4**

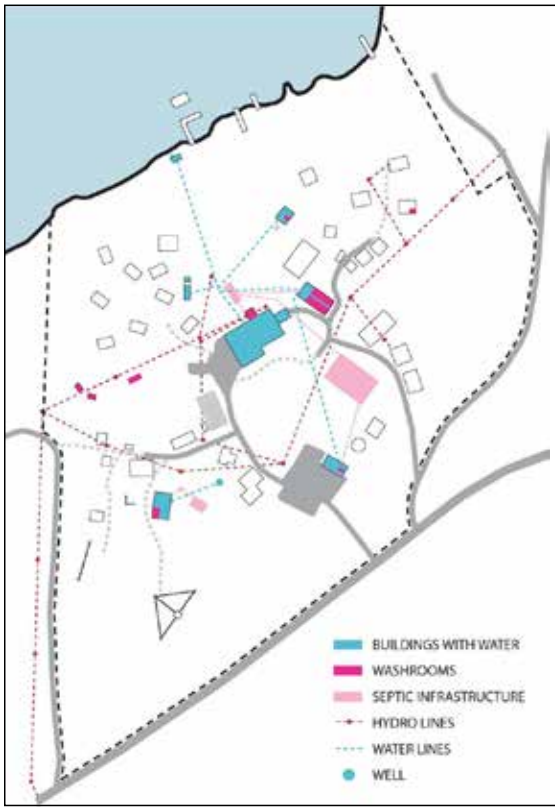
Figure 6: **What words/images describe Camp Kawartha today? Panel 5**

Presentation from Meeting #3

Workshop – What we heard

• year-round operation fundamental to the identity, business plan and staffing resources of the camp, however winter operations remain inefficient
• intimate nature of the camp important to its success
• quality of buildings on site vary – "hodge podge" nature of most buildings antithetical to environmental mission of the camp - most desirable spaces characterized by a distinct architectural character and have strong relationships to principle outdoor spaces
• "public face" of the camp, including the camp entrance and playfield, needs improvement
• pathways between buildings and down to the water need improvement so that surrounding landscapes can be protected and maintained
• waterfront the second entrance and "public face" to the camp – location of multiple programs - safety and access need improvement

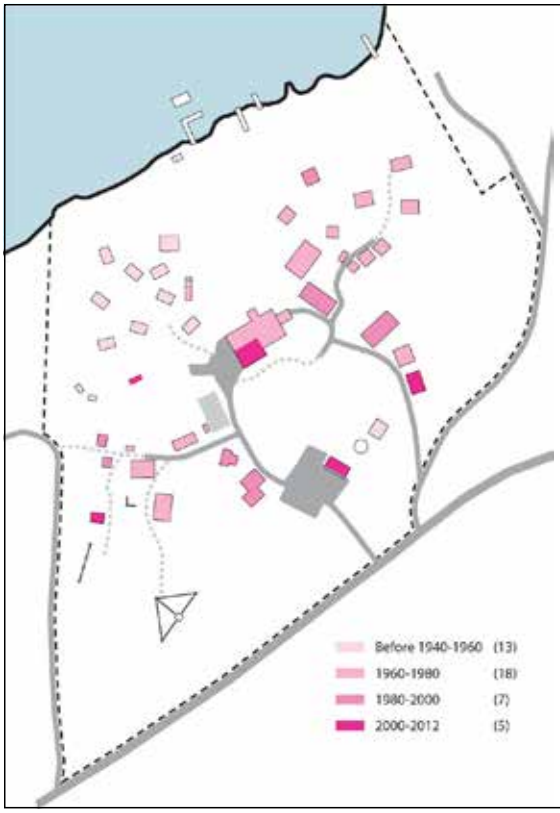
Camp Kawartha Site and Facilities Master Plan



Infrastructure

• how is power, water and sewage handled currently on site

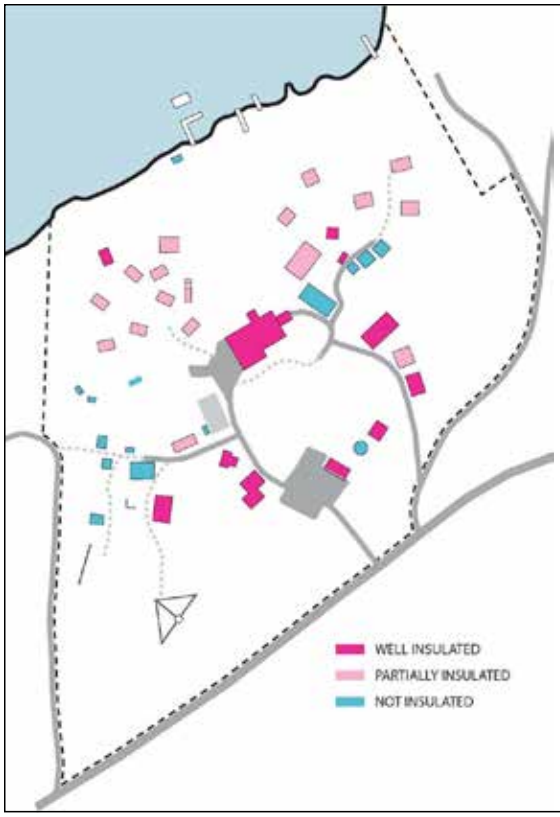
Camp Kawartha Site and Facilities Master Plan



Building Age

• chronology of the buildings on site by decade – relates to level of maintenance required

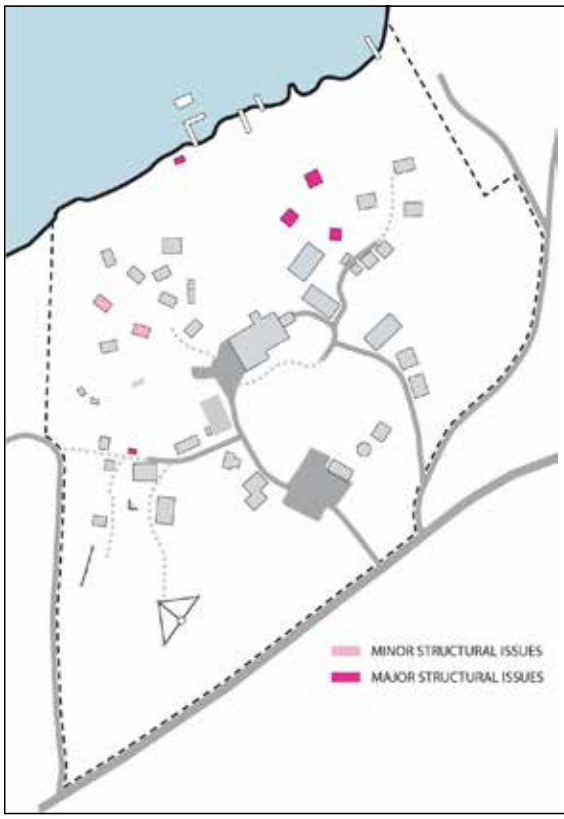
Camp Kawartha Site and Facilities Master Plan



Winterized

• which buildings are insulated and provided with a heat source, and therefore usable during shoulder and winter seasons

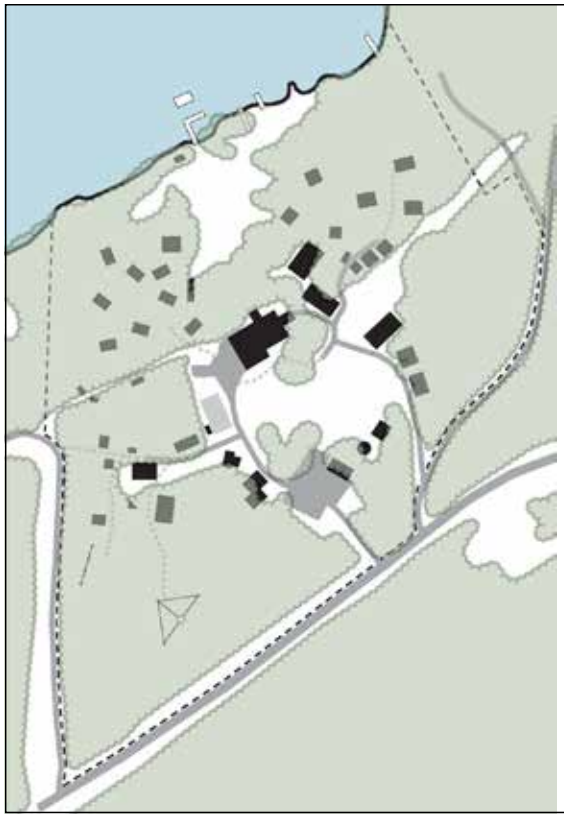
Camp Kawartha Site and Facilities Master Plan



Structural Issues

• which structures are in need of major or minor structural repairs

Camp Kawartha Site and Facilities Master Plan



Tree Canopy

• what areas of the camp have access to direct sunlight, and what areas are tree covered

Camp Kawartha Site and Facilities Master Plan

15. Washroom Building (Colosse)

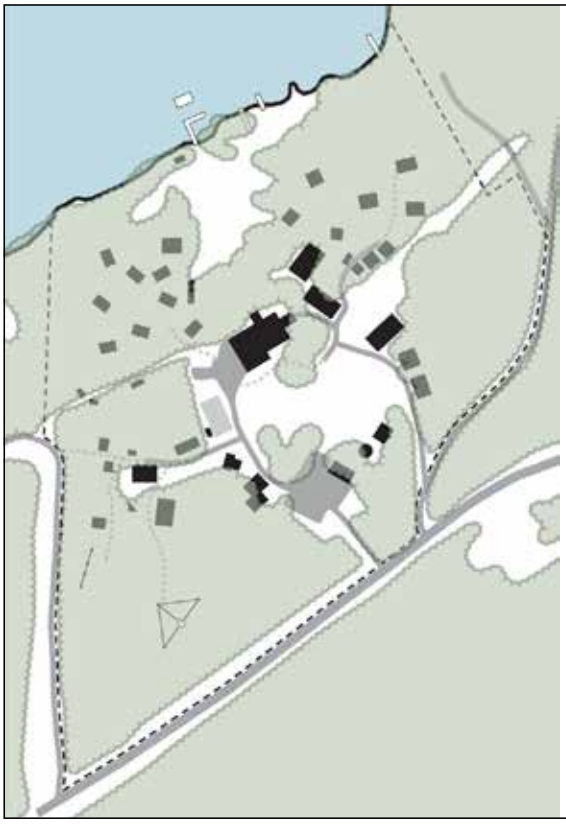
16. Comstock Learning Centre (Hangar/Workshop)

Interim Report

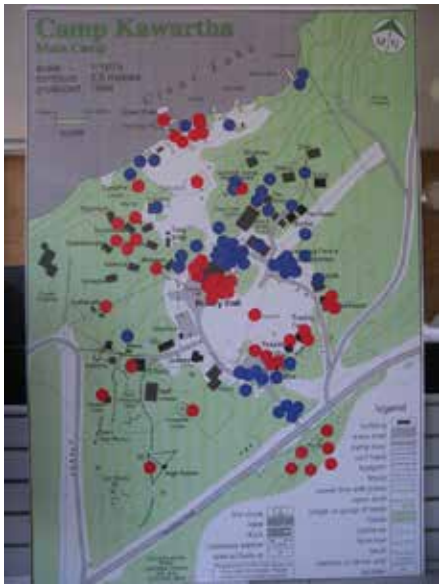
- Draft Existing Building Condition Assessment
- Draft Programming and Business Development Assessment

Organizational Principles

- create a strong organizational concept that informs site improvements and growth over time
- work with existing infrastructure wherever possible
- align site and building planning with sustainable ethos of camp
- take advantage of beautiful natural setting in the placement and orientation of new buildings
- concentrate buildings around central hub and outdoor gathering spaces – reduce the overall built footprint of the camp on the surrounding woodland habitat
- implement habitat restoration surrounding the existing buildings as a programmatic component of the camp curriculum



Existing Site Plan



Camp Kawartha Site and Facilities Master Plan

Camp Kawartha today

Camp Kawartha Site and Facilities Master Plan

Camp Kawartha today

Camp Kawartha Site and Facilities Master Plan

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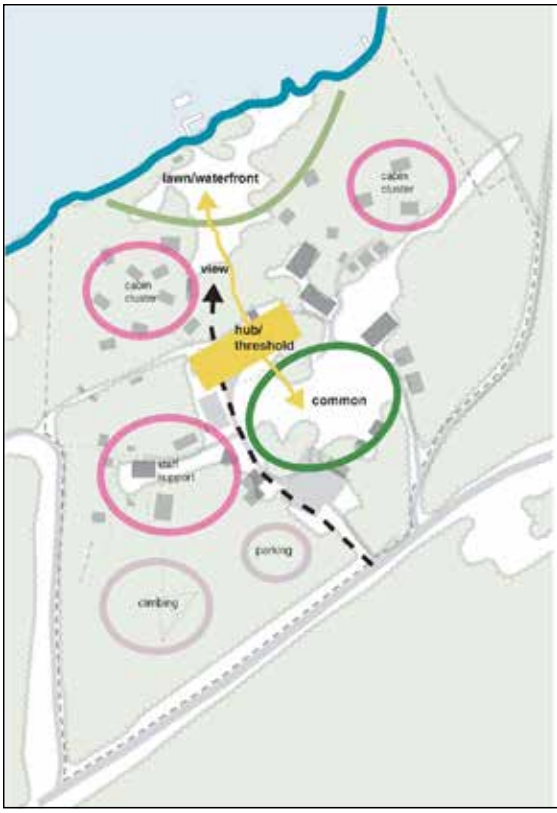
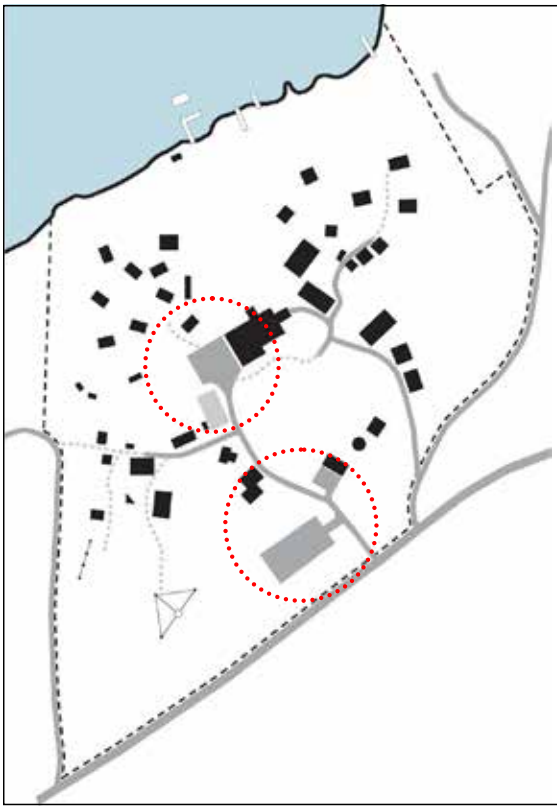


Site Diagram

• define outdoor open spaces with landscaping
• reinforce view to lake
• create Hub as threshold between upper and lower gathering spaces
• reinforce cabin clusters and provide them with their own distinct characters
• focus staff/support uses adjacent to upper common
• relocate parking on west side of entry drive – reduce its visual prominence

Camp Kawartha Site and Facilities Master Plan



Entry/Parking

• remove parking lot from landscaped Common – restore landscaping surrounding common
• establish new parking lot west of entrance drive – less visible from Common and Hub

Camp Kawartha Site and Facilities Master Plan

Upper Common

• use landscaping to define the upper Common and screen building façades around the eastern edge of the Common

• view of the Common to become the first view a visitor has upon entry to the site

Camp Kawartha Site and Facilities Master Plan

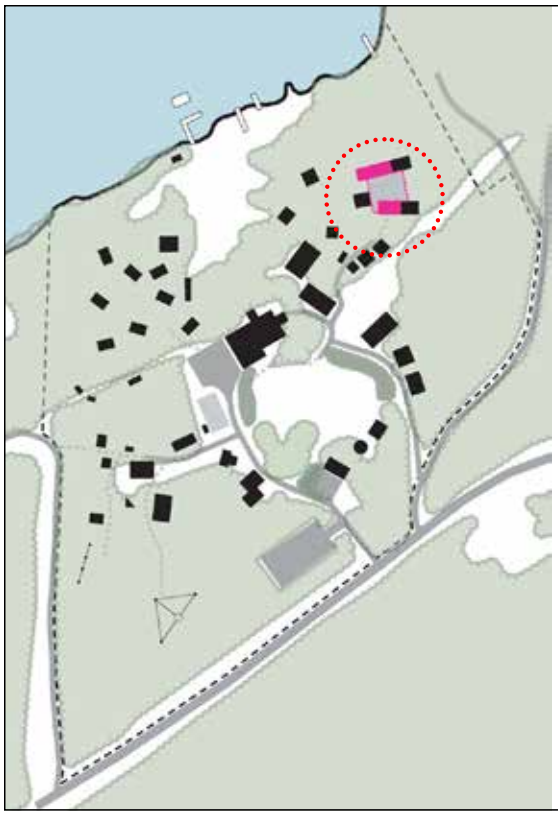
Atlantic Centre for the Arts, Florida

• exceptional artists' residency program with outreach programs to promote arts education to the local community by providing exhibition opportunities for outstanding Florida artists and educational programs for children and adults

• program includes black-box theater, painting and sculpting studios, recording studios, a dance studio, a library and various support spaces

• design includes 6 buildings interwoven into an indigenous Florida jungle landscape, linked by an elevated boardwalk

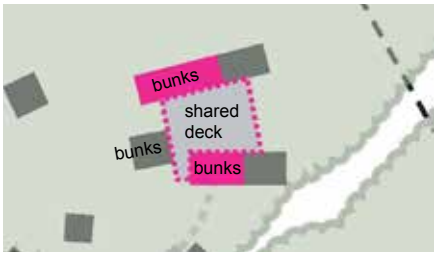
Camp Kawartha Site and Facilities Master Plan



East Cabin Cluster

• establish an eastern Cabin Cluster around the IODE, Willow and Oak cabins through cabin expansion and interconnection via an elevated deck structure

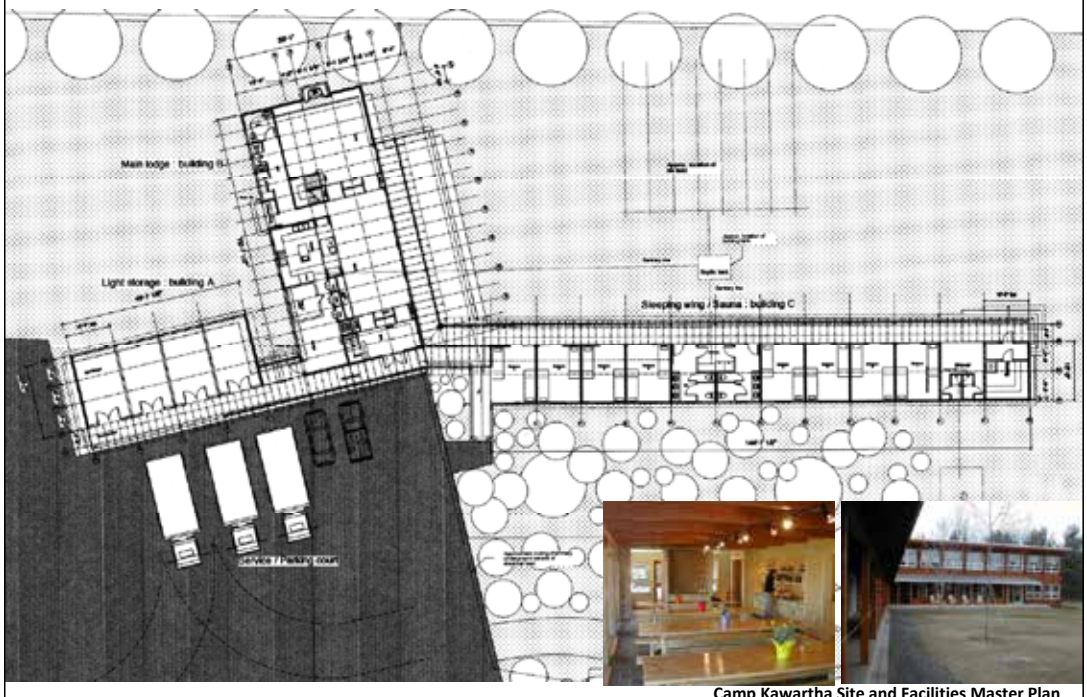
• consider introducing plumbing and full winterization measures to these cabins to create a winter cluster



Camp Kawartha Site and Facilities Master Plan

Boundless Camp, Palmer Rapids, Ontario

• budget for new camp hub $ 730,000



Camp Kawartha Site and Facilities Master Plan

Ganaraska Forest Centre, Cambellcroft, Ontario

• includes Learning Gallery, Great Hall, Learning Studies, Dormitories and Administration

• sleeping capacity for 80 persons

• 5, 3 or 2-day programs are available as well as single day use educational programs

• Centre is equipped with a commercial-class kitchen

• Oak Ridges Moraine Information Centre integrated into facility, which serves as a focal point of the Oak Ridges Moraine for Eastern Ontario

• green features include: solar thermal, biomass, propane and combination boilers, green roof areas and recycled plastic roof tiles

• budget $4,000,000

Camp Kawartha Site and Facilities Master Plan

Prefab Cabin for two families, Muskoka

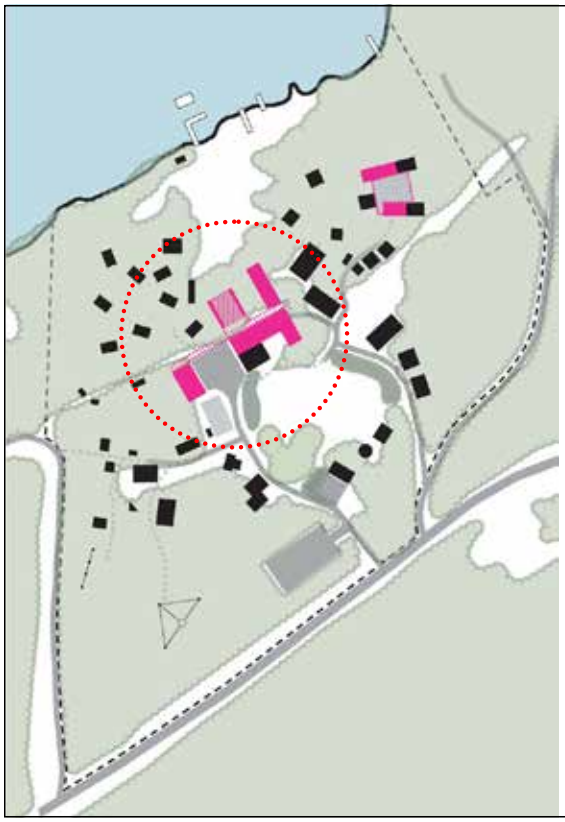
• designed by Kohn Shnier Architects

• two-family cottage comprised of seven prefabricated modules that took only 8 weeks to construct in a factory and install on site

Camp Kawartha Site and Facilities Master Plan

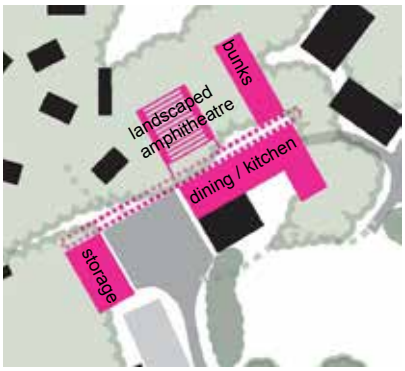
Landscaped Amphitheatre

Camp Kawartha Site and Facilities Master Plan

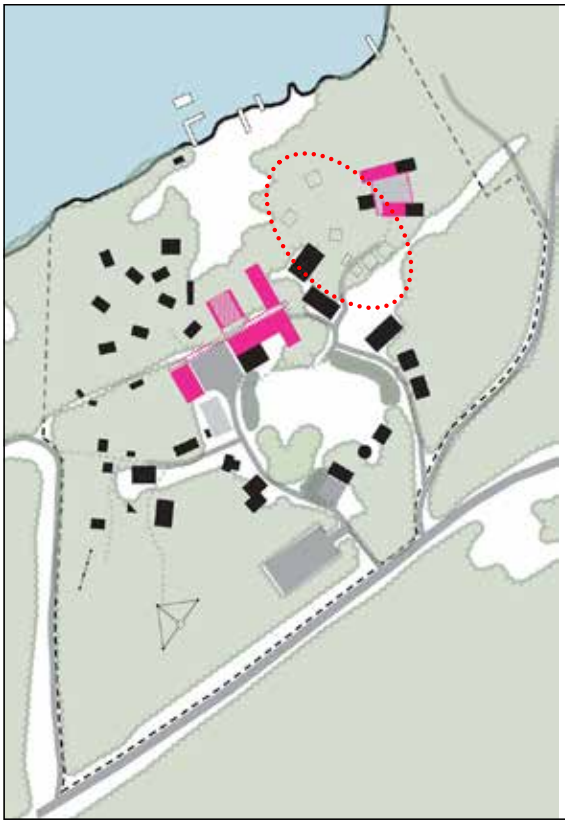


Expanded Hub

• new hub includes preserved Rotary Hall, new dining hall, kitchen, 45-60 winterized bunks, storage/tripping shed, outdoor amphitheatre and inter-connecting porch/trellis



Camp Kawartha Site and Facilities Master Plan



Selective Building Removals

- Spurway Cabin
- Infirmary
- Cedar – Trip Storage
- Wood and Storage Sheds
- Bunkie Cabin
- Gazebo – Tripping Cabin

In their place consider ecological restoration projects including improved walkway between east cabin cluster and lawn/ waterfront

Camp Kawartha Site and Facilities Master Plan

Ecological Restoration

What:

- Establishment of marked pathways through forested areas incl. Range
- Planting native trees, shrubs, wildflowers and aquatic plants wherever possible
- Invasive species removal
- Add structural habitat features (bird and bat boxes, basking logs, stumps, etc.)
- Erosion control along shoreline

Camp Kawartha Site and Facilities Master Plan

Ecological Restoration

How:

• low-cost, work can be phased, implementation can be done using volunteers

• funding for projects (especially plant material) relatively easy to secure

• rely on government agencies / conservation authorities for technical support

• ecological restoration work is full of “teachable moments”

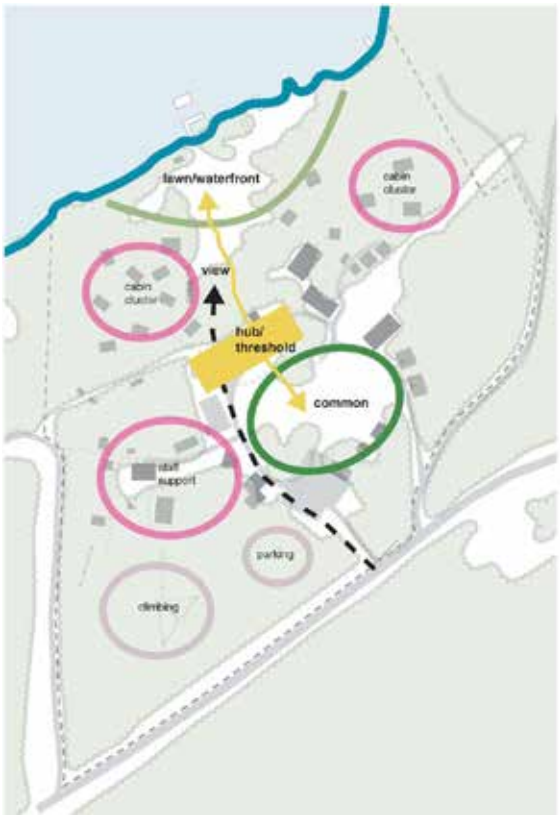
• ecological restoration plans should be prepared by a professional ecologist

• consider engaging the joint Trent-Fleming program in Ecological Restoration



Camp Kawartha Site and Facilities Master Plan

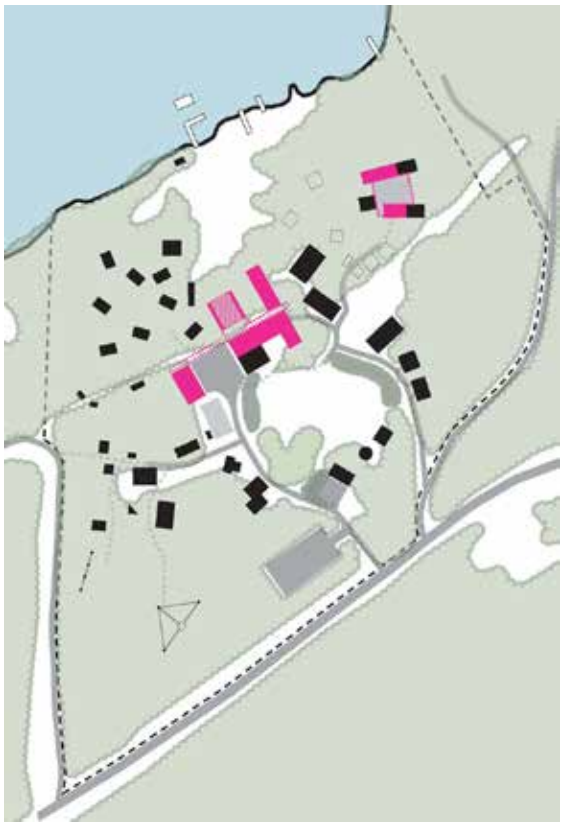
Presentation from Meeting #4



What we heard

- Ideal overnight sleeping capacity 150 campers + 60 staff
- Dining hall to accommodate 250 persons (could be in combination with Rotary Hall?)
- Maintenance functions to be removed from centre of the camp
- access to winterized plumbing facilities important (where and how?)
- accessibility important (where and how?)
- full year sustainable operation critical to future success of camp

Camp Kawartha Site and Facilities Master Plan



Previous Plan

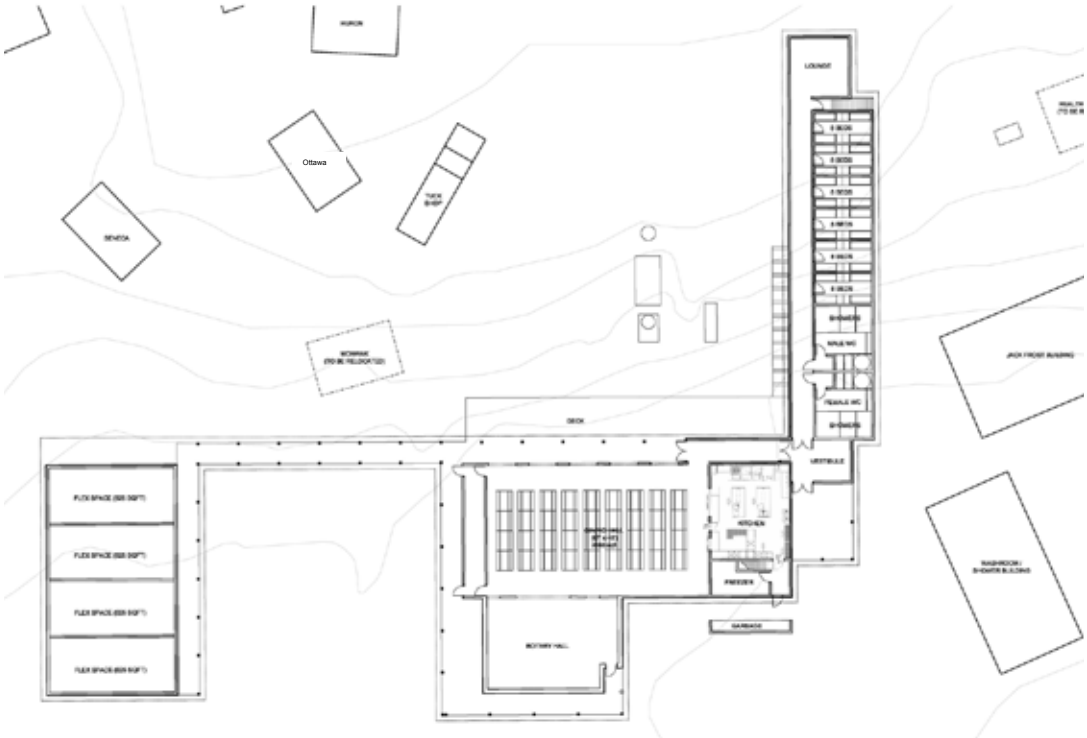
- proposed Hub connected to maintenance building by linear porch, landscaped amphitheatre to lake.
- east cabin cluster configured through the extension of both IODE and Oak cabins, interconnected to Willow through large deck
- new parking facility located immediately adjacent to main entrance to camp
- selected building demolition
- landscaping central green

Camp Kawartha Site and Facilities Master Plan

Central Hub

• centralized dining, kitchen, gathering, health and dormitory functions
• dormitory to sleep 48 persons
• needs to be flexible to suit different user groups, ages and functions
• demonstration of sustainability important component of design
• consider how short-term kitchen renovation fits with long-term vision of hub
• consider moving pump house into the lower level of the central hub

Camp Kawartha Site and Facilities Master Plan



Camp Kawartha Site and Facilities Master Plan

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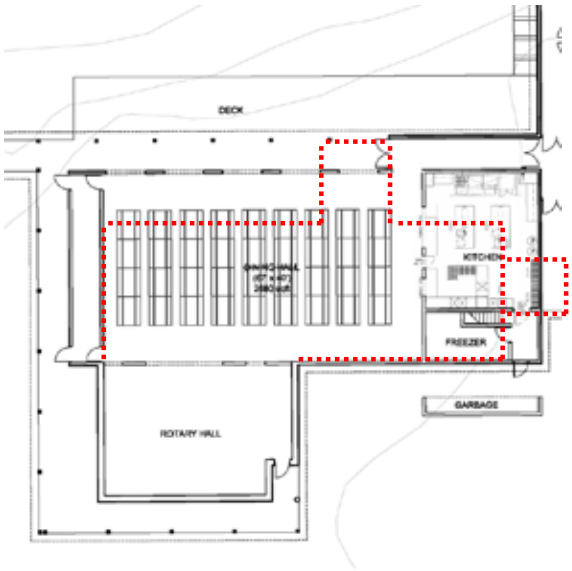
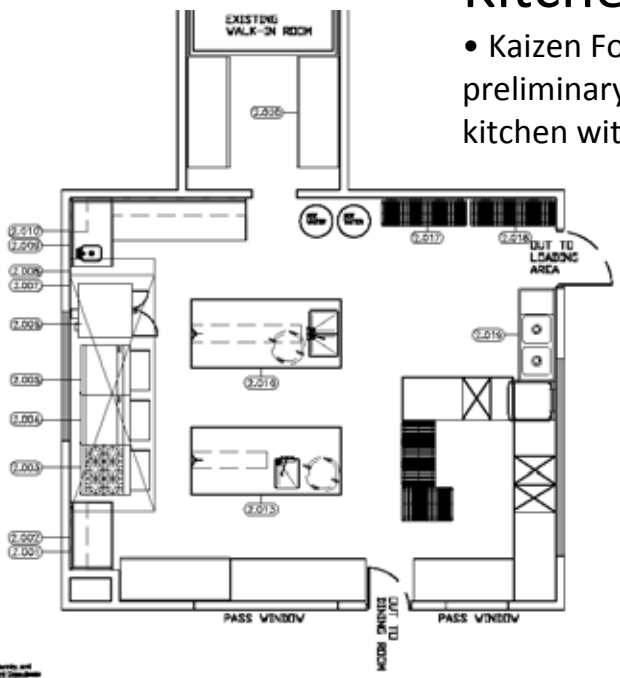


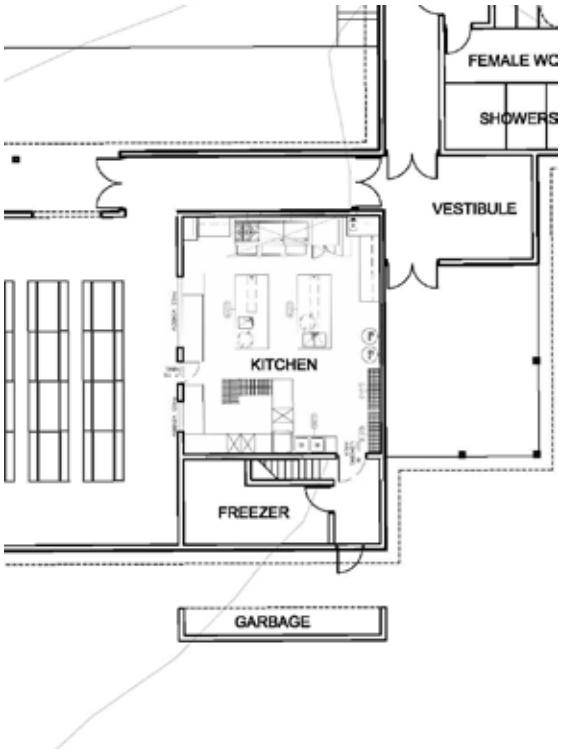
Dining Hall

- bright, welcoming, and connected to the outdoors through a wrap-around porch facing the lake
- capacity of 200 seated + potential 50+ additional in Rotary Hall
- internally connected to the Rotary Hall, kitchen, bathrooms, and dormitories – floor at the same elevation as Rotary Hall
- tall open truss roof – tall ceiling creating an inviting and grand space suitable for rentals

Kitchen

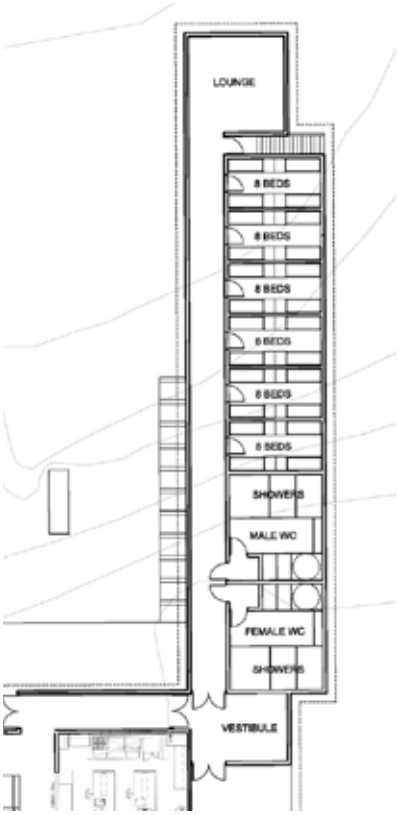
- Kaizen Food Service consultants preliminary design for renovated kitchen within the existing space





Kitchen

• Using the Kaizen drawings as a base, the new kitchen would be located within the heart of the hub, adjacent to the dining hall and dormitories, with adjacent outdoor cooking area on porch, and concealed garbage storage

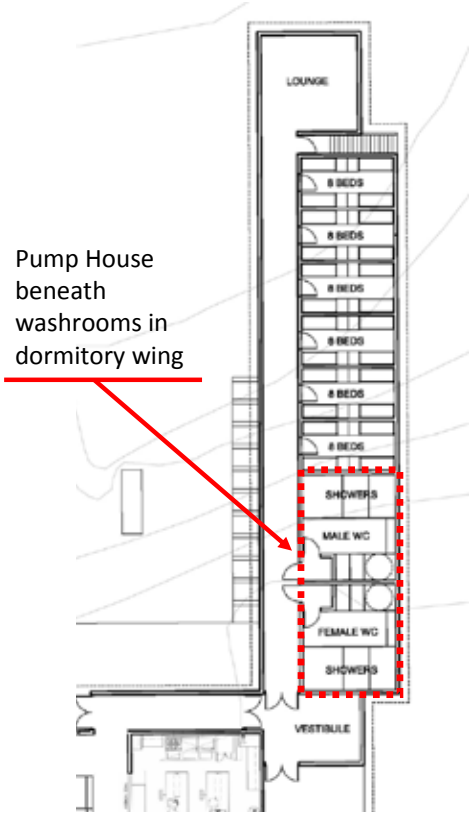


Dormitories

• sleeping quarters for 50 persons in modules of 8-person rooms

• modular furniture design could allow for certain rooms to be converted into 2-4 person capacity rooms to serve private functions and other uses

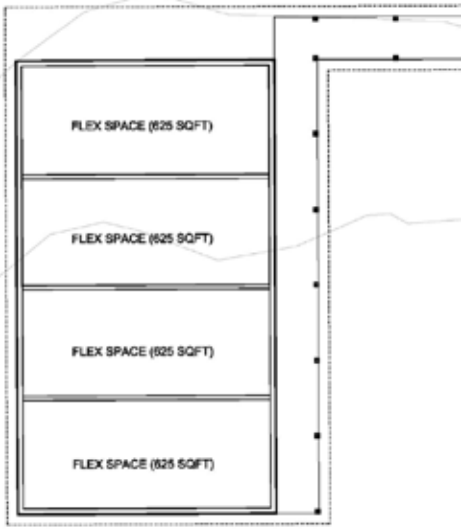
• wing designed to take advantage of passive heating, ventilation, and day lighting, and provides great shared views to the lake



Pump House beneath washrooms in dormitory wing

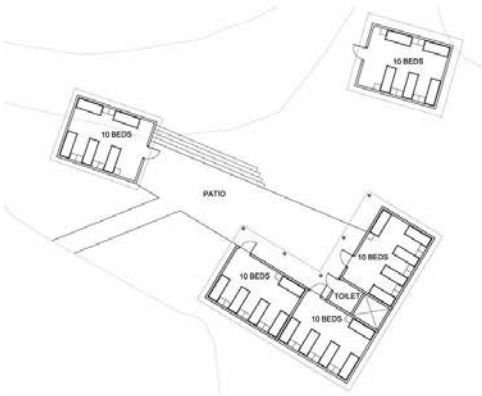
Pump House

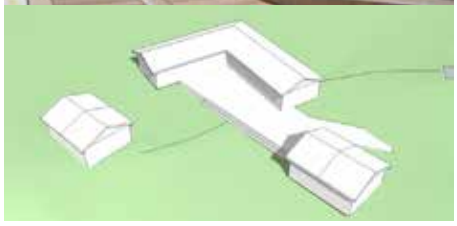
• relocate pump house into the lower level of the new hub – accessible from grade yet part of the heated enclosure of the rest of the building



Health Centre / Storage

• a series of multipurpose rooms adjacent to the hub can be used to accommodate the Health Centre, Trip Storage and Kitchen, and general storage
• connected by porch to hub
• easily accessed directly from the outdoors for campers sleeping in cabin clusters





East Cabin Cluster

• selective addition to three existing cabins to create a cluster around deck and open landscaped court
• focus its external views and pathways to the lake
• capacity for 50 people
• winterized through building envelope upgrades, improved heating technologies
• partially accessible through the interconnection of expanded IODE and Willow with raised patio
• potential for composting toilet

Camp Kawartha Site and Facilities Master Plan

West Cabin Cluster

•retrofit could include increasing insulation values of envelope, increased window area, exposing structure on interior of cabin, introduction of energy-efficient heating technologies connected to local solar PV arrays, replacement of existing roofs with metal roofs, and introduction of natural ventilation
• accessibility difficult due to nature of existing cabin structure

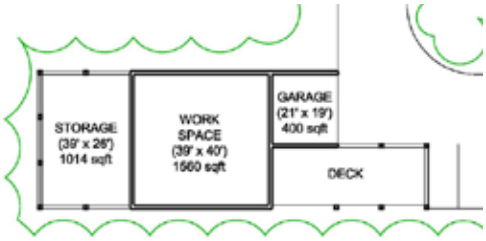
Camp Kawartha Site and Facilities Master Plan

Sustainability

• concentrate winterized and plumbed facilities to enable efficient operation
• choose durable materials that require little maintenance
• consider the phased introduction of sustainable technologies on a building-by-building or cluster-by-cluster scale

Entry/Parking

• Main parking lot at entry to allow for 50 cars + 2-3 buses
• Overflow parking to be accommodated elsewhere – preserve as much existing mature forest as possible
• Maintenance building to be located at the edge of main parking lot



Upper Common

• principle landscaped open space for camp gatherings
• maintenance program for grass/groundcover could improve its life and appearance
• specification of more durable and hardy grass species possible to improve capacity for heavy use – RTF Sod or similar

Selective Building Removals

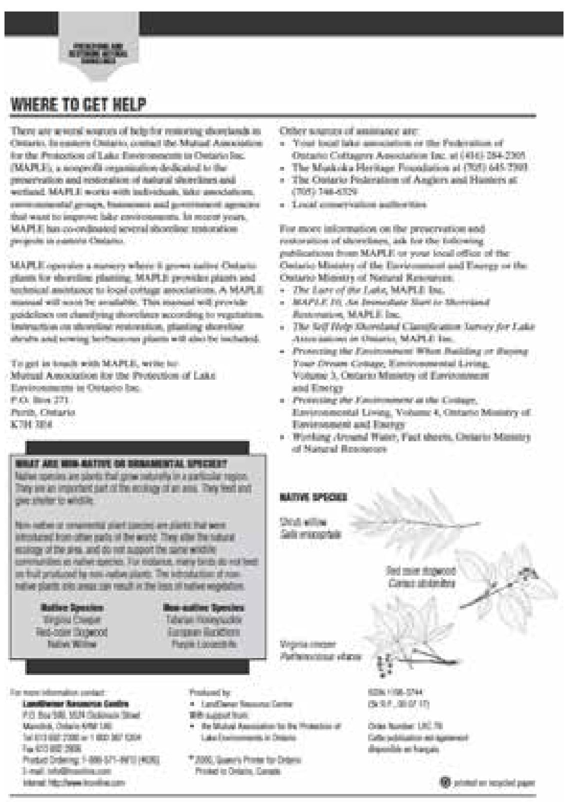
• Spurway Cabin
• Infirmary
• Cedar – Trip Storage
• Wood and Storage Sheds
• Bunkie Cabin
• Gazebo – Tripping Cabin

Additional relocation of Mohawk cabin as part of new hub project – opening up access to the lower common and lakefront

Shoreline Restoration

• potential new learning environment for the camp – introduction of wetland habitat in sheltered areas, restoration of native species at lake edge
• maintenance of shoreline a potential learning activity for campers every summer

Camp Kawartha Site and Facilities Master Plan



WHERE TO GET HELP

There are several sources of help for restoring shorelands in Ontario. In eastern Ontario, contact the Mutual Association for the Protection of Lake Environments in Ontario Inc. (MAPLE), a nonprofit organization dedicated to the preservation and restoration of natural shorelines and wetland. MAPLE works with individuals, lake associations, environmental groups, businesses and government agencies that want to improve lake environments. In recent years, MAPLE has co-ordinated several shoreline restoration projects in eastern Ontario.

MAPLE operates a nursery where it grows native Ontario plants for shoreline planting. MAPLE provides plants and technical assistance to local cottage associations. A MAPLE manual will soon be available. This manual will provide guidelines on classifying shorelines according to vegetation. Instruction on shoreline restoration, planting shoreline shrubs and sowing herbaceous plants will also be included.

To get in touch with MAPLE, write to:
Mutual Association for the Protection of Lake Environments in Ontario Inc.
P.O. Box 271
Perth, Ontario
K7H 3E4

Other sources of assistance are:
- Your local lake association or the Federation of Ontario Cottagers Association Inc. at (416) 284-2305
- The Muskoka Heritage Foundation at (705) 645-7393
- The Ontario Federation of Anglers and Hunters at (705) 748-6324
- Local conservation authorities

For more information on the preservation and restoration of shorelines, ask for the following publications from MAPLE or your local office of the Ontario Ministry of the Environment and Energy or the Ontario Ministry of Natural Resources:
- *The Lore of the Lake*, MAPLE Inc.
- *MAPLE Fit, An Immediate Start to Shoreland Restoration*, MAPLE Inc.
- *The Self Help Shoreland Classification Survey for Lake Associations in Ontario*, MAPLE Inc.
- *Protecting the Environment When Building or Buying Your Dream Cottage*, Environmental Living, Volume 3, Ontario Ministry of Environment and Energy
- *Protecting the Environment at the Cottage*, Environmental Living, Volume 4, Ontario Ministry of Environment and Energy
- Working Around Water, Fact sheets, Ontario Ministry of Natural Resources

WHAT ARE NON-NATIVE OR ORNAMENTAL SPECIES?

NATIVE SPECIES

Shoreline Restoration

• shoreline restoration is in everyone's best interest
• contact MAPLE – non-profit dedicated to the preservation and restoration of natural shorelines and wetlands in Eastern Ontario
• Otonabee Region Conservation Authority mandate includes watershed and shoreline restoration – likely resource to assist Camp Kawartha with the development of a restoration strategy

Camp Kawartha Site and Facilities Master Plan

Next Steps

- Development of budget:
  - What combination of upgrades should we cost?
  - What components do you want individual costs for?
  - Is there a thought regarding a phasing strategy?
  - What other components should we consider in the budget (the Range)?
  - What format do you need the costing in order to present it to your Board?

Next Steps

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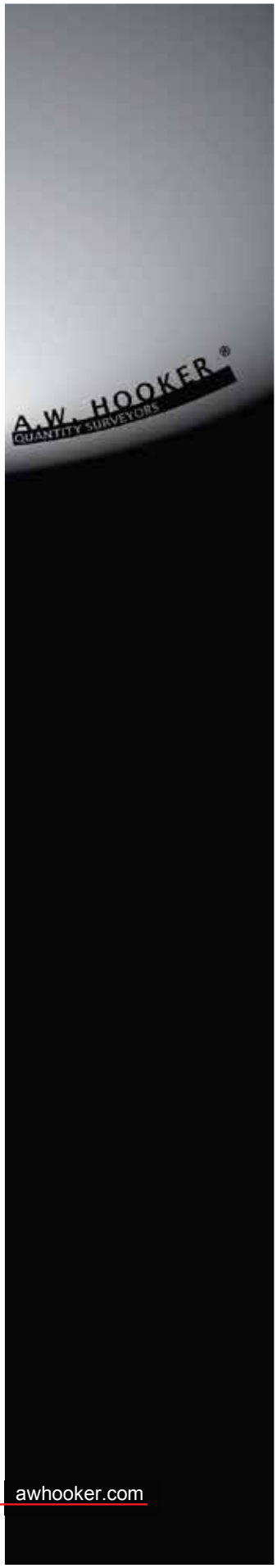
CAMP KAWARTHA MASTER PLAN
Class D Cost Estimate (Order of Magnitude)
SEPTEMBER 4, 2012

Report Recipient:
DTAH



A.W. Hooker Associates Ltd.
2265 Upper Middle Rd. E., Suite 400, Oakville, ON, CA, L6H 0G5
T 905-823-8111 F 905-823-5111 E info@awhooker.com
awhooker.com

September 4, 2012

DTAH
50 Park Road
Toronto, ON
M4W 2N5

Attention: Megan Torza, Partner

Re: Camp Kawartha Master Plan – Order of Magnitude Estimate

Dear Megan,

Please find enclosed our Order of Magnitude Estimate for the above project.

This estimate was prepared based on drawings and information provided by DTAH received on August 22, 2012 .

This estimate is meant to reflect the fair market value for the construction of this project; it is not intended to be the prediction of the lowest bid and should be representative of the median bid amount received.

We recommend that the owner and/or the design team carefully review the cost estimate report, including line item descriptions, unit price clarifications, exclusions, inclusions and assumptions, contingencies, escalation, and mark-ups. This is to ensure that the design intent is captured within the content of the report. This is especially important at early stage estimates which tend to be based on a lesser level of design completion.

Please refer to the preamble of our cost report for all exclusions, assumptions, and information pertaining to the estimate.

We trust our work will assist in the decision making process and look forward to our continued involvement in this important project.

Yours very truly,

A.W. HOOKER ASSOCIATES LTD.

Tim Moore, PQS
Partner

Encl: (Order of Magnitude Estimate, September 4, 2012)

Table of Contents

1. INTRODUCTION TO THE ESTIMATE

1.1 Project Description

This project consists of the Camp Kawartha Master Plan Addition and Renovation. The scope of work has been divided into 6 areas including:

1. Central Hub Renovation / Addition – includes demolishing the existing building and retaining the 110 m2 rotary hall and building a 1,002 m2 addition that includes dining hall, kitchen, living quarters, washroom and shower areas, mechanical room, health centre and associated M&E and storage spaces.
2. East Cabin Cluster – includes renovations to three existing cabins, addition of two new cabins with one composting toilet and a new deck that will connect the new cabins with two of the existing.
3. Entry Parking Workshop – includes the construction of a new workshop with covered parking and new gravel parking lot with room for 50 cars and 3 busses.
4. Landscape Restoration – includes 500m2 sloped landscaped improvements with tiered terraces and a 1500 m2 landscaping improvement at the main Hub building including trees, shrubs and vegetable gardens.
5. Selective Building Removal – includes demolition of 8 existing cabins and the relocation of one existing cabin.
6. Septic System Upgrade – includes upgrading the existing septic system including ne storage tanks, pumps and increasing the size of the existing septic field.

1.2 Type of Estimate

This Order of Magnitude Estimate is intended to establish a realistic elemental estimate of the hard construction costs based on the level of design information provided. Detailed quantities have been measured from drawings where possible for the proposed building and associated site development. This estimate reflects our opinion as to the fair market value for the hard construction of this project.

The accuracy of the estimate based on the documentation provided and design stage is intended to be +/- 25%. This is based on standard industry guidelines derived from the Federal Government definition of Estimate Class (A, B, C & D). Contingencies are included to offset the accuracy risk, to the extent that the estimated amount represents the current opinion of the likely fair market value at the time of tender.

The intention of the estimate is **not** to predict the low bid price received; typically based on historical tender results estimates are more likely to be towards the median value of bids received under competitive conditions. This is a deliberate methodology due to the inherent risk in attempting to predict the low bid and numerous factors which can contribute to lower than anticipated tender submissions which are beyond our control.

2. BASIS OF THE ESTIMATE

2.1 General Information

From the design information provided, we have measured quantities where possible and applied typical unit rates for each of the specific elements based on historical cost data for this type of project. In some instances where design information is limited we have made reasonable assumptions based on our experience with projects of a similar scope and design. Estimates for mechanical and electrical systems are developed based on information prepared by the project engineers, historical projects and experience.

Significant changes to the basis of design will impact the estimate value; this is particularly critical where changes are made after the final estimate prior to tender. We recommend that all major design or scope changes be reviewed for their cost, time and constructability impact prior to incorporation in a finalized tender package.

2.2 Location Cost Base

The location cost base for this estimate is Lakefield, Ontario.

2.3 Unit Rates

The unit rates in the preparation of the elemental estimate include labour and material, equipment, and subcontractors overheads and profits. We have assumed for pricing purposes that non-union contractors would perform the work. We have assumed the fair wage policy would be in effect. The unit rates for each of the elements are based on typical mid-range costs for the type of design, construction, and materials proposed.

Unit rates in all estimates combine the material, labour, and equipment components for a single unit cost for ease of presentation. This estimate is not a prediction of low bid. Pricing assumes competitive bidding for every aspect of the work.

2.4 Taxes

Harmonized Sales Tax (HST) is excluded from our estimate.

2.5 Construction Schedule

The estimate has been prepared on the assumption that the work will be performed within the timelines of a normal construction schedule. We have assumed the structural components of the building would be constructed in predominantly non-winter months. No allowances have been included for premium time and after hours work associated with an accelerated schedule.

2.6 General Requirements and Fees

The General Requirements and Fees for the General Contractor are included as a percentage of the hard construction cost. These costs include supervision and labour, access to the site, site accommodations, site protection, temporary utilities, clean up, equipment, and other miscellaneous project requirements provided by the General Contractor.

2.7 Bonding and Insurance

We have included the median estimated costs for 50% Performance, 50% Labour and Materials, and 10% bid bonds. These are the traditional bonding requirements commonly requested by the owner. The actual final bonding costs will vary depending on the selected contractors' performance history.

The estimate includes an allowance for general liability and builder's risk insurance based on an average cost per $1,000 of estimated hard construction costs. The actual insurance costs would be subject to the insurance requirements for the project.

2.8 Procurement

It was assumed for the preparation of this estimate that the project would be tendered to a prequalified list of bidders with a standard Lumpsum contract. Pricing is based on competitive tender results with a minimum of four (preferably six tender submissions) at general contractor and major trade level. Pre-qualification with a restrictive list of contractors or subcontractors may result in a higher tendered cost due to the inherent reduction in competitiveness. Tenders receiving two or less submissions (occasionally three) historically tend to have a much higher risk of over an overrun in cost when compared to the budget established in an estimate. Ensuring adequate bonafide bidders is a prerequisite for competitive bidding scenarios, on which the estimate is predicated.

2.9 Specifications

Where detailed and complete specifications are unavailable, we have assumed that no onerous special requirements will be applicable to this project. It was assumed that all products / materials could be substituted with an alternative product to avoid sole-sourcing which results in a non-competitive market and increases costs.

2.10 Soft Costs

The estimated soft costs have been excluded from this estimate.

An itemized list of potential soft costs has been shown on the Master Estimate Summary. These costs include items traditionally funded by the owner and separate from the hard construction costs which would be applicable to the contractor. The soft costs include items such as consultant fees; disbursements; project management fees; independent inspection and testing; third party commissioning; legal fees; permits and development charges; operational and moving expenses; financing and loan fees; owner supplied furnishings, fixtures, and equipment; land acquisition costs; and Harmonized Sales Tax.

3. CONTINGENCIES

3.1 Design and Pricing Contingency

A design and pricing contingency has been included as a percentage of the hard construction costs including the general requirements and fees.

This allowance of 10% (10% Architectural, 10% Mechanical and 10% Electrical) is meant to cover design and pricing unknowns in the preparation of this estimate.

The contingency where included in our estimate is **not** meant to cover significant additional program space or quality modifications, but rather to provide some flexibility as the design develops. The design contingency typically decreases as the design progresses and more definition and detail is available to refine the basis of the cost estimate. If the owner anticipates significant changes to the basis of design we recommend additional contingency be retained as a reserve for the scope modifications.

3.2 Escalation

An allowance has not been included for escalation.

Escalation during construction is included in the unit rates; essentially this allowance is the risk carried by the general contractor and trades with a fixed price made years before the work is completed or carried out for some trades.

3.3 Construction Contingency (Post Contract Changes)

Contingency has not been included for post contract changes that may occur after the project is tendered.

We recommend that at a minimum the owner retain a 3-5% contingency for new construction and a 5-7% contingency for renovation. Where a project is of a complex nature these contingencies should be increased to reflect the risk of changes during construction.

This contingency where included in our estimate excludes any major program or scope requests by the client; these should form part of an overall project management reserve or be reflected in increased funding.

4. GENERAL LIABILITY

4.1 Statement of Probable Costs

A.W. Hooker Associates Ltd. (HOOKER) cannot control the cost of labour and materials, the general contractors or any subcontractors' methods of determining prices, or competitive bidding and market conditions. This opinion of probable cost of construction is based on the experience, qualifications, and best judgement of the professional consultant familiar with the construction industry. HOOKER cannot and does not warranty that proposals or actual construction costs will not vary from this or subsequent estimates.

4.2 Ongoing Cost Control

A.W. Hooker Associates Ltd. **recommends** that the owner and/or the design team carefully review the cost estimate report, including line item descriptions, unit price clarifications, exclusions, inclusions and assumptions, contingencies, escalation, and mark-ups. This is to ensure that the design intent is captured within the content of the report. This is especially important at early stage estimates which tend to be based on a lesser level of design completion.

If the project is over budget or there are unresolved budget issues, alternative systems or schemes should ideally be evaluated before proceeding with the design phase. We recommend that cost control be implemented throughout the various stages of the design process to ensure the proposed design remains within the overall budget. It is recommended that the final estimate be produced by HOOKER using Bid Documents to determine overall cost changes, which may have occurred since the preparation of this estimate. The final update estimate will address changes and additions to the documents as well as addenda issued during the bidding process. HOOKER cannot reconcile bid results to any estimate not produced from bid documents including all addenda.

5. ESTIMATE SCOPE CLARIFICATIONS

5.1 List of Exclusions

1. Harmonized Sales Tax (HST)
2. Project Soft Costs (as described in item 2.10 above and shown on Master Estimate Summary)
3. Furniture, furnishings, and equipment (except as noted in the estimate)
4. Premium time / after hours work
5. Accelerated construction schedule
6. Construction allowance
7. Escalation allowance
8. Abatement and handling of asbestos and other hazardous materials
9. Handling and removal of contaminated soils
10. Deep foundation systems
11. Premium for construction management or alternate approaches to procurement
12. Sole sourced equipment or building control system
13. Lightning protection system.

5.2 List of Assumptions

Architectural / Structural / Landscaping:

1. The existing soils on the site are adequate to support standard strip and pad foundations to the minimum depth required for frost. No allowances have been made for larger or special foundations such as caissons or piles due to poor soil conditions.
2. Floor to floor height is 3m.
3. Windows assumed to 10% of exterior envelope area.

Mechanical:

4. Our estimate includes cost of solar domestic hot water generation and in-floor heating system for central hub building. Our cost does not include any government subsidy or rebate to use such system.
5. Our estimate includes a provisional allowance to upgrade septic system upgrade.

Electrical:

6. The existing incoming 600A 120/240V feeder is in good working order and requires no remedial work.
7. The existing cabin fixtures are in good order and will only require cleaning, relamping and reinstallation in the existing locations after the remedial work to the ceiling has been completed.
8. The existing cabin devices will be reinstalled in the existing locations after the remedial work has been completed with new devices and cover plates.
9. The existing fire alarm/ security panel is in good working order and has sufficient capacity to accommodate the new devices.
10. The existing PA equipment has sufficient capacity to accommodate the new equipment.

General:

11. Various assumptions were made based on the design information available and our experience with projects of a similar nature. Please refer to the specific items within the estimate for the detailed assumptions made.

6. DOCUMENTATION RECEIVED

Architectural drawings and documentation were prepared DTAH.

Reference	Document Description	Revision / Date
Drawings	Architectural Drawings and Floor Plans	August 22, 2012
Photo	Site Photographs	August 22, 2012
Doc	Outline Spec for O of M Costing	August 22, 2012

7. GROSS FLOOR AREA SUMMARY

The following gross floor areas of renovation and new construction have been measured from floor plan drawings. The areas were measured electronically with a digitizer and checked longhand by dimensioning and scaling. The gross area calculations were performed in accordance with the Standard Method of Measurement published by the Canadian Institute of Quantity Surveyors.

GROSS FLOOR AREA TABLE – CENTRAL HUB (square meters)				
Area Description	Floor Elevation	Gross Floor Areas		Total GFA
		Renovation	New Construction	
Lower Level		0	154	154
Ground Level		110	707	817
Second Level		0	141	141
Total Gross Floor Area (square meters)		110	1,002	1,112
Total Gross Floor Area (square feet)		1,184	10,785	11,969

GROSS FLOOR AREA TABLE – EAST CABIN CLUSTER (square meters)				
Area Description	**Floor Elevation**	**Gross Floor Areas**		**Total GFA**
		Renovation	**New Construction**	
Existing Cabin A (Oak)	0	31	0	31
Existing Cabin B (Willow)	0	31	0	31
Existing Cabin C (IODE	0	29	0	29
New Cabins and Composting Toilet	0	0	66	66
Total Gross Floor Area (square meters)		91	66	157
Total Gross Floor Area (square feet)		980	710	1,690

GROSS FLOOR AREA TABLE – WORKSHOP (square meters)				
Area Description	**Floor Elevation**	**Gross Floor Areas**		**Total GFA**
		Renovation	**New Construction**	
Lower Level	0	0	128	128
Total Gross Floor Area (square meters)		0	128	128
Total Gross Floor Area (square feet)		0	1,138	1,378

GROSS FLOOR AREA TABLE – SELECTIVE BUILDING REMOVAL (square meters)				
Area Description	**Floor Elevation**	**Gross Floor Areas**		**Total GFA**
		Renovation	**New Construction**	
Relocate Mohawk Cabin (assumed moved 50m from current location)	0	39	0	39
Demolish Infirmary	0	42	0	42
Demolish Spurway	0	47	0	47
Demolish Trip Shed	0	30	0	30
Demolish Wood Sheds	0	36	0	36
Demolish Bunkie	0	41	0	41
Demolish Trip Kitchen	0	39	0	39
Demolish Tent Platform	0	28	0	28
Demolish Pump House	0	15	0	15
Total Gross Floor Area (square meters)		318	0	318
Total Gross Floor Area (square feet)		3,423	0	3,423

MULTIPLE ESTIMATE SUMMARY

CAMP KAWARTHA MASTER PLAN

ORDER OF MAGNITUDE ESTIMATE
SEPTEMBER 04, 2012

A.W. HOOKER ®
QUANTITY SURVEYORS

	Hard Construction Costs	GFA/SWA (m2)	Unit (Cost/m2)	Estimated Total	% of Total
A	Central Hub Addition and Renovation	1,112	$2,101.62	$2,337,000	67.9%
B	East Cabin Cluster	157	$1,165.61	$183,000	5.3%
C	Entry and Parking Workshop	128	$2,492.19	$319,000	9.3%
D	Landscape Restoration		$65.00	$130,000	3.8%
E	Selective Building removal	318	$110.06	$35,000	1.0%
F	Septic System Upgrade		$436.00	$436,000	12.7%
	Total Estimated Hard Construction Cost	**1,397**	**$2,462.42**	**$3,440,000**	
	Imperial Conversion	**15,037**	**$228.76**	**Per SF**	

MASTER ESTIMATE SUMMARY
CAMP KAWARTHA MASTER PLAN
CENTRAL HUB ADDITION AND RENOVATION
ORDER OF MAGNITUDE ESTIMATE
SEPTEMBER 04, 2012

A.W. HOOKER ®
QUANTITY SURVEYORS

	Hard Construction Costs	GFA (m2)	Unit (Cost/m2)	Sub Total	Estimated Total	% of Total
1	Building Shell	1,112	$775.47		$862,319	36.9%
	- Sub Structure		$122.56	$136,285		
	- Structure		$165.80	$184,369		
	- Exterior Enclosure		$487.11	$541,665		
2	Building Interiors	1,112	$290.94		$323,530	13.8%
	- Partitions and Doors		$114.71	$127,561		
	- Finishes		$58.48	$65,033		
	- Fittings and Equipment		$117.75	$130,936		
3	Mechanical	1,112	$448.37		$498,593	21.3%
	- Plumbing and Drainage		$195.92	$217,868		
	- Fire Protection		$0.00	$0		
	- Heating, Ventilation, Air Conditioning		$247.95	$275,725		
	- Controls		$4.50	$5,000		
4	Electrical	1,112	$124.11		$138,012	5.9%
	- Service and Distribution		$31.96	$35,539		
	- Lighting, Devices, and Heating		$72.88	$81,046		
	- Systems and Ancillaries		$19.27	$21,427		
5	Site Work	1,112	$4.50		$5,000	0.2%
	- Site Development (prep, surfaces, landscaping)		$4.50	$5,000		
	- Mechanical Site Services		$0.00	$0		
	- Electrical Site Services		$0.00	$0		
6	Ancillary Work	1,112	$21.43		$23,835	1.0%
	- Demolition		$16.94	$18,835		
	- Alterations		$4.50	$5,000		
7	Contractor's General Requirements	1,112	$171.85		$191,100	8.2%
8	Contractor's Fees (OH&P)	1,112	$73.74		$82,000	3.5%
9	Design Contingency	1,112	$191.01		$212,400	9.1%
	Sub Total (current dollars)	**1,112**	**$2,101.62**		**$2,337,000**	
10	Escalation Contingency		Excluded			0.0%
	Sub Total (Excluding Escalation)	**1,112**	**$2,101.62**		**$2,337,000**	
11	Construction Contingency (post contract)		Excluded			0.0%
	Total Estimated Hard Construction Cost	**1,112**	**$2,101.62**		**$2,337,000**	
	Imperial Conversion	**11,970**	**$195.25**		**Per SF**	

	Estimated Construction Costs (Breakdown by Major Component)	GFA m2	Unit Cost/m2	Estimated Total	% of Total
1	Building	1,112	$2,069.24	$2,301,000	98.5%
2	Alterations and Demolition	1,112	$26.98	$30,000	1.3%
3	Site Work (including M&E site services)	1,112	$5.40	$6,000	0.3%
4	Soft Costs	0	$0.00	Excluded	0.0%
	Total Estimated Hard and Soft Construction Costs	**1,112**	**$2,101.62**	**$2,337,000**	
	Imperial Conversion	**11,970**	**$195.25**	**Per SF**	

MECHANICAL ESTIMATE SUMMARY

CAMP KAWARTHA MASTER PLAN
CENTRAL HUB ADDITION AND RENOVATION

ORDER OF MAGNITUDE ESTIMATE
SEPTEMBER 04, 2012

Gross Floor Area 1,112 **m2**

Description Element\Sub-Element	Specialty Sub Break down	Sub Element Total	Element Total	$ per m2 Sub Element	$ per m2 Element	% Element
C1 Mechanical						
C1.1 Plumbing & Drainage			**$217,868**		**$195.92**	**43.7%**
C1.11 - Plumbing Fixtures		$22,200		$19.96		
C1.12 - Domestic Water		$144,288		$129.75		
C1.13 - Sanitary Waste & Vent		$27,100		$24.37		
C1.14 - Storm		$22,280		$20.04		
C1.15 - Propane Gas		$2,000		$1.80		
C1.16 - Specialty Systems:		$0		$0.00		
C1.17 - Miscellaneous Works and General Accounts		$0		$0.00		
C1.2 Fire Protection			**$0**		**$0.00**	**0.0%**
C1.21 - Standpipe		$0		$0.00		
C1.22 - Sprinklers		$0		$0.00		
C1.23 - Specialty Systems		$0		$0.00		
C1.24 - Fire Extinguisher		$0		$0.00		
C1.25 - Miscellaneous Works and General Accounts		$0		$0.00		
C1.3 Heating, Ventilation & Air Conditioning			**$275,725**		**$247.95**	**55.3%**
C1.31 - Liquid Heat Transfer (Heating)		$139,450		$125.40		
C1.32 - Liquid Heat Transfer (Cooling)		$16,275		$14.64		
C1.33 - Steam and Condensate		$0		$0.00		
C1.34 - Air Distribution		$10,000		$8.99		
C1.35 - Exhaust Systems		$43,000		$38.67		
C1.36 - Specialty Systems		$0		$0.00		
C1.37 - Support Systems and Works		$2,000		$1.80		
- C1.37.3 - Balancing and Commissioning	$2,000					
C1.38 - Miscellaneous Works and General Accounts		$65,000		$58.45		
C1.4 Controls			**$5,000**		**$4.50**	**1.0%**
C1.41 - Controls and Automation		$5,000		$4.50		
C1.42 - Miscellaneous Works and General Accounts		$0		$0.00		
Total Building (C1) Mechanical			**$498,593**		**$448.37**	**Per m2**
Imperial Conversion		**11,970**	**SF**		**$41.66**	**Per SF**
D1.2 Siteworks - Mechanical Summary					**0**	
D1.2 Site Works			**$0**		**$0.00**	**0.0%**
D1.21 - Water		$0		$0.00		
D1.22 - Sanitary		$0		$0.00		
D1.23 - Storm		$0		$0.00		
D1.24 - Natural Gas		$0		$0.00		
D1.25 - Specialty Systems		$0		$0.00		
D1.26 - Miscellaneous Works and General Accounts		$0		$0.00		
Total Siteworks (D1.2) Mechanical			**$0**		**$0.00**	**Per m2**
Imperial Conversion		**0**	**SF**		**$0.00**	**Per SF**
Total Building (C1) and Siteworks (D1.2) Mechanical			**$498,593**		**$448.38**	**Per m2**
Imperial Conversion		**11,970**	**SF**		**$41.66**	**Per SF**

ELECTRICAL ESTIMATE SUMMARY

CAMP KAWARTHA MASTER PLAN
CENTRAL HUB ADDITION AND RENOVATION

ORDER OF MAGNITUDE ESTIMATE
SEPTEMBER 04, 2012

Gross Floor Area **1,112** **m2**

Description Element\Sub-Element	Sub Element Total	Element Total	$ per m2 Sub Element	$ per m2 Element	% Element
C2 Electrical					
C2.1 Service & Distribution		**$35,539**		**$31.96**	**25.8%**
C2.11 - L.V. Switchboard	$7,300		$6.56		
C2.12 - Emergency Power	$0		$0.00		
C2.13 - Distribution	$8,243		$7.41		
C2.14 - Feeders	$2,335		$2.10		
C2.15 - Motor Controls & Wiring	$10,543		$9.48		
C2.16 - Miscellaneous	$2,500		$2.25		
C2.17 - General Requirements	$4,618		$4.15		
C2.2 Lighting, Devices & Heating		**$81,046**		**$72.88**	**58.7%**
C2.21 - Lighting	$51,110		$45.96		
C2.22 - Branch Devices & Wiring	$10,132		$9.11		
C2.23 - Heating	$9,296		$8.36		
C2.24 - General Requirements	$10,508		$9.45		
C2.3 Systems & Ancillaries		**$21,427**		**$19.27**	**15.5%**
C2.31 - Fire Alarm System	$9,296		$8.36		
C2.32 - Security System	$4,348		$3.91		
C2.33 - Communications	$1,366		$1.23		
C2.34 - P.A. System	$1,400		$1.26		
C2.35 - Miscellaneous	$2,124		$1.91		
C2.36 - General Requirements	$2,893		$2.60		
Total Building (C2) Electrical		**$138,012**		**$124.11**	**Per m2**
Imperial Conversion	**11,970**	**SF**		**$11.53**	**Per SF**
D1.3 Siteworks - Electrical Summary		**Site Work Area**		**0**	**m2**
D1.3 Electrical Site Services		**$0**		**$0.00**	**0.0%**
D1.31 - Site - Power	$0		$0.00		
D1.32 - Site - Communications	$0		$0.00		
D1.33 - Site - Lighting	$0		$0.00		
D1.34 - Site - General Requirements	$0		$0.00		
Total Siteworks (D1.3) Electrical		**$0**		**$0.00**	**Per m2**
Imperial Conversion	**0**	**SF**		**$0.00**	**Per SF**
Total Building (C2) and Siteworks (D1.3) Electrical		**$138,012**		**$124.11**	**Per m2**
Imperial Conversion	**11,970**	**SF**		**$11.53**	**Per SF**

ELEMENTAL SUMMARY
CAMP KAWARTHA MASTER PLAN
CENTRAL HUB ADDITION AND RENOVATION
ORDER OF MAGNITUDE ESTIMATE
SEPTEMBER 04, 2012

A.W. HOOKER QUANTITY SURVEYORS

Gross Floor Area 1,112 m2

Description Element\Sub-Element	Ratio	Quantity	Unit	Unit Rate	Elemental Cost Sub Element	Elemental Cost Element Total	$ per m2 Sub Element	$ per m2 Element	%
A. SHELL									
A1. Sub-Structure						**$136,285**		$122.56	5.8%
A1.1 Foundations	0.64	707	m2	$164.61	$116,381		$104.66		
A1.2 Basement Excavation	0.26	285	m2	$69.84	$19,904		$17.90		
A2. Structure						**$184,369**		$165.80	7.9%
A2.1 Lowest Floor Construction	0.73	817	m2	$51.16	$41,799		$37.59		
A2.2 Upper Floor Construction	0.27	295	m2	$170.03	$50,160		$45.11		
A2.3 Roof Construction	0.73	817	m2	$113.11	$92,410		$83.10		
A3. Exterior Enclosure						**$541,665**		$487.11	23.2%
A3.1 Walls Below Grade	0.11	120	m2	$450.00	$54,000		$48.56		
A3.2 Walls Above Grade	0.49	550	m2	$200.00	$110,000		$98.92		
A3.3 Windows & Entrances	0.10	106	m2	$709.00	$75,375		$67.78		
A3.4 Roof Finish	0.73	817	m2	$156.20	$127,615		$114.76		
A3.5 Projections	1.00	1,112	m2	$157.08	$174,675		$157.08		
B. INTERIORS									
B1 Partitions & Doors						**$127,561**		$114.71	5.5%
B1.1 Partitions	0.58	645	m2	$136.37	$87,961		$79.10		
B1.2 Doors	0.05	51	m2	$774.22	$39,600		$35.61		
B2 Finishes						**$65,033**		$58.48	2.8%
B2.1 Floor Finishes	0.95	1,056	m2	$19.96	$21,091		$18.97		
B2.2 Ceiling Finishes	0.95	1,056	m2	$27.86	$29,428		$26.46		
B2.3 Wall Finishes	2.00	2,224	m2	$6.53	$14,514		$13.05		
B3 Fittings & Equipment						**$130,936**		$117.75	5.6%
B3.1 Fittings & Fixtures	1.00	1,112	m2	$26.92	$29,936		$26.92		
B3.2 Equipment	1.00	1,112	m2	$90.83	$101,000		$90.83		
B3.3 Conveying Systems	0.00	0	m2	$0.00	$0		$0.00		
C. SERVICES									
C1 Mechanical						**$498,593**		$448.37	21.3%
C1.1 Plumbing & Drainage	1.00	1,112	m2	$195.92	$217,868		$195.92		
C1.2 Fire Protection	0.00	0	m2	$0.00	$0		$0.00		
C1.3 HVAC	1.00	1,112	m2	$247.95	$275,725		$247.95		
C1.4 Controls	1.00	1,112	m2	$4.50	$5,000		$4.50		
C2 Electrical						**$138,012**		$124.11	5.9%
C2.1 Service & Distribution	1.00	1,112	m2	$31.96	$35,539		$31.96		
C2.2 Lighting, Devices & Heating	1.00	1,112	m2	$72.88	$81,046		$72.88		
C2.3 Systems & Ancillaries	1.00	1,112	m2	$19.27	$21,427		$19.27		
D. SITE & ANCILLARY WORK									
D1 Site Work						**$5,000**		$4.50	0.2%
D1.1 Site Development	1.00	1,112	m2	$4.50	$5,000		$4.50		
D1.2 Mechanical Site Services	0.00	0	m2	$0.00	$0		$0.00		
D1.3 Electrical Site Services	0.00	0	m2	$0.00	$0		$0.00		
D2 Ancillary Work						**$23,835**		$21.43	1.0%
D2.1 Demolition	1.00	1,112	m2	$16.94	$18,835		$16.94		
D2.2 Alterations	1.00	1,112	m2	$4.50	$5,000		$4.50		
Z. GENERAL REQUIREMENTS & CONTINGENCIES									
Z1 General Requirements & Fees						**$273,100**		$245.59	11.7%
Z1.1 General Requirements	1.00	1,112	m2	$171.85	$191,100		$171.85		
Z1.2 Fees	1.00	1,112	m2	$73.74	$82,000		$73.74		
Z2 Allowances						**$212,400**		$191.01	9.1%
Z2.1 Design Contingency	1.00	1,112	m2	$191.01	$212,400		$191.01		
Z2.2 Escalation Contingency				Excluded			$0.00		
Z2.3 Construction Contingency				Excluded			$0.00		
TOTAL ESTIMATED CONSTRUCTION COST (nearest ,000)						**$2,337,000**		**$2,101.43**	**100.0%**

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	A. SHELL					
	A1.1 SUB-STRUCTURE - Foundations					
	A1.11 - Standard Foundations					
	Note: We have assumed normal soil conditions exist in the proposed building location and that load bearing soil is present at the levels shown on the architectural/structural drawings.					
1	Strip topsoil and stockpile on site	707	m2	$1.50	$1,061	
2	Exterior strip footings including:	160	m	$165.00	$26,400	
2.1	- excavation, backfill and disposal					
2.2	- hand trim					
2.3	- formwork					
2.4	- reinforcing steel					
2.5	- concrete					
2.6	- keyway					
3	Interior strip footings including:	25	m	$140.00	$3,500	
3.1	- excavation, backfill and disposal					
3.2	- hand trim					
3.3	- formwork					
3.4	- reinforcing steel					
3.5	- concrete					
3.6	- keyway					
4	Exterior pad footings including:	20	NO	$500.00	$10,000	
4.1	- excavation, backfill and disposal					
4.2	- hand trim					
4.3	- formwork					
4.4	- reinforcing steel					
4.5	- concrete					
5	Interior pad footings including:	5	NO	$400.00	$2,000	
5.1	- excavation, backfill and disposal					
5.2	- hand trim					
5.3	- formwork					
5.4	- reinforcing steel					
5.5	- concrete					
6	Exterior foundation walls including:	192	m2	$250.00	$48,000	
6.1	- reinforced concrete block, assumed 240 mm block					
7	Interior foundation walls including:	15	m2	$250.00	$3,750	
7.1	- reinforced concrete block, assumed 240 mm block					
8	Exterior pilasters and interior piers	25	NO	$250.00	$6,250	
9	Perimeter weeping tile and granular	160	m	$30.00	$4,800	
10	Perimeter insulation	144	m2	$30.00	$4,320	
11	Perimeter dampproofing	144	m2	$25.00	$3,600	
12	Miscellaneous embedded metals	1	LS	$500.00	$500	
13	Stair foundations	2	NO	$350.00	$700	
14	Stepped foundations	1	LS	$1,500.00	$1,500	

No.	Description		Quant.	Unit	Rate	Sub Total	Total
	A1.12 - Special Foundations						
15	NIL						
	TOTAL FOR SUB-STRUCTURE - Foundations	0.64	707	m2	$164.61	$116,381	
	A1.2 SUB-STRUCTURE - Basement Excavation						
16	Bulk excavation to partial lower level basement		285	m3	$12.00	$3,420	
17	Trench excavation to perimeter		200	m3	$12.00	$2,400	
18	Backfill trench with excavated material		117	m3	$12.00	$1,404	
19	Dispose excess excavated material off site		368	m3	$10.00	$3,680	
20	Allowance for rock excavation		1	LS	$7,500.00	$7,500	
21	Allowance for dewatering		1	LS	$1,500.00	$1,500	
	TOTAL FOR SUB-STRUCTURE - Basement Excavation	0.26	285	m3	$69.84	$19,904	
	A2.1 STRUCTURE - Lowest Floor Construction						
22	Level and compact subgrade		707	m2	$2.00	$1,414	
23	Concrete slab on grade including:		707	m2	$55.00	$38,885	
23.1	- granular sub base						
23.2	- wire mesh reinforcing						
23.3	- concrete						
23.4	- screed and cure						
23.5	- steel trowel finish						
24	Existing slab to rotary hall to remain (make good with floor finishes)		110	m2	$0.00	$0	
25	Pits and trenches, curbs and pads for mechanical equipment, etc.		1	LS	$1,500.00	$1,500	
	TOTAL FOR STRUCTURE - Lowest Floor Construction	0.73	817	m2	$51.16	$41,799	
	A2.2 STRUCTURE - Upper Floor Construction						
	A2.21 - Upper Floor Construction						
26	Wood framed upper floor construction including:		295	m2	$150.00	$44,250	
26.1	- wood beams and columns						
26.2	- wood joists						
26.3	- bridging and bracings						
26.4	- plywood subfloor						
26.5	- concrete topping						
27	Extra over for insulated floor to lounge area		33	m2	$20.00	$660	
28	Framing to floor openings		1	LS	$500.00	$500	

No.	Description		Quant.	Unit	Rate	Sub Total	Total
	A2.22 - Stair Construction						
29	Wood stairs		38	m	$125.00	$4,750	
	TOTAL FOR STRUCTURE - Upper Floor Construction	0.27	295	m2	$170.03	$50,160	
	A2.3 STRUCTURE - Roof Construction						
	A2.31 - Roof Construction						
30	Wood framed roof construction (MOP) including:		707	m2	$130.00	$91,910	
30.1	- base plates and anchor bolts						
30.2	- wood beams and columns						
30.3	- bridging and bracings						
30.4	- wood deck						
31	Existing roof to rotary hall to remain		110	m2	$0.00	$0	
32	Framing to roof openings		1	LS	$500.00	$500	
	TOTAL FOR STRUCTURE - Roof Construction	0.73	817	m2	$113.11	$92,410	
	A3.1 EXTERIOR ENCLOSURE - Walls Below Grade						
	A3.11 - Walls Below Grade						
33	Concrete walls to low level including:		120	m2	$450.00	$54,000	
33.1	- formwork						
33.2	- reinforcing steel						
33.3	- concrete						
33.4	- waterproofing						
33.5	- water stop						
33.6	- rigid insulation						
	A3.12 - Structural Walls Below Grade						
34	NIL						
	TOTAL FOR EXT. ENCLOSURE - Walls Below Grade	0.11	120	m2	$450.00	$54,000	
	A3.2 EXTERIOR ENCLOSURE - Walls Above Grade						
	A3.21 - Walls Above Grade						
35	Wood siding wall including:		550	m2	$200.00	$110,000	
35.1	- wood siding (assumed T&G cedar with finish)						
35.2	- wood strapping						
35.3	- plywood sheathing						
35.4	- insulation						
35.5	- air / vapour barrier						
35.6	- wood studs						
35.7	- veneer plywood						

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	A3.22 - Structural Walls Above Grade					
36	NIL					
	A3.23 - Glazed Curtain Wall					
37	NIL					
	TOTAL FOR EXT. ENCLOSURE - Walls Above Grade	0.49 | 550	m2	$200.00	$110,000	
	A3.3 EXTERIOR ENCLOSURE - Windows & Entrances					
	A3.31 - Windows & Louvres					
38	Fibreglass framed windows, assumed double glazed, low e coating, and argon filled, assumed to 10% of total exterior wall area)	65	m2	$375.00	$24,375	
39	Allowance for operable units (assumed locations, manual operation)	1	LS	$3,000.00	$3,000	
	A3.32 - Entrance Glazed Screens					
40	NIL					
	A3.33 - Exterior Doors					
41	Wood framed fully glazed doors including installation and finish					
41.1	- single	5	NO	$2,200.00	$11,000	
41.2	- double	8	PR	$4,000.00	$32,000	
42	Door hardware supply allowance				Included Above	
43	Barrier free operators (assumed to vestibules only)	2	NO	$2,500.00	$5,000	
	TOTAL FOR EXT. ENCLOSURE - Windows & Entrances	0.10 | 106	m2	$709.00	$75,375	
	A3.4 EXTERIOR ENCLOSURE - Roof Covering					
	A3.41 - Roofing					
44	Standing seam metal roof including underlayment, plywood sheathing, vapour barrier (MOP)	707	m2	$165.00	$116,655	
45	Extra over for insulation to dormitory (MOP)	230	m2	$22.00	$5,060	
46	Flashing to vertical surfaces	120	m	$45.00	$5,400	
47	Flashing to openings	1	LS	$500.00	$500	
48	Existing roof to rotary hall to remain	110	m2	$0.00	$0	
	A3.42 - Skylights & Roof Glazing					
49	NIL					

No.	Description		Quant.	Unit	Rate	Sub Total	Total
	A3.43 - Roof Hatches & Doors						
50	NIL						
	TOTAL FOR EXT. ENCLOSURE - Roof Covering	0.73	817	m2	$156.20	$127,615	
	A3.5 EXTERIOR ENCLOSURE - Projections						
	A3.51 - Projections						
51	Roof overhangs including structure, roof covering, and fascia		100	m2	$295.00	$29,500	
52	Exterior covered walkway including:		1	LS	$130,575.00		$130,575
52.1	- pad footings and piers		30	NO	$500.00	$15,000	
52.2	- recycled plastic composite deck		315	m2	$125.00	$39,375	
52.3	- covered walkway including roof construction, roof covering (metal) and fascia		245	m2	$295.00	$72,275	
52.4	- floor mounted wood railing at deck		35	m	$65.00	$2,275	
52.5	- wood slat wall at garbage area		11	m2	$150.00	$1,650	
53	Concrete retaining wall at mechanical room		7	m	$800.00	$5,600	
54	Concrete stairs		30	m	$300.00	$9,000	
55	Exterior building signature signage					Excluded	
	TOTAL FOR EXT. ENCLOSURE - Projections	1.00	1,112	m2	$157.08	$174,675	
	B. INTERIORS						
	B1.1 PARTITIONS & DOORS - Partitions						
	B1.11 - Fixed Partitions						
56	Partitions including:		645	m2	$125.00	$80,625	
56.1	- wood veneer plywood						
56.2	- wood studs						
56.3	- wood veneer plywood						
57	Moisture resistant gypsum board in lieu of veneer plywood to washrooms (one side, 2400 mm AFF), tile finish included with wall finishes		106	m2	-$20.00	-$2,112.00	
58	Allowance for concrete block in lieu of wood partitions		1	LS	$5,000.00	$5,000	
59	Rough carpentry		1,112	m2	$2.50	$2,780	
60	Caulking, sealing, and firestopping		1,112	m2	$1.50	$1,668	
	B1.12 - Moveable Partitions						
61	NIL						
	B1.13 - Structural Partitions & Shear Walls						
62	NIL						
	TOTAL FOR INTERIOR PARTITIONS & DOORS - Partitions	0.58	645	m2	$136.37	$87,961	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	B1.2 PARTITIONS & DOORS - Interior Doors					
	B1.21 - Interior Doors & Hardware					
63	Hollow core wood veneer door and frame including installation and finish					
63.1	- single	20	NO	$600.00	$12,000	
63.2	- double	3	PR	$1,100.00	$3,300	
64	Door hardware supply allowance	26	NO	$550.00	$14,300	
65	Barrier free operators	3	NO	$2,500.00	$7,500	
66	View panels, door glazing, and transoms	1	LS	$2,500.00	$2,500	
	TOTAL FOR INTERIOR PARTITIONS & DOORS - Doors	0.05 | 51	m2	$774.22	$39,600	
	B2.1 FINISHES - Floor Finishes					
	B2.11 - Floor Finishes					
67	Concrete sealer	892	m2	$15.00	$13,379	
68	Rubber flooring to washrooms	60	m2	$85.00	$5,100	
69	Patch and make good rotary hall flooring	105	m2	$25.00	$2,613	
70	Allowance for upgraded floor finishes				Excluded	
	TOTAL FOR FINISHES - Floor Finishes	0.95 | 1,056	m2	$19.96	$21,091	
	B2.2 FINISHES - Ceiling Finishes					
	B2.21 - Ceiling Finishes					
71	Stain/seal exposed wood deck	996	m2	$20.00	$19,928	
72	Suspended gypsum board ceiling to washrooms	60	m2	$125.00	$7,500	
73	Gypsum board bulkheads	1	LS	$2,000.00	$2,000	
	TOTAL FOR FINISHES - Ceiling Finishes	0.95 | 1,056	m2	$27.86	$29,428	
	B2.3 FINISHES - Wall Finishes					
	B2.31 - Wall Finishes					
74	Ceramic tile to washrooms, 2400 mm AFF	106	m2	$110.00	$11,616	
75	Wainscoting to perimeter of dining hall, 1800 mm high (extra over to wood veneer wall panel)	83	m2	$35.00	$2,898	
76	No finish (wood veneer plywood included with exterior wall and partitions)	2,036	m2	$0.00	$0	
	TOTAL FOR FINISHES - Wall Finishes	2.00 | 2,224	m2	$6.53	$14,514	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	B3.1 FITTINGS & EQUIPMENT - Fittings & Fixtures					
	B3.11 - Miscellaneous Metals					
77	Miscellaneous metals including lintels, bracing, and so fourth	1,112	m2	$3.00	$3,336	
78	Wall mounted handrails, assumed wood	15	m	$100.00	$1,500	
	B3.12 - Millwork					
79	Washroom vanities	5	m	$350.00	$1,750	
80	Kitchen type counter with upper and lower cabinets, assumed stainless steel	4	m	$1,500.00	$6,000	
81	Kitchen type counter with lower cabinets, assumed stainless steel	4	m	$1,100.00	$4,400	
82	Stainless steel counters with sinks included in kitchen equipment budget				Included	
83	Pass thru windows (assumed openings, nor glass or screens)				Excluded	
	B3.13 - Specialties					
84	Washroom partitions					
84.1	- standard	4	NO	$750.00	$3,000	
84.2	- barrier free	2	NO	$950.00	$1,900	
85	Washroom accessories including:					
85.1	- toilet paper dispenser	7	NO	$50.00	$350	
85.2	- soap dispenser	3	NO	$50.00	$150	
85.3	- paper towel dispenser	3	NO	$275.00	$825	
85.4	- grab bars	2	PR	$350.00	$700	
85.5	- sanitary dispenser				Excluded	
85.6	- sanitary disposal	3	NO	$75.00	$225	
85.7	- shower soap dish	6	NO	$50.00	$300	
85.8	- fold down shower seat	2	NO	$350.00	$700	
85.9	- shower curtain and rod	6	NO	$100.00	$600	
85.10	- shower grab bars	2	PR	$350.00	$700	
85.11	- mirrors	3	NO	$250.00	$750	
85.12	- waste receptacles	3	NO	$250.00	$750	
86	Lockers				Excluded	
87	Tack boards and white boards				Excluded	
88	Window shades				Excluded	
89	Interior signage (doors only)	1	LS	$2,000.00	$2,000	
	B3.14 - Furniture					
90	NIL			Excluded		
	TOTAL FOR FITTINGS & EQUIP. - Fittings & Fixtures	1.00	1,112 m2	$26.92		$29,936

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	B3.2 FITTINGS & EQUIPMENT - Equipment					
	B3.21 - Equipment					
91	Kitchen equipment (quotation provided by Kazien)	1	LS	$76,000.00	$76,000	
92	Allowance for 3m x 5m walk in freezer, not included in above quotation	1	LS	$25,000.00	$25,000	
	TOTAL FOR FITTINGS & EQUIP. - Equipment	1.00 1,112	m2	$90.83	$101,000	
	B3.3 FITTINGS & EQUIPMENT - Conveying Systems					
	B3.31 - Elevators					
93	NIL					
	B3.32 - Escalators & Moving Walks					
94	NIL					
	B3.33 - Material Handling Systems					
95	NIL					
	TOTAL FOR FITTINGS & EQUIP. - Conveying Systems	0.00 0	m2	$0.00	$0	
	C1. SERVICES - MECHANICAL					
	C1.1 Plumbing & Drainage					
	C1.11 - Plumbing Fixtures					$22,200
96	Plumbing fixtures and fittings, low water consumption, manual operated flush valve/ faucets c/w hook-up connections:					
96.1	- Water closets	7	NO	$1,150.00	$8,050	
96.2	- Lavatories	5	NO	$1,000.00	$5,000	
96.3	- Showers	6	NO	$850.00	$5,100	
96.4	- Hand wash basin	1	NO	$1,050.00	$1,050	
96.5	- Mop /service sink	1	NO	$1,400.00	$1,400	
97	Kitchen fixtures rough - in connections, kitchen fixture supplied by kitchen contractor	4	NO	$400.00	$1,600	
	C1.12 - Domestic Water					$144,288
98	Existing lake water pumps to be relocated (allowance for labour and reconnection costs only)	1	NO	$600.00	$600	
99	Solar domestic water preheat thermal array on roof, solar thermal equipment in mechanical room for capacity of 250 US Gallons . Approximately 10 solar collectors will be required.	10	NO	$12,000.00	$120,000	
100	Propane domestic hot water heater as backup to solar thermal source - 50 US Gallons	2	NO	$3,500.00	$7,000	
101	Potable water distribution (thermally insulated) to washroom fixtures, kitchen equipment and mechanical service areas	175	m	$75.00	$13,125	
102	Isolation and balancing valves	10	NO	$75.00	$750	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
103	Trap seal primers (floor/shower drains will be primed in the group of 8 nos.)	2	NO	$1,500.00	$2,813	
	C1.13 - Sanitary Waste & Vent					$27,100
104	Floor/ shower drain and trap assemblies	15	NO	$500.00	$7,500	
105	Buried sanitary waste & vent collection serving washroom fixtures, kitchen and mechanical service areas	130	m	$85.00	$11,050	
106	Trenching, bedding and backfill for buried piping	130	m	$35.00	4,550	
107	Above grade sanitary waste & vent collection piping	30	m	$100.00	3,000	
108	Clean out and line items	1	NO	$1,000.00	$1,000	
	C1.14 - Storm					$22,280
109	Roof drains	4	NO	$500.00	$2,000	
110	Above grade storm collection piping	90	m	$100.00	$9,000	
111	Thermal insulation to storm piping (3m from RD's)	12	m	$40.00	$480	
112	Connection to cistern tank	1	NO	$300.00	$300	
113	Clean out and line items	1	NO	$1,000.00	$1,000	
	Grey water system					
114	Cistern tank (grey water storage tank) for rain water collection and pump	1	NO	$5,000.00	$5,000	
115	Existing UV water purification and filtration systems system in place (allowance for labour and reconnection costs plus possible expansion of the existing system).	1	NO	$2,500.00	$2,500	
116	Grey water piping from rain water cistern to water closets	40	m	$50.00	$2,000	
	C1.15 - Propane Gas					$2,000
117	Propane gas storage by Propane Gas Vendor at no capital cost to the owner				Excluded	
118	Propane gas distribution to boilers, make-up air heater and kitchen appliances	1	NO	$2,000.00	$2,000	
	C1.17 - Miscellaneous Works and General Accounts					$0
119	Included in section C1.38				Included	
	TOTAL FOR MECHANICAL - Plumbing & Drainage	1.00	1,112 m2	$195.92	$217,868	
	C1.2 Fire Protection					
	C1.21 - Standpipe					$0
120	No work required					
	C1.22 - Sprinklers					$0
121	No work required					

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	C1.24 - Fire Extinguisher					$0
122	Fire extinguishers supplied by owner if required				Excluded	
	C1.25 - Miscellaneous Works and General Accounts					$0
123	No work required					
	TOTAL FOR MECHANICAL - Fire Protection	0.00 | 0	m2	$0.00	$0	
	C1.3 Heating, Ventilation & Air Conditioning					
	C1.31 - Liquid Heat Transfer (Heating)					$139,450
124	Solar heating panels array as primary source of energy input to infloor radiant heating system. Infloor heating will be combined with solar domestic hot water generation system by supplementing with another 5 solar collectors	5	NO	$12,000.00	$60,000	
125	Infloor radiant hot water heating system throughout with central high efficiency back-up propane boiler(s) c/w operating accessories, circulation pump, manifolds, zone control valves and imbedded poly piping with rigid board insulation heat shield beneath imbedded piping	845	m2	$50.00	$42,250	
126	Supplemental force flow / unit heaters	9	NO	$1,000.00	$9,000	
127	Heating supply/return distribution piping c/w thermal insulation to infloor heating and supplementary heaters	200	m	$80.00	$16,000	
128	Chemical treatment system c/w feed pump and chemical solution	1	NO	$1,200.00	$1,200	
129	Air and expansion controls	1	NO	$500.00	$500	
130	Hook-up connections:					
130.1	- Infloor heating boilers / pumps	1	NO	$1,500.00	$1,500	
130.2	- Infloor zone manifolds	5	NO	$600.00	$3,000	
130.3	- Solar heating panel array	1	NO	$600.00	$600	
130.4	- Supplementary forced flow/ unit heaters	9	NO	$600.00	$5,400	
	C1.32 - Liquid Heat Transfer (Cooling)					$16,275
131	Passive cooling achieved by natural ventilation				Info only	
132	Utilize above imbedded glycol piping for cooling circulating cooled water from air cooled water chiller (20 Tons cooling , via automatic seasonal change over control station	845	m2	$15.00	$12,675	
133	Interconnection chilled water piping between chiller, pump and infloor-heating/cooling loop c/w thermal insulation	20	m	$80.00	$1,600	
134	Hook-up connections:					
134.1	- Infloor cooling chiller	1	NO	$2,000.00	$2,000	
	C1.33 - Steam and Condensate					$0
135	No work required					
	C1.34 - Air Distribution					$10,000
136	Heat recovery ventilation unit (1000 CFM) c/w distribution ductwork & terminals to corridors and exhaust ductwork from washrooms	1	NO	$10,000.00	$10,000	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	C1.35 - Exhaust Systems					$43,000
137	Kitchen exhaust hood/fan and make up air system, quote as provided by Adamson and Dobbin Ltd.	1	NO	$43,000.00	$43,000	
138	Supply and install (1no) one new stainless steel kitchen exhaust hood (approx. 15' long) c/w washable filters, incandescent lights and a fire suppression system	1	NO		Included	
139	Supply and install a wall-mounted exhaust fan c/w back-draft damper	1	NO		Included	
140	Fabricate and install 16 gauge carbon steel ductwork to interconnect the exhaust fan with the stainless steel hood	1	NO		Included	
141	Fabricate and install an un-tempered make-up system complete with associated ductwork with thermal insulation	1	NO		Included	
142	Ductwork c/w thermal insulation	1	NO		Included	
143	Washroom exhaust will be collected thru heat recovery unit included in section C1.34 above				See C1.34	
	C1.37 - Support Systems and Works					$2,000
	C1.37.1 - Noise and Vibration Isolation					$0
144	Included in above rates				Included	
	C1.37.2 - Mechanical Wiring and Starters					$0
145	By Electrical / Div.16 contractor				Info only	
	C1.37.3 - Balancing and Commissioning					$2,000
146	Commission and provide an air balancing report upon completion	1	NO	$2,000.00	$2,000	
	C1.38 - Miscellaneous Works and General Accounts					$65,000
147	Supervision, job set up, submittals, clean up etc., rentals, small tools etc., permits, inspections and insurance etc.	1	NO	$65,000.00	$65,000	
	TOTAL FOR MECHANICAL - HVAC	1.00	1,112 m2	$247.95	$275,725	
	C1.4 MECHANICAL - Controls					
	C1.41 - Controls and Automation					$5,000
148	Install space thermostats and accessories for zone heating / cooling infloor system and make-up air / heat recovery unit	1	NO	$5,000.00	$5,000	
	C1.42 - Miscellaneous Works and General Accounts					$0
149	Included in above rates				Included	
	TOTAL FOR MECHANICAL - Controls	1.00	1,112 m2	$4.50	$5,000	
			Total Mech Unit Rate		$448.37	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	C2. SERVICES - ELECTRICAL					
	C2.1 ELECTRICAL - Service & Distribution					
	C2.11 - L.V. Switchboard					$7,300
150	Replace existing 600A 120/240V main service with new main distribution panel including breakers to feed new cabins	1	NO	$6,300.00	$6,300	
151	Hydro meter	1	NO	$1,000.00	$1,000	
	C2.12 - Emergency Power					$0
152	Life safety provided by battery units				Excluded	
	C2.13 - Distribution					$8,243
153	60cct 120/240V kitchen power panel	1	NO	$4,578.00	$4,578	
154	42cct 120/240V mechanical power panel	1	NO	$2,698.50	$2,699	
155	Remedial work to existing panels and circuitry	1	LS	$966.00	$966	
	C2.14 - Feeders					$2,335
156	3#3/0 + 1#2 in 53mm emt to feed new kitchen and mechanical panels	30	m	$77.84	$2,335	
	C2.15 - Motor Controls & Wiring					$10,543
157	FHP motor connection with line and load side wiring for mechanical	12	NO	$405.09	$4,861	
158	15A power connection to mechanical unit with line and load side wiring	5	NO	$300.00	$1,500	
159	Freezer connection	1	NO	$1,081.75	$1,082	
160	Power connections to kitchen equipment	1	LS	$3,100.00	$3,100	
	C2.16 - Miscellaneous					$2,500
161	Upgrade the building grounding system	1	LS	$2,500.00	$2,500	
	C2.17 - General Requirements					$4,618
162	Supervision	1	LS	$1,859.00	$1,859	
163	Premium time, etc.	1	LS	$0.00	$0	
164	Job set-up, etc.	1	LS	$1,623.00	$1,623	
165	Rentals, small tools, etc.	1	LS	$649.00	$649	
166	Permits & inspections	1	LS	$422.00	$422	
167	Insurance	1	LS	$65.00	$65	
168	Performance bond	1	LS	$0.00	$0	
169	Labour & material bond	1	LS	$0.00	$0	
170	Contingency	1	LS	$0.00	$0	
	TOTAL FOR ELECTRICAL - Service & Distribution	1.00	1,112 m2	$31.96	$35,539	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	C2.2 ELECTRICAL - Lighting, Devices & Heating					
	C2.21 - Lighting					$51,110
171	*Fixture costs include the supply and installation of fixtures with associated wiring and supports*					
172	Dinning hall lighting using surface mounted 2'x4' energy efficient fluorescent fixtures	420	m2	$37.83	$15,889	
173	Health centre and quarters lighting using suspended incandescent fixtures	170	m2	$44.79	$7,614	
174	Kitchen and service area lighting using surface mounted fluorescent striplights	522	m2	$29.56	$15,430	
175	Upgrade emergency battery and exit light system	1,112	m2	$10.95	$12,176	
	C2.22 - Branch Devices & Wiring					$10,132
176	*Device costs include the supply and installation of devices and associated wiring and supports*					
177	Dinning hall devices and lighting control using local switches	420	m2	$8.96	$3,763	
178	Health centre and quarters devices and lighting control using local switches	170	m2	$9.95	$1,692	
179	Kitchen and service area general devices and lighting control using local switches	522	m2	$8.96	$4,677	
	C2.23 - Heating					$9,296
180	New efficient baseboard heater	1,112	m2	$8.36	$9,296	
	C2.24 - General Requirements					$10,508
181	Supervision	1	LS	$4,213.00	$4,213	
182	Premium time, etc.	1	LS	$0.00	$0	
183	Job set-up, etc.	1	LS	$3,703.00	$3,703	
184	Rentals, small tools, etc.	1	LS	$1,481.00	$1,481	
185	Permits & inspections	1	LS	$963.00	$963	
186	Insurance	1	LS	$148.00	$148	
187	Performance bond	1	LS	$0.00	$0	
188	Labour & material bond	1	LS	$0.00	$0	
189	Contingency	1	LS	$0.00	$0	
	TOTAL FOR ELECTRICAL - Lighting, Devices & Heating	1.00	1,112 m2	$72.88	$81,046	
	C2.3 ELECTRICAL - Systems & Ancillaries					
	C2.31 - Fire Alarm System					$9,296
190	Upgrade existing single stage Fire Alarm system to meet barrier free requirements	1,112	m2	$8.36	$9,296	
	C2.32 - Security System					$4,348
191	Security access monitoring system	1,112	m2	$3.91	$4,348	
	C2.33 - Communications					$1,366
192	Voice outlet and wiring back to main telephone rack	6	NO	$227.69	$1,366	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	C2.34 - P.A. System					$1,400
193	Disconnect and reconnect PA system	1	LS	$1,400.00	$1,400	
	C2.35 - Miscellaneous					$2,124
194	Miscellaneous systems (Door bell, clocks…)	1,112	m2	$1.91	$2,124	
	C2.36 - General Requirements					$2,893
195	Supervision	1	LS	$1,239.00	$1,239	
196	Premium time, etc.	1	LS	$0.00	$0	
197	Job set-up, etc.	1	LS	$973.00	$973	
198	Rentals, small tools, etc.	1	LS	$389.00	$389	
199	Permits & inspections	1	LS	$253.00	$253	
200	Insurance	1	LS	$39.00	$39	
201	Performance bond	1	LS	$0.00	$0	
202	Labour & material bond	1	LS	$0.00	$0	
203	Contingency	1	LS	$0.00	$0	
	TOTAL FOR ELECTRICAL - Systems & Ancillaries	1.00	1,112 m2	$19.27	$21,427	
	Total Elec Unit Rate			$124.11		

D. SITE & ANCILLARY WORK

D1.1 SITEWORK - Site Development

	D1.11 - Preparation					$3,500
204	Clear and grub site, rough grading, etc.	1	LS	$1,000.00	$1,000	
205	Demolition of existing site elements including:					
205.1	- remove existing ramp	1	LS	$1,000.00	$1,000	
205.2	- miscellaneous demolition (hard and soft surfaces)	1	LS	$1,500.00	$1,500	
	D1.12 - Hard Surfaces					$0
206	Not Applicable - deck and stairs included with projections					
	D1.13 - Improvements					$0
207	NIL					
	D1.14 - Landscaping					$1,500
208	Allowance to make good existing landscaping/sod upon completion of construction	1	LS	$1,500.00	$1,500	
	TOTAL FOR SITE WORK - Site Development	1.00	1,112 m2	$4.50	$5,000	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	D1.2 SITEWORK - Mechanical Site Services					
	D1.21 - Water					$0
209	No work required					
	D1.22 - Sanitary					$0
210	No work required					
	D1.23 - Storm					$0
211	No work required					
	D1.24 - Natural Gas					$0
212	No work required					
	D1.25 - Specialty Systems					$0
213	No work required					
	D1.26 - Miscellaneous Works and General Accounts					$0
214	No work required					
	TOTAL FOR SITE WORK - Mechanical Site Services	0.00 | 0	m2	$0.00	$0	
	D1.3 SITEWORK - Electrical Site Services					
	D1.31 - Site - Power					$0
215	Not in the scope of work				Excluded	
	D1.32 - Site - Communications					$0
216	Not in the scope of work				Excluded	
	D1.33 - Site - Lighting					$0
217	Not in the scope of work				Excluded	
	D1.34 - Site - General Requirements					$0
218	Not in the scope of work					
	TOTAL FOR SITE WORK - Electrical Site Services	0.00 | 0	m2	$0.00	$0	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	D2.1 ANCILLARY WORK - Demolition					
	D2.11 - Demolition					
219	Demolish existing building and deck and dispose	297	m2	$55.00	$16,335	
220	Temporary partitions and hoarding to rotary hall	1	LS	$2,500.00	$2,500	
	D2.12 - Hazardous Materials					
221	This estimate excludes allowances for asbestos abatement and the handling of hazardous materials				**Excluded**	
	TOTAL FOR ANCILLARY WORK - Demolition	1.00 × 1,112	m2	$16.94	$18,835	
	D2.2 ANCILLARY WORK - Alterations					
	D2.21 - Alterations					
222	Allowance to tie in new structure with existing rotary hall (foundations, slab on grade, exterior walls, roof construction and finish, etc.)	1	LS	$5,000.00	$5,000	
	TOTAL FOR ANCILLARY WORK - Alterations	1.00 × 1,112	m2	$4.50	$5,000	
	Z. GENERAL REQUIREMENTS & CONTINGENCIES					
	Z1.1 GENERAL REQUIREMENTS & FEES - General Requirements					
	Z1.11 - Supervision & Labour Expenses					
223	Allowance for the General Contractor's supervision & labour expenses as follows:	1	LS	$129,590.13	$129,600	7.0%
223.1	- supervision and coordination of subcontractors					
223.2	- site superintendent and vehicle					
223.3	- general labour expenses					
	Z1.12 - Temporary Conditions					
224	Allowance for the temporary conditions provided by the General Contractor including:					
225	Access to site					
225.1	- traffic control					
225.2	- pedestrian safety					
225.3	- removal of exterior cladding for access					
225.4	- temporary closure panels					
226	Site accommodations:					
226.1	- temporary site office					
226.2	- temporary signage					
226.3	- telephone and fax					
226.4	- stationary supplies and office equipment					

No.	Description	Quant.	Unit	Rate	Sub Total	Total
227	Site protection:					
227.1	- hoarding and gates					
227.2	- safety guard rails					
227.3	- fire extinguishers					
227.4	- first aid kits					
227.5	- temporary shoring					
227.6	- temporary stairs and ladders					
227.7	- protection for site elevators and flooring					
228	Temporary utilities:					
228.1	- temporary construction power panels					
228.2	- temporary water source					
229	Site clean up:					
229.1	- daily clean up in addition to the trades					
229.2	- final cleaning					
229.3	- dump bins					
229.4	- dumping charges					
230	Equipment:					
230.1	- material hoisting equipment					
230.2	- cranes and operators					
230.3	- small tool rental					
230.4	- pumps and pumping equipment					
231	Miscellaneous					
231.1	- CPM scheduling					
231.2	- land surveying					
231.3	- testing and inspections					
231.4	- photography					
	Cash Allowances					**$7,500**
232	Independent inspection and testing		1 LS	$7,500.00	$7,500	
233	Door hardware supply				Included in B 1.2	
	Z1.13 - Permits, Insurance & Bonds					**$54,000**
234	Building permit		1 LS	$22,000.00	$22,000	
235	General Liability and Builder's Risk insurance		1 LS	$13,000.00	$13,000	
236	Labour & Material and Performance bonding		1 LS	$19,000.00	$19,000	
	TOTAL FOR GEN. REQ'MENTS & FEES - Gen. Req'ments	1.00 1,112	m2	$171.85	$191,100	
	Z1.2 GENERAL REQUIREMENTS & FEES - Fees					
	Z1.21 - General Contractor's Fees					
237	Allowance for the General Contractor's Fees (Overhead and Profit). (applied to measured works plus general requirements)		1 LS	$81,695.50	$82,000	4.0%
	TOTAL FOR GEN. REQ'MENTS & FEES - Fees	1.00 1,112	m2	$73.74	$82,000	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	Z2.1 ALLOWANCES - Design Contingency					
238	Design Contingency as a percentage of the above to cover increases in the overall scope of the design during the remaining stages of the design phase (applied to measured works plus general requirements and fees)					
238.1	- Architectural / Structural / Siteworks	1	LS	$139,400.00	$139,400	10.0%
238.2	- Mechanical Services	1	LS	$57,200.00	$57,200	10.0%
238.3	- Electrical Services	1	LS	$15,800.00	$15,800	10.0%
	TOTAL FOR ALLOWANCES - Design Contingency	1.00 | 1,112	m2	$191.01	$212,400	
	Z2.2 ALLOWANCES - Escalation Contingency					
239	Contingency for escalation that might occur between the date of the estimate and the anticipated tender date (applied to measured works plus general requirements, fees and Design Contingency)				Excluded	0.0%
	TOTAL FOR ALLOWANCES - Escalation Contingency	0.00 | 0	m2	$0.00	$0	
	Z2.3 ALLOWANCES - Construction Contingency					
240	Construction Contingency for post contract changes (applied to measured works plus general requirements, fees, Design Contingency and Escalation Contingency)				Excluded	0.0%
	TOTAL FOR ALLOWANCES - Construction Contingency	0.00 | 0	m2	$0.00	$0	

ESTIMATE SUMMARY
CAMP KAWARTHA MASTER PLAN
EAST CABIN CLUSTER

ORDER OF MAGNITUDE ESTIMATE
SEPTEMBER 4, 2012

A.W. HOOKER ®
QUANTITY SURVEYORS

Gross Floor Area **157** **m2**

	Hard Construction Costs		GFA (m2)	Unit Cost/m2	Sub Total	Estimated Total	% of Total
1	Building Shell:		157	$599.68		$94,149	51.4%
	- Sub Structure			$51.59	$8,099.00		
	- Structure			$176.56	$27,720.00		
	- Exterior Enclosure			$371.53	$58,330.00		
2	Building Interiors		157	$35.88		$5,634	3.1%
	- Partitions and Doors			$12.03	$1,889.00		
	- Finishes			$13.98	$2,194.50		
	- Fittings and Equipment			$9.87	$1,550.00		
3	Mechanical including;		157	$15.92		$2,500	1.4%
	- Plumbing and Drainage			$15.92	$2,500.00		
	- Fire Protection			$0.00	$0.00		
	- Heating, Ventilation, Air Conditioning			$0.00	$0.00		
	- Controls			$0.00	$0.00		
4	Electrical including		157	$144.62		$22,706	12.4%
	- Service and Distribution			$68.31	$10,724.20		
	- Lighting, Devices, and Heating			$38.35	$6,020.25		
	- Systems and Ancillaries			$37.97	$5,961.56		
5	Site Work		0	$0.00		$0	0.0%
	- Site Development (prep, surfaces, landscaping)			$0.00	$0.00		
	- Mechanical Site Services			$0.00	$0.00		
	- Electrical Site Services			$0.00	$0.00		
6	Ancillary Work		157	$145.48		$22,840	12.5%
	- Demolition						
	- Alterations						
7	Contractor's General Requirements and Bonding	7.0%	157	$75.16		$11,800	6.4%
8	Contractor's Fees (OH&P)	4.0%	157	$40.76		$6,400	3.5%
9	Design Contingency	10.0%	157	$105.73		$16,600	9.1%
	Sub Total (current dollars)		**157**	**$1,163.24**		**$182,629**	
10	Escalation Contingency	0.0%	0	$0.00		$0	0.0%
	Sub Total (Excluding Escalation)		**157**	**$1,163.24**		**$182,629**	
11	Construction Contingency (post contract)	0.0%	0	$0.00		$0	0.0%
	Total Estimated Hard Construction Cost		**157**	**$1,165.61**		**$183,000**	
	Imperial Conversion		**1,690**	**$108.29**		**Per SF**	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	Camp Kawartha Master Plan **East Cabin Cluster**					
	Building Shell:					
	Excavation, Backfill, and Foundations					**$8,099**
	Note: We have assumed normal soil conditions exist in the proposed building location and that load bearing soil is present at the levels shown on the architectural/structural drawings.					
1	Strip topsoil and stockpile on site	66	m2	$1.50	$99	
2	Sonotube foundations (assumed at 3000 mm o.c.)	20	NO	$400.00	$8,000	
3	**Lowest Floor Structure**					**$8,250**
4	Wood framed floor construction including:	66	m2	$125.00	$8,250	
4.1	- plywood					
4.2	- wood joists					
4.3	- bridging and bracings					
4.4	- insulation					
4.5	- plywood subfloor					
4.6	- concrete topping					
5	**Upper Floor Structure**					**$0**
6	NIL					
7	**Roof Structure and Coverings**					**$19,470**
8	Wood framed roof construction (MOP) including:	66	m2	$130.00	$8,580	
8.1	- base plates and anchor bolts					
8.2	- wood beams and columns					
8.3	- bridging and bracings					
8.4	- wood deck					
9	Standing seam metal roof including underlayment, plywood sheathing, vapour barrier (MOP)	66	m2	$165.00	$10,890	
10	**Walls Above Grade (cladding, windows, and doors)**					**$32,310**
11	Wood siding wall including:	118	m2	$200.00	$23,600	
11.1	- wood siding (assumed T&G cedar with finish)					
11.2	- wood strapping					
11.3	- plywood sheathing					
11.4	- insulation					
11.5	- air / vapour barrier					
11.6	- wood studs					
11.7	- veneer plywood					
12	New wood siding on existing wall construction to walls to remain at existing cabin C	36	m2	$60.00	$2,160	
13	Wood framed windows (assumed 1000 x 1000 mm)	4	m2	$400.00	$1,600	
14	Wood half glazed doors including installation and finish					
14.1	- single	3	NO	$1,650.00	$4,950	
15	Door hardware supply allowance				Included Above	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
16	**Projections**					**$26,020**
17	Roof overhangs including structure, roof covering, and fascia	35	m2	$295.00	$10,325	
18	Recycled plastic composite deck	88	m2	$125.00	$11,000	
19	Extra over for ramp to deck	10	m2	$25.00	$250	
20	Wood stairs to deck	35	m	$75.00	$2,625	
21	Wood handrail (to ramp and edge of deck), assumed required	28	m	$65.00	$1,820	
22	**Building Interiors:**					
23	**Interior Partitions and Doors**					**$1,889**
24	Partitions including:	13	m2	$125.00	$1,625	
24.1	- wood veneer plywood					
24.2	- wood studs					
24.3	- wood veneer plywood					
25	Rough carpentry	66	m2	$2.50	$165	
26	Caulking, sealing, and firestopping	66	m2	$1.50	$99	
27	**Interior Finishes (floor, ceiling, and wall)**					**$2,195**
28	Concrete sealer	63	m2	$15.00	$941	
29	Stain/seal exposed wood deck	63	m2	$20.00	$1,254	
30	Wall finish (wood veneer plywood included with exterior wall and partitions)				Included	
31	**FF&E (miscellaneous metals, specialities, millwork, equipment, elevators)**					**$1,550**
32	Miscellaneous metals including lintels, bracing, and so fourth	1	LS	$500.00	$500	
33	Washroom vanity	1	NO	$350.00	$350	
34	Washroom accessories including:					
34.1	- toilet paper dispenser	1	NO	$50.00	$50	
34.2	- soap dispenser	1	NO	$50.00	$50	
34.3	- paper towel dispenser	1	NO	$275.00	$275	
34.4	- sanitary disposal	1	NO	$75.00	$75	
34.5	- mirrors	1	NO	$250.00	$250	
35	Furniture				Excluded	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
36	**Mechanical:**					**$2,500**
37	**Plumbing and Drainage**					**$2,500**
38	Composting toilet	1	NO	$2,500.00	$2,500	
39	**Fire Protection**					**$0**
40	No work required - fire extinguishers by owner if required				Excluded	
41	**Heating, Ventilation, Air Conditioning**					**$0**
42	Natural ventilation				Info only	
43	Electric heat by Div. 16 included elsewhere in this estimate				Info only	
44	**Controls**					**$0**
45	No work required					
46	**Electrical:**					**$22,706**
47	**Service and Distribution**					**$10,724**
48	Rework existing power panel and circuitry	1	LS	$500.00	$500	
49	Remedial work to existing mechanical power connections	1	LS	$170.00	$170	
50	New cabin 12cct panel	2	NO	$1,200.00	$2,400	
51	New feeder to cabin panel	140	m	$44.33	$6,206	
52	General Requirements including:					$1,448
52.1	- Supervision	1	LS	$620.00	$620	
52.2	- Premium time, etc.	1	LS	$0.00	$0	
52.3	- Job set-up, etc.	1	LS	$487.00	$487	
52.4	- Rentals, small tools, etc.	1	LS	$195.00	$195	
52.5	- Permits & inspections	1	LS	$127.00	$127	
52.6	- Insurance	1	LS	$19.00	$19	
52.7	- Performance bond	1	LS	$0.00	$0	
52.8	- Labour & material bond	1	LS	$0.00	$0	
52.9	- Contingency	1	LS	$0.00	$0	
53	**Lighting, Devices, and Heating**					**$6,020**
54	Disconnect, clean, relamp and reinstall existing light fixtures	1	LS	$700.00	$700	
55	Disconnect and replace existing receptacles and switches	1	LS	$840.00	$840	
56	Remedial work to existing electrical heaters	1	LS	$700.00	$700	
57	Suspended incandescent light fixture	7	NO	$142.63	$998	
58	Recess PL shower fixture	1	NO	$237.16	$237	
59	15A 120V 1P toggle switch	3	NO	$76.82	$230	
60	15A 125V duplex receptacle	12	NO	$108.40	$1,301	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
61	15A 125V duplex receptacle, GFI	1	NO	$121.42	$121	
62	General Requirements including:					$892
62.1	- Supervision	1	LS	$434.00	$434	
62.2	- Premium time, etc.	1	LS	$0.00	$0	
62.3	- Job set-up, etc.	1	LS	$269.00	$269	
62.4	- Rentals, small tools, etc.	1	LS	$108.00	$108	
62.5	- Permits & inspections	1	LS	$70.00	$70	
62.6	- Insurance	1	LS	$11.00	$11	
62.7	- Performance bond	1	LS	$0.00	$0	
62.8	- Labour & material bond	1	LS	$0.00	$0	
62.9	- Contingency	1	LS	$0.00	$0	
63	**Systems and Ancillaries**					**$5,962**
64	Disconnect and replace existing smoke detector	6	NO	$160.00	$960	
65	New smoke detector	4		$374.52	$1,498	
66	Disconnect and replace existing CO detector	6	NO	$190.00	$1,140	
67	New CO detector	4	NO	$397.62	$1,590	
68	General Requirements including:					$773
68.1	- Supervision	1	LS	$310.00	$310	
68.2	- Premium time, etc.	1	LS	$0.00	$0	
68.3	- Job set-up, etc.	1	LS	$272.00	$272	
68.4	- Rentals, small tools, etc.	1	LS	$109.00	$109	
68.5	- Permits & inspections	1	LS	$71.00	$71	
68.6	- Insurance	1	LS	$11.00	$11	
68.7	- Performance bond	1	LS	$0.00	$0	
68.8	- Labour & material bond	1	LS	$0.00	$0	
68.9	- Contingency	1	LS	$0.00	$0	
69	**Ancillary Work:**					
70	**Demolition and Alterations**					**$22,840**
71	Work to existing cabins including:					
71.1	- strip interior finishes to cabin A,B and C (MOP area)	91	m2	$20.00	$1,820	
71.2	- strip exterior siding to cabin C and make good (cladding area)	68	m2	$15.00	$1,020	
71.3	- insulate floors, walls ands attic to cabin A, B and C	380	m2	$20.00	$7,600	
71.4	- reclad interior walls and ceilings with veneer plywood to cabins A and B	136	m2	$50.00	$6,800	
71.5	- create 2 new window openings to cabin A, B and C	6	NO	$200.00	$1,200	
71.6	- new wood windows to cabin A, B and C, assume 1000 x 1000 mm	6	m2	$400.00	$2,400	
71.7	- relocate door including infill opening to Cabin B and C	2	NO	$500.00	$1,000	
71.8	- allowance to tie in new cabins to existing (foundations, floor, roof, walls, etc.)	1	LS	$1,000.00	$1,000	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
72	Subtotal 1				$147,800	
73	General Requirements		1 LS	$10,346	$10,300	7.0%
74	Labour & Material and Performance bonding		1 LS	$1,500	$1,500	
75	Fees		1 LS	$6,384	$6,400	4.0%
76	Subtotal 2				$166,000	
77	Design Allowance		1 LS	$16,600	$16,600	10.0%
78	Escalation Allowance (Excluded)					0.0%
79	Construction Allowance (Excluded)					0.0%
TOTAL ESTIMATED HARD CONSTRUCTION COSTS (exc. HST)		1.00 157	m2	$1,165.61	$183,000	

ESTIMATE SUMMARY
CAMP KAWARTHA MASTER PLAN
ENTRY AND PARKING WORKSHOP

ORDER OF MAGNITUDE ESTIMATE
SEPTEMBER 4, 2012

A.W. HOOKER QUANTITY SURVEYORS

Gross Floor Area 128 m2

	Hard Construction Costs		GFA (m2)	Unit Cost/m2	Sub Total	Estimated Total	% of Total
1	Building Shell:		128	$1,304.57		$166,985	52.3%
	- Sub Structure			$262.71	$33,627.00		
	- Structure			$354.34	$45,356.00		
	- Exterior Enclosure			$687.52	$88,002.00		
2	Building Interiors		128	$60.78		$7,780	2.4%
	- Partitions and Doors			$23.44	$3,000.00		
	- Finishes			$35.00	$4,480.00		
	- Fittings and Equipment			$2.34	$300.00		
3	Mechanical including;		128	$35.16		$4,500	1.4%
	- Plumbing and Drainage			$35.16	$4,500.00		
	- Fire Protection			$0.00	$0.00		
	- Heating, Ventilation, Air Conditioning			$0.00	$0.00		
	- Controls			$0.00	$0.00		
4	Electrical including		128	$250.65		$32,083	10.1%
	- Service and Distribution			$155.00	$19,839.48		
	- Lighting, Devices, and Heating			$52.95	$6,778.01		
	- Systems and Ancillaries			$42.70	$5,466.00		
5	Site Work		2,025	$23.27		$47,128	14.8%
	- Site Development (prep, surfaces, landscaping)			$23.27	$47,127.50		
	- Mechanical Site Services			$0.00	$0.00		
	- Electrical Site Services			$0.00	$0.00		
6	Ancillary Work		128	$0.00		$0	0.0%
	- Demolition						
	- Alterations						
7	Contractor's General Requirements and Bonding	7.0%	128	$160.94		$20,600	6.5%
8	Contractor's Fees (OH&P)	4.0%	128	$85.94		$11,000	3.4%
9	Design Contingency	10.0%	128	$226.56		$29,000	9.1%
	Sub Total (current dollars)		**128**	**$2,492.78**		**$319,076**	
10	Escalation Contingency	0.0%	128	$0.00		$0	0.0%
	Sub Total (Excluding Escalation)		**128**	**$2,492.78**		**$319,076**	
11	Construction Contingency (post contract)	0.0%	128	$0.00		$0	0.0%
	Total Estimated Hard Construction Cost		**128**	**$2,492.19**		**$319,000**	
	Imperial Conversion		**1,378**	**$231.53**		**Per SF**	

	Estimated Construction Costs (Breakdown by Major Component)	GFA m2	Unit Cost/m2	Estimated Total	% of Total
1	Building	128	$2,039.06	$261,000	81.8%
2	Alterations and demolition	128	$0.00	$0	0.0%
3	Site Work (including M&E site services)	128	$453.13	$58,000	18.2%
4	Soft Costs	128	$0.00	$0	0.0%
	Total Estimated Hard and Soft Construction Costs	**128**	**$2,492.19**	**$319,000**	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	Camp Kawartha Master Plan **Entry And Parking Workshop**					
	Building Shell:					
	Excavation, Backfill, and Foundations					**$33,627**
	Note: We have assumed normal soil conditions exist in the proposed building location and that load bearing soil is present at the levels shown on the architectural/structural drawings.					
1	Strip topsoil and stockpile on site	128	m2	$1.50	$192	
2	Exterior strip footings including:	43	m	$165.00	$7,095	
2.1	- excavation, backfill and disposal					
2.2	- hand trim					
2.3	- formwork					
2.4	- reinforcing steel					
2.5	- concrete					
2.6	- keyway					
3	Interior strip footings including:				Excluded	
3.1	- excavation, backfill and disposal					
3.2	- hand trim					
3.3	- formwork					
3.4	- reinforcing steel					
3.5	- concrete					
3.6	- keyway					
4	Exterior pad footings including:	10	NO	$500.00	$5,000	
4.1	- excavation, backfill and disposal					
4.2	- hand trim					
4.3	- formwork					
4.4	- reinforcing steel					
4.5	- concrete					
5	Interior pad footings including:	3	NO	$400.00	$1,200	
5.1	- excavation, backfill and disposal					
5.2	- hand trim					
5.3	- formwork					
5.4	- reinforcing steel					
5.5	- concrete					
6	Exterior foundation walls including:	52	m2	$250.00	$12,900	
6.1	- reinforced concrete block, assumed 240 mm block					
7	Exterior pilasters and interior piers	13	NO	$250.00	$3,250	
8	Perimeter weeping tile and granular	43	m	$30.00	$1,290	
9	Perimeter insulation				Excluded	
10	Perimeter dampproofing				Excluded	
11	Miscellaneous embedded metals	1	LS	$500.00	$500	
12	Stair foundations	2	NO	$350.00	$700	
13	Stepped foundations	1	LS	$1,500.00	$1,500	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
14	**Lowest Floor Structure**					**$7,296**
15	Level and compact subgrade	128	m2	$2.00	$256	
16	Concrete slab on grade including:	128	m2	$55.00	$7,040	
16.1	- granular sub base					
16.2	- wire mesh reinforcing					
16.3	- concrete					
16.4	- screed and cure					
16.5	- steel trowel finish					
17	**Upper Floor Structure**					**$0**
18	NIL					
19	**Roof Structure and Coverings**					**$38,060**
20	Wood framed roof construction (MOP) including:	128	m2	$130.00	$16,640	
20.1	- base plates and anchor bolts					
20.2	- wood beams and columns					
20.3	- bridging and bracings					
20.4	- wood deck					
21	Framing to roof openings	1	LS	$300.00	$300	
22	Standing seam metal roof including underlayment, plywood sheathing, vapour barrier (MOP)	128	m2	$165.00	$21,120	
23	**Walls Above Grade (cladding, windows, and doors)**					**$30,517**
24	Wood siding wall including:	107	m2	$200.00	$21,317	
24.1	- wood siding (assumed T&G cedar with finish)					
24.2	- wood strapping					
24.3	- plywood sheathing					
24.4	- insulation					
24.5	- air / vapour barrier					
24.6	- wood studs					
24.7	- veneer plywood					
25	Fibreglass framed windows, assumed double glazed, low e coating, and argon filled	4	m2	$375.00	$1,500	
26	Wood framed fully glazed doors including installation and finish					
26.1	- single	1	NO	$2,200.00	$2,200	
27	Overhead door, assumed 3000 x 3000 mm	1	LS	$5,500.00	$5,500	
28	**Projections**					**$57,485**
29	Roof overhangs including structure, roof covering, and fascia	19	m2	$295.00	$5,605	
30	Covered parking including:	1	LS	$51,880		$51,880
30.1	- pad footings and piers	8	NO	$500.00	$4,000	
30.2	- gravel surface	152	m2	$20.00	$3,040	
30.3	- roof construction, roof covering (metal) and fascia (MOP)	152	m2	$295.00	$44,840	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
31	**Building Interiors:**					
32	**Interior Partitions and Doors**					**$3,000**
33	Allowance for partition and door at composting toilet	1	LS	$3,000.00	$3,000	
34	**Interior Finishes (floor, ceiling, and wall)**					**$4,480**
35	Concrete sealer	128	m2	$15.00	$1,920	
36	Stain/seal exposed wood deck	128	m2	$20.00	$2,560	
37	No finish (wood veneer plywood included with exterior wall and partitions)				Included	
38	**FF&E (miscellaneous metals, specialities, millwork, equipment, elevators)**					**$300**
39	Miscellaneous metals including lintels, bracing, and so fourth	1	LS	$300.00	$300	
40	**Mechanical:**					**$4,500**
41	**Plumbing and Drainage**					**$4,500**
42	Composting toilet	1	NO	$2,500.00	$2,500	
43	Wash-up sink to french drain pit adjacent to workshop	1	NO	$2,000.00	$2,000	
44	**Fire Protection**					**$0**
45	No work required - fire extinguishers by owner if required					
46	**Heating, Ventilation, Air Conditioning**					**$0**
47	Natural ventilation				Info only	
48	Electric heat by Div. 16 included elsewhere in this estimate				Info only	
49	Wood stove by others, included elsewhere in this estimate				Info only	
50	**Controls**					**$0**
51	No work required					
52	**Electrical:**					**$32,083**
53	**Service and Distribution**					**$19,839**
54	New 30cct 120/240V shop power panel	1	LS	$1,800.00	$1,800	
55	Feeder to new shop panel	300	m	$44.33	$13,299	
56	Power connection to new ventilation fan	1	NO	$382.24	$382	
57	Power connection to new furnace	1	NO	$382.24	$382	
58	Shop grounding system	1	LS	$1,400.00	$1,400	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
59	General Requirements including:					$2,576
59.1	- Supervision	1	LS	$1,035.00	$1,035	
59.2	- Premium time, etc.	1	LS	$0.00	$0	
59.3	- Job set-up, etc.	1	LS	$906.00	$906	
59.4	- Rentals, small tools, etc.	1	LS	$363.00	$363	
59.5	- Permits & inspections	1	LS	$236.00	$236	
59.6	- Insurance	1	LS	$36.00	$36	
59.7	- Performance bond	1	LS	$0.00	$0	
59.8	- Labour & material bond	1	LS	$0.00	$0	
59.9	- Contingency	1	LS	$0.00	$0	
60	**Lighting, Devices, and Heating**					**$6,778**
61	Workshop lighting using suspended fluorescent striplight fixtures	66	m2	$29.56	$1,951	
62	Covered parking and storage lighting using surface mounted incandescent fixtures	135	m2	$13.59	$1,835	
63	Workshop devices and lighting control using local switches	66	m2	$26.24	$1,732	
64	15A 125V duplex receptacle, GFI, W/P	3	NO	$123.52	$371	
65	General Requirements including:					$890
65.1	- Supervision	1	LS	$365.00	$365	
65.2	- Premium time, etc.	1	LS	$0.00	$0	
65.3	- Job set-up, etc.	1	LS	$309.00	$309	
65.4	- Rentals, small tools, etc.	1	LS	$124.00	$124	
65.5	- Permits & inspections	1	LS	$80.00	$80	
65.6	- Insurance	1	LS	$12.00	$12	
65.7	- Performance bond	1	LS	$0.00	$0	
65.8	- Labour & material bond	1	LS	$0.00	$0	
65.9	- Contingency	1	LS	$0.00	$0	
66	**Systems and Ancillaries**					**$5,466**
67	New fire alarm/security system interfaced with main facility system	1	LS	$4,000.00	$4,000	
68	New communications outlet with wiring	1	NO	$850.00	$850	
69	General Requirements including:					$616
69.1	- Supervision	1	LS	$183.00	$183	
69.2	- Premium time, etc.	1	LS	$0.00	$0	
69.3	- Job set-up, etc.	1	LS	$255.00	$255	
69.4	- Rentals, small tools, etc.	1	LS	$102.00	$102	
69.5	- Permits & inspections	1	LS	$66.00	$66	
69.6	- Insurance	1	LS	$10.00	$10	
69.7	- Performance bond	1	LS	$0.00	$0	
69.8	- Labour & material bond	1	LS	$0.00	$0	
69.9	- Contingency	1	LS	$0.00	$0	
70	**Site Work:**	2,025	m2	$23.27		**$47,128**
71	**Site Development (preparation, hard surfaces, improvements, landscaping, M&E services)**					**$47,128**
72	Clear and grub site, rough grading	2,025	m2	$2.00	$4,050	
73	Allowance for minor demolition, including tree removal	1	LS	$2,500.00	$2,500	
74	Make good landscaping/sod upon completion of construction	1	LS	$1,000.00	$1,000	
75	Gravel paving	1,760	m2	$20.00	$35,200	
76	Seed and topsoil	265	m2	$3.50	$928	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
77	Trees including:					
77.1	- large	2	NO	$500.00	$1,000	
77.2	- medium	7	NO	$350.00	$2,450	
78	**Mechanical Site Services**					**$0**
79	NIL					
80	**Electrical Site Services**					**$0**
81	NIL					
82	**Ancillary Work:**					
83	**Demolition and Alterations**					**$0**
84	NIL					
85	Subtotal 1				$258,000	
86	General Requirements	1	LS	$18,060	$18,000	7.0%
87	Labour & Material and Performance bonding	1	LS	$2,600	$2,600	
88	Fees	1	LS	$11,144	$11,000	4.0%
89	Subtotal 2				$290,000	
90	Design Allowance	1	LS	$29,000	$29,000	10.0%
91	Escalation Allowance (Excluded)					0.0%
92	Construction Allowance (Excluded)					0.0%
TOTAL ESTIMATED HARD CONSTRUCTION COSTS (exc. HST)		1.00	128 m2	$2,492.19	$319,000	

ESTIMATE SUMMARY
CAMP KAWARTHA MASTER PLAN
LANDSCAPE RESTORATION

ORDER OF MAGNITUDE ESTIMATE
SEPTEMBER 4, 2012

A.W. HOOKER ®
QUANTITY SURVEYORS

Gross Floor Area **2,000** **m2**

	Hard Construction Costs		GFA (m2)	Unit Cost/m2	Sub Total	Estimated Total	% of Total
1	Building Shell:		0	$0.00		$0	0.0%
	- Sub Structure			$0.00	$0.00		
	- Structure			$0.00	$0.00		
	- Exterior Enclosure			$0.00	$0.00		
2	Building Interiors		0	$0.00		$0	0.0%
	- Partitions and Doors			$0.00	$0.00		
	- Finishes			$0.00	$0.00		
	- Fittings and Equipment			$0.00	$0.00		
3	Mechanical including;		0	$0.00		$0	0.0%
	- Plumbing and Drainage			$0.00	$0.00		
	- Fire Protection			$0.00	$0.00		
	- Heating, Ventilation, Air Conditioning			$0.00	$0.00		
	- Controls			$0.00	$0.00		
4	Electrical including		0	$0.00		$0	0.0%
	- Service and Distribution			$0.00	$0.00		
	- Lighting, Devices, and Heating			$0.00	$0.00		
	- Systems and Ancillaries			$0.00	$0.00		
5	Site Work		2,000	$52.37		$104,738	80.6%
	- Site Development (prep, surfaces, landscaping)			$52.37	$104,737.50		
	- Mechanical Site Services			$0.00	$0.00		
	- Electrical Site Services			$0.00	$0.00		
6	Ancillary Work		0	$0.00		$0	0.0%
	- Demolition						
	- Alterations						
7	Contractor's General Requirements and Bonding	7.0%	2,000	$4.05		$8,100	6.2%
8	Contractor's Fees (OH&P)	4.0%	2,000	$2.50		$5,000	3.8%
9	Design Contingency	10.0%	2,000	$6.00		$12,000	9.2%
	Sub Total (current dollars)		**2,000**	**$64.92**		**$129,838**	
10	Escalation Contingency	0.0%	0	$0.00		$0	0.0%
	Sub Total (Excluding Escalation)		**2,000**	**$64.92**		**$129,838**	
11	Construction Contingency (post contract)	0.0%	0	$0.00		$0	0.0%
	Total Estimated Hard Construction Cost		**2,000**	**$65.00**		**$130,000**	
	Imperial Conversion		**21,528**	**$6.04**		**Per SF**	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	Camp Kawartha Master Plan **Landscape Restoration**					
	Site Work:	2,000	m2	$52.37		**$104,738**
	Site Development (preparation, hard surfaces, improvements, landscaping, M&E services)					**$104,738**
1	Sloped landscape improvements including:	500	m2	$125.88		$62,938
1.1	- clear and grub site, strip topsoil and grading	500	m2	$5.50	$2,750	
1.2	- removal of septic equipment - included with Septic field upgrade estimate				Excluded	
1.3	- allowance for miscellaneous demolition	1	LS	$2,000.00	$2,000	
1.4	- tiered landscaped terraces (assumed ironstone boulders or similar)	140	m	$350.00	$49,000	
1.5	- topsoil to planting beds	375	m2	$4.50	$1,688	
1.6	- allowance for landscaping, shrubs, trees, plants, etc.	1	LS	$7,500.00	$7,500	
2	Upper Common Landscape Improvements including:	1,500	m2	$27.87		$41,800
2.1	- clear and grub site, strip topsoil and grading	1500	m2	$5.50	$8,250	
2.2	- allowance for miscellaneous demolition	1	LS	$3,000.00	$3,000	
2.3	- topsoil to planting beds	1,500	m2	$4.50	$6,750	
2.4	- trees	18	NO	$350.00	$6,300	
2.5	- allowance for landscaping, shrubs, plants, etc.	1	LS	$15,000.00	$15,000	
2.6	- allowance for boarder to vegetable gardens, assumed timber	1	LS	$2,500.00	$2,500	
3	**Mechanical Site Services**					**$0**
4	NIL					
5	**Electrical Site Services**					**$0**
6	NIL					
7	Subtotal 1				$105,000	
8	General Requirements	1	LS	$7,350	$7,000	7.0%
9	Labour & Material and Performance bonding	1	LS	$1,100	$1,100	
10	Fees	1	LS	$4,524	$5,000	4.0%
11	Subtotal 2				$118,000	
12	Design Allowance	1	LS	$11,800	$12,000	10.0%
13	Escalation Allowance (Excluded)					0.0%
14	Construction Allowance (Excluded)					0.0%
TOTAL ESTIMATED HARD CONSTRUCTION COSTS (exc. HST)		1.00	2,000 m2	$65.00	$130,000	

ESTIMATE SUMMARY
CAMP KAWARTHA MASTER PLAN
SELECTIVE BUILDING REMOVAL

ORDER OF MAGNITUDE ESTIMATE
SEPTEMBER 4, 2012

A.W. HOOKER ®
QUANTITY SURVEYORS

Gross Floor Area 318 m2

	Hard Construction Costs		GFA (m2)	Unit Cost/m2	Sub Total	Estimated Total	% of Total
1	Building Shell:		0	$0.00		$0	0.0%
	- Sub Structure			$0.00	$0.00		
	- Structure			$0.00	$0.00		
	- Exterior Enclosure			$0.00	$0.00		
2	Building Interiors		0	$0.00		$0	0.0%
	- Partitions and Doors			$0.00	$0.00		
	- Finishes			$0.00	$0.00		
	- Fittings and Equipment			$0.00	$0.00		
3	Mechanical including;		0	$0.00		$0	0.0%
	- Plumbing and Drainage			$0.00	$0.00		
	- Fire Protection			$0.00	$0.00		
	- Heating, Ventilation, Air Conditioning			$0.00	$0.00		
	- Controls			$0.00	$0.00		
4	Electrical including		0	$0.00		$0	0.0%
	- Service and Distribution			$0.00	$0.00		
	- Lighting, Devices, and Heating			$0.00	$0.00		
	- Systems and Ancillaries			$0.00	$0.00		
5	Site Work		0	$0.00		$0	0.0%
	- Site Development (prep, surfaces, landscaping)			$0.00	$0.00		
	- Mechanical Site Services			$0.00	$0.00		
	- Electrical Site Services			$0.00	$0.00		
6	Ancillary Work		318	$89.87		$28,579	81.7%
	- Demolition						
	- Alterations						
7	Contractor's General Requirements and Bonding	7.0%	318	$7.23		$2,300	6.6%
8	Contractor's Fees (OH&P)	4.0%	318	$3.14		$1,000	2.9%
9	Design Contingency	10.0%	318	$9.43		$3,000	8.6%
	Sub Total (current dollars)		**318**	**$109.68**		**$34,879**	
10	Escalation Contingency	0.0%	0	$0.00		$0	0.0%
	Sub Total (Exluding Escalation)		**318**	**$109.68**		**$34,879**	
11	Construction Contingency (post contract)	0.0%	0	$0.00		$0	0.0%
	Total Estimated Hard Construction Cost		**318**	**$110.06**		**$35,000**	
	Imperial Conversion		**3,423**	**$10.23**		**Per SF**	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	Camp Kawartha Master Plan **Selective Building Removal**					
	Ancillary Work:					
	Demolition and Alterations					**$28,579**
1	Removal of exiting building and dispose including:	278	m2	$64.10		$17,820
1.1	- infirmary	42	m2	$65.00	$2,730	
1.2	- spurway	47	m2	$65.00	$3,055	
1.3	- trip shed	30	m2	$55.00	$1,650	
1.4	- wood sheds	36	m2	$55.00	$1,980	
1.5	- bunkie	41	m2	$65.00	$2,665	
1.6	- trip kitchen	39	m2	$75.00	$2,925	
1.7	- tent platform	28	m2	$55.00	$1,540	
1.8	- pump house	15	m2	$85.00	$1,275	
2	Relocate existing Mohawk cabin (assumed moved 50 m maximum from current location) including:	39	m2	$275.86		$10,759
2.1	- strip topsoil and stockpile on site	39	m2	$1.50	$59	
2.2	- sonotube foundations (assumed at 3000 mm o.c.)	8	NO	$400.00	$3,200	
2.3	- relocate cabin on new foundations and make good including trick rental	1	LS	$5,000.00	$5,000	
2.4	- disconnect electrical and reconnect in new location	1	LS	$2,500.00	$2,500	
3	Subtotal 1				$29,000	
4	General Requirements	1	LS	$2,030	$2,000	7.0%
5	Labour & Material and Performance bonding	1	LS	$300	$300	
6	Fees	1	LS	$1,252	$1,000	4.0%
7	Subtotal 2				$32,000	
8	Design Allowance	1	LS	$3,200	$3,000	10.0%
9	Escalation Allowance (Excluded)					0.0%
10	Construction Allowance (Excluded)					0.0%
TOTAL ESTIMATED HARD CONSTRUCTION COSTS (exc. HST)		1.00	318 m2	$110.06	$35,000	

ESTIMATE SUMMARY
CAMP KAWARTHA MASTER PLAN
SEPTIC SYSTME UPGRADE

ORDER OF MAGNITUDE ESTIMATE
SEPTEMBER 4, 2012

A.W. HOOKER ®
QUANTITY SURVEYORS

Gross Floor Area **1,000** **m2**

	Hard Construction Costs		GFA (m2)	Unit Cost/m2	Sub Total	Estimated Total	% of Total
1	Building Shell:		1,000	$41,156.00		$0	0.0%
	- Sub Structure			$0.00	$0.00		
	- Structure			$0.00	$0.00		
	- Exterior Enclosure			$0.00	$0.00		
2	Building Interiors		1,000	$0.00		$0	0.0%
	- Partitions and Doors			$0.00	$0.00		
	- Finishes			$0.00	$0.00		
	- Fittings and Equipment			$0.00	$0.00		
3	Mechanical including;		1,000	$0.00		$0	0.0%
	- Plumbing and Drainage			$0.00	$0.00		
	- Fire Protection			$0.00	$0.00		
	- Heating, Ventilation, Air Conditioning			$0.00	$0.00		
	- Controls			$0.00	$0.00		
4	Electrical including		1,000	$0.00		$0	0.0%
	- Service and Distribution			$0.00	$0.00		
	- Lighting, Devices, and Heating			$0.00	$0.00		
	- Systems and Ancillaries			$0.00	$0.00		
5	Site Work		100	$3,525.00		$352,500	80.8%
	- Site Development (prep, surfaces, landscaping)			$25.00	$2,500.00		
	- Mechanical Site Services			$3,500.00	$350,000.00		
	- Electrical Site Services			$0.00	$0.00		
6	Ancillary Work		1,000	$0.00		$0	0.0%
	- Demolition						
	- Alterations						
7	Contractor's General Requirements and Bonding	7.0%	1,000	$28.50		$28,500	6.5%
8	Contractor's Fees (OH&P)	4.0%	1,000	$15.00		$15,000	3.4%
9	Design Contingency	10.0%	1,000	$40.00		$40,000	9.2%
	Sub Total (current dollars)		**1,000**	**$436.00**		**$436,000**	
10	Escalation Contingency	0.0%	0	$0.00		$0	0.0%
	Sub Total (Excluding Escalation)		**1,000**	**$436.00**		**$436,000**	
11	Construction Contingency (post contract)	0.0%	0	$0.00		$0	0.0%
	Total Estimated Hard Construction Cost		**1,000**	**$436.00**		**$436,000**	
	Imperial Conversion		**10,764**	**$40.51**		**Per SF**	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	Camp Kawartha Master Plan **Septic Systme Upgrade**					
	Site Work:	100	m2	$3,525.00		**$352,500**
	Site Development (preparation, hard surfaces, improvements, landscaping, M&E services)					**$2,500**
1	Allowance to make good landscaping upon completion of work	1	LS	$2,500.00	$2,500	
2	**Mechanical Site Services**					**$350,000**
3	Upgrade septic system as per recommendations outlined in sewage works investigation / report including new storage tank, pumps and enlarged septic field.	1	NO	$350,000	$350,000	
4	**Electrical Site Services**					**$0**
5	Included above					
6	Subtotal 1				$352,500	
7	General Requirements	1	LS	$24,675	$25,000	7.0%
8	Labour & Material and Performance bonding	1	LS	$3,500	$3,500	
9	Fees	1	LS	$15,240	$15,000	4.0%
10	Subtotal 2				$396,000	
11	Design Allowance	1	LS	$39,600	$40,000	10.0%
12	Escalation Allowance (Excluded)					0.0%
13	Construction Allowance (Excluded)					0.0%
TOTAL ESTIMATED HARD CONSTRUCTION COSTS (exc. HST)		1.00	1,000 m2	$436.00	$436,000	