BRAC Report

BUILDING RESEARCH ADVISORY COUNCIL

This material is approved for general distribution to stakeholders. This report is a snapshot of highlights from the August 2021 BRAC meeting and is not a full record of all the discussions that took place. It is intended to be for BRAC members to distribute to their nominating bodies.

September 2021

Governance

Mike Sang appointed to BRANZ Board

Mike Sang has been elected to the BRANZ Group Board of Directors for a term of three years. Mike brings over 20 years' experience working with, and on, boards as a non-executive Director, Chief Executive and Chief Financial Officer. He has held roles across multiple sectors including infrastructure, property, transport and agriculture and with listed, SOE and family businesses. Up until recently, Mike was the Chief Executive of Ngāi Tahu Holdings Ltd. We're delighted to welcome Mike to the BRANZ Board.

Mike fills the Board vacancy created by outgoing Director Dr Helen Anderson who has completed three terms on the Board and is not eligible for re-appointment.

Mike Sang

Alan Bickers term extended

BRAC has reappointed Alan Bickers to the BRANZ Board BRANZ Board for a third term of three years.

BRAC Membership and Elections

BRAC appointed the following as the Chair and Deputy Chair:

- Keiren Mallon, Registered Master Builders Association, was elected as Chair of BRAC
- Jon Williams, Property Council NZ, was elected as Deputy Chair of BRAC.

BRAC welcomed two new members:

- James le Page, representing Consumer NZ,
- John Gardiner, representing the Building Industry Federation.

We take the opportunity to thank the following for their contribution:

- Bill Whitley, Consumers NZ, who made a significant contribution to BRAC representing Consumer New Zealand over three terms.
- Alistair Miles who represented Business New Zealand for two terms.
- Bruce Kohn, representing Building Industry Federation for one term.

Industry issues

One of the Council's roles is to inform BRANZ of industry issues that could require a research response. BRANZ tracks these issues over time. Discussions at the August 2021 meeting were wide ranging – reflecting the diversity of issues front-of-mind for industry. Three discussion items were raised.

1. Zero carbon – discussing the real challenges, both as an individual and industry, to meet some rapidly developing deadlines and there were concerns about how that was going to work. The importance of both strong regulation and a good roadmap that people would be able to see and understand how it will be measured, and some tangible short-term targets. The recognition of the role for industry leadership and role model actions to reinforce the importance for industry to take steps.
2. The disruption of current supply challenges were also discussed, in particular on the ability to access the products required in a timely way to progress construction.
3. BRAC members continued to provide strong support for the use of Artisan. There was discussion around how a set of operating procedures could be established to encourage industry to use Artisan.

Two members presented to the Council on their perspectives on what is happening in the sector:

- Don Tilbrook, Civil Contractors NZ, provided a presentation on the use of estimating software to measure carbon.
- Graham Burke, NZ Specialist Trade Contractors Federation, gave an overview of his work with the Construction and Infrastructure Centre of Vocational Excellence (ConCOVE).

Spotlight on Research

Two of BRANZ's research scientists presented to the Council.

Housing and occupant wellbeing

The impact of housing performance on a sense of home and well-being is increasingly recognised in research. The association between health and house performance has prompted a raft of policy and regulatory responses, both in New Zealand and elsewhere.

Housing should provide a safe, healthy living environment for its occupants. The design and integrity of construction, insulation levels, ventilation and heating systems, and general state of repair will affect the efficacy with which a dwelling fulfils that role.

National housing assessment surveys have provided important data on the condition of the New Zealand housing stock for a quarter of a century. However, our understanding of the exposure of New Zealand's population to different housing conditions has been relatively limited.

In 2018/19 BRANZ partnered with Stats NZ to help address this information gap and undertake a national housing assessment survey in parallel with the General Social Survey (GSS). The combination of GSS data and that from the housing assessments provides opportunity to gain greater insight into how housing conditions distribute across the New Zealand population. This will advance our understanding of the interface between population, dwelling performance and wellbeing.

Vicki White, a Research Scientist at BRANZ, provided an overview of the research and analysis BRANZ has undertaken. Findings were shared and insights on the learning and value of a collaborative, co-funded approach, being agile and adaptive in our research to ensure it aligns with evolving government priorities.

The 2018/19 housing survey assessed the condition of over 800 dwellings throughout New Zealand

Innovative low-carbon water heating

The test building housing the hot water systems under investigation on a sunny winter's day. Three of the hot water systems are connected to the solar photovoltaic panels on the roof

Andrew Pollard, a BRANZ Building Physicist, presented the early results of the Innovative low-carbon water heating project. Residential water heating is a major cost to New Zealand homes costing around 1.6 billion dollars every year. Traditionally this has been provided inefficiently by electric-storage cylinders. An increasing trend over the last 5-10 years has been the popularity of instant gas systems which now make up over 40% of the systems sold.

This project evaluates a number of emerging hot water systems to see how well they perform in energy efficiency, financial and environmental areas. The project will also assess the practicalities of using these technologies compared with traditional types.

The technologies under investigation include:

- two models of directly connected photovoltaic (PV) systems
- one directly connected PV system (based on a typical AC inverter)
- one high efficiency air-to-water heat pump system.

These systems have been installed into a test facility at BRANZ and will undergo a variety of scenarios, over the next year, to test their performance under different conditions. Initial winter data from the largest PV system (3.2 kW) shows all hot water needs of a 4-person household can be met with solar energy on a sunny Wellington winters' day.