

11 November 2011

Queensland Floods Commission of Inquiry Level 30 400 George Street Brisbane, QLD 4000

Attention:

Jane Moynihan Executive Director

Dear Jane

RE: Flood of Ideas Submission to the Queensland Floods Commission of Inquiry

Thank you for the opportunity to submit the flood of ideas project for consideration by the Queensland Floods Commission of Inquiry.

There have been over 225 public submissions published to the to website to date, covering a broad spectrum of community views. Since January 2011 the project has been supported by a number of public events and submissions have been vetted by a panel of experts.

As discussed earlier this week, the project is almost at the point of having a finalised shortlist of public submissions. Please find attached a summary of the process undertaken to date and a selection of finalist submissions demonstrating the range of ideas relevant to improving community flood resilience. Many of these submissions would benefit from further support and development in order to be realised.

We welcome the opportunity to submit a more comprehensive document confirming the shortlisted projects in the following weeks as discussed. Should you require anything further please don't hesitate to contact me.

Regards,



Damian Thompson Director Lat27

per Alan Hoban Water by Design, Healthy Waterways







Project Overview_

Background

In December 2010 and January 2011, many Queenslanders were confronted with disastrous flooding that damaged their homes, devastated their communities and tragically, lead to the loss of life. For many citizens this was their first experience of the ferocity of flooding in their communities. For others, this event was reminiscent of the Queensland floods of 1974. Following the 1974 floods, as a community we learnt a lot and initiated some important changes to better prepare us for future floods. Unfortunately, it would now appear that in the following thirty-six years we also lost a lot of the good thinking from that time.

Similar initiatives (such as Dutch flood design competitions) have fallen short in not having a deliberative, convergent phase to bring ideas and concepts together. This project workshop is part of that process.

Aims

The Flood of Ideas project aims to allow everyone to take part in a conversation that might help us be better prepared for future floods. Almost everyone we meet, who has been through the floods has an idea for how we can design a better flood response. We are asking the general public, as well as planners, engineers, urban designers, architects, scientists and artists to propose flood response ideas. These can be at the scale of the city down to the scale of a house. They can be infrastructure solutions or new policy ideas. We would like to draw on the wisdom of those who have long experience of living with disasters and call on fresh ideas from students and the young.

The project aims to provide a public forum to seek the best and the most creative ideas to respond to the threat of flood and natural disaster in our community.

Outcomes

This project aims to deliver the following outcomes:

- + An interactive website the documents all of the ideas and initiatives established throughout the course of the project
- + A publication that captures that idea content of the website in a format that can become an archive of the collective creativity and innovation of this unique period of time
- + A series of key policy recommendations that are developed as a result of the ideas process and delivered to the key representatives of federal, state and local government

Project Delivery Structure

The project is an initiative of **Water by Design** Healthy Waterways and will be delivered as a partnership between **Water by Design** Healthy Waterways and **The Edge** State Library of Queensland.

Project Staging

Stage 1- Planning

(1 February 2011 - 1 March 2011- 4 weeks)

- + Project feasibility and planning
- + Soliciting of 'seed ideas' through curatorial panel for 'skeleton' website
- Development of website architecture, visual branding and creation of 'skeleton' website

Stage 2- Website Launch

(1 March 2011 - 15 April 2011- 7 weeks)

+ Launch of 'skeleton' website featuring 'seed ideas'. This launch will be promoted through the mailing list networks of Healthy Waterways, The Edge and the Supporting Partners. The website will be available for general submissions from this point. Although open to the general public, it is anticipated that the site will be dominated by submissions from members of the Supporting Partners during this period.

Stage 3- Public Exhibition & Workshop

(15 April 2011 – 22 April 2011- 1 week)

- + Exhibition event at The State Library of Queensland, showcasing the existing ideas on the website and launching / promoting the project to a wider public audience. This event will be widely publicised through the media and will be free and open to the general public. A guest speaker will open the night and sponsored catering will be provided.
- + Ideas already published on the website will be mounted through the exhibition space and also shown across screens in the space. The intention of this stage is to launch the public profile of the project through media coverage of the launch event and the subsequent workshop. The aim in promoting the project at this stage to the general public, is to gather the best ideas as images, text or videos and give them the widest possible coverage through the interactive website to ensure that every idea, however inventive or unusual, is considered in the future idea development phase.
- + The following week will feature an industry workshop combining invited professionals from a diverse range of backgrounds focused on developing

ideas in distinct areas and scales. The aim of this workshop will be to use the ideas that have been previously gathered to fuel a creative multidisciplinary design workshop to see what synergies can be achieved if ideas are linked and the possibilities that might arise when ideas are looked at from multiple viewpoints.

 The outcomes of this workshop will be represented on the website. It is intended that the ideas from the workshop can receive a voice in the media in conjunction with the press received from the launch event. As a result, it is hoped that this stage will elevate the public profile of the project to further invite public and professional contribution to the website.

Stage 4 - Community Program

(22 April 2011 - 1 August 2011- 14 weeks)

Commencement of three distinct community-based initiatives lead by The Edge / State Library of Queensland. These initiatives will be:

- + Student and Youth Ideas Competition; a state-wide school-based competition gathering the best ideas of young people around the state for contribution to the site. The best students' ideas will be selected to be presented at the 'International River Symposium' in Brisbane in September 2011.
- + Journalism and Storytelling; a writing project that will connect with The Edge's 'Disaster Stories Project'. Citizen journalists will describe their experiences of the flood and reflect on what they could have done better to prepare for a disaster situation. Selected articles will be featured on the homepage of the Flood of Ideas website including both a written and audio component.
- Legacy Ideas; a research project run through the State Library of Queensland, where past ideas and knowledge in relation to preparing and mitigating the effects of flood are summarised for inclusion in the website. This research will cover the knowledge from the past floods of 1974 and 1893 as well as Indigenous knowledge of the traditional use of the land.

Meanwhile, the website will continue to operate and develop, compiling further ideas and encouraging debate and discussion on the presented ideas.

Stage 5- Idea Review and Recommendations

(1 July 2011- current)

Based on a review of the website and ideas by the editorial committee, a series of key areas or 'types' of ideas will be identified. An expert review panel reviewed the submissions in September of 2011 to determine the most applicable and inventive concepts.

The review panel included a number of respected leaders form the fields of planning, architecture, urban design, landscape architecture and communication:

- + Professor Catherin Bull
- + Nick Flutter, QUT
- + Jason Grant, inkahoots
- + Sarah Jones, Water by Design, Healthy Waterways
- + Jeremy Mansfield, Regional Sustainability Leader, Lend Lease
- + Kevin O'Brien, Kevin O'Brien Architects
- + Markus Rittenbruch, QUT Urban Informatics research lab
- + Chris Tanner, Bligh Tanner Consulting Engineers
- + Don Watson, Queensland Public Works
- + Ian Weir, QUT

Key messages from the recent Flood of Ideas review workshop in September can be summarised all of the ideas received through the website to date:

- + Importance of flood knowledge / awareness / education in the community
- + Emergency infrastructure that incorporates new technology
- + Forward planning / modelling and thinking for long term change
- + Reclaim the flood plain for non residential purposes
- + Equilibrium / tension between nature and the built environment
- + Rethinking house design using new technology
- + The best ideas are holistic and multi-dimensional i.e. they work 365 days of the year in the context of flood, drought, fire etc.

This work will then be framed as recommendations to form part of a submission to the Federal, State and Local Governments, coinciding with this submission to the Inquiry into the 2011 floods. During this stage the aim will be to promote these ideas to government, industry and professional groups to seek to influence future decision-making.

The documentation prepared by the focus groups as well as the documentation of the entire project will be finalised in a revised website and publication.

_Project Examples _____

A range of short-listed ideas submissions have been included as follows to represent the breadth and depth of concepts developed.

These submissions can be broadly charted across the following spectrums:

- + spatial application: Human/ Object scale through to catchment scale and beyond
- + flood response positions: ranging from scientific/ infrastructural through to cultural awareness agendas.

The Flood of Ideas team will be developing a more comprehensive document outlining the shortlisted submissions in the near future for further consideration.



This masterplan is a momentary snapshot into the development of an idea through a design process that remained centered around Resilience and Fluid Terrain. This masterplan is a small portion of a larger body of work that has been produced to explore and test ideas for the future of Brisbane City's river transport system. What you see in this project are direct and indirect design outcomes of a theoretical foundation made up from the fusion of resilience theory and chaos theory. This proposal looks to use the river as an opportunity for diversifying public transport through the addition of new terminals and the 'RiverRat' system. The RiverRat scheme is a public transport system that will act as a protected and reliable travel route for small scaled public and private water-craft. This masterplan has also looked at possible new typologies of river transport terminals by focusing on the spaces of two selected terminals within the system. These examples have shown that each terminal can be linked to its surrounding landscape which will create diverse and unique spaces that will help create a legible river transport system. This process of responding to the 2011 floods has taught me that there is an inescapable evolution that must happen for a species to survive within its environment. Knowing this I believe that design is our most important tool in testing out ideas for a successful future as creatures living within and around this fluid river system.



Establish the B.R.I.S.B.A.N.E. Fund, ie the Brisbane Regional Inundation Savings Bank and Natural Emergency Fund. The Fund would collect \$20 per person per year (increasing annually with CPI) from everyone in the Brisbane Region. This would raise \$50M in the 1st year increasing to \$80M by 2026. The accumulated real value over 25 years allowing for interest on deposits and inflation would be approximately \$2,500M in 2011\$ terms.The Fund would provide disaster relief to the South East Queensland community with a focus on supporting affected members of the community (i.e. residents and small businesses) against significant natural disasters, such as regional flooding, including:li>/li>/ul



In concluding his report for the Queensland Government of recommendations following the 1893 Brisbane flood, Colonel Pennycuick presented two key proposals. The first to create a 'regulating reservoir' at the junction of the Stanley and Brisbane rivers and the second, a range of modifications and improvements to the Brisbane river banks. He writes: "The only improvements to the river at Brisbane which I consider necessary are a widening of 300ft [approx. 90 metres] at Garden and Kangaroo Points [shown in blue], of 200ft [approx. 60 metres] at Kinellan [shown in green], and 150 ft [approx. 45 metres] at Norris and Bulimba Points [shown in red], and the making up of the banks as far as possible to 15ft [approx. 4.5 metres] above low water level from the lower end of Bulimba Reach to Kangaroo Point and that to 20ft at the Victoria Bridge."Pennycuick estimated that this remedial work would cost £100,000 pounds (approximately \$3.9 million in today's terms)



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Cloud Dwellers' design for the Grantham Flood House won second prize in a competition organised by the Future Housing Taskforce. Our house has been designed with two wings to make it adaptable for a variety of sites. The building fabric uses materials which are resistant to water damage, and are used in a way that is easy to clean and get dry. The building elements are either made with sandwich panels with a closed cell insulation core (so there is nowhere for water to get trapped), or with removable linings of screw-fixed fibro panels (to allow for cleaning and of cavities). Sloping ceilings are typically used to avoid ceiling cavities. The small area where lowered ceilings are used incorporates a drop down ladder, giving emergency roof access via gable hatches. These lowered ceilings allow for high storage of valuables, and are above the joists to create a flat surface for easy drainage. The house is elevated a level above the ground, with the ground floor containing a hose-out concrete store that can be utilised post-flood for valuables, and a screened entry enclosure that provides security while houses are kept open to dry out. More details at www.cloud-dwellers.com.au.



Knock down old low density areas on badly affected floodplains. Replace with self-funding high-rise residential towers scattered on floodplain and accessed by flood proof tunnels. Increase flood conveyance of the floodplain around the scattered residential towers.



Step 1: Start with an engineered solution to regular inundation. Step 2:Minimise stormwater runoff. Step 3: Transpose this concept onto your landscape, integrating the engineered solutions with urban design. In this example, a vibrant urban community in the heart of the city, where public space, high density living, retail and commercial opportunities are integrated with a landscape that responds to stormwater and inundation, so as to nearly welcome them. Inundation and its impacts on our built environment are kept to a minimum via a straightforward concept that, in its simplest form, can be transposed onto the landscape throughout the entire catchment. By allowing the river to break its banks in times of flood, it lowers peak flood heights and reduces water velocity. Further reduction in the severity of floods can be achieved through a whole of catchment uptake of WSUD principles that aims to reduce stormwater runoff, increase infiltration and reduce the quantity of sediments and pollutants entering the river in times of heavy rainfall.



Just like the UV and Fire Danger Index, when the Southern Oscillation Index (SOI) is above 20, East Coast QLD should be declared as having a 'high' flood danger and people should be warned to prepare.



The design here is based primarily around ideas of fluid terrain, flood resilience, the tidal nature and natural systems. Tidal influences relate to the reintroduction of the New Farm Creek so that any water levels above the standard high tide level will flood the lower walkway. This creates an outside influence that will affect and interact with users on a regular basis. By doing this it will ensure that flooding and even the small instances need to be taken seriously and are an integral part of living along the banks of the Brisbane River. The creek will also have sections of gabion structures and of natural flowing garden/ grassland to mimic and miniaturise the Brisbane River and the way it has been treated in terms of the modified riparian zone. The multi level network of paths along the entire river frontage from Sydney Street through to the Powerhouse relies on somewhat of an interaction based relationship, 'Separation and Reunion'. The user will have areas where they become directed away with very restricted views of the water to create a level of separation, and then at moments of interest or significant view shed the users will once again be reunited with the water's edge. By doing this it exchanges a static monotony of the concrete path at the waters edge for an interacting network that will invigorate user's minds more aptly to the water and its natural actions. The network also flows and replicates the tidal nature or the river. The upper network of the paths would still be accessible and usable during peak floods i.e. January 2011.

