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ENGAGEMENT AND PARTNERSHIPS – A KEY TO MANAGING THE FUTURE IN SENSITIVE COASTAL PLACES

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INTRODUCTION

Sandwiched between the largest concentration of nesting marine turtles on the eastern Australian mainland, and the pressures of growing urban development and intensive sugarcane farming, is the site of a challenging engagement project between QUT Landscape Architecture and Environmental Engineering staff, senior students and the Burnett Shire Council. The 312ha project site, containing ephemeral wetlands, is known as the Pasturage Reserve at Bargara. It is the only bio-filter and meeting point between intensive farming runoff, urban stormwater, and the Mon Repos Conservation Park, home of the sensitive Loggerhead Turtles. This site is representative of many coastal places in Queensland.

The project engages with partners whose priorities are managing the complex challenges of rapid urban development, sustainable industries, expanding tourism, and a sensitive coastal environment. Planning, design and management of these areas need to be addressed in an integrated manner, and QUT is in a unique position to be able to offer a new partnership approach. This capacity results from a strong history of design-based community engagement projects in diverse real world contexts (Thomas 2006). This project builds on previous successful engagements in the region, including the QUT Landscape Architecture '*Poona Futures*' project. In this Bargara project, the QUT group engaged with the community and council, and ultimately delivered 12 Strategic Plans, 2 Environmental Management Plans, and 30 Detailed Design proposals envisioning sustainable futures for the Pasturage Reserve.

The engagement process is organised in accordance with Armstrong's notion of 'creative associations' (1999), encouraging the building of partnerships between universities and communities. This requires recognition of the ways in which communities can use their cultural capital and different forms of knowledge (theoretical, formal, informal, practical, local, tacit) to accommodate change (Thomas 2006). Universities are at the forefront of the generation of new knowledge, and are uniquely placed to engage with communities to enhance their natural, cultural, economic and social opportunities. The university in turn benefits from the opportunity to expand learning and knowledge generation to incorporate the complexities of a 'real world' situation. This 'mutual exchange' can produce 'wide ranging and unexpected benefits for all parties' (Commonwealth of Australia, 2003). The novelty of this project's approach is the capacity for the student projects to offer communities a wide diversity of possible futures, a choice that is not available through conventional external consultancy processes.

The final product of this project, exhibited in Bargara in June 2007, was a great success. Detailed and sophisticated solutions were exhibited to many of the problems facing Queensland's sensitive coastal places today. This supports the major conclusion of this paper that innovative partnerships between tertiary, government and community sectors can provide a key to managing the delicate balance of coastal development and conservation.

BACKGROUND

Public consultation in 2001 identified the Pasturage Reserve as providing opportunities for public access to environmental and cultural features of interest existing or to be developed within the Reserve (Burnett Shire, 2003). The site is in high demand to provide passive environmental recreation in the fast-developing urban and tourism centre of Bargara.

It has high conservation values, representing one of the few remaining *Melaleuca* Swamp Forest stands in coastal parts of Burnett Shire. The 2003 Management Plan identified the redevelopment of a wetland system in the Pasturage Reserve as beneficial, having a positive affect on biodiversity and the beauty of the area. Wetlands are often seen as hindrances to human progress, fit only to be drained, filled or used as rubbish dumps. As a result, more than half of Australia's wetlands have disappeared since the time of the first European settlement (Claridge, 1994). Fortunately this view is changing, with governments and communities alike starting to recognise their benefits. In addition to supporting and nourishing extensive biological communities, wetlands have the ability to remove or reduce nutrients and pollutants contained in water entering the hydrological system.

The broad project brief given to the final year Landscape Architecture and Environmental Engineering students was to prepare a range of strategic planning/management options for the long term development of access to and interpretation of the natural and cultural resource values of the Pasturage Reserve, Bargara. Following this each student refined their design to a higher degree of detail for the guidance of the Burnett Shire Council and the local community in seeking opportunities for implementation. The broad issues to be addressed in the project included but were not limited to:

- conflicts between residential land use, industry, agriculture and environmental management of the area's natural resources;
- environmental impacts on local aquifers, wetlands and estuarine systems, foreshore, native bushland ecologies and existing community values; and
- protection or rehabilitation of the Reserve and cultural and environmental values of the surrounding area.

The students identified the interrelationship between the Pasturage Reserve and surroundings as representative of the multiple issues currently facing much of Queensland's coastline. Their recognition of such places as complex meshes of natural, cultural, economic and social systems and values, has directly informed the exciting work produced.

METHODS

The methods of project engagement were twofold: facilitating engagement between the tertiary, government and local community sectors, and structuring the design educational process to best respond to the complex conditions of this sensitive coastal place.

Structure of the Engagement Process

The engagement process occurred through the obtaining of an exemplary project for students to undertake as part of their education, with a 'real' client drawn from the public and community sectors. QUT staff acted as project managers, and as the initial conduits between client groups and students, as well as facilitating the educational experience.

An initial visit was made to Bargara in March 2007 by the QUT staff and 37 students. A briefing session was held with representatives of Burnett Shire Council, Landcare, and the Burnett-Mary Regional Group to discuss project issues, and to initiate and foster the ongoing engagement process. Two days were spent walking the Reserve, recording and analysing its form and character, and that of the surrounding context including Mon Repos and the Great Sandy Marine Park. Evenings were spent socialising, chatting with locals about their ideas and feelings regarding the Pasturage Reserve to gain a better understanding of community values. This visit enabled the QUT group to gain a sense of the complexity and sensitivity of this coastal place. Over the following weeks, students maintained ongoing relationships with community representatives and local government and

initiated fruitful relationships with local Indigenous and Australian South Sea Islander representatives.

For 7 weeks, the students worked in groups to produce 12 Strategic Plans for the future of the Pasturage Reserve at Bargara. These plans were presented to, and discussed with, representatives of Burnett Shire Council and Landcare in late April. For a further 6 weeks Landscape Architecture students work individually to prepare Detailed Designs of selected areas from their Strategic Plans, while the Environmental Engineering students worked in pairs to devise Environmental Management Plans for Biodiversity and Water Management. A final exhibition of this work, entitled 'Future Visions for the Pasturage Reserve' was held in Bargara in early June, with the community invited to view and discuss the work with the students. The exhibition was publicised via a letter drop and radio advertisements, keeping the Pasturage Reserve high on the community agenda. A digital set of all work was provided to the Burnett Shire Council, to be used to spark discussion and catalyse action locally. The views of the Bargara community were surveyed regarding the potential of the exhibited work, and the perceived value of the engagement process.

The Engaged Design Studio: Toward Future Visions for Sensitive Coastal Places

Landscape Architects and Environmental Engineers operate within the highly complex and globalising contemporary environment, responding to the needs of sensitive changing landscapes. In this design studio, students were expected to strive to achieve the best balance possible amongst, but not limited to, ecological health, enhancement of cultural heritage, manifestation of cultural values (particularly acknowledgement of the place of traditional owners of land), the sustainability of urban development, local economic health, and the promotion of local distinctiveness.

The studios were built on a twofold academic platform: intellectually, upon recent theory in 'Ecological Design' and 'Landscape Urbanism'; and upon technical knowledge regarding environmental design and management. The students were required to operate at a sophisticated level, integrating theoretical frameworks developed from the former, with appropriately applied knowledge from the latter as essential ingredients in the planning, design and management of sensitive coastal places.

A new, core theoretical framework utilised in this studio was that of Landscape Urbanism, a multidisciplinary approach to design and planning wherein landscape is recognised as the structuring element of urban settlements: built forms and human activities are *part* of the total landscape. This approach responds to the complexity of the rural-urban-coastal interface through the exploration of design as a catalytic agent, initiating processes 'capable of hybridising and spreading. Landscape projects are both part of a very much bigger whole and a key component of that whole capable of transforming it' (Doherty 2005).

A cross-disciplinary studio approach was taken to address the complexity of the Pasturage Reserve, encouraging more lateral design thinking to evolve. Burry, Maher, Burry and Taylor (2003) write of the cross-disciplinary design studio as 'not a search for a single common language or knowledge domain but an opportunity to engender new overlapping or transcendent domains and shared languages.' The studio did not try to impose a single design approach, but to engender conversation between Landscape Architecture and Environmental Engineering students, leading to exploration and collaboration.

RESULTS AND DISCUSSION

Results of the Engagement Process

The 'Future Visions for the Pasturage Reserve' exhibition was a success, with approximately 150 community members ranging from local residents to government representatives attending and discussing the students' proposals. At the end of the day, Burnett Shire Council was left with a large number of planning, management and design proposals that could be translated into eventual plans. Feedback from the council, Landcare and the local community was very positive. One member of the community suggested this as a 'fantastic opportunity for council to tap into some informed ideas put forward by educated professionals who have no political agenda to push.'

Burnett Shire Council Manager of Environmental Health Geordie Lascelles enthused: 'While I was initially blown away by the quality and professionalism of the (project) presentations - it is the unique workable ideas that have stayed in my memory and offer real value to our community.' Mr. Lascelles is encouraging of further such projects, stating: 'The variety of ideas and concepts could not have been realised by traditional methods of consulting with an individual landscape architect or firm.' Maureen Schmitt, of Bundaberg Landcare and a member of the Pasturage Reserve Steering Committee, was 'greatly impressed by the professionalism of the students and the depth of their knowledge on so many aspects of the project.' These aspects included not only environmental aspects but also 'social, cultural and economic.'

Survey feedback from the local community (response rate 33%) was predominately positive. The majority identified the Pasturage Reserve as a precious piece of land and praised the students for keeping it in a natural state, while giving the community opportunities to enjoy it. Many appreciated proposals providing connections to Nielson's Park and Mon Repos, the education precincts, and to interaction with nature through walking tracks, bird hides, viewing points and boardwalks. Some were concerned about the blurring edge of urban development with the Pasturage Reserve and suggested more community consultation was necessary. Two respondents wanted the site left untouched.

Public comments such as 'The plans incorporate historical aspects and ensure the conservation of flora and fauna,' and 'very creative and innovative design with melding of the history and other pertinent aspects of the area,' highlighted that the students had successfully incorporated natural, cultural and social systems and values into their proposals. Many visitors would have liked to view the exhibition over a longer time period as there was a lot of information to absorb.

Design Results: Future Visions for Sensitive Coastal Places

Adopting Landscape Urbanist design processes, the students have developed future visions for 'the dynamic cultivation of new ecologies ... of program and human activity; of financing, stewardship and adaptive management; of environmental technology, renewable energy and education; and of new forms of interaction among people, nature, technology and the passage of time' (Field Operations 2006). These projects draw equally on design theory, environmental design technology, and importantly, on community knowledge and experience.

Learmonth, Tanner and Warwick (2007) collaborated on a Strategic Plan for the 'cultivation of new ecologies'. They felt that the Pasturage Reserve is neither 'urban' nor 'natural,' instead describing it metaphorically as a 'cultivated field'. The term 'field' refers directly to the use of The Pasturage Reserve for grazing; it also implies a place for social and ecological activity, merging these binary distinctions (Weller, 2005). These included the 'ur-

ban', 'recreation' and 'community' fields addressed in Warwick's Detailed Design of the Pasturage Reserve and Bargara foreshore interface. Warwick addressed the thorny issue of inevitable coastal urban development, proposing a sensitive model which enhances the cultural, recreational and environmental values of the Pasturage Reserve, and greater Bargara (Warwick 2007).

Stewart and Nastrom's Strategic Plan placed a strong focus on 'financing, stewardship and adaptive management,' with a sophisticated 'Finance and Stewardship System' for the Pasturage Reserve. This system encompasses cost minimisation strategies, stakeholder relationships, public-private partnerships, land stewardship, futures development, revenue raising, local economic development, and tourism development and management (Stewart and Nastrom, 2007). This system guides outcomes to balance economic, ecological, and cultural concerns in a pragmatic, yet catalytic manner, setting up frameworks to spark action and growth.

Brand and Stickland (2007) prepared an Environmental Management Plan (EMP) for the construction and operation phases of their Strategic Plan, focusing on protecting and improving water quality in the surrounding waterways. The major environmental benefits from the student EMPs are seen as: improved wetland biodiversity and habitat quality and; increased hydrological and water quality function within this coastal wetland adjoining a coastal area of high conservation value. Environmental performance was a central aspect of this project. The preparation of this EMP and associated Environmental Policy form an integral part of a commitment to minimising and mitigating the environmental impacts of design activities deriving from their Strategic Plan.

An outstanding Strategic Plan by Zhang, Lemberg and Jensen (2007) addressed the potentials for 'program and human activity ... renewable energy and education.' The Plan is entitled *Metanoia*, meaning to make a change as the result of reflection on values and meaning. *Metanoia* is a three-phased plan spanning a twenty-five year time period. Through the phases of "flow", "flux", and "flex", the students presented a vision for the future of the Pasturage Reserve as a research and conservation hub, showcasing Queensland coastal issues with a focus on wetland function, turtle habitat and coral reef conservation.

CONCLUSION

This project has embraced the changes and complexities inherent to sites such as the Pasturage Reserve, at the juncture of the urban, the rural, cultural values, and sites of environmental sensitivity. The range of high quality Plans and Designs produced by QUT senior Landscape Architecture and Environmental Engineering students offer Burnett Shire Council and the Bargara community a variety of future visions that can be openly debated before commitment. Planning and design work of this scope is not available through conventional external consultancies, and QUT is in the unique position of being able to facilitate such mutually beneficial partnerships. Drawing on processes of community engagement coupled with the framework of the design studio, this project provides an exemplary model for making a substantial and valuable contribution to the management of future development and conservation in Queensland's sensitive coastal places.

TAKE-HOME-MESSAGE

Innovative partnerships between tertiary, government and community sectors can achieve important outcomes for the delicate balance of coastal development and conservation. Such engagements offer a valuable key to managing future development and conservation in Queensland's sensitive coastal places.

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