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Issues presented to Ian Walker MP, Assistant Minister for Planning Reform, Community Cabinet 16th September 2012: Parramatta Park Primary School, Cairns.

Representatives of the Tropical Green Building Network: Emma Thirkell and Christine Doan with issues supplemented by the Far North Queensland Chapters of the Planning Institute of Australia, the Australian Institute of Architects, Building Designers Association of Queensland, Engineers Australia, Royal Institution of Chartered Surveyors, Urban Development Institute of Australia and the Housing Industry Association.

Tropical Green Building Expertise:

Tropical Green Building expertise has been gained by adapting or developing to meet the unique conditions of tropical environments and uses processes which are environmentally responsible and resource efficient throughout the building's life cycle in the tropics. The tropical green building sector is growing rapidly worldwide due to the scarcity of natural resources, rising costs of fossil fuel energy, rising material costs and climate change. The economic growth forecast for the tropical zone including India and South East Asia will lead to increased demand for innovative, climate resilient, energy efficient tropical green build solutions. Tropical North Queensland is establishing itself as a worldwide hub for tropical green building as one of the world's most developed tropical regions.

Tropical Green Building Network: Funding support

- The Tropical Green Building Network (TGBN) is a voluntary network that supports sustainable tropical building design, construction, planning, new technology, products and services through collaboration between individuals and organisations in the industry.
- GreenBuild.com.au is a tropical eco-building and living resource and co-operative online marketing platform for the suppliers of sustainable building technology, products and construction services in North Queensland. It is a privately owned business.
- We seek support to secure government funding to continue the work of the Tropical Green Building Network through the Department of State Development, Infrastructure and Planning in partnership with the Federal Government Clean Tech Sector our Local Authorities and GreenBuild.com.au.
- The issues that have been identified below and presented to you today are supported by the Network. We undertake many projects and carrying out events to support industry and educate the public of North Queensland about Sustainable Building practices.
- We seek a full-time position for a person whose primary function is to administrate and facilitate the Network. As a business cluster in the construction industry the development of activities that support the growth of our businesses is primary to our purpose.

Energy Efficiency: QDC and BCA, NCA, BERS.

- Naturally ventilated houses in the tropics may not achieve a high star rating. Energy star ratings are to help educate people and give houses increased value.

The thermal simulation software used in Queensland assumes air-conditioning use and passively designed homes that reduce reliance on air-conditioning for most of the year can be penalised because they are not air-tight and insulated to be efficient for the 4 weeks or so of extreme heat. For the rest of the year these house types comfortably operate without the need for air-conditioning but the simulation software does not reflect this. The star ratings may be very low for these house types that are part of our vernacular architecture and respond to climate by using lightweight materials with large openings facing northerly monsoon breezes.

COAG and the NCA are pushing for increased energy efficiency in housing stock in Australia, but the methods have some failings and may be counterproductive in tropical North Queensland for these housing types. Air-conditioning is a necessity for about 4 weeks of the year if the houses are well designed but the regulations are giving rewards for housing types that may need to rely on air-conditioning for longer periods because they are not, as a first priority, designed for natural cooling. Queensland Building Codes have a responsibility to protect our vernacular architecture and should resist any COAG directives and National Construction Code plans to use a star rating system based on the measures of design documentation and should consider phasing in the use of rating tools such as NABERS for residential and commercial buildings to underpin public education and values attached to sustainable building in Queensland.

- The QDC MP 4.1 Sustainable Building gives 'credits' for sustainable features like a fan on a verandah so it may still qualify for building approval if the overall design is having trouble reaching 6 stars. Energy star ratings are to help educate people and make houses have value... credits don't count in advertising. The features that increase housing sustainability should be debits, and increase the star rating, not credits to assist it meet the lowest base denominator. The credit system has confused industry and appear to be in place to counter-act the 'one-size fits all' energy efficiency performance requirements in the National Construction Codes. Building Codes Queensland should actively pursue the introduction of alternative rating tools that deliver public education and valuation outcomes that support the improvement of sustainable housing for Queensland's climate.
- The BERS Pro and associated software used for thermal simulation in North Queensland, Far North Queensland and the Atherton Tablelands requires an increase in the number of climate files used including wind speed data and recognition of 'system R values' for thermal reflective foil insulation where the system R value is validated by a credible laboratory i.e. CSIRO and BRANZ.
- Peer review is an alternative 'deemed to satisfy' provision to software ratings that may be under-utilised because it is costly and reveals intellectual property.
- Subdivision design that allows houses to be better orientated is found to be a major part of the solution and at this time very little involvement has been engaged at this level with property developers. Subdivision design that supports affordable sustainable housing requires incentives.

James Cook University: School of Tropical Architecture and Design:

- The Centre for Tropical Urban and Regional Planning and the Bachelor of Sustainability are offering successful courses for students. JCU also has an Engineering faculty. There is a failure though to offer tropical design and architecture as a course.
- The built environment that relies on tropical expertise is a major growth opportunity. Australia and Queensland are not harnessing the opportunity to underpin the delivery of expertise in this field with our Australian Standards and Building Codes. North Queensland is one of the most developed tropical regions in the world and expertise in the area of sustainable 'green' building is in demand. The skills of students and graduates may also supply local employment opportunities. The availability of courses and training may provide continuing professional development opportunities and contribute to retaining skilled professionals in the region.
- JCU has an opportunity to increase the services it provides for building material and design testing. JCU Townsville campus has the Cyclone Testing Station and the CSIRO are also on campus. New technology in cladding, building boards, engineered timbers

and proprietary systems, particularly those that rely on glues, caulking's and silicon's to name a few of many products are being introduced into tropical areas and climate resistance is questionable. Many of these products are 'green' and support a sustainable built environment and North Queensland would benefit from their use. Product manufacturers, distributors, engineers, certifiers and builders would benefit from comprehensive testing and data underpinned by Australian Standards. There is opportunity to export these products and services to other countries in the tropical zone. The insurance industry would also benefit.

Affordable Sustainable Housing Stock: Designated Noise Attenuation Corridors

- A 100m buffer either side of a state controlled road will deplete affordable housing opportunities, particularly in regional areas that are closer to other services.
- One size does not fit all. Each state controlled road is different. For instance, the Atherton Tablelands and a 'b-double' freight route at Kairi, Bruce Highway at Aloomba and Bruce Highway at Woree.
- The buffer is insulting: as it does not reflect the way noise travels (e.g. up or down hill)
- The agenda can be driven by materials suppliers of noise insulation products.
- It puts about \$110,000 on the new building costs of a 2 storey house.
- The value of many houses will decrease, as you cannot renovate without having to upgrade to meet the noise abatement regulations.
- It is replacing an obvious detrimental element with cost built in, with a hidden one. This is an additional cost.
- Common sense says that people make choices to live beside a noisy road because it is all they can afford and work to give them greater opportunity to re-locate if they can.
- If affordable housing is built to reduce energy and water costs and increase over wellbeing of the occupants, they have a greater chance of working towards better opportunities.

Affordable Sustainable Housing Stock : Fees and Charges

- 38-40% of new home construction costs are made up of taxes, fees and charges that the developer does not control. See HIA website: National Economics. There is a broad range of taxes on materials, including statutory charges for all levels of government.
- There is on-going uncertainty around costs for WH&S and uncertainty around testing of safety devices on hooks in roof etc.
- New regulation is adding to costs and the pace of change is difficult to keep up with. Specialists in the area are charging for additional reports and certification adding costs to the home because of the complexity and the indemnification needs.

Affordable Sustainable Housing Stock : Developers Contributions

- Developer contributions for up to \$30,000 for a triplex development at Holloways Beach; \$15,000 - \$20,000 per new lot/unit is blocking dual occupancy and 1 into 2 lot subdivisions.
- This is the bread and butter work for local designers, builders and planners. These small jobs keep communities employed in slow times and provide the housing mix that is sought in the Scheme and Regional plan – and as good social policy.
- The issue of contributions and how they are paid (up front or over time) is in need of a fresh start.
- The current approach does not work. A standard contribution amount is a short term solution which will see infrastructure (particularly open space, community infrastructure and drainage) underfunded over time.
- LGAQ, UDIA, PIA - have all done work on this. There are other models. Peruse new approach. This cannot be dropped as an issue.

Affordable Sustainable Housing Stock: Reward and support for Innovation

- Affordable sustainable housing is about adopting new technology, building materials and services that are allowing affordable houses to be self-sustainable.
- There is tropical expertise and businesses that are supplying services in our region that are contributing towards a householders ability to generate their own electricity, harvest their own water and manage their own waste disposal. Occupiers of these types of homes are generally growing their own food.
- The regulation surrounding energy, water and waste in North Queensland is world's best practice.
- Each time a household is self-sustainable they reduce their reliance on a public utility and the need for infrastructure to be developed.
- Currently growth is held back by Government's inability to deliver utilities and services because it can't afford the development and maintenance of adequate infrastructure.
- It's high time that these types of self-sustainable property developments are rewarded through incentives and real risk reduction strategies to bring them into 'normal' housing stock types. They need to be recognised as 'future proofing' and as a way to deliver growth in Queensland, in particular regional and North Queensland.

Waste reduction and re-use: construction and demolition materials

- The waste levy proposed by the previous government was particularly costly to regional and North Queensland business.
- There was no infrastructure or systems in place to help reduce the implications of the tax on business.
- Constructions and demolition waste makes up to 40% of landfill.
- Waste is a resource and new 'green' building technology is based on 'closed loop' manufacturing.
- There are industry stakeholders in North Queensland who are prepared to invest into C&D waste sorting yards and machinery like concrete crushers
- They are looking to reduce risk and need assistance to compile the business case for investment through public-private partnerships with government.
- A supply, demand and strategy study needs to be undertaken to identify waste types their markets, the collection, transport and sales strategies.
- In regional Queensland, particularly North Queensland, the strategy development requires collaboration across local and state areas and with companies like SITA (that already carry out this activity in larger metropolitan areas and have markets identified) through to local organisations like LAWMAC and the industry stakeholders like the demolition operators and recycling yards willing to expand their businesses and take on the risk of investing capital.
- The cost of landfill and the benefits of waste reduction studies are available through most of our local governments.

Heritage Buildings: Usefulness underpins value

- Our heritage buildings are expensive to maintain and in the regional areas, decisions to maintain them are under-pinned by return on investment decisions.
- The costs to maintain or make useful is often more expensive than building new.
- Government regulation is a cost burden that these building owners cannot afford.
- A special pathway for heritage buildings that reduces the cost burden and gives incentives for their maintenance is needed.

Resources Boom: Impact on availability of skilled trade

- Cannot get local trained individuals, they have generally moved to the mining areas.
- There will be a shortage of trades when the thing picks up.
- To maintain affordable housing a faster and more efficient delivery skills training in the construction sector is vital in North Queensland. Skilled migration in this area should be considered to allow the sector to take control of 'boom, bust' and construction costs. Skilled migration from areas such as Sri Lanka are a good fit for tropical North Queensland.

Resources Boom: Buy local

- Much of the FNQ resources are minerals not coal, and the mines are closing. The existing towns are suffering not so much from the population change or FIFO but from the purchasing policies which do not allow for local buy.
Example: Cloncurry can support an abattoir and export slaughtered beef, if the local mine would support the local butchers. At this time, the mine flies its beef in, along with the people. So the Cloncurry cattle is trucked out 'live' and flown back butchered.

Sustainable Industries: Aquaculture

- We understand that the Queensland Government may not have delivered a permit for fish farming and aquaculture for over 10 years.
- Barriers have included planning regulation.
- Human health relies on the consumption of fish oils.
- Australia is a net importer of fish although we have the capacity in Queensland to supply our own demand.
- The fish that is affordable to buy for the majority of Queenslanders is imported from countries where aquaculture practices do cause environmental harm.
- We use world's best practice in our fishing industry.
- North Queensland and in particular, Far North Queensland and regional communities would be more sustainable if the barriers to carry out aquaculture were brought into balance.

Understanding climate change impact: A Whole of Process Cost

- The Cassowary Coast Regional Council recently built a new waste treatment plant although it added an additional \$180,000 to its operating electricity costs.
- Triple bottom line development is a whole of process cost and based on 'life-cycle assessment' cost benefit analysis. Green building technology is delivering greater benefits for the on-going maintenance and costs.

Understanding climate change impact: A Gradual Uptake

- Climate change is well understood in our region, and we are aware of how exposed we are. The impacts need to be addressed, however the timeframes – particularly in the coastal plan, are not realistic. We do not want to see the baby thrown out with the bathwater. However, the process does take time and should be introduced incrementally with each new scheme, etc. There should be recognition that this is occurring anyway, through local policy and local understanding.
- The cost in time and money, and priority - of addressing climate change are not realistic for small councils.
- Cost and availability of reliable data is a genuine issue. It is not realistic for this to be provided across the entire state in a 2-4 year timeframe. Recognise the improvements that have been made and allow for gradual approach.
- **A Solution:** Steps – priority areas, lower priority areas, areas where data is available, and incrementally with each new scheme and regional plan.

Understanding climate change impact: The Coastal Plan

- The cost of raising houses 5m above HAT for a 1 in 100yr flood requires an understanding on a local level of local issues. Guidance rather than regulation is a preference. 'One size fits all' will not work.

Understanding climate change impact: GBRMPA Strategic Assessment

In 2009, ports and shipping were not on the GBRMPA horizon as threats to the Reef in the State of the Reef Report. The pace of change in the mining and ports industry has been rapid. The GBRMPA is now looking more at land use impacts on the reef.

The GBRMPA strategic assessment will look at current policy and planning arrangements for a range of uses and their impacts, including:

- the full range of activities in the Marine Park including tourism, fishing, ports and shipping, defence, research, recreation and use by Traditional Owners,
- impacts of development within the coastal zone, including urban, industrial, port, marina and aquaculture activities (10m AHD or 5km in land whichever is further – this is the majority of the urban centres for Cardwell to Cooktown)
- water quality policies and controls
- island national parks and protected areas.

Comments on the draft terms of reference were required by 13 April 2012:

- The implications of the TOR are only just being understood by industry professionals, and there is a need to revisit the TOR.
- This essentially precluded the new state and local governments from providing comments.
- The fact that the Strategic Assessment includes a regulatory impact statement, was not clear in the initial consultation, and this does impact on the scale of the policy reach and implications for government.

The implications in terms of managing development, carbon offsets and sustainability will fall to the small coastal communities. The Strategic Assessment recognises the value of the GBR to Australia and the world. It is appropriate to use this process to address Biodiversity funding at a national level as well as reducing current legislation duplication/ overlap including:

- Sustainable Planning Act
- Far North Queensland (FNQ) Regional Plan 2009–2031
- Mackay, Isaac and Whitsunday Regional Plan 2012
- Coastal plan
- SPP 4/11: Protecting Wetlands of High Ecological Significance in Great Barrier Reef Catchments
- SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils
- SPP 4/10: Healthy Waters
- Planning Schemes

Example: Cassowary Coast Regional Council sewerage treatment plant. At \$35 million, Innisfail's new *sewage* treatment plant prevents harmful nutrients reaching the Great Barrier Reef. It will create about three times the amount of liquid sludge than its predecessor, bumping up rates. Council staff estimate the operating costs could more than double. (3000 Tonnes p/a \$180,000) The electricity cost outweighs the other environmental benefits. This example is symptomatic of many issues in this field.

Solutions

The PIA suggests that the Strategic Assessment would benefit from:

1. Revisiting the TOR, including key industry working groups to explain the approach and define an agreed approach
2. Revisiting the proposed timeframes (currently propose draft for consultation by Feb 2013 and adoption by June 2013. This document represents a new approach, it is across all levels of government and has local to international implications. Take the time to do it well, including the legislative review.
3. Partnering with LG and State to second planners to the project. We have excellent knowledge and experience in the State. It should be utilised in this project.
4. Cairns Institute – has a specific focus on these same areas: Sustainability, Coastal impacts, legislation. They should be heavily involved.

TNQ MATTERS FOR PLANNING REFORM 2012

Regional Plan –where is it at?

- Urban footprint – ability to subdivide, having regard to population growth. Check that the urban footprint right for local population and expectation.

Planning processes in general:

What are we as a planning profession doing well? Are we:

- Widening planner's views
- Trusting alternative solutions
- Learning about different views
- Giving tools, pathways, incentives to developers for sustainable development
- Opening 'Green' doors – take away cost of compliance; reduce risk of championing new approaches.
- The culture – risk avoidance rather than risk management
- Giving a choice of criteria, go with the tick box, meet timeframes and not criticised.
- Good management and leadership to encourage people to make decisions.
- Risk adverse nature of the public institution
- further you are from the top – the less the message gets down to the grass roots

Where are we struggling?

- Giving weight to new policy
- Applying common sense to local matters and triggers
- Encouraging people to make good decisions not consistent decisions.
- Outcome takes a long time to get a change.