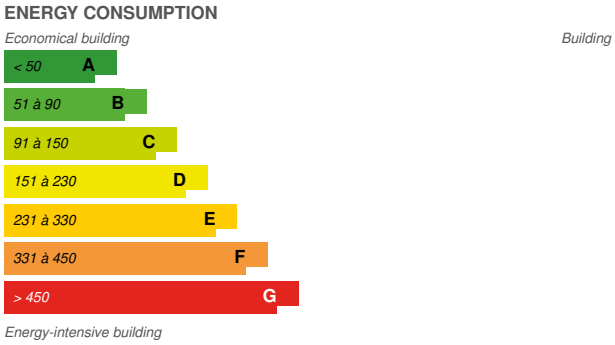
The Kitchen - Conversion of a shed for the Winnipeg Folk Festival

by Dylan Hewlett / 2022-05-23 00:00:00 / France / 914 / FR

Primary energy need :
kWhep/m².an
(Calculation method : Other)



Building Type : Other building
Construction Year : 2011
Delivery year : 2012
Address 1 - street : Festival Dr R0E 1J0 BIRDS HILL PARK, Canada
Climate zone : [Dfb] Humid Continental Mild Summer, Wet All Year

Net Floor Area : 650 m² SHON
Construction/refurbishment cost : 307 500 €
Cost/m2 : 473.08 €/m²

General information

It is not so uncommon to come across examples of steel frames that give rise to great reuse operations. It must be said that **the steel construction readily evokes a 1:1 scale Meccano game, which invites you to assemble and disassemble various structures**. But few projects push this logic as far as in this kitchen project for a music festival in Canada.

The Winnipeg Folk Festival is a 5 day festival that takes place annually. The client entrusted the architects of the Monteyne office with the mission of **building a large kitchen that could serve as a gathering point during the festival**. The client, sensitive to the principle of *leave no trace*, wanted **a building that could be easily disassembled the day this space would become useless**. This intention was combined with the environmental and aesthetic motivations of the architects, who quickly turned to reusable elements.

The designers based themselves on structural elements taken from an abandoned warehouse in Winnipeg and about to be demolished, which they used as a kit of elements to be reassembled freely. The project also incorporates old electric poles, used to support an outdoor portico. The terrace was made with local wood and corrugated metal sheets, which although new, come from a surplus. **Everything has been assembled taking into account a future disassembly**.

The site presented few unpleasant surprises because, from the sketch phase, the architects designed the project from the materials of which they had noted the exact dimensions. A stability study office checked the suitability of these elements for their new destination and confirmed the validity of the design options.

The end result highlights the patina of the elements while presenting an original variation on the theme of the steel framed warehouse.

See more details about this project

https://www.mont-arc.com/projects/display,project/13/winnipeg-folk-festival-kitchen-facility
https://opalis.eu/fr/projets/centre-du-winnipeg-folk-festival

Photo credit

Monteyne Architecture Works Inc.

Stakeholders

Contractor

Name : Winnipeg Folk Festival
Contact : info[a]winnipegfolkfestival.ca
https://www.winnipegfolkfestival.ca

Construction Manager

Name : Monteyne Architecture Works Inc.
Contact : info[a]mont-arc.com
https://www.mont-arc.com

Stakeholders

Function : Structures calculist

Wolfrom Engineering Ltd.

info[a]wolfromeng.com

https://www.wolfromeng.com

Function : Construction company

Milestone Project Management - Garry Humphrys

Function : Manufacturer

WOOD ANCHOR

info[a]woodanchor.com

https://woodanchor.com

Function : Other consultancy agency

KGS Group

https://kgsgroup.com

Energy

Energy consumption

Calculation method : Other

More information

The electricity for the operation of the kitchen and the lighting comes from the public electricity network. Power is generated using hydroelectric dams throughout Manitoba operated by Manitoba Hydro, the provincial electric utility.

Renewables & systems

Systems

Heating system :

- No heating system

Hot water system :

- No domestic hot water system

Cooling system :

- No cooling system

Ventilation system :

- Natural ventilation

Renewable systems :

- No renewable energy systems

Solutions enhancing nature free gains :
Chauffage / Refroidissement

La fonction principale du bâtiment en tant que cuisine fonctionnant pendant cinq jours en été permet au bâtiment d'être léger et ouvert, presque comme une tente. Les panneaux sont retirés et les murs s'ouvrent en coulissant. La majeure partie de la surface de plancher se trouve à moins de 7 mètres d'un mur ouvert. Le toit et les murs du bâtiment ont des panneaux de polycarbonate translucides entrecoupés de panneaux solides qui produisent une lumière naturelle tachetée à l'intérieur. Beaucoup de chaleur est générée lors de la préparation de 10 000 repas par jour et le toit a donc été incliné du sud au nord pour favoriser la ventilation passive, et l'air vicié peut s'échapper par des perforations dans le haut du mur qui est abrité par le porche.

Traitement de l'eau / plomberie

La forme du toit a également été conçue pour capter l'eau de pluie en créant une gouttière "papillon" avec plusieurs drains et tuyaux de descente. Le bâtiment n'a pas de toilettes et donc toutes les eaux de drainage sont des eaux grises, qui sont collectées dans des réservoirs. La consommation d'eau du bâtiment est typique d'une cuisine commerciale produisant 10 000 repas par jour.

Environment

Urban environment

The festival site is part of Birdshill Provincial Park in Manitoba. The park covers 35.1 square kilometers and features a wide variety of grassland ecosystems such as dry grassland, wet grassland, bog, aspen/oak, and mixed boreal forest, all within of its limits. For its relatively small size, the park is home to over 200 species of birds, 40 species of mammals, and a large number of white-tailed deer. All of this is mixed in with overnight campsites, the festival grounds, and an indoor beach, among other amenities.

The La Cuisine building is a small part of a large-scale redevelopment, which includes an emergency access road, new performance stages, and new water and water infrastructure. The entire project was subject to an environmental assessment which identified, among other things, habitat areas for the Loggerhead Shrike, an endangered bird species. The construction schedule of the affected areas was governed by the mating habits of this animal.

During the festival, the entire site resembles a utopian, shoe-optional pedestrian community teeming with people. As one of the festival's few permanent structures, the Conservatory is the backstage social hub.

In response to its backstage location, the La Cuisine building is preceded by a festival-sized veranda that serves as a welcoming space for visitors and arriving artists, shelter from summer storms and general backstage meeting space. At night, it becomes a lantern that backstage volunteers use to navigate in the dark.

When the buses arrive from the city, the artists and volunteers are disgorged at the veranda. When the gates to the festival open each morning, the day begins with a ceremony for festival-goers to claim a prime spot in front of the main stage. The claims are punctuated by a colorful landscape of polytarps of floor mats and garden chairs that give the settlers rights to the property until the end of the concert on the main stage that evening that day. The tarps are removed each evening, resulting in a newly composed patchwork the next day. The veranda cladding, while providing protection from the elements and permanent color for the La Cuisine building, pays homage to this vibrant tradition.

Water is pumped from an underground well on site. The water is potable without any need for filtration and is used in the kitchen for all cooking and cleaning needs. Wastewater is stored in tanks and removed from the park for proper treatment.

Products

Product

Steel superstructure

Product category : Gros œuvre / Structure, maçonnerie, façade

A total of 15 steel framing parts salvaged from three different pre-engineered rigid frame buildings were adapted for reuse at La Cuisine. The structure has been designed in such a way that very few modifications of the steel elements are necessary. Components have been modified and re-welded or bolted together. In addition to an entirely reused steel superstructure, all secondary structural parts, including roof purlins and struts, and metal roofing, are reused materials.

Left unpainted and exposed, the design team wanted the repurposed nature of the steel to be expressed for the occupants and visitors to the site.

Electric poles

Product category : Gros œuvre / Structure, maçonnerie, façade

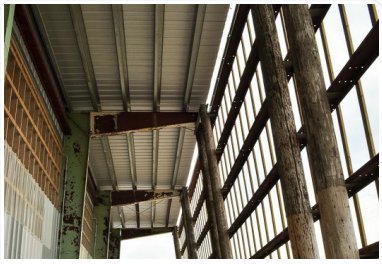
The disused cedar poles of Manitoba Hydro (provincial electric utility) were originally intended for landfill. The posts were inspected for suitability and left to age with their original finish.

Oak flooring

Product category : Second œuvre / Menuiseries extérieures

Manitoba's local bur oak is a common species of the region's riparian forest. The cold climate and frequent flooding are excellent conditions for a slow-growing, rot-resistant species.

The erosion of the banks, causing instabilities, leads to the deposit of mature trees in the waterways. Naturally felled trees are harvested and transported to landfill. Appropriate trees were selected, ground at an adjacent site and conditioned for use prior to installation.



Costs

Construction and exploitation costs

Total cost of the building : 307 500 €

Circular Economy

Reuse : same function or different function

Batches concerned by reuse :

- Structural works
- Structural framework
- Roofing
- Facades
- Raised floors

For each batch : Reused Materials / Products / Equipments :

Steel superstructure - 25,900 kg

Timber Post - 10 posts each 2.5 ml

Corrugated Sheet Roof and Facade - 1,235 m²

Oak flooring - 260 m²

Field of use and material origin :

Steel superstructure - Salvaged from a pre-engineered rigid frame building in an industrial park northeast of Winnipeg.

Timber Poles - Decommissioned and diverted utility poles from a landfill from the Manitoba Hydro storage lot in Winnipeg.

Corrugated Iron Roof and Facade - The repurposed facade and roof were salvaged from various sites around Winnipeg. The new material, if any, is the second factory or the end of a production line.

Oak Flooring - Oak trees diverted from landfill, Brady Landfill, Winnipeg.

Environmental assessment

Impacts avoided : water, waste, CO2 :

Catégories	CO2 évité (kg)	Consommation Eau évité (m3)	Déchets évités (kg)
Aménagements extérieurs	325	2.7664	735.714109
Aménagements extérieurs / Serrurerie - Métallerie	0	0	0
Charpente	62947.55833	331.902025	1462.768186
Cloisons	0	0	0
Couverture	0	0	0
Couverture / Aménagements extérieurs	0	0	0
Eclairages	0	0	0
Eclairages sécurité	0	0	0
Equipements de génie climatique	0	0	0
Equipements électriques	0	0	0
Façades	34017.54732	4527.068193	8646.41332
Faux plafonds	0	0	0
Faux planchers	0	0	0
Faux-plafonds	0	0	0
Gros-œuvre	0	0	0
Installations sanitaires	0	0	0
Isolation	0	0	0
Menuiserie ext	0	0	0
Menuiseries intérieures	0	0	0
Mobilier	0	0	0
Peinture	0	0	0
Plomberie	0	0	0
Revêtements de sols	0	0	0
Revêtements de sols ou muraux	0	0	0
Revêtements muraux	0	0	0
Sécurité du bâtiment	0	0	0
Serrurerie - métallerie	0	0	0
VRD	0	0	0

	CO2 évité (kg)	Consommation Eau évité (m3)	Déchets évités (kg)
TOTAL	97290.10565	4861.736618	10844.89562

	Km en petite voiture	Nb de Baignoires rectangulaires	nb d'années de déchets ménagers d'un français
Equivalent	778321	32412	22

Equivalent trajet Paris- Nice	884.0

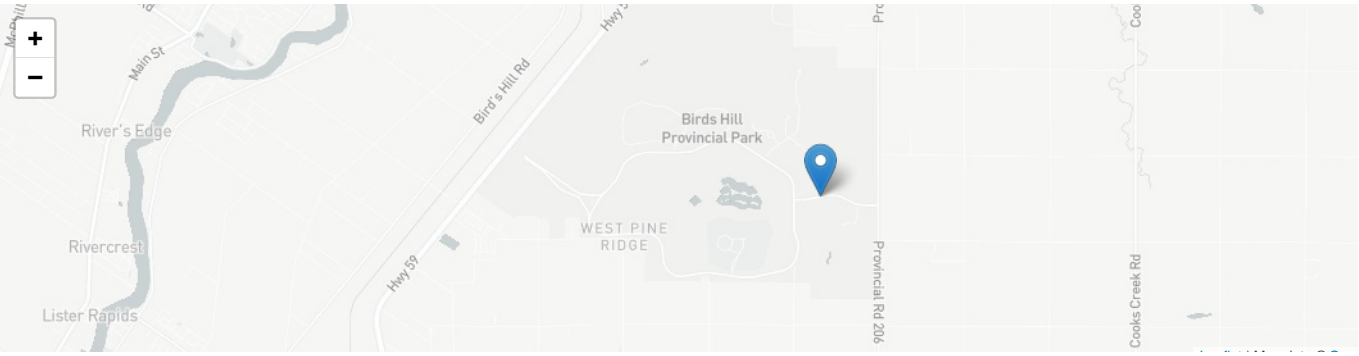
Phrase à copier ci-dessous

L'opération de réemploi a économisé l'équivalent de 778321 kilomètres parcourus par une petite voiture, soit 884 trajets Paris-Nice, 32412 baignoires rectangulaires remplies d'eau et 22 années de déchets ménagers d'un français

Contest

Building candidate in the category

Prix hors-cadre



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