

Draft
MINUTES
Building Research Committee Meeting
9:00 a.m. to 12:00 p.m., Plaza 500
May 17, 2005

In attendance:

Bob Sloat – Cement Association of Canada (chair)	Silvio Plescia – CMHC National Office (conference call)
Dave Ricketts – APEGBC	Chris Kiiveri – HPO (recording)
Theresa Weston – DuPont	Peter Moonen – Canadian Wood Council
Richard Kadulski – AIBC	Mark Lawton – Morrison Hershfield
Bill McEwen – Masonry Institute of BC	Bob Maling – HPO
Jennifer O'Connor – Forintek Canada Corporation	Elia Sterling – Theodor Sterling Associates
Kim Tompkins – EIFS Council of Canada	Bob Thompson – Building Policy Branch MCAWS
Charlie Gould – Starline Windows	Mark Angelini – Structural Board Association
Allan Dobie – CMHC/BCYRO	Innes Hood – Sheltair Group
John Bell – HPO	

Guests:

Rob Marshall – Canada Green Building Council	Ian Theaker – Canada Green Building Council
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Regrets:

Jan Rasilainen – St. Paul Guarantee	Tony Gioventu – CHOA
Ron Krpan - BCIT	Warren Knowles - BCBECC
Alex McGowan - Levelton	Bob Switzer – Polygon

1. Introduction

B. Sloat welcomed everyone to the meeting on behalf of BCBECC.

2. Approval of September 8, 2004 Meeting Minutes, agenda, and additional items.

The minutes from the September 8, 2004 BRC meeting were approved. The May 17 BRC meeting agenda was approved.

3. Research Projects Overview

CMHC Report

S. Plescia mentioned the 2005 CMHC research plan is not yet approved, while the window to submit 2006 research projects will be open for a period of one week and will close the first week of June.

S. Plescia provided an overview of current CMHC research projects (handout), highlighted below:

- Best Practice Guide for Windows – workshops will be held shortly, providing an opportunity for CMHC to receive feedback from the industry.
- Window Installation Course – questions arose whether certification would be a possibility and will be industry driven. There was some discussion regarding existing window installation programs, such as the program available Alberta, which are based on minimum standards and requirements. The CMHC project is developed with best practices in mind and in conjunction with the Windows Best Practice Guide.

- Developing a Green rating System for Residential Buildings - I. Theaker stated LEED Canada would be introducing an application guide and will be released this fall.

HPO Report

J. Bell provided an update of HPO R&E projects from the May 2005 Summary of Projects (handout), highlighted below:

- Basic Course on Wood-Frame House Construction – The course will be piloted in three locations beginning this fall including: Kamloops-Thompson Rivers University, Victoria-Camosun College, and Coquitlam-Continuing Education.
- Building Smart #3 – over 700 people attended the seminars this spring in 15 cities. Upcoming fall seminar topics to be chosen.
- Performance of Poured in Place Concrete Walls – CD and full report to be released in June 2005.
- Water Resistive Barriers study – CD and full report is now available

New and upcoming projects:

- Two ventilation studies, partners include HPO and CMHC, are currently at the work statement stage.
- ACQ treated wood and the use of fasteners – HPO and Forintek are creating a bulletin focused towards builders and contractors. HPO is coordinating the publication and presentation of the material.
- Study of the effects of green building rating systems on the durability of building elements – I. Theaker requested that the Canadian Green Building Council (CaGBC) receive updates on the progress of the study, item 4i) in the September 8, 2004 meeting minutes. The HPO will provide updates to the Canadian Green Building Council.

B. Maling also provided HPO updates on the following:

- The Futures Report, which provides future direction for the HPO, is available on the HPO website www.hpo.bc.ca under 'What's New'. The information pertinent to the BRC includes:
 - The emergence of the HPO as a strategic centre for research and education with respect to residential construction.
 - “Raising the bar” in order to increase the professionalization of the construction industry, including minimum education for builders and owner-builders.
- HPO and CMHC are developing a publication of performance guidelines for consumers and will serve as a base for warranty performance of residential buildings. The guide will be a national document covering all residential buildings and will outline both consumer and builder expectations.

Other member updates

J. O'Connor mentioned the BCIT test hut, a project Forintek is still interested in. R. Kadulski said a test hut is being constructed in Coquitlam and involves Mark Gauvin, John Straube, and Joe Lstiburek. J. Bell invited M. Gauvin to this BRC meeting but M. Gauvin mentioned the project is still too preliminary at this point to report any information. J. Bell will invite M. Gauvin to the next BRC meeting.

I. Hood said Langara College would offer a module for building operators related to the building envelope in September.

E. Sterling mentioned an annotated bibliography related to indoor air quality and standards is available.

4. Canada Green Building Council (CaGBC) – Task Force on Durable Buildings

- Task force on Durable Buildings in LEED Canada-NC 1.0 (PowerPoint presentation – handout, distributed with draft minutes)
- Ontario Association of Architects Wall Design Exclusion (handout)
- Excerpt from LEED Canada-NC 1.0 Materials & Resources Chapter (handout)

I. Theaker and R. Marshall gave a presentation to the BRC members, key points included:

- CaGBC membership is growing at an exponential rate
- Materials & Resources credit 8 (MRc8): Durable Building. Feedback LEED Canada received from the public comment period reinforced the desire to address building durability
- Reference standard - CSA S478-95 (R2001) Guideline on Durability in Buildings
- Potential issues with LEED Canada MRc8 include:
 - Difficulty and cost of credit to apply for credit
 - Perceived risk of increased liability
 - Certification and credentials of Building Envelope Professionals

A task force on durability was created in order to:

- Obtain input and recommendations
- Simplify the credit and to encourage durable buildings, particularly the residential construction industry which has a large share of all new construction
- Address anecdotal reports of cost and insurance issues
- Input and recommendations is encouraged from BRC members

⇒ **BRC input and recommendations to be submitted to CaGBC by June 14, 2005 via e-mail to: MarshallRbrt@aol.com and/or itheaker@cagbc.org**

R. Marshall requested that he receives notification of future BRC meetings.

⇒ C. Kiiveri to add R. Marshall to the BRC member's e-mail distribution list.

There was some discussion surrounding reference standards for durable buildings including ASHRAE SPC 160P: Design Criteria for Moisture Control and ASTM Standards relating to the building envelope.

5. Discussion: Current Research Issues and Priorities

Summary of responses to the BRC Research Questionnaire (handout)

J. Bell provided a summary of the eight responses received to the BRC Research Questionnaire, categorized according to topic. The following were discussed:

a) Windows

C. Gould provided the following considerations:

- Sealed windows are affected by weather fronts - resulting in movement
- Removing the window from its opening results in racking and subsequent damage.
- Replacement of the glazing itself is more costly than replacing the entire window unit and offers an opportunity to install energy efficient glazing with a higher R-value.
- Issues with hardware maintenance

M. Lawton said there is an issue with the second line of defense and criteria is required to determine whether or not to replace windows.

b) Wetting of walls/monitoring

S. Plescia said quantification of rain loads on buildings needs to be looked at including exposure, design of walls, along with wind and rain loads. Public Works Canada and NRCan has collected wind and rain data. M. Lawton said Australia has been studying the effects of wind and rain on buildings, but they may not be useful in B.C. due to a significant difference in our local climate and other locations. R. Kadulski added that microclimate issues also play an important role. B. Maling said BCIT and BC Housing, with its large housing stock, would be able to provide quantification values for wind driven rain on buildings.

B. Sloat said that research into EIFS elastomeric coatings would yield practical benefits for builders, among others, and agreed with B. Maling that the HPO data may reveal how many buildings are being repaired a second time that initially used a coating system. M. Lawton said the HPO data define systems that are currently used, but could potentially identify what systems have failed. B. Sloat mentioned that developers such as Polygon have data that could possibly be obtained for research studies.

c) Green building and sustainability

R. Marshall said that in the United Kingdom that whole building life cycle costs over the entire life of the building are taken into consideration. P. Moonen mentioned an 800-page report published by the Consortium for Research on Renewable Industrial Materials (CORRIM) is available (www.corrim.org/reports) on the subject of life cycle environmental performance of renewable building materials in the context of residential construction.

I. Theaker said LEED is moving towards a direction that would incorporate life cycle assessments. Life cycle assessment systems such as ATHENA look at entire buildings whereas US National Standards looks only at building components.

d) Ventilation/indoor air quality/thermal

R. Kadulski questioned how tight buildings really are, particularly multi-unit buildings, and a baseline needs to be established. A. Dobie added that a clear methodology is lacking for multi-unit buildings, which are more difficult to test. B. Sloat said that parameters/criteria should be developed to prevent further repairs and retrofits, and mentioned we are currently in the midst of a building boom, which may cause future problems to arise. S. Plescia said that the Best Practice Guide for Steel Studs is currently being revised. S. Plescia also mentioned that there is no shortage of potential research projects and both CMHC and the HPO have limited resources to carry out all of the needed research projects.

⇒ Further input and discussion of current research issues and priorities from the BRC members is welcome.

6. Next meeting date – to be announced.

B. Sloat mentioned in the September 2004 BRC meeting, future meetings would be held twice per year. The next meeting is planned for October or November, in conjunction with the BCBECL luncheon.

Meeting adjourned at 12:00 p.m.