

**3 March 2011**

# **COMMISSION OF INQUIRY**

**SUBMISSION TO QUEENSLAND FLOODS  
COMMISSION OF INQUIRY**

**OCEAN PARK CONSULTING**

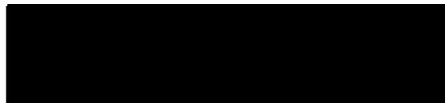
# COMMISSION OF INQUIRY

## SUBMISSION TO QUEENSLAND FLOODS COMMISSION OF INQUIRY

Prepared By:

**Ocean Park Consulting Pty Limited**

Delivery Management • Approvals Engineering • Environmental Planning  
Integrated Infrastructure Planning

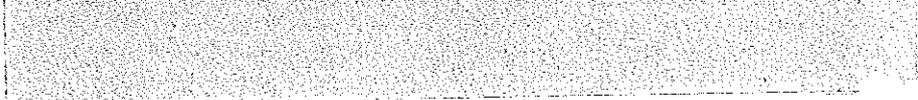
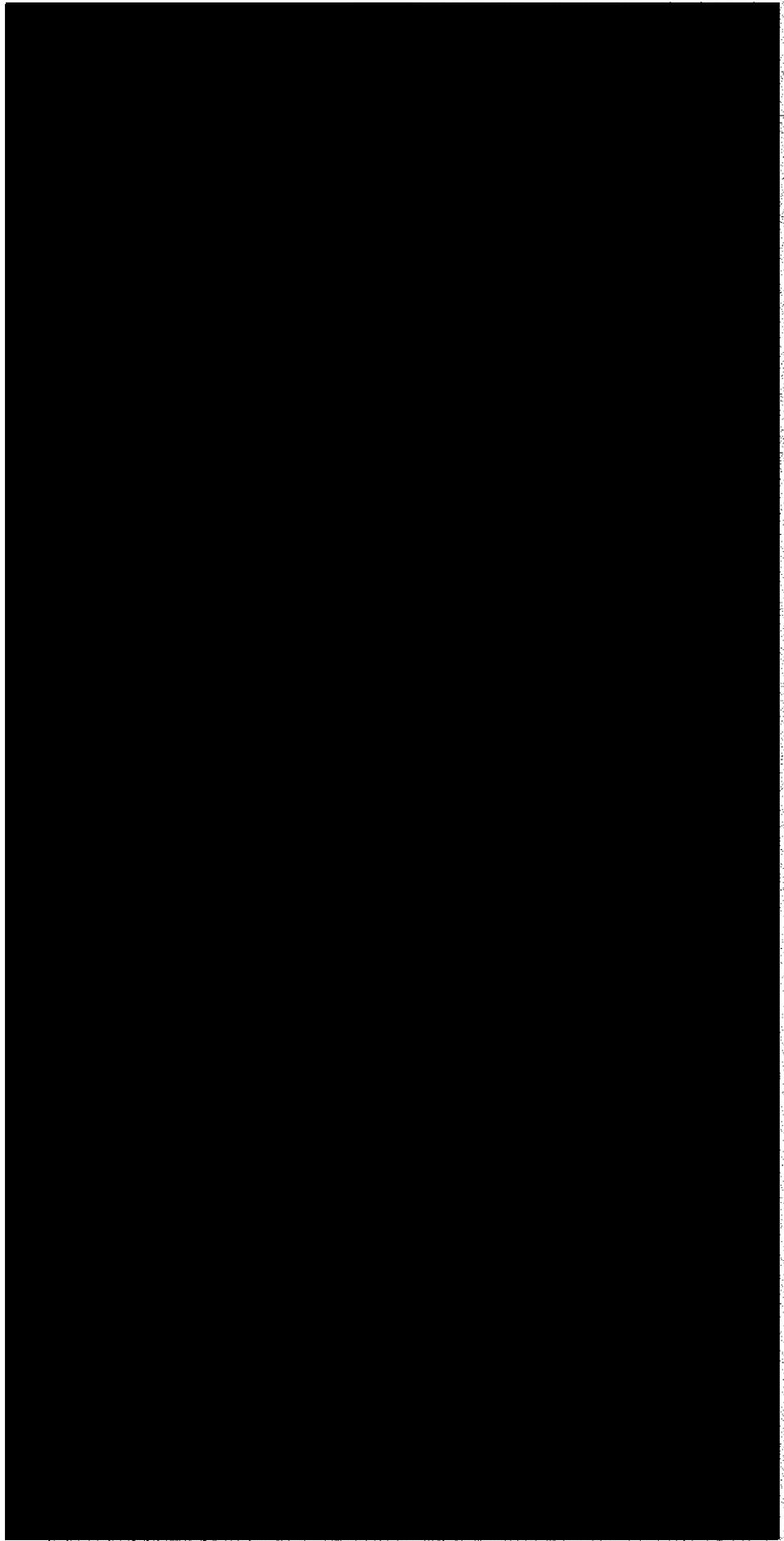


Report No.

050



3 MARCH 2011



## 1.0 PURPOSE

The purpose of this submission to the Queensland Floods Commission of Inquiry is to provide suggested implementation approaches to improve flood management planning and safety within the community.

This submission is in response to the "Call for Submissions – Queensland Floods" as advertised in The Australian newspaper on the 12 February 2011.

### Submission Structure

The submission is structured to identify and briefly describe key issues and provide recommended implementation strategies on each key element relating to planning for and management associated with natural hazards (primarily flooding). The key outcomes are:

- A National Education Program for Schools and Tertiary Institutions;
  - To be implemented including compulsory curriculum program – to provide a "community awareness and safety cadetship";
- Raising community and property owner awareness;
  - Implemented through notations to be placed on all property "rate notice", property searches implemented and also through additional disclosure on property sales contracts;
- Urban Design and Land Use Planning and emergency planning;
  - Implemented through adoption of interim sensitivity or risk analysis of flood events based on the principles contained in the recent Queensland Government Reports and Studies - such as the joint project of the Department of Environment and Resource Management, the Department of Infrastructure Planning and the Local Government Association of Queensland, "Increasing Queensland's Resilience to Inland Flooding in a Changeling Climate:- Final Report on Inland Flooding Study"

## 2.0 PEOPLE LOST THEIR LIVES

This submission is made recognising the tragic loss of life during the weather events and flood period December 2010 and January 2011 in Queensland and other parts of Australia. This submission is provided to the memory of those people who lost their lives and to their families and friends.

The submission recognises the many people who have suffered loss and damage directly to homes and business.

This submission also recognises the very brave actions by those in the community, and of the many professional and volunteer service organisations personnel who risked their own lives to save others from flood waters.

In relation to the recovery program through this submission there is a recognition of the many volunteers who have and continue to donate funds, equipment, food, clothing and their own time to help others in the community to clean, restore and support the adversely influenced residences, businesses, schools, streets or parks.

This submission is made with recommendations for improved planning, management of and achievement of a safer environment for communities.

### 3.0 SUBMITTER DETAILS AND ASSUMPTIONS

#### 3.1 Submitter Details

This submission is made by Rangi Campbell Director of Ocean Park Consulting Pty Limited. Refer to the details provided below.

The formal letter cover page for the submission to the Queensland Floods Commission of Inquiry forms part of this submission document.

SUBMITTER	ORGANISATION	ADDRESS
Rangi Campbell Director	Ocean Park Consulting Pty Limited	

#### Rangi Campbell – Profile

Rangi Campbell BE, MBA, MIE Aust., CPEng, RPEQ, JP Com Dec.

Rangi has broad and diverse experience in civil engineering, urban planning, infrastructure planning and environmental planning. His experience enables him to prepare, lead, and manage and coordinate Environmental Assessments, Environmental Impact Statements, Environmental Management Plans, Strategic Town Plans, Local Area Plans, Delivery Management and Strategic and Operational Infrastructure Delivery Plans.

Rangi has extensive experience and has provided professional services to the public and private sectors, in statutory and regulatory matters associated with sustainable urban development and urban control, catchment management and infrastructure management. Rangi's experience enables him to prepare and coordinate integrated assessments for approvals processes with Statutory Authorities.

Rangi is an experienced practitioner in project delivery, environmental sustainability assessments, development of Site Based Management Plans, integrated water quality and quantity management, and Crime Prevention Through Environmental Design (CPTED) assessment and reporting.

Rangi has 35 years extensive experience in a broad range of city, urban development and infrastructure projects within the Gold Coast and regions of South East Queensland, New South Wales, Northern Territory, Canberra, Townsville, Fiji, Malaysia, and Vietnam.

On a personal level Rangi has lived in New South Wales and experience flooding of the Clarence River and many other rivers throughout the north and mid north coast of New South Wales.

#### Ocean Park Consulting Pty Limited – Profile

Ocean Park Consulting Pty Limited provides to government agencies and private enterprise organisations delivery management, approvals engineering, environmental planning and integrated infrastructure planning services.

Ocean Park Consulting was formed on the basis of enabling a collegiate of specialist people to work in an environment focused on the project or infrastructure development outcome objectives.

Ocean Park Consulting extensive professional experience in major land development and infrastructure projects facilitates early recognition of potential project constraints and opportunities

and allows for development of effective management strategies to ensure positive project outcomes, to strive to achieve a balance between the needs of the natural environment and the human environment.

### 3.2 Submission Assumptions, References and Limitations

For the purpose of this submission it is recognised flooding events can vary depending on many factors. Flooding can be influenced by; weather conditions – rainfall intensity and duration, catchment size, catchment type, shape and topography and other resources, such as, vegetation growth, soils and urban development within a particular catchment. For those rivers within the coastal areas flooding can also be influenced by tidal movements, storm surge, and coastal inundation.

When considering the nature of the weather effects in December 2010 and January 2011 flooding in Queensland, distinctions could be drawn between the types of floods that occurred in Toowoomba and the Lockyer Valley as compared with other flood events within the Brisbane River system. There are also distinctions that could be made between other river systems within regional Queensland.

This submission does not attempt to differentiate between the different types of storm events or flood events or to provide a detailed analysis on the different types of weather events that may occur and consequent flooding.

The matters raised and recommendations provided in this submission cover a broad scope including an education program, land use planning, flood management and safety management for the community. In some instances this submission refers to an integrated approach to emergency management which would require integration with management of other natural hazard activities, such as, bushfire, earthquake, tsunami and cyclones. These management principles could also extend to the potential disasters caused by human intervention and activity.

In making this submission there is a recognition that extensive flooding has occurred in Queensland in the past, it has occurred recently in Queensland and it will occur in the future. The nature and extent of whether events and flooding could well be different from the areas of influence attributable to the recent floods.

Floods can cause loss of life, disruption to the community, disruption and in some cases destruction to homes, business and infrastructure. Where practicable when formulating urban land use and infrastructure planning consideration should be given to the identification of the risk, and adoption of acceptable community standards to minimise the impact of future floods.

This submission also recognises there are costs associated with implementation of any flood mitigation program or community awareness program. This submission does not attempt to cost any of the initiatives or implementation recommendations. The consideration of the recommendations and priority setting are to be assessed by others against other community needs, priorities and aspirations.

There are key planning instruments, guidelines and standards that can be applied to consideration of stormwater planning, design and flood planning and design. Those instruments considered in the Queensland context include:

- Queensland Government – Sustainable Planning Act 2009 (SPA);
- Queensland Government – South East Queensland Regional Plan 2009 – 2031 (SEQRP);
- Queensland State Planning Policy 1/03 “Mitigating the Adverse Impacts of Flood, Bushfire and Landslide (SPP 1/03);
- The various – Queensland – Local Government Planning Schemes;
- Australian Rainfall and Runoff (ARR) published by the Engineers Australia;

- Queensland Government Reports and Studies - such as the joint project of the Department of Environment and Resource Management, the Department of Infrastructure Planning and the Local Government Association of Queensland, "Increasing Queensland's Resilience to Inland Flooding in a Changing Climate:- Final Report on Inland Flooding Study". (Described in this submission as 'Inland Flooding Study')
- The above study incorporates "Policy Options for Incorporating Climate Change into Flood Risk Management Framework in Gayndah (North Burnett Regional Council Inland Flooding Study)"

As means of defining flood events The Inland Flooding Study – describes the various flood events in the terms as follows:

*"The Annual Exceedence Probability (AEP) refers to the likelihood of occurrence of a flood of a given size or larger in any one year.*

- *The 1 per cent AEP flood event is also known as the 1-in-100 year flood;*
- *The 0.5 per cent AEP as the 1-in-200 year flood; and*
- *The 0.2 per cent AEP as the 1-in-500 year flood."*

Key relevant legislative instruments and guidelines applicable to emergency management in Queensland referenced in this submission are:

- Australian Government Emergency Management Australia – Various Publications;
- Queensland Disaster Management Act 2003;
- Emergency Management Queensland – Publications:
  - Emergency REDI Plan – Household preparedness for people with disability, their families and carers;
  - Queensland State Disaster Management Plan;
  - Queensland Disaster Management Planning Guidelines;
  - Queensland Disaster Management Strategic Policy Framework;
  - Queensland District Disaster Management Guidelines;
  - Queensland Operational Planning Guidelines for Local Management Groups;
  - Draft – Queensland Evacuation Guidelines for Disaster Management Groups.

In making this submission it is recognised individuals in the community must take responsibility for their own preparedness and safety. However, there is a role the Queensland Government can and is taking to coordinate "guidelines, frameworks and templates for local governments and emergency management organisations to use. This is important to ensure a consistent approach is adopted across localities, regions and the State.

The other key factor is the ability of each local government to communicate and engage the "local" disaster management plans and "evacuation" plans to the community as a whole.

## SUBMISSION – COMMISSION OF INQUIRY FLOODS OF QUEENSLAND

### NATIONAL EDUCATION SCHOOL AND TERTIARY EDUCATION PROGRAM

#### KEY ISSUES

##### **Capacity for Community to Cope**

The capacity of the community to cope with natural hazards and disasters can be learnt through experience, knowledge and training. Some people may not be influenced by natural hazard or human disaster events during their lifetime or if influenced the hazard occurrence may be many years apart. It is important there is a high level of community awareness of potential natural hazards and how to be prepared and manage through the particular event. It is important the potential impacts of natural hazard are learnt from an early age and reinforced on a regular basis, so the community is well advised of potential hazards and is best equipped to cope with the event.

##### **Natural Hazard can Occur at Anytime**

Natural disasters or human influenced disasters can occur (in some cases without any warning) at any time of the day or night. Disasters may occur during times when children are at school or people are going about their normal daily routine, or business activity, or in any season of the year (that is, the event may occur in winter months where there may be extreme cold conditions or in summer months which may experience an extreme heat condition).

##### **Warning of Natural Hazard**

People's lives were lost during the recent flood events in Queensland. Some lives were lost by people placing themselves in potential danger, for example; driving cars into water, swimming or paddle boarding in water. Some of these type of activities can be limited and managed by personal behavioural changes. It is acknowledged and cannot be forgotten lives were lost in the recent weather events where people had no or very little warning of the hazard.

##### **National School Curriculum for Community Awareness Cadetship**

There is an opportunity to combine as part of the national school curriculum a compulsory training program for first aid, driver safety, and natural disaster or hazard management. This training program could be thought of as a "community awareness and safety cadetship".

The Emergency Management Australia Institute recognises in its publication "Emergency Management Australia Institute Course Guidelines Handbook 2009.

*"The importance of school education in emergency management, particularly in risk reduction was recognised in the strategy Education 2000, which was a n Australian contribution to the International Decade for Natural Disaster Reduction (1990-2000).*

*EMA believes that educating students in emergency management has the potential to contribute to a culture of preparedness in the community. Australian school students will become tomorrow's active citizens and we are obliged to assist them in preparing for a safer future. Education in emergency management is a way of achieving this. An important part of preparing students for the future is*

*ensuring that the issues and concepts relevant to community safety are given the resource and curriculum support they need in Australian schools.”*

## RECOMMENDED STRATEGY

- **Recommendation 01** - The Commonwealth Government develop and implement through all State and Territory Governments a national “Integrated Community Safety Management Program” to be introduced as a compulsory program into all public and private school curriculum and through tertiary institution training. – Refer to a draft outline of this program in Attachment 1.  
The new curriculum study subjects could be based on an adaptation of Emergency Management Australia Institute course, and would need to be managed by and coordinated y the Emergency Management Australia Institute.
- **Recommendation 02** – The Queensland Government develop appropriate ‘emergency’ management plans and have these distributed to the community importantly schools to educate the community in relation to potential events for each particular local area.
- **Recommendation 03** - The Queensland Government develop evacuation management strategies where any new or existing school or tertiary education facility development can align in an integrated manner with, a total community wide emergency management program.

## **SUBMISSION – COMMISSION OF INQUIRY FLOODS OF QUEENSLAND**

### **RAISE COMMUNITY AND PROPERTY OWNER AWARENESS**

#### **KEY ISSUES**

##### **Being Prepared**

The effectiveness of implementation of any emergency management plan is primarily reliant on the knowledge, understanding and preparedness of the community.

##### **Property Search Information**

At an individual property owner level there may be a lack of understanding of potential natural hazards because certain events or potential risks of hazard may not have occurred for many years, or when properties are purchased there may not be information searched, or available to indicate the property is situated in a potential risk or hazard area. For example, flood prone land. Some people may not know flood searches are available and if so how to obtain such a search.

##### **Dissemination of Information to Community**

In some communities there may be knowledge of certain hazard events known to certain individuals within organisations and local Councils. There may be relatively sophisticated computer model information available to local government organisations. However, there may not be broad scale awareness in the community about the information held by the Council or the potential hazard events that may occur, the timing of events and warning of the particular event occurrence.

##### **Land Use Planning and Mapping and Emergency Planning and Mapping**

The adoption of land use planning control mapping in isolation to emergency management hazard mapping can cause inconsistency between various government agencies and confusion by the individual land owner. Emergency management mapping should be available to the public whether it is to be provided a fee or at no fee.

It is important we recognise extreme natural hazard events can occur. Planning for extreme events should be consistent, integrated and meaningful.

##### **Climates Change – Consideration of Changed Risks Required**

For the purpose of this submission it is accepted climates change. As our records of recorded events improves we as a community will understand in a more detailed and more precise form the potential influences of various climatic events. This also means a better understanding of the risks associated with extreme natural events. Hazard events can and do differ from historical or 'modelled' events due to many factors. To be effective the strategy is to plan for the best available information at the time with allowance for reasonable sensitivity predictions. This way the potential sensitivity or risks can be analysed.

With acknowledgement that climates change, and that rainfall events may become more frequent and more intense. Therefore, it is important to develop emergency management plans for the cities, towns and regions for a variety of 'events' and involve the community in 'event' drills and programs

to raise awareness of the types of hazards that could occur and to provide an understanding of management approaches to minimise the hazard.

The Queensland Government through the entity Emergency Management Queensland has released a draft document – “Queensland Evacuation Guidelines for Disaster management Groups” – Its purpose *“is to outline the evacuation process within Queensland based on nationally agreed emergency management principles and to provide a guide to assist local governments to develop and review local evacuation plans.*

*A uniform evacuation process is considered essential as evacuation may be required across more than one local government area and consistent evacuation processes and messages need to be conveyed to tourists and other transient populations.....”.*

It is suggested the Queensland Government conduct an audit of all local governments to confirm the progress of meeting the draft objectives, and seek a draft of the various evacuation models and mapping for each local government area within 12 months.

## RECOMMENDED STRATEGY

- **Recommendation 04** – The Queensland Government implement a transitional instrument during the review of the State Planning Policies (including State Planning Policy 1/03 Mitigating the Adverse Impacts of Flooding, Bushfire and Landslide) and the State Coastal Management Plan and develop local disaster management plans for sensitive locations. The transitional instrument is to adopt the relevant recommendations of the “Inland Flooding Study” for inland rivers and relevant considerations for Coastal rivers and areas of the State.
- **Recommendation 05** - The Queensland Government within twelve months prepare standard wording to be applied to each local government real property ‘rate notice’ to define whether or not the property is influenced by a particular hazard or natural hazard for example:

The land is influence by:

- The designated flood planning level,
  - The identified bush fire hazard mapping,
  - The land has been filled or created by changing the existing land form, or
  - Any other “specific” local area hazard that may be applicable.
- **Recommendation 06** - That the requirements of sales notifications, land or building contracts of sale or lease documents, or equivalent, for all residential and commercial dealings be amended to include a statement by the seller regarding the influence of the following on the land:
    - The designated flood planning level;
    - The identified bushfire hazard mapping;
    - The land has been filled or created by changing the existing land form prior to creation of the allotment or building/s constructed on the land; or
    - Specific local hazard for the area.
  - **Recommendation 07** - That the Queensland Government, require all local government authorities within twelve months, to identify as an ‘integrated’ property search all relevant information relating to a particular land title parcel. This is to provide an integrated and complete response to a property search.

This is necessary as some inquirers do not know or understand or may not appreciate a current property search does not include comment in relation to the land and its potential influence by:

- The designated flood planning level;
  - The identified bushfire hazard mapping;
  - The land has been filled or created by changing the existing land form prior to creation of the allotment or building/s constructed on the land; or
  - Specific local hazard notification for the area.
- **Recommendation 08** - That the Queensland Government require all local governments or Emergency Management Queensland within twelve months to undertake, for each respective local government area, a community education program or 'drill' and this drill is to be then undertaken annually. This to be undertaken to demonstrate community involvement in the processes and in particular awareness of identified disaster management and evacuation mapping contained in the Draft – Queensland Evacuation Guidelines (for Disaster Management Groups) by Emergency Management Queensland.

The purpose of the drill is to advise the Community of the potential hazards that exist in that particular area or region. This to be inclusive but not limited to:

- Hazard mapping of designated flood planning levels;
- Hazard mapping of particular known stormwater events;
- Potential influences of cyclones;
- Potential influences of bushfire hazard;
- Potential influences of particular hazard of that area or region;
- Description of evacuation routes;
- Identification of potential evacuation centres;
- Method of notification of the hazard or disaster;
- Clearly identify and distinguish between land use management mapping and natural hazard mapping;
- Identification of school and hospital, and other high priority sites and safety plans including evacuation plans.

It cannot be assumed every member of the community has access to a computer and its up to them the individual to seek the local emergency plan from a local government web site. An effective and efficient communication advice must be implemented and delivered.

- **Recommendation 09** – That the Queensland Government adopt a state wide strategy to require all local governments to clearly distinguish, and integrate land use planning (including mapping) and emergency management planning (including hazard mapping and evacuation mapping).

## SUBMISSION – COMMISSION OF INQUIRY FLOODS OF QUEENSLAND

### URBAN DESIGN – LAND USE PLANNING

#### KEY ISSUES

#### Planning for the Queensland Regions - South East Queensland Regional Plan

On the planning instruments adopted by the Queensland Government for planning for regional areas is the South East Queensland Regional Plan 2009 – 2031.

The South East Queensland Regional Plan 2009 – 2031 (SEQRP) purpose is to manage regional growth and change in the most sustainable way to protect and enhance quality of life in the region.” The SEQRP identifies regional policies which set out the “desired regional outcomes, principles, policies and programs to address growth and management of the region.

One of these regional policies relates to ‘sustainability and climate change’. In this policy there is a strategy addressing potential sea level change. It mentions:

- *“Planning for natural hazards in SEQ will be informed by the projected sea level rise outlined in the Queensland Coastal Plan.*

*The sea level rises in the Queensland Coastal Plan are:*

- *for land not already subject to a development commitment, a sea level rise of 0.8 m by 2100 will need to be taken into account.*
- *For land already subject to a development commitment the following projected sea level rise needs to be accommodated for the year of end of planning period (asset life):*
  - *2050 0.3 m*
  - *2060 0.4 m*
  - *2070 0.5 m*
  - *2080 0.6 m*
  - *2090 0.7 m*
  - *2100 0.8 m”*

#### The Inland Flooding Study – Provides and Effective Interim Response

The recent “The Inland Flooding Study” undertaken prior to the December 2010 and January 2011 whether events provides valuable insight into the type of “Flood Planning and Emergency Management Planning” sensitivity analysis. The basis of this study is supported by our submission to the Commission of Inquiry. Whether ultimately the anticipated changes to temperature or rainfall intensity occur or not it provides a sound basis for “sensitivity or risk” analysis.

There would be a need to review the findings of the Inland Study Report against any known data from the December 2010 and January 2011 conditions. Then adjust or refine the final recommendations for Queensland State wide flood planning and emergency planning guidelines accordingly. It is noted:

*"The Inland Flooding Study makes a number of recommendations that relate to the review of the State Planning Policy 1/03. These include identifying how frequently flood studies should be reviewed and / or updated, and investigating the circumstances in which councils should be able to have a 'Defined Flood Event' that is higher or lower than the 1-in-100 year flood."*

*"The study provides Queensland's local governments with a recommended climate change factor for increased rainfall intensity for incorporation into their flood studies. It proposed a 5 per cent increase in rainfall intensity per degree of global warming."*

*This 5 per cent increase in rainfall intensity per degree of global warming can be incorporated into the 1-in-100, 1-in-200 and 1-in-500 year flood levels for the location and design of new development in the State Planning Policy 1/03. Local governments are advised to use the following temperature increases and planning timeframes: 2<sup>o</sup>C by 2050; 3<sup>o</sup>C by 2070; and 4<sup>o</sup>C by 2100."*

### **Land Use Planning – Use Rights**

Urban design and land use planning in Australia are in a very broad sense administered through individual State Government Acts and Policies and Local Government planning scheme provisions. These planning schemes or equivalent can confirm either directly or indirectly use rights for land and associated buildings. In Queensland the primary instrument is the Sustainable Planning Act 2009.

It is also important that any specific land use approval that may apply to the land are implemented and maintained to ensure the integrity and intent of the approval. This could extend to clearing vegetation for fire management, maintaining stormwater flow paths or maintaining and implementing flood evacuation and management plans.

### **Development Below 'Designated Flood Planning' Level**

There are public and private land holdings currently developed or with the potential to be developed on land situated below the 'designated flood planning level'. Options to reduce the risk of future impacts and influence by flood hazard could include:

- o Building structures to be assessed and where necessary upgraded to minimise flood damage.
- o Acquisition by negotiation of the land by government agencies through negotiation.
- o Compulsory acquisition of the land by government agencies. The land may then transfer to open space use or some other appropriate use.
- o Adoption of a system of a 'Transferable Development Rights' or "Development Offset" scheme.

### **Transferrable Development Rights**

The concept of transferable development rights are used in places such as the United States of America. One of the principles is to compensate landowners for restriction on the development potential of their parcel of land by transferring some identified development to another land parcel.

The use of transferable development rights would require rigorous planning and control mechanisms. It would be important this system be initially implemented at the Queensland Government – Regional Planning Level. This is necessary to ensure appropriately identified 'sending' and 'receiving' sites. The 'sending' sites may then be used for a variety of controlled uses – open space, community facilities, regeneration of biodiversity areas, water quality treatment zone areas.

The offsets may be used to manage conflict with land uses below the adopted designated flood level.

Not all areas within Queensland may be suitable to apply direct 'transferable development rights' scheme. Some towns and cities are completely below the 'designated flood planning level' therefore, the linking of the transferable development rights scheme to a mapped flood line may not be appropriate. However, in these cases it may be appropriate to link the transferable development rights scheme to another urban design or natural event parameter or characteristic.

The principle of transferable development rights could adopt the "approach" or "mechanisms" applied to other "offset policies" that have been considered by various State Governments within Australia, for example:

- Environmental Management Offsets Policy;
- Vegetation Management Offset Policy;
- Biodiversity Offsets policy;
- Carbon Offsets Policy and
- Forestry Offsets Policy.

The difference being the offsets in the transfer of development rights case are sites planning scheme defined development parameters or provisions or use rights. Used in this context to assign a value where the "sending" site where its future use is restricted or controlled

#### **Flood Plain is a valuable Resource**

Consider flood plains in the urban form context as a valuable resource not a "constraint". If a positive approach is taken then a more legitimate 'credit' can be applied as a transfer as open space as an acceptable solution. As the land will provide a valuable flood flow path and flood water storage area for flood waters.

### **RECOMMENDED STRATEGY**

- **Recommendation 10** - The Queensland Government as an interim measure adopt revised rainfall intensity factors that are considered appropriate for risk management of flood events as recommended in the "The Inland Flooding Study". These factors to be applied to the 1 percent (Q100) 0.5 percent (Q200) and 0.2 percent (Q500) AEP flood events for the location and design of new development with a requirement to consider any specific local catchment factors.

Recognising "The Inland Flooding Study" focused on inland rivers then a similar approach be taken for coastal river areas with the relevant factor to accommodate sea level rise as identified in SEQRP 2009 – 2031.

This interim measure can be implemented through the review of the State Planning Policy 1/03 – Mitigating in Adverse Impacts of Flood, Bushfire and Landslide". It is suggested the 0.2 percent AEP event be adopted as the flood planning level.

- **Recommendation 11** - The Queensland Government prepare guidelines for each local Government authority within Queensland to adopt a community accepted risk flood planning level to be incorporated as an overlay map in the various local authority planning schemes throughout the State.

The guidelines will enable the planning schemes to have regard to a differentiation of the urban fabric within the city for any development constructed below or within the designated flood

planning level as compared to a development to be constructed external to the designated flood planning level imprint area.

- **Recommendation 12** - The Commonwealth Government provide funding for the Local Government Agencies that have extensive land areas subject to flood inundation and do not have a large rate base to generate funding of, for example, geographic information systems or flood modelling and mapping.

This is to ensure equity of information distribution so that not only the larger cities which can implement, monitor and update flood information, also the small local government agencies are able to gather data and provide publically available data for natural hazard events.

- **Recommendation 13** - The Queensland Government prepare and implement a transferable development offset policy that provides for offsetting of development right parameters for areas within or below a designated food planning level (the sending site) to transfer development rights to certain areas (receiving site) above the designated flood planning level.

The purpose of the development offsets or transferable development rights strategy is to recognise the existing value attributed to land through the current planning scheme designations and to provide future protection from hazard events. Also to provide public benefit where applicable by creation of increased public open space, community infrastructure or regeneration of biodiversity values.

- **Recommendation 14** - Queensland Government review and implement strategies relating to local government areas and the option of flood model data and the design and sensitivity analysis characteristics acceptable to assist development within a designated flood planning area.

This is to ensure a consistent and reasonable approach is adopted in relation to the sensitivity analysis and acceptable impacts and the reporting of impacts of flood hydraulic analysis suitably qualified experts. These attributes relating to flood sensitivity and risk analysis to be translated into the local governments planning schemes and emergency management planning and mapping.

- **Recommendation 15** - Each Local Government Agency develop evacuation management strategies to enable new and existing developments to align in an integrated manner. These strategies to be made available to and communicated to each local community on an annual basis.

These evacuation plans to be completed in a draft form by each local government agency within 12 months and are to follow the principles of the draft document "Queensland Evacuation Guidelines for Disaster Management Groups" are to be widely communicated within each local government agency area.

- **Recommendation 16** - Emergency management strategies be applied consistently and equitably across a region to new development and to community assets such as road, rail and utility services as well as the existing residential and the business community.
- **Recommendation 17** - The Queensland Government adopt the "The Inland Flooding Study" principles to review the State Planning Policy 1/03 and to provide a template to all Local Government agencies with Queensland. Recognising the study was for non-coastal area river systems and adopt appropriate amendments for coastal river areas.

**ATTACHMENT 1 – SCHOOL CURRICULUM COMMUNITY SAFETY  
MANAGEMENT PROGRAM**

## **EDUCATION - COMMUNITY SAFETY MANAGEMENT PLAN**

### **Integrated Community Safety Management Program – for Schools and Tertiary Education Institutions**

#### **Purpose**

The purpose of the integrated community safety management preventative learning compulsory program for schools and tertiary education institutions is fivefold;

- To inform students and raise awareness of management techniques for extreme natural and human caused disaster events
- To provide students with compulsory training in community safety management for all attending school and tertiary education institutions.
- To provide education, coping mechanisms and safety and skills in natural and human hazards / disasters and emergency management.
- To provide insight to the particular school emergency management plan and evacuation management plan and the integration with the local district management plans and evacuation plans.
- To provide a recognised subject in the school and tertiary education institution curriculum.

#### **Type of Hazard**

The education training would be associated with natural or human caused events, such as:

- Bushfire / fire;
- Flooding;
- Earthquakes;
- Tsunami;
- Cyclone;
- Human caused Event; or
- Snow Storm, and or the particular hazards identified for particular school locations.

#### **Curriculum or Syllabus as part of the 'Preventative Learning Program'**

- To be included as a standard curriculum unit.
- To be compulsory for every student.
- To be included in every year of learning;
- To incorporate reference to all natural and human disaster events.
- To incorporate emergency management principles as identified by Emergency Management Australia;
- To incorporate two 'drills' per year (one summer and one winter months);
- To include fundamental 'occupational health and safety training'.
- To include a range of 'first aid' training and issue of certificates (for appropriate student skill and age level(s)).
- To include 'cadet' type training for physical activity and emergency management.
- To include driver training/ defensive driver education provided (by suitably qualified persons).
- To include (at appropriate age for the student) a period of 'on the job' training with one of the suitably qualified emergency agencies (professional or volunteer) or not for profit organisation).
- All relevant subjects where necessary to be provided by suitably qualified persons and coordinated and implemented by the Emergency Management Australia Institute;
- The curriculum subject including; lectures, equipment, cloths, to be sponsored by the Australian Government.