Something from nothing.

The architect. The scavenger.

by
Hailey Weatherbee

A thesis submitted to the Faculty of Graduate and Postdoctoral Affairs in partial fulfillment of the requirements for the degree of

Master
in
Architecture

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ABSTRACT

Can reappropriations of the same reclaimed building materials and found salvage instruct two different design approaches? The search begins collecting authentic building materials and reclaimed architectural artifacts. Items that would otherwise end up in landfills at great historical and environmental expense will be studied and reappropriated. The salvage will be repurposed into two different designs; a home renovation and a tabula rasa workspace retreat for a scavenging architect. Both designs take a complete look at imposing architectural salvage as the basis of frugality, building material reuse and recycling.

Can *something* be created *from nothing*?

THE ARCHITECT. THE SCAVENGER.

SOMETHING FROM NOTHING

Architecture, Agency, and Activism
Engaging Material Thinking in Architecture

by **Hailey Weatherbee**

A Thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of
Master of Architecture
in Master of Architecture Studies (M.A.S.)

Azrieli School of Architecture & Urbanism
Associate Professor, Associate Director Graduate Program: **Roger Connah**

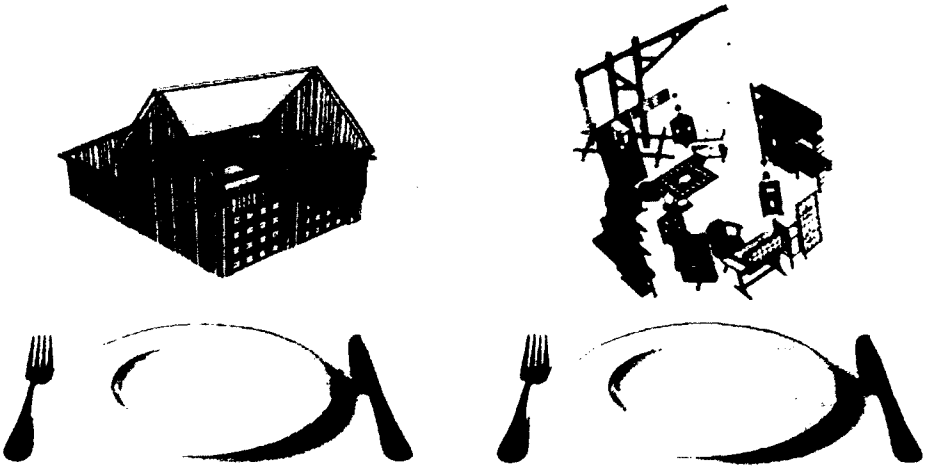
Carleton University, 1125 Colonel By Drive
Ottawa, Ontario, Canada
K1S 5B6

April 2013

ABSTRACT

Can reappropriations of the same reclaimed building materials and found salvage instruct two different design approaches? The search begins collecting authentic building materials and reclaimed architectural artifacts. Items that would otherwise end up in landfills at great historical and environmental expense will be studied and re-appropriated. The salvage will be repurposed into two different designs; a home renovation and a tabula rasa workspace retreat for a scavanging architect. Both designs take a complete look at imposing architectural salvage as the basis of frugality, building material reuse and recycling.

Can *something* be created *from nothing*?



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JULIE AND BOB BOADWAY Mom and Dad

This thesis is dedicated to my parents who have given me the opportunity of an education from the best institutions and support throughout my life. This thesis would have remained a dream had it not been for their help. It is no fluke I pursued an interest in architecture and I am happy to share a love for building and design. Another *thesis* could be written in order to thank my parents for the life and encouragement they have always given me.

Never, ever, give up.

IMAGE OF MY PARENTS AT THE PRAGUE QUADRENNIAL INTERNATIONAL THEATRE PERFORMANCE DESIGN COMPETITION. Weatherbee, Hailey. Prague, Czech Republic, 2011.

BEN WEATHERBEE Husband

I also dedicate this thesis to my best friend who has always helped me and believed that I could do it. For the tears he's had to wipe, the models he's had to help build, for the designs he's had to pretend to like, and for the reassurance he's had to give at 3:00 a.m., I thank him.

IMAGE OF BEN AT THE CARLETON UNIVERSITY LACROSSE FIELD. Weatherbee, Hailey. Ottawa Ontario, 2007.

ROGER CONNAH Professor + Director Graduate Program

This thesis is also dedicated to my thesis advisor Professor Roger who has been my friend, guide and philosopher throughout my entire time at Carleton University. It is with immense gratitude that I acknowledge the support, positive encouragement, the motivation, and immense knowledge he has given me *and* all students throughout the years.

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I cannot find words to express my gratitude to my Ma-in-law! Ellen was my personal chauffeur to and from Ottawa, the most helpful researcher and my much needed editor. Ellen sincerely helped me along the entire thesis journey and I thank her for that. *For any errors or inadequacies that may remain in this work, of course, the responsibility is entirely my own!*

IMAGE OF THE 20 WEEK ULTRASOUND Weatherbee, Hailey. Uxbridge Ontario, 2013.

MS. BABY BEE Due June 2013

I share the credit of my work with my thesis buddy, Ms. Baby Bee. Late nights and early mornings (filled with *decaf* coffee's) Ms. Bee literally kicked me along keeping me determined to finish stress-free (*?!*) and on time!

CLASS OF 2011

Bachelor of Architecture
Carleton University

IMAGE OF CLASSMATES: **Chong, Alex M. Ottawa Ontario, 2011.**

CLASS OF 2013

Master of Architecture
Carleton University

IMAGE OF CLASSMATES: **Lioubachevski, Elena. Berlin, 2013.**

Special thanks to all my undergraduate and graduate friends I have made in the past years at Carleton University. I feel very lucky to have built relationships with such a talented group of peers who inspire me to push my design ideas further.

FAMILY

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Blanket

Jacket

Vest

Tie

Handkerchief

Button

FIG. 2 IMAGES OF STORYBOOK ILLUSTRATIONS: Gilman, Phoebe. *Something From Nothing*. Markham, Ontario: Scholastic, 1992.

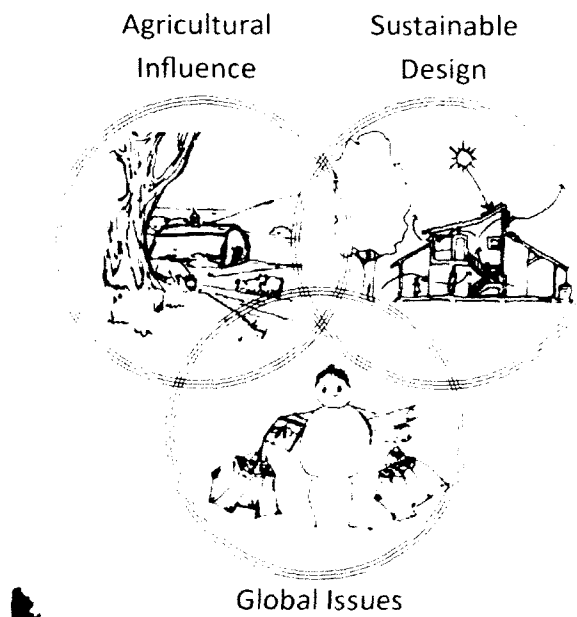
PROLOGUE

The inspiration for two design strategies focus on creative new uses of hunted, salvaged and found building materials. Both designs look at recycling the same reclaimed elements into two reuse building projects.

These projects take a special cue from a storybook titled *Something from Nothing*, by Phoebe Gilman (1982) (Fig. 1). Key ideas taken from this childhood book focus on revising, reusing, reappriopriating and ultimately storytelling. In the childhood story book, Joseph's Grandpa can fix anything. He can turn a worn out blanket into a wonderful jacket, a vest into a Sabbath tie and a ragged handkerchief into a brand-new button. The blanket is transformed over the years from a jacket into a button, and, ultimately a story (Fig. 2).

The reuse of the reclaimed timbers from the barn at 812 Monarch Road, Lindsay, Ontario, and the items found on site and purchased from local auctions are designed into a *limited* home renovation and an *unlimited* workspace retreat. All gathered materials will play a cruical role, as the new designs come after the scavenging process. The role of an architect is challenged to think like a scavenger.

"The nothings will instruct the new something"
(Weatherbee).



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PERSONAL INFLUENCES

I was born May 5, 1987 which also marked the day when my parents dug the foundation of my childhood home (Fig. 3). The built environment of my home continued to grow and change around me, as I grew. My parents built my house into a home, the home grew into a working farm, and the farm grew into a lifestyle and mindset. My four sisters and I could build forts in the forest, eat peas from the orchard, and swim in the pond. Besides the obvious benefits, living on an organic garlic and beef cattle farm taught me that *the home* could be transformed into a giant recycling center paying close attention to the conservation of natural resources.

Naturally, many of my interests and skills are entangled with reappropriation, nature and the ever changing built environment happening around me. The particularly special interest in the study of adaptive reuse materials and projects are inherent within me. Reusing readymade elements and spaces is a clever way of thinking, and I give credit to my family for providing me with the lifetyle and imagination to help me think in this way.

> "Architecture has to be greater than just architecture. It has to address social values, as well as technical and aesthetic values. On top of that, the one true gift that an architect has is his or her imagination. We take something ordinary and elevate it to something extraordinary" (Mockbee 1.2).

CHAPTER 01. INTRODUCTION

INTRODUCTION

Using various case studies from different contributors tests the limits of recycling as a critical category of architectural salvage and seeks to define its specific character in relation to other forms of artistic appropriation. Today's contemporary fascination with recycling is addressed as a larger cultural concern with reuse, appropriation and re-presentation while still preserving memory.

The tremendous growth in the building industry and the resulted increase in wasted materials within the 21st century is undoubtedly an issue of concern. The high concern for the negative outcomes of such tremendous growth in building is especially concentrated with the disposal of the debris from the buildings that are demolished. Encourages a translation for recycled building resources today. The transfer of ownership in various building materials and reclaimed artifacts is studied and adopted into two different design styles.

Found salvage purchased from local auctions, at discounted prices, will be given new life. The reclaimed items will be used within the designs emphasizing characteristics of fragmentations, historicism, memory, authenticity, authorship and appropriation. These practices speak to a desire to make use of preexisting elements for contemporary purposes.

In today's world, and over the past decade, there has been a gradual change in the mindset of society with a focus on preserving and reusing what we already have. This change in focus comes full circle from the mentality of what was use and consume with the disregard from the reality of not every resource being of infinite proportion.

Throughout different countries, federal and local Governments are mandating usage policies on: how resources can be allocated, the amount that can be used over a period of time, and policies centering around preservation and possible renewal of our resources. This global awareness has had an impact on producers, consumers and the everyday lives of people in general.

Over the years, as the focus has shifted, the impact of this, green, mentality has brought about positive change to general and specific parts of our world that may not have been fully considered in the past. One of these specifics could be how each different industry is affected, and to what extent. The field of architecture has and continues to change. Architects and design professionals have begun to see the value reuse and reappropriation of different materials and features in their designs. A run down structure can be looked at with the perspective of new possibilities and salvageable components that could both bring character into a new build. From the chimney cap, to worn floor boards, there is a very wide range of creativity that can be explored. Wherever recycling can be introduced, parts of the past are transferred to the present through our design and building expressions. Reusing from what we have, help to storytell and to preserve what we some day may not have.

Emphasizing the utility of reused materials is the focus of the future, and with it, a world of possibility for a scavenging architect.

Two different projects look at using the same scavenged materials in creating two designs. The 224 Reach Street home renovation looks at imposing reclaimed items into an existing home. The second design uses the natural setting of the 224 Reach site and focuses the new space as an office for a scavenging architect constructed from the same reclaimed items.

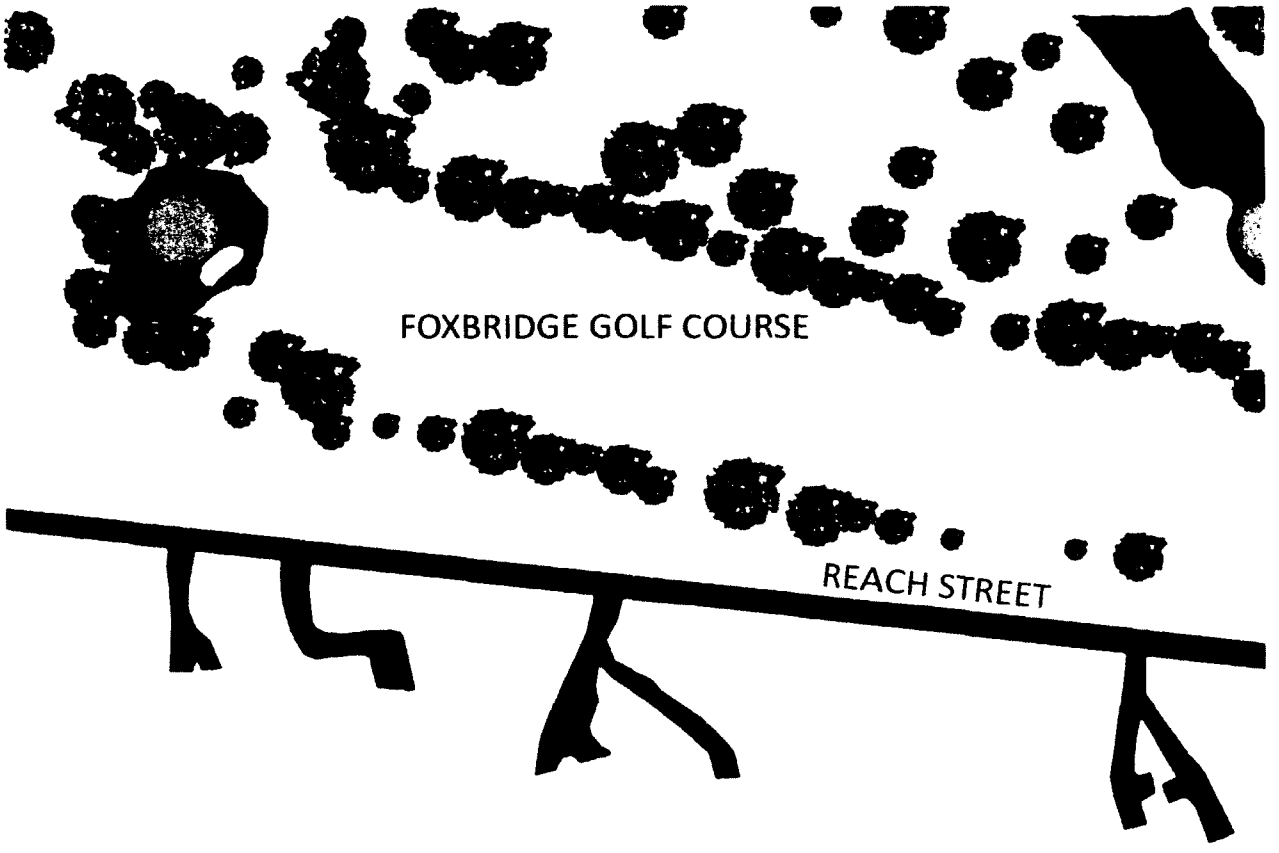
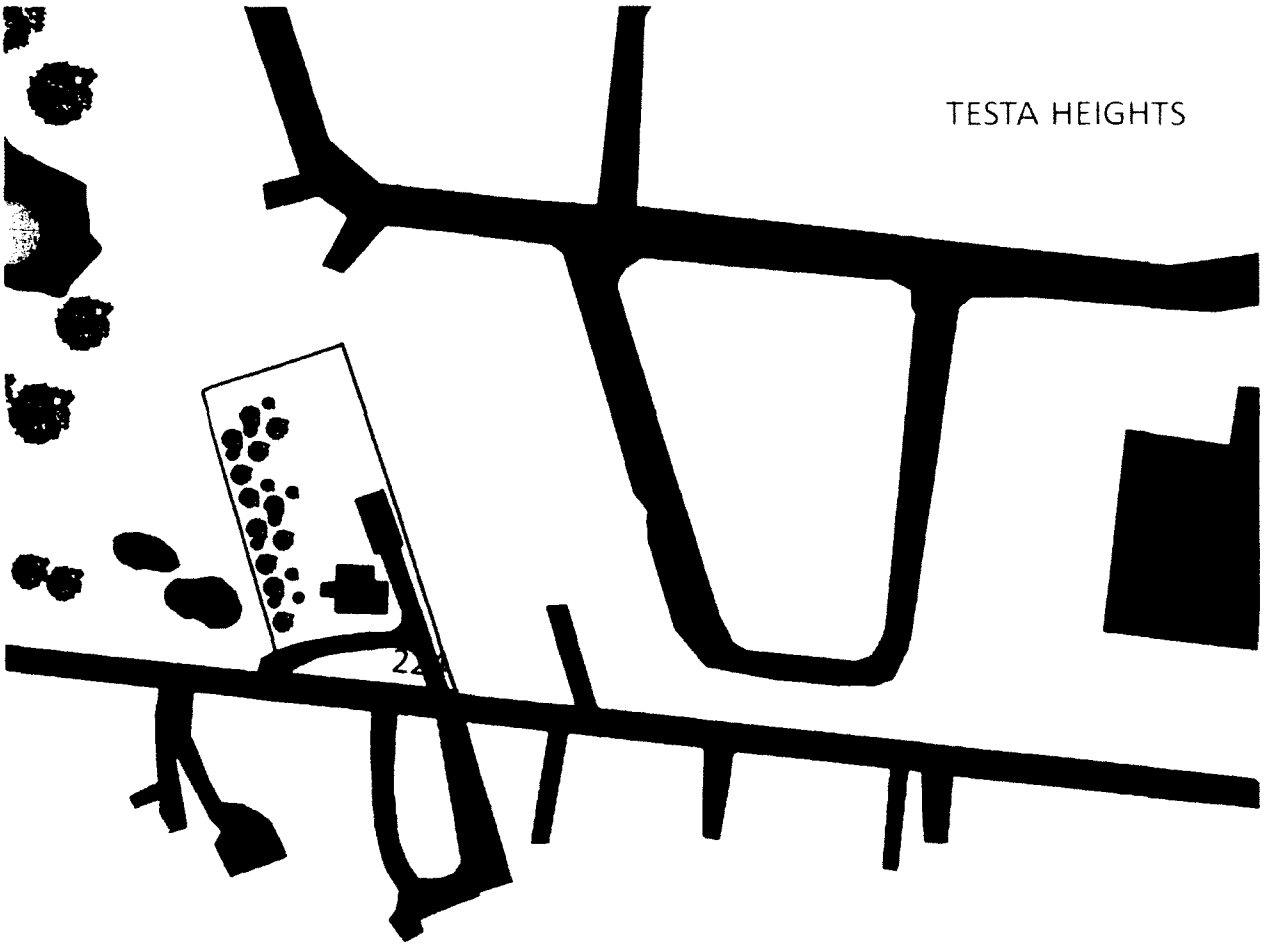


FIG. 4. SITE MAP OF SURROUNDING: Weatherbee, Hailey. Uxbridge Ontario, 2013.

224 REACH STREET HOME

The artistic composition of old elements and new construction assemble together in the existing 224 Reach Street home (Fig. 5).

FIG. 5. INSPECTING THE EXISTING HOME: Weatherbee, Hailey. Uxbridge Ontario, 2013.



224 REACH STREET TREE LINE

The natural setting (Fig. 6) at 224 Reach Street has no restrictions on the design possibilities in designing a workspace for the scavenging architect.

FIG. 6. 224 REACH STREET TREE LINE. Weatherbee, Hailey. Uxbridge Ontario, 2013.

CHAPTER 02. EXISTING IDEAS

Sven Kraumanis is the owner and operator of Legacy Vintage Building Materials and Antique salvage store in Cobourg, Ontario.

FIG. 7. IMAGE OF REUSED SKID: Scrap Hacker. *Skid Stairs*. Last Modified September, 2012. Accessed September, 2012 <dishfunctionaldesigns.blogspot.se>.

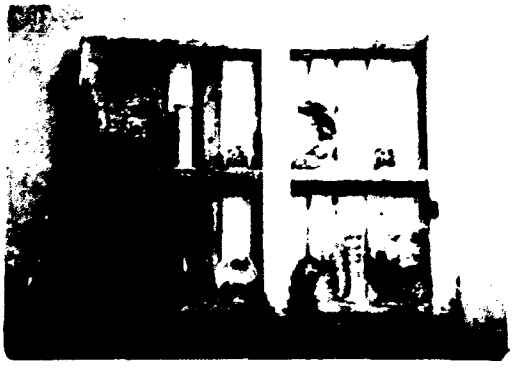


FIG. 8. IMAGE OF REUSED SKID 2: Foto, Anderes. *Skid Art*. Lookbook, Woonkamer. Accessed September, 2012 <www.welke.nl>.

THE FUTURE OF RECYCLING

The tremendous growth in the building industry within the 21st century is undoubtedly an issue of concern to many people. Such tremendous growth in building disposal of the debris from the buildings that are demolished to be replaced is of high concern. Demolition of old buildings is necessary to give space for new ones and even for renovation of the old ones. In a lot of cases, the demolished materials are not handled in the most efficient ways. Given this, undesirable outcomes are overwhelmingly being witnessed. Environment Canada (2009) has stated, "[e]very time a house is built, renovated or demolished, a great deal of waste is deposited in local landfills. A demolished house can add up to 42 tonnes (92 thousand lbs.) of waste to landfill sites, and these materials can account for 15 to 20 percent of total landfill waste. Discarded, reusable materials includes wood products (mouldings, beams, plywood, exterior sheathing), metal products (radiators, piping, fixtures, wiring) and dry products (bricks, stone, marble, glass)" (Kraumanis). The use of landfills in disposing waste from demolished buildings, for example, is one such an undesired outcome. The idea of reuse needs to be more seriously thought about today (Fig. 7, Fig. 8). The discussion focuses on reuse of building waste in the 20th century and how this should change in the 21st century in relation to the mindset of Canadian architects and builders.

CONSUMERISM CRISIS

The 20th century has experienced both effective and ineffective ways of handling waste from demolished buildings. The ineffective ways have been more so through the use of landfills to dispose building wastes. A program of collecting wastes does not prevent building waste materials from getting into landfills if there is no market demand for anyone to use them (Friedman 88). In support of this is the fact that the amount of debris from demolished houses is usually voluminous. A single storied building, for instance, can produce tonnes of waste which might not find enough space for disposal. As such, there is need to have an established consumer base for the demolished materials in order to have a way of minimizing undesirable environmental effects that are bound to come about. The past ideas of reuse in relation to landfills make such an idea outdated.

Reuse of building materials has often been considered a preserve of the slums, a constant feature in developing countries. This has in turn perpetually contributed to the pollution menace, hence the call for a more radical approach to solving the problem (Friedman 88). Some of the materials from demolished buildings are used to construct houses in the slums, including galvanized iron sheets, bricks, stones and glass. Slums are usually perceived to be for the economically disadvantaged people who cannot afford decent housing. As such, these remnants find a disposal space in the slums in the name of being re-used to build houses there.

This idea does not bring much benefit since even the structures that come out of it are in most cases precarious and pose a threat to the safety of the habitats as evidenced in most slum areas. Such a situation leads to social marginalization and encourages social and economic stratification.

The use of landfills to dispose of building wastes is guided by emphasis on the perception that people have on new products. Architects and builders tend to use new products such as wood, glass and stone because they consider new products as being capable of functioning more efficiently compared to products which have been reused. New building materials are also considered to be cleaner and safer compared to re-used ones. These ideas are in no way justifiable when the number of ways through which reused materials have been useful is considered. There has been recycling of wood wastes emerging from demolished buildings in many parts of the world, with attractive products coming out of it. To illustrate this, it is observed that demolition and land debris among other sources accounted to, "99,000 tons of wood recycled" (Conklin 13). Using building materials in the 21st century has often been on the basis of new building materials perceived to be of more quality compared to re-used materials. The ideas that people have had, especially architects, need to change in the 21st century. Reused materials need to gain a more competitive outlook in the building and construction market rather than being

"The bald eagle population had been wiped out around the mid 1900's because of excessive hunting, habitat destruction from farming, logging and urban development, and the use of pesticides especially DDT. Under the Endangered Species Act, bald eagles are considered regionally endangered (Pennell)."

Avi Friedman began his architectural studies at the Politecnico di Milano in Italy, received his Bachelor of Architecture from the Technion - Israel Institute of Technology and his Master of Architecture from McGill University in Montréal and his Doctorate from the Université de Montréal. He co-founded the 'Affordable Homes Program' at the McGill School of Architecture, where he is a Professor (School of Architecture - McGill University).

used in a manner suggesting that the days of their usability are numbered like is the case witnessed in the present times. To achieve this, there is need for more aesthetic input from the architects in the way they make use of these materials.

Reuse of building products in light of the ineffective ways of handling waste has had significant implications for the environment. Architects can appear to be guided by competition and materialism rather than the value of re-usable materials available. This causes the profession to seem out of touch with the imminent reality. Such a perceived mindset will continue to have a negative effect on the environment and generate long term economic costs. Landfills are costly and the result is that the disposed materials lead to wasteful ways of dealing with the waste building materials.

According to Friedman, most of the wood generated from demolition or renovation of structures made of wood is disposed in landfills yet it can be recycled and consequently be reused (Friedman 93). This amounts to irrecoverable and unnecessary waste. Recycling of wood from demolished buildings will therefore minimize destruction of indigenous forests which are a home for wild animals. Architects and builders should shift from using new materials such as wood to using materials that have been recycled where possible. Environmental degradation has been one of the

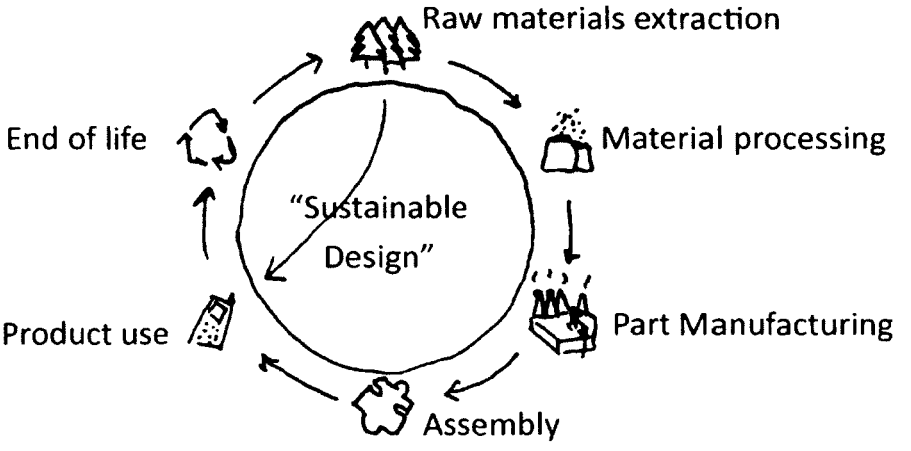
"The use of the chemical DDT hurt the bald eagle population and by 1980 they were on the brink of extinction in Ontario. Bald eagles were considered endangered nationally from 1978 to 1984 and are still endangered in Ontario (Sharon)."

loudest cries of individuals and organizations. The poor ways through which the debris from demolitions is handled are given little consideration in many environmental forums as it is assumed that the responsibility of handling this crisis is in the hands of the builders and owners of the structures alone.

In addition to recycling building wastes, architects also need to emphasize the authenticity of reused building materials, especially when dealing with historical artifacts. Given this, there is need for design to advocate for repurposing of building wastes such as sculptures and furniture. Building wastes, especially historical artifacts, can be incorporated to suit the design of modern homes without interfering with the harmony of modern and historical designs. Building elements such as sculptures and furniture arising from demolished buildings should be sought to reclaim considering that such items cannot be exactly replicated, making them to be invaluable sources of designing modern homes. They have such a touch of historical value that cannot be found in any other place except in reclaimed building materials. As much as modern home designs conform to changing times in relation to cultural values and ideals, reclaiming of building materials is important in order to have memory of historical values of the past which set the course of modern home designs being witnessed today.

It is in everyone's interest to protect all different kinds of species, anything that maintains biodiversity is reflective of a healthy environment (Kate)."

It is evident that the ideas of reusing building materials witnessed in the 20th century need to change, given the undesirable outcomes of what has so far been happening. The 21st century demands that competing interests should be minimized for the sake of upholding the interests of the community, and this can be well achieved through effective management of construction debris. Everyone should be able to access decent housing while at the same time building waste should be minimized as much as possible in order to preserve the environment and the historical value of artifacts. Given the recent trend in the massive demolition of the existing structures there is room for change with the help of today's architects, emphasizing the hidden treasures of debris from demolished structures and giving appreciation of what such remnants are capable of producing.

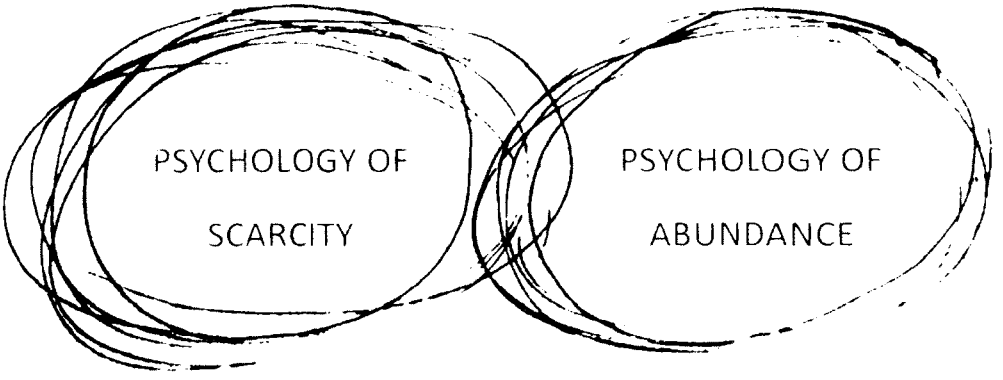


PROTECTION

The preservation of our resources, and to reduce unnecessary waste are at the heart of sustainable design. Recycling, composting and reusing are all different approaches that can be considered when looking at this idea. The general focus to reuse and salvage existing materials is essentially what brings these different aspects together and creates the shell of sustainability and sustainable design.

By essentially getting rid of the, 'end of life,' part of the cycle for a product or material, we are preserving what we have and decreasing waste through discarded products and materials.

The use and reuse of building materials in architectural design can be thought of as two unique models of study (Jansen). These models are:



PSYCHOLOGY OF SCARCITY

The psychology of scarcity, supports that resources that are available for human utility should be used extremely economically (Jansen). This translates into recycling resources that have previously been used. The aim of this mode of thinking and management is to preserve resources that are scarce (Fig. 9). The psychology of scarcity finds numerous applications in the preservation of historical artifacts and other key inventions that have occurred along the course of human history.

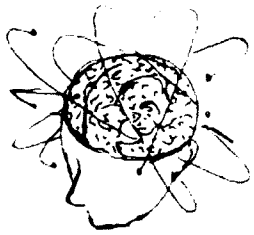
FIG. 9. IMAGE OF FALLING DOWN BARN: Weatherbee, Hailey. Uxbridge Ontario, 2013.

Wendy Jansen is the author of *Abundance in Positive Design*. The two ideas on each psychology were taken from her chapter on The Image of 'Unlimited Good'.

PSYCHOLOGY OF ABUNDANCE

In the model of the psychology of abundance, it is believed that there is an excess of resources available for utilization by masses (Jansen). This guidance on resource use does not find limitation in the total cost of investment. What matters to the initiators of the project, is the quality of the project and the value that it carries with regards to historical and artistic domains (Fig. 10).

FIG. 10. IMAGES OF REUSED DOORS Garrid, Cristina. *Hidden Value, Critical Practice*. Last Modified August, 2011. Accessed November, 2012 <http://cargocollective.com/cgresearchfolio/RESEARCH-PAPER_>.



A CHANGE IN MINDSET

Reuse in the 20th century	Reuse in the 21st century
Negatively charged idea	Little surplus
Backwardness	Cannot afford waste
Social marginality	Historicism
Slums	Memory
Developing World	Authenticity
New Products: more efficient, cleaner, safer, more aesthetically appealing	Melodies, stories, images, symbols, other forms of expression
	Value in items that can't be replicated

CASE STUDIES

The relationship between material scarcity and material abundance ideas can be found in the following projects that carefully use both psychologies. Each of the following projects and companies (Fig. 11) use both discussed psychologies benefitting complete utility and maintenance of resources.

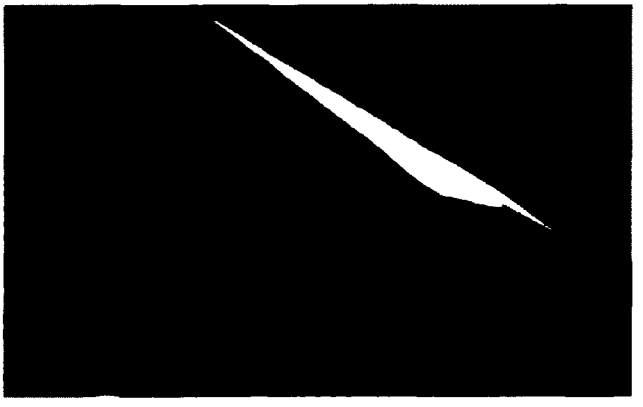


FIG 11 :IMAGE OF A RURAL STUDIOS PROJECT: Mockbee, Samuel. *Thought and Process*. New York, NY: Princeton Architectural Press, 1995.

FIG. 12. IMAGE OF GEHRY HOUSE: Houses and Residential in the Architecture Category. *The House that Shaped an Architectural Generation: Frank Gehry's First 'Deconstructivist' Building*. Last Modified February, 2008. Accessed October, 2012 <weburbanist.com/2008/02/03/>.

GEHRY RESIDENCE / FRANK GEHRY

The Gehry Residence (Fig. 12) designed by Frank Gehry uses the psychology of abundance in numerous formats. This unique building construction is located in California (Perez). The building makes use of an investment approach towards an old structure. In his pursuit for a residence for his family, Gehry focuses on maintaining an old building by encapsulating three sides of the building and focussing on extending the remaining side so that the building may accommodate the few occupants. In upholding the psychology of abundance, Gehry considers that he has no need to bring down the old building before setting up the new structure. Gehry balances elements of the old building and the new building. He maintains the respective parts of the new and the old in order to maintain the desired esthetic look of the building. According to the neighbours of Frank Gehry, the building looks like, "an abode for ghosts" (Perez). The architectural idea behind the building goes largely against the conventional method of building (Perez). For instance, Gehry takes upon disguising the entry point to the building. The design of the entrance is not conspicuous because of the massive use of numerous elements. The rising of the apex of the house in the midst of the new construction indicates a picture of work in progress.

The original Dutch Colonial home was left intact and the new house was built around it using inexpensive found objects. Gehry uses "wood, aluminum, and chain link fencing to construct the entrance" (Perez). It is evident that the building has made use of numerous types of materials. The result of this method of application is that the audience gets a feeling of massive expenditure in gathering the collective material (Perez).

Gehry's efforts at using abundantly available and affordable material are embellished in the pulling down and building up of walls. The completed project was a delicate but strong balance of fragments of the old house together with raw and refined pieces that dot the contemporary style of building. The outcome of mixing the old and new building styles is a "loud shriek" of a commonly existing building style (Perez) (Fig. 13). The result in the Gehry Residence is an inexpensive expansion of an old colonial building (Perez). Despite leaving the old colonial house intact, Gehry focuses on portraying the interior of the house using angular glass skylight. The wooden floor is exposed in a sculpture like view when reflected into the glass above. The elements inside the house were altered so that both the new and the old elements of the building could fit. Inside the house reveals the existence of two types of doors. The new areas have new doors while the old sections have old doors (Perez).

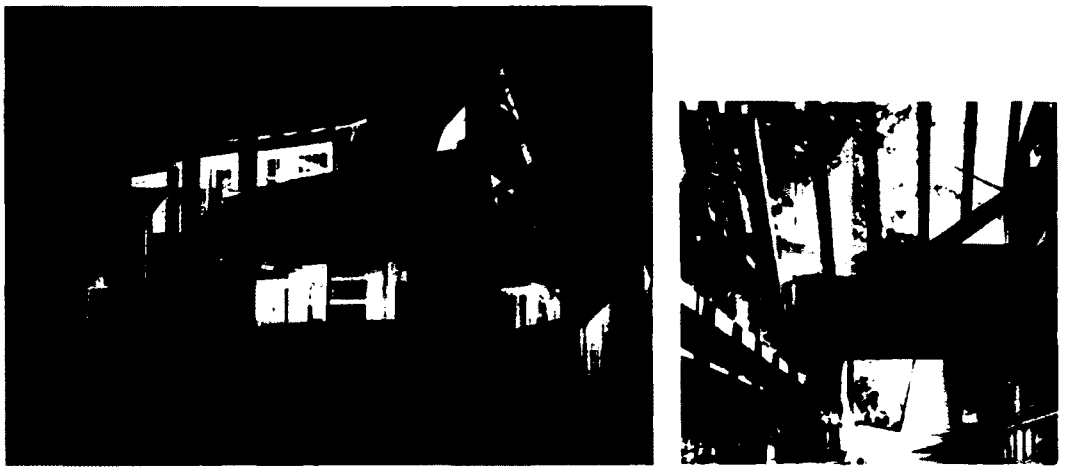
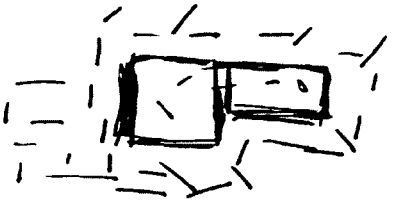


FIG. 13. IMAGES OF GEHRY HOUSE: Houses and Residential in the Architecture Category. *The House that Shaped an Architectural Generation: Frank Gehry's First 'Deconstructivist' Building*. Last Modified February, 2008. Accessed October, 2012 <weburbanist.com/2008/02/03/>.

The main idea behind the use of psychology of scarcity is the reuse of items of history that need preservation. In the Gehry project, we find the desire to maintain an old colonial structure in the midst of neighbouring new and contemporary houses (Perez). The Gehry residence is a rare occurrence of the old existing technologies. Gerhy's design serves as a clear comparison of the old and new versions of architectural designs (Fisher 158). With this information, people are able to relate the new and the old hence preserving technological progress. Gehry aims to communicate that there exists value in maintaining the past architectural designs in order to complement the new designs. The Gehry residence is a direct attempt at upholding the psychology of scarcity in the building industry.

The Gehry Residence WRAPS a new shell exterior around the exisiting home, using found objects.



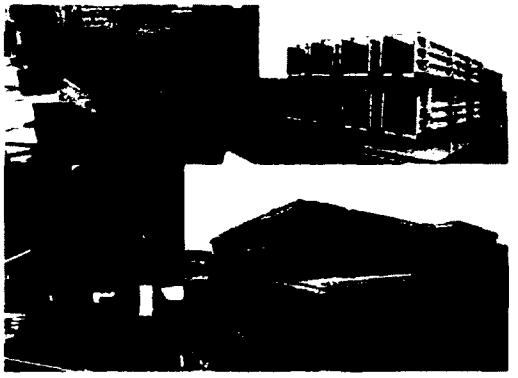


FIG. 14. IMAGE OF B.G DIG ORIGINAL MATERIAL:
Single Speed Design. *The Big Dig House.* Last Modified June, 2009. Accessed September, 2012 <www.archdaily.com/24396/big-dig-house-single-speed-design/>.

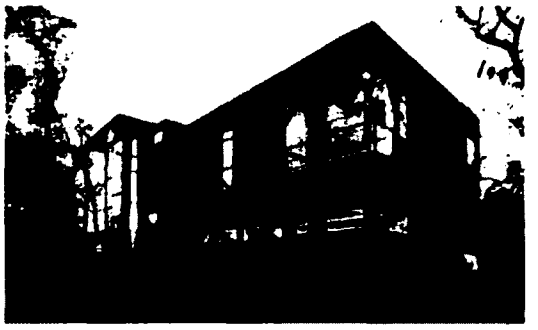


FIG. 15. IMAGE OF BIG DIG COMPLETED DESIGN:
Single Speed Design. *The Big Dig House.* Last Modified June, 2009. Accessed September, 2012 <www.archdaily.com/24396/big-dig-house-single-speed-design/>.

Thomas Fisher is the dean of 'College of Design' at the University of Minnesota. Educated at Cornell University in architecture and at Case Western Reserve University in intellectual history, Thomas previously served as the Editorial Director of *Progressive Architecture* magazine (Amazon Fisher).

THE BIG DIG HOUSE / SINGLE SPEED DESIGN

The Big Dig House (Fig. 15) designed by Single Speed Design (2008) is touted as one of the most expensive reclaimed projects in United States history. The Big Dig project was done on reclaimed land in the city of Boston (Single Speed Design). In that aspect, it's a remarkable example of recycling in architecture. This project receives the honour of expense because of the magnitude of re-routing work that was invested in the project. For instance, a whole central highway had to be broken to facilitate routing it through an underground channel. The rechanneling work increased the need for engineering application and methods (Fisher 133). This arose because the project needed the excavation of utility lines, drainage pipes and also metro lines. The project invested a lot in the use of heavy machinery because the area had a lot of barriers existed in the tunnels. Among the barriers, there were archeological and geological barriers (Single Speed Design). Glacial remains formed a hard point that largely hampered the construction work. These remains arose from the remains of sunken houses, wrecked ships and other remains of submerged material that existed in this reclaimed land.

The demolition of the highway needed highly organized planning. The debris from the bridges and the highway needed proper and organized depositing (Fig. 14). The debris needed planned separation of the

useful pieces of debris from the useless bits. This meant that there was an abundance of building material (Single Speed Design). The psychology of abundance is applied in the recycling process that largely dotted the Big Dig House project. There was a lot of debris that lay at the construction site. In constructing the Big Dig House, the contractors made use of steel and concrete remains obtained from the deconstruction. The debris was used to put up the structural system (Single Speed Design). There was an inherent advantage that accompanied the use of the recovered debris. The debris is stronger than usual material used for building purposes. With this advantage, the design of the building accommodates heavier gardens on the roof of the building. The reason for this design is that the debris used for structural construction could withstand much more stress than other standard material used for building.

The Big Dig project brings to focus the scarce glacial remains formed during the Ice Age. Some key materials mentioned in the Big Dig project include: remains of submerged houses, wrecked ships, together with other materials that arose from the deconstruction process (Single Speed Design). Another resource that comes as a scarce resource is the space where the debris is supposed to be deposited. The Big Dig project makes use of unconventional materials like glaciated rocks that have ex-

Robert Bechtel and Arza Churchman are the authors of *Handbook of Environmental Psychology.*

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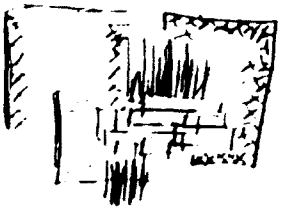
tremely vital significance in relation to history. The use of these materials stands to break the existing idea that debris is not useful in current construction projects (Bechtel and Churchman 165).

The Big Dig House reutilizes recovered debris by WEAVING the recycled building materials into a new home design.



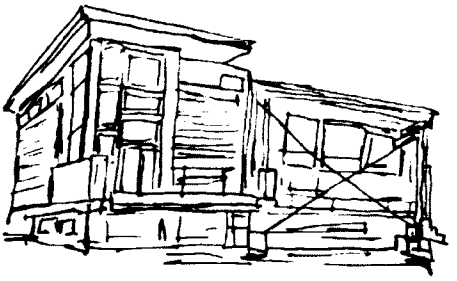


FIG. 16. IMAGES OF PIG BARN ASSEMBLY. FNP-Architekten. *Adaptive Reuse: From Derelict Pig Barn to Modern House.* Zurück Zur Projektübersicht. Accessed September, 2012 <www.fnp-architekten.de>.

PIG BARN / FNP ARCHITECKTEN

The Pig Barn (Fig. 16) designed by FNP Architeckten is an adaptive reuse project that involved the maintenance of a feeble pig barn. The external appearance of this barn depicts a worn out structure but the interior of it is designed to be a stylistic accommodation facility. The Pig Barn could not withstand any additions or subtractions of materials so a tactical solution had to be identified. The original building was largely weakened by the effects of the Second World War (Architektur). The solution to maintaining this vital historical asset was to drop in an affordable prefabricated structure. The prefabricated house did not affect the structure of the old barn but stood to support the barn. If the "house within house" proposal did not work to reinforce the old barn, the project would be rendered useless and fit for demolition (Architektur).

The shell of the Pig Barn was deemed to be intact but adding to it or subtracting from it would spoil its architectural state. The solution was to add an entirely new prefabricated home. Dropping the new home in from above, not even touching the existing structure, effectively compliments the old pig barn structure.

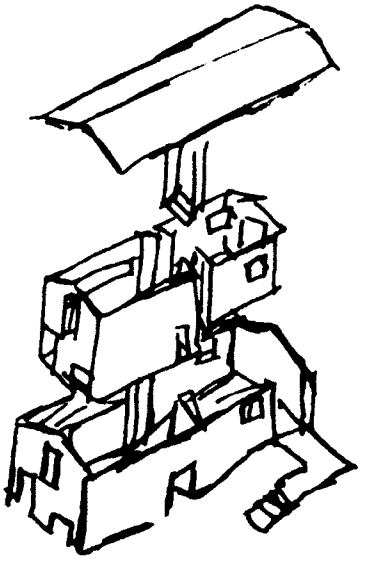
The adaptive reuse project of the Pig Barn depicts the principle of psychology of scarcity. The scarce item in this project is the historical

FIG. 17. IMAGE OF PIG BARN INTERIOR. FNP-Architekten. *Adaptive Reuse: From Derelict Pig Barn to Modern House.* Zurück Zur Projektübersicht. Accessed September, 2012 <www.fnp-architekten.de>.

Ernest Burden is an architect and consultant specializing in media and marketing strategies. He is the author of many books on design and presentation, including McGraw-Hill's Illustrated Dictionary of Architecture (Amazon Burden).

derelict pig barn that existed during the Second World War. Though the barn had been worn out by the forces of the Second World War the historical value in this building was massive (Burden 59). The desire to maintain the old building inspires the historical preservation spirit that seems to be lacking in most nations (Fig 17). The idea behind this project is that new technologies stand to support the formative technologies. The old technologies, therefore, deserve extra effort at preservation (Architektur).

The Pig Barn home INSERTS a new interior layer inside the original structure.



Think Globally
Act Locally

RURAL STUDIOS

Without a doubt the concept of the use and reuse of building materials in architectural design has already been thought of and executed. In fact, Samuel Mockbee (Fig. 18) established Auburn University's Rural Studio in 1993 where the entire focus of the team is to create vanguard designs that utilize an array of innovative, cost-effective building materials (Oppenheimer). This combination of ingenuity and enterprise inform the unique character of the studios undertaking. This contribution is admired, assessing how they believed that architecture, practiced as a community-oriented undertaking, can transform the social environment.

FIG. 18. IMAGE OF SAMUEL MOCKBEE: Mockbee, Samuel. *Rural Studio: Community Architecture*. New York, NY: Princeton Architectural Press, 2003.

"Architecture is a social art. And as a social art, it is our social responsibility to make sure that we are delivering architecture that meets not only functional and creature comforts, but also spiritual comfort" (Mockbee).

Andrea Oppenheimer is the former Executive Editor of *Architecture Magazine* and a published author (Amazon Oppenheimer).

Rural Studio is a design-build architecture studio run by Auburn University which aims to teach students about the "social responsiblities of the profession of architecture" while also providing safe, well-constructed and inspirational homes and buildings (Oppenheimer).

For example, this community center and glass chapel (Fig. 19) replaced a trailer that was being used for church services. The walls are made out of clay and sand with wood from nearby cypress trees. The glass treatment is comprised of 80 Chevrolet Caprice windshields that were gathered from a Chicago scrapyard for $120 (Mockbee).

FIG. 19. IMAGE OF RURAL STUDIO CHURCH: Mockbee, Samuel. *Rural Studio: Community Architecture*. New York, NY: Princeton Architectural Press, 2003.

CHAPTER 03. SCAVENGING

WHAT IS A SCAVENGER?

Looking at scavenging from a very basic standpoint, you could make the argument that the lives of some animals function daily around scavenging. Of course, this is not an idea of an animal searching for food, but more so looking at how an animal may create a home for itself and the many different components that make that home up. For example, consider the Bald Eagle. Although this animal is primarily a hunter, it also assumes a role of scavenger when it comes to building it's habitat and feeding. Looking specifically at the habitat aspect of the animal, their nest is constructed of broken tree branches and vegetation that are gathered from the surrounding habitat and purposefully placed to create a home. Naturally, the scavenger uses local resources, gathers them together and aggregately makes use of the materials to perform a specific function. This is evident when looking what a Bald Eagle may consider, 'home,' – their nest.

In an architectural sense, when talking about building materials and components, this may involve how to incorporate discarded materials from buildings into usable and functional components of a new design.

Scavenging seen in architectural design and interior design trends.

FIG. 20. IMAGE OF SALVAGED SHED: Hayes, Ethan. *Houses from Salvaged Materials.* Last Modified November, 2011. Accessed September, 2012 <www.recyclart.org/2011/11/houses-from-salvages-materials/>.

FIG. 21. IMAGE OF REUSED LOGS: McGrath, Meegs. *Gold Log Tables.* Last Modified September, 2012. Accessed September, 2012 <accoutrement.com>.

FEED ON DEAD AND DECAYING MATTER

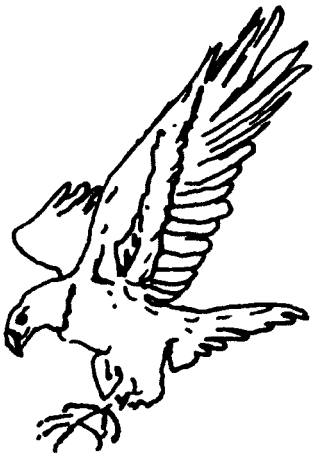
Scavenging is encouraged as reuse of materials to avoid material wastage and to maximize surplus (Fig. 20). It is therefore a common belief that usage of waste materials has economic gains for the user. In cultural economics, use of old symbols, stories, images and other expressions signifies a feeling of connection, familiarity to culture and a personal self identity and embracement of one's origin and cultural morality. Reuse of materials however must be relevant to the current architecture and there is need to consider the outcome of such work. Such perceptions depend on the product in question. The maintenance of ancient work is of great importance for the current and the forthcoming generations.

The scarcity of old materials and their importance in meaning to the minds of the current generation dictates its worthiness and beauty and therefore, reuse or modification of such material is inevitable, especially if such materials are irreplaceable (Fig. 21). Looking at the site of Uxbridge, Ontario the accessibility of old barns surrounding the site, which are no longer associated with agricultural use, are readily available. The reuse of barn timber in reconstruction of buildings is economical and helps in reduction of waste materials (Fig. 22). The selection of surviving ma-

FIG. 22. IMAGE OF BARN HOUSE: Farmhouse Style. *Barn Raising: Reassembled Barns as Modern Dwellings*. Edition 26. Last Modified June, 2012. Accessed September, 2012 <remodelista.com>.

FIG. 23. IMAGE OF RECLAIMED WOOD SHELVES: Maison and Demeure. *Rough-Hewn Shelves*. House and Home Magazine, October, 2012. pp. 137.

terial must provide the scavenging architect with up to standard material for usage, while the architect must be aware of the functions or the significance of such materials in construction of the needed structure (Fig. 23). The barn timbers would be used for historical significance, so the architect must consider the most appropriate sections to use in order to achieve the design requirements, without weakening or reducing the strength and standard of the structure.

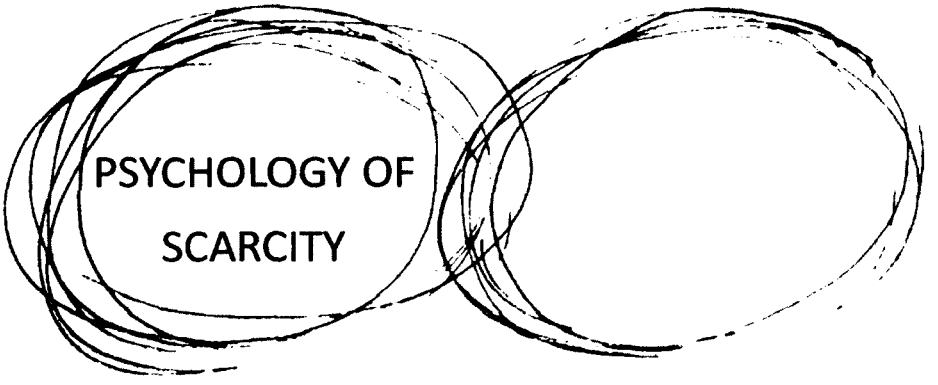


ONTARIO'S SCAVENGER BIRD

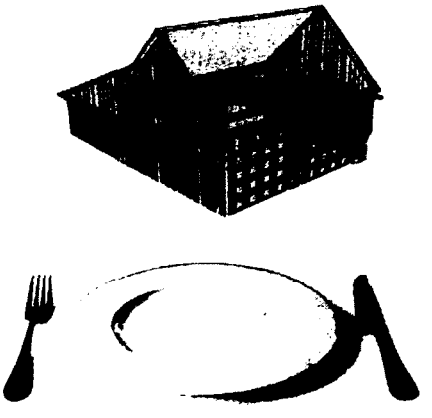
The Bald Eagle is a bird unique to North America. In Canada, the majority of Canada's breeding Bald Eagle population is found in British Columbia, especially along the coast where eagles follow the Pacific salmon runs north (Whittam). The Gulf of St. Lawrence has been identified as an important stopover area for migrating eagles, and Baddeck, Cape Breton is home to numerous feeding eagles in spring and fall (Whittam). As well, Newfoundland and Labrador have healthy populations of eagles, which disperse from breeding grounds between mid-October and the first week of November, later than the rest of Canada (Whittam).

The population of the Bald Eagle in Southern Ontario, and the rest of North America, has been steadily increasing over the last 20 years thanks to conservation programs and anti-hunting laws. With only 50% of their offspring making it through the first year, the increase in numbers has been a very gradual process (Whittam). Although the population is on the increase, the bird is still at risk and precautions need to be taken to ensure long term survival.

The use and reuse of building materials in architectural design can be thought of as two unique models of study (Jansen). One model of this is:



Timber framing is a scarce, timehonoured craft practiced around the world. The abundance of barn wood in the Uxbridge region makes it a sustainable practice, especially as we often use found, unmilled logs and recycled timbers in our frames. The handcrafted joinery is strong and long-lasting, and timber frames work well with a wide range of natural foundation, wall and roofing systems.



Richard Brilliant (Anna S. Garbedian Professor in the Humanities Emeritus, Columbia University) is the author of more than one hundred articles and a dozen books on Roman art and its afterlife, portraiture, narrative and other subjects. His influential article defining *'spolia in se, spolia in re'* appear in the Italian journal *Prespettiva* in 1982 (Reuse Value xiii).

Dale Kinney (Eugenia Chase Guild Professor in the Humanities Emeritus Bryn Mawr College) is an historian of medieval art and architecture. Among her many articles of *spolia* is 'The Concept of Spolia' in *A Companion to Medieval Art: Romanesque and Gothic in Northern Europe* (2006) (Reuse Value xii).

ADAPTIVE REUSE OF BARNS

A barn is an architectural work in a farm designed for storage of assets and animals by the owner (Brilliant and Kinney 6). The use of old wood materials found in the barn reduces the cost of construction when reused into a new design once deconstructed, this is additionally an important aspect in expenditure. Reuse of old timber is one of the ways the new structure may be constructed to give economical and solid structure. The availability of barn materials is readily available on unused farm property found in the area of Uxbridge, Ontario. Such material, if properly used through architectural designs, would produce up to standard structure, which would be a beauty to the owner and to the environment surrounding them. Working with historic barns encourages the viability, reuse, restoration and rehabilitation of barns which are no longer associated with agricultural use. Vintage architectural elements and found objects from the past can be combined within the interior and exterior of one of a kind home sculpture.

FIG. 24. BARNS FOUND INBETWEEN REACH STREET SITE AND NOSAY BARN. Weatherbee, Hailey. Uxbridge Ontario, 2013.

RECLAIMED BARN MATERIALS

The reclaimed barn material offers an entirely new sequence of configurations to be reused in the creation of new space. New uses for the wood can be appriopriated and perserved the timbers as a chance for survival. The availability of barns surrounding the 224 Reach Street Uxbridge, Ontario site is evident (Fig. 24). The re-use of barn wood helps avoid waste and encourages ideas of being sparing, thrifty and, economical.

Business

Jobs

SCAVENGE
LOCALLY!

Community

SEPTEMBER 20, 2012

Ads (Fig. 25) in search for unwanted barns were put into all surrounding local newspapers and classifieds.

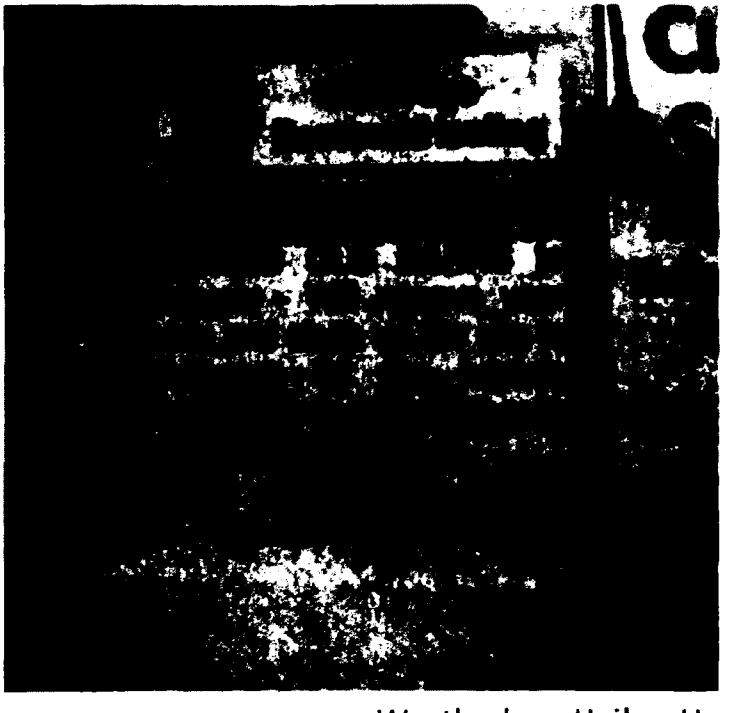


FIG. 25. IMAGE OF NEWSPAPER AD: Weatherbee, Hailey. Uxbridge, Ontario, 2012.

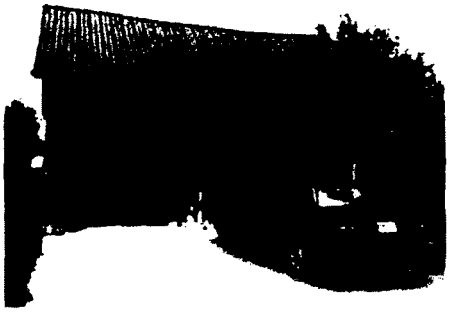


FIG. 26. IMAGE OF 812 MONARCH ROAD BARN: Weatherbee, Hailey. Lindsay, Ontario, 2012.

OCTOBER 15, 2012

After the ad was published, a phone call was received offering a barn's components for use from 812 Monarch Road, Lindsay Ontario (Fig. 26).

> Cost: $0.00.
> Clean up the site in exchange for the lumber.

The lumber (Fig. 27) used from the barn will be reappriopriated as architectural details.

FIG. 27. IMAGES OF 812 MONARCH ROAD LUMBER: Weatherbee, Hailey. Lindsay, Ontario, 2012.

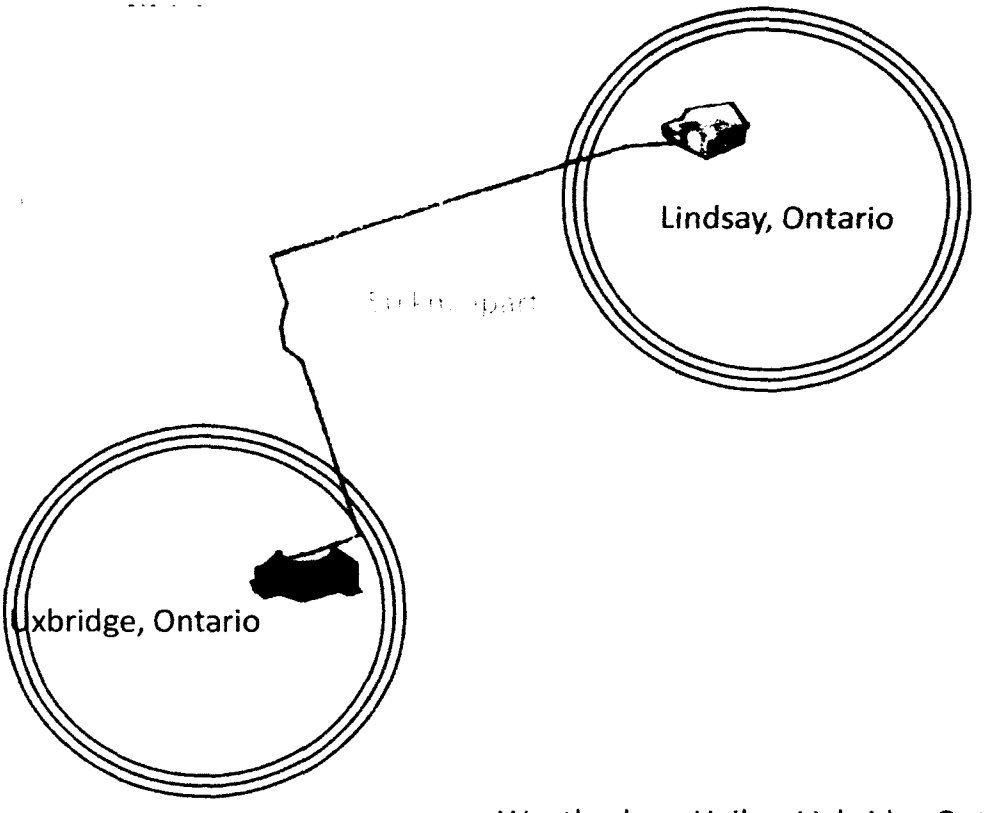
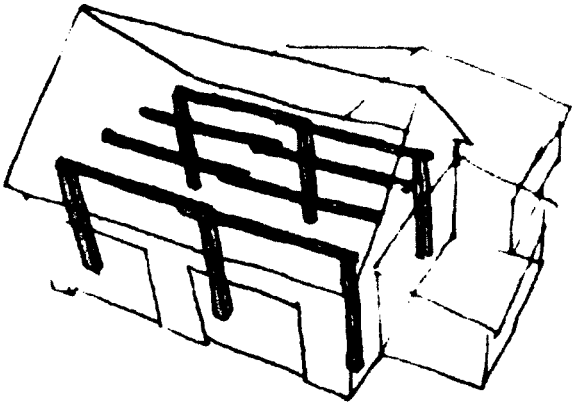


FIG. 28. DISTANCE BETWEEN HOUSE AND BARN. Weatherbee, Hailey. Uxbridge Ontario, 2013.

FIG. 29. IMAGES OF REFINED BARN HOME. Johnson, Tom. *Rustic and Refined Barn Home.* Home and Garden Edition. Accessed September, 2012 <www.marthastewart.com>.



RECLAIMED BUILDING MATERIAL

The previously owned wood from the barn from 812 Monarch Road, Lindsay Ontario (Fig. 28) will be used for its unique appearance, its contribution to green building and the wood's physical characteristics such as strength, stability, and durability.

The survival prospects from the barn material are the wood remains that can be reused to give new meaning in the new designs. In the history of architecture, the early barn material was placed together without much regards to arrangement, and the reuse of such artwork was viewed as sophisticated and discriminating (Porter - Szucs 484). Quality, dimension suitability, and uniformity are of main concern both on the inner and the outer spaces of the new art work (Fig. 29). The timbers are used in a specific and particular arrangement between two designs, and the creation of its imitation is needed in order to achieve the required outcomes.

Brian Porter and Brian Porter Szucs are the authors of *Faith and Fatherland: Catholicism, Modernity, and Poland.*

ARCHITECTURAL SALVAGE STORES

Legacy Vintage / legacyvintage.com
540 Divison St., Cobourg ON

Artefacts Salvage & Design / artefacts.ca
46 Isabella St., St. Jacobs ON

The Door Store / thedoorstore.ca
1260 Castlefield Ave., Toronto ON

Post + Beam Reclamation / www.pandb.ca
2869 Dundas St. W. Toronto ON

ReStores - Habitat for Humanity:

Renovator Resource / renovators-resource.com
2456 Maynard St., Halifax NS

The Demolition Depot & Irreplaceable Artifaces /
demonlitiondepot.com
216 East 125Th St., New York

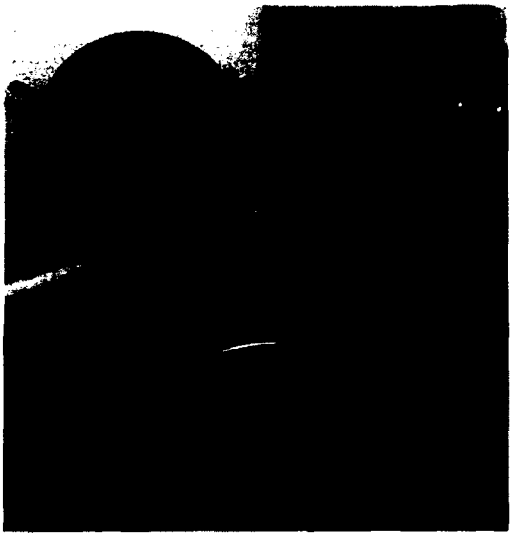


FIG. 30. IMAGE OF REUSED PORT WINDOW AS A LAUNDRY CHUTE: Willis, Allee. *'Kitsch O' The Day.* 1952 Chris-Craft Portholes (via Neatorama). Last Modified April, 2007. Accessed September, 2012 <www.alleewillis.com>.

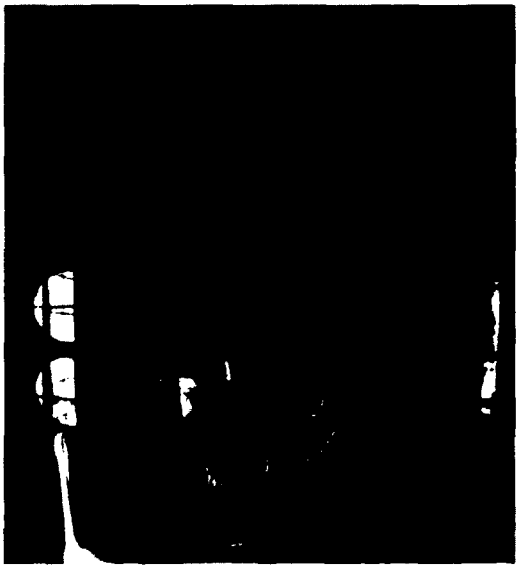
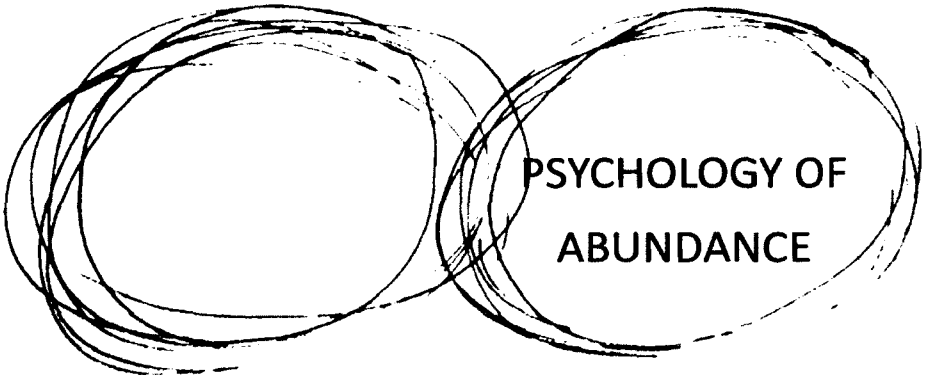
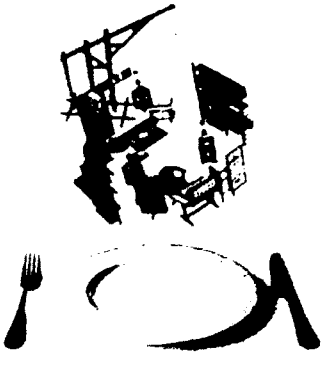


FIG. 31. IMAGE OF REUSED WHEEL: Tella, Lindsay. *Jamie and Byron's Elegant Art Canvas.* Last Modified July, 2010. Accessed September, 2012 <www.apartmenttherapy.com>.

The use and reuse of building materials in architectural design can be thought of as two unique models of study (Jansen). One model of this is:



The abundance of auction sales in the Uxbridge region makes it a sustainable practice to investigate. Numerous types of architectural salvage stores are available. This project hopes to avoid the idea of stores altogether and use strictly auctions. In order to complete this scavenging investigation thoroughly, the scavenger, the architect will attend all local auctions, in the Uxbridge area, in search for salvage to be used within the home design. All elements sold at a discounted price can be re appropriated into the homes new design once gathered (Fig. 30, Fig. 31).



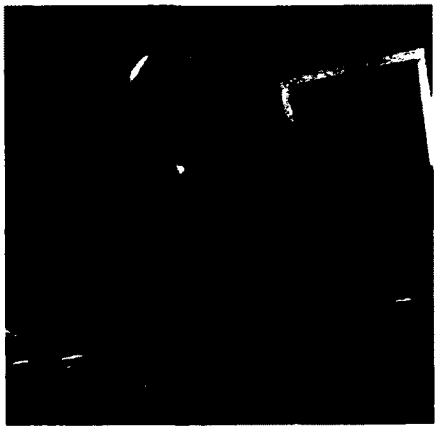


FIG. 33. IMAGE OF GARY HILL, OF GARY HILL AUCTIONS: Weatherbee, Hailey. Uxbridge Ontario, 2012.

"Raised on a farm in Uxbridge, Ontario, Gary Hill, a veteran auctioneer, offers a unique and tremendously successful combination of formal education and lifelong experiences in agriculture, auctioning and marketing. He is a fully licensed, insured and bondable auctioneer. A well-respected and much sought-after member of the auction profession, Gary has even appeared in a TV episode of 'Due South' as the auctioneer" (Hill).

FIG. 32. IMAGE OF VANHAVEN AUCTION ARENA, GARY HILL SPRING Weatherbee, Hailey. Uxbridge Ontario, 2012.

SCAVENGING AT AUCTIONS

Auctions sell estate and contents of homes (Fig. 33). Some of these items include antiques, furniture, household items, collectibles, coins, sports cards, toys, glass, china, tools, lumber, cars, trucks, boats and real estate. These venues also auction off farm machinery and the contents of close-out/retiring businesses, as well as old barn fragments.

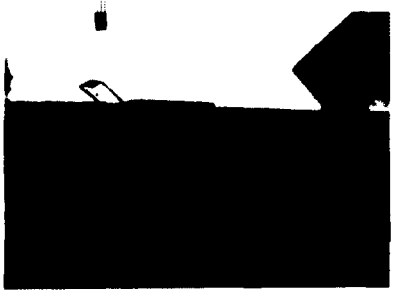
The survival prospects in the case of auction finds, are the items that can be reused to give a new meaning in a new space. Quality, dimension suitability, and uniformity are of main concern both on the inner and the outer spaces of art work, and in cases where spolium did not provide sufficient space, an imitation of it is created and to supplement it. This is because spolia was used in a specific and particular arrangement, and the creation of its imitation was needed in order to achieve the required outcomes. The reuse of such art work demanded a wide search for the diverse sculptures in order to achieve the set standards in the work of art, which indicates the architectural choice and quality in reused antiquity (Porter - Szucs 484).

SCAVENGING

Item: Two Wooden Barrels
Found: September 10, 2012
Where: Left from previous owner, in storage shed.
Cost: $0.00

L 22" x W 22" x H 36"

Item: Lawn Mower Tire
Found: September 10, 2012
Where: Left from previous owner, in yard behind garage.
Cost: $0.00



Item: Cast Iron Wood Stove
Found: September 10, 2012
Where: Left from previous owner, inside garage.
Cost: $0.00

L 30" x W 18" x H 26"

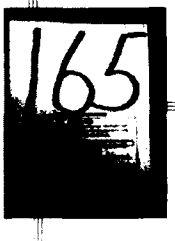
SCAVENGING

Item: Raw Wood
Found: September 10, 2012
Where: Left from previous owner (in storage shed / piled).
Cost: $0.00

Item: Wooden Ladder
Found: September 10, 2012
Where: Left from previous owner (in yard).
Cost: $0.00

L 27" x W 3" x H 127"

SCAVENGING



Item: Pulley
Found: October 10, 2012
Where: Neil Bacon Auction.
Cost: $30.00

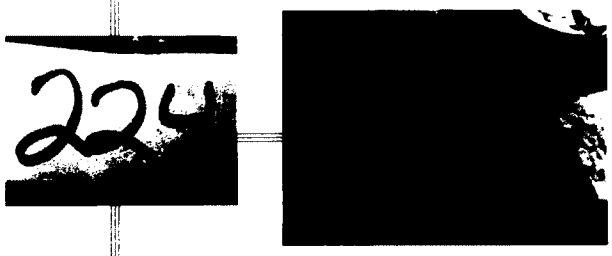
L 9" x W 2" x H 17"
L 8" x W 2" x H 10"

Item: *Lead Glass Windows*
Found: October 10, 2012
Where: Neil Bacon Auction.
Cost: $10.00 each x 3

L 20" x W 2" x H 56"
L 24" x W 2" x H 50"

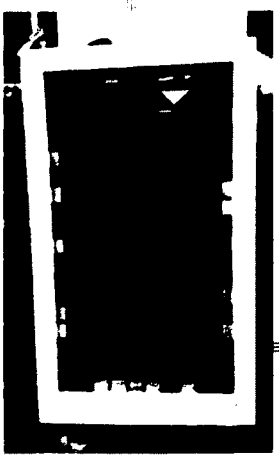
L 18" x W 1/2" x H 44"

SCAVENGING



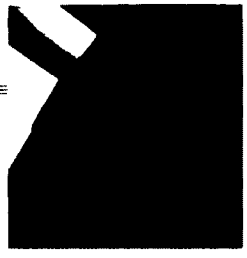
Item: Singer Sewing Table Pedals
Found: November 7, 2012
Where: Neil Bacon Auction.
Cost: $10.00 each

L 10" x W 1/2" x H 13"



Item: Stained Glass Window
Found: November 7, 2012
Where: Neil Bacon Auction.
Cost: $50.00

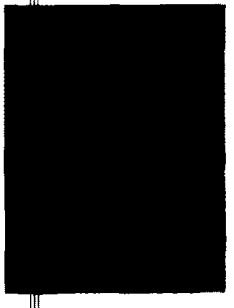
L 25" x W 2" x H 43"

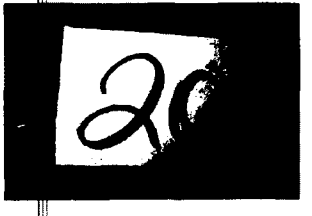


Item: Wood Painted Bracket
Found: November 7, 2012
Where: Neil Bacon Auction.
Cost: $25.00

L 15" x W 15" x H 40"

SCAVENGING





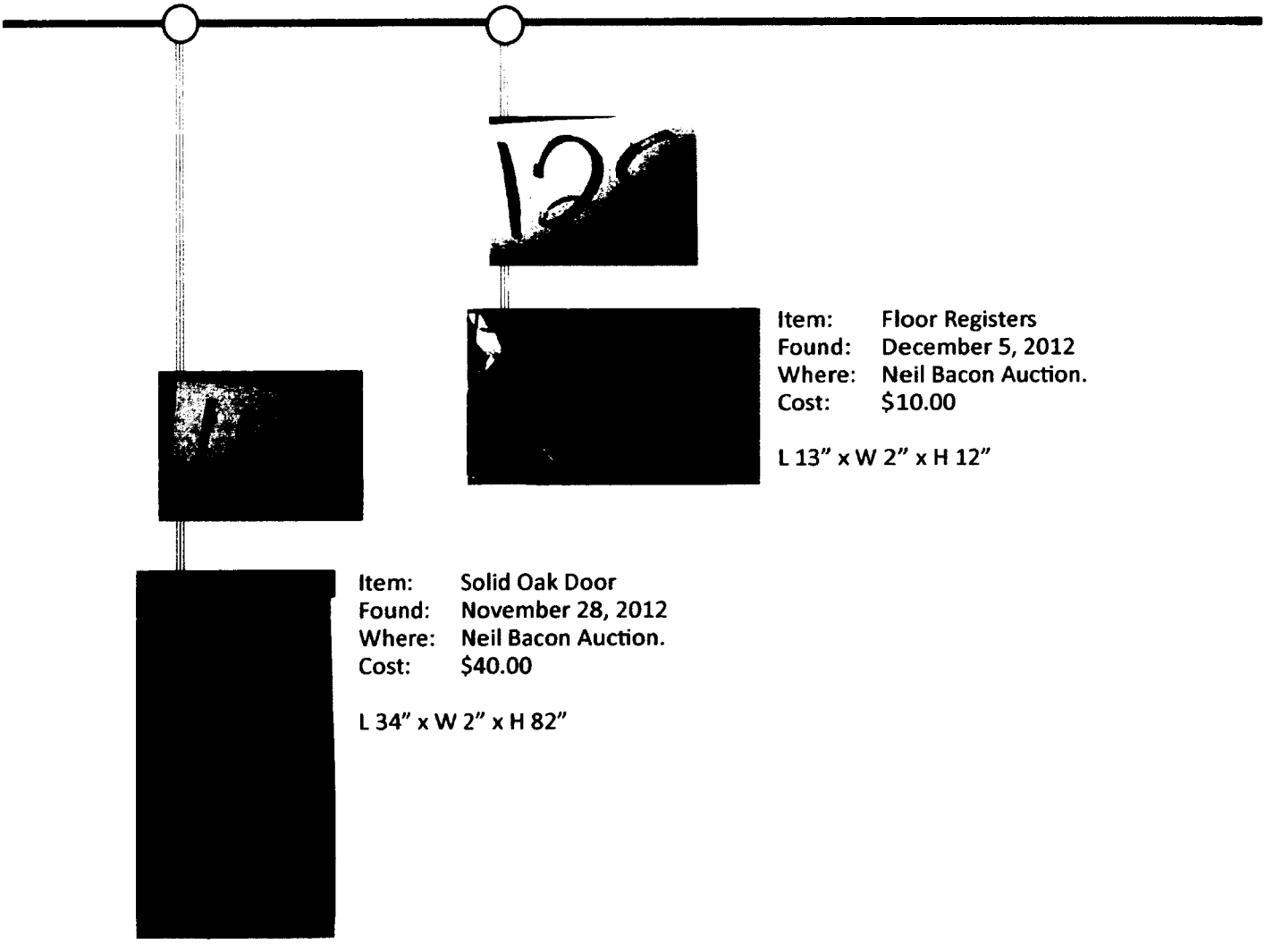
Item: 3 Hinges
Found: November 16, 2012
Where: Neil Bacon Auction.
Cost: $10.00

L 16" x W 1/2" x H 2"

Item: Cedar Door
Found: November 10, 2012
Where: Gary Hill Auction.
Cost: $50.00

L 32" x W 2" x H 80"

SCAVENGING



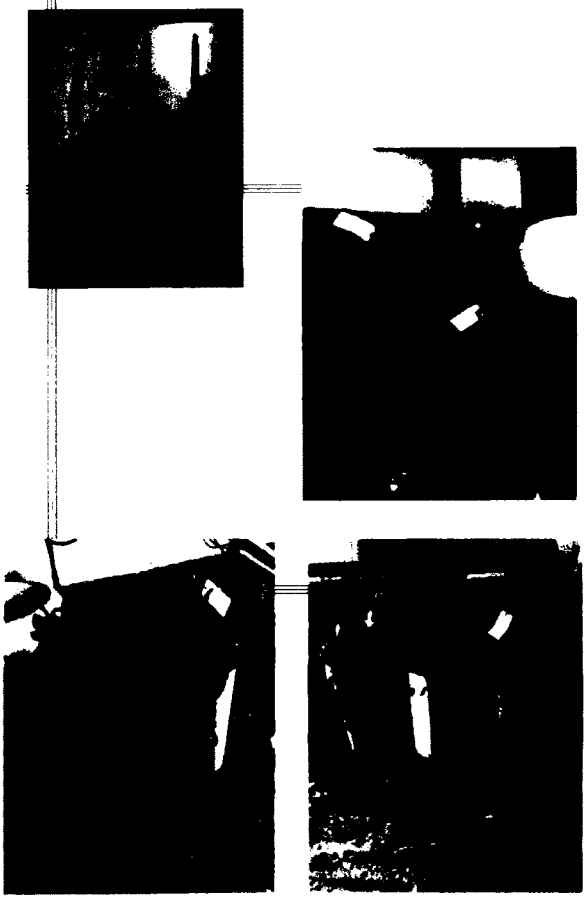
Item: Floor Registers
Found: December 5, 2012
Where: Neil Bacon Auction.
Cost: $10.00

L 13" x W 2" x H 12"

Item: Solid Oak Door
Found: November 28, 2012
Where: Neil Bacon Auction.
Cost: $40.00

L 34" x W 2" x H 82"

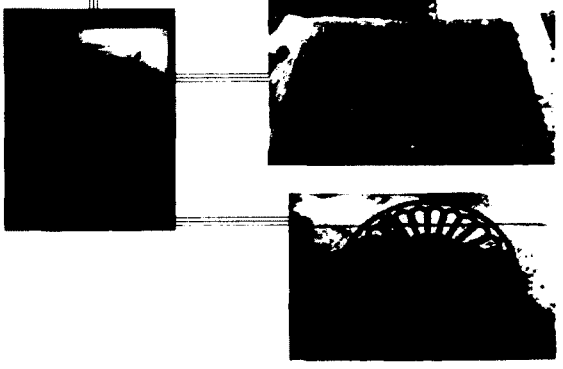
SCAVENGING



Item: 7 Casa Loma Original Lights
Found: January 26, 2013
Where: Gary Hill Auction.
Cost: $50.00 each

L 15" x W 15" x H 33" X6
L 15" x W 15" x H 24"

SCAVENGING



Item: Floor Registers
Found: February 10, 2013
Where: Gary Hill Auction.
Cost: $40.00 each

L 27" x W 2" x H 18"
L 16" x W 1/2" x H 16"

Item: Brass Door Knockers
Found: February 8, 2012
Where: Gary Hill Auction.
Cost: $5.00

AUCTION SALVAGE

A step away from the reuse of whole buildings materials, like found from the barn, is the reuse of architectural pieces. Building waste including individual artifacts should be minimized as much as possible in order to preserve the environment and the historical value of individual items. The plentitude of salvage gathered from auctions can explore many possible functions, making it necessary to consider them from various perspectives. Scavenging invites application to other forms, where different view points on different items can create entirely new pieces. Once the items have been gathered different purposes to each item can be thought of.

Auction finds are thought of as readymade items. The readymades illustrate interest in blurring the lines between art and life and questioning what makes art so sacred. Readymades are not about the physical object itself as much as they are about the concept. The readymade is literally just an idea and the starting point in recycling.

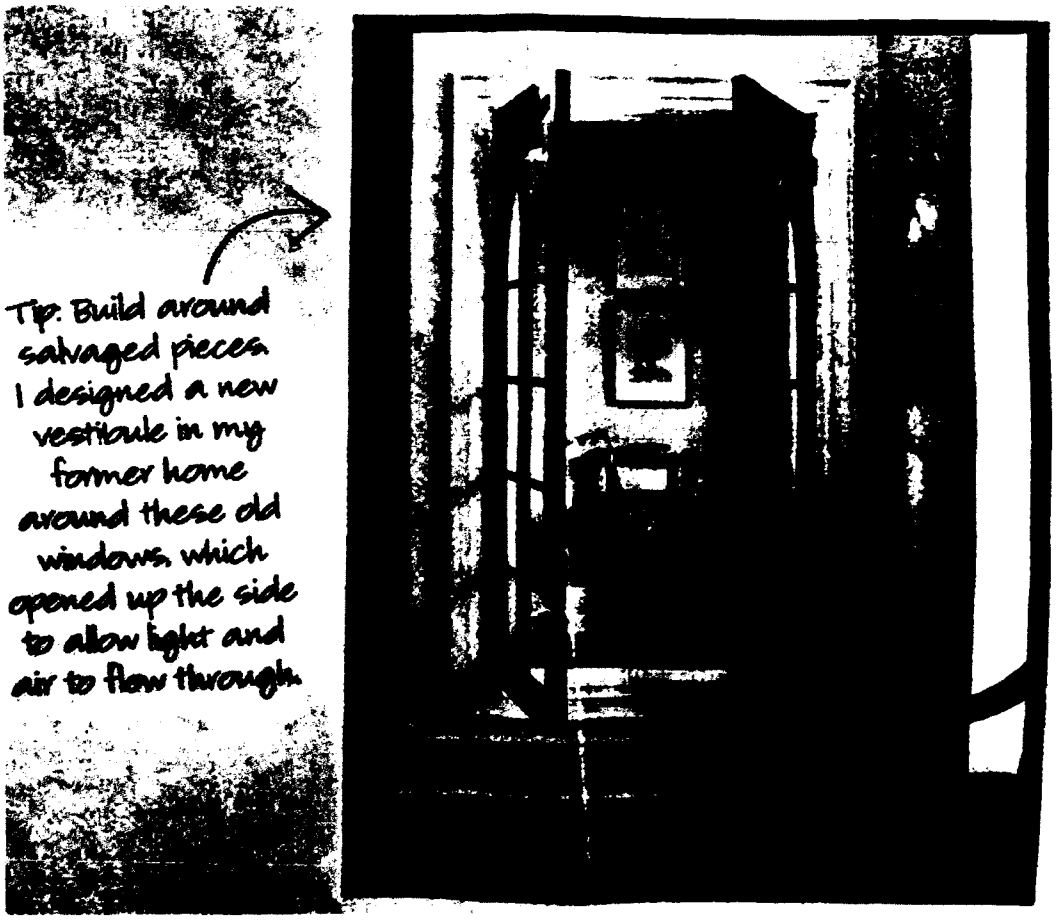


FIG. 34. IMAGE OF SALVAGED WINDOW: Smythe, Thomas. "Salvage City." Design Insider. House and Home Magazine. August, 2012. pp. 34.

SCAVENGING ITEMS SEEN IN TRENDS

A quick Google search or a glance at a growing number of shows on television will show that do-it-yourself (DIY) interior design ideas are booming. From blogs to Pinterest, Youtube to commercial TV stars, the realm of DIY designers (Fig. 34) is exploding. While there may be a savvy few who enter into the realm of interior architecture and gain an understanding of the psychology behind design, this sector remains monopolised by trained professionals, leaving DIYers to stick to more aesthetically-based pursuits. With this increased exposure, consumers are being encouraged more than ever to follow design trends and seek out ways to develop exterior and interior spaces to reflect themselves. As design booms with ideas of reappriopriation it is fair to say architecture will too.

FIG. 35. IMAGE OF BUILT IN. Home Design. *Built-In Drawers Between Wall Studs*. Last Modified September, 2012. Accessed September, 2012 <homedesignpins.com>.

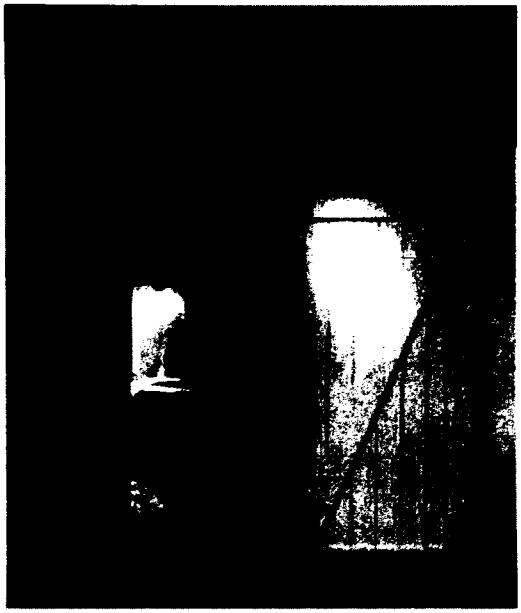


FIG. 36. IMAGE OF REPURPOSED BARN DOOR TRACK. Fabulous Home Blog. *Sliding Barn Door*. Last Modified December, 2012. Accessed December, 2012 <http://fabuloushomeblog.com/2012/12/26/sliding-barn-door-and-its-a-screen-genius-would-love-to-do-this-on-a-screened-in-back-porch/>.

...ADAPTIVE REUSE...

...REDUCE WASTE...

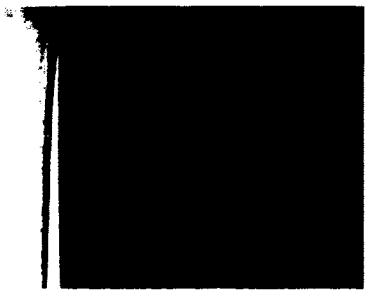


FIG. 37. IMAGE OF REUSED CORNICE. Bonney, Grace. *Design Sponge*. Last Modified August, 2009. Accessed September, 2012 <www.flickr.com/photos/71112133@N00/3856641981/>.

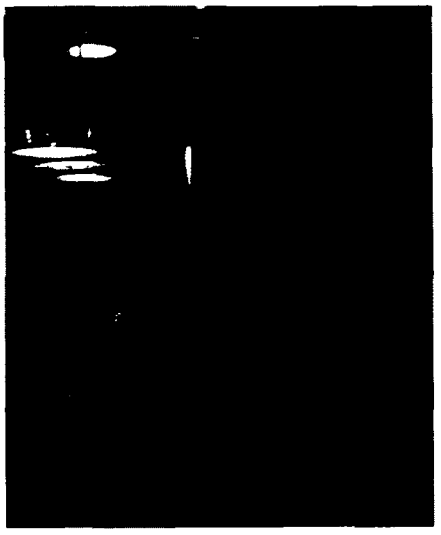


FIG. 38. IMAGE OF SALVAGED LADDER Berry, Nancy. "Two-Tone Traditional." Home Buyer Publications Old House Journals Magazine, Spring/Summer, 2012. pp. 51.

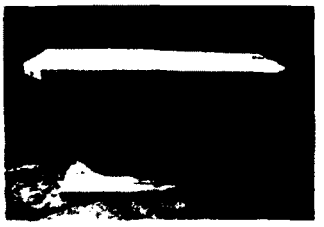


FIG. 39. IMAGE OF WINE BARRELS Stockman, Renea. *Wine Barrel Bar*. Last Modified September, 2012. Accessed September, 2012 <http://pinterest.com/>.

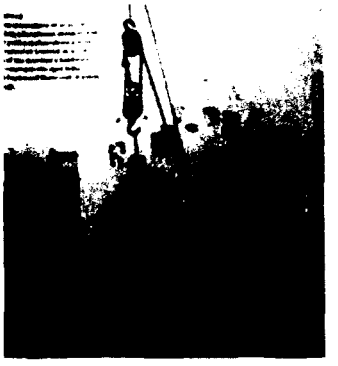


FIG. 40. IMAGE OF SALVAGED PULLEY Maison and Demeure. *Over the Workspace*. House and Home Magazine, May, 2012. pp. 143.

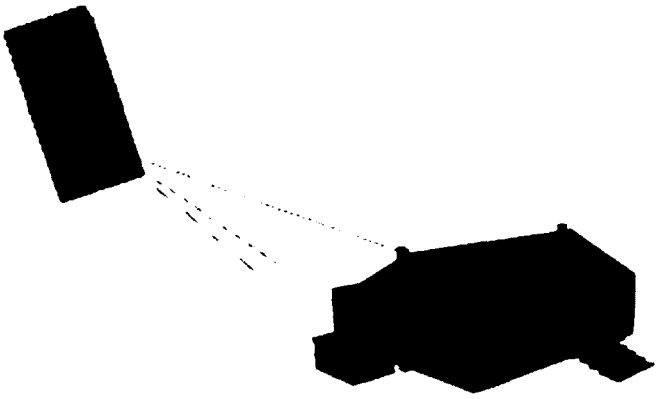
...SALVAGE... ...REPURPOSE...

...INSPIRE... ...THINK FRUGALLY...

FIG. 41. REUSED WINDOWS: Smythe, Thomas. "Salvage City." Design Insider. House and Home Magazine. August, 2012. pp. 39.

CHAPTER 04. THE SITE

"Architecture is broad based but at the heart of architecture is a social order that has to exist, that architecture works with. And so in order to expose students to that social order that exists, at some point in their education, it becomes necessary for them to leave the classroom of the university and enter the classroom of the community. And to leave an abstract world to a world of reality" (Mockbee).



224 REACH STREET, UXBRIDGE ONTARIO

FIG. 42. ORIGINAL SITE MAP: Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002*. Accessed October, 2012 <www.oakridgesmoraine.org>.

FIG. 43. ORIGINAL IMAGE OF BROCK STREET UXBRIDGE: Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002*. Accessed October, 2012 <www.oakridgesmoraine.org>.

FOUND ORIGINAL MAP: Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002*. Accessed October, 2012 <www.oakridgesmoraine.org>.

UXBRIDGE, ONTARIO

"The Town of Uxbridge (Fig. 43) is situated in a beautiful valley on the northern slope of the Oak Ridges Moraine, about 64 km northeast of Toronto, Ontario.

Established:	1806 Uxbridge became a village in 1872, and reached town status in 1885.
Region:	Durham Region
Area Land:	420.65 km2
Population (2011]:	20,623
Density:	45.6 people /km2 " (Oak Ridges Moraine)

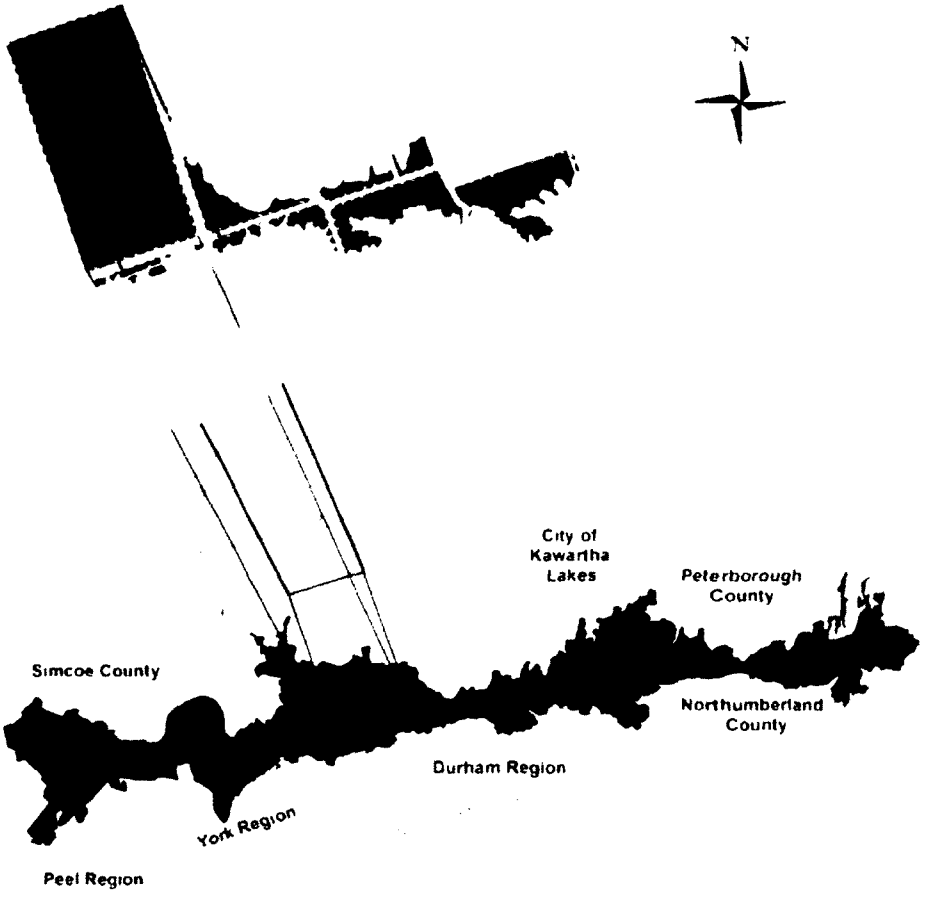


FIG 45 ORIGINAL OAK RIDGES MORAINE MAP Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002*. Accessed October, 2012 <www.oakridgesmoraine.org>.

".The bald eagle will always be protected and off-limits for hunters, it is not a gamebird. You can't destroy its nest - irrespective of whether it's a species at risk.

The government plans to adopt the national standard for classifying species at risk, and that will include more detailed categories such as threatened, special concern, extirpated, and extinct (Kate)."

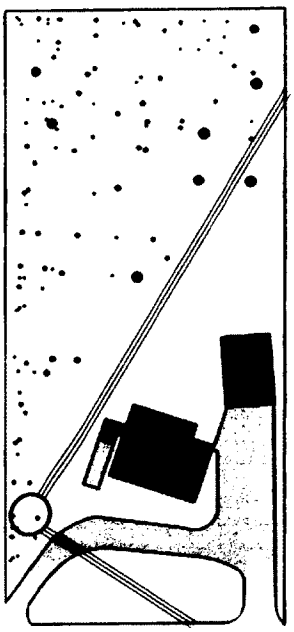
FIG. 46. OAK RIDGES MORAINE WELCOME SIGN IMAGE: Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002*. Accessed October, 2012 <www.oakridgesmoraine.org>.

The community of Uxbridge, Ontario enables opportunities for sustainable development as it is located on the Oak Ridges Moraine (Fig. 45). The site location emphasizes ideas of protection and restoration of existing space. The integration of reclaimed architectural artifacts will go a long way to preserve the fine heritage.

THE OAK RIDGES MORAINE

The Oak Ridges Moraine stretches for over 160 kilometers across the most populated area of Ontario. This distinct ridge, a 12,000 year old remnant of the last ice age, is the source of 65 major streams or rivers. The Moraine provides clean, safe drinking water to over a quarter of a million people with private and municipal wells. It is home to hundreds of protected plant and animal species.

Provincial legislation to protect the functions of the Oak Ridges Moraine enacted in 2002 was an important step – but the work is not done. Over 90% of the Moraine is in private ownership (Oak Ridges Moraine). As such, the promotion of sustainable use by individuals is a necessary complement to land use planning and protection efforts (Oak Ridges Moraine).



EXTERIOR INSPECTION

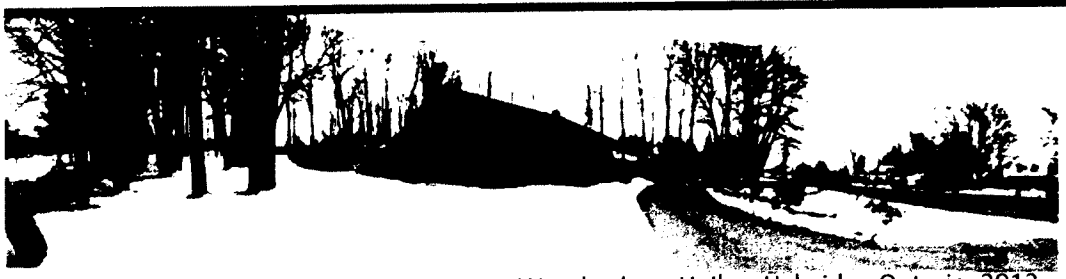


FIG. 47. IMAGE OF 324 BEACH HOUSE EAST SIDE. Weatherbee, Hailey. Uxbridge Ontario, 2012.

Single family detached bungalow
Wood framed
Foundation below-grade walls
(concrete block)
Full-height basement

Detached garage
2 Vehicle capacity

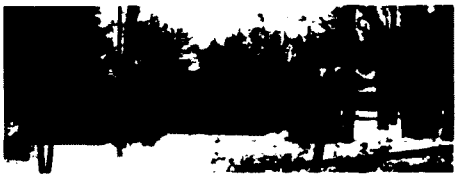


FIG. 48. 224 REACH HOUSE AND GARAGE SOUTH SIDE: Weatherbee, Hailey. Uxbridge Ontario, 2012.

FIG. 49. 224 REACH HOUSE AND GARAGE NORTH SIDE Weatherbee, Hailey. Uxbridge Ontario, 2012.

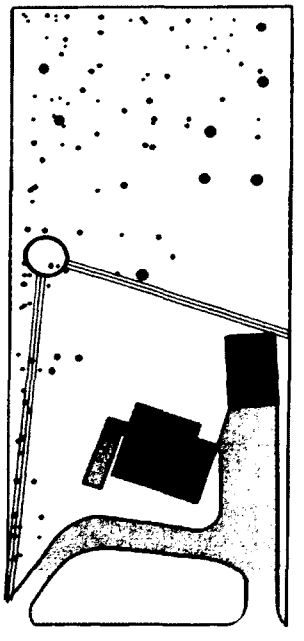
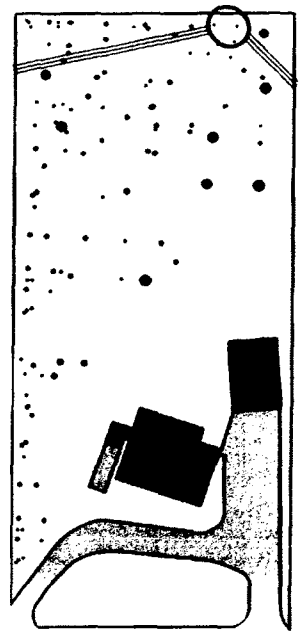


FIG. 50. BACK OF 224 REACH HOUSE SOUTH EAST SIDE: Weatherbee, Hailey. Uxbridge Ontario, 2012.

224 Reach Street is a 0.71 acre treed lot giving the landscape a private park-like setting. The west and north sides of the site are lined with mature maple and spruce trees (Fig. 51). The trees affect the immediate environment of the building in the following ways:

Provide shade
Serve as a windbreak
Define space
Direct and screen views
Attenuate sound
Improve air quality
Stabilize the soil



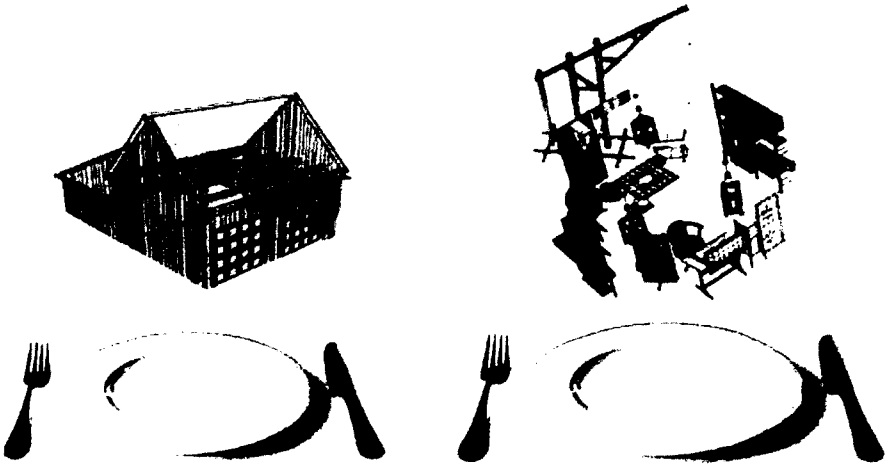
LANDSCAPE INSPECTION

FIG. 51. BACK YARD OF 224 REACH HOUSE. Weatherbee, Hailey. Uxbridge Ontario, 2012.

But most importantly, the mature tree line is aesthetically pleasing.

FIG. 52. MAPLE AND SPRUCE TREE LINE. Weatherbee, Hailey. Uxbridge Ontario, 2012.

"Always design a thing by considering it in its next larger context - a chair in a room, a room in a house, a house in an environment, an environment in a city plan. - Eliel Saarinen" (Frederick 92).



SOMETHING FROM NOTHING

The artistic composition of old elements and new construction collage together in two different designs. The first design uses the 224 Reach Street home (Chapter 05.) and the following design explores design through the eye of an architect as a scavenger (Chapter 06.). In both designs, the *nothings* will instruct the new *something.*

CHAPTER 05. 224 REACH STREET HOME

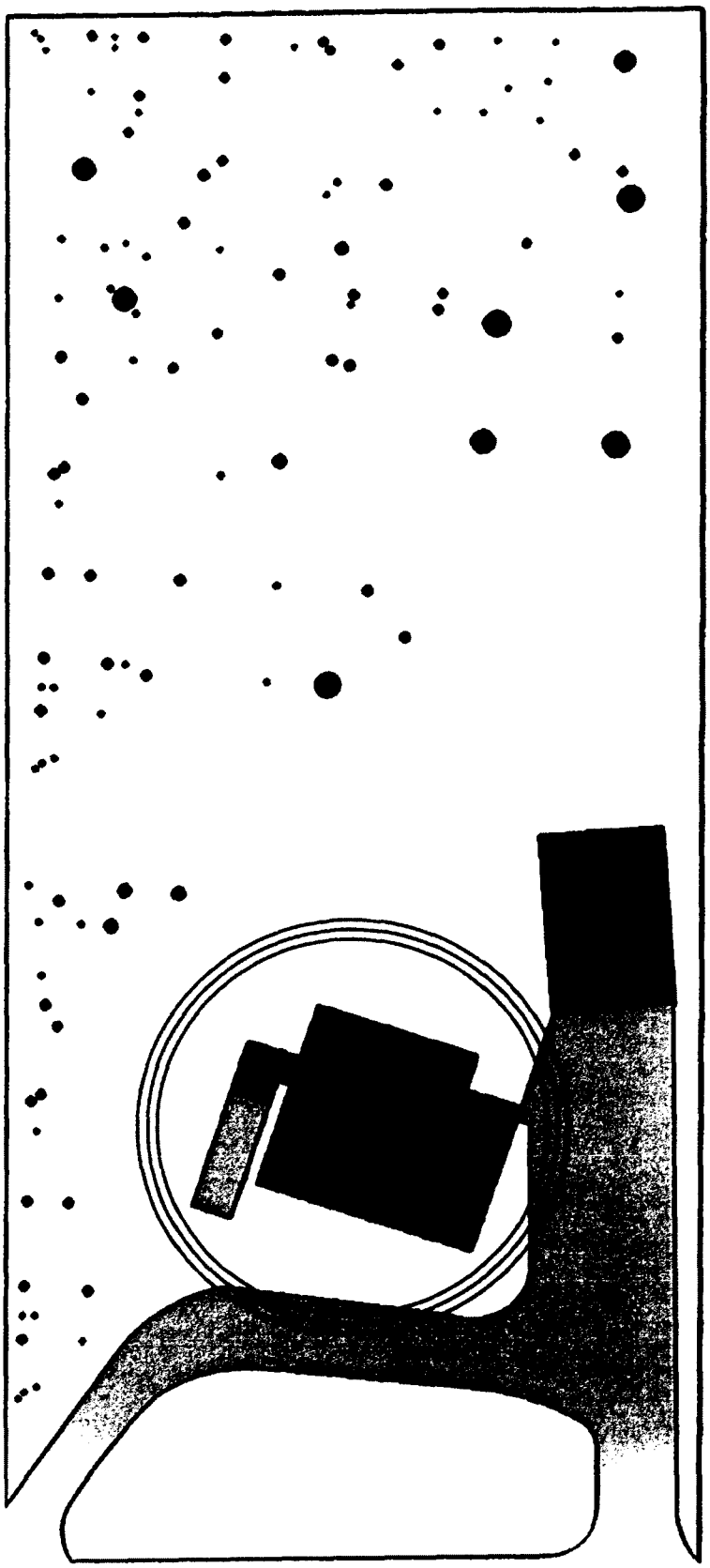


FIG. 53. 224 REACH STREET HOUSE. **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

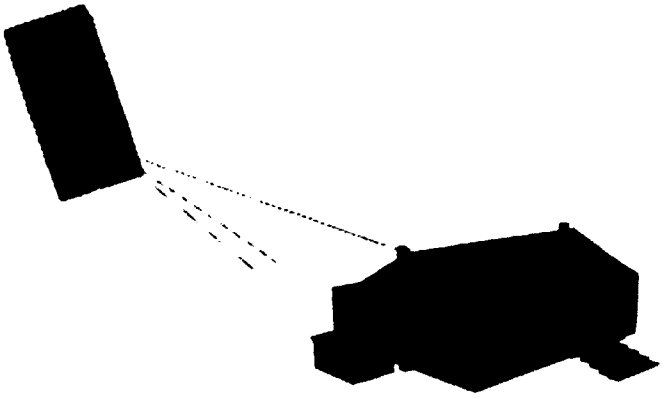
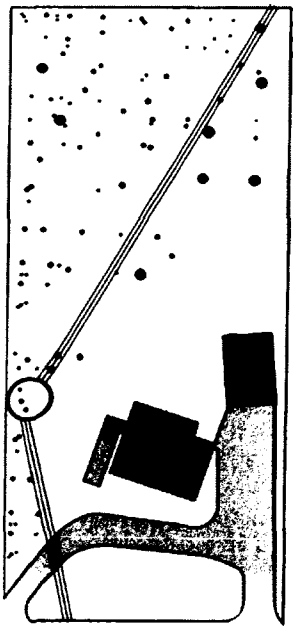


FIG. 53 ORIGINAL SITE MAP AND HOME Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002.* Accessed October, 2012 <www.oakridgesmoraine.org>.

224 REACH STREET HOME

The reclaimed lumber from an unwanted barn and found salvage from auction gatherings will be used to instruct the design process of the home renovation at 224 Reach Street, Uxbridge, Ontario (Fig. 53). The site location emphasizes ideas of protection and restoration of existing space and helps to make connections.

"In a time of unexampled prosperity, when architectural attention focuses on big, glossy urban projects, the Rural Studio provides an alternative of substance" (Oppenheimer).



ROOF INSPECTION

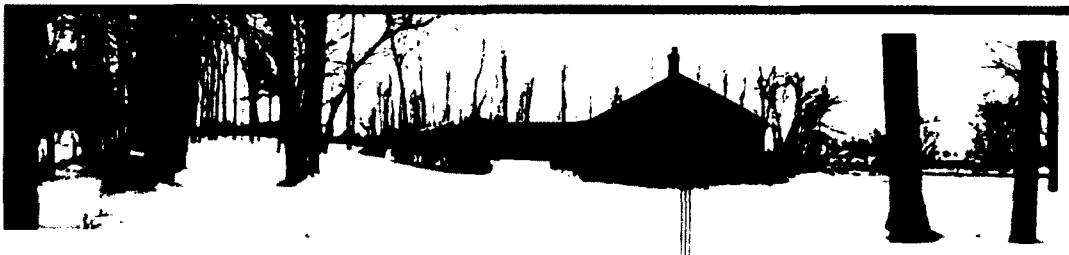


FIG. 54. SIDE OF 224 BEACH HOUSE Weatherbee, Hailey. Uxbridge Ontario, 2012.

Hip roof style
Asphalt Shingle

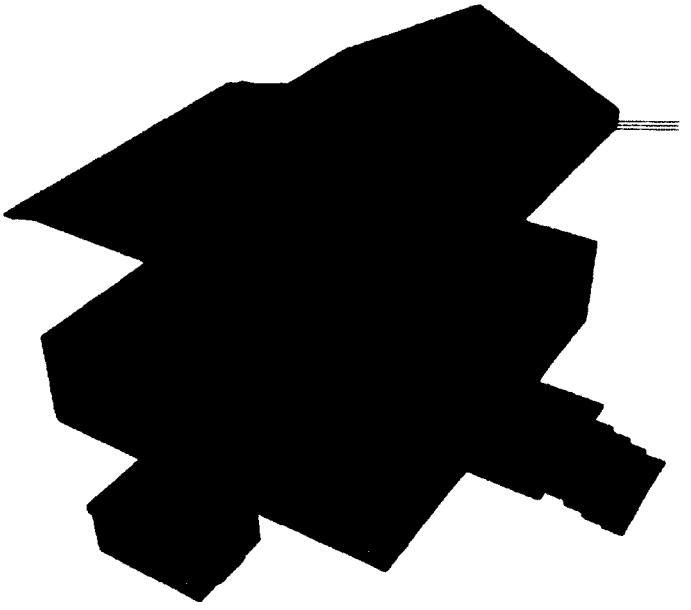


FIG. 55. HIDDEN HOME POTENTIAL: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

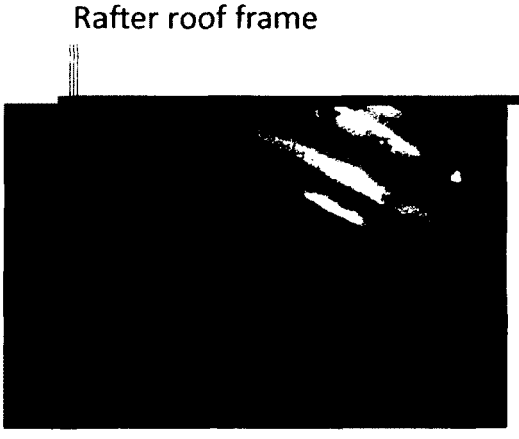


FIG. 56. WOOD RAFTERS IN ATTIC SPACE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

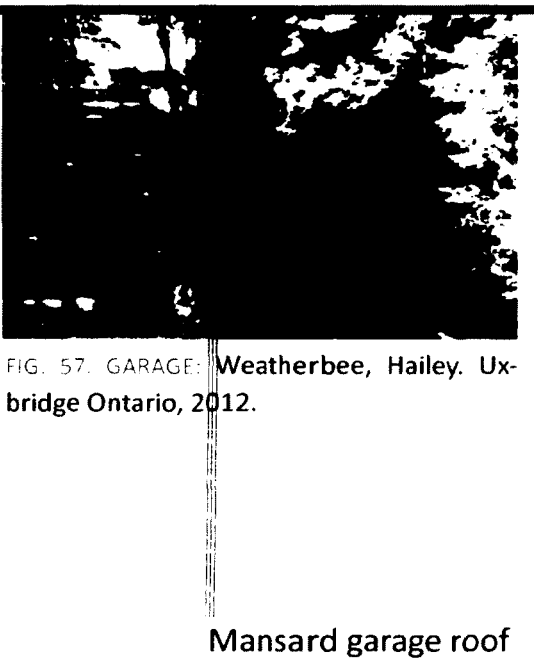


FIG. 57. GARAGE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

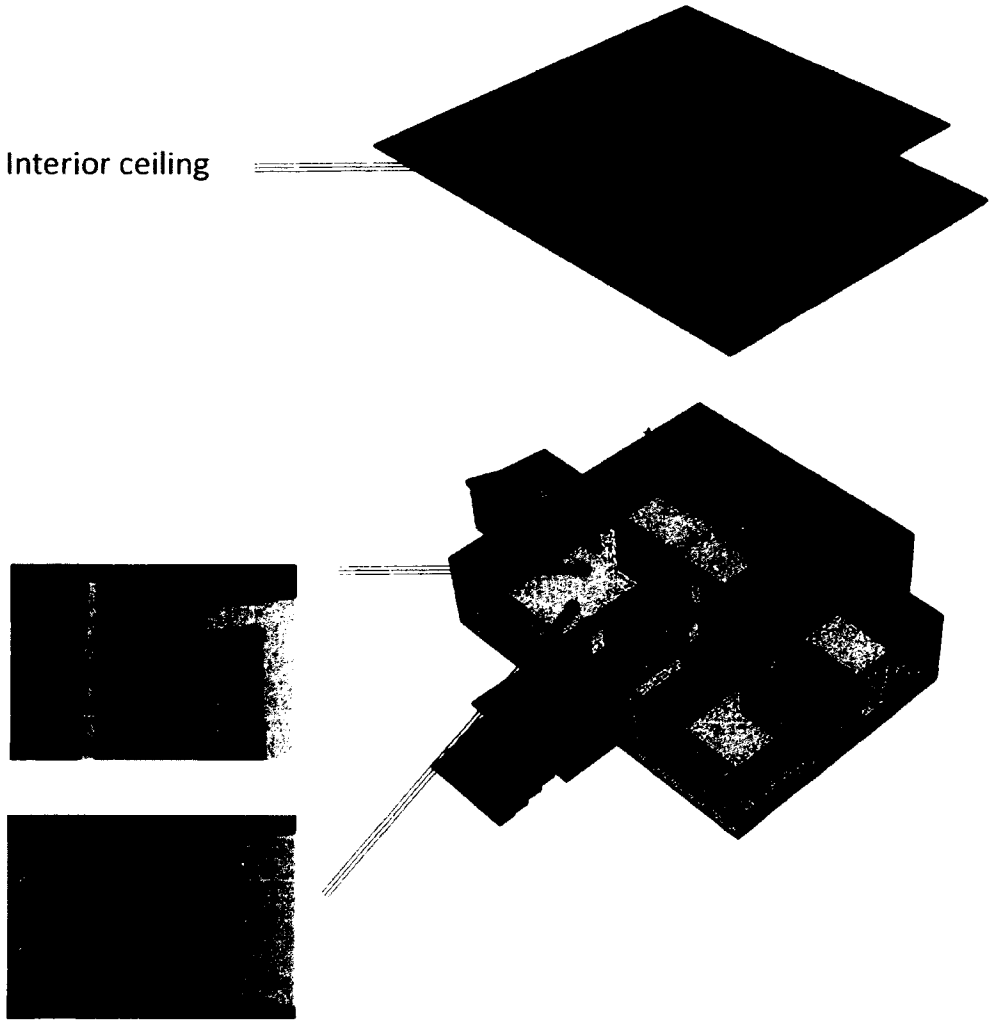


FIG. 58. CEILINGS AT 224 BEACH STREET HOME: Weatherbee, Hailey. Uxbridge Ontario, 2012.

INTERIOR HOME INSPECTION

The bungalow living space (Fig. 55) also has a full-height basement. Keeping closely to the existing footprint, the house renovation will build on top of the concrete block foundation. The renovation hopes to allow more light to pass into the interior spaces and to improve the home's views. The light that will be captured through the upper storey windows encourage shadows. Exposing the original wood rafters eliminates the existing interior dropped ceilings (Fig. 58).-

EXISITING FLOOR PLAN

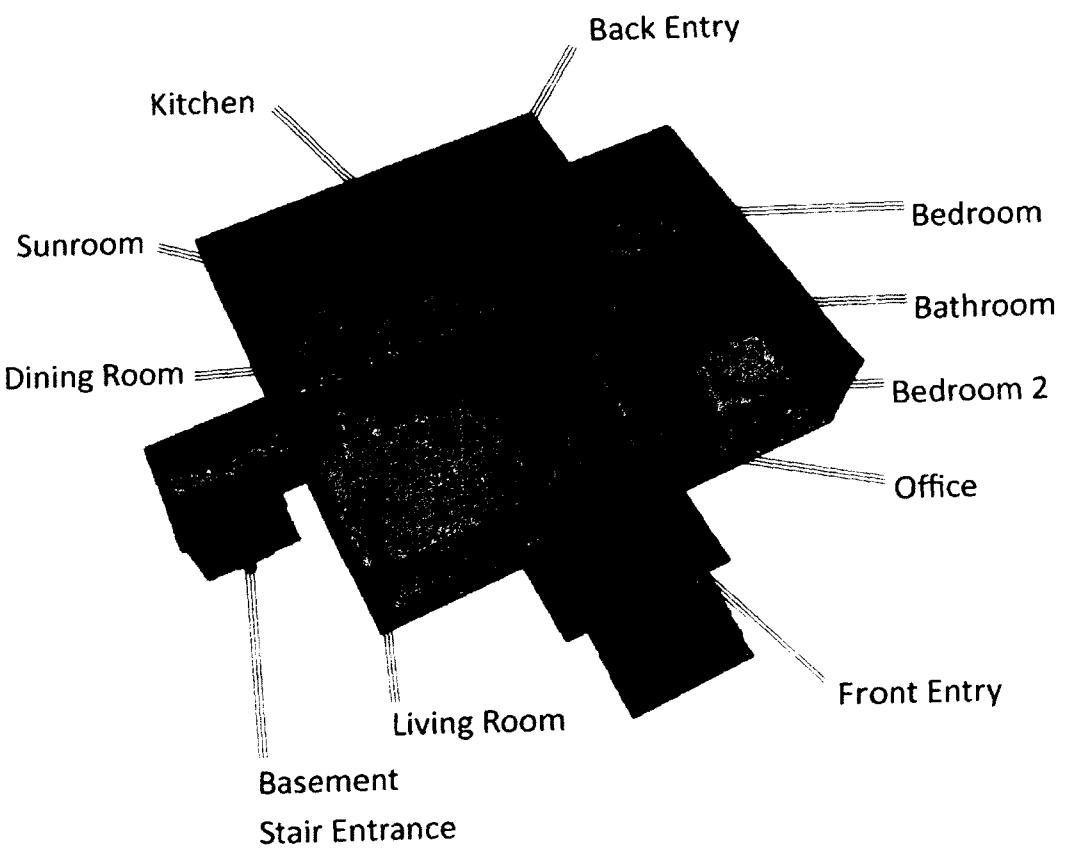


FIG. 59. EXISTING FLOOR PLAN: Weatherbee, Hailey. Uxbridge Ontario, 2012.

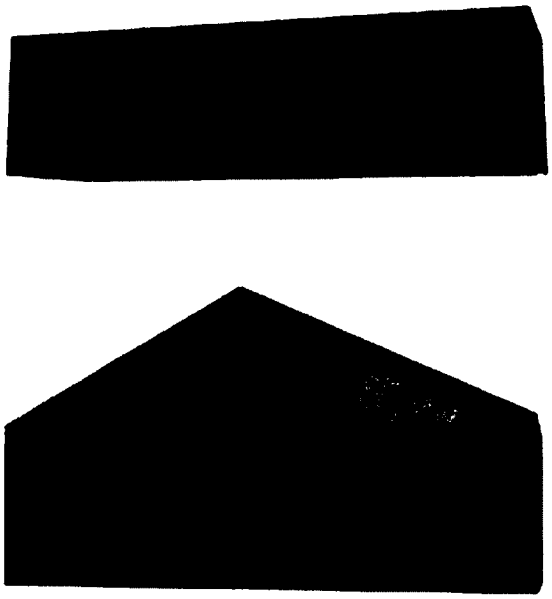


FIG. 60: CEILING HEIGHT: Weatherbee, Hailey. Uxbridge Ontario, 2013.

UTILIZE AND REPURPOSE

In order to utilize the entire existing space, it is necessary to open up the existing ceiling to make use of the buildings full height and expose the original wood rafters (Fig. 60).

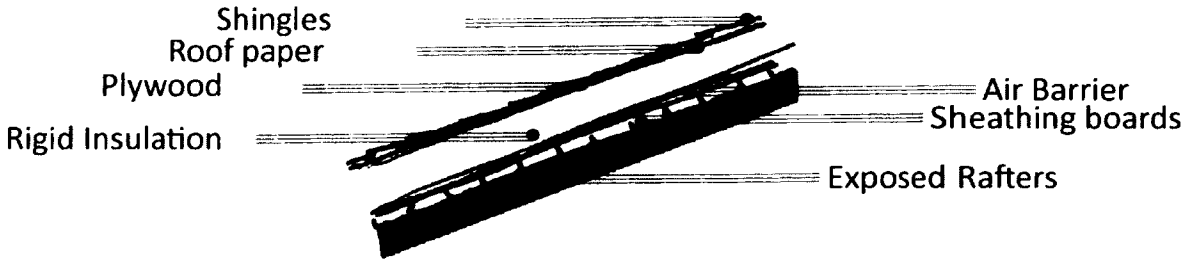
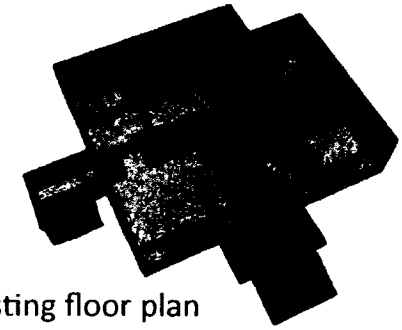
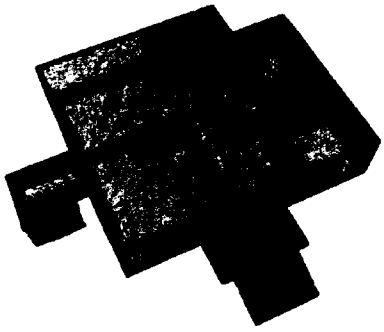


FIG. 61: ROOF LAYERS: Weatherbee, Hailey. Uxbridge Ontario, 2013.



Existing floor plan

224 Reach Street, Uxbridge, Ontario



Repurposed floor plan distribution

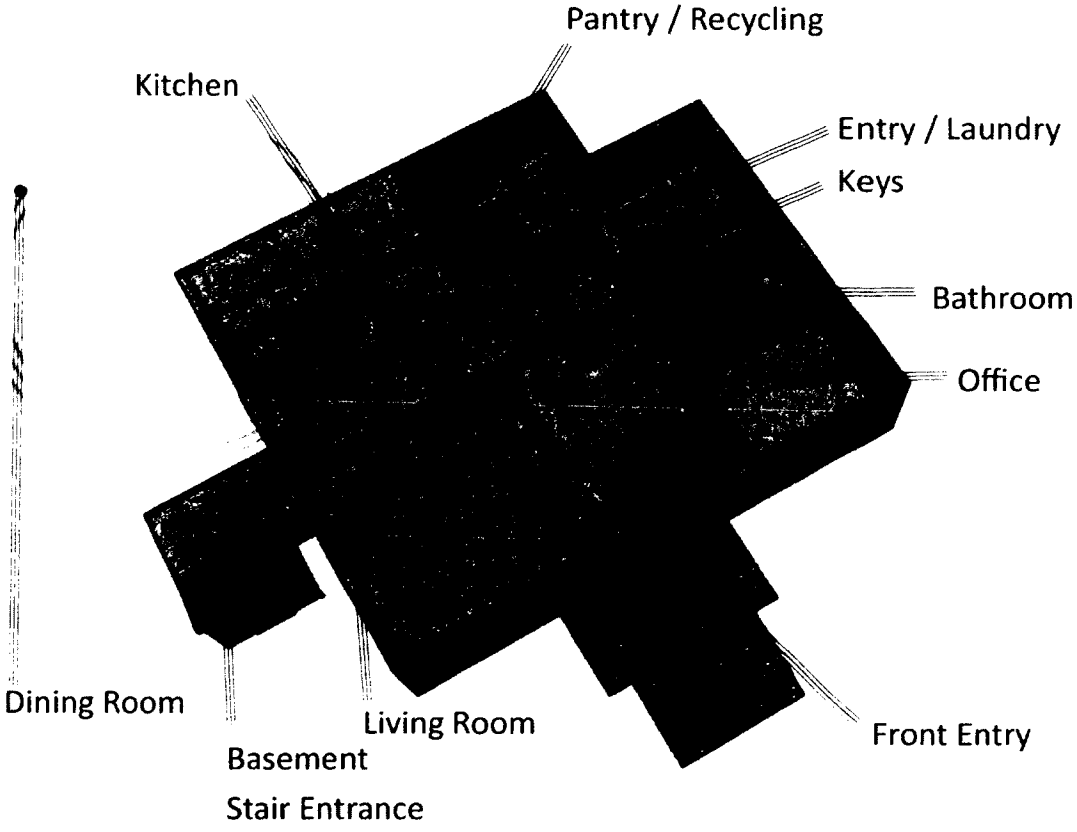
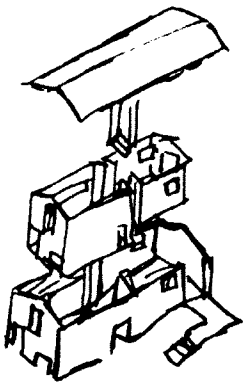


FIG. 62. MODIFIED FLOOR PLAN: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**



Looking back at The Pig Barn (Architektur) case study, the existing home INSERTS a new layer inside the original structure.

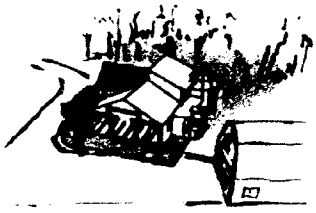


FIG. 63. IMAGE OF PEAKED DORMER: Shinichiro Atelier, Akasaka. *Home Design and Architecture*. Freshome Design. Last Modified April, 2011. Accessed March, 2013 <www.freshomedesign.com/2011/04/>.

FIG. 64 IMAGE OF RURAL STUDIO PROJECT: Mockbee, Samuel. *Goat House.* Samuel Mockbee and an Architecture of Decency. Rural Studio. Sawyerville, AL, 1997.

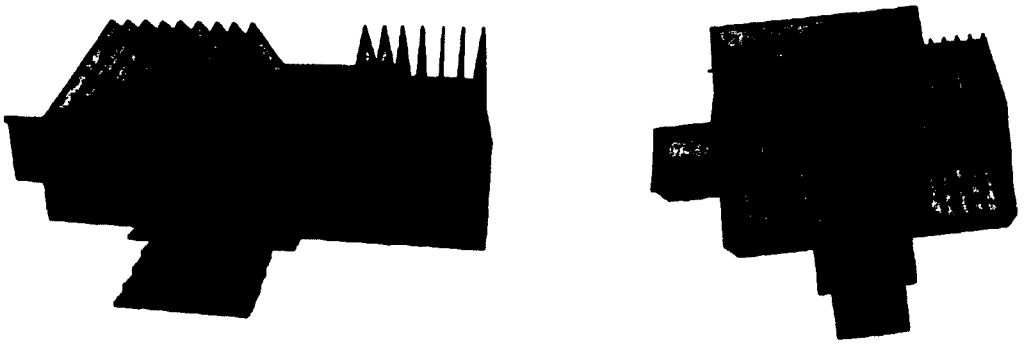


FIG. 65. REMOVED WOOD RAFTERS. **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

Inserting a new building component defines the center entry hall in the new home addition. The original roof rafters are removed through the center and the reclaimed wood defines a second story new space assemblage. The second story height allows light to enter from the back and the front (Fig. 65).

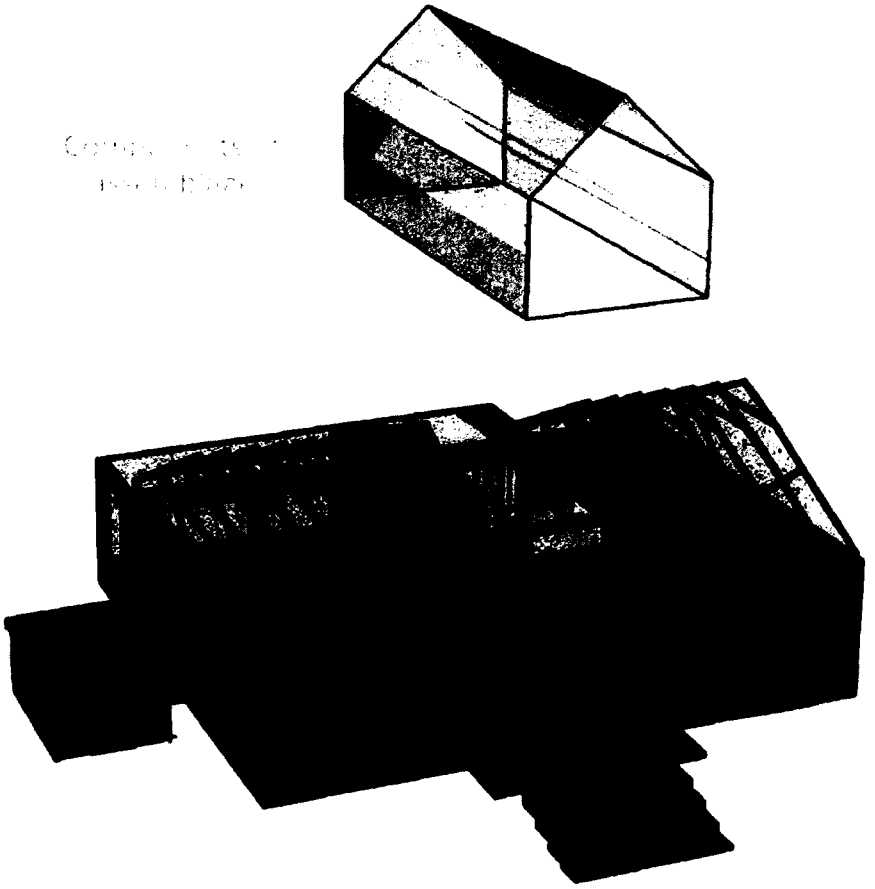
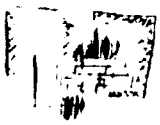
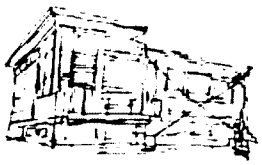


FIG. 66. HOME INSERT. **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

Looking at The Big Dig House (Single Speed Design) case study, the house reutilizes recovered debris by WEAVING the recycled building materials into a new home design.





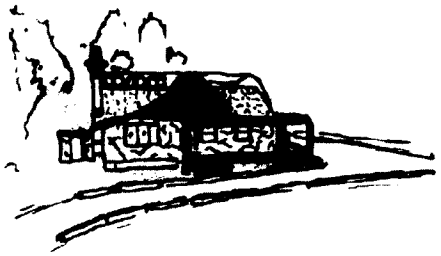


FIG. 67. IMAGE OF BEANS ACROSS SKYLIGHT: Stamp, Elizabeth. Country Homes. McConnell, Mary and James. Last Modified June, 2007. Accessed June, 2012 <http://www.architecturaldigest.com/decor/2012-06/country-homes-slideshow>.

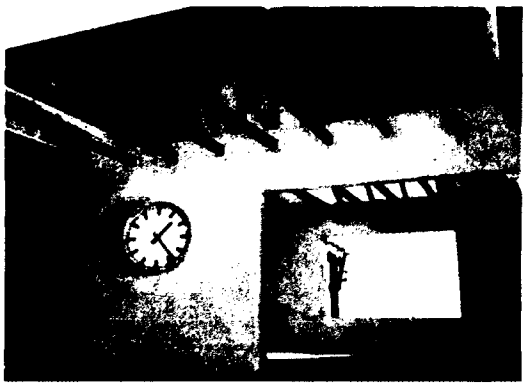
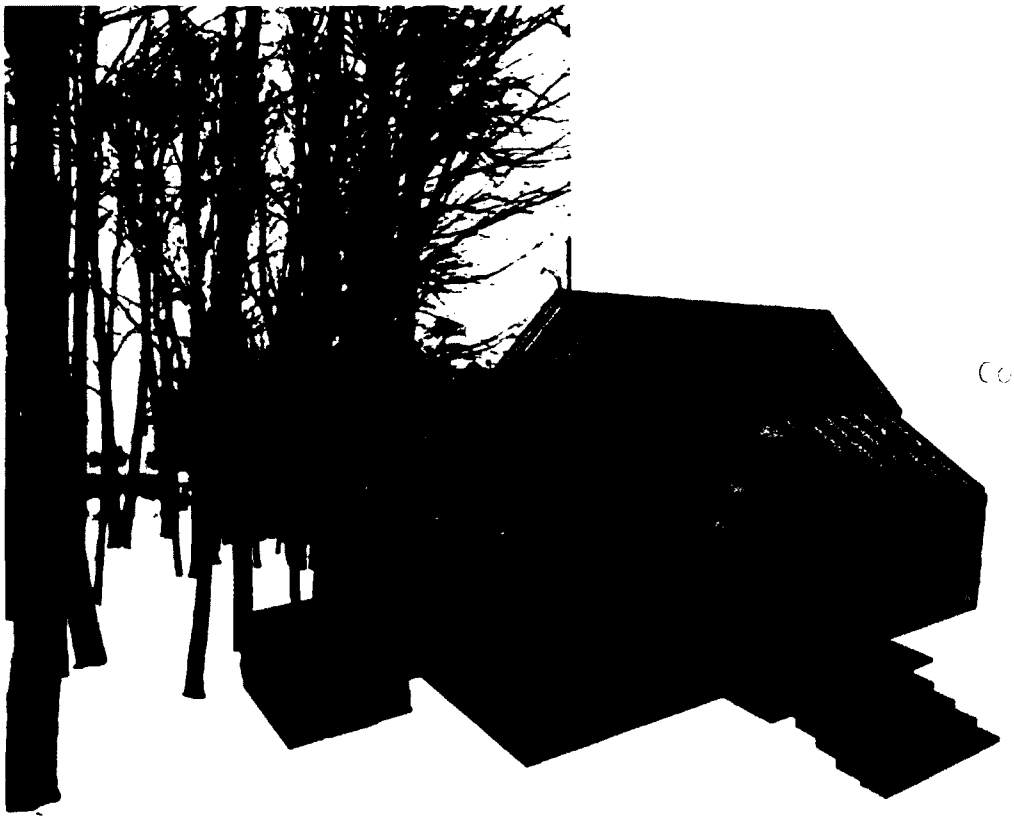


FIG. 68. OLD AND NEW RAFTERS: Weatherbee, Hailey. Uxbridge Ontario, 2013.

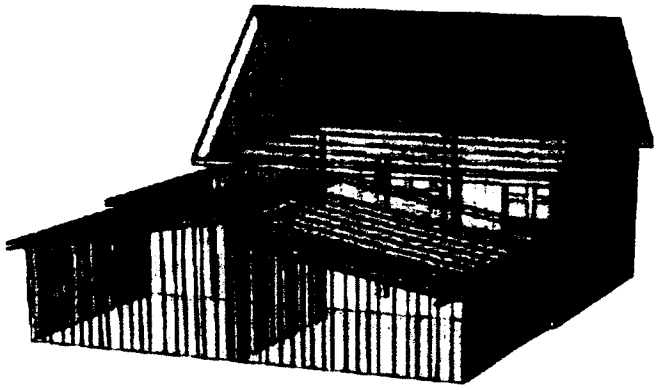


Collage

FIG. 69. WOOD RAFTER WEAVING: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

Opening up the ceiling exposes the old rafters and shows the weaving of the new rafters placed inbetween (Fig. 70). The roof slopes from the outside towards the east side of the treed landscaped lot (Fig. 69). The interior and exterior space is dramatically altered to create a one of a kind home sculpture.

FIG. 70. OLD AND NEW RAFTERS WEAVING: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**



Re-use of the actual architectural components

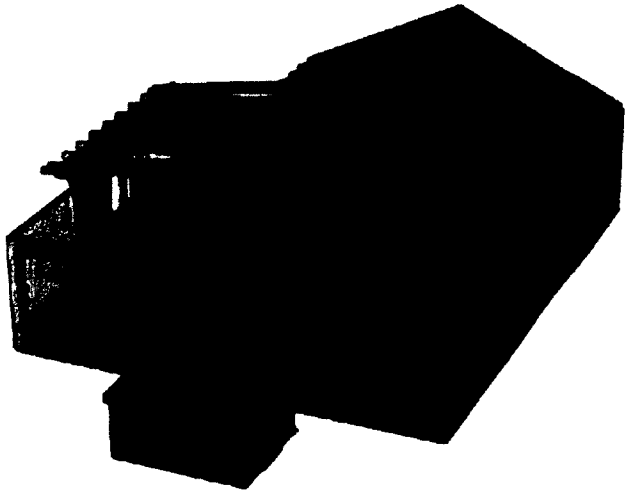
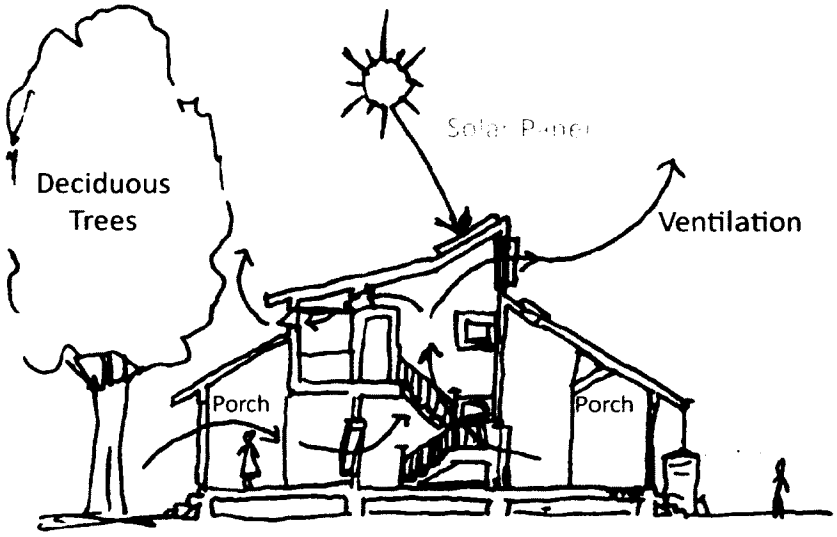


FIG. 71. VENTILATION LAYER INSERT. **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

The psychology of scarcity, supports that resources that are available for human utility should be used extremely economically (Jansen). This translates into recycling resources that have previously been used. Reuse of actual architectural components from the Lindsay barn are re-used in the 224 Reach home design (Fig. 71).



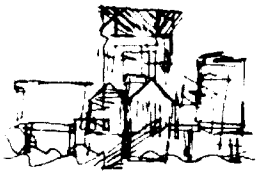
From a sustainable design point of view the center entry hall terminated by glass views open to encourage cross ventilation from the back to the front of the house.

FIG. 72. NEW LOFT SPACE: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 73. ENTRY TO BACKYARD SPACE: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 74. CROSS VENTILATION: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

Looking back at The Gehry Residence (Perez) case study, WRAPS a new shell exterior around the exisiting home, using found objects.



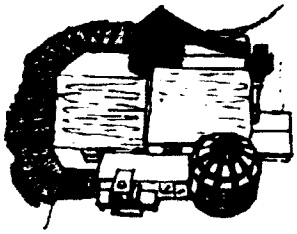


FIG. 75. RECLAIMED WOOD USED IN EXTERIOR DETAILING: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

Weathered wood from the old Lindsay barn makes lovely additions to rustic home renovation. Not only found in the roof rafters the idea of wrapping is also seen in:

The exterior corner with a new wrap around porch (Fig. 76).

As trim for exterior windows and doors (Fig. 75).

As decoration to the exterior material in order to mimic original barn structure (Fig. 77).

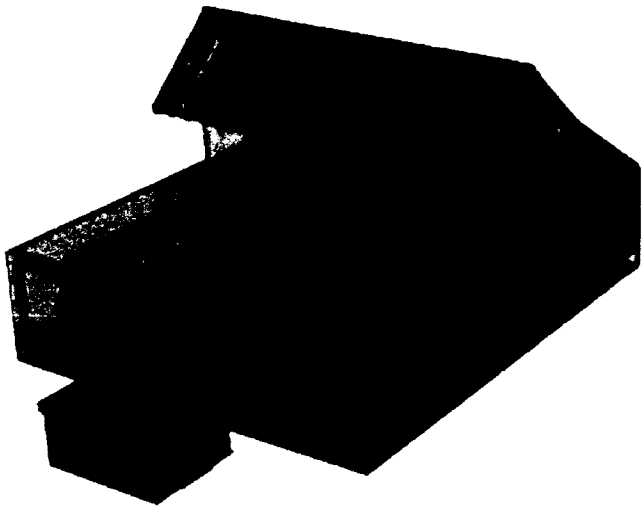


FIG. 76. WRAP AROUND PORCH: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

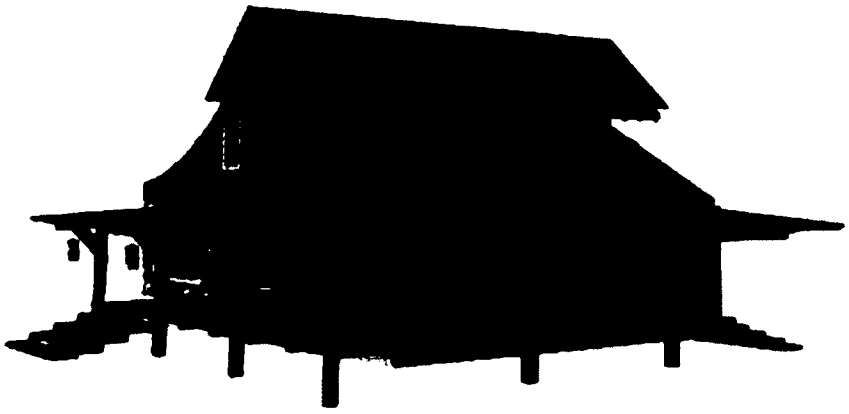
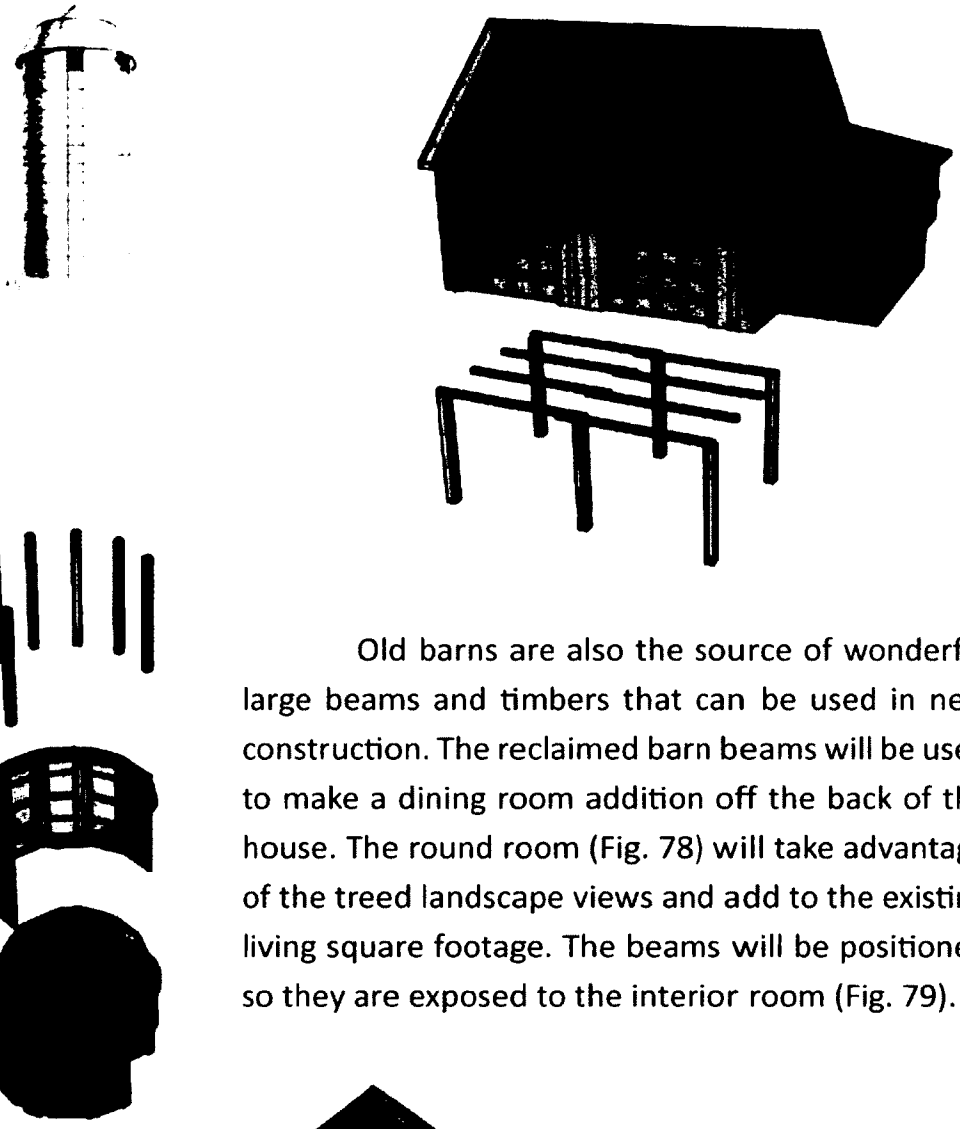


FIG. 77. WRAPPING THE HOME: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**



Old barns are also the source of wonderful large beams and timbers that can be used in new construction. The reclaimed barn beams will be used to make a dining room addition off the back of the house. The round room (Fig. 78) will take advantage of the treed landscape views and add to the existing living square footage. The beams will be positioned so they are exposed to the interior room (Fig. 79).

FIG. 78: REUSING BARN TIMBERS: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 79. IMAGE OF INTERIOR WINDOWS FRAMED BY TIMBER. The Enchanted Home. *One Word with Brooke of Velvet and Linen*. Last Modified February, 2012. Accessed February, 2012 <theenchantedhome.blogspot.ca>.

FIG. 80. IMAGE OF SOLARIUM. Vivir, Belle. *A Designer's Bookmark on Style*. Last Modified March, 2013. Accessed March, 2013 <http://bellevivir.blogspot.ca/>.

The most important room in the house, the dining room, will take advantage of the best views of the yard.

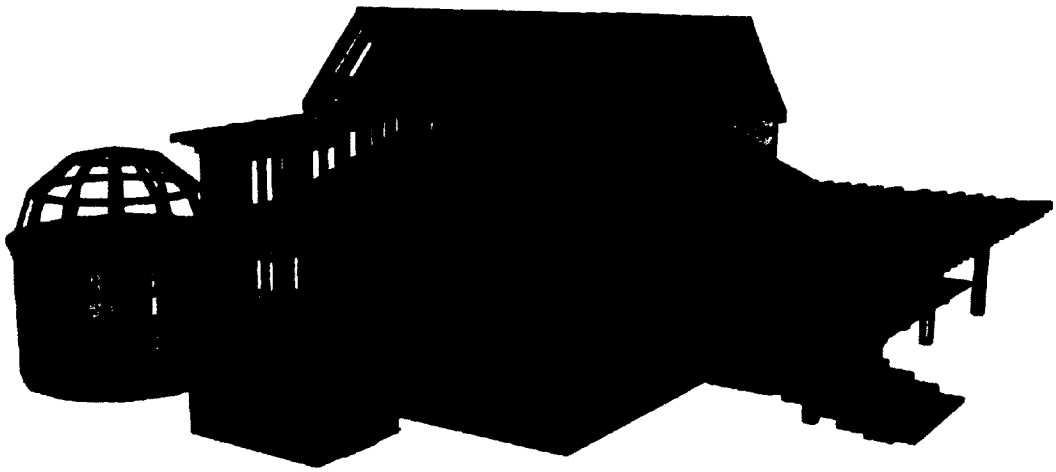
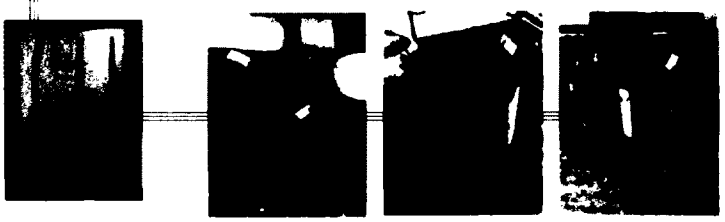


FIG. 81. NEW DINING ROOM: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**



Item: 7 Casa Loma Original Lights
Found: January 26, 2013
Where: Gary Hill Auction.
Cost: $50.00 each

With interior design in such focus, professionals are able to further develop the industry and their understanding thereof in a communal environment that is receptive to ideas, new trends and innovation. Gathering salvaged items before designing a new architectural space has been tested. For example take the seven original Casa Loma light fixtures. The oversized light fixtures encouraged the location for an outdoor setting. Six lights were used to wrap the porch (Fig. 82) and the smaller lamp is hung in the round dining room (Fig. 81).

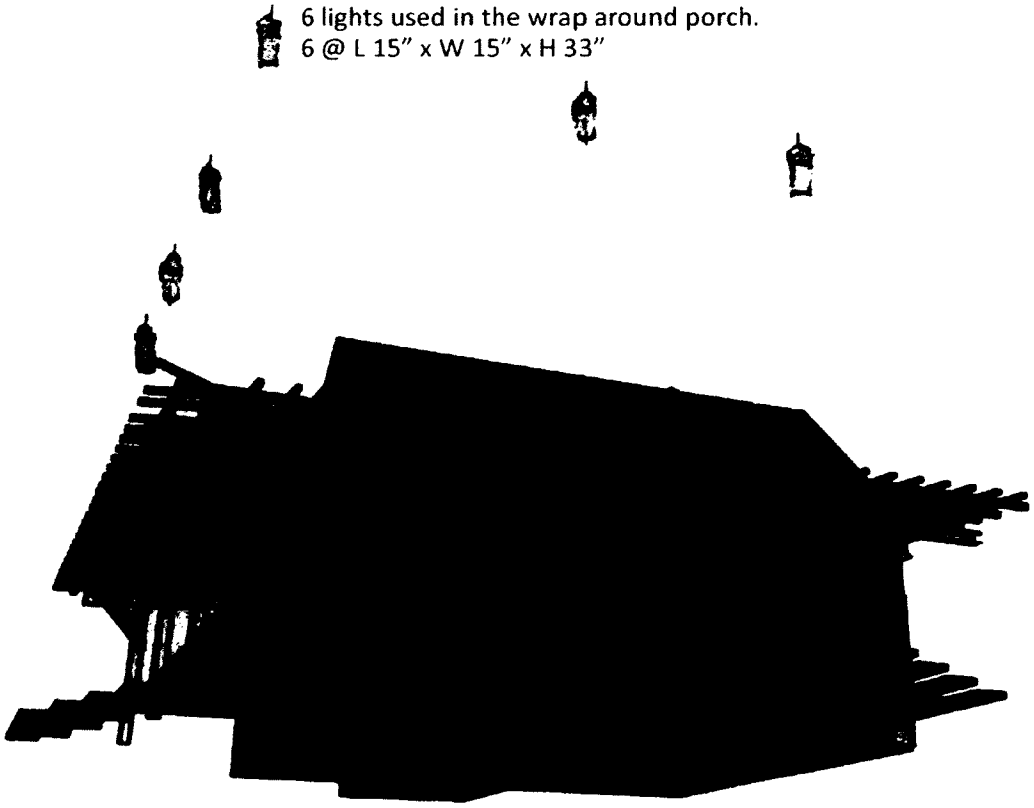
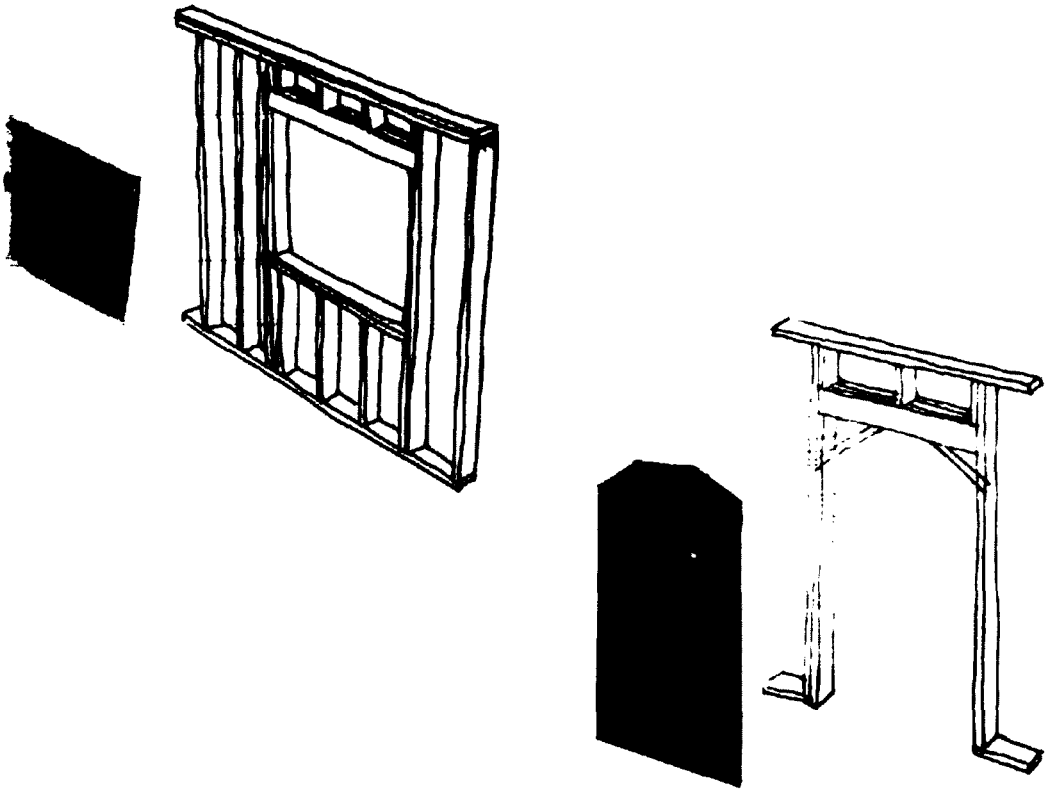


FIG. 82 LARGE SALVAGE LIGHT PLACEMENT. **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

"Beauty is due more to harmonious relationships among the elements of a composition than to the elements themselves" (Frederick 51).



1 light used in the dining room
1 @ L 15" x W 15" x H 24"

FIG. 83 SMALLER SALVAGED LIGHT PLACEMENT: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

CHAPTER 05. 224 REACH STREET HOME

FIG. 84. NEW EXTERIOR HOME DESIGN: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 85. NEW LIVING ROOM SPACE OVER LOOKING BACK YARD ENTRANCE: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

The form and function of different components of a home can produce boundaries on the design and creativity that goes into creating it. Different parts of a building have different functions, and as such, are usually designed for a specific function. When looking at the reuse of materials, it must be considered that the form and function of the products being reused from previous use may be introduced into a new use with an entirely different function. This doesn't mean that a product or material looses its use; however it only implies that functionalities in materials from one area may be used with a new functionality in a different area.

However, the most important aspect to consider may be the possibility of restrictions that come with introducing used materials into new projects. Considering the aspect of form and functionality, if something has a specific use in one setting, it may not lend itself to limitless possibilities for design in a new setting. Structural members in one aspect may not be used as structural members in another, however these materials may be altered to function in different form. There are endless ideas that can be put into a new form of the material, however there will always be some type of restriction on the functionality on the material that has been predetermined by its previous use.

224 Reach Street is a project that has challenges in itself. Like the functionality of materials, this home has been designed and built around a specific function that the previous owners had in mind. With this design, there also comes restrictions into how the home can be changed moving forward. For example, the middle of the home has a load bearing wall through it. Although this is not an insurmountable task to work around, it does place a limitation on the new design. Other factors including foundation type and condition (can the building support another floor?) and the position of the structure on the lot are factors that must be considered. All of these existing conditions add up to create a design project that at first glance looks like a blank slate, but with further investigation shows a project that may require significant sacrifices must be made with regard to creating a workable functional design.

CHAPTER 06. 224 REACH STREET TREE LINE

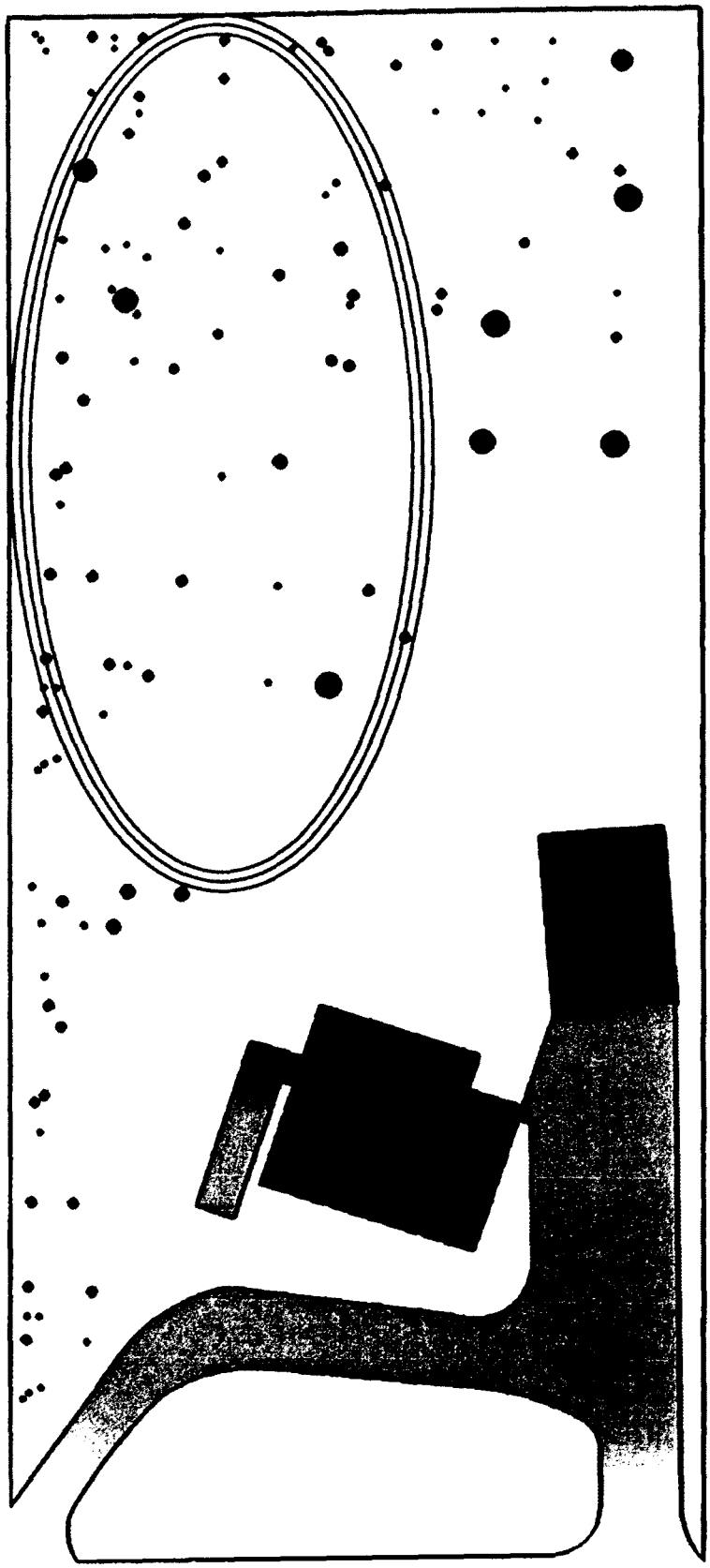


FIG. 86. 224 REACH STREET TREE LINE: Weatherbee, Hailey. Uxbridge Ontario, 2013.

FIG. 87 NATURAL SETTING Weatherbee, Hailey. Uxbridge Ontario, 2013.

224 REACH STREET TREE LINE

The natural setting (Fig. 86) at 224 Reach Street has no restrictions on the design possibilities in designing a workspace for the scavenging architect. Like a young pair of Bald Eagles, the scavenging architect starts new construction (like the Bald Eagle's nest) near or in a living tree, though there are often dead trees (snags) nearby. The healthier the tree, the better. Fortunately the site of 224 Reach Street provides numberous locations for new construction along the lush tree line (Fig. 87).

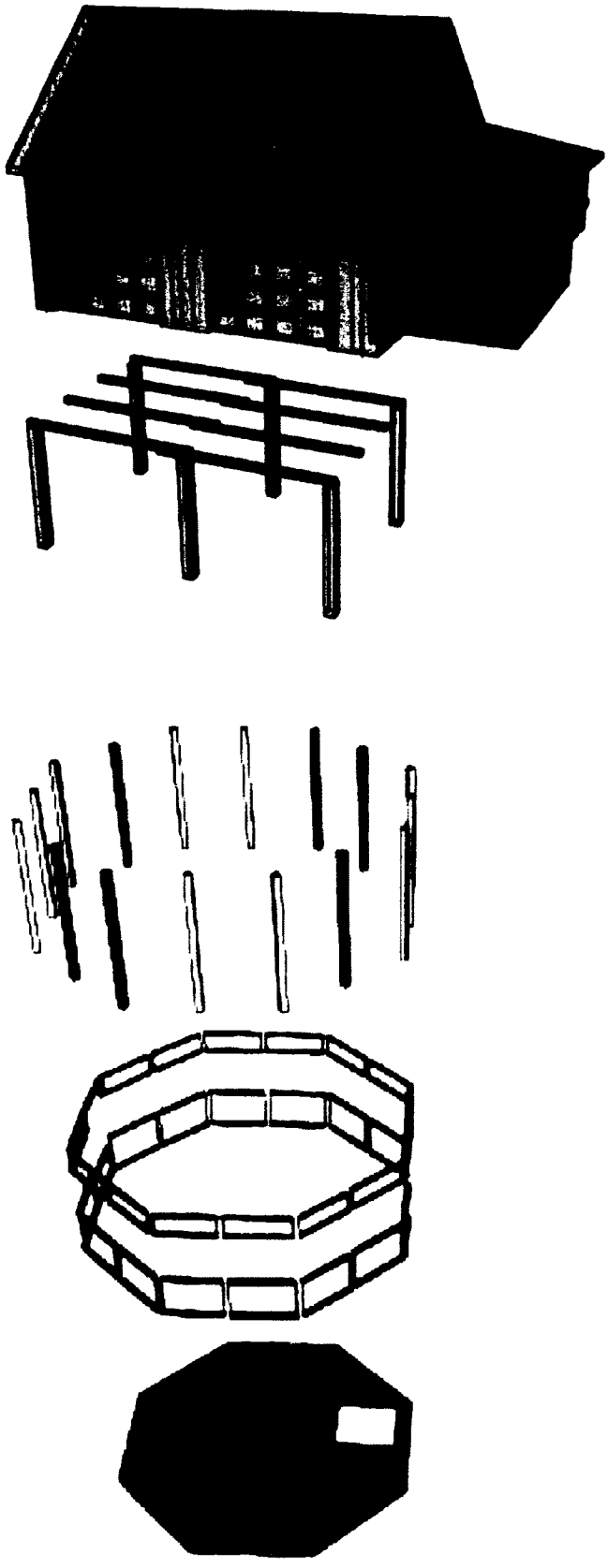


FIG. 88 WORKSPACE GATHERING OF RECLAIMED WOOD: Weatherbee, Hailey. Uxbridge Ontario, 2013.

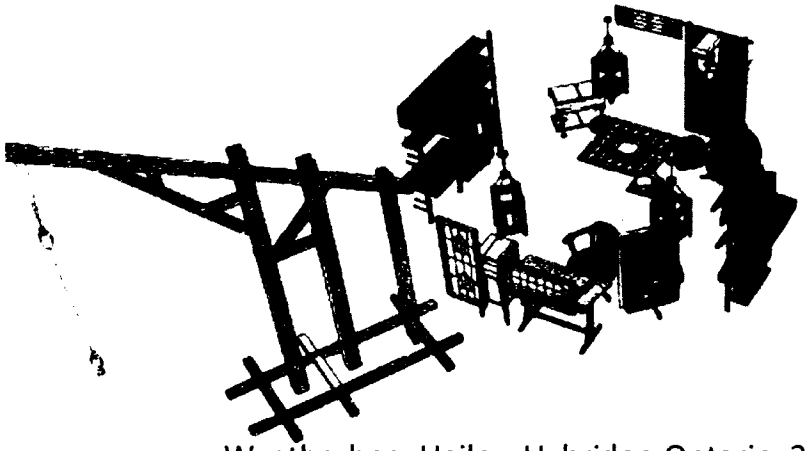


FIG. 89 AUCTION ITEMS GATHERED. Weatherbee, Hailey. Uxbridge Ontario, 2013.

GATHERING

Like the Bald Eagle who picks up nearby broken sticks from the ground, the scavenging architect picks up reclaimed barn lumber and the auction finds to build it's space. The scavenger naturally takes as many sticks as he/she can and puts to use. Like the bird, the architect inter-weaves the reclaimed barn elements (like Bald Eagles does with the sticks for its nest) (Fig. 88), and fills in spaces with the additional elements also gathered (like the Bald Eagle does with grasses, mosses, and other fibers) (Fig. 89).

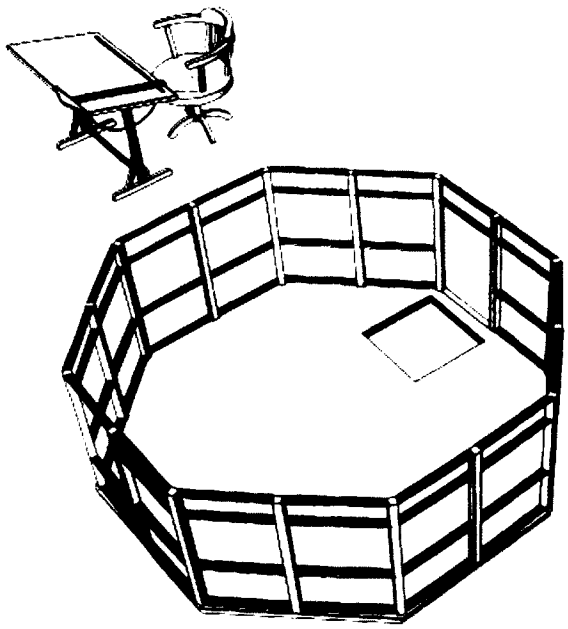


FIG. 90 SCAVENGING ARCHITECTS WORKSPACE. Weather-bee, Hailey. Uxbridge Ontario, 2013.

WHERE DOES THE SCAVENGING ARCHITECT WORK?

One might wonder where the scavenging architect may work. How does the architect enter his/her workspace (Fig. 90)? What surrounds the architect? What furniture and elements are needed in order to provide the architect with a functional space? And most importantly, what type of environment inspires the scavenging architect to continue with the notion of reusing found salvage in creative design?

Item: Stained Glass Window

Item: Lead Glass Windows

STAINED GLASS WINDOWS

Initial development was in Middle East where holes allowed light into buildings and craftsmen included patterns leading to stained glass (4).

Originally stained glass began to be used as a work of art and it is still used for the same purpose in the current times.

The 11th century saw the use of stained glass in Europe for panels in religious buildings like churches (4).

...according to, Darrell Lim author of The Historical and Contemporary use of Stained Glass.

LEAD GLASS WINDOWS

The percentage of lead windows in America which were there before 1700 is below 1 % (2).

Important aspect of buildings in the 18th century America.

Leaded windows were used in the construction of openings in temples and churches (5).

Designing of religious building architecture applies leaded windows to further increase beauty and aesthetics.

...according to Neal Vogel and Rolf Achilles authors of *The Preservation and Repair of Historic Stained and Leaded Glass.*

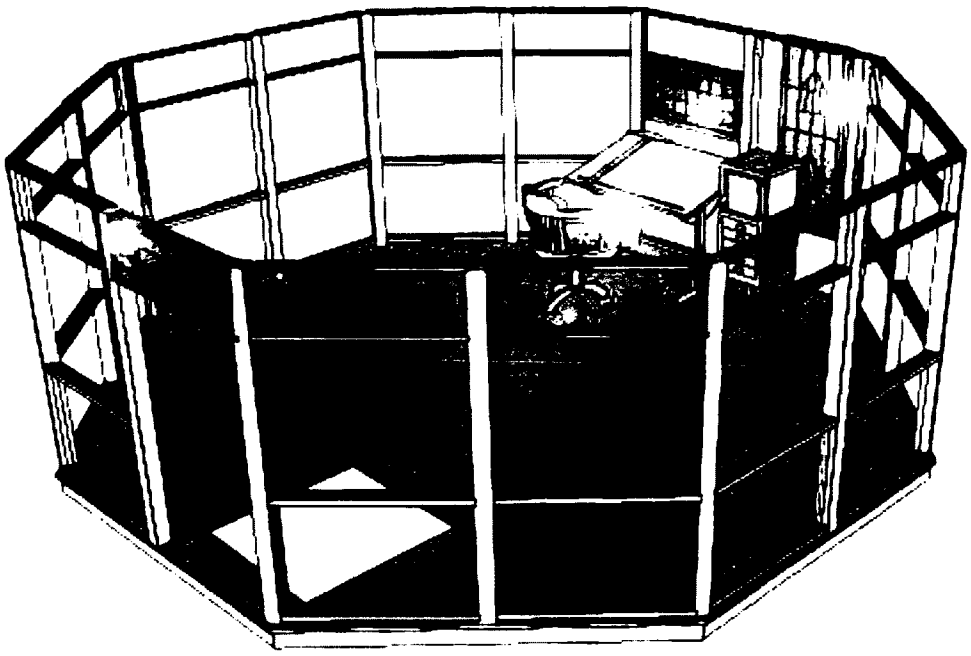
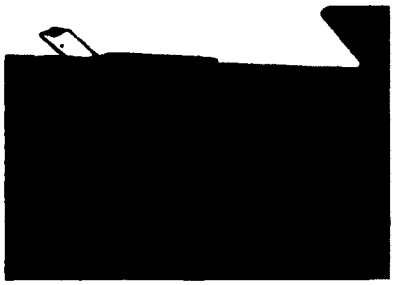


FIG. 91. SCAVENGED STAIN GLASS AND LEAD GLASS WINDOWS. Weatherbee, Hailey. Uxbridge Ontario, 2013.

Originally stained glass began to be used as a work of art and it is still used for the same purpose in the current times. Perhaps the stained glass window is positioned directly over the architects drafting table. The sun passes through the window and the colours of the glass dance on the architects canvas (Fig. 91).

Just like stained windows, leaded windows were an important aspect of buildings. Leaded windows were used in the construction of openings in temples and churches (Vogel & Achilles 5). Architecture applies leaded windows to further increase beauty and aesthetics. Perhaps the salvaged lead glass windows frame the entrance door and view from the drafting table (Fig. 91).



Item: Cast Iron Wood Stove

WOOD STOVES

Invention in Germany during the 18th century.

Cooking necessitated the need for stoves to provide heat.

Stoves greatly developed during the 19th century.

Initial use of stoves were in rooms that were large such as hotels and hospitals for heating (112).

The first stoves were furnaces made of cast iron and as such they were crude and large.

The most common material used to make stove is iron.

> ...according to Bill Loomis author of Detroit's *Delectable Past : Two centuries of frog legs, pigeon pie and drug store whiskey* (Loomis 111).

"Eagles, add sprigs of greenery to their nests. Some scientists think the greenery :

- may serve as an insect repellent
- may be a clear signal to other eagles that this nest is well-tended so they better keep away
- may provide a bit of camouflage
- may help keep inside of nest clean (Whittam)".

Perhaps the wood stove serves as a planter for in the workspace instead of a stove to burn wood (Fig 92).

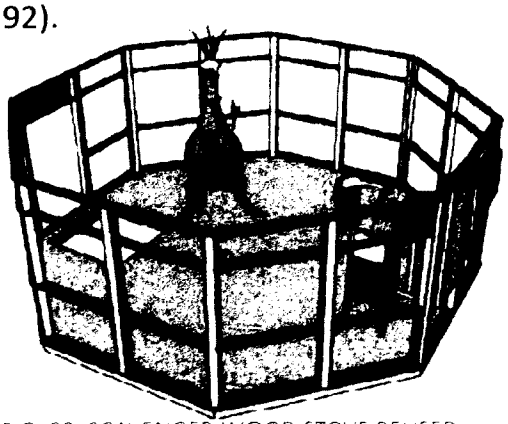


FIG. 92. SCAVENGED WOOD STOVE REUSED: Weatherbee, Hailey. Uxbridge Ontario, 2013.

Item: Singer Sewing Table Pedals

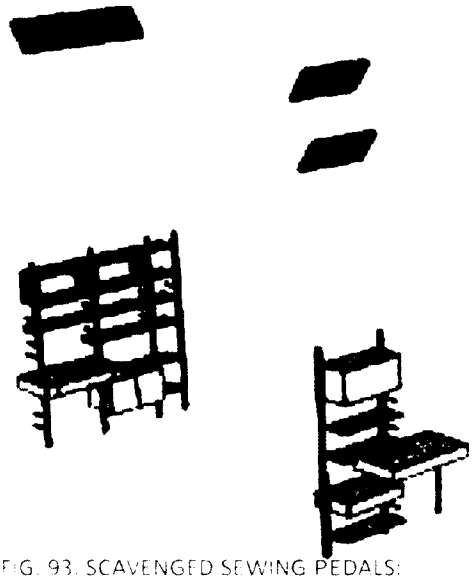


FIG. 93. SCAVENGED SEWING PEDALS:
Weatherbee, Hailey. Uxbridge Ontario, 2013.

SINGER SEWING PEDALS

Developed in the 19th century at a time when different inventors were trying to come up with different concepts on how to improve the user friendliness of the sewing machines.

In 1859, Singer introduced a foot pedal since there had been efforts from the middle of the 17th century to come up with a sewing machine that was mechanical (Friedman, 94).

Original use of the sewing table was to provide power to the sewing machine itself in order to enable increased productivity in the sewing of clothes.

Iron is among the initial material that was used in construction of sewing table pedals.

> ...according to Walter Friedman author of *Birth of a Salesman: The Transformation of Selling in America.*

Perhaps the iron pedals serve as door fronts to the architects shelving systems (Fig 93, Fig 94).

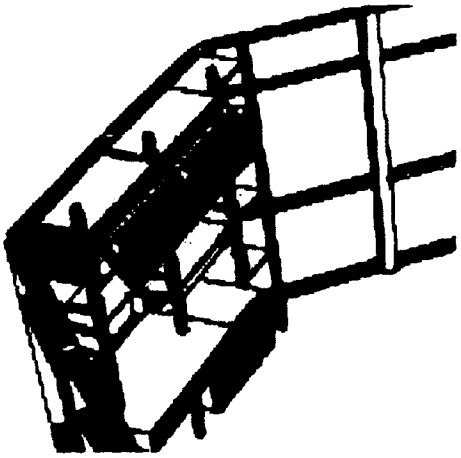
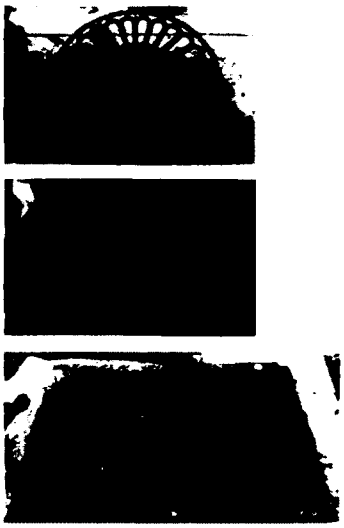


FIG. 94. SCAVENGED SEWING PEDALS:
Weatherbee, Hailey. Uxbridge Ontario, 2013.



Item: Floor Registers

REGISTER VENT COVERS

Decorative metallic register developed in the 19th century (210).

The depth of fire places in 1796 was set at a given depth and chimneys were required to vent such fire places.

This was a time when chimneys were a popular feature in most houses and therefore the function of register vent covers was to provide ventilation for such chimneys.

Large register, where furnaces were ducted, located at the center of the room served homes (210).

The design for register vent covers originated from Britain because of the popular use in ventilating chimneys.

...according to Aaron Lubeck author of *Green Restorations: Sustainable Building and Historic Homes.*

The decorative metallic register vent cover is placed at the enterance of the workspace in order to help ventilation within the room (Fig 95).

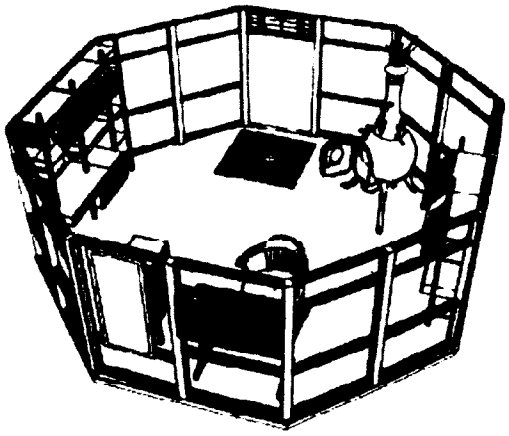
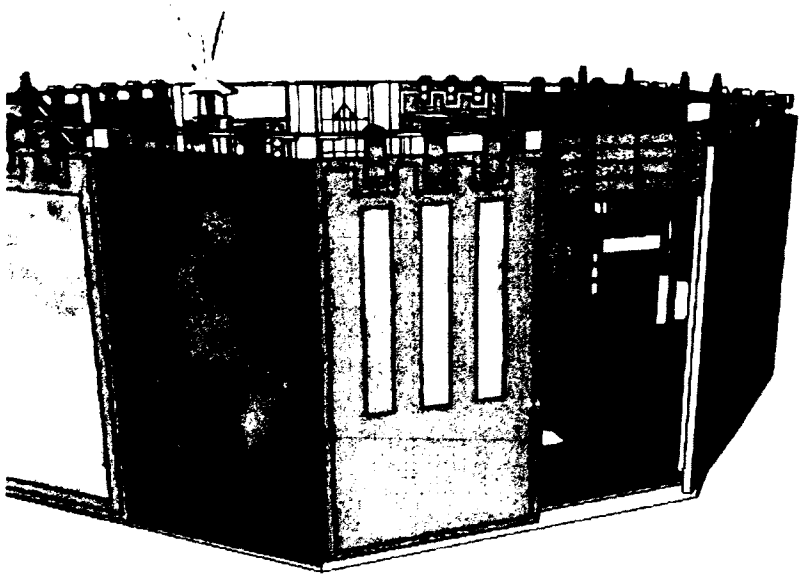


FIG. 95 SCAVENGED VENT COVER: Weatherbee, Hailey. Uxbridge Ontario, 2013.



F.G. 96 SCAVENGED OLD DOORS Weatherbee, Hailey. Uxbridge Ontario, 2013.

WINE CELLAR DOORS

Wine cellar's history can be traced in the 1600s when wine started being expensive (125).

Wine cellar doors were developed based on different regions where it was a common way of storing wine.

Wine cellar doors were constructed from different types of wood that were available in different regions.

Cedar wine cellar doors have been effective in safeguarding entrance to wine cellars over the years.

...according to Matt Kramer authors of *Making Sense of Wine.*

OAK DOORS

Middle Age was a time when doors were constructed using solid oak compared to ancient Rome when bronze was used in buildings for the public (81).

As far as doors are concerned, stone was the first material used to make doors. Cave man used stones to cover the cave in which he lived for protection (81).

Doors are used to restrict entry into architectural structures. Doors are also used for aesthetic purposes when the design is presentable.

...accordling to Charles Hooper author of *The Country House.*

Item: Wood Painted Bracket

ARCHWAY CORNICE

The Egyptians had already used arches as from the 6th century B.C. however the 3rd century B.C. had seen the Romans beginning to apply it (156).

Arches were originally used by the Romans to construct theaters that were free standing (156).

The Romans utilized concrete in the construction of arches (156).

Wooden decorative archway cornice has been used to increase the appeal of architectural designs of areas such as windows and doors.

> ...according to Lesley and Roy Adkins authors of *Hand Book to Life in Ancient Rome.*

Perhaps the archway cornice is used by the architect as a place to hang his/her coat once entering the workspace (Fig 97).

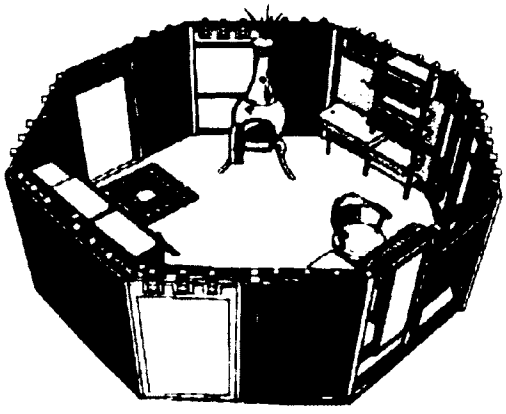


FIG. 97 SCAVENGED CORNICE: Weatherbee, Hailey. Uxbridge Ontario, 2013.

WHAT ELSE WILL THE WORKSPACE NEED?

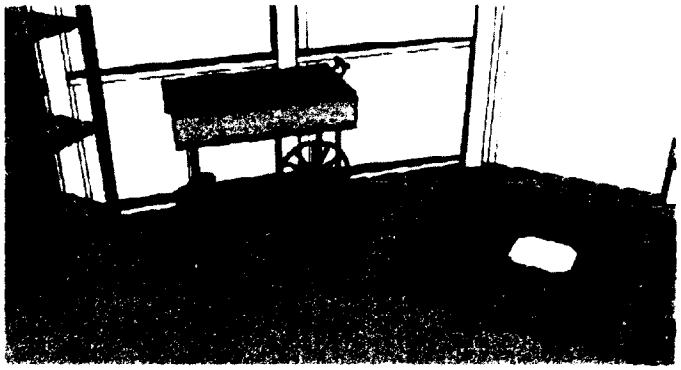


FIG. 98. SCAVENGED CART: Weatherbee, Hailey. Uxbridge Ontario, 2013.

Naturally, the architect needs a bar where he/she can offer its visitors a drink.

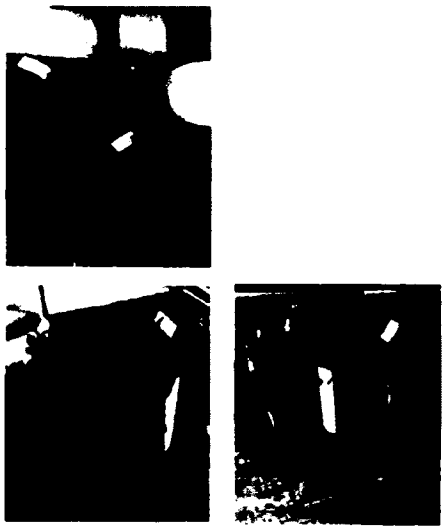
The scavenger must be on the look out for a piece of furniture that suits this desire (Fig 98).

FIG. 99. SCAVENGED CART: Weatherbee, Hailey. Uxbridge Ontario, 2013.

The architect needs a place to hang up his/her drawings and to project illustrations onto.

The scavenger must be on the look out for a piece that will suit this function (Fig 99).

Item: Pulley



Item: 7 Casa Loma Original Lights

PULLEYS

A sculpture which dates back to 2800 years is the earliest indication of a pulley (1381).

Considering that the wheel was already invented during this period, its principles were used in coming up with the style and design.

Pulleys of the ancient times were used to draw water from the wells (1381).

Different types of materials were used in the construction of pulleys. For instance the material which was common in those years was stone. Currently pulleys are made from different materials because of the discovery of materials such as metals.

...according to Marshall Cavendish Corporation, *Growing up with Science*, Volume II.

LIGHT FIXTURES

Light fixtures developed at a time when different forms of lighting were being used, such as gas and electricity.

In Britain, development of emerging kind of fixtures for new fuels such as kerosene and gas was taking place in the final half of the 19th century (8).

Even before the invention of electricity, light fixtures were used for lamps.

England adopted lighting by gas in 1792 (8).

Glass was a common material in the manufacture of electric light fixtures, used to increase the illumination (8).

Light fixtures are nowadays used for decorative purposes therefore adding to the architectural appeal.

...according to Carolyn Flaherty author of *A Guide to Lighting the Old House* found in the Old House Journal.

Pulleys of the ancient times were used to draw water from the wells. Since the workspace is set high up in the tree a pulley system (Fig 100) is in place in order to draw up anything needed for scavanging architect.

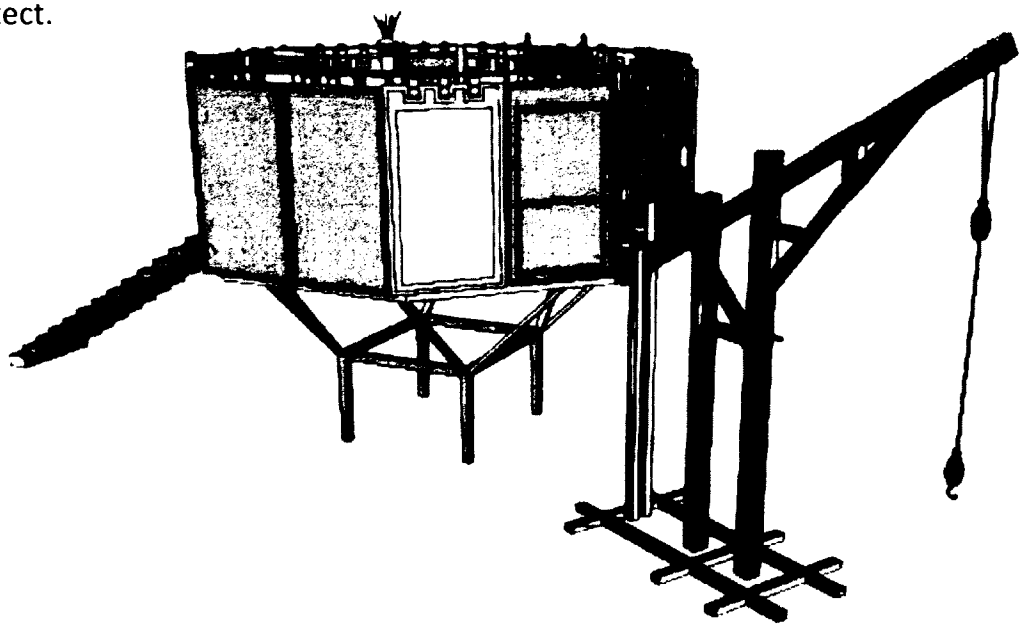
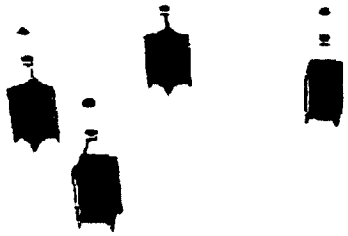


FIG 100. SCAVENGED PULLEY. Weatherbee, Hailey. Uxbridge Ontario, 2012.

The light fixtures are suspended from the ceiling and used to light the office. The lights are powered by the heat core system from the compost barrel tumblers (explained and explored later in the text) (Fig 101).



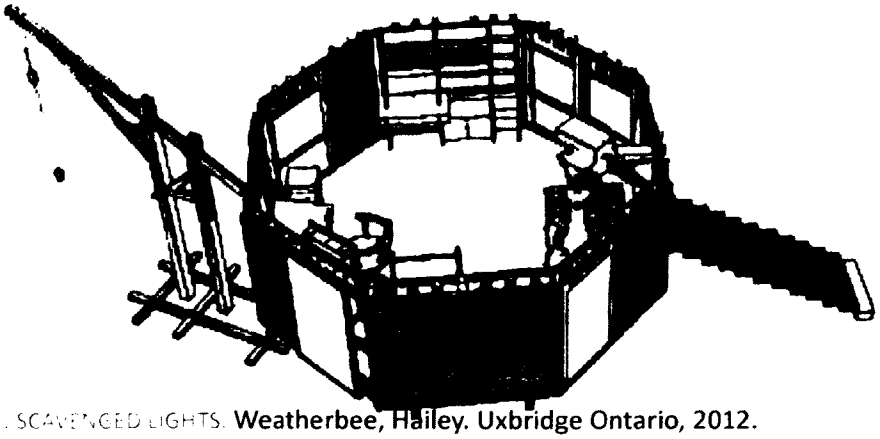


FIG 101. SCAVENGED LIGHTS. Weatherbee, Hailey. Uxbridge Ontario, 2012.

FIG. 102. MAPLE AND SPRUCE TREE LINE. **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

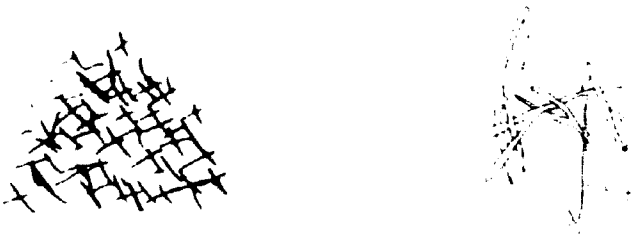
FIG. 103. BALD EAGLE NEST. **Weatherbee, Hailey. Sault Ste Marie, Ontario, 2010.**

"Bald Eagles usually start building in the top quarter of the tree, below the crown, near the trunk, where branches are thick and strong enough to support the heavy nest. Looking at an eagle's nest, it's hard to understand why eggs don't get cracked or babies don't get poked by the sharp sticks. To soften the bottom, parents line it with their own feathers (Whittam)."

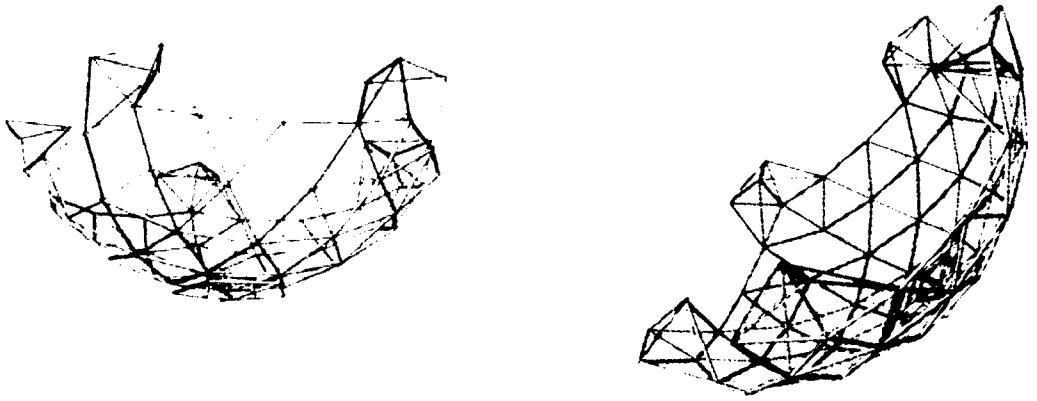
FIG. 104. RAISED WORKSPACE. Weatherbee, Hailey. Uxbridge Ontario, 2012.

The idea of reuse of recycling can be brought to the next level through the implication of sustainable design in a building.

The natural setting at 224 Reach St provides the perfect location to implement a design that compliments and uses the surrounding area. The functionality of the structure comes from the incorporation of an architectural workspace carefully placed in the structure, and built around and suspended from the base of a tree (Fig 104). The workspace consists of reclaimed and reused materials and products now being used to function in new form and new life.



The architects workspace is wrapped in a nest. The remaining reclaimed barn material is used to create a geodome structure (Fig 105).



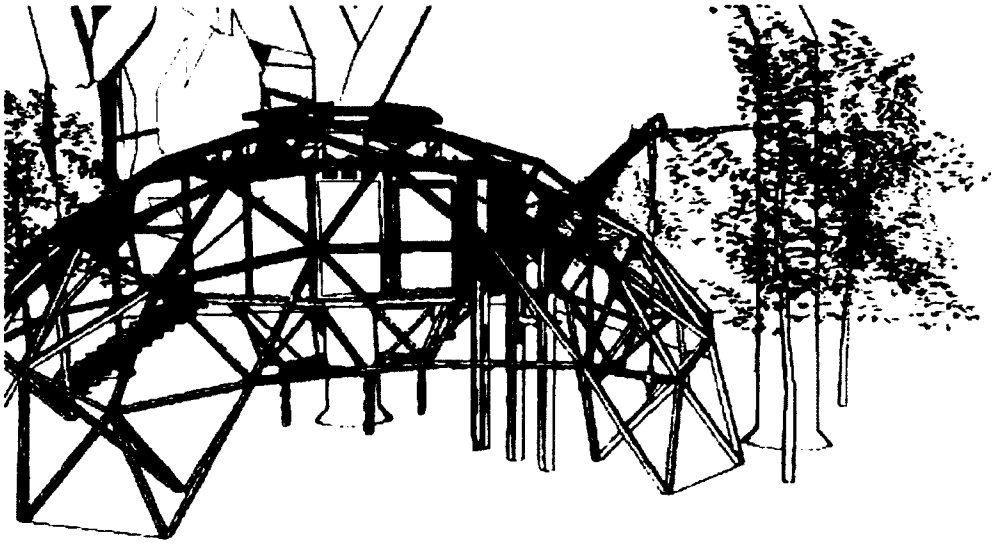
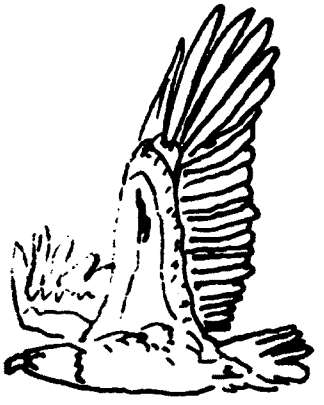
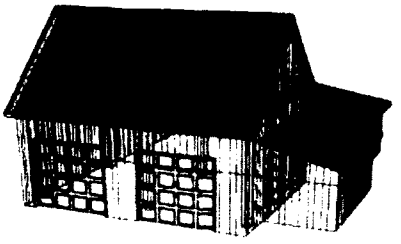


FIG. 105. RECLAIMED WOOD FROM BARN: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**





A structure is created from reclaimed timbers and enclosed from the elements from sheet metal roofing seeing its second life after being salvaged from a fallen barn (Fig. 106).

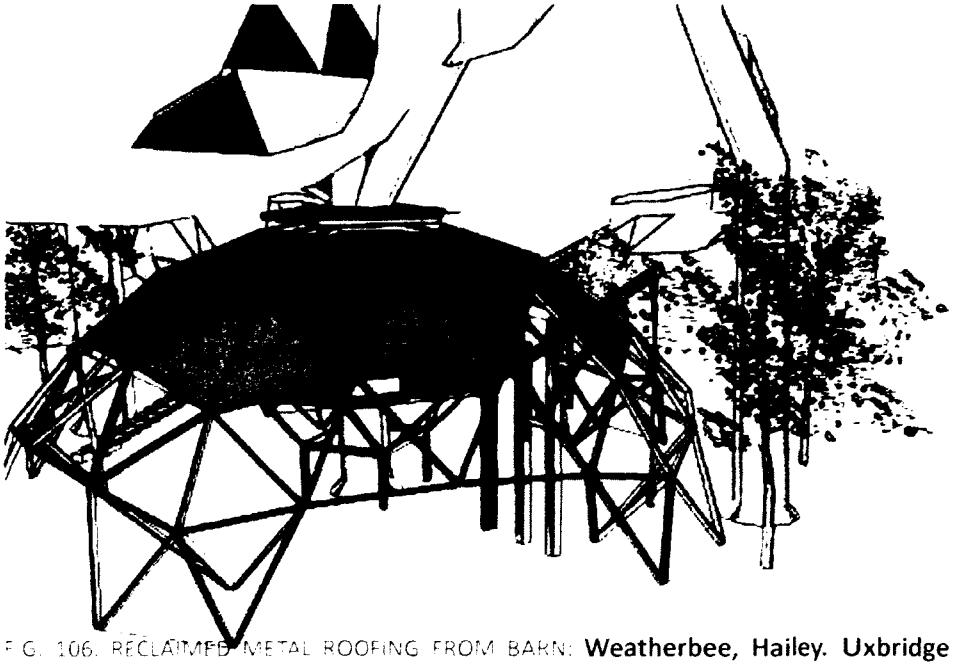


FIG. 106. RECLAIMED METAL ROOFING FROM BARN: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

Item: Two Wooden Barrels

WOODEN BARRELS

Development of closed clay barrels was 800 to 900 B.C., a time when transport and trade was developing (1).

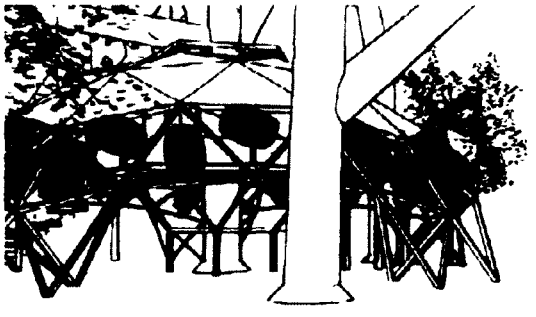
Originally used to store liquids such as olive oil and wine during transport.

Wooden wine barrels emerged to replace clay barrels because they were easy to roll and quality of wine improved (1).

Wood has continued to be used for making barrels and is still used today contributing to manufacture of high quality wine for industries.

> ... accordingly to Beekman author of Wines and Liquors article titled, *oak aging and wine.*

The wooden barrels are used as compost tumblers suspended on the outside structure.



F.C. 107 SCAVENGED WOODEN BARRELS: Weatherbee, Hailey. Uxbridge Ontario, 2012.

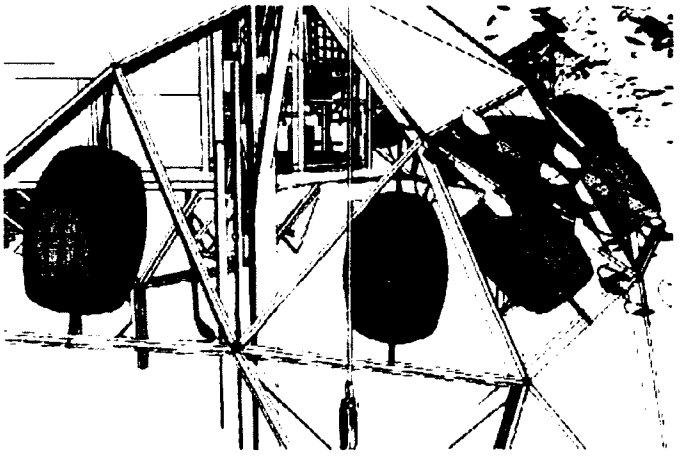


FIG. 108. SCAVENGED WOODEN BARRELS: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

Compost tumbler's are devices used to effectively create rich compost in a time effective manor while taking up a small amount of space. Generally consisting of a barrel-type compost space suspended above the ground using a geodome frame (Fig 108), this allows manual rotation of the barrel and, 'cycle,' the compost. From this action, and from the heat generated from the organics breaking down, the natural material in the barrel produce a nutrient rich compost that can be used for fertilizer, gardening, or lawn care (Fig 109).

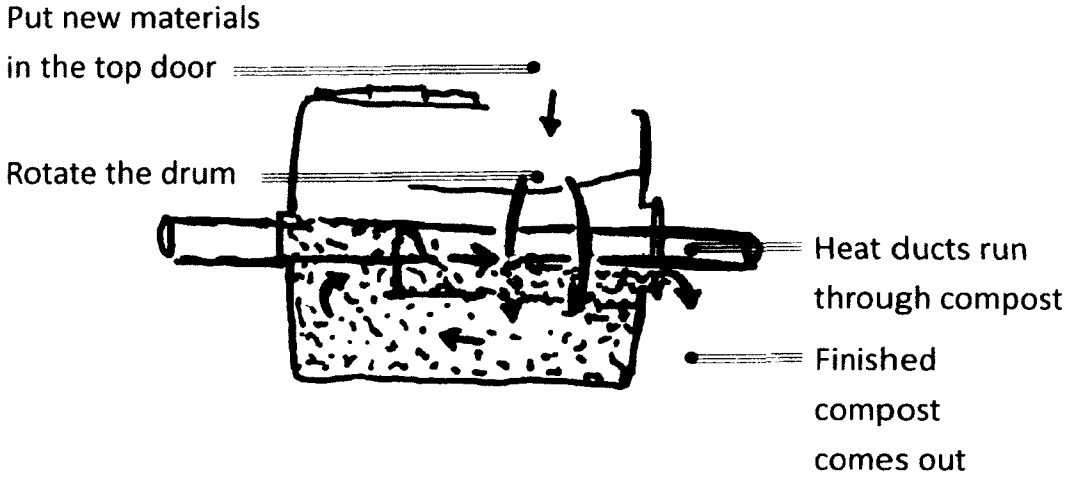


FIG. 109. SCAVENGED WOODEN BARRELS: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

Item: Wooden Ladder

LADDERS

Ladders were used in accessing quarters which were for both living and for the public and in climbing walls of fortresses before Christ was born (450).

Wood was originally used to construct ladders because it was available in plenty. Wood is still used to make ladders but other materials such as aluminum are used nowadays.

...according to David McCollum, and Richard Hughes authors of *Building Design and Construction Hazards.*

The ladders are positioned around the outter shell of the workspace. The ladders allow one to climb up and down the structure and fill the barrels with organic matter. During the composting process, the organics break down and heat is released. The heat generated is used to light the hanging light fixtures inside and additionally to heat the enclosed workspace (Fig 110).

FIG. 110. SCAVENGED LADDERS: Weatherbee, Hailey. Uxbridge Ontario, 2012.

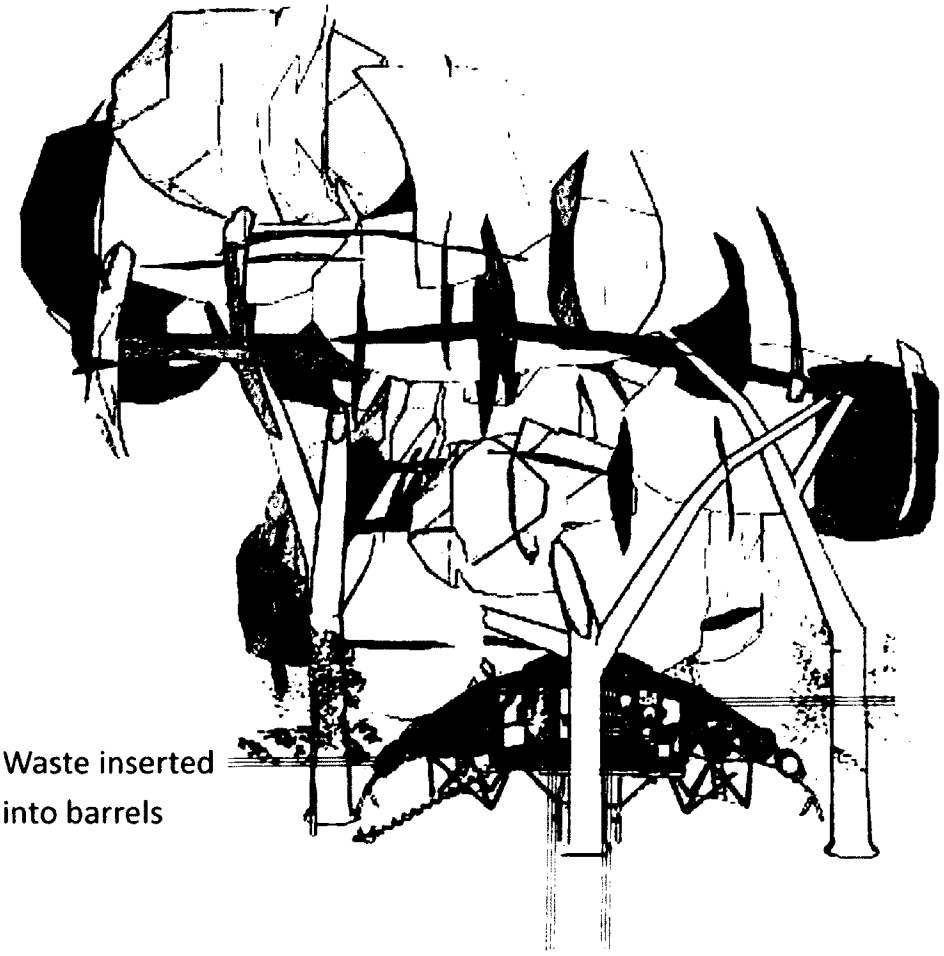


FIG. 111. SCAVENGED LADDERS: Weatherbee, Hailey. Uxbridge Ontario, 2012.

CHAPTER 06. 224 REACH STREET TREE LINE

FIG. 112. WORKSPACE SYSTEM: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

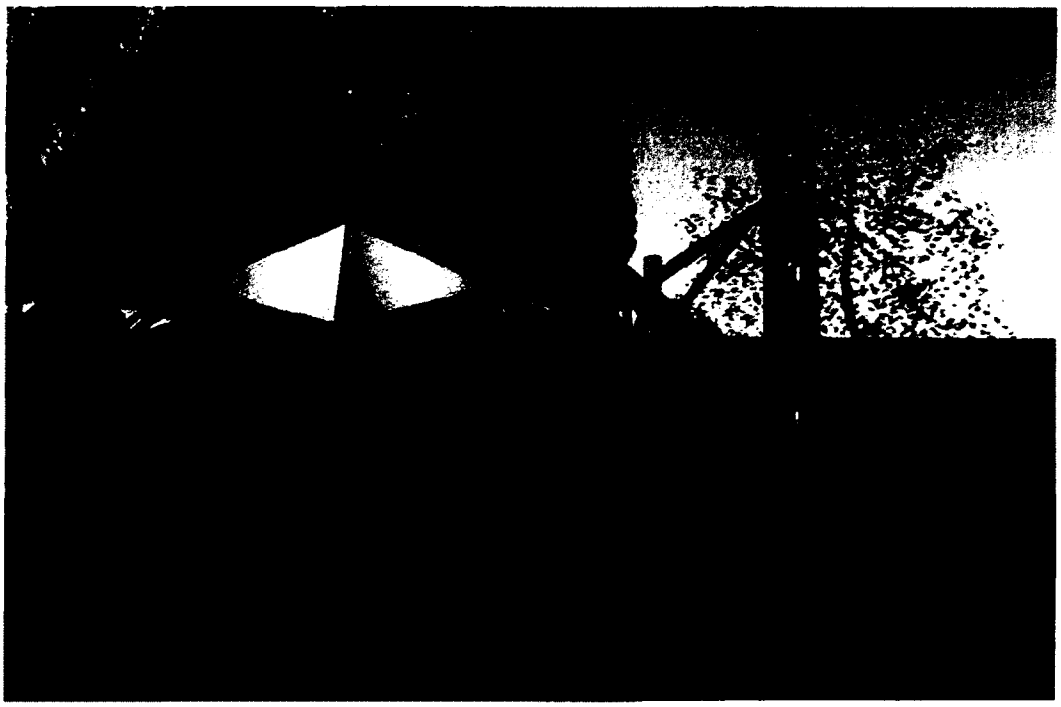


FIG. 113. 224 REACH STREET TREE LINE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

Tabula Rasa. Nothing existing, nothing pre-determined, endless possibility.

The natural setting at 224 Reach Street can be anything an architect dreams of. There are no restrictions on the design possibilities that can be brought forward from this site. The trees and the atmosphere merely, 'lend,' themselves to ideas rather than restrict them. Like an animal in the wild, the habitat is created from natures, 'leftovers,' and what can be scavenged from it. Dens, nests, and shelter are all created from the land and incorporated into the land. The role of an architect on this site and the incorporated design can compliment the very basics of survival, scavenging, and reusing. Fittingly, the design can implement all the characteristics of how most animals survive, while at the same time designing a functional space in the setting they live in.

An unique feature of the design is the recycled wooden barrels that have been converted into compost tumblers. As described previously, a compost tumbler is simply a device that helps to break down organic waste and create compost that can be used. During the process of the organics breaking down, heat is released. In turn, it would fit into the building idea of sustainability to capture this heat and use it as an energy source in the structure as well. Moreover, based on the setting of the structure, the abundance of fallen organics provides a constant source of, 'fuel,' for the building to use a source of renewable energy.

Architecturally, scavenging can come in the form of reusing existing products and materials and incorporating them into new design. Quite clearly, scavenging on a survival basis for an animal, and scavenging on a design and preservation basis for an architect differs greatly. However, the main focus on reuse and recycle applies to both.

CHAPTER 07. POSTSCRIPT

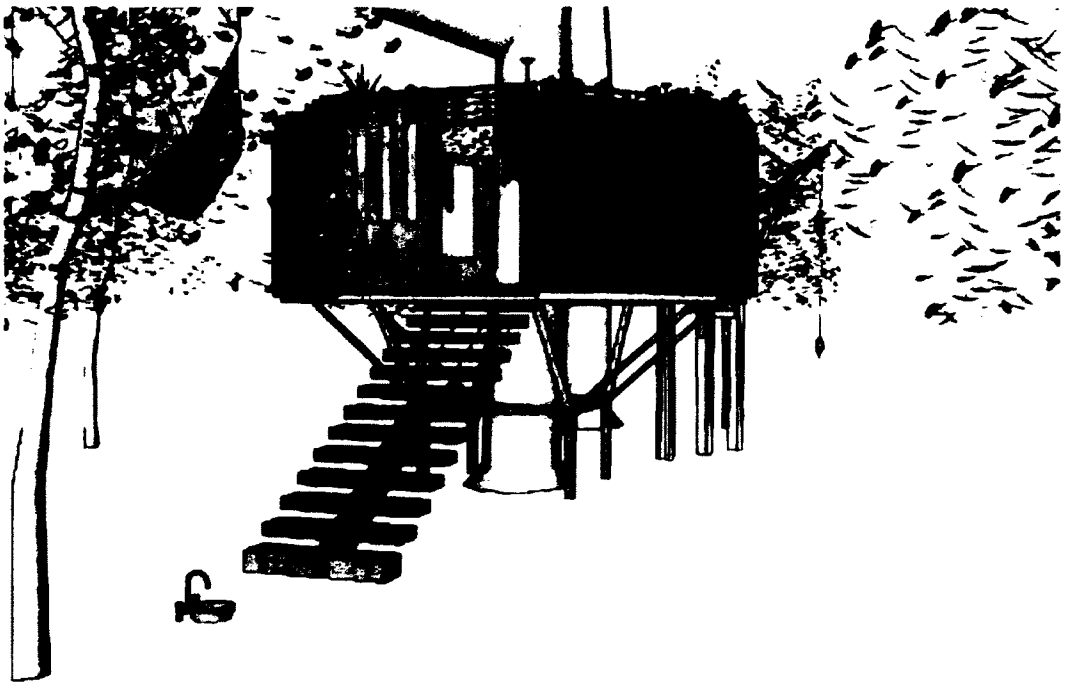


FIG. 114: 224 REACH STREET TREE LINE SINK Weatherbee, Hailey. Uxbridge Ontario, 2012.

Don't forget to wash your feet before going up to the workspace (Fig 114) ! Like eagles, the scavenging architect will continue to keep adding reclaimed items (like eagles do with sticks) to their nests for years and years.

POSTSCRIPT

Role – Responsibility – Reality

The role of an architect includes an endless spectrum of possibilities. One architect may have a strong focus on functionality of a building, while another may focus largely on the environmental impact of a building. Whatever the case may be, the role is ever evolving based on a number of factors that may include current design trends, changing building practices, client expectations, and most recently, local and global awareness on sustainability.

With the newer expectation of creating environmentally friendly and sustainable buildings, design methods and the approach to design as a whole must change and evolve to meet these new expectations. Green

roofs have been added, interior drainage systems are used to collect rain water, and hay bails have started to be used for insulation; just to name a few.

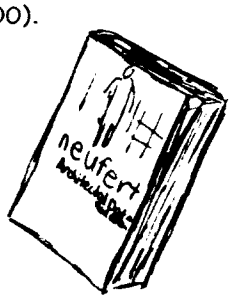
Taking a step back from specifically the, green, aspect of building and looking more at the focus on reusability and recycling, we can understand how these different design characteristics fall under the umbrella of sustainability. If we separate green practice from reusability we can see they are actually two different ideas in design. Green implies less environmental impact, whereas reusability implies reduced waste. Green practice in design is presently a reality. Reusability however, has yet to be fully added and accepted into one of the many roles an architect must consider when designing a building. The idea to reuse materials from old building and put them into new design is a way for us to broaden our tree of sustainability and function with what we have and not with what's to come. Architecture is a profession that accepts and welcomes new ideas on a consistent basis. Transforming an idea into reality and common practice is not something that happens overnight, especially when the idea requires the architect to assume another role in the profession – Scavenger.

Change is in the works as architects like Samuel Mockbee has shown there is great value in sustainable and community-build design. This is an architect who found creative use in building supplies through found, salvaged and scavenged materials and incorporated them into new design. It takes only a little inspiration to have a major impact on the industry and people around you.

As we move forward, scavenging and architecture may become synonymous with each other. The role may become a responsibility and come with the expectations for young architects starting in the profession. Not so many years ago, the world was a place where recycling was just an idea and not carried out in actuality. In today's world, people feel responsible to make an effort towards this changing trend and their role in society. Enough so that it has become a reality.

INSPIRED BY

"Neufert's Architects' Data is an essential reference for the initial design and planning of a building project. It provides, in one concise volume, the core information needed to form the framework for the more detailed design and planning of any building project" (Neufert 2000).



"Don't inherit your environment from your ancestors, but rather borrow it from your children" (Kraumanis).

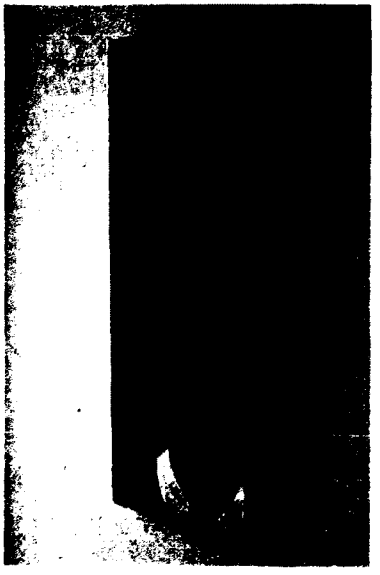


FIG. 115: IMAGE OF REUSED PLYWOOD: Dishfunctional Designs. *Going with Grain Plywood Artwork*. Last Modified March, 2013. Accessed September, 2012 <dishfunctionaldesigns.blogspot.ca/2012/03>.

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FIGURE LIST

big-dig-house-single-speed-design/>.

FIG. 15. PAGE 42. IMAGE OF BIG DIG COMPLETED DESIGN: **Single Speed Design. *The Big Dig House.* Last Modified June, 2009. Accessed September, 2012 <www.archdaily.com/24396/ big-dig-house-single-speed-design/>.**

FIG. 16. PAGE 46. IMAGES OF PIG BARN ASSEMBLY: **FNP-Architekten. *Adaptive Reuse: From Derelict Pig Barn to Modern House.* Zurück Zur Projektübersicht. Accessed September, 2012 <www.fnp-architekten.de>.**

FIG. 17. PAGE 48. IMAGE OF PIG BARN INTERIOR: **FNP-Architekten. *Adaptive Reuse: From Derelict Pig Barn to Modern House.* Zurück Zur Projektübersicht. Accessed September, 2012 <www.fnp-architekten.de>.**

FIG. 18. PAGE 50. IMAGE OF SAMUEL MOCKBEE: **Mockbee, Samuel. *Rural Studio: Community Architecture.* New York, NY: Princeton Architectural Press, 2003.**

FIG. 19. PAGE 51. IMAGE OF RURAL STUDIO CHURCH: **Mockbee, Samuel. *Rural Studio: Community Architecture.* New York, NY: Princeton Architectural Press, 2003.**

FIG. 20. PAGE 54. IMAGE OF SALVAGED SHED: **Hayes, Ethan. *Houses from Salvaged Materials.* Last Modified November, 2011. Accessed September, 2012 <www.recyclart. org/2011/11/houses-from-salvages-materials/>.**

FIG. 21. PAGE 54. IMAGE OF REUSED LOGS: **McGrath, Meegs. *Gold Log Tables.* Last Modified September, 2012. Accessed September, 2012 <accoutrement.com>.**

FIG. 22. PAGE 56. IMAGE OF BARN HOUSE: **Farmhouse Style. *Barn Raising: Reassembled Barns as Modern Dwellings.* Edition 26. Last Modified June, 2012. Accessed September, 2012 <remodelista.com>.**

FIG. 23. PAGE 56. IMAGE OF RECLAIMED WOOD SHELVES: **Maison and Demeure. *Rough-Hewn Shelves.* House and Home Magazine, October, 2012. pp. 137.**

FIG. 24. PAGE 62. BARNS FOUND INBETWEEN REACH STREET SITE AND LINDSAY BARN: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 25. PAGE 63. IMAGE OF NEWSPAPER AD: **Weatherbee, Hailey. Uxbridge, Ontario, 2012.**

FIG. 26. PAGE 64. IMAGE OF 812 MONARCH ROAD BARN: **Weatherbee, Hailey. Lindsay, Ontario, 2012.**

FIG. 27. PAGE 64. IMAGES OF 812 MONARCH ROAD LUMBER: **Weatherbee, Hailey. Lindsay, Ontario, 2012.**

FIG. 28. PAGE 65. DISTANCE BETWEEN HOUSE AND BARN: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 29. PAGE 65. IMAGES OF REFINED BARN HOME: **Johnson, Tom. *Rustic and Refined Barn***

Home. Home and Garden Edition. Accessed September, 2012 <www.marthastewart.com>.

FIG. 30. PAGE 67. IMAGE OF REUSED PORT WINDOW AS A LAUNDRY CHUTE: Willis, Allee. *'Kitsch O' The Day.* 1952 Chris-Craft Portholes (via Neatorama). Last Modified April, 2007. Accessed September, 2012 <www.alleewillis.com>.

FIG. 31. PAGE 67. IMAGE OF REUSED WHEEL: Tella, Lindsay. *Jamie and Byron's Elegant Art Canvas*. Last Modified July, 2010. Accessed September, 2012 <www.apartmenttherapy.com>.

FIG. 32. PAGE 69. IMAGE OF VANHAVEN AUCTION ARENA, GARY HILL SPRING: Weatherbee, Hailey. Uxbridge Ontario, 2012.

FIG. 33. PAGE 69. IMAGE OF GARY HILL, OF GARY HILL AUCTIONS: Weatherbee, Hailey. Uxbridge Ontario, 2012.

FIG. 34. PAGE 80. IMAGE OF SALVAGED WINDOW: Smythe, Thomas. "Salvage City." Design Insider. House and Home Magazine. August, 2012. pp. 34.

FIG. 35. PAGE 81. IMAGE OF BUILT IN: Home Design. *Built-In Drawers Between Wall Studs*. Last Modified September, 2012. Accessed September, 2012 <homedesignpins.com>.

FIG. 36. PAGE 81. IMAGE OF REPURPOSED BARN DOOR TRACK: Fabulous Home Blog. *Sliding Barn Door*. Last Modified December, 2012. Accessed December, 2012 <http://fabuloushomeblog.com/2012/12/26/sliding-barn-door-and-its-a-screen-genius-would-love-to-do-this-on-a-screened-in-back-porch/>.

FIG. 37. PAGE 81. IMAGE OF REUSED CORNICE: Bonney, Grace. *Design Sponge*. Last Modified August, 2009. Accessed September, 2012 <www.flickr.com/photos/71112133@N00/3856641981/>.

FIG. 38. PAGE 82. IMAGE OF SALVAGED LADDER: Berry, Nancy. "Two-Tone Traditional." Home Buyer Publications Old House Journals Magazine, Spring/Summer, 2012. pp. 51.

FIG. 39. PAGE 82. IMAGE OF WINE BARRELS: Stockman, Renea. *Wine Barrel Bar*. Last Modified September, 2012. Accessed September, 2012 <http://pinterest.com/>.

FIG. 40. PAGE 82. IMAGE OF SALVAGED PULLEY: Maison and Demeure. *Over the Workspace*. House and Home Magazine, May, 2012. pp. 143.

FIG. 41.PAGE 82. REUSED WINDOWS: Smythe, Thomas. "Salvage City." Design Insider. House and Home Magazine. August, 2012. pp. 39.

FIG. 42. PAGE 85. ORIGINAL SITE MAP: Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002*. Accessed October, 2012 <www.oakridgesmoraine.org>.

FIG. 43. PAGE 85. ORIGINAL IMAGE OF BROCK STREET UXBRIDGE: Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002*. Accessed October, 2012 <www.oakridgesmoraine.org>.

FIG. 44. PAGE 86. ORIGINAL MAP: **Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002*. Accessed October, 2012 <www.oakridgesmoraine.org>.**

FIG. 45. PAGE 87. ORIGINAL OAK RIDGES MORAINE MAP: **Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002*. Accessed October, 2012 <www.oakridgesmoraine.org>.**

FIG. 46. PAGE 88. OAK RIDGES MORAINE WELCOME SIGN IMAGE: **Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002*. Accessed October, 2012 <www.oakridgesmoraine.org>.**

FIG. 47. PAGE 89. IMAGE OF 224 REACH HOUSE EAST SIDE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 48. PAGE 90. 224 REACH HOUSE AND GARAGE SOUTH SIDE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 49. PAGE 90. 224 REACH HOUSE AND GARAGE NORTH SIDE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 50. PAGE 90. BACK OF 224 REACH HOUSE SOUTH EAST SIDE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 51. PAGE 91. BACK YARD OF 224 REACH HOUSE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 52. PAGE 92. MAPLE AND SPRUCE TREE LINE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 53. PAGE 96. ORIGINAL SITE MAP AND HOME: **Oak Ridges Moraine. *Oak Ridges Moraine Land Trust 2002*. Accessed October, 2012 <www.oakridgesmoraine.org>.**

FIG. 54. PAGE 97. SIDE OF 224 REACH HOUSE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 55. PAGE 98. HIDDEN HOME POTENTIAL: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 56. PAGE 98. WOOD RAFTERS IN ATTIC SPACE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 57. PAGE 98. GARAGE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 58. PAGE 99. CEILINGS AT 224 REACH STREET HOME: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 59. PAGE 100. EXISTING FLOOR PLAN: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 60. PAGE 101. CEILING HEIGHT: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 61. PAGE 101. ROOF LAYERS: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 62. PAGE 102. MODIFIED FLOOR PLAN: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 63. PAGE 103. IMAGE OF PEAKED DORMER: **Shinichiro Atelier, Akasaka. *Home Design and Architecture*. Freshome Design. Last Modified April, 2011. Accessed March, 2013 <www.freshomedesign.com/2011/04/>.**

FIG. 64. PAGE 103. IMAGE OF RURAL STUDIO PROJECT: **Mockbee, Samuel. *Goat House*. Samuel Mockbee and an Architecture of Decency. Rural Studio. Sawyerville, AL, 1997.**

FIG. 65. PAGE 104. REMOVED WOOD RAFTERS: **Weatherbee, Hailey. Uxbridge**

FIG. 66. PAGE 104. HOME INSERT: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 67. PAGE 105. IMAGE OF BEANS ACROSS SKYLIGHT: **Stamp, Elizabeth. Country Homes. McConnell, Mary and James. Last Modified June, 2007. Accessed June, 2012 <http://www.architecturaldigest.com/decor/2012-06/country-homes-slideshow>.**

FIG. 68. PAGE 105. OLD AND NEW RAFTERS: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 69. PAGE 106. WOOD RAFTER WEAVING: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 70. PAGE 106. OLD AND NEW RAFTERS WEAVING: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 71. PAGE 107. VENTILATION LAYER INSERT: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 72. PAGE 108. NEW LOFT SPACE: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 73. PAGE 108. ENTRY TO BACKYARD SPACE: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 74. PAGE 108. CROSS VENTILATION: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 75. PAGE 109. RECLAIMED WOOD USED IN EXTERIOR DETAILIN: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 76. PAGE 110. WRAP AROUND PORCH: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 77. PAGE 110. WRAPPING THE HOME: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 78. PAGE 111. REUSING BARN TIIMBERS: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 79. PAGE 112. IMAGE OF INTERIOR WINDOWS FRAMED BY TIMBER: **The Enchanted Home. *One Word with Brooke of Velvet and Linen*. Last Modified February, 2012. Accessed February, 2012 <theenchantedhome.blogspot.ca>.**

FIG. 80. PAGE 112. IMAGE OF SOLARIUM. **Vivir, Belle. *A Designer's Bookmark on Style*. Last Modified March, 2013. Accessed March, 2013 <http://bellevivir.blogspot.ca/>.**

FIG. 81. PAGE 112. NEW DINING ROOM: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 82. PAGE 113. LARGE SALVAGE LIGHT PLACEMENT: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 83. PAGE 114. SMALLER SALVAGED LIGHT PLACEMENT: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 84. PAGE 115. NEW EXTERIOR HOME DESIGN: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 85. PAGE 115. NEW LIVING ROOM SPACE OVER LOOKING BACK YARD ENTRANCE: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 86. PAGE 118. 224 REACH STREET TREE LINE: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 87. PAGE 119. NATURAL SETTING: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 88. PAGE 120. WORKSPACE GATHERING OF RECLAIMED WOOD: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 89. PAGE 121. WORKSPACE GATHERING OF RECLAIMED WOOD: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 90. PAGE 122. SCAVENGING ARCHITECTS WORKSPACE: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 91. PAGE 124. SCAVENGED STAIN GLASS AND LEAD GLASS WINDOWS: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 92. PAGE 125. SCAVENGED WOOD STOVE REUSED: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 93. PAGE 126. CAVENGED SEWING PEDALS: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 94. PAGE 126. SCAVENGED SEWING PEDALS: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 95. PAGE 127. SCAVENGED VENT COVER: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 96. PAGE 128. SCAVENGED OLD DOORS: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 97. PAGE 129. SCAVENGED CORNICE: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 98. PAGE 130. SCAVENGED CART: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 99. PAGE 130. SCAVENGED CART: **Weatherbee, Hailey. Uxbridge Ontario, 2013.**

FIG. 100. PAGE 132. SCAVENGED PULLEY: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 101. PAGE 132. SCAVENGED LIGHTS: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 102. PAGE 133. MAPLE AND SPRUCE TREE LINE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 103. PAGE 133. BALD EAGLE NEST. **Weatherbee, Hailey. Sault Ste Marie, Ontario, 2010.**

FIG. 104. PAGE 134. RAISED WORKSPACE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 105. PAGE 135. RECLAIMED WOOD FROM BARN: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 106. PAGE 136. RECLAIMED METAL ROOFING FROM BARN: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 107. PAGE 137. SCAVENGED WOODEN BARRELS: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 108. PAGE 138. SCAVENGED WOODEN BARRELS: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 109. PAGE 138. SCAVENGED WOODEN BARRELS: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 110. PAGE 140. SCAVENGED LADDERS: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 111. PAGE 140. SCAVENGED LADDERS: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 112. PAGE 141. WORKSPACE SYSTEM: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 113. PAGE 141. 224 REACH STREET TREE LINE: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 114. PAGE 144. 24 REACH STREET TREE LINE SINK: **Weatherbee, Hailey. Uxbridge Ontario, 2012.**

FIG. 115. PAGE 147. IMAGE OF REUSED PLYWOOD: **Dishfunctional Designs. *Going with Grain Plywood Artwork*. Last Modified March, 2013. Accessed September, 2012 <dishfunctionaldesigns.blogspot.ca/2012/03>.**