

Meeting Minutes

Building Research Committee (BRC)

October 28, 2025

Attendance

Phalguni Mukhopadhyaya (Chair)	David Hardinger
David Bruce	Theo Christiaanse
Michael Lemm	Grace Oh
Cooper Dawson	Patrick Roppel
Mohammad Palreed	James Higgins
Gabriela Mercado	Michelle Less
Alireza Asharioun	Richard Kadulski
Jessica Fell	

9:00 AM – Meeting Open

The Chair opened the meeting and thanked everyone for attending.

9:04 AM – Agenda Approved

9:10 AM - Presentation: Harnessing Nature-Based Solutions for Climate Resilience in the Built Environment

Presenter: Zahra Jandaghian, National Research Council Canada

Zahra Jandaghian presented a vision for a future built environment that is more closely aligned with nature, with the goal of creating more resilient cities. Overheating studies from various cities were presented using common building archetypes to demonstrate how nature-based solutions can reduce cooling demand. Localized climate data were used in these analyses, providing more accurate estimates of experienced indoor temperatures than traditional climate datasets.

Zahra also outlined upcoming research and testing plans, including controlled laboratory testing, field testing, and natural field testing.

During discussion, challenges related to determining the return on investment (ROI) of nature-based solutions, as well as their long-term maintenance requirements, were highlighted.

9:40 AM – Presentation: Climate-Resilient Buildings: Current Paradigm

Presenter: Robert Lepage, Climes Group Engineering Inc.

Robert Lepage emphasized the importance of harmonizing the language used by engineers and climate scientists and identified key challenges in communicating climate risk. He presented a definition of resilient buildings and described a pathway to resilience that includes hardening, robustification inflection points, and enhanced durability.

Robert highlighted two key issues:

The difficulty of predicting future climate scenarios

The risk of greenwashing through carbon offsets

He noted that the outcomes of his work are also available through a professional development course titled "Climate Change Resilience for Building Sector Professionals."

10:32 AM – Break (10 minutes)

10:43 AM – Presentation: The Impact of Architectural Design on Thermal Comfort in the Built Environment

Presenter: *Mohammad Fakoor, Read Jones Christoffersen Ltd. (RJC)*

Mohammad Fakoor presented on the importance of thermal comfort as a key indicator of building design quality. He emphasized that air temperature alone is insufficient to assess thermal comfort, as radiant effects contribute significantly to occupants' overall comfort.

Based on modelling studies, he demonstrated that envelope design plays a critical role in thermal comfort and that its effects cannot be fully mitigated by mechanical HVAC systems. Despite being included in ASHRAE standards, thermal comfort studies are often excluded or overlooked in practice.

Mohammad concluded by emphasizing the need for greater knowledge mobilization and advocated for integrating thermal comfort analysis into the building design process.

11:10 AM – Presentation: Durability, Service Life Prediction, and Life Cycle Assessment

Presenter: *Michael Lacasse, Retired, National Research Council Canada*

Michael Lacasse discussed how a changing climate is placing increasing demands on building envelopes. He noted that increased environmental loads and reduced material resistance are shortening service life and contributing to rising insured losses over recent decades.

He introduced key standards and resources related to durability, emphasizing the importance of reviewing guidelines for designing durable building envelopes. Michael also highlighted relevant national and international standards addressing the durability of envelope systems and materials. The presentation concluded with an overview of ongoing resilience initiatives at national and international levels, including efforts led by the NRC, CIB, and ISO.

12:00 PM – Forum Discussion

Key discussion points included:

The need to address technical issues experienced by remote presenters

Confirmation that the next BRC meeting will take place in April 2026

Additional feedback and suggestions from members:

Case studies would be valuable, potentially presented in anonymized form to reduce sensitivity

Consideration of ROI for various technologies is essential to support adoption

Thermal comfort was identified as highly impactful and relevant to addressing multiple challenges

The definition of resilience should include the ability to exceed threshold conditions and recover quickly

The building envelope should be viewed holistically, including acoustical and material performance considerations

12:30 PM – Meeting Close and Networking