



## Queensland



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## Stakeholder Workshop

### Initial Summary Report

17 March 2011  
Parliament House, Brisbane



## Queensland

<b>BACKGROUND</b>	<b>3</b>
<b>Build It Back Green initiative overview</b>	<b>3</b>
<b>Strategic alignment with Queensland Reconstruction Authority objectives</b>	<b>3</b>
<b>Partnership aims</b>	<b>3</b>
<b>Engagement with DERM</b>	<b>4</b>
<b>STAKEHOLDER WORKSHOP</b>	<b>4</b>
<b>Workshop Analysis</b>	<b>5</b>
Defining success	5
Key Challenges and opportunities	6
Priorities for Action	6
<b>WORKING WITH THE AUTHORITY TO ADVANCE BIBG</b>	<b>8</b>
Council, State and Federal Government Engagement	8
<b>Conclusions</b>	<b>8</b>
Next Steps	9
Appendix 1: Principles of “Build it Back Green” Queensland (BIBG)	10
Appendix 2: Stakeholder Workshop Invitation and Agenda	11
Appendix 3: Smart State – Design State framework	16
Appendix 4: History and Q2 alignment of Build It Back Green Queensland	17
Appendix 5: Stakeholder Workshop attendance list	20
Appendix 6: Full outcomes of Stakeholder Workshop stream discussions	21

## BACKGROUND

### Build It Back Green initiative overview

The Build It Back Green (BIBG) initiative aims to leverage disaster recovery efforts so as to maximise sustainability and community resilience outcomes, while reducing longer-term energy, water and waste (or utility) bills. The initiative hopes to catalyse green jobs and investment in green infrastructure that is resilient while empowering communities to influence investments in recovery through informed, community-based deliberation. (Please see Appendix 1 for Principles Statement.)

BIBG builds on five years of experience gained by Green Cross Australia's US affiliate in supporting communities impacted by Hurricane Katrina to rebuild to high sustainability and resilience standards. We are also inspired by outcomes achieved in the green rebuilding program in Greensburg Kansas in the aftermath of a 2007 tornado. BIBG is also informed by the Black Saturday recovery where communities are implementing a green rebuilding program supported by [www.builditbackgreen.org](http://www.builditbackgreen.org) which also is used by the Perth bushfire affected community of Kelmscott Hills.



### Strategic alignment with Queensland Reconstruction Authority objectives

BIBG supports the Queensland Reconstruction Authority's strategic objectives directly:

- **Maintain the self-confidence of Queensland.** BIBG involves over 100 Queensland business, community and government agency partners with enthusiasm and conviction in our ability to deliver a better future.
- **Build a resilient Queensland and support resilient Queenslanders.** BIBG integrates resilience and sustainability objectives in recognition that through good design, the recovery can mitigate against the risks future natural disaster impacts as well as reducing the level of greenhouse emissions that endanger future generations through predicted increasing intensity of severe weather events.
- **Enhance preparedness and disaster mitigation.** Particularly through the vision of Green Schools as a hub for community disaster preparedness and response initiatives, BIBG directly aims for greater community preparedness.
- **Continue implementation of Toward Q2: Tomorrow's Queensland.** Green Cross Australia is a Q2 Foundation Partner and the BIBG initiative has been identified under Q2 as having potential to support the Q2 goal of reducing household emissions by 30% by 2020 (see Appendix 2). BIBG also supports the "Smart State = Design State" framework which underpins Q2 aims through good design strategies that focus on Queensland design and environmental sustainability (see Appendix 3)



### Partnership aims

Green Cross plays a catalysing and convening role in shaping a BIBG Queensland initiative (see Appendix 1 for Principles Statement).

BIBG partners include Green Building Council of Australia, Queensland Conservation Council, Australian Green Infrastructure Council, Property Council of Australia, Alternative Technology Association and Habitat for Humanity Australia. Numerous local and State government agencies are eager to play a role in BIBG. Organisations exploring ways to deepen involvement include Lend Lease, Suncorp Insurance, EC3 Global, Davis Langton, Manidiss Roberts, AECOM, Stockland, GHD, Ergon Energy, Energex, Brisbane Housing Company and Queensland Council of Social Services.



The BIBG partnership embraces the following aims:

<b>Green Cross and our partners have shaped a framework for potential BIBG Queensland efforts with the following objectives:</b>
Reduce household greenhouse emissions and other environmental impacts
Improve community resilience through good design, effective engagement and social media dialogue
Invest in resilient green school infrastructure to support improved educational outcomes and environmental education that embraces disaster resilience
Invest in exemplar green commercial, government and public buildings with strong resilience
Invest in exemplar green infrastructure projects with strong resilience
Pioneer solutions for low income residents that combine resilience and sustainability, while reducing energy, water and waste (or utility) bills

### Engagement with DERM

To achieve maximum impact across these objectives, collaboration and partnership between developers, local and state governments and community groups and private sector service providers is essential.

To this end, Green Cross has worked with the Department of Environment and Resource Management, including in consultation with DERM’s Flood Recovery Environment Task Force where Queensland Conservation Council plays a sector leadership role, to advance broad engagement with the proposed BIBG initiative. Green Cross and DERM have met with the Queensland Reconstruction Authority to advise and involve QRA in initiative formation.



### STAKEHOLDER WORKSHOP

In order to build involvement and buy-in of diverse Queensland organisations, Green Cross and DERM hosted a BIBG Stakeholder Workshop in Parliament House on March 17 2011. Please see Appendix 4 for Agenda and workshop background papers). The aim of the Workshop was to explore opportunities, challenges and ideas for prioritising practical exemplar and supportive initiatives across five streams of work.



The Workshop was attended by an exciting and diverse group of Queensland organizations and individuals – a truly broad and enthusiastic group (see Appendix 5 for list of attendees). After a live Skype interaction with New Orleans and Kansas green rebuilding leaders and presentations from key local leaders including Michael Rayner (Smart State Council member and leading Queensland architect), the group broke into five smaller groups to focus on specific streams of activity.

<b>Five streams of work addressed in the BIBG Stakeholder Workshop</b>
<b>Green Schools</b> (discussion led by Jeremy Mansfield, Lend Lease)
<b>Residential</b> (discussion led by Mara Bun, Green Cross Australia)
<b>Infrastructure</b> (discussion led by Nicholas Apostolidis, GHD)
<b>Commercial, Government and Public Buildings</b> (discussion led by Katy Dean, Green Building Council of Australia)
<b>Local communities</b> (discussion led by Andrew Zuch, RPS Group)

## Workshop Analysis

Please see Appendix 5 for full listing of Workshop ideas and priorities for each stream. Each stream discussion defined success in their area, discussed challenges and opportunities for overcoming these, and agreed on priorities for action in the spirit of exemplar leadership that BIBG partners aspire to.

Below we have provided summary outcomes in the areas of defining success and priority project suggestions in each stream.



### Defining success

Each of the five stream groups was asked to describe “What will an ideal outcome for this stream area look like?” The responses were then presented to workshop participants as a whole.

Our ideas of success for each stream discussed are as follows:

#### Green Schools

- Places of structural resilience with multi-purpose uses (education, disaster preparedness, disaster shelter, community recovery)
- Training ground for ‘Resilience’ (school/community)
- Location specific community impact and needs
- Empowered through local leadership and public/private partnerships
- Green schools create a healthy and safe environment that is conducive to learning while saving energy, resources and money
- Green schools are a point of resilience where a degree of normality for children can be attained while allowing the community to get on with disaster recovery and reconstruction.



#### Residential

- Maximise use of resilient materials and modular design to meet hierarchy of needs
- Use local resources, materials, skills, insulation, energy efficient appliances
- Consumers, business, government focussed on same outcome - building to “green type”
- Codes: fast tracking/green door
- Exemplar projects used to build media and public awareness of reduced energy usage and lower energy bills through both good design and changed behaviours.



#### Infrastructure

- Infrastructure planned for sustainability + environmental values recognised early and material use optimized
- Infrastructure is rebuilt in a way that values the quality of waterways and local environment
- Eco resilience built into systems/standards
- Infrastructure is built in a way that minimises harm to the environment during construction and ongoing operations
- Showcase green infrastructure that reduce impacts and deliver greater resilience



**Commercial, Government and Public Buildings**

- Procurement models supporting sustainability including green leasing arrangements and underpinned by understanding the business case and return on investment through informed decisions
- Asset Leadership/owner preparedness - policy for response - recovery to events
- Embodied energy – reduction in rebuilding
- Ensure holistic overview of policies – may require compromise/balance
- Rebuilding with focus on green precincts
- Build common understanding of what an extreme event can be



**Local communities**

- Participative, proactive and respectful engagement that builds empowered and responsible local ownership of BIBG initiatives
- Drive innovation through embracing cultural differences and building trust through integrated planning, using a localised approach
- Building risk aware and connected communities that link infrastructure, community and biodiversity
- Celebrate working together to achieve adaptive and creative places where fearlessness and endurance thrive through shared values



**Key Challenges and opportunities**

Consistently across discussion streams one fundamental challenge was identified: how to advance alternatives that can advance better solutions given the pressure for fast and low cost responses and media reinforcement of these pressures.

To overcome this fundamental challenge BIBG is oriented towards an ‘exemplar’ focus where the benefits of better eco-resilient design and deliver can be advanced in a showcase fashion.



Alongside this exemplar approach, workshop participants support one-stop-shop style information provision (through online and regional hub means) as well as good community engagement as the recovery unfolds, so that local communities are able to gain a better understanding of the longer term benefits of pushing beyond a “business as usual” approach to recovery.

Full details of challenges and opportunities to overcome these are provided in Appendix 6.

**Priorities for action**

Each of the five stream groups was asked to priorities specific actions with strong exemplar potential. Priorities emerging from the discussion are:

**Green Schools**

- Develop a template model for an “eco-resilient” school
- Work with Department of Education and Training to select target schools to implement a focussed retrofitting and new building program
- Encourage community capacity building – foster buy-in to the role of schools as a learning hub about resilience and sustainability



### **Residential**

- Introduce a recovery specific “Green Door” Policy (approvals processes) to fast track exemplar projects
- Deliver “one-stop shop” Information provision (online/regional green building centres)
- Seek targeted rebates & incentives from all levels of govt and the private sectors
- Deliver exemplar residential projects with strong showcase potential using public/private partnerships (Targeted locations aligned with local government priorities to maximise regional impact)
- Apply BIBG framework and focus on eco-resilience to supercities



### **Infrastructure**

- Select three to five exemplar eco-resilient infrastructure projects based on assessment of demonstration potential from the list of local government infrastructure priorities as delivered to the Queensland Reconstruction Authority.
- Work with Authority and Local Government stakeholders to select these demonstration projects.
- Ensure that selected demonstration projects are evaluated using the AGIC sustainability rating tool to support performance benchmarking and future innovation.

### **Commercial, Government and Public Building Priorities**

- The group recommends using a range of examples and exemplar projects to demonstrate to the community how non-residential buildings can be green, resilient and commercially viable.
  - Universities are leaders in green in many ways and provide natural opportunity for learning.
  - Use Parkhurst Primary School Hall project as an example of how to gain community support and acceptance for green building.
  - The Mission Beach Ferry Terminal will require a total rebuild. This is an opportunity to incorporate the best in resilient and green principles as well as a learning/info centre.
  - Rocklea Markets resilience can be improved.
- Help businesses and building owners to understand what an extreme disaster will look like and the potential impact on their asset and business.
- Create tools/templates/sources of information for building and business owners to help them develop their plans for disaster preparation, response and recovery.

### **Local communities**

- Use deliberative and democratic engagement processes to establish approach taken for each Build It Back Green demonstration project that is initiated – maximise participation
- Support community sector to deliver community engagement on sustainability and community resilience themes at local levels right across flood and cyclone affected areas
- Encourage use of social media to empower community engagement

## WORKING WITH THE AUTHORITY TO ADVANCE BIBG

The ideas provided above can form the basis for a whole-of-government targeted BIBG initiative, convened by Green Cross and delivered through community, private sector and government partners.

The Authority's role has the potential to include:

- Assistance with framing of objectives.
- Ensuring measurement mechanisms are in place.
- Supporting dialogue with potential funding partners including philanthropic and other sources.



Green Cross and our partners also welcome support from the Authority to encourage development of creative public private partnerships to advance BIBG projects.

### Council, State and Federal Government Engagement

The role of local government is central to the recovery effort. A range of local government representatives attended the Stakeholder Workshop (see Appendix 5 – Workshop attendance).

In order to deepen engagement across local government, Green Cross is seeking to discuss BIBG at the next significant gathering of councils related to the recovery which will be in Gladstone on 18-20 May. We hope there will be scope to discuss a BIBG element before, during or after the conference, and we have contacted organisers to explore options for this to occur.



Green Cross has provided an initial summary briefing about BIBG to the Coastal Adaptation and Energy Efficiency teams of the Federal Department of Climate Change.

DCC officials have identified the appropriate contacts for Green Cross to brief within the Regional Development and Local Government group within Regional Australia. Green Cross is seeking meetings to advance a Federal dialogue about BIBG with key officials in this area.



### Conclusions

The flood and cyclone recovery underway presents an unparalleled opportunity to enhance the resilience, preparedness and confidence of diverse Queensland communities while advancing the underlying goals of Q2.

By bringing together leading community, business and government players into a "Team Queensland" partnership that shares common aims and objectives and is playing an active role in shaping a green rebuilding program, Green Cross hopes to catalyse an initiative that will put Queensland on the global map for an innovative recovery that delivers multiple sustainability and resilience benefits.



## Next Steps

After liaising closely with DERM to analyse Workshop findings and calibrate opportunities for practical action, Green Cross and DERM hope to discuss the framing of a targeted BIBG initiative with the Queensland Reconstruction Authority over coming weeks.

As dialogue builds with local and federal stakeholders, BIBG partners will organically explore opportunities for contributing to priority actions as they unfold.

Discussions already are underway about a number of exemplar initiatives that align with BIBG aims and programs already underway are now delivering BIBG messages to the public to reinforce our message.

### **For further information please contact:**

If you or your organisation wishes to contribute to the design and development of the Build It Back Green initiative or if you have any queries in relation to this initiative, please make contact with Green Cross Australia:

#### **Green Cross Australia**

**Postal Address: PO Box 12117, George Street, Brisbane QLD 4003**

**Physical Address: Level 2, 79 Adelaide Street, Brisbane**

**P: 07 3003 0644**

**E: [info@greencrossaustralia.org](mailto:info@greencrossaustralia.org) | W: [www.greencrossaustralia.org](http://www.greencrossaustralia.org) | W: [www.builditbackgreen.org](http://www.builditbackgreen.org)**

## Appendix 1: Principles of “Build it Back Green” Queensland (BIBG)

BIBG Aims	<ul style="list-style-type: none"> <li>To leverage disaster recovery efforts so as to maximise sustainability and community resilience outcomes, while reducing longer-term energy bills</li> <li>To catalyse green jobs and investment in green infrastructure that is resilient</li> <li>To empower communities to influence investments in recovery through informed, community-based deliberation</li> </ul>	
BIBG Objectives	<ul style="list-style-type: none"> <li>Reduce household greenhouse emissions and other environmental impacts</li> <li>Improve community resilience through good design, effective engagement and social media dialogue</li> <li>Invest in resilient Green school infrastructure to support improved educational outcomes and environmental education that embraces disaster resilience</li> <li>Invest in exemplar green commercial, government and public buildings with strong resilience</li> <li>Invest in exemplar green infrastructure projects with strong resilience</li> <li>Pioneer solutions for low income residents that combine resilience and sustainability, while significantly reducing energy bills</li> </ul>	
Roles	Green Cross Australia GCA	<p>Responsible for shaping, coordinating and securing funding for an outcomes driven community, business, government partnership in a “Team-Queensland” fashion.</p> <p>Ensure BIBG partners address agreed activities and deliver on milestones underpinning BIBG objectives in a collaborative fashion.</p> <p>Project manager for integration of proposed BIBG streams: residential, commercial, schools, government &amp; public buildings, and infrastructure.</p> <p>Advocate for Federal funding of policy aligned activities.</p>
	Queensland Reconstruction Authority QRA	<p>Responsible for developing and implementing a state-wide plan for rebuilding and reconnecting communities across the State, featuring agreed eco-resilience dimensions.</p> <p>Coordinate government and non-government organisations to deliver the necessary services to assist individual communities in the rebuilding process, working with GCA (and DERM) in relation to BIBG activities.</p> <p>Work with GCA to ensure whole-of-government participation in BIBG, possibly working through DERM in a liaison role.</p>
	Department of Environment and Natural Resources DERM	<p>Is responsible for leading and coordinating the environmental aspects of flood recovery.</p> <p>DERM’s broader role in relation to GCA roles is to be determined.</p>
	Industry associations	<p>Advance the interests of their members towards delivering BIBG objectives.</p>
	Individual companies	<p>Integrate commercial opportunities with BIBG objectives (commercial buildings, roads, schools etc)</p>
	Community groups	<p>Build on-the-ground BIBG visibility and engagement locally working with BIBG tools (website, green building centres, green community talks etc.)</p>
	Government agencies	<p>Integrate existing and targeted new programs that support delivery of objectives, working with all BIBG partners.</p>
	Local Government	<p>Integrate planning and operational programs to maximise local delivery of objectives</p>
	Communities	<p>To actively participate in local community based conversations that will influence decisions after informed debate</p>
Communications	<ul style="list-style-type: none"> <li>Green Cross Australia work closely with all partners, especially the Queensland Reconstruction Authority and the Department and Environment and Resource Management, to ensure consistent delivery of agreed core messages across BIBG partners.</li> <li>Green Cross Australia owns the Trademark for “Build it Back Green” and will prevent parties from exploiting use of the brand with offers or programs that are not aligned with stated aims and objectives.</li> </ul>	
Governance	<ul style="list-style-type: none"> <li>Green Cross Australia will create and support a Steering Committee to ensure governance of BIBG activities (the Green Cross Australia Board provides governance oversight for all Green Cross Australia activities and ensures a strong, transparent project management vehicle is maintained).</li> <li>The Steering Committee is responsible for oversight of Green Cross funding used to advance aims and objectives through partners and directly through Green Cross activities including web development and social media outreach.</li> <li>The Steering Committee will be chaired by a trusted independent person of standing in the Queensland public policy community and will include independent members trusted and agreed by key BIBG partners.</li> </ul>	

## Appendix 2: Stakeholder Workshop Invitation and Agenda



### Invitation to the Build It Back Green Queensland Stakeholder Workshop

The Minister for Environment and Resource Management, Kate Jones, invites you to attend a workshop addressing a proposed Built it Back Green (BIBG) rebuilding initiative.

This workshop will look at the recovery work being undertaken across Queensland and will shape objectives for sustainable, resilient rebuilding initiatives that support:

- Residential rebuilding
- Schools
- Commercial, government and public buildings
- Infrastructure

The workshop will also look at the potential for intensive focus in key local areas.

The workshop details are:

**Date: Thursday 17 March 2011**

**Place: Undumbi Room, Queensland Parliamentary Annexe, Parliament House, Alice Street, Brisbane**

**Time: 8.30 am to 2:00 pm (lunch and refreshments will be provided)**

Workshop attendees will be encouraged to actively contribute ideas for practical initiatives that will maximise sustainability and resilience outcomes, including reduced energy consumption resulting in lower energy bills.

BIBG is convened by Green Cross, guided and framed by priorities and governance established by the Queensland Reconstruction Authority.

BIBG draws expertise from Green Cross' US affiliate which has been leading a successful green recovery effort in New Orleans over the past five years.

To RSVP email [rsvp@greencrossaustralia.org](mailto:rsvp@greencrossaustralia.org)

**RSVPs are required by Friday 11 March 2011.**

Yours faithfully



Mara Bun  
CEO  
Green Cross Australia

In partnership with  
Green Cross International

Mikhail S. Gorbachev  
*Founder*

Mara Bún  
*CEO*

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Adaptation Flagship*

**ADVISORY PANEL**

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Di Morgan

Heather Jeffery

Ian Dunlop

Ian Lowe

James Bradfield Moody

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Phillip Toyne

Richard Sanders

Ros Kelly

Sonia Caton

Tony Fry

Tor Hundloe

Wilson da Silva

Linda Dreghorn  
*Company Secretary*

## Build It Back Green Queensland Workshop Agenda

- 8:30am**      **Registration and introductions**
- 9:00am**      **Introduction** and aims of Build it Back Green Queensland  
*Mara Bun, CEO, Green Cross Australia*
- 9:20am**      **Planning for resilience:** adapting to climate change through resilient communities  
*Andrew Zuch, Technical Director Climate Change and Sustainability, RPS Group*
- 9:40am**      **The international experience** of Build It Back Green, by video interview
- *Beth Galante, Head of Global Green USA New Orleans office, leader of post-Katrina Build it Back Green initiative (Global Green is the US Green Cross affiliate)*
  - *Stephen Hardy, planner/project manager for BNIM in Greensburg, driver of Greensburg green recovery after being devastated by a 2007 tornado*
- 10:00am**      **Sustainable and Resilient Design for 21<sup>st</sup> Century Queensland**  
*Michael Rayner, Principle Architect of Cox Rayner Architects*
- 10:15am**      **Morning Tea and networking**
- 10:45am**      **Official opening** of the Build It Back Green Workshop  
*Minister for Environment and Resource Management, Kate Jones*
- 11:00-11:30am** **Overview of the eco-resilient streams of activity – brief introductions by Stream champions**
- 11:00am**      Eco-resilient stream one - **Support for residential rebuilding**  
*Stream champion – Mara Bun, CEO Green Cross Australia*
- 11:05am**      Eco-resilient stream two - **“Green Schools” retrofitting and rebuilding program**  
*Stream champion – Jeremy Mansfield, Regional Sustainability Leader QLD/NT, Lend Lease*
- 11:10am**      Eco-resilient stream three - **Commercial, government and public exemplar buildings**  
*Stream champion – Katy Dean, Green Building Council of Australia*
- 11:15am**      Eco-resilient stream four – **Infrastructure projects**  
*Stream champion – Nick Apostolidis, Director and GM, Client Development, GHD*
- 11:20am**      Eco-resilient stream five – **Key local areas**  
*Stream champion – Andrew Zuch, Technical Director, Climate Change & Sustainability RPS Group*
- 11:30am**      **Break out session**  
*Workshop participants to brainstorm tangible objectives for each stream activity*
- 12:20pm**      **Luncheon and networking opportunity**
- 1:00pm**      **Stream activity project focus**  
*Workshop participants report back on potential areas of project focus for each stream*
- 1:30pm**      **Conclusion and next steps:** overview of workshop findings  
*Mara Bun, supported by Stream champions*
- 2:00pm**      **End**

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# A Sustainable New Orleans Slowly Rises in Katrina's Wake

By KATIE HOWELL of **Greenwire**  
Published: July 14, 2009

NEW ORLEANS -- People here are finally seeing a bright side to the catastrophic damage done four years ago by hurricanes Katrina and Rita.

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The city is being rebuilt slowly as what many hope will be a clean, green model for the nation.

"After the storm events happened, now everybody is interested in the environment," said Wynecta Fisher, director of the city's Office of Environmental Affairs. "I hate to say that it came at a good time, but because of the storm, we've been able to build on that momentum."

There is a big push in the Big Easy for dramatically improving energy efficiency in homes and public buildings. The city has purchased a fleet of hybrid buses and has plans to install solar-powered LED streetlights. And the renewable energy sector is drawing up grandiose plans for using hydrokinetic turbines to tap powerful currents in the Mississippi River to generate electricity.

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Among the foot soldiers in the sustainability movement is fourth-generation New Orleanian John Moore, who left for college in Atlanta several years ago, with no plans of returning. But as floodwaters receded and his family

struggled to patch up their lives, Moore returned as part of the "green" recovery effort. "I'd seen the chaos," he said, "and I knew something needed to change."

Working first for the nonprofit, Global Green USA, Moore helped start redevelopment certified by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program in the Lower 9th Ward, a thriving working-class neighborhood that Katrina turned into a ghost town. Then Moore, a certified energy rater with a background in architecture, moved to city government to work on "GreeNOLA," a plan drafted by Massachusetts Institute of Technology students.

The step-by-step GreeNOLA guide is aimed at boosting the city's existing sustainability policies and environmental leadership. It also sets longer-term goals and milestones, such as boosting the use of renewable energy produced in the region, re-establishing a citywide recycling program, conducting a greenhouse gas emissions study and revamping city transit.

"The MIT-New Orleans connection is working out for us," Moore said. "It ... added a layer of sophistication to GreeNOLA."

Moore's team and Fisher in the environmental office have been slowly implementing the improvements and changes outlined by GreeNOLA after winding their way through the city's bureaucratic maze and around funding shortfalls.

GreeNOLA is expected to get a jolt from the federal stimulus law, with \$2.4 million heading to Moore's team. "The stimulus package literally ... stimulated the GreeNOLA

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plan," Moore said. "We're sort of buried under so much stuff around here -- and all of a sudden, this package came down and it's like a gift."

The stimulus cash will be split between transportation and building projects. There will be \$1.1 million to help five libraries that the city is building achieve LEED certification with green roofs, solar panels or other energy-efficiency features.

The rest will pay for installing solar-powered LED streetlights in areas slammed by the storms.

"Some areas up along Lake Pontchartrain -- which was hit pretty hard, pretty much wiped off the face of the Earth -- there are no street lights up there, because it's incredibly expensive to run all the conduit and all the wires and all that," said Zack Embry, the city's renewable-energy permitting specialist who works with Moore on GreenOLA.

"It would be a perfect situation to implement solar street lights, because you can pretty much stand them right there and turn them on."

### Nonprofit spurred action

Solar came to New Orleans by way of a Solar America City designation from the Energy Department, which comes with a two-year grant. That cash paid for streamlining solar permitting for residential installations, writing a comprehensive plan to expand solar technologies, and training developers and craftspeople about solar power.

The DOE grant was made possible by Global Green, a California-based nonprofit, which provided matching funds.

Overall, Global Green has brought in about \$15 million in grants and funding for recovery efforts in the city, the group says. And it has helped other groups seeking sustainable and renewable energy change.

The group launched the Lower 9th Ward's showcase Holy Cross project, where the organization is building five single-family energy-efficient homes, an 18-unit apartment building and a community center.

The houses will be sold roughly at cost to residents who lost their homes during the storms, and the apartments will be rented at a discounted rate. Energy efficiency will dramatically reduce energy bills, promoters say. The buildings feature 3- to 5.3-kilowatt solar arrays on rooftops, energy-efficient appliances and a sustainable design that uses 75 percent less energy than a typical building.

Global Green says the project is also an educational tool, as its model home gets dozens of visits a week from people looking for ways to improve energy efficiency in their own homes. The organization is distributing lists of contractors who specialize in energy efficiency work and places to buy the building materials.

"We want to create a different future for this city," said Matt Petersen, Global Green's president and CEO. "One could debate that it doesn't make sense to rebuild New Orleans, given the fact that much of the city lies under sea level, but the fact is, it was going to be rebuilt, so why not make it a model? Why not create a center of expertise in a city that had no green building or energy efficiency experience?"

Global Green has also helped the city rebuild several schools with a \$2 million grant from a fund organized by former Presidents George H.W. Bush and Bill Clinton. The group uses the money to build two LEED-certified schools that are "PV ready," able to add photovoltaic panels later.

"Our role as a catalyst has been tremendous," Petersen said. "There's been a good ripple effect."

One of the LEED-certified schools, Wilson Elementary School in the low-lying Broadmoor neighborhood, will be the first to receive panels as part of the DOE Solar America Cities grant.

Moore -- who worked for Global Green before moving to city government -- hopes to replicate the success of the school project with the libraries. "We're breaking lots of new ground here," he said. "A lot of people want to touch and feel this stuff, and what better way than through a building they can use that's a teaching tool?"

Outreach, Moore said, is the key to bringing about sweeping change in New Orleans.

"That's one of the biggest things for us, boosting the appeal of 'green,'" he said. "We don't want it to stay sort of a crunchy, granola effort. We want it to line up with national efforts and where the rest of the nation is going with this."

### Turbines in Big Muddy?

Many New Orleanians involved in sustainability work say they have seen a sea change in attitudes about renewable energy since Hurricane Katrina.

New Orleans native Jon Guidroz, the director of project development for Massachusetts-based hydrokinetic developer Free Flow Power, said he returned to his hometown after the storm to "do something that would be good."

"What I've encountered is unreal," Guidroz said. "There is an open-minded approach to energy and new businesses that I don't think was here before Katrina."

Guidroz returned in January to open Free Flow Power's New Orleans office with a mind toward tapping the mighty Mississippi River for energy.

Free Flow Power, which develops hydrokinetic turbines, has a grand scheme for installing thousands of hydrokinetic turbines in Louisiana's part of the Mississippi River. It has received preliminary permits for 32 sites from the Federal Energy Regulatory Commission and says it will file for licensing in 2012 and begin generating electricity in 2013.

The turbine developer says it will build 900 megawatts of hydrokinetic capacity in the state -- assuming 600 turbines per mile over 180 miles of river. Those huge numbers are aimed at helping the company overcome the pitfalls of other river hydrokinetic projects, Guidroz said.

"Sometimes folks say, 'Wow, you're going to put a lot of turbines in the river,' but we have to do that to make it economic," he said.

The global financial meltdown has slowed the company's work on what it says will be the \$3 billion project -- including sites all the way to St. Louis -- but Guidroz said the company is not going to turn back on a plan that would make New Orleans become a showcase for hydrokinetic power generation.

That is exactly the type of activity Global Green's Petersen hopes to see in the Big Easy.

"We want to help it change its course for the future," he said. "We want to make it a place that's not just about jazz and great food, but a place that's known for ... creating a path for the future."

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### Holy Cross Building Dashboard

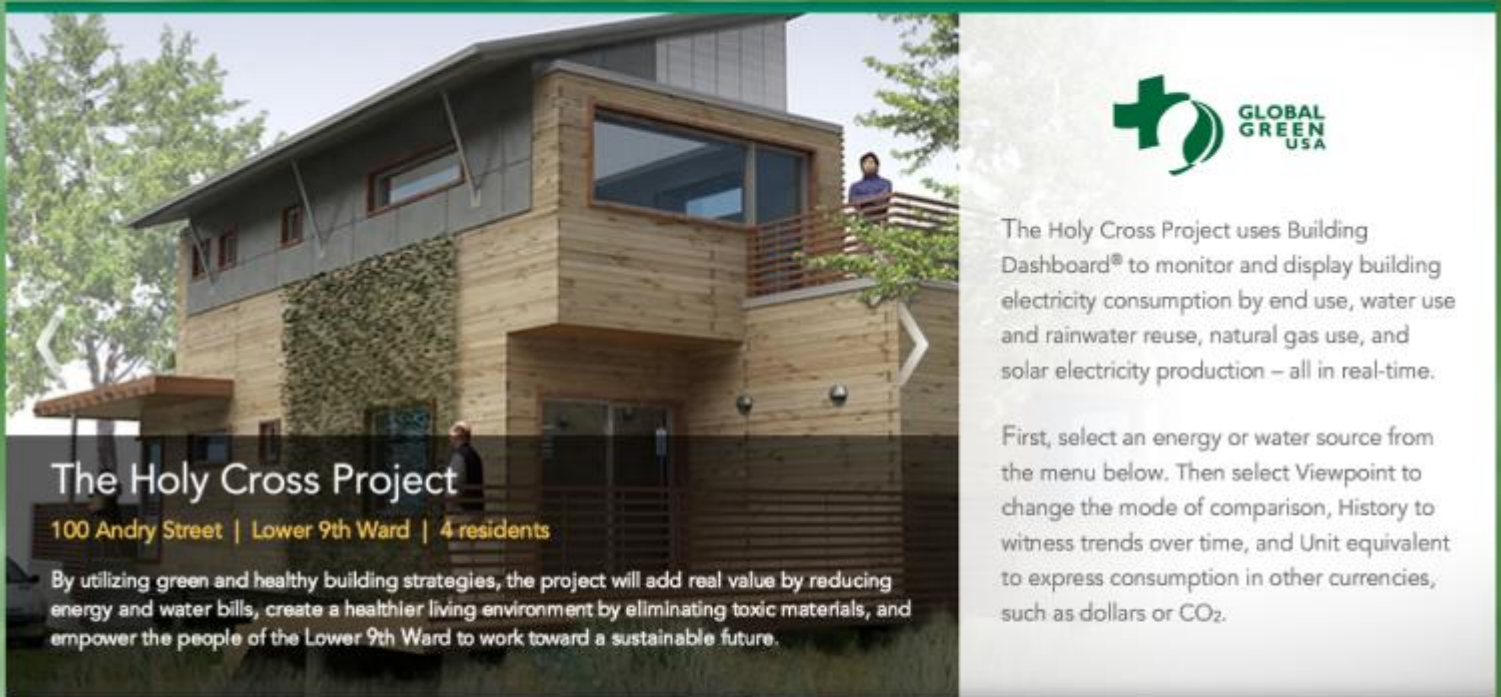
The image below is from the green development that Green Cross Australia’s US affiliate has built with corporate, government and philanthropic support the Ninth Ward of New Orleans – the neighbourhood that was hit hardest by Hurricane Katrina.

The ‘Holy Cross’ project includes five homes, eighteen apartments and a community centre build to high sustainability and resilience standards after a national design competition chaired by Brad Pitt and involving eminent US design experts.

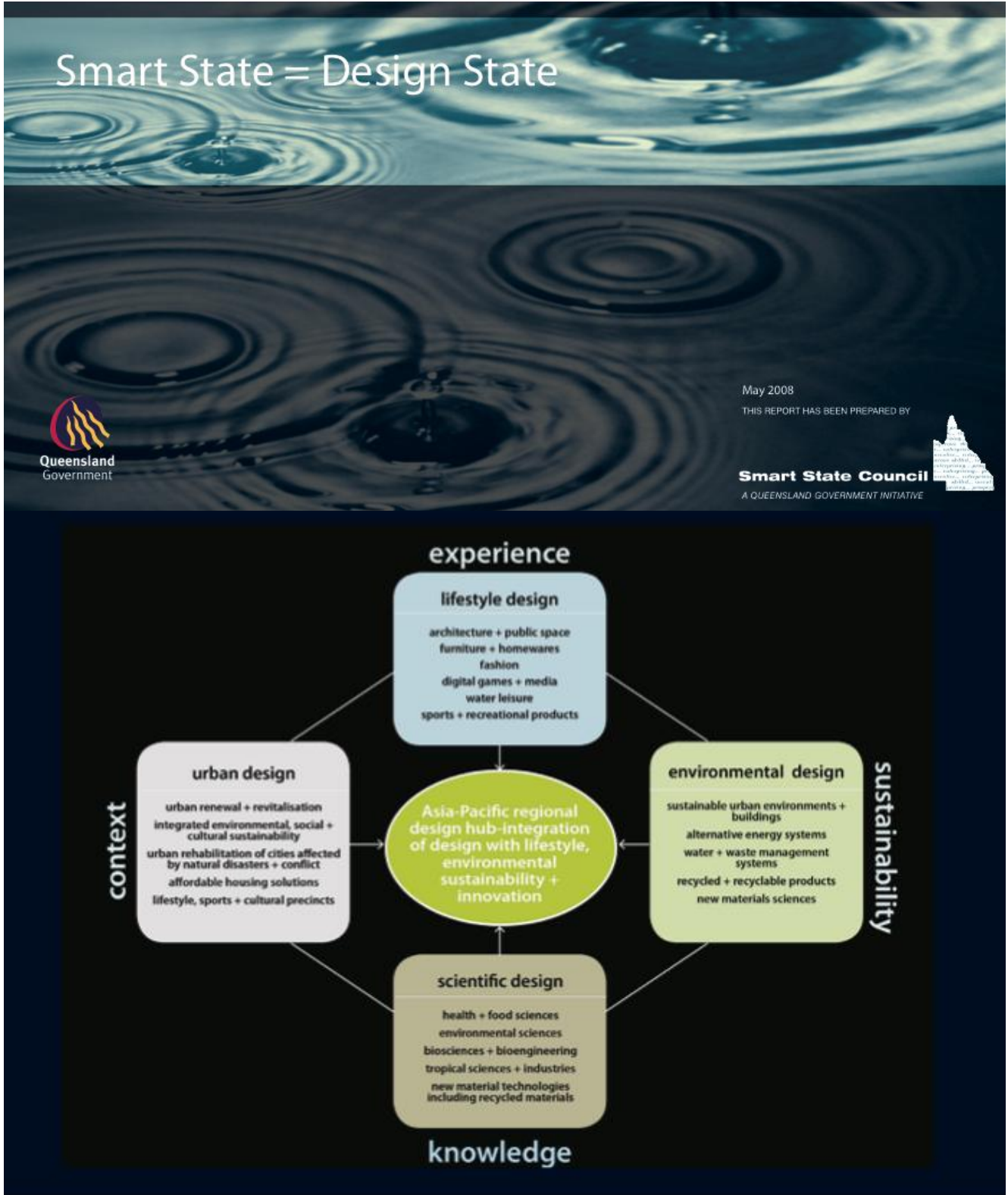
This home is wired with real time metering that enables the public to view electricity, gas and water usage in real time, measured by dollars as well as CO2 emissions.

You can view 24/7 usage by four residents who enjoy very low energy and water bills here:

<http://buildingdashboard.com/clients/holycross/>



## Appendix 3: Smart State – Design State framework





## Appendix 4: History and Q2 alignment of Build It Back Green Queensland

The following website “screenshots” are taken from the Green Cross Australia website here:

<http://www.greencrossaustralia.org/our-work/build-it-back-green/qld-prepares-to-bibg.aspx>

More information about the New Orleans, Greensburg and Black Saturday green rebuilding efforts is available in this section of the website: <http://www.greencrossaustralia.org/our-work/build-it-back-green.aspx>

**OUR WORK**

- > Green Cross Projects
- > Environmental Education: Green Lane Diary
- > Prepare for La Nina: Buckle down for 2011
- > Youth Emergency Volunteering: Extreme Weather Heroes
- > Post-Disaster Rebuilding: Build It Back Green
  - >> Queensland prepares to build it back green
  - >> From the Ashes of Victoria: Build it back green!
  - >> Save energy and save money
  - >> The aftermath of New Orleans: Build it back green
  - >> Live from the oil spill
  - >> Rebuilding Haiti
- > Building Weather Resilience: HardenUp.org
- > Humanitarian Climate Adaptation: Climate Resilience

### Post-Disaster Rebuilding: Build It Back Green Queensland prepares to build it back green

*Can we ask the north what [it] is it was asking this time around? Can we talk about building simple, practical houses designed to withstand cyclones and storms, houses that bring in their own cooling breezes and actually save money and energy, houses that are designed to remain high and dry above the flood-line?*

*The north - and Cyclone Yasi - spoke to us this week. I hope we were listening to what she said.*  
*The Weekend Australian 5/2/2011*

Green Cross Australia is leading a stakeholder dialogue to explore how the multi-billion dollar investment in Queensland’s flood and cyclone recovery can deliver community resilience and sustainability gains. Together with partners from the business, community, research and government sectors we are shaping four streams of possible activities under a Build It Back Green project umbrella:

- support for sustainable and hazard resilient residential rebuilding
- exemplar green commercial, public and government buildings
- green schools (new and retrofit)
- exemplar green infrastructure.

On March 17, Climate Change and Sustainability Minister Kate Jones is opening the Build It Back Green stakeholder workshop. At this workshop, Green Cross Australia will shape green rebuilding options with the Queensland Department of Environment and Resource Management and members of Green Building Council of Australia, Property Council of Australia, Queensland Conservation Council, Alternative Technology Association and Australian Green Infrastructure Council. Key government agencies such as Office of Clean Energy, Office of Climate Change and Brisbane City Council will be present along with CitySmart and others. Local governments across Queensland will play a vital role in the rebuilding and we look forward to engaging with them through the Local Government Association of Queensland.

The Queensland Reconstruction Authority faces an enormous challenge given the tremendous diversity and scale of 2011’s severe weather impacts. We look forward to supporting QRA to catalyse and convene innovative, sustainable and resilient recovery efforts.

As we have seen through Green Cross leadership of a **sustainable recovery in the aftermath of Hurricane Katrina in New Orleans**, green disaster rebuilding creates green jobs, saves greenhouse emissions, reduces energy bills, and supports community resilience.

We particularly look forward to exploring the possibility of retrofitting flood and cyclone affected schools to a high eco-resilience level **as we have done across New Orleans**.

**Build it Back Green is linked in the Anna Bligh’s Q2 strategy**

We are delighted that in 2009 Premier Anna Bligh selected Green Cross Australia to be a **Foundation Q2 Partner**, and that the Queensland State Government considers our Build it back green initiative to be a smart way to help Queenslanders reduce their carbon footprint by 30% by 2020, a Q2 goal.

Green Cross has influenced **Queensland Climate Change Strategy** to incorporate green rebuilding in advance of major weather events.

**Bovis Lend Lease supports Green Cross Australia**

In 2010 Green Cross worked on the ground in Queensland with our partners to ensure there is building commitment to sustainable disaster rebuilding in advance of the severe weather we are now experiencing.

Bovis Lend Lease hosted a Build it Back Green luncheon in Brisbane focusing the attention of community, business and government leaders on severe weather risks.

- > International Right to Water
- > UN Emergency Response: AGEE
- > Democracy In Action: The National People’s Assembly 2008
- > A conversation with His Holiness the Dalai Lama
- > Other Projects

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**SUPPORT OUR RAFFLE**

SUPPORT GREEN CROSS AND WIN GREEN PRIZES >>

**eNEWS UPDATE**

**RESOURCES**

- > **Partners on target for Q2**  
Download the Q2 Partners Media Release  
▼ DOWNLOAD
- > **Green Cross Australia’s Queensland Government climate change strategy submission**  
▼ DOWNLOAD Download our submission
- > **Open Letter from Green Cross to Premier Anna Bligh, Brisbane Lord Mayor Campbell Newman, and Gold Coast Mayor Ron Clarke**  
Discussing the important conclusions reached at the SEQ Cyclone Hypothetical Session at the

GREEN CROSS eNEWS  
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"Bovis Lend Lease is proud to be supporting Green Cross Australia. Through our extensive work in the area of disaster recovery and building communities, we understand the importance of stakeholder engagement and collaboration. This is why the Build it Back Green luncheon is an important opportunity for stakeholders from industry, government and the community to come together and work towards ensuring there is a resilient and sustainable response to manage the potential impacts of Queensland disasters." Peter Ward, Bovis Lend Lease QLD General Manager.

Participants joining Green Cross and Lend Lease include: Ergon Energy, Energex, Insurance Australia Group, Swiss Re, Australian Conservation Foundation, Building Codes Queensland, Property Council of Australia, Emergency Management Queensland, Minter Ellison, CSIRO, Volunteering Queensland and the Queensland Government's Office of Clean Energy and Office of Climate Change.


We are delighted that through support for our Storm Season Community Forums in November 2010, Suncorp Insurance is now firmly engaged with our efforts.

The April 2010 Bovis Lend Lease luncheon kick-started a process for planning a sustainable rebuild out of Queensland's next major weather event - now upon us with record 2011 floods - learning from the models coming out of Greensburg, Kansas and New Orleans, as well as the sustainable recovery model underway in Black Saturday affected Victorian communities.

#### SEQ Cyclone Hypothetical

As flood waters recede in Brisbane, we remain concerned about cyclone risk during 2011. In May 2010, together with the Property Council of Australia Green Cross facilitated a significant "Hypothetical" in Parliament House Canberra in front of a large business audience to raise awareness about this risk.

The background setting for the Hypothetical is: major weather events occur in South East Queensland in 30-year cycles. The last major event happened in 1967. As [this video interview with Griffith University's Rodger Tomlinson](#) indicate, there is a risk that a cyclone tracking into the shallow water environment of Moreton Bay could build into a storm surge four metres high which then comes through the Broadwater putting thousands of vulnerable residents at risk.

the SEQ Cyclone Hypothetical session at the National Business Leaders Forum for  
 **DOWNLOAD** Sustainable Development

#### USEFUL LINKS

- > [Ergon Energy's Cyclone Larry Response](#)
- > [Tropical Cyclone Larry Review - May 2006](#)
- > [Tropical Cyclone Information for the Australian Region](#)
- > [Climate change and extreme weather](#)



The "SEQ Cyclone Hypothetical" was a key session of the 2010 National Business Leaders' Forum on Sustainable Development on May 29 2010. The event was moderated by Radio National's Fran Kelly and occurred without media coverage to encourage an open exchange.

The Hypothetical took place in the presence of an audience of 200 business sustainability leaders from across manufacturing, service and resource sectors. We were delighted that Climate Change Minister Penny Wong and Shadow Minister for Sustainable Cities Bruce Billson were able to participate in our vibrant discussion which involved CEO and Director level participants from Lend Lease, CSIRO, the Property Council of Australia and others including Green Cross.

[Read the Open Letter from Green Cross to Premier Anna Bligh, Brisbane Lord Mayor Campbell Newman, and Gold Coast Mayor Ron Clarke that discusses important conclusions reached at the Hypothetical.](#)

#### Circles of learning: a community based government disaster response strategy

Usually major cyclones track the Queensland coast then veer offshore, but as we saw with Cyclone Larry in 2006, they can hit land. In the case of Larry, the damage due to severe winds was widespread.

Jim Varghese, now Executive Director of Springfield Land Corporation, has extensive public sector leadership experience in Queensland, having served as Director General of four State Government Departments.

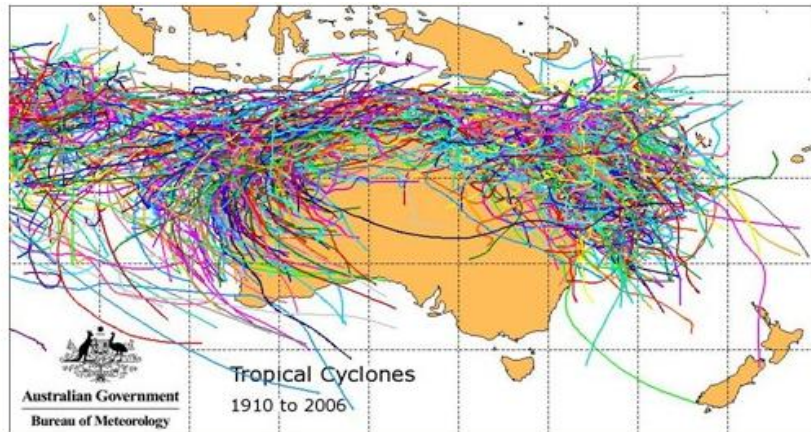
After Cyclone Larry he was deeply involved in applying a response approach which was community grounded and enabling as opposed to "top down". To learn more about the "Circles of Learning" approach that greatly enhanced Cyclone Larry recovery, [watch this video interview with Jim Varghese](#).

#### More about Queensland exposure to cyclones, flooding and storm surge

Between December 2010 and February 2011, many businesses have been devastated and over 30,000 Queenslanders have been impacted by record flood and cyclone activity that has covered 75% of the State. Exceptional rainfall was predicted for this year, given the powerful La Nina conditions that we are experiencing ([link to preparing for La Nina page](#)).

During the summer of 2009 Queenslanders experienced floods and storms with great intensity, but fortunately did not have to suffer through a Category 5 Cyclone since Cyclone Hamish veered off the coast just in time.

Over the past 50 years Australia's top end has experienced much tropical cyclone activity. A 2007 paper by the National Centre for Atmospheric Research in Boulder Colorado stated that "the last decade has experienced a 300-400% increase in category 5 hurricanes" in the North Atlantic. The storm intensity increases predicted by climate scientists may be materialising.



Usually major cyclones track the Queensland coast then veer offshore, but as we saw with Cyclone Yasi in 2011 and Cyclone Larry in 2006, they can hit land. The full impact of Cyclone Yasi is still unclear. In the case of Larry, the damage due to severe winds was widespread.

Location	Damage
Mareeba / Eacham / Millaa Millaa	93 damaged properties
Babinda	80% of buildings damaged
Flying Fish Point	15% of homes damaged
Innisfail	50% of homes damaged, 35% of private industry damaged 25% of Government buildings damaged (schools etc)
Etty Bay	40% of homes suffered roof damage
East Palmerston	70% of homes damaged
Silkwood	Worst affected location, 99% of homes lost roofs or suffered structural damage
Kurrimine Beach	30% of homes damaged, 15% of private industry damaged
El Arish	30% of homes damaged, 50% of private industry damaged
Mission Beach	30% of homes damaged, 20% of private industry damaged 45% of caravan park damaged
South Mission Beach	20% of homes damaged, 20% of private industry damaged
Japponvale	Possible tornado damage

If Cyclone Hamish, a Category 5 event with wind speeds up to 215km/hour had hit land, the exposure would have been extensive.

According to the CSIRO: "It is plausible that uncontrolled climate change could see global sea level rise of 1 metre or more by 2100 and more intense storms threatening coastal housing and infrastructure. Queensland's highly developed and populated coastal communities, such as the Gold Coast and the Sunshine Coast, will be particularly affected by the predicted increase of sea level rise and floods. With almost 250,000 vulnerable coastal buildings, Queensland is at the highest risk from all Australian states from projected sea level rise, coastal flooding and erosion."

**Build It Back Green Queensland Partners**



## Appendix 5: Stakeholder Workshop attendance list

Jane Tietzel	AECOM	Piet Filet	Healthy Waterways
Penny Townley	AECOM	James Udy	Healthy Waterways
Scott Losee	AECOM	Chris Warnock	Lend Lease
Jon White	Alex Frazer Group	Jeremy Mansfield	Lend Lease
Rebecca Miller	ARUP	Scott Leonard	Local Govt Assoc of QLD
Meg McDonald	Australian Carbon Trust	Amelia Loye	Manidis Roberts
Mark Thomson	Aust Green Development Forum	Karen Haworth	Master Builders
Richard Sale	Australian Institute of Architects	Carly Allen	Office of Clean Energy
Hayley Jarick	Bluescope Steel	Sanad Albatal	Office of Clean Energy
Andrew Wilford	Bond University	Travis Bates	Office of Clean Energy
Carolyn Honeywill	Brisbane City Council	Jo Smith	One Step Further
Cody Grosert	Brisbane City Council	Caryn Kakas	Property Council Australia
Ken Mackenzie	Brisbane City Council	Johanna de Winter	Property Council Australia
Melinda Bergmann	Brisbane City Council	Julianne McIntyre	Property Council Australia
Sarah Bishop	Brisbane City Council	Kathy McDermott	Property Council Australia
Erin Lloyd	Brisbane City Council	Toby Hutcheon	QCC
Jennifer Mansfield	Brisbane City Council	Roger Church	QCOSS
Lindsay Walker	Building Codes Queensland	Brendan Nelson	QLD Reconstruction Authority
Morgan Corkhill	BVN Architects	Graeme Milligan	QLD Reconstruction Authority
Christian Duell	Catalyst - The Edge	Graham Newton	QLD Reconstruction Authority
Graham Witherspoon	CitySmart	Alexander Lotersztain	Queensland Design Council
Michael Rayner	Cox Rayner	Yassmin Abdel-Magied	Queensland Design Council
Michael Peach	Dept of Community Safety	Robyn Keenen	Qld Tourism Industry Council
Graeme Harding	Dept of Education & Training	Helena Malawkin	Redland City Council
Benton Wecker	Dept of Env, & Resource Mtg.	Luke Reade	Redland City Council
Emma Clark	Dept of Env, & Resource Mtg.	Andrew Zuch	RPS Group
Jennifer Burley	Dept of Env, & Resource Mtg.	Jim McKnoulty	RPS Group
John Bradley	Dept of Env, & Resource Mtg.	Tony Costantini	SEQ Catchments
Nick Weinert	Dept of Env, & Resource Mtg.	Leanne McKnoulty	SHaM Communication
Rebecca Duffy	Dept of Env, & Resource Mtg.	Andrew Palmer	Stockland
Minister Kate Jones	Dept of Env, & Resource Mtg.	Jimmy Higgins	Suncorp Insurance
Tim Moore	Dept of Env, & Resource Mtg.	Marcus Taylor	Suncorp Insurance
Alethea Cardwell	Dept of Premier and Cabinet	Adrian Just	Sunshine Coast Architects
Leslie Curtis	Dept of Public Works	Christian Truscott	Tenix
Richard Hawkes	Dept of Public Works	Chad Brown	Thomson Adsett Studio 39
David Harrison	Dept of Public Works	Jack Bryce	Thomson Adsett Studio 39
Julianne Schultz	Design Council	Ann Hooper	Tourism Queensland
Claire Hendrie	EC3 Global	Julie O'Brien	Tourism Queensland
Stewart Moor	EC3 Global	Anthony Marklund	Umow Lai Pty Ltd
Steph Zannakis	Spiral Community Hub	Kirsty Chessher	Urban Development Institute Aus
James Davidson	Emergency Architects Australia	Cat Williams	Volunteering Queensland
Dean Comber	Ergon Energy	Jennie Schoof	Volunteering Queensland
Greg Nielsen	Ergon Energy	Julie Molloy	Volunteering Queensland
Jeff Callaghan	Former BOM expert	Sean Hoobin	WWF Australia
Nick Apostolidis	GHD	Paul Watt	
Kim Johnson	Gold Coast City Council	Terry O'Connell	
John Williams	Gold Coast City Council	John Fraser	
Katy Dean	Green Bldg Council of Australia	Desiree Houston	
Frances Curro	Green Cross Australia	Ghassab Sattary	
Mara Bun	Green Cross Australia	Grant Lewis	
Miranda Mason	Green Cross Australia		
Stephanie Remy	Green Cross Australia		
Ralf Reeger	Greening Australia		
Rod Douglas	Greening Australia		
Sean Willians	Greening Australia		
Rod Hyatt	Habitat for Humanity		
Yolie Entsch	Habitat for Humanity		

## Appendix 6: Full outcomes of Stakeholder Workshop stream discussions

<h1>Summary Priorities for Action</h1>	
<b>Schools</b>	<ol style="list-style-type: none"> <li>1. Develop a template model for an “eco-resilient” school                             <ul style="list-style-type: none"> <li>• Combine “Green School” and Disaster Resilience principles into new model</li> <li>• with DET identify the appropriate schools to target as an Exemplar BIBG New School project</li> <li>• with DET engage with the design community &amp; also kids on design competition for a model new “green resilient school”</li> </ul> </li>   <li>2. Develop a template model for an “eco-resilient” retrofitting of schools                             <ul style="list-style-type: none"> <li>• Initial trial of 20 schools out of the 90 impacted by recent disasters</li> <li>• With DET develop a matrix for how participating schools will be selected and approached for engagement</li> <li>• Include retrofitting criteria that addresses sustainability and property resilience (Work with GBCA to address Green Star retrofitting approach + Disaster Risk Reduction &amp; Preparedness)</li> <li>• Include a “Health Check” criteria that addresses property resilience and evacuation aspects (especially targeting issues non visual damage but increase risks to future disasters)</li> <li>• Work with DET to create decision making framework that adapts template to local needs to scale up to all schools in State and empower schools to take action.</li> </ul> </li>   <li>3. Encourage community capacity building – foster buy-in to the role of schools as a learning hub about resilience and sustainability                             <ul style="list-style-type: none"> <li>• Build a knowledge portal that enables the school to connect with local business and community groups to identify opportunities, raise awareness &amp; education / interactive engagement and provide appropriate sponsorship.</li> </ul> </li> </ol>
<b>Residential</b>	<ol style="list-style-type: none"> <li>1. “Green Door” Policy (approvals processes)                             <ul style="list-style-type: none"> <li>- Craft as related to this recovery</li> <li>- Technology</li> </ul> </li> <li>2. Information provision (online/Building centre)                             <ul style="list-style-type: none"> <li>- Ones stop shop (virtual and in key regional hubs)</li> <li>- Accessibility (enable tailored outreach to vulnerable, low resilience groups, while supporting mainstream information delivery)</li> </ul> </li> <li>3. Rebates/Incentives                             <ul style="list-style-type: none"> <li>- seek targeted rebates &amp; incentives from all levels of govt and the private sector</li> <li>- Rolled out quickly</li> <li>- Working with retailers to encourage energy efficient appliance upgrades</li> </ul> </li> </ol>

	<ol style="list-style-type: none"> <li>4. Exemplar projects (Targeted locations to maximise regional impact)             <ul style="list-style-type: none"> <li>- Build awareness through community engagement in design selection process</li> <li>- Affordability as central as sustainability and resilience criteria</li> <li>- Showcase including through online displays and media outreach</li> </ul> </li> <li>5. "Super Cities"- framing as if were BIBG</li> </ol>
<b>Infrastructure</b>	<ol style="list-style-type: none"> <li>1. The Group recommends selection of three to five exemplar eco-resilient infrastructure projects based on assessment of demonstration potential from the list of Local Government infrastructure priorities as delivered to the Queensland Reconstruction Authority.</li> <li>2. Stream participants are eager to work with QRA and Local Government stakeholders to select these demonstration projects.</li> <li>3. The group recommends that selected demonstration projects be evaluated using the AGIC sustainability rating tool to support performance benchmarking and future innovation.</li> </ol>
<b>Commercial, Government and Public Buildings</b>	<ol style="list-style-type: none"> <li>1. The group recommends using a range of examples and exemplar projects to demonstrate to the community how non-residential buildings can be green, resilient and commercially viable.             <ul style="list-style-type: none"> <li>- Universities are leaders in green in many ways and provide natural opportunity for learning.</li> <li>- Use Parkhurst Primary School Hall project as an example of how to gain community support and acceptance for green building.</li> <li>- The Mission Beach Ferry Terminal will require a total rebuild. This is an opportunity to incorporate the best in resilient and green principles as well as a learning/info centre.</li> </ul> </li> <li>2. Help businesses and building owners to understand what an extreme disaster will look like and the potential impact on their asset and business.</li> <li>3. Create tools/templates/sources of information for building and business owners to help them develop their plans for disaster preparation, response and recovery.</li> </ol>
<b>Local Communities</b>	<ol style="list-style-type: none"> <li>1. Use deliberative and democratic engagement processes to establish approach taken for each Build It Back Green demonstration project that is initiated – maximise participation</li> <li>2. Support community sector to deliver community engagement on sustainability and community resilience themes at local levels right across flood and cyclone affected areas</li> <li>3. Encourage use of social media to empower community engagement</li> </ol>

<h2>Green Schools Stream</h2>	
<b>Participants</b>	Jeremy Mansfield, Lend Lease (leader) participants included Dept of Education and Training, Premier’s Design Council, Brisbane City Council, BVN Architects, EC3Global, Green Cross Australia, Thomson Adsett Studio 39, Greening Australia, Dept of Environment and Resource Management
<b>What does a successful outcome look like?</b>	<ul style="list-style-type: none"> <li>• Disaster resilient green school n. a school building or facility that is disaster prepared and creates a healthy and safe environment that is conducive to learning while saving energy, resources and money.</li> <li>• Green schools provide<sup>i</sup>:                         <ul style="list-style-type: none"> <li>○ A healthy and productive place to learn</li> <li>○ A healthy place to teach</li> <li>○ Lower operating costs</li> <li>○ Hands-on learning opportunities</li> <li>○ Reputation enhancement</li> </ul> </li> <li>• A point of resilience where a degree of normality for children can be attained while allowing the community to get on with disaster recovery and reconstruction.</li> <li>• Structural Resilience of Schools – Enables multi purposes use:                         <ul style="list-style-type: none"> <li>- Education</li> <li>- Disaster</li> <li>- Recovery</li> </ul> </li> <li>• Training ground for ‘Resilience’ (school/community)</li> <li>• Location specific community impact and needs must be accommodated</li> <li>• Scale- some affected more than others/adaptable solutions but also opportunity to engage all schools</li> <li>• Physical &amp; Curriculum outcomes</li> <li>• Economical- Must be a Value proposition</li> <li>• Institutional supports &amp; leadership-‘empower’ and Government (fed+state) +private business</li> <li>• Disaster Preparedness                         <ul style="list-style-type: none"> <li>- Plans</li> <li>- School Kits</li> <li>- Maintenance Issues focused on preparedness not just bldg maintenance</li> </ul> </li> <li>• Learn from others- ex: Japan</li> <li>• Focal Point for community recovery</li> </ul>

<p><b>What are the challenges?</b></p>	<ul style="list-style-type: none"> <li>• Funding-support</li> <li>• Bureaucracy</li> <li>• Core Business is Education and how to address with other priorities (eg. NAPLAN etc)</li> <li>• Uncertainty of disaster risks – what to prepare for?</li> <li>• Human Factors-Behaviour</li> <li>• Skills and understanding technology options</li> <li>• Product availability for innovative reconstruction ie Low VOC paints, roofing materials, internal wall cladding etc</li> <li>• Community awareness - to build connection and capacity</li> <li>• Dealing with existing building/infrastructure issues</li> <li>• Creating efficiency of BIBG framework and scaling up</li> <li>• Training teachers</li> <li>• Cultural differences for community gathering</li> <li>• Metrics (how will we measure) + what are the priorities?</li> <li>• Split agendas</li> <li>• Life cycle cost Vs initial capital cost</li> <li>• “Change” Burn out – lots of Education change and dealing with lots of issues</li> </ul>
<p><b>How can they be addressed?</b></p>	<ul style="list-style-type: none"> <li>• Deliver economic outcomes:- Lower energy bill &amp; Less disruption to school</li> <li>• Prototype &amp; Model school demonstration – Examples, such as Green Star school case studies, to look and see that relate to New Build and Retrofit</li> <li>• Improve indoor environment quality that supports academic achievement &amp; attendance</li> <li>• Embrace community uniqueness in adapting BIBG framework to local risks and community</li> <li>• Provide social outcomes that benefit the community</li> <li>• Development of training&amp; job skilling</li> <li>• Development of tools and assessment systems:             <ul style="list-style-type: none"> <li>- Establish how to adapt existing tools to address BIBG Principles</li> <li>- Risk assessment process for retrofit (ie. Where to target great risk / opportunity for return on investment)</li> <li>- Supplier base to support the work</li> <li>- Prioritisation of works needed from risk assessments prior to disaster</li> </ul> </li> <li>• Knowledge capture &amp; sharing portal</li> <li>• Empower community through engagement in school project initiatives</li> <li>• Seek industry support to disaster preparedness</li> <li>• Connected/ networking with the community             <ul style="list-style-type: none"> <li>- Education of kids to “be the change” and to influence family, community</li> </ul> </li> </ul>



<p><b>What are the group's priorities?</b></p>	<ol style="list-style-type: none"> <li>1. Develop a template model for an “eco-resilient” school: <ul style="list-style-type: none"> <li>• includes criteria that addresses sustainability and property resilience (use Green Star tools/ engage with GBCA to identify key elements for rebuilding/retrofitting, or other tools like EarthCheck + Disaster Risk Reduction &amp; Preparedness)</li> <li>• Empower local leaders for selected participating schools to help develop criteria to empower community</li> <li>• Investigate in consultation with DET to identify the appropriate schools to target as an Exemplar BIBG New School project</li> <li>• Partner with DET to engage with the design community &amp; also kids on design competition for a model new “green resilient school”</li> </ul> </li>   <li>2. Develop a template model for an “eco-resilient” retrofitting of schools: <ul style="list-style-type: none"> <li>• Initial trial of 20 schools out of the 90 impacted by recent disasters</li> <li>• Work with the DET to develop a matrix for how participating schools will be selected and approached for engagement</li> <li>• Include retrofitting criteria that addresses sustainability and property resilience (Green Star – but targeted for retrofitting initiatives + Disaster Risk Reduction &amp; Preparedness)</li> <li>• Also new “Health Check” criteria that addresses property resilience and evacuation aspects (especially targeting issues non visual damage but increase risks to future disasters)</li> <li>• Focus on disaster resilience awareness, training and education</li> <li>• Work with DET to create decision making framework that adapts to local needs and strategy to scale up to all schools in State and empower schools to take action.</li> </ul> </li>   <li>3. Encourage community capacity building – foster buy-in to the role of schools as a learning hub about resilience and sustainability <ul style="list-style-type: none"> <li>• build a knowledge portal that enables the school to connect with local business and community groups to identify opportunities, raise awareness &amp; education / interactive engagement</li> </ul> </li> </ol>
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<h2>Residential Stream</h2>	
<b>Participants</b>	Mara Bun, Green Cross Australia (leader), participants included Stockland, Suncorp Insurance, BlueScope Steel, Property Council of Australia, Queensland Council of Social Services, Good Sheppard, Habitat for Humanity, Brisbane City Council, Office of Clean Energy, Dept of Environment and Resource Management
<b>What does a successful outcome look like?</b>	<ul style="list-style-type: none"> <li>• Awareness of energy usage</li> <li>• Education ( where can save energy)</li> <li>• Low energy use- not necessarily drastic</li> <li>• Changing behaviours ( make as easy as possible)</li> <li>• Passive infrastructure ( nature of community)</li> <li>• No silver bullet( silver buckshot/ different elements)</li> <li>• Local resources, materials, skills</li> <li>• Consumers, business, government focused on same outcome- building to “green tape”</li> <li>• Codes: fast tracking/ green door</li> <li>• Insulation</li> <li>• Better efficient appliances</li> <li>• Resilient materials/ preparedness measures</li> <li>• Modular design- affordability</li> <li>• Preparation of systems- to be quickly rolled out- timing</li> <li>• Hierarchy of needs after event</li> <li>• Awareness of risks- management- each person profile</li> <li>• Retrofitting for resilience</li> </ul>
<b>What are the challenges?</b>	<ul style="list-style-type: none"> <li>• Building quickly and green</li> <li>• Approvals processes</li> <li>• Capacity (skilled professionals)</li> <li>• Access to funds- insurance gaps</li> <li>• Lack of information/knowledge- star ratings</li> <li>• Helping people to understand value of green</li> <li>• Planning system- flexibility in councils</li> <li>• Getting a price point- opens up to low income communities</li> <li>• Building material impact on health</li> </ul>
<b>How can they be addressed?</b>	<ul style="list-style-type: none"> <li>• Green Door policy which fast-tracks approvals for innovative eco-resilient recovery projects</li> <li>• Demonstration(certification system) of exemplar buildings:                             <ul style="list-style-type: none"> <li>- Monitoring good for learning</li> <li>- Education (Materials, products, design)</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>- Sample homes- Building resource centres</li> <li>• Rebates (e.g. Solar-scaling up- to developers)</li> <li>• Retrofit:             <ul style="list-style-type: none"> <li>- Exemplar</li> <li>- Reconsider options</li> <li>- Understanding</li> </ul> </li> <li>• Healthier buildings + people</li> <li>• Pest control (mosquitoes)</li> <li>• “Super cities”- frame as if BIBG</li> <li>• Waste usage-recycling after event</li> <li>• Incentivise</li> <li>• Lower premiums- when resilient</li> <li>• Push to envelope- Competition?</li> <li>• Making sustainability apolitical</li> <li>• Practioners - certification:</li> <li>• Usage of materials</li> <li>• Around sustainability</li> </ul>
<p><b>What are the group’s priorities?</b></p>	<ol style="list-style-type: none"> <li>1. “Green Door” Policy (approvals processes)             <ul style="list-style-type: none"> <li>- Craft as related to this recovery</li> <li>- Technology</li> </ul> </li> <li>2. Information provision (online/Building centre)             <ul style="list-style-type: none"> <li>- Ones stop shop (virtual and in key regional hubs)</li> <li>- Accessibility (enable tailored outreach to vulnerable, low resilience groups, while supporting mainstream information delivery)</li> </ul> </li> <li>3. Rebates/Incentives             <ul style="list-style-type: none"> <li>- seek targeted rebates &amp; incentives from all levels of govt and the private sector</li> <li>- Rolled out quickly</li> <li>- Working with retailers to encourage energy efficient appliance upgrades</li> </ul> </li> <li>4. Exemplar projects (Targeted locations to maximise regional impact)             <ul style="list-style-type: none"> <li>- Build awareness through community engagement in design selection process</li> <li>- Affordability as central as sustainability and resilience criteria</li> <li>- Showcase including through online displays and media outreach</li> </ul> </li> <li>5. “Super Cities”- framing as if were BIBG</li> </ol>

<h2>Infrastructure Stream</h2>	
<b>Participants</b>	Nicholas Apostolidis, GHD (leader), participants included Gold Coast City Council, AECOM, Queensland Reconstruction Authority, SEQ Catchments, Tenix, WWF Australia, Queensland Conservation Council, EC3 Global.
<b>What does a successful outcome look like?</b>	<ul style="list-style-type: none"> <li>• Planning for sustainability + future risks</li> <li>• Harmony with environment</li> <li>• Material reuse optimised</li> <li>• Minimise Impact</li> <li>• Building eco-resilience into systems/standards</li> <li>• Built and natural infrastructure in balance during operation</li> <li>• Business &amp; economic reliance</li> <li>• Showcase green infrastructure to reduce impacts that restore to greater resilience</li> <li>• Specific environmental values recognised</li> </ul>
<b>What are the challenges?</b>	<ul style="list-style-type: none"> <li>• Business as usual mindset – not seeing opportunities</li> <li>• Current regulatory framework</li> <li>• Speedy recovery</li> <li>• Cost</li> <li>• NDRRA framework for funding</li> <li>• Balancing performance of natural environment with engineering reports</li> <li>• Procurement requirements restrict green opps</li> <li>• Monitoring of procurement policy</li> <li>• Speedy recovery</li> <li>• Need support for timing of discussions</li> <li>• A clear government plan and community</li> </ul>
<b>How can they be addressed?</b>	<ul style="list-style-type: none"> <li>• Create a sense of urgency to get community attention - more open mindedness and more engagement with community – part of the solution. Eg: recent drought raised attention to the value of water.</li> <li>• BAU – can BAU deal with a similar disaster eg: increase wetland protection to enhance flood mitigation</li> <li>• Transparent Risk assessment review and rezone existing land use</li> <li>• Improve design of infrastructure eg: roads, power supply in cities</li> <li>• Smaller scale network to increase resilience</li> <li>• A clear vision for resilience and recovery</li> <li>• Pilot projects to show new way forward</li> <li>• Improve on ground communication</li> <li>• Community input into process</li> </ul>

	<ul style="list-style-type: none"> <li>• Need time and space to think</li> <li>• Processes needed to deal with issues eg: restoration (Mr Sylvia Road)</li> <li>• Incorporative disaster lessons learnt into recovery</li> <li>• Better information and education eg: demo projects</li> <li>• Produce guidelines for assessing ‘whole of life’ costs and ‘whole of catchments’ cost should be considered</li> <li>• Make externalities transparent</li> <li>• Government Incentive to built back Green</li> <li>• Early planning &amp; design can lead to reduce cost</li> <li>• To include environmental cost of decision making</li> <li>• Employment support: support Investment in new industries and local employment</li> </ul>
<p><b>What are the group’s priorities?</b></p>	<ol style="list-style-type: none"> <li>1. The Group recommends selection of three to five exemplar eco-resilient infrastructure projects based on assessment of demonstration potential from the list of Local Government infrastructure priorities as delivered to the Queensland Reconstruction Authority.</li> <li>2. Stream participants are eager to work with QRA and Local Government stakeholders to select these demonstration projects.</li> <li>3. The group recommends that selected demonstration projects be evaluated using the AGIC sustainability rating tool to support performance benchmarking and to drive innovation.</li> </ol>

## Commercial/Public/ Government Buildings Stream

<b>Participants</b>	Katy Dean, Green Building Council of Australia (leader), participants included Property Council of Australia, Brisbane City Council, Office of Clean Energy, DERM, AECOM
<b>What does a successful outcome look like?</b>	<ul style="list-style-type: none"> <li>• Procurement models supporting sustainability</li> <li>• Asset Leadership/owner preparedness – policies in place for preparedness, response and recovery following extreme events</li> <li>• Reduce embodied energy in rebuilding</li> <li>• Ensure holistic overview of policies – may require compromise/balance</li> <li>• Rebuilding with focus on green precincts</li> <li>• Incentives and support for BIBG projects</li> <li>• Green leasing arrangements</li> <li>• Green leadership in a green government and public buildings</li> <li>• Build a common understanding of what an extreme event can be</li> <li>• Build understanding of the business case, return on investment for green building, support informed decisions</li> </ul>
<b>What are the challenges?</b>	<ul style="list-style-type: none"> <li>• Lack of knowledge about where to start</li> <li>• Lack of understanding of potential impacts</li> <li>• Planning for disaster is not a high priority for many businesses</li> <li>• Locality – inequality between regional/urban areas and/or resilience needs are different</li> <li>• Hard to measure the benefits of preparing green/resilience</li> <li>• Is the priority being green or getting back to back to business as usual as soon as possible?</li> <li>• Competing interests in a market economy</li> <li>• Media</li> <li>• Political will</li> <li>• Understanding/prioritising between preparedness/response/recovery</li> <li>• Insurance cost – gap between replacement and green/resilience</li> <li>• The cost of building materials for BIBG/resilience</li> </ul>
<b>How can they be addressed?</b>	<ul style="list-style-type: none"> <li>• Public – private partnerships</li> <li>• Private-private collaboration</li> <li>• Enhance public realm outcomes to gain community enrichment</li> <li>• Demonstrate opportunities for more greening</li> <li>• Build public awareness of sustainable options</li> <li>• Education – show business where to start eg: templates for building owners</li> <li>• Development of green precincts</li> <li>• Integrate assets into the community</li> <li>• Incentivise sustainability options – make them the norm</li> </ul>

	<ul style="list-style-type: none"> <li>• Innovation in the way buildings are owned/managed/tenanted/used</li> <li>• Carbon targets</li> <li>• Leverage, catalyse, empower – tapping innovation potential of design professionals</li> <li>• Community engagement – managing expectations</li> <li>• Take a multi-layered approach</li> <li>• Empowering community resilience – how people can respond locally</li> <li>• Use social media networks to gather and broadcast information (manage issues of control and accuracy)</li> <li>• Use sustainability as a selling point</li> <li>• Maximise marketing/PR opportunities</li> <li>• Create awareness</li> <li>• Emphasis on greening schools reaches kids and parents and builds better understanding of green building principles and benefits.</li> <li>• Use case studies and tools that are already available such as Green Star and the Property Council of Australia’s <i>Existing Buildings Survival Strategy</i>.</li> <li>• Find a way to identify ‘what’s in it for me?’ for each target audience</li> <li>• Find ways to identify what communities are prepared to sacrifice/compromise to achieve the best outcomes. This influences design in vulnerable areas.</li> </ul>
<p><b>What are the group’s priorities?</b></p>	<ul style="list-style-type: none"> <li>• The group recommends using a range of examples and exemplar projects to demonstrate to the community how non-residential buildings can be green, resilient and commercially viable.             <ul style="list-style-type: none"> <li>- Universities are leaders in green in many ways and provide natural opportunity for learning.</li> <li>- Use Parkhurst Primary School Hall project as an example of how to gain community support and acceptance for green building.</li> <li>- The Mission Beach Ferry Terminal will require a total rebuild. This is an opportunity to incorporate the best in resilient and green principles as well as a learning/info centre.</li> </ul> </li> <li>• Help businesses and building owners to understand what an extreme disaster will look like and the potential impact on their asset and business.</li> <li>• Create tools/templates/sources of information for building and business owners to help them develop their plans for disaster preparation, response and recovery.</li> </ul>

<h2>Local Communities Stream</h2>	
<b>Participants</b>	Andrew Zuch, RPS Group (leader), participants included Bond University, Green Cross Australia, Premiers Design Council
<b>What does a successful outcome look like?</b>	<ul style="list-style-type: none"> <li>• Participation</li> <li>• Proactive</li> <li>• Respect</li> <li>• Passion</li> <li>• Happiness</li> <li>• Foresight</li> <li>• Engaged</li> <li>• Ownership</li> <li>• Responsible</li> <li>• Strong</li> <li>• Empowered</li> <li>• Agency (no barriers)</li> <li>• Communicate</li> <li>• Share knowledge</li> <li>• Innovation</li> <li>• Diverse</li> <li>• Embrace cultural differences</li> <li>• Trust</li> <li>• Localised approach</li> <li>• Integrated planning</li> <li>• Rise aware</li> <li>• Connected (infrastructure/community/biodiversity)</li> <li>• Celebrate</li> <li>• Work together</li> <li>• Adaptiveness</li> <li>• Creativity</li> <li>• Values</li> <li>• Sufficient</li> <li>• Coordination</li> <li>• Fearless</li> <li>• Endurance</li> <li>• Drive</li> </ul>
<b>What are the challenges?</b>	<ul style="list-style-type: none"> <li>• Time of response – too slow OR too fast</li> <li>• Over plan</li> <li>• Fear</li> <li>• Distribution networks - transport/fuel/food and information</li> <li>• Short term vs Long term</li> <li>• Cost</li> <li>• ROI</li> <li>• Policy</li> <li>• Disconnectedness</li> </ul>



	<ul style="list-style-type: none"> <li>• Local decision making</li> <li>• Not listening by governments, business and individuals</li> <li>• Access to reliable information</li> <li>• Information on risks and science</li> <li>• Small business/local community</li> <li>• Truthful leadership and trust</li> <li>• Military culture vs ESD</li> <li>• Short term help</li> <li>• Corporate greed</li> </ul>
<p><b>How can they be addressed?</b></p>	<ul style="list-style-type: none"> <li>• Intimacy – knowing neighbours/community better.</li> <li>• Connectivity</li> <li>• Harness existing</li> <li>• Storytelling</li> <li>• Changing development models</li> <li>• Positive response to adversity</li> <li>• Skill sharing</li> <li>• Reduce energy/oil</li> <li>• Reduce materialism</li> <li>• Increase self sufficiency</li> <li>• Social leveller</li> <li>• Green space</li> <li>• Community planning</li> <li>• Build resilience</li> <li>• Increase empowerment</li> <li>• Government/community/business engagement</li> <li>• Volunteers</li> <li>• Local food</li> <li>• Online community building (Facebook, Twitter etc)</li> <li>• Harness digital opportunities online</li> <li>• Local infrastructure eg: schools</li> <li>• Seize the moment – media/experience/conversation/memory</li> <li>• Learn from others stories/experiences</li> <li>• Ask ‘who do we want/need to become?’</li> <li>• Collective positive vision</li> <li>• Preparedness</li> <li>• Connection to nature</li> <li>• Understand environment</li> <li>• Local economy/global perspective</li> </ul>
<p><b>What are the group’s priorities?</b></p>	<ol style="list-style-type: none"> <li>1. Use deliberative and democratic engagement processes to establish approach taken for each Build It Back Green demonstration project that is initiated – maximise participation</li> <li>2. Support community sector to deliver community engagement on sustainability and community resilience themes at local levels right across flood and cyclone affected areas</li> <li>3. Encourage use of social media to empower community engagement</li> </ol>

<sup>i</sup> Green Building Council of Australia Green schools report, 2010, page 14.