

BATA SHOE FACTORY REVITALIZATION

BATAWA, ON

**Quadrangle (Architect of Record) and
Dubbeldam Architecture + Design (Collaborating Design Architect)**
Residential [Large] Award

The renovation to the Bata Shoe Factory is an ambitious adaptive re-use project located at the gateway to Batawa. Central to Mrs. Bata's vision for Batawa was the conversion of the manufacturing facility built by her family's shoe empire during WWII, into a modern mixed use residential, commercial and community building with a light environmental footprint and a social mandate.



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1. The renovation of the Bata Shoe Factory is an ambitious conversion to a modern mixed use residential, commercial and community building.



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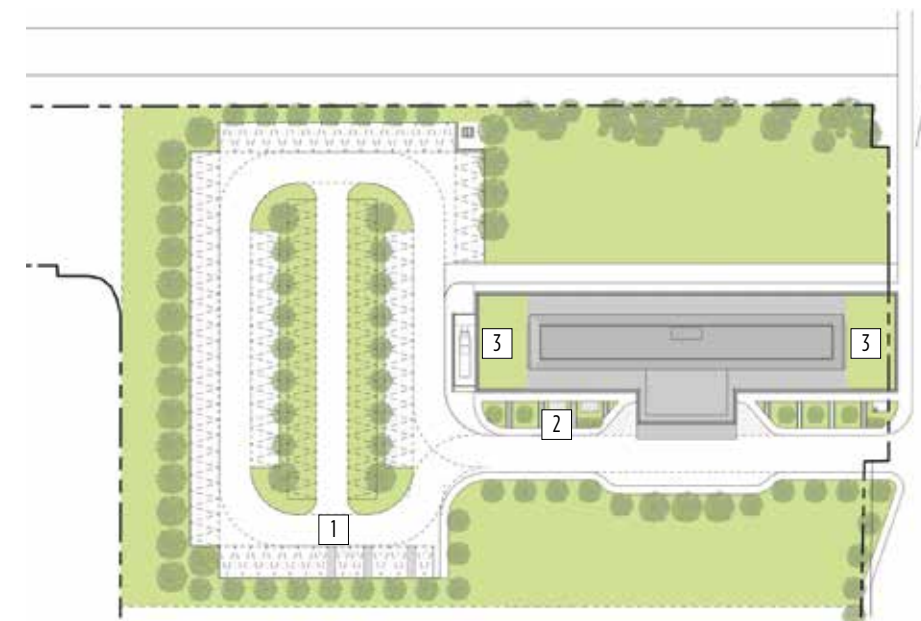
With a focus on integrating the most sustainable approaches - the renovated building retains the original 1939 concrete structure; the HVAC systems are powered entirely through a geothermal energy source; and any new materials or systems are as sustainable as possible - the resulting renovated building is a model for increased housing density in a rural setting with the lightest impact on the environment and a focus on community and social sustainability.

Aside from not building at all, the lightest impact on the environment is accomplished through adaptive re-use strategies - retention and rehabilitation of existing buildings. With close to 80% of a building's embodied carbon found in the structural components, retaining and highlighting the existing concrete structure of the building in combination with new sustainable materials and systems was one of the key strategic decisions for this adaptive re-use project.

2. With close to 80% of a building's embodied carbon found in the structural components, retaining the existing concrete structure was a key strategic decision for this adaptive re-use project.
3. The original 1939 Bata Shoe Factory.

Jury: This conversion of the original 1939 Bata Shoe Factory provides the small town of Batawa with an amenity uncommon in a community of this size: mixed income rental accommodation with recreational amenities for residents; a daycare and a community art space. The project is exemplary for its respectful adaptation of an important part of Ontario's industrial heritage, its well-considered mixed-use program, and its rehabilitation of the former parking lot that surrounded the building. In addition to the carbon benefit of retaining the concrete structure, the project has very good energy performance.

The late Sonja Bata pursued her passion for architecture and the built environment through the revitalization of the town of Batawa, located 30km east of Belleville on the Trent river. As a sustainable community and satellite town adapted to 21st century living, where residents could live close to nature but maintain a connection to work through broadband, she envisioned Batawa as a model community for social and environmental sustainability.



Site plan

The parking lot has permeable paving over a 63-borehole geothermal field.

- 1 Permeable paving over geothermal field
- 2 Bike storage
- 3 Green roof



1 BEDROOM UNITS
2 BEDROOM UNITS

PROJECT PERFORMANCE

- Energy intensity (building and process energy) = 101KWhr/m²/year**
- Energy intensity reduction relative to reference building under ASHRAE 90.1 2004 = 55.6%**
- Water consumption from municipal sources = 28,384litres/occupant/year**
- Reduction in water consumption relative to reference building under LEED = 30%**
- Recycled material content by value = 28%**
- Regional materials (800km radius) by value = 21%**
- Construction waste diverted from landfill = 40%**

- 4. The roof terrace with vegetated roofs provides a connection to nature.
- 5. The daycare on the ground floor.

Another key decision was to revive cultural values and sustain the local community. The original shoe factory, when it was in operation, provided jobs for the town, a sense of community, and even fitness and education programs; it was the force that bound and oriented the local community.

The same philosophy was taken in the revitalization of the building, through the creation of community spaces, new retail spaces, a daycare, and 47 high-quality rental residential units on the upper floors of the building.

The commercial and community spaces on the two lowest levels are linked by a generous open stair located within a double-height volume.



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PROJECT CREDITS

- OWNER/DEVELOPER** The Batawa Development Corporation
- COLLABORATING DESIGN ARCHITECT** Quadrangle
- JOINT VENTURE ARCHITECT** Dubbeldam Architecture + Design
- GENERAL CONTRACTOR** The Dalton Company Ltd.
- CIVIL ENGINEER** Greer Galloway Group Inc. Engineers and Planners
- ELECTRICAL/MECHANICAL ENGINEER** The HIDI Group
- STRUCTURAL ENGINEER** Jablonsky, Ast and Partners International
- COMMISSIONING AGENT** HRCx
- PHOTOS** Scott Norsworthy

The residential units are of varying sizes to provide both affordability and flexibility as families grow and contract, and to promote aging in place for residents who want to stay connected with the community but without the responsibility of the maintenance of a single-family property.

The decision to use onsite geothermal energy for 100% of the HVAC needs of the building and the omission of natural gas as an energy source was a key factor in energy savings and minimizing long-term CO₂ emissions from building operations. The choice had the additional environmental benefit of catalyzing the greening of the site through the removal of the large area of concrete paving that surrounded the existing factory building on three sides. A new parking area with extensive green space was built on top of the geothermal field.

- 6. The commercial and community spaces on the two lowest levels are linked by an open stair within a double-height volume.
- 7. One of the rental residential units on the upper floors.



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