



# JOB POSTING – POSTDOCTORAL FELLOW

**Areas of Research:** Sustainable cities, embodied GHG, GHG budgets, infrastructure sufficiency

**The Centre for the Sustainable Built Environment:**

Applications are invited for three postdoctoral positions in the Centre for the Sustainable Built Environment (CSBE). The CSBE is supported by consortium of 12 companies across the built environment/construction sector ecosystem and a Natural Sciences and Engineering Research Council of Canada Alliance Grant (2023 – 2026). The focus of the CSBE is on finding deployable solutions to two disruptive 21st Century challenges 1) the increasing need for housing and supportive infrastructure in light of growing populations and 2) the need to reduce embodied GHG to achieve greenhouse gas (GHG) emissions in line with 2030 and 2050 climate commitments, with a particular focus on resource use and embodied GHG in the built environment (buildings and infrastructure). More information on CSBE here <https://civmin.utoronto.ca/build-more-pollute-less-new-academic-industry-partnership-to-balance-infrastructure-needs-with-environmental-integrity/>.

**Description of duties**:

The postdoctoral fellows will have research and/or industry background and be a lead contributor to peer- reviewed publications, technical reports, conference proceedings and in-depth interactions with research partners. In addition to acting as a lead contributor on this research project, the fellow is expected to actively engage with other researchers in the group (e.g., regular attendance at group meetings, providing advice to graduate students).

CSBE covers a range of topics for establishing pathways to low GHG construction including 1) quantitative assessment of the need for future buildings and infrastructure 2) establishing a GHG budget for the construction sector (including scope 3 emissions), 3) law and policy that influences the built environment and embodied GHG, 4) Urban form, 5) structural design, and 6) material design pathways to meet 1 within 2. Candidates are expected to have a particular interest in one or more of the above. There will be the opportunity for the fellow to propose and lead research sub-projects.

The ideal candidate will contribute to a subset of the below (and related work) in line with their skills and interests.

* Quantification of construction material use from drawings (material take off) to develop an urban MFA database
* Development of GHG budgets for the construction sector and/or construction projects
* Urban design to reduce embodied GHG
* Building design to reduce embodied GHG
* Structural design to reduce embodied GHG
* Material design to reduce embodied GHG
* Assessment of sufficiency in built environment products
* Infrastructure/housing policy and law

**Salary**: **$70,000/year base + benefits**

*Please note that should the minimum rates stipulated in the collective agreement be higher than rates stated in this posting, the minimum rates stated in the collective agreement shall prevail.*

**Required qualifications:**

* PhD degree in engineering, construction management, architecture, industrial ecology, urban planning, or related field awarded within the past 5 years
* Excellent communication skills in English
* Desire to engage in applied research with near-term applications
* Demonstrated ability to work independently and as part of a team and a drive to create their own novel research direction

**Application instructions**

All individuals interested in this position should submit a single electronic file consisting of a cover letter, detailed CV, a one-page statement of research interests, and the names and email addresses of two references to Prof. Shoshanna Saxe (s.saxe@utoronto.ca). Please use the subject line **Application for CSBE postdoctoral fellowship**.

**Closing date**: available until filled

**Supervisor:**  Prof. Shoshanna Saxe

**Expected start date:** 2023/2023 academic year

**Term: 1 year, renewable (CSBE is funded through December 2025 plus an expected 1-year extension)**

**FTE**: 1

Employment as a Postdoctoral Fellow at the University of Toronto is covered by the terms of the CUPE 3902 Unit 5 Collective Agreement.

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The normal hours of work are 40 hours per week for a full-time postdoctoral fellow (pro-rated for those holding a partial appointment) recognizing that the needs of the employee's research and training and the needs of the supervisor's research program may require flexibility in the performance of the employee's duties and hours of work.

*The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of colour, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ persons, and others who may contribute to the further diversification of ideas.*