



Fall 2026 1UP Competition

Designing for Flood Resilience

In partnership with **Evergreen Brick Works**

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About Evergreen Brick Works

Evergreen Brick Works is one of Canada's leading examples of urban sustainability and adaptive reuse. Located in Toronto's Don Valley, the site was transformed from a former industrial brick manufacturing facility into a vibrant public space that demonstrates how cities can thrive alongside nature.

The Brick Works is situated within a floodplain and experiences regular flooding from the Don River watershed. Rather than preventing flooding altogether, Evergreen's long-term vision is to create a site that can safely adapt to, recover from, and continue operating despite increasingly frequent and severe climate events.

The site welcomes thousands of visitors every week through the Saturday Farmers Market, public programming, educational experiences, festivals, conferences, and community events while also serving as a workplace for Evergreen staff, tenants, and business partners. As both a National Historic Site and a LEED Platinum-certified campus, any future improvements must balance environmental performance, heritage conservation, operational resilience, and visitor experience.

Today, Evergreen continues to invest in improving the site as a living laboratory where innovative technologies, nature-based solutions, and sustainable design can be tested and demonstrated for cities across Canada.

The Challenge

Climate change is increasing the frequency and intensity of flooding across Canadian cities. Evergreen Brick Works embraces flooding as part of the site's natural condition and is working to become increasingly resilient rather than simply resistant.

Design a solution that helps Evergreen Brick Works continue serving people and nature before, during, and after flood events.

Consider the following design questions:

1. **Heritage Protection & Conservation:** How might we help Evergreen Brick Works better adapt to flooding while protecting its heritage character and natural environment?
2. **Climate Adaptation & Resilience:** How might we design public spaces and infrastructure that remain safe, functional, and welcoming during changing climate conditions?
3. **Innovation & Technology:** How might innovation and technology strengthen the site's resilience while enhancing visitor experiences?

Students are encouraged to think creatively about both physical and operational solutions.

Design proposals should consider the following principles:

- Nature-based solutions
- Flood resilience and climate adaptation
- Industrial heritage conservation
- Innovative technologies
- Flexible and adaptive public spaces
- Emergency preparedness and accessibility
- Net Zero energy performance
- LEED sustainability principles
- Community gathering and public programming

Key Considerations

How we develop our cities around waterways can have massive impacts on flooding. More non-permeable surfaces and fewer plants mean the risk of flooding only increases. Knowing that flooding is inevitable, Evergreen planned to mitigate the risk with key green design features. At the Brick Works, not only was the site designed to help manage stormwater, but it was also built with the idea of wet floodproofing at its core.

An overview of all the infrastructure can be found [here](#).

As you develop your proposal, keep the following conditions in mind:

- Evergreen Brick Works is located within a floodplain and flooding is expected to occur.
- The goal is not to eliminate flooding but to increase resilience and recovery.
- The site is protected as an industrial heritage landscape, creating constraints on new construction and alterations.
- Approximately 5,000 visitors may use the site during busy weekends.
- Large public events, such as Day of the Dead celebrations, can attract up to 10,000 visitors.
- Weekday site users are primarily Evergreen staff, tenants, and partners.
- The site supports a multimillion-dollar social enterprise, meaning operational disruptions from flooding have significant economic impacts.
- Evergreen continues to invest in ongoing improvements, making adaptable, phased solutions valuable.
- Multiple organizations influence decisions about the site, including Toronto and Region Conservation Authority (TRCA), the City of Toronto, and Metrolinx.
- Sustainability goals include maintaining LEED Platinum standards while supporting Net Zero operations.

About the Site

Evergreen Brick Works is divided into **three distinct zones (see the red, blue, and yellow polygons below)**, each with its own character, challenges, and opportunities. Each team will pick one zone and come up with a focused, thoughtful design for that zone.

Before picking a zone, think about:

- Which zone matters most to the users you're designing for?
- What's already working there?
- What breaks during floods?
- Where can your idea have the biggest impact?

In the following pages, you'll see what makes each zone special and why flooding affects them differently.



Red Zone: Pavilions & The Farmers Market

Pavilions & The Farmers Market:

Located on the far west side of the site, these pavilions host the weekly Farmers & Artisan Market in spring and summer. They include the Mud Creek Terrace and Pollinator Gardens.

Historically, bricks would go through their final drying process in this space, and as a result, there are heritage industrial archaeological remains under the capping concrete.



South Pavilion Entrance 1



South Pavilion Entrance 2



North Pavillion



South Pavillion

Blue Zone: The Front Door & A Nature Playground

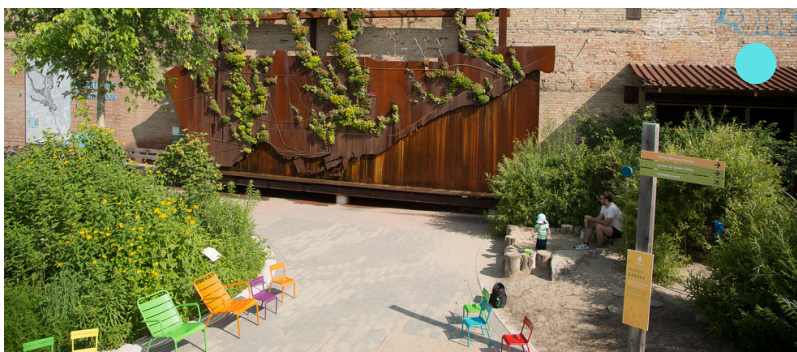
Tiffany Commons is the 'front door' to Evergreen. It is a vibrant gathering place with ten landscaped garden mounds that showcase resilient native plants and show how ecological restoration transforms urban landscapes. It features the **Watershed Wall** and the Rec Hub

The **Children's Garden** is a 14,000 sq. ft. outdoor play space designed for learning, creativity, and climate resilience. Thousands of kids, educators, and families visit annually.

Both spaces feature nature-based climate solutions: permeable ground, dense vegetation for cooling, and gardens that absorb rainwater to prevent flooding.



Tiffany Commons



Watershed Wall



Children's Garden

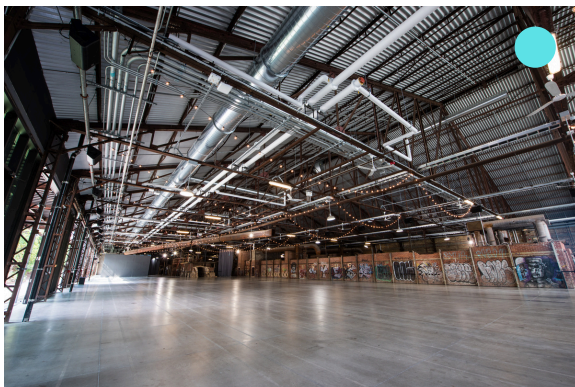
Yellow Zone: The Beating Heart



The **Welcome Centre** is the hub - café, restrooms, market access, and info desk. It's part of Evergreen's \$16M revitalization.



The **Garden Market** is a year-round destination for gardeners and nature lovers. It's an incubator for local small businesses. It was devastated in the 2023 flood, losing thousands of dollars in inventory.



The **TD Future Cities Centre** sits inside a restored historic kiln. It's an event venue with exposed brick, timber, and views. It incorporates geothermal heating, solar energy, and other climate solutions - proving heritage buildings can be adapted for a low-carbon future.



Koerner Gardens is an open green space open for the enjoyment of all visitors and a hub for community events, recreational activities, public art projects, and more. In the winter, it becomes a skating rink, which includes free skate programming for community members.

Yellow Zone: The Beating Heart



Meet the Users

Design your solution with the following four people in mind. Your strongest ideas will balance their competing needs.



Maya

Role: Evergreen Staff Member - Manages public programming, coordinates emergencies, prepares site for reopening

Values: Community continuity, staff safety, program resilience

Needs:

- Infrastructure that improves safety during floods
- Quick recovery time so programs restart fast
- Clear communication systems for visitors



Daniel

Role: Regular Visitor - visits with his two young children for the Farmers Market, trails, and events

Values: Access to nature, feeling safe, year-round welcoming space

Needs:

- To know if the site is flooded before showing up
- Spaces that feel safe and navigable in any weather—especially for young kids
- Access to programs and markets all year



Aisha

Role: Business Partner - Owns small business, participates in farmers market, hosts seasonal events

Challenge: Flooding closures directly cut her income

Needs:

- Predictable, minimal closure times
- Infrastructure that protects products and stock
- Confidence that the site is reliable for customers



Marcus

Role: Event Organizer - Organizes conferences, fundraisers, and community events at Brick Works

Challenge: Weather disruptions harm clients' experiences and his reputation

Needs:

- A resilient, adaptable venue
- Confidence in year-round operations
- Exceptional guest experience despite climate change

Budget & Scope

You have a \$100,000 budget for your solution. Below is a sample budget breakdown to guide your thinking. You don't have to follow this exactly, but think about costs realistically. You'll need to complete the detailed Financial Plan template provided in the introductory package as part of your final submission. Use this breakdown to get started.

1UP Competition Financial Plan					
1UP Team Name:	1UP Toronto: Youth City Builders				
Project Title:	Smart Urban Resilience Platform (SURP)				
Total Budget (\$):	\$99,645				
Project Duration:	12 Months				
Goal	Develop and pilot an urban climate adaptation platform that visualizes flood, heat, and infrastructure risk across city neighbourhoods				
Budget Category	Description / Use of Funds	Unit Rate (\$CAD)	Quantity	Estimated Cost (CAD)	Justification / Expected Outcome
Materials & Equipment	Cloud servers, GIS licenses, and basic hardware	\$1,000	6	\$6,000.00	Supports platform hosting and map rendering
Research & Data Collection	Access to municipal climate & infrastructure datasets	\$2,000	1	\$2,000.00	Enables local risk and adaptation modeling
Marketing & Outreach	Pilot outreach with 2 municipalities; branding	\$1,500	2	\$3,000.00	Builds visibility and stakeholder engagement
Staffing & Personnel	1 project manager, 1 developer, 1 analyst (part-time contracts)	\$25,000	3	\$75,000.00	Core development and coordination team
Travel & Fieldwork	Local travel for stakeholder meetings/workshops	\$800	3	\$2,400.00	Field engagement and pilot evaluations
Miscellaneous/Admin	Office, insurance, accounting, legal	\$2,500.00	1	\$2,500.00	Basic operational support
Technology & Software	Software development tools, API integrations, and data storage	\$4,000.00	1	\$4,000.00	Supports the creation and maintenance of the resilience platform
Contingency (5–10%)	5% buffer			\$4,745.00	Covers unforeseen project expenses
Total				\$99,645.00	
Cost Efficiency & Impact					
How does your spending maximize environmental and social impact?	Most of our budget goes toward building the Smart Urban Resilience Platform and hiring our team to make it work. We're also funding research and community outreach to include youth and local voices in climate planning. Every dollar supports real action that helps cities prepare for floods, heatwaves, and other risks while promoting a safer, more sustainable, and inclusive future.				
What partnerships, donations, or in-kind contributions will help reduce costs?	We'll work with local governments and universities that can share open data and expert advice. Tech companies may provide free cloud credits for hosting our platform, and community groups can offer meeting spaces or volunteers for workshops. These partnerships help lower costs and strengthen local collaboration.				
How will you sustain or scale the project after initial funding?	After the first year, cities will pay small subscription fees to keep using the platform. We'll also offer training and workshops to bring in extra income. By applying for new grants and adding more partner cities, we can grow and continue supporting climate resilience long-term.				

Judging Rubric

Judges will score your design across the 5 criteria below (5 points each). Understand them now, and you'll know what to emphasize in your pitch. A strong pitch balances all five criteria.

Criterion	1–2 (Developing)	3–4 (Proficient)	5 (Exemplary)	Score
Empathy	Limited understanding of user needs; perspectives not clearly explored	Good grasp of target users' circumstances and needs	Deep, nuanced understanding; vulnerabilities and perspectives clearly centered	/5
Novelty & Creativity	Incremental; conventional approach	Fresh idea with some creative elements	Distinctive, imaginative solution; novel framing or delivery	/5
Impact & Sustainability	Addresses flood mitigation/adaptation but limited integration of guiding approaches (Heritage Protection, Climate Adaptation, Innovation/Technology); minimal consideration of long-term viability	Meaningfully addresses flood mitigation; integrates 2 of the 3 design approaches (Heritage Protection, Climate Adaptation, Innovation/Technology); sustainability considered	Significant, lasting community/environmental benefit; intentionally integrates all 3 design approaches (Heritage Protection, Climate Adaptation, Innovation/Technology); long-term maintenance and phased implementation planned	/5
Budget & Feasibility	Unrealistic or poorly justified costs	Realistic budget; financially feasible	Well-justified, cost-effective, clearly aligned with scope	/5
Presentation & Engagement	Unclear communication; lacks structure or persuasiveness	Clear articulation of problem/solution; generally engaging	Compelling delivery; strong connection with audience; logical value proposition	/5
Total Score				/25

Key Definitions

Climate Adaptation: Actions that help communities prepare for and respond to the impacts of climate change.

Flood Resilience: The ability of a place to anticipate, withstand, recover from, and adapt to flooding while continuing to function.

Nature-Based Solutions: Actions that protect, restore, or sustainably manage ecosystems to address environmental challenges while benefiting people and biodiversity.

Green Infrastructure: Natural or engineered systems - such as rain gardens, wetlands, permeable pavements, and bioswales - that help manage stormwater and improve environmental performance.

Industrial Heritage: Buildings, landscapes, and infrastructure preserved because of their historical, cultural, and architectural significance.

LEED Platinum: The highest level of certification under the Leadership in Energy and Environmental Design (LEED) green building rating system.

Net Zero Energy: Producing as much renewable energy as is consumed over the course of a year.

Adaptive Infrastructure: Infrastructure that can continue functioning or be easily modified as environmental conditions change.

Public Realm: Spaces that are open and accessible to everyone, including plazas, pathways, gathering spaces, and parks.

Emergency Preparedness: Planning, infrastructure, and systems that help protect people and enable rapid response and recovery during emergencies.

Key Definitions

Stormwater Management: Systems designed to capture, slow down, and filter rainwater to prevent flooding and pollution.

Bioswale: A shallow, planted ditch that channels and filters stormwater.

Permeable Pavement: Pavement (sidewalks, paths, parking) designed to let water pass through instead of running off.

Wetland / Constructed Wetland: Natural or designed watery habitats where water, soil, and plants support wildlife and filter water.

Geothermal Heating/Cooling: Using energy from the earth (stable underground temperatures) to heat or cool buildings.

Solar Energy / Photovoltaic (PV): Systems that convert sunlight into electricity.

Community Engagement: The process of involving local people in decisions about their spaces.

Accessibility: Designing spaces and systems so people of all abilities (mobility, vision, hearing, neurodivergence) can use them equally.

Resources

TRCA Flood Monitoring & Don River Data

TRCA's real-time flood monitoring website lets you view current water levels and rainfall data for the Brick Works area. Use these resources to understand flooding patterns:

- [Real-Time Gauge Station \(Brick Works\)](#): Current precipitation, water levels, and historical rainfall data for the site
- [TRCA Flood Risk Management Main Page](#): Floodplain mapping, flood history, and how TRCA monitors and manages flood risk
- [TRCA Flood Plain Map Viewer](#): Visual flood risk areas around Evergreen Brick Works (shaded blue areas indicate regulatory floodplain)
- [Don River Flood Data & Modelling](#): Hydrologic models and hydraulic data for the Don River (published December 2018)

LEED: Green Building Standards

LEED (Leadership in Energy and Environmental Design) is the world's most recognized green building certification. Evergreen is LEED Platinum—the highest level. Use these resources to understand what that means for your design:

- [USGBC LEED Overview](#): The official LEED rating system, project examples, and how buildings earn certification points

Evergreen Brick Works Resources

Learn what's already happening at the site so you can build on what works:

- [Evergreen's Green Infrastructure Story](#): How Evergreen planned for flooding with green design from the start
- [Visit Evergreen Brick Works](#): Hours, events, programs, and ways to connect with the site in person

Thank You!

Connect with us on Social Media

[Competition Website](#) | [Discord](#) | [Instagram](#) | [Facebook](#) | [TikTok](#)

You may also access the introductory package with all program materials [here](#).

If you have questions about the competition, please email Enrique Torres at enriquetorres@urbanminds.co