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Page 2 of 7

Bushfire-

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It is recommended that section 4.8 of the Guideline be amended to be more consistent with the content of section 4.6 of the SPP.

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For example, a development application seeking a material change of use for 'residential' and associated reconfiguration, may be lodged on land having a slope of less then 15% and, being cleared of vegetation. However, the adjoining land parcel may comprise of a heavily vegetated slope greater than 15%, thus presenting a potential risk to future residences.

Page 4 of 7

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Further clarification is needed in relation to what constitutes "development that is clearly consistent with the relevant zone." For example, development comprising a material change of use, identified as self-assessable and code assessable (complying with the relevant code) in the Table of Development of a Planning Scheme, are usually construed to be clearly consistent with the intent of the relevant zone.

• Furthermore, the words "(or equivalent)" needs further clarification. For example, notwithstanding that a development proposal may be in conflict with the intent of the 'existing' zoning, such development may be clearly consistent with the intent of the Strategic Plan designation. This situation would frequently arise when considering applications for a material-change of use to increase residential densities from 'Rural' to 'Residential A' and associated reconfiguration. Is this situation intended to be included under "(or equivalent)"?

- In section 6.7, page 27 of the Guideline, the sentence "Information about the severity of the hazard may be available for the development site. If so, this information should be provided to the assessment manager by the proponent" appears to be superfluous in its current form. It should be amended to clarify that the Assessment Manager has the ability to request further information to support a development application pursuant to the Integrated Planning Act 1997. This will be particularly pertinent for those Local Governments who will be using the default "Natural Hazard Management Area" as defined by Annex 3.
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Page 5 of 7

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	Performance Criteria	Indicators of compatibility	
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	· · · · · · · · · · · · · · · · · · ·		
i 1 - 43° 4 - 41 - 4	7. Development that materially intensifies the use of	Development is compatible when:	
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	siting, design and management measures to minimise	number of people living, working or congregating in	
	bushfire hazard.	the area or involve the storage or manufacture of	
		flammable, explosive or noxious materials in bulk	
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1		OR	
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The practicality of implementing and ensuring ongoing compliance with performance criteria 7 and acceptable solution 7.2 is questioned. It is recognised that the assessment manager has the ability to condition the preparation of, and compliance with a fire management plan as part of a material change of use development approval, whilst also having the legal ability to ensure continuing compliance. However, it is understood that this may not be the case for development approvals for reconfiguration. In the absence of a material change of use, once the subdivision has been constructed, the conditions have deemed to have been complied with.

Page 6 of 7

Therefore, for effective implementation of land management conditions, such conditions need to be attached to an approval for a material change of use to ensure all future landholders are legally bound to complying with the approved fire management plan.

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Enquiries Telephone Your reference Our reference



12 December 2002

Mr Director-General Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear

Draft State Planning Policy and Guideline for Natural Disaster Mitigation

Thank you for the opportunity to provide comment on the final draft version of the State Planning Policy for Natural Disaster Mitigation (SPP), and Guideline for Natural Disaster Mitigation.

Attached herewith, are comments from the Environmental Protection Agency. I trust that these comments are of value to you. If you require further information regarding these comments, please do not hesitate to contact

Yours sincerely.

Director-General

Page 1 of 7

160 Ann Street Brisbane Queensland 4000 Australia PO Box 155 Brisbane Albert Street 5

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Queensland 4002 Australia Telephone (07) 3227 6877 Facsimile (07) 3221 0768 Website www.epa.qld.gov.au

ABN 87 221 158 786

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1 - - -	From: Sent: To: Cc: Subject: State Planning Policy Submission - Natural Disaster Mitigation
· · · · · · · · · · · · · · · · · · ·	Mac Word 3.0 InterScan_SafeSta mp.bxt
: 	As discussed please find following an advanced copy of Main Roads submission on the SPP.
	Our formal submission will follow early next week under our DG's signature.
	Please contact myself on any queries. Regards
11	(See attached file: DES Letter_11122002 v3.doc)
	Opinions contained in this e-mail do not necessarily reflect the opinions of the Queensland Department of Main Roads, Queensland Transport or National Transport Secretariat, or endorsed organisations utilizing the same infrastructure. If you have received this electronic mail message in error,
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Endorsed by Accountable executive Contact officer Telephone Finalised through Divisional reference D-G reference



P14980 MH

Director - General Department of Emergency Services PO Box 1425 BRISBANE QLD 4001

Dear

RE: Draft Planning Policy (SPP) for Natural Disaster Mitigation

Thank you for your letter of 21 October 2002 inviting submissions on the draft State Planning Policy (SPP) on Natural Disaster Mitigation. The SPP and associated guideline has been distributed within Main Roads and numerous Main Roads officers have attended regional workshops. This letter forms a coordinated Main Roads response.

Main Roads is a member of the State Disaster Mitigation Committee and was also a member of the working group that developed the draft planning policy. I am pleased that most of our previous comments have been addressed in the public draft.

Main Roads is generally satisfied with the content of the draft SPP and associated guideline.

Main Roads already considers disaster mitigation planning as an integral part of its usual road planning and design processes. Disaster mitigation measures are assessed in the context of cost effectiveness and affordability given other competing needs for available roads funding. The draft SPP provides enough flexibility to allow Main Roads to continue to make these judgements on a case- by- case basis within the context of overall funding priorities.

Office of the Director-General Floor 16 Capital Hill Building 85 George Street (cnr Mary Street) Brisbane Queensland 4000 GPO Box 1549 Brisbane Queensland 4000 Telephone +61 7 3235 4964 Facsimile +61 7 3235 4276 ABN 57 836 727 711

Our ref Your ref Enquiries Jay Wickramatunga Telephone +61 7 3405 6493 Facsimile +61 7 3404 3808 Given the importance of disaster relief funding to Queensland it is also important that the State Planning Policy give due recognition to the Council of Australian Governments (COAG) review of natural disaster mitigation arrangements affecting Australian communities. The substantive initiative from the COAG review was to change the emphasis from disaster relief towards disaster mitigation. This is being delivered through a new funding regime. As you are aware, Cabinet Budget Review Committee has given "in principle" support for the COAG review outcomes. A final check for consistency between the COAG review and the draft SPP is recommended.

Detailed comments obtained from Main Roads regional and district staff highlight some minor inconsistencies between the draft SPP and current departmental operations. It is important that the document does not mandate requirements that are inconsistent with Main Roads operations, but rather provides a clear intent of the policy for natural disaster mitigation.

The detailed comments on the draft SPP are included as Attachment 1 and detailed comments on the guideline are included as Attachment 2.

I am also sending a copy of this submission to **service services** the Acting Director Disaster Mitigation Unit as requested in your letter.

Thank you for providing us with the opportunity to participate in the consultation process.

Yours sincerely

AM RFD Director-General

Enc (2)

1	Deputy Director-General	
2	Executive Director (Road Network Management)	
3	Regional Executive Director (Central Queensland)	
4	Regional Executive Director (Southern Queensland)	
	Attention: Attention, Regional Adviser (Strategic Planning)	. !
5	Regional Executive Director (South East Queensland) Attention: Regional Adviser (Strategy)	(
. 6	Executive Director (Roads Programs) Attention: Executive , A/Principal Engineer (Roads Programs)	
7	Executive Director (Planning, Design, Environment) Attention: Security , Principal Advisor (Transport Infrastructure Planning)	- }
8	Manager (IPA) Attention: Manager (Policy & Projects)	• •
	Por vour information	· · ·

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Yours sincerely

B/c

Director-General

Attachment 1 - Detailed Comments on the Policy

• Definition of Development Commitments (Page 9)

The current definition of development commitments in the SPP refers to development with a valid development approval. This covers all forms of approval including preliminary approval. If the intent of the SPP is to only consider preliminary approvals (i.e. not any other impact assessable or previously approved development approval) then this needs to be clearly stated.

If it is left as it is then there could be a timing issue with SPP requirements coming after preliminary approval has been given. This could lead to a potential appeal situation.

Reference to exempt development is also made in the definition. There is no opportunity to apply conditions dealing with minimising bushfire, landslide and flood hazard where a development application is not required (i.e. exempt development). This reference needs to be removed.

The definition refers to assessable development against the *Standard Building Regulation* however page 3 of the Policy suggests the opposite. Clarification is needed.

Development outcomes and development assessment (Information requests and availability of information to applicants - page 3)

Importantly the SPP applies to community infrastructure anywhere in the State and not only within natural hazard management areas. This has implications for Main Roads. Although Main Roads hasn't utilised designation processes prescribed by IPA for community infrastructure previously, it is likely that these will be used in the future. This will require some changes to internal arrangements (e.g. Environment, Branch and alteration to the EMP documentation).

Where the local government does not have information to enable an assessment of the potential natural hazard and measures to minimise such hazard, the applicant must provide information following receipt of an information request. Where Main Roads is an applicant, the department will have to respond to information requests. Fundamental issues such as:

- Levels of risk in a particular vicinity as a benchmark to determine whether the subject development is compatible with the natural hazard and indeed would have a lower level of risk;
- * Degree to which a development poses an unacceptable level of risk to property and persons internal and external to the site; and
- * The degree to which a development would materially increase the natural hazard Need to be considered and responded to prior to the SPP being finalised.
- Main Roads often had projects, which cross local government boundaries and involve 2 or more local authorities. Certainty regarding likely information requirements and consistency is important in this regard.

Attachment 2 - Guideline

- Appendix 2 on page 46 the definition of flood (A2.1) may need to include "tidal influence."
- Appendix 7 on page 76
 - The performance criteria A (Flood) for Community Infrastructure suggests that infrastructure development identified by flood hazard mapping as being below the Recommended Flood Level (RFL) for that community infrastructure, should have at least one road access that will remain passable for the performance of an emergency evacuation for all floods up to and including the RFL. Whilst there is no specific recommended RFL for state-controlled roads, it would appear unrealistic to expect that any road system, be it Local Government or state-controlled, be capable of meeting the RFLs stipulated for infrastructure development (range of :200 ARI – 1:500 ARI). The intent of this requirement needs to be re-assessed. Perhaps access may be available by other means apart from road?
 - The RFL for state controlled roads, whilst not specific, indicates that it should be optimally located and designed to achieve suitable levels of service. A suitable level of service is not defined and it is suggested that the words "as defined by the state" after suitable levels of service be inserted.
- Section 6.6: Local Government is not the only source of information on flood events but they should certainly be the first port of call for a development proponent. Section 6.6 also appears to be in conflict with the intention of the SPP. The consideration of flooding risk should not be reliant on local governments defining a DFE.
- Annex A2.22: The 0.5m flood level difference between Q₁₀₀ and Q₂₀₀ flood event in Western Queensland can have just as large an impact because larger areas are covered due to generally flatter ground.
- Annex A5.3: Road authorities (State and Local Government) will have difficulty (due to cost) in constructing roads above the Defined Flood Event. For example Longreach may well choose a DFE of Q₁₀₀ for town planning and future development purposes. The Thomson River crossing is at Q₇₀ to Q₈₀ trafficability. It is good to note the policy does not mandate a recommended flood level for roads.
- Section 4.1: It is suggested that the term "or eliminate" be changed to reduce in this paragraph. The elimination of risk is not achievable, and provides false expectations.
- Section 4.6: Given the uncertainty in assessing climatic change the word assessed should be changed to considered in the last sentence.

- Section 6.11: better guidance may be required on how many additional people constitute a material change in use or alternatively talk in terms of impacts. There are a number of section in the document where this could be clarified including Appendix 5, Table A. Flood; better guidance is needed on defining a material increase in the number of people living or working in a natural hazard management area.
- Appendix 5, Delete the note from section 2.3.2, in Table A. Flood, and delete 'all' from part 4.2

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- Appendix 5, Bushfire: If roads are constructed to relevant Local and State Government standards, statement 3.2 of the table should be deleted.
- Map 1 on page 20 shows that Belyando and Peak Downs Shires are not considered applicable for bushfire. However surrounding Local Governments are. This appears inconsistent.

Our ref ITP E4645 890/00416 Your ref

Enquiries Facsimile

13 December 2002

Attention State Planning Policy Acting Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 Brisbane Queensland 4001

via email sppconsultation@emergency.qld.gov.au

Dear State Planning Policy Team

Proposed State Planning Policy for Natural Disaster Mitigation

Thank you for the opportunity to comment on the proposed State Planning Policy (SPP) and the associated guideline for Natural Disaster Mitigation. Queensland Transport (QT) generally supports the proposed SPP and its associated guideline. However, QT officers based in regional Queensland wish to make the following comments and observations for your consideration in finalising the SPP:

 Why is the "development commitment" definition in this proposed SPP different to the "development commitment" definition in the SPP 01/022. We note that the definition of

"development commitment" in this proposed SPP excludes strategic planning designations in transitional schemes.

- Given the likely delay in the gazettal of most *Integrated Planning Act* (IPA)-compliant planning schemes, it is suggested that the 1 in 100 year flood level should become the default Defined Flood Event (DFE) for all local governments at the commencement of the SPP until such time that they each introduce their own IPA-compliant planning scheme with individual DFEs. We are concerned that the delay in IPA-compliant planning schemes will delay the commencement of this SPP for flood hazards unnecessarily.
- The provision for local governments to determine their own DFEs based on local circumstances may cause vast inconsistencies at local government area boundaries. Regional mapping would potentially resolve this.
- The performance criteria and indicators of compatibility for flood in Appendix 7 of the guideline suggest that road is the only appropriate emergency evacuation access for all forms of community infrastructure. This should be re-worded to indicate that at least one means of emergency evacuation access is useable, whether that be road or other. For example, in the case of Karumba hospital, it may be air access.

Integrated Transport Planning Division Regional Transport Planning Branch Level 8, Capital Hill Building GPO Box 1549 Brisbane Queensland 4001 ABN 13 200 330 520 Please contact me on the second second if you have any queries on these comments. I look forward to your feedback on our comments.

Yours sincerely

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Senior Advisor (Land Use Planning)

From: Sent: To: Subject:

Thursday, 12 December 2002 3:18 PM SPP Consultation Draft SPP Natural disasters

Dear Sir/Madam,

I write to you with comments about the Draft State Planning Policy on Natural Disaster Mitigation. First of all may I congratulate you on preparing this document and all of the effort that your department has gone to with respect to the public consultation on this matter. In general I like the document and hope that is implemented. I do have one major concern though and it is one which can be easily addressed.

First of all let me explain the background to this concern. I undertake scientific research into, and publish on, a range of natural hazards. Both my results and those of many others now show us that we have, in the past, misinterpreted the nature of natural hazards. We have usually assumed that natural hazards are time dependent phenomena. That is the smaller magnitude events occur more frequently and the larger and largest magnitude events less frequently. So with increasing amounts of time we can expect to see a larger event despite the fact that technically the probability of an event is independent of the occurrence of other events of any particular natural hazard. This is true to an extent. Based upon this assumption, however, we frequently make another assumption and that is that the time series we are dealing with (i.e. the historical record of events) displays stationarity. Stationarity means that if we have say 100 years of historical record of rainfall events then that 100 years is reflective, on average, of any 100 years of rainfall. What we are now finding is that this is not the case. The last I00 years is often not a good reflection of the penultimate 100 year period and may well be unlikely to be a good reflection of the next 100 year (future) period. Hence the slope of the magnitude vs return interval curve can change over time. Whereas previously we assumed that it remained the same. If we assume stationarity exists then we think we can make reasonable predictions about the future by simply extrapolating this cover the stope of this line is prone to change with time then we cannot make reasonable predictions about the future or the past.

This has substantial implications for undertaking natural hazard assessments as per appendices 2-4 in the draft report. Here, as has been the standard practice, it is assumed that the historical time series displays stationarity and no allowance is made for the possibility that a particular natural hazard may in fact display non-stationarity. This is part of the classic engineering approach which for the main part is excellent except for this assumption. It is entirely possible to test for non-stationarity in any region for most natural hazards, particularly floods and landslides. There often exists a very long-term natural record of natural hazards at most locations. For example the long-term history of landslides at a location, if it is prone to this hazard, is likely to be preserved as a series of landslide deposits on the slopes or at the base of the hills. In Cairns for example there exists the entire history of every landslide that has occurred here over the last 30,000 years. And in the eyes of a trained person this entire history is easily decipherable. When we did this for Cairns we found that the assumptions made about the landslides and how often they occur here were incorrect. In fact the likelihood of a large landslide occurring here is much less than previously thought and hence the associated risks are lower. The opposite can be true of other hazards elsewhere.

In short my point here is that we cannot identify a natural hazard management area without a reasonable understanding of the nature of the natural hazard for a region. And unfortunately the historical record in Australia is too short for us to use to determine this. This we, and many others, have proved through our research and have documented in the peer reviewed scientific literature. This problem is easily overcome by undertaking a study of the natural record of natural hazards in a region

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and by doing this we can obtain the most accurate understanding of the behaviour of the hazard in question. This study can be undertaken as part of the initial investigation to determine the hazard management area. May I urge you please to adopt this approach for all natural hazards in conjunction with that already stated in the draft policy. Otherwise it is very likely that the level of risk to exposure of any hazard will be miscalculated as a function of assuming stationarity in the historical time series.

I will be very happy to provide you with copies of our published reports on this topic which contain examples of these miscalculations of risk to various natural hazards if you like.

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Yours sincerely,

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Reader Faculty of Science & Engineering School of Tropical Environment Studies and Geography James Cook University PO Box 6811 Cairns Qld 4870 Australia Ph: +

Sent:	Friday, 13 December 2002 3:15 PM
Subject:	Final consultation on the draft SSP and Guideline for Natural Disaster Mitigation
Thank you for y opportunity to impact on aeron	your letter (dated 21 October 2002) providing me with the review and comment on the draft SPP. I have reviewed SPP for its nautical facilities and I have no comments to make.
Regards	
Senior Advisor	
Air Transport M	lanagement
Queensland Transpor	sport
-	
Phone (
Floor 7 Transpo	rt House 230 Brunswick Street
BOX 673 FORTITU	DE VALLEY QLD 4006
******	**********
Opinions contair	led in this e-mail do not necessarily reflect
the opinions of	the Queensland Department of Main Roads,
Deensland Trend	sport or National Transport Secretariat, or
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FOR ENQUIRIES PLEASE CONTACT: Matthew Coleman IN REPLY PLEASE QUOTE: 2099678

20 December 2002

Attention: State Planning Policy Acting Director Disaster Mitigation Unit Counter Disaster & Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

2 4 DEC 2002

of noted

5 SPP to

Dear Sir/Madam

RE: Draft State Planning Policy (SPP)– Natural Disaster Mitigation Submission

Reference is made to the Draft State Planning Policy & Guideline for Natural Disaster Mitigation (SPP) issued on the 21 October 2002 for consultation purposes.

Council agrees that the SPP is an important and necessary planning tool for minimising the detrimental impacts of natural disasters and the Department of Local Government & Planning and Department of Emergency Services should be commended on the development of the policy.

Council resolved on the 16 December 2002 to make a submission on the SPP. The issues of concern raised by Council are outlined below.

There is a need for a mechanism in the Draft State Planning Policy for Natural Disaster Mitigation, or the Integrated Planning Act 1997 that allows the Minister for Local Government & Planning to sign off on planning schemes for State interests on specific sections of the policy due to the clearly defined (bushfire, landslide & flood) issues covered by the document; and

The role of the SPP, once it has been reflected in the local government's planning scheme, needs to be clarified. Allowance should be made for a SPP compliant planning scheme to become the sole planning instrument for triggering assessment and defining natural hazard management standards/requirements for development in Natural Hazard Management Areas.

ABN 69 653 021 471 Administration Building 153 Herries Street Toowoomba Qtd 4350

THE GARDEN CITY

Address all communications to: The Chief Executive Officer P.O. Box 3021 Toowoomba Village Fair Qld 4350

Visit our web site: www.toowcomba.qld.gov.au Email address: council@toowcomba.qld.gov.au

Telephone: (07) 4688 6611 Facsimile: (07) 4638 3830

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Any (Po	enquiries regarding this r licy Planning Officer)	matter may be directed to by phone	or email	1 <u>1</u>
You				
Cc:	Local Government Assoc PO Box 2230 Fortitude Valley, BC, OL	iation of Queensland		
		9 4000		
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From:

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Sent: Friday, 13 December 2002 3:48 PM

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To: SPP Consultation

Subject: State Planning Policy & Guidelines for Natural Disaster Mitigation- ToowoombaCity Council

Acting Director Disaster Mitigation Unit

Please find attached the draft submission of the Toowoomba City Council for the State Planning Policy & Guidelines for Natural Disaster Mitigation.

The information contained in the attachment has been approved by the Planning Committee and upon the resolution of the Ger Meeting on the 16th of December, 2002 the signed submission will be forwarded as per our previous correspondence on the 2r December.

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Yours faithfully

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licy Planning Officer

FOR ENQUIRIES PLEASE CONTACT: Matthew Coleman IN REPLY PLEASE QUOTE: 2099678

13 December 2002

Attention: State Planning Policy Acting Director Disaster Mitigation Unit Counter Disaster & Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear Sir/Madam

RE: Draft State Planning Policy (SPP)– Natural Disaster Mitigation Submission

Beference is made to the Draft State Planning Policy & Guideline for Natural Disaster Mitigation (SPP) issued on the 21 October 2002 for consultation

purposes.

Council agrees that he SPP is an important and necessary planning tool for minimising the detrimental impacts of natural disasters and the Department of Local Government & Planning and Department of Emergency Services should be commended on the development of the policy.

Council resolved on the 16 December 2002 to make a submission on the SPP. The issue of concern raised by Council are outlined below.

There is a need for a mechanism in the Draft State Planning Policy for Natural Disaster Mitigation or the Integrated Planning Act 1997 that allows the Minister for Local Government & Planning to sign off on planning schemes for State interests on specific sections of the policy due to the clearly defined (bushfire, landslide & flood) issues covered by the document; and

The role of the SPP, once it has been reflected in the local government's planning scheme, needs to be clarified. Allowance should be made for a SPP compliant planning scheme to become the sole planning instrument for triggering assessment and defining natural hazard management standards/requirements for development in Natural Hazard Management Areas.

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Yours fait	hfully				
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need to stage flood mitigation projects over a number of years because of the limited availability of funding, or to allow time for agencies and statutory bodies including River Trusts to prove the benefits and gain further community support for any significant resultant changes in flood behaviour. At the same time, a scheme for something less than a 1 in 100 year ARI flood immunity can often deliver very significant benefits.

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However it is agreed that staged programs should incorporate provision for further improvements (works to be extended or raised in the case of levee banks) to provide for that 1 in 100 event in urban areas or a DFE appropriate to the circumstances of other localities.

Annex 1 lists changes caused by development to which the policy will apply. Under dot point 4 in 1(a), "lowering" should be added so it reads (e.g. filling, lowering or vegetation removal). Lowering can be just as catastrophic in terms of flood control in many river bank or some flood plain areas.

3. State Council support for proposed "Policy Outcomes".

In relation to those areas where River Trusts have and can continue to play an effective role with and beside Local Government, the following comments are offered.

Outcomes2 and 3 - Points made here are critical to the continued successful operation of river management assets maintained by the 17 River Trusts in Queensland. Much of the work maintained by Trusts in the Burdekin dry tropics, Mackay Whitsunday, Ipswich, Eastern Downs and Warwick/Stanthorpe areas has flood mitigation benefit to communities in those regions.

The Trust's strategic plans help to achieve the improved compatibility and enhanced performance of all community infrastructures during periods of severe flooding. Stability of rivers and control of overbank flooding can help achieve these outcomes. Similarly the Trusts have no difficulty with Outcome 5.

4. Draft State Planning Policy Guidelines

In relation to Sections A2.17 to A2.26 and the references to current-fleod studies, hydraulic analyses, etc, River Trusts where they exist continue to be major players in their preparation and funding. They should particularly be mentioned under A2.20 as valuable sources of data, mapping and historical experience for the carrying out of those studies or analyses. In Local Government areas where they have been established, Trusts would be valuable members of the Floodplain Advisory Committees referred to in Step 1 in Appendix 2 (Sections A2.15 & A2.16), (local government would probably want it that way).

In terms of Table 1 in Section 6.37 of the guideline, the Trusts would be comfortable with the land uses defined as appropriate across the floodplain. However, it probably should be recognised that the outcomes of flood mitigation works or systems of flood protection that exist in the abovementioned regions does alter the level of severity and so the level of risk of flood disaster. That then would be expected to influence the planning decisions at the local government level.

5. Concluding comments.

The State council supports for the draft policy and guideline.

Pat Botto PO Box 83 Proscrpine Qld 4800 Phone/Fax 4945 1052 E-ma	a

However the Council wishes to have the role River Trusts play, their experience and the resource base they have in flood mitigation and river management, referenced in the policy alongside other agencies.

Given the prominent role and leadership River Trusts have played in flood plain management studies, the Council believes their representation on the proposed Floodplain Advisory Committees (A2.15/A2.16) would enhance the advisory role to local government.

The Council wishes to see the benefits of flood mitigation which flow to public and private lands, public and private infrastructure and the economic and social well being in urban and rural community environments reflected in the outcomes and ongoing planning decisions intended under this State Planning Policy.

In relation to the layout of the guideline I had some difficulty in relating to the various tables. My original difficulty arose because the Guideline has two Tablel's (one on p.33 which I had trouble finding and the other on p.58 which dealt with bushfire hazards and which should probably be labeled Table A1). I would suggest that for clarification, when Tables and Figures in the Guideline are referenced, they could be labeled as Figure 1 etc and Table 1 etc in the main text, and Figure A1 etc and Table A1 etc in the Appendices.

Yours faithfully

Executive Officer

Pat Botto PO Box 83 Proserpine Qld 4800 Phone/Fax 4945 1052 E-mail <u>botto@whitsunday.net.au</u> Tim Smith PO Box 5318 MC Townsville Qld 4810 Phone 0418 725585 Fax 4799736 E-mail <u>limsmithco@bigpond.com</u> Norm Craswell 3 Aviesbury St Fig Tree Pocket Old 4060 Phone 3378 5986 Fax 3379 6687 E-mail normie@gil.com.au

North Queensland River Trusts' Association Inc.

REFERENCE POSTAL ADDRESS: P.O. Box 5318 MC Townsville, Q. 4810 PRESIDENT: TELEPHONE: 0418 725585 Pat 8otto FAX: (07) 4722 1736 **EXECUTIVE OFFICER:** DATE: Tim Smith 9 December, 2002 Acting Director. Disaster Mitigation Unit, Counter Disaster and Rescue Services. 1 3 DEC 2002 Department of Emergency Services, GPO Box 1425. Brisbane, Old 4001 Attention - State Planning Policy Submission on the draft State Planning Policy for Natural Disaster Mitigation 1. Introduction While NQRTA and it's member Trusts do not make decisions directly related to Local Government land use planning, their legislation, the River Improvement Trust Act 1940, does enable them to play an effective role beside their Local Authorities inrelation to river and flood plain-management issues. The Trusts are able to plan, fund and implement priority works of flood mitigation and river management, with the power to impose controls on land use where it has or may contribute to damage by flood or cyclone to river banks and adjacent flood plain areas. These benefits extend to the mitigation of flooding and flood damage to public and private lands and infrastructure. They also obviously impact on the safety and well being of the community. Many of the outcomes sought by the State's proposed policy do understandably include the same outcomes sought by the River Trusts with their work. In particular, Outcomes 2, 3 and 5 are very relevant to Trusts. 2. Comments on the proposed Policy. Section 5 refers to important community infrastructure which needs to operate through disaster events and Annex 3 talks about the adoption of an "appropriate flood event" or DFE - 1 in 100 year ARI flood. For a number of reasons, NQRTA suggests that the policy needs to recognise that realistically the DFE may have to be lower for reasons other than "circumstances of the locality". There is often a need to stage flood mitigation projects over a number of years because of the limited availability of funding, or to allow time to prove the

benefits and gain further community support for any significant resultant changes in flood behaviour. At the same time, a scheme for something less than a 1 in 100 year ARI flood immunity can often deliver very significant benefits.

However it is agreed that staged programs should incorporate provision for further improvements (works to be extended or raised in the case of levee banks) to provide for that 1 in 100 event in urban areas or a DFE appropriate to the circumstances of other localities.

Annex 1 lists changes caused by development to which the policy will apply. Under dot point 4 in 1(a), "lowering" should be added so it reads (e.g. filling, lowering or vegetation removal). Lowering can be just as catastrophic in terms of flood control in many river bank or some flood plain areas.

3. River Trusts support for proposed "Policy Outcomes".

In relation to those areas where Trusts have and can continue to play an effective role with and beside Local Government, the following comments are offered.

Outcome 1. The second dot point is critical to the continued successful operation of the existing \$100 million plus public flood mitigation and river management assets maintained by the 9 River Trusts in North Queensland.

Outcomes 2 and 3. The Trust's strategic plans and programs seek to help achieve the improved compatibility and enhanced performance of all community infrastructure during periods of severe fleeding. Stability of rivers and control of overbank fleeding can help achieve these outcomes. Similarly the Trusts have no difficulty with Outcome 5.

4. Draft State Planning Policy Guidelines

Section 4.9 and Appendix 1. In relation to those NQ coastal local authority_areas which do have River Trusts to handle river management, the reference to that River Trust role in Appendix 1 A1.8 would seem appropriate.

In relation to A2.17 to A2.26 and their references to current flood studies, hydraulic analyses, etc, where River Trusts exist they continue to be major players in their development and funding. They could particularly be mentioned under A2.20 as valuable sources of data, mapping and historical experience for the carrying out of those studies or analyses. Where they exist, the Trusts would be valuable members of the Floodplain Advisory Committees referred to in Step 1 (local government would probably want it that way).

In terms of Table 1 then the Trusts would be comfortable with the land uses defined as appropriate across the floodplain. However, it probably should be recognised in the policy that the outcomes of flood mitigation works or a system of flood protection does alter the level of severity and so the level of risk of flood disaster. That then should be expected to influence the planning decisions at the local government level.

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Acting Director, Disaster Mitigation Unit, Counter Disaster and Rescue Services, 9th December, 2002.

5. Concluding comments.

NQRTA wishes to express it's support for the draft policy and guideline.

NQRTA wishes to have the role River Trusts play, their experience and the resource base they have in flood mitigation and river management referenced in the policy alongside other agencies.

NQRTA wishes to see the benefits of flood mitigation which flow to public and private lands, public and private infrastructure and the economic and social well being in urban and rural community environments reflected in the outcomes and ongoing planning decisions intended under this State Planning Policy.






Sarina Shire Council

ADDRESS ALL COMMUNICATIONS TO THE CHIEF EXECUTIVE OFFICER PO Box 219 Sarina Queensland 4737

Your Ref.:

Email:

Our Rol.:

PJK:pjk T20014/D3390

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Paul Kelly

For enquiries please contact:

11 December 2002

Acting Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

13 DEC 2002

Dear Sir/Madam

RE: <u>SUBMISSION - State Planning Policy - Natural Disaster Mitigation</u>

1 wish to make the following submission on behalf of Sarina Shire Council for the draft______ State Planning Policy (SPP) for Natural Disaster Mitigation.

1.1 Purpose of the Policy

It is acknowledged that the SPP only seeks to regulate the natural hazards of flood, landslide and bushfire with respect to development approvals and that other hazards such as storm tide inundation, earthquake and strong winds are currently or proposed to be, regulated through other measures.

In particular, development within storm-tide inundation areas is to be regulated through the State Coastal Management Plan (sec 2.1 and 2.2) and it is understood that the EPA will be issuing guidelines in relation to natural disaster mitigation in storm-tide susceptible areas in conjunction with this SPP. It is strongly recommended that the EPA guidelines reflect measures proposed for this SPP to ensure protection of future communities in relation to the natural hazard of storm-tide inundation and that the EPA guidelines do not just have an ecological focus. It would have been preferred if measures in relation to this hazard could have been incorporated with the flood mitigation provisions of this SPP (refer sec 4.5) so that disaster mitigation measures were contained as far as practicable, in one SPP.

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In relation to controlling development to help mitigate the spread of plagues, pestilence and exotic diseases, it is suggested that provisions could be included such as setback distances for new uses that may pose threats of this nature eg. DPI recommendations for setbacks for intensive animal husbandry activities such as feedlots, piggeries, dairies, broiler poultry sheds etc. from sensitive or incompatible uses such as residential development, urban areas etc.

6. Development Outcomes and Development Assessment

Outcomes 1 and 2 relate to development assessment in natural hazard management areas. There are concerns that these outcomes may need to be tightened if decisions made by assessment managers require a refusal if the application does not appear to adequately address these outcomes eg -

If an assessment manager made reference to the SPP in refusing an application for a residential proposal because the land was within an identified natural hazard management area and the applicant did not provide sufficient measures to mitigate the risk. If the applicant could argue that the proposal had overriding need or was a "development commitment" ie the proposed use or subdivision was consistent with the zone, the applicant would satisfy Outcome 1; though there may still be concerns about the future impact of the natural hazard. It is understood that the intent of the SPP is that the application would then get caught by Outcome 2 with respect to refusal, ie it is not compatible with the natural hazard. However, if the applicant could successfully argue that it does not result in an "unacceptable level of risk" and that the impacts of the natural hazard are minimised then the decision may be overturned if the matter were to go to Court.

It is important therefore to define what constitutes an "unacceptable level of risk". Sarina Shire Council has recently undertaken consultation in relation to the preparation of a Risk Mitigation Plan for the Shire. Part of this process sought public comment on what was an "acceptable level of risk" for each of the communities visited. Although, there were some consistencies regarding what was acceptable ie. no loss of life, other matters such as periods of loss of service were more difficult to determine. It is expected that there will be numerous local authorities to which this SPP applies that have not undertaken a similar process to prepare a Risk Mitigation Plan at this stage. It is therefore, strongly recommended that the State provide clear default definitions or standards for what constitutes an "unacceptable level of risk".

For example, in flood prone areas the level could be calculated as the development of a community of x% of the total local authority population (or population of x number of people), that is a distance of greater than x metres from a recognized emergency support centre or services. Limitations on the calculated figure could include the demographics of the community eg retirement village and impediments to access eg waterway crossings.

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7. Making and Amending Planning Schemes

It is understood that for those Councils well progressed with the development of their IPA Planning Schemes, they will not have to be amended at this late stage to include the provisions of this SPP especially given that the SPP is not expected to be adopted until mid 2003 which is after the March 2003 deadline. It is acknowledged however, that where a Council does not have natural hazard management areas identified or provisions included for regulation of development in these areas in its Planning Scheme that the default mechanisms of the SPP will apply.

8. Information and Advice on the Policy

It is acknowledged that the Queensland Fire and Rescue Service, the Department of Emergency Services, the Department of Natural Resources and Mines and the Environmental Protection Agency are only considered as Advice Agencies for the SPP at this stage. It is strongly recommended that these agencies be raised to Concurrence Agency status to ensure that the provisions of the SPP are met State-wide and that there is no misinterpretation with respect to the application of the provisions by the many local authorities to which the SPP applies.

Separate to the above, Council would like to stress the importance of raising the level of awareness and education of those residents living in natural hazard management areas. Whether this is done by the local authority providing advice at the rate search stage of purchasing property; or via some other means. It is important that residents living in these areas start taking responsibility for their decision to reside in a location that is prone to natural hazards.

Council would like to express its gratitude for the opportunity to be involved in this consultation process. If you have any queries in relation to the above, please contact Council's Manager – Planning & Development, Paul Kelly on telephone 4943 1466.

Yours faithfully

Chief Executive Officer

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Page 1 - Position Statement -

Why have a statement of this nature when all Planning Schemes ignore this very aspect. It would appear that this whole policy is selectively aimed to avoid responsibility.

2.1 – This statement has caused some confusion and doubt by members when Planning Schemes and Local Authority land uses for community infrastructure regularly defy such direction. – Example – Planned sports fields and infrastructure at Fishermans Rd in Maroochydore has the potential to create major flood event consequences.

In addition, the Maroochy Shire use of levy banks at Marcoola to divert floodwaters, combined with the construction of the Sunshine Coast Motorway, has the potential to cause serious problems in the event of a normal flood level in the Maroochy River.

Extreme concern exists as to the intent and application of this policy proposal locally, particularly as referred to in 2.3 and 4.4.

4.2 – By the exclusion of cyclones and their associated events makes this policy proposal false and misleading.

By selective preparation and careful wording, this proposal appears intended to reduce responsibility by those charged with just such responsibility. Para 4.6 is a classic example where "Greenhouse" is once again promoted as the potential cause of all climatic change and variation when no evidence whatsoever can support such a view. The drought this year, as a result of such climatic change, is no more severe than that of about 1902, before any popular opinion on climate change. Whilst it may be appropriate to consider such change potential, it is false to promote such anticipated potential events.

4.7 and 5.2 – This planning aspect has been raised earlier and the intent of this paragraph wording is of some concern. Natural Disaster Mitigation should be an example of prime concern to all planning schemes, not just community infrastructure.

6.3 and 6.5 - This whole section has caused some community concern and the intent has several interpretations.

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Annex 1 –

A1.1 – This section of the document raised extensive public comment, particularly (A) .4 and .5. The intent of this whole document needs extensive clarification.





QUEENSLAND POLICE SERVICE

NORTH COAST REGION 61 The Esplanade MAROOCHYD/RE P O Box 553 MAROOCHYDORE QLI) 4558

TELEPHONE (07) 54 439 555 FACSIMILE (07) 54 439 233

December 11, 2002

Mr.

Acting Director Disaster Mitigation Unit Department of Emergency Services GPO Box 1425 Brisbane Qld 4001



Dear

Re: Public consultation on draft State Planning Policy and Guideline for Natural Disaster Mitigation.

I refer to your letter dated 21 October 2000 requesting that the Queensland Police Service consider the draft State Planning Policy and Guideline for Natural Disaster Mitigation.

The District Officers from Bundaberg District and Sunshine Coast District attended the workshops present by your Department.

I consulted with all Districts within the North Coast Police Region regarding the draft and no modifications of changes were required.

Thank you for the opportunity to participate in the consultation phase of your project.

Should you require any further information please contact my staff officer on

Yours sincerely

ASSISTANT COMMISSIONER NORTH COAST REGION Omobel Omobel

Our Reference: 730-02 Your Reference CDS 4899

Acting Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001



Queensland Government

Department of Primary Industries

10 December 2002

A detailed SPP submission on behalf of the Department of Primary Industries is attached (Attachment 1).

Thank you for the opportunity to participate.

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Principal Policy Officer Forest Policy Unit Department of Primary Industries- Forestry C/O Forest Office Red Road BEERBURRUM QLD 4517



Attachment 1

Department of Primary Industries

Submission on the Draft State Planning Policy and Guideline for Natural Disaster Mitigation (SPP) Submission

In the previous draft, not released for public consultation and distributed to GAC members on the 19th July 2002, under the heading of **Development in High and Medium Severity Bushfire Hazard (page 69)**, a "setback" provision was included, as item 2.4 of Appendix 5, which has been withdrawn from the new draft. The old draft of the 19th July 2002, read:-,

"Buildings and other permanent structures have the following minimum setbacks from hazardous vegetation

(a) 1.5 times the predominant mature canopy tree height in any adjoining bushfire hazard vegetation.

(b) 5 m from any retained vegetation strips or small areas of vegetation within individual lots"

The Department of Primary Industries strongly supports the reinclusion of this provision. In the new Section 6, mention is only made for non-residential buildings, not all buildings. Further, the publication "Protecting Your Home against Bushfire Attack" does not include any specific information about setbacks

The reinclusion of the previous Section 2.4, would necessitate the rewriting of the current Bushfire Section 6

Grounds of the Submission

Circumstances Supporting the Grounds

DPI Forestry has many years experience regarding forest fire management including fire suppression and prevention. It is this experience that leads the Department of Primary Industries to the conclusion that it is not in the State's interest or community interest, for building to occur immediately adjacent to these forest fire hazards, unless it can be appropriately managed to minimise the risk to life and property from such hazards. Developments that are approved adjacent to forest, with little or no regard to fire hazard, can pose legal and financial liabilities to the State in the event will bushfire

In arriving at this position, DPI has maintained consultation with the Queensland Fire and Rescue Authority.

Other Comments

(1). The glossary refers to the term "risk" (see page 10). Hence the additional reference made under Section 6.34 which states "Risk is often thought of as the downside of a gamble"merely provides a different perception. It is suggested that the quoted reference could be deleted from the Draft.



Department of Primary Industries

ARM 43 300 006 316

(2). Query regarding Section 6.47. Does this section imply that by applying the SPP, development can be refused on the basis of service time?

(3). Appendix 5, Section A- Flood. Where reference is made to compatible development there needs to have some reference which makes mention of the need to stop net increases in hard surfaces in the landscape (eg large car parks), and identify ways in which the introduction of new hard spaces can be offset by the removal of unnecessary bitumen surfaces. If this matter is already addressed in DNR's Floodplain Management Guidelines please disregard this issue.





Department of the Environment and Heritage Office of the Secretary

Acting Director **Disaster Mitigation Unit** Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Onot. () -> 5 PP/2 1 3 DEC 2002

Thank you for your invitation to participate in the public consultation on Queensland's draft State Planning Policy and Guideline for Natural Disaster Mitigation (SPP).

The draft SPP is to be commended for recognising that Queensland is vulnerable to climate change and should be considered in natural hazard assessments. A significant issue that will need to be addressed is support for the planning profession and local government in taking account of potential climate change impacts. You may be aware that the Planning Institute of Australia (Queensland Division) is undertaking a four part project aimed at preparing communities and industries for the impacts associated with climate change. The first part of the project (a scoping study, funded by Oueensland EPA and the Australian Greenhouse Office) found that the planning profession does not have the tools available to address the impacts of climate change and there is a perception that climate change projections are too uncertain. Additional information on this project can be found at: http://www.planning.org.au/qld/research-project.html,

Further comments on the draft SPP are outlined in the attached document. The Bureau of Meteorology will forward a more detailed submission to you in the near future. Please do not hesitate to contact

if you wish to discuss this matter further.

Thank you for providing the opportunity to comment on the draft SPP. I would appreciate being kept informed of progress in implementing the Planning Policy and Guideline and look forward to hearing from you in the future.

Yours sincerely

Secretary

/ 🖉 December 2002





GPO Box 787 Canberra ACT 2601 Telephone 02 6274 1550 Facsimile 02 6274 1552 Internet: www.environment.gov.au

Department of the Environment and Heritage - comments on the Draft State Planning Policy and Guideline (SPP)

Section & page 3		
· · · · · · · · · · · · · · · · · · ·	Comments	
State Planning Policy		
Section 4.4, page 2	Intergovernmental Panel on Climate Change (IPCC) Third A second to D	the law law
	change to increase storm tide inundation events. This becard is	
	State Coastal Management Plan. It is recommanded that the Given Covered by the draft policy and is addressed under the	ha
	in increased storm surve events and taked becoment of the Custal Management Plan recognises the role of climate ch	
Section 4. 6, page 2	This section should include reference to the material for the full range of risk assessment and mitigation issues	auge
	Assessment Report).	
Guideline for Natural	This section of the SPP notes that it does alternate to be determined and the section of the SPP notes that it does alternate to be determined and the section of the secti	
Disaster Mitigation	assessments. It is recommended that aligned to be feasible to take climate change into account for hushfire hazard	
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Section 4.7, page 23	estimates take into account uncertainting the projections in Australian temperature, rainfall and evaporation While the	
1 5	model responses they indicate which and the range of future global warming and the range of regional aligned	ese.
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	likely to be subject to increased hash for the subject to increase the likely to be subject to increased hash for the subject to increase the subject	
Section 8, page 39-41	Section 8 could include a first and provide a basis for mitigation measures and adaptive responses	15
/1 8-01	Administered by Environment A to the Environment Protection and Biodiversity Conservation Act 1999 (EDBC A st)	
	significance (NES) A mountain Australia, the EPBC Act provides for the protection of matters of national environment at	
	of NES. The protocted is needed under the Act for proposals or actions likely to have a significant important	
	of NES. The protected matters include: World Heritage values of a declared World Heritage property and in matter	rs
	a declared Ramsar Wetland; nationally listed threatened species or communities; nationally listed mignetic	r of
	Continionwealur manne environment; and huclear actions.	
	An 'action' is defined under the Action	
	action must be of a time that has material birds and activity or series of activities. For the Act to be applicable to	J
	category to another that does not invested interaction with the environment. Rezoning land from one usage	ne
	of the Act. However, subsequent double any ground activity per se, is not considered to be an action falling within the activity per set.	
	if significant impacts an matter of the second of service works) would need to be referred under the	pe
	significant impacts on matters of NES are likely. If following a referral, it is determined that an action is likely to have	ACT
Appendix A2.44	Climate change information and approval by the Commonwealth will be required	
page 55	Cinitate charge information may also be spught from the Bureau of Meteorology.	
Appendix A9.7	The recently released CSIDO Others of the state	[
page 81	document and quoted where any change and Australia's Coastal Communities (2002) could now be added as a reference	
	use and quoted where appropriate.	

'Not all actions potentially affecting these matters will have a significant impact and need approval under the Act. The Commonwealth has issued Administrative Guidelines on 'significance' that give guidance on what types of actions and impacts may be considered significant and require referral under the Act. These g'i'lines (vail '' from '' iron ' Aut''' i's w____' e w_____a.go '_____

	(19/18)
	From: Sent: Friday, 13 December 2002 3:57 PM To: Subject: Fwo: Drait EMA Comments on the Queenslad SPP
	letter spp InterScan_SafeSta dec02.doc mp.bt
	Original Message Date: 12/13/2002 03:14 pm +1000 (Friday) From: To: To: Subject: Draft EMA Comments on the Queenslad SPP
	Good afternoon DGEMA is attached, which I am sending in order to get the comments to you by the due date. Please be aware that it is a draft so do not regard it as the final response. Having said that, I would be surprised if the DG changes the comments.
, be and the second	As said in the draft letter, I am the contact. Please do not hesitate to contact me if you have any queries.
	Regards, Assistant Director Development Strategies Emergency Management Australia
	Ph: email: Important: If you have received this transmission in error please patify up
	<pre>immediately by return email and delete all copies. <<letter dec02.doc="" spp="">></letter></pre>

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DRAFT

File: Ref: EMA/ /02

December 2002

A/Director Disaster Mitigation Unit Counter Disaster and Rescue Services GPO Box 1425 Brisbane QLD 4001

Draft State Planning Policy - Natural Disaster Mitigation

Dear

Thank you for the opportunity to comment on the draft State Planning Policy (SPP). Queensland is to be congratulated for this initiative, the SPP is possibly a benchmark for Australian planning and sets the standard for the other States/Territories to consider. EMA has recently produced a new manual, "Planning Safer Communities – Land use planning for natural hazards", which is complementary to the SPP in that it also promotes the role of land use planning to mitigate natural hazards. I would appreciate it if the EMA manual could be added to the references in the SPP.

My four areas of comment with respect to the SPP follow. I have also attached a list of minor comments and suggestions, which have been raised by EMA staff.

I feel that earthquake should be considered in the SPP. Banhquake can be spatially defined,

even if only in the broad. Geoscience Australia have produced a general map of earthquake risk, though whether the data that is based on is sufficiently detailed to use in this process is the issue.

I also feel that storm surge should be considered. The Queensland State Coastal Management Plan does address storm surge in the topic on Physical Coastal Processes, where the principle states "Risks associated with all relevant hazards including storm tide inundation and cyclone effects are minimised." However the topic is one of ten and only three policies touch on storm surge. These are not yet supported by actions, which have yet to be developed. The SPP has a formal process in the Guideline, I feel the storm tide inundation hazard should be included in the SPP. This is especially pertinent since in many places the hazard has already been mapped.

With respect to Development Commitment and Overriding Need, I recognise that both have to be in the SPP. However I suggest that the SPP stipulate that a rigorous process and precise and complete documentation are needed in support, since both have potential create variances to the Policy objectives, which could have longer term detrimental consequences for the public interest.

DRAFT

I suggest that some words on the role of the Commonwealth be included in Section 8, Roles and Responsibilities, of the Guideline. A form of words for your consideration is included in the attachment.

The Queensland State Planning Policy is certainly a step forward in planning for natural disaster mitigation in Australia. To keep the momentum going, there is potential for EMA to develop a project to on model planning policy, based on the Queensland SPP approach. This could be investigated for the 2003-2004 financial year, if you were interested in participating.

Finally, I reiterate that EMA supports the concept and applauds the Disaster Mitigation Unit for the effort in preparing the Policy.

My contact officer for the SPP is Peter Arnold, Assistant Director Development Strategies, phillippe Please contact him if you have any queries.

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Yours sincerely

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Director General

References:

Suggest add to A9.2 General

Planning Safer Communities – Land use planning for natural hazards, (2002), Emergency Management Australia

Role of the Commonwealth:

Suggested form of words to add to Section 8 of the Guideline;

Commonwealth

There are intergovernmental agreements and a large number of Commonwealth Acts, Regulations and Instruments that need to be considered in the land use planning process. Examples include:

- the Inter-Governmental Agreement on the Environment, signed in 1992 by the Commonwealth Government, State and Territory Governments and the Australian Local Government Association;
- the *Native Title Act 1993*, amended in 1998 planning authorities have an obligation to comply with the Act in areas where native title exists or may exist; and
- the Environment Protection and Biodiversity Conservation Act 1999, which established a Commonwealth administered environmental assessment and approval system operating in addition to but separate from state and territory systems.

Information on Commonwealth instruments is available through the Development Assessment Forum at <www.daf.gov.au.reports.htm>. This contains:

 Commonwealth Planning Instruments—a database of all Commonwealth Acts, Regulations, Agreements, Policies and the like that impact upon planning and development assessment systems and processes.

• State of Play – a report that compares planning systems in Australian states and territories.

Many of the Acts and Regulations, and some of the planning instruments, are available in full through the Australian Legal Information Institute site at <www.austlii.edu.au>.

Consolidated comments from EMA staff:

Section 4, p2 - should integrate location, design and construction standards (the latter could be covered by other regulation).

4.3, p2 – the statement that earthquake is not amenable to clear spatial definition is challengeable on the basis of soil type (see Geoscience Australia); GA have a general map of earthquake risk, though whether they have sufficiently detailed data to use in this process is the issue; design and siting should be considered with respect to strong wind.

4.4, p2 – SCMP 2.2 Physical Coastal Processes, Principle 2D states "Risks associated with all relevant hazards including storm tide inundation and cyclone effects are minimised."

DRAFT

This is addressed by Policies 2.2.2 Erosion prone areas; 2.2.3 Shoreline erosion management and 2.2.4 Coastal hazards. However the three are policies only, figure 5 of the SCMP indicates that "Actions" are "to be developed". The SPP has a formal process in the Guideline, the storm tide inundation hazard should be included in the SPP.

Outcome 1, p4 - could this be phrased in risk management terms?

6.4, p4 - with respect to natural hazard management areas, there is a need to understand risk factors for these hazards.

6.5, p4 - there is a need to consider residual risk to PMF. At the end of the section - would this be considered best practice - not necessarily 1:100.

6.6 & 6.7 - there is a need for specialist information on hazards (BoM, GA, others).

6.10, p5 – overriding need in the public interest – how this is determined is critical (what processes). Also, risk management still needs to be applied to this overriding need (ie the residual risk, or protection for facilities. This appears to be a potential loophole for unscrupulous developers to use to justify a development and for legal types to use to challenge an application refusal. The process for determining overriding need must be robust and legally watertight.

6.12, p5 - example? development commitment is defined in the glossary, but it again needs to be derived through a robust process, or it could be another potential loophole (though perhaps not as bad as above).

Outcome 2, p.5 – also consider accumulative effects of development on hazard/risk (eg increases risk)

7.2, p37 - the variation in scope will also depend on the nature of the developments planned & activities associated with the development and any vulnerability of the activities

8.14, p 41 – define community?

9 Glossary, p 42 – need something on resilience or vulnerability? also include susceptibility (vulnerability is the susceptibility and resilience of a community)

footnote 39, p 48 – the reference should be to p 13, not page 3.

A4.11, p64-65 – Suggest add Natural Hazards and the risks they pose to South-East Queensland, Granger and Hayne (ed), 2001, Geoscience Australia.

- Erom	
	Cuerer Russen
To:	
	12/13/02 4:42pm
Subject:	FW: Planning and Environment Update- December 2002
Raelene,	
F	

Feedback for our Dam Safety Group (and I believe you will be getting the same from the BoM) was the need to emphasis that managing development within the 1 in 100 year flood "line" does not eliminate flood all risk and that significantly larger floods can occur.

Page

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The only other feedback I have had from within the Department is attached - thought you might like to look at it "uncut" (also means I get it to you sooner).

As far as my own feedback goes, I would only make the point that the description of how the SPP deals with "development commitment" is confusing. After 15 workshops I think I am clear, but I don't think the wording in the document is. Maybe it is as simple as adding words like "when there is a development commitment because of a zoning etc., but actual development requires further approvals, these should only be given where lower than existing risk ... etc."

Given the stuff in the explanatory statement in the Draft, do you need this response more formally? If so, please let me know.

cheers

Russell Cuerel Principal Policy Officer Water Use Natural Resources and Mines, Qld phone

-Onginal Message-

Sent: Thursday, 12 December 2002 11:05 AM To: Cuerel Russell Subject: RE: Planning and Environment Update- December 2002

Russell

From

I have sent our comments to Tony Pressland.

Please see the attachment below.

Regards



-----Original Message-----From: Cuerel Russell Sent: Wednesday, 11 December 2002 9:14 AM To: Subject: RE: Planning and Environment Update- December 2002

I assume you guys have no comments on the SPP for Natural Disaster Mitigation prepared by DES??

Reelene Corner - FW: Planning and Environment Update- December 2002 Page Russell Cuerei Principal Policy Officer Water Use Natural Resources and Mines, Qld phone -----Original Message-----From: Sent: Wednesday, 11 December 2002 8:42 AM To: CHQ Planners Contact; IRM P&E Coordinators Subject: FW: Planning and Environment Update- December 2002 Colleagues fyi Regards 7128 ACHARLES From: Sent: Thursday, 5 December 2002 1:55 PM 7128 ACHARLES To: Subject: Planning and Environment Update- December 2002 Good Afternoon, Please find the attached Planning and Environment Update for December 2002. Should have any questions regarding this issue please do not hesitate to contact me on Regards,

<<BDW PE Update (12-02.pdf>>

Blake Dawson Waldron Marketing Co-ordinator

Tel: (

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COMMENTS ON THE DRAFT STATE PLANNING POLICY INCLUDING GUIDELINE ON NATURAL DISASTER MITIGATION

Format of the Policy

A number of suggestions to improve the format of the document are:

- There should be a concise policy scope statement. There is no heading in the policy on the scope of the policy. The scope is dealt with under a number of paragraphs entitled 'The Need to Mitigate the Adverse Impacts of Natural Hazards''. This section is too long and does not provide a clear statement of the scope of the policy.
- It is more logical, for chronological reasons, to refer first to the preparation of planning schemes <u>then</u> development assessment, under the 'Application of Policy' section.

Examination of Proposed Outcomes

Outcome 1 states that within natural hazard management areas, the SPP applies to development that is compatible with the nature of the natural hazard, except where, among other matters, the development proposal is a development commitment <u>and</u> it would have a lower risk than that which generally applies to development in the vicinity. A development commitment includes development with a valid development approval.

This means that the SPP applies when the committed development does not have a <u>lower risk than development in the vicinity</u>, in spite of the fact that it may have a valid development approval. Qualifying a valid development approval in this way seems to run counter to normal principles of administrative law regarding the lawfulness of decisions made prior to when a new law is promulgated.

Climate Change (p.23)

It is inappropriate for the SPP to include a suggestion that local governments form a view about their local area in relation to risks from climate change when the State has no agreed position on the matter. This may weaken the position by local government in the Planning and Environment Court where a decision on a development application based on precautionary approach to climatic change is being defended.

Regional Scale in Natural Disaster Mitigation

The policy sets out the roles and responsibilities of local government in the preparation or amending planning schemes and in development assessment. The question of the role of regional planning however does not appear to have been considered although, in many instances, the extent of these natural hazards would extend well beyond local government boundaries. It is recommended therefore that the SPP include a section on the relevance of these matters to regional land use plans.

Role of State Agencies-

The SPP is focused on the role of local governments in the planning process. This is appropriate because of the responsibility of local governments under the Integrated Planning Act. However, the SPP should also acknowledge that State agencies will have an important role in the land use planning aspects of natural disaster mitigation. Factors that support this role include the following:

- The areal extent of natural disaster issues generally beyond the boundary of local government.
- The expertise and traditional role of State agencies on the management of natural disasters.
- The traditional role of State agencies with respect to mitigation, particularly in relation to information to back up any planning measures.
- The expectation by local governments of the prominent role to be adopted by State agencies.

The principal concern is that there should not be any ambiguity of the role of local government and the State in relation to natural disaster mitigation. Any suggestion that land use planning in relation to natural disaster mitigation is primarily a responsibility of local government will not be accurate unless there is also recognition of the role of State agencies and of the role of regional planning.

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,	Subject:	Submission on SPP Disaster Mitigation	
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Gecko – Gold Coast & Hinterland Environment Council

139 Duringan St, Currumbin Qld 4223

Ph: (07) 5534 1412; Fax: (07) 5534 1401; Email: info@gecko.org.au

13 December 2002

Attention: State Planning Policy Acting Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Email: sppconsultation@emergency.qld.gov.au

Dear Sir/Madam,

Re: Draft State Planning Policy for Natural Disaster Mitigation

Thank you for supplying Gecko - Gold Coast and Hinterland Environment Council, with the draft State Planning Policy for Disaster Mitigation.

The Policy is directed toward the protection of development by attempting to mitigate against the most destructive elements of fire, flood and landslides, but does so by exposing the natural environment to probable permanent loss of biodiversity while hindering its natural regenerative processes.

We assert that this policy does not go far enough to avoid development in disaster prone areas, largely due to the provision that developments already approved are exempt and there is no assessment of the synergistic or cumulative effects of the three factors of clearing for bushfire management reduction and increase in potential landslide and flooding levels.

The changes we have proposed to the draft are intended to alert assessors of development proposals of the need to make an informed judgment when considering such building development proposals in natural hazard areas, located in environmentally sensitive areas.

On a point of detail we have made a comparison of the methods of calculating slope in Appendix 8. Flood, landslide and fire protection are all equally related to the steepness of terrain. The method chosen does not seem to recognise this fact as the graph displays. In the area displayed in the draft 28% of the land shown as suitable is in fact steeper than 1:15.

Gecko made submissions, dated 9 November 2001, on the proposed policy and is concerned to read that none of the specifics in those submissions has been properly addressed in the draft document. Indeed, the environment as such is identified only in the Position Statement and nowhere else. Gecko also brought these matters to the fore on 11 November 2002 at the Surfers Paradise regional workshop on disaster mitigation, and our comments were supported by several other attendees.

Accordingly, we now make a new submission, comprised of a table of amendments and suggested additional appendices, which are attached to this letter, and we urge you to incorporate these issues into the legislation in order to properly protect the environment in all its aspects from the impact of developments in or near disaster prone areas. Special reference should be made to the "Review of the National Strategy for the Conservation of Australia's Biological Diversity (June 2001)" (attached in hard copy).

We should be pleased to discuss further any of the points raised.

Yours faithfully,

President

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- New Appendix 6
 Revised Appendix 8
 - SPP Disaster Mitigation comments
 - "Review of the National Strategy for the Conservation of Australia's Biological Diversity (June 2001)" - hard copy only

Development outcome

A5.1 Ecosystems, including their ecological processes, opportunities for survival, biological diversity and potential for continuing adaptation, are maintained and preserved.

Principles

A5.2 The biological diversity of terrestrial systems and the ecological processes essential for their continued existence are conserved. Loss or degradation of native vegetation, particularly of endangered regional ecosystems and wetlands, is avoided wherever possible. Loss or gegradation of habitats, particularly for rare, threatened and migratory species, is avoided.

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Policies

- obligations under A5.3 The Queensland Government has Commonwealth legislation, including the Nature Conservation Act 1992, the Environment Protection and Biodiversity Conservation Act 1999 and under the Intergovernmental Land identified for Agreement on the Environment. development is to located outside of 'areas of state significance (natural resources)'. Existing land uses shall not expand into these areas unless it can be demonstrated that there will be no adverse impacts on their values. Land-allocation for uses and activities adjacent to 'areas of state significance (natural resources)' shall be compatible with the maintenance of these areas' values.
- A5.4 Biodiversity is fundamental to the maintenance of sustainable ecosystems. In addition to ecological benefits, biodiversity provides essential biological resources (food, medicine and breeding stocks) and associated benefits (scientific cultural and economic). Biodiversity is to be safeguarded by conserving and appropriately managing the diverse range of habitats within the ecosystem. The following issues shall be addressed when evaluating development proposals:
 - (a) maintenance of the connectivity of ecosystems, particularly remnant systems;
 - (b) ensuring viable populations of protected native species continue to exist throughout their range by protection of significant wildlife habitats through provision of adequate buffers;
 - (c) retention of native vegetation wherever practicable;
 - (d) retention and management of riparian vegetation to provide self-sustainable linked networks.

APPENDIX 6: LANDSCAPES

Development outcome

A6.1 The scenic and cultural values associated with landscapes are protected.

Principles

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A6.2 The values of landscapes shall be preserved and recognised for their importance to the quality of life of both residents and visitors, as well as to the economic development and growth of Queensland. The dominance of the natural character of the region (including developed urban areas) is retained.

Policies

A6.3 'Areas of state significance (scenic landscapes)' are areas of outstanding and distinctive scenic quality and are high priority areas for scenic landscape management within Queensland. Queensland's tourism industry is reliant upon the richness and diversity of the landscapes. Natural landscapes also serve to separate and balance more intensively developed landscapes.

A6.4 Development-shall-identify 'areas of state significance (scenic landscapes)', recognise their diversity, quality and scenic values and ensure the preservation of these unique qualities of the region. S.P.P. AMENDMENT REQUIRED

FACTS AND CIRCUMSTANCES IN SUPPORT OF THE AMENDMENT

		11	_	
Statements to	be added .			
Explanatory Statement	The Issues Addressed by the Proposed State Planning Polic Effective land use planning is an Important means of redu community's vulnerability to the natural hazards of flood, bu landslide in ameliorating the destructive effects of insee we the environment and in promoting resilient communities.	ッ cing shfire	the or	
Explanatory Statement	The Outcomes Sought by the Proposed State Planning Poli The proposed SPP does this by ensuring that the potential a impacts of natural hazards are adequately consideredwhe designated for community infrastructure and when the deve could also have adversed impacts on the matural environment	cy nove in la	rse nd is	
2.3, page 1				I.P.A. allows planning schemes to be continuously amended. Suggest this clause be amended to recognise this.
4.1, page 2	reducing the community's vulnerability to natural hazards	lties		Refers back to the Position Statement, Page 1
4.2, page 2				Add the natural disasters of drought and tsunami to complete the list; point out synergetic effects
4.3, page 2	Therefore, the design requirements to catento, strong winds	s		The last sentence should be revised to make the interlinked effects of natural hazards clear.
4.4, page 2	The cumulative effects of flood, bushfire, and landslides do to include the adverse effects some remedial proposals sug would have on the natural environment - including the dest biodiversity and the sustainability of ecosystems.	not : jgesi ructi	seen ted on o	 Refer: Biodiversity and its value ISBN o 642 1990 4 3. Reprinted 1994; Department of Environment Canberra; The National Strategy for the Conservation of Australia's Biodiversity and Guides of the Department of the Environment Canberra
4.6, page 2	Predicted changes include increased flood risks which it higher fisk of damage to transport infrastructure and low-lyi settlements and increased detrimental effects to the natur environment and biodiversity.	ng h	Uma	It needs to be acknowledged, that climate change has effects on the natural environment, especially on Biodiversity. As it is pointed out in ANZECC, June 2001, "Significant climate change will mean that biodiversity must either gradually move away from areas that become unsuitable or, if possible, adapt to the new climate." Therefor the integrated planning schemes play a vital role in providing the conditions for biodiversity to survive, such as reserves linked through vegetation corridors.
4.7, page 3	Inappropriate development in areas susceptible to natural h significantly increases the risks (and associated costs) to the community and associated costs).	naza ne	rds	According to the position Statement of this SPP "development should minimise the potential adverse impacts of flood, bushfire and landslide on the environment" (see SPP, page 1) consequently it should be included in this paragraph

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S.P.P. SECTION

FACTS AND CINCUMSTANCES IN SUPPORT OF THE AMENDMENT

		11 -	included in this according to
5.3, page 3	The following paragraph should be added to:		included in this paragraph.
	The SPP requires the identification of significant natural en areas within or adjacent to natural hazard management are National Parks) minimising risks to such important environma areas should be a key consideration in development assess the preparation of planning scheme.	ronment as (e.g. nental ment and	The policy would make it necessary to alter other sections of the draft such as 6.3 outcome 1 and Annex 1.
6.3, page 4 – Outcome 1	- there is an overriding need for the development in the pub interest, no other site is suitable and reasonably available for proposal, and the site is not within an area on high nature conservation value as identified through the SEQ RNCS	lic or the	SEQ Regional Nature Conservation Strategy Appendix 5 may require amendment, for example bush fire protection requiring vegetation clearance increases risk of landslittee
6.4, page 4	() In the case of the environment the degree of potential of may be measured against the desired environmental outcor planning scheme of the responsible authority.	lamage nes of the	Refer to schedule 10 of I.P.A.
6.5 , page 4		4	Last sentence should be revised "until this occurs" -> last 50/100 years; "that locality" + or aggravating effects of floods downstream/ elsewhere in the catchment can be excluded.
6.7, page 4	When assessing applications for development, the assessin manager will need to confirm whether the proposed develop located within a natural hazard management area, or if the development could cause or aggravate a natural hazard electric this and electric transmission of the second	ent ment is Where in	This addition is dependent on how "management area" is defined. Example: clearing vegetation for fire protection may result in higher erosion, through that in landslides and floods through silitation of the waterways.
6.9, page 5	Outcome 1 aims to ensure that development is compatible we nature of the natural hazard. However, in some cases, it may possible to demonstrate that a proposed development that is incompatible would meet a particular public need to an extent would override the risk associated with the natural hazard and damage done to the ecosystem.	th the be t that	
6.10, page 5	Increased risk to people and the natural environment is a signatural environment is a signatural environment is a signatural environment.	nificant	According to the position Statement of this SPP "development should minimise the potential adverse impacts of flood, bushfire and landslide on the environment" (see SPP, page 1) consequently it should be included in this paragraph.

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S.P.P. SECTION	AMENDMENT REQUIRED	FACTS AND CIRCUMSTANCES IN SUPPORT OF THE AMENDMENT
5.13, page 5 - Outcome 2	Development that is not compatible with the nature of the natural hazard but is otherwise consistent with Outcome 1: does not result in an unacceptable level of risk to people, property of the natural environment;	According to the position Statement of this SPP "development should minimise the potential adverse impacts of flood, bushfire and landslide on the environment" (see SPP, page 1) consequently it should be included in this paragraph.
5.14, page 6	and the development would not result in unacceptable levels of risk to people, property of the environment.	According to the position Statement of this SPP "development should minimise the potential adverse impacts of flood, bushfire and landslide on the environment" (see SPP, page 1) consequently it should be included in this paragraph.
3.16, page 6	Wherever practicable, community infrastructure should be capable of performing its role in maintaining the health, safety and well-being of the community and the protection and safety for the health and the protection and	According to the position Statement of this SPP "development should minimise the potential adverse impacts of flood, bushfire and landslide on the environment" (see SPP, page 1) consequently it should be included in this paragraph.
7.2, page 7	Identifying and, where practicable, mapping areas potentially affected by flood, bushfire, and landslide, and viting chadracent downline cossistemus adversely sensitive to change are necessary to assist in formulating planning strategies and detailed planning measures that minimise risks to people, property, economic activity or the environment	Refer 8.2
Outcome 5	assessment/manager.a/decision/does not complements the achievement of the amission does not complemine the achievement of the amission the DEO's. The planning scheme contains planning strategies that aim to: minimise impacts (forminatural/hazardscorthelemingation on the natural/environment; () define the inatural environmentally valuable areas within the planning scheme.	
7.5, page 7	In relation to flooding , the planning scheme should aim to maintain as well as the flood of eventing function of vegetation.	
Dutcome 6	Add cross reference: to I.P.A. such as I.P.A. (s 3.5 14(2)) could be useful.	
3.4, page 8	Queensland Environmental Protection Agency can provide advice and information on storm tide, climate change and protection	

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	the planning scheme:	deration in	
Glossary, page 9	Desired environmental outcomes (DEOs) are outcomes, focused statements which address the sought to be achieved for a particular issue, circumstance area. They are Key "high order" planning policies cont planning scheme and cover ecological, physical, spatial aesthetic and cultural considerations by virtue of the de environment" in I-P.A. (Schedulero).	end state? I theme or a ned in a economic, inition of	
Annex 1, page 11	Threatens to degrade the environmental provisions of a pla scheme.	hning	
Annex 3.1 , page 14			It has to be acknowledged, that human impacts, such as vegetation removal in the upper catchment, can increase the flood in the lower catchment. Therefore the natural hazard mitigation policy should include upstream development as well. Reference: Commonwealth Department of the Environment, Sport and
A 3.2, page 14	To adopt a lower DFE than the 1:100 year event means to a higher risk of damage and destruction to property, of pollute environment and of high danger to people. This can only be in areas with a very low flood height range, what is most like found in western Queensland with its wide floodplains. But shires are excluded from this policy, the remaining areas at have not only a very high flood height range but also most of population. Therefore exemptions in defining the flood even frequent average recurrence than 1:100 years should be de highest caution, if not left out at all. It might be even appropriate to consider the following as a g "the design flood will be the 1 in 100 year event or largest re flood whichever is the higher." (Smith 1998, page 40)	accept on to the callowed ely to be as those the coast, of the t at more alt ¹ with puldeline: acorded	 1, 1993. Page 11 Reference: Smith, David Ingle. Urban Flooding in Queensland – A Review. 1998 Due to a large variation in flood height between locations, the possibility of failure from extreme events and the problems posed by the probable maximum flood, the defined flood event should be chosen very carefully. "All too often the perception of the 1 in 100 year (or other) design flood is that divides areas that are considered as flood prone from those (erroneously) thought to be flood free." In addition the effects of climate change will increase the occurrence and the level of floods, what leads to a rise in the level of the 1 in 100 years flood.
A 3.3, page 14	When determining a natural bazard management (flood) DF possible effects of climate change shall be evaluated.	8	
A 3.6, page 14	Synergetic effects between the different natural hazards and mitigation measures.	the	

S.P.P. SECTION	AMENDMENT REQUIRED	FACTS AND CIRCUMSTANCES IN SUPPORT OF THE AMENDMENT
State Plannin	ng Policy Guideline for Natural Disaster Mitigation	
2.1, page 15	The SPP aims to ensure that the natural hazards of flood, bushfire and landslide and consequential damage to the natural environment caused by such events are adequately considered when making decisions about certain development.	
2.2, page 15	() consequential damage to Natural Environment	Reference: Commonwealth Department of the Environment, Sport and Territories (ed.). Ecosystem Services. In: Biodiversity Series. Paper No 1, 1993. Page 11
4.2, page 22	These three factors result in more people and property and the natural environment being vulnerable to natural disasters.	
4.3, page 22	The SPP will shape land use planning and development decisions to create settlement patterns that reduce vulnerability to many flood, landslide or bushfire events, leaving space for the natural role those events play in ecological processes and ameliorate at the same time the destructive effects of these events upon the natural environment and so promote resilient communities.	Reference: Blanck, Stuart. Short-circuiting our rivers and wetlands. In: Australian Conservation Foundation (ed.) special habitat supplement. On the brink – Australia's threatened species. In addition, according to this reference: floods and bushfire are to a certain extent part of the ecological cycle in Australia, however, development in areas prone to those events makes a natural disaster out of them.
4.5, page 22	These costs include loss of life, loss of biodiversity and degraded environment.	The addition highlights the wide extent of environmental loss.
4.6, page 23	Predicted changes include reductions in annual rainfall but increased rainfall intensity, more frequent and more severe droughts and consequential, increased risk of landslides, increased risk of bushfire and increased flood risk and damage to transport infrastructure and human settlements. Climate change will mean that blodiversity must either gradually move away from areas that become unsuitable or if possible, adapted a new climate. Vegetation confiders will be vital in such adaptations.	Reference: ANZECC (ed.). Review of the national strategy for the conservation of Australia's biological diversity.2001. page 57:

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FACTS AND CIRCUMSTANCES IN SUPPORT OF THE AMENDMENT

The SPP addresses this issue by seeking to ensure that climate change is considered when certain natural hazards assessments are undertaken. Climate change should be considered as a matter of increasing urgency with reference to bushine hazard management.	Long-sighted planning policy will be able to reduce the destruction of Australia's biodiversity by climate change through selecting reserves linked with vegetation corridors to provide space for migration into more suitable areas or even adaptation to changed climatic conditions. Reference: ANZECC (ed.). Review of the national strategy for the conservation of Australia's biological diversity.2001. page 57
area coincides with or abuts another defined area of a planning scheme, refer to clause 6.10	
	The adoption of a lower DFE than 1:100 should be handled with greatest caution, as people tend to perceive areas outside the DFE as flood-proof and as the local government is the only source of information exemptions from the general 1:100 year DFE should be researched thoroughly. Refer to suggestions re Annex 3.2, page 14. Reference: Smith, David Ingle. Urban Flooding in Queensland
- there is an overriding need for the development in the public interest, no other site is suitable and reasonably available for the proposal, and the site is not within an area of State, regional or local nature conservation value as identified through the SEO RNOS.	Re 6.3 outcome 1, page 4
Outcome 1 of the SPP applies to development in natural hazard management area and will not seriously degrade the natural environment.	
Information about the severity of the hazard and its environmental values may be available for the development site	
Threatens to degrade the environmental provisions of a planning scheme.	
Generally, a development proposal that would result in adverse impacts on existing or approved development external to the site (e.g. by increasing the extent or severity of the natural hazard on adjoining properties)	
	The SPP addresses this issue by seeking to ensure that climate change is considered when certain natural hazards assessments are undertaken. Climate change should be considered as a matter of increasing urgency with reference to bushfire hazard management. When an area defined as a natural hazard management area coincides with or abuts another defined area of a planning scheme, refer to clause 6.10 - there is an overriding need for the development in the public interest, no other site is suitable and reasonably available for the proposal, and the site is not writin an area of State, regional or local nature conservation value as identified through the SEO RNCS. Outcome 1 of the SPP applies to development in natural hazard management area and will not seriously degrade the natural environment. Information about the severity of the hazard <u>and/tis</u> environmental values may be available for the development site Threatens to degrade the environmental provisions of a planning scheme.

SECTION	AMENDMENT REQUIRED	FACTS AND CIRCUMSTANCES IN SUPPORT OF TH AMENDMENT
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	environmental degradation would not be acceptable	
Outcome 2		
page 32 & 6.30 ?		
Appendix 1, page 44 Figure 1	Short term – long term See A 1.7	
Appendix 5, page 66,	Development is compatible when: 1.1	
67 A. FLOOD	does not ser ously degrade the environment.	
	2.3.2	
	Any changes to the flood characteristics at the DFE outside of the subject site arising as a result of:	
	do not remove significant vegetation or increase the risks to existing populations and property or adversely affect the interests of other landowners.	
Appendix 5 page 68, 71 B. BUSH- FIRE	1. Development does not compromise the safety of people or property from bushfire or endangematural environmental areas of a planning scheme.	
	Development is compatible when:	
	1.2.3 hot result in the clearing of vagetation to the defineent of the blockversity of the aread	
	7. Development that materially intensifies the use of high bushfirehazard areas incorporates effective siting, design and management measures to minimize bushfire hazard and protectime natural environment.	
Appendix 5 page 72 C. LAND- SLIDE	Development is compatible when:	
	1.1 The development:	
	does not require the removal of vegetation lonad purpose;	
Appendix	Per cent gradients are very suitable for engineered slopes such as roads where the incline is built and can be	The method used by the City of Gold Coast to determine landslide hazard classification based on the studies of Willmott

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S.P.P. SECTION

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FACTS AND CIRCUMSTANCES IN SUPPORT OF THE AMENDMENT

the slope angle of the ground surface when evaluating hazard ratings. Calculating slopes from a Topographic map uses per cent gradient but offers no argument for its selection. A comparison of the two methods using the contour map provided in the draft shows that a slopes angle would be more suitable. The 4.1% slope calculated in the draft would lead a developer to believe that all the land used in the exercise is suitable for development Using the Willmott slope angle al the land between contours 40 and 50 is unsuitable because it is steeper than 15°. As this calculation is also to be used for determining whether land is accessible to fire fighting equipment, the per cent	the slope angle of the ground surface rd ratings. 's et al. studies are used by the City of ne landslide hazard classification used
Calculating slopes from a Topographic map uses per cent gradient but offers no argument for its selection. A comparison of the two methods using the contour map provided in the draft shows that a slopes angle would be more suitable. The 4.1% slope calculated in the draft would lead a developer to believe that all the land used in the exercise is suitable for development Using the Willmott slope angle al the land between contours 40 and 50 is unsuitable because it is steeper than 15°. As this calculation is also to be used for determining whether land is accessible to fire fighting equipment, the per cent	the slope angle of the ground surface when evaluating hazard ratings.
A comparison of the two methods using the contour map provided in the draft shows that a slopes angle would be more suitable. The 4.1% slope calculated in the draft would lead a developer to believe that all the land used in the exercise is suitable for development Using the Willmott slope angle all the land between contours 40 and 50 is unsuitable because it is steeper than 15°. As this calculation is also to be used for determining whether land is accessible to fire fighting equipment, the per cent	n a Topographic map uses per cent argument for its selection.
As this calculation is also to be used for determining whether land is accessible to fire fighting equipment, the per cent gradient method of calculation along and the per cent	vo methods using the contour map hows that a slopes angle would be more pe calculated in the draft would lead a hat all the land used in the exercise is ent Using the Willmott slope angle all ours 40 and 50 is unsuitable because it
a substantiation of calculation slope again fails.	lso to be used for determining whether re fighting equipment, the per cent culation slope again fails.





- Other sources of pollution include the dumping of waste from ships. Australia currently regulates the deliberate loading, dumping and incineration of waste at sea under the Environment Protection (Sea Dumping) Act 1981 and the Environment Protection (Sea Dumping) Amendment Act 1986.
- In the Northern Territory, waste management and pollution control strategies and legislation are in place. Erosion and sediment control plans are required for new developments, and guidelines have been prepared to assist developers.
- The New South Wales water reforms outlined under Objective 2.5 "Water", include the identification of water quality objectives for each river valley and the development of river and groundwater management plans. Other activities in the State include the urban stormwater management program, the National Strategy for the Management of Coastal and Sulfate Soils (National Working Party on Acid Sulfate Soils, 2000) and environment protection licensing by the Environment Protection Agency including load based licensing.

3.5 FIRE

Reduce the adverse impacts of altered fire regimes on biological diversity.

Assessment: Partially achieved

With the increasing awareness of the importance of maintaining biological diversity, appropriate fire regimes which tal into consideration the frequency and extent of disturbance are, for the most part, being developed and implemented by forest and other land management agencies. Management agencies face resource constraints that limit their ability to maintain traditional fire regimes. Other objectives, such as the protection of human life and property, have to be balanced with biodiversity conservation objectives.

management planning. There needs to be wider agency participation and coordination. This issue also needs to be considered across all land tenures and ecosystems. Further work in these areas is required.

ACTIVITIES

- The report Australia: State of the Environment1996 identified altered fire regimes as a potential threat to biodiversity. It recommended that the extent, frequency, seasonality and impact of fire by
 - vegetation types should be monitored.
- The Commonwealth has funded the Cooperative Research Centre for Tropical Savannas, which is continuing its research program on fire and tropical savannas.
- Throughout the Northern Territory, volunteer bushfire brigades are maintained and monthly monitoring of bushfires is carried out. The ecological effects of fire are being monitored in conservation areas. Techniques for monitoring fire using remote sensing are being researched. There are community education and involvement programs in three biogeographic regions.
- New South Wales is developing guidelines for ecologically sustainable fire management. The guidelines will identify appropriate fire regimes for the biodiversity within given ecosystems. These guidelines can be used in the full range of fire management planning initiatives in the State, thus ensuring the deliberate use of fire regimes that conserve biodiversity.
- The Fire and Biodiversity Consortium has been established in south-east Queensland with the assistance of Natural Heritage Trust funding to bring together and disseminate information on fire management practices that will support conservation of the area's biological diversity. The consortium includes representatives from local authorities, the Rural Fire Service, Queensland Parks and Wildlife Service, the Department of Natural Resources, the Department of Primary Industry, Greening Australia, universities, and Landcare Australia.

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3.6 IMPACTS OF CLIMATE CHANGE ON BIOLOGICAL DIVERSITY

Plan to minimise the potential impacts of human-induced climate change on biological diversity.

Assessment: Not achieved

If global climate change causes climatic zones to shift across the continent of Australia, integrated strategic planning will be essential to ensure Australia's biodiversity survives. Plants and animals are adapted to particular climatic regimes and are limited in their distribution by this. Significant climate change will mean that biodiversity must either gradually move away from areas that become unsuitable or, if possible, adapt to the new climate. Reserves need to be selected, designed, linked with vegetation corridors and managed to provide the conditions for biodiversity to be able to gradually alter its distribution in response to climate change.

Within the agricultural community there is a growing awareness of the need for integrated management practices which include more sustainable farming systems to enhance productivity and long-term viability. New greenhouse response measures in the agricultural sector aim to build on this awareness by providing appropriately tailored and targeted information to incorporate consideration of greenhouse issues into agricultural management practices.

Considerable effort is being put into a range of revegetation activities as part of Australia's greenhouse response measures. This work needs to be planned to ameliorate the impact of climate change on native biodiversity.

ACTIVITIES

- The ANZECC contact group on greenhouse has identified some priority areas of interest including adaptation strategies for climate change. A draft work program has been developed which indicates that the actions required include:
 - identifying priority issues for discussion; and
 - compiling a report of activities undertaken by alljurisdictions that could contribute to developing adaptation strategies. These could include current regional program activities conducted by the
- States, agricultural extension work, and town and regional planning programs. The Commonwealth is responsible for the development of detailed adaptation plans for biodiversity of national
- environmental significance threatened by climate change.
- The Northern Territory has developed the concept
 Of=Greater-Parks' that_cover a broad latitudinal
 - range and has partially implemented this.
- New South Wales has developed the NSW Greenhouse Action Plan (1998).

3.7 REHABILITATION

Repair and rehabilitate areas to restore their biological diversity.

Assessment: Partially achieved

Given the scale of land clearing, dry land salinity and other impacts on biodiversity, areas needing rehabilitation can be expected to increase for many years. Projects funded under the Natural Heritage Trust and by the States and Territories are detailed under Activities. There is a continuing need for investment in this area by governments and, increasingly, by the private sector to reverse the long-term decline in the quality and extent of Australia's native vegetation.

ACTIVITIES

□ The ANZECC National Framework for the Management and Monitoring of Australia's Native Vegetation (1999) describes a best practice approach to and platform for institutional reform that has as its outcomes:

- restoring, by means of substantially increased revegetation, the environmental values and productive capacity of Australia's land and water;
- retaining and enhancing biodiversity and native vegetation at both regional and national levels; and
- improving the condition of existing native vegetation.

- The Northern Territory has spent over \$3.5 million in six years to restore and rehabilitate extensive freshwater wetlands devastated by saltwater intrusion.
- The Revegetation Strategy for South Australia (State) Revegetation Committee 1996) aims to improve coordination of revegetation activities to ensure value for effort. A series of regional revegetation strategies are being prepared for the agricultural lands to provide a framework for sustainable land use and

biodiversity at the local and property level. A plan for the upper south-east of the State was published in 1998 and a draft plan for the Mount Lofty ranges was released for public comment in late 1999.

The Western Australian Salinity Strategy (2000) includes a specific commitment to, and funding for, a 'natural diversity recovery catchment program', under which priority areas for investment are selected based on their biodiversity values.

3.8 ENVIRONMENTAL ASSESSMENT

Ensure that the potential impacts of any projects, programs and policies on biological diversity are assessed and reflected in planning processes, with a view to minimising or avoiding such impacts.

Assessment: Achieved

Environmental impact legislation is in place in the Commonwealth and each State and Territory. The application and scope of such legislation varies considerably between jurisdictions. The COAG Heads of Agreement on Commonwealth/State Roles and Responsibilities for the Environment provides for the Commonwealth to focus on matters of national environmental significance. This approach is being implemented through the EPBC Act which came into effect on 16 July 2000. To eliminate duplication, the Act sets out the basis for bilateral agreements with the Commonwealth for accreditation of State and Territory environmental impact assessment processes.

Strategic environmental assessment provides the opportunity for environmentally significant factors to be taken into account in the development, approval and implementation of policies, plans and programs. It may also be applied to classes of development proposals, or to staged development proposals, in order to facilitate early consideration of environmental matters and more efficient assessment and approval processes.

Ongoing action is required to implement Commonwealth, State and Territory legislation and to make environmental impact assessment compulsory for programs and policies.

ACTIVITIES

- The legislation governing Commonwealth environment impact assessment is the recently enacted EPBC Act. Under the EPBC Act, Commonwealth environmental assessment and approval will be triggered by actions that have, will have, or are likely to have, a significant adverse impact on matters of national environmental significance. The EPBC Act incorporates the capacity to undertake strategic environmental assessment of policies, plans and programs, but only where they impact on matters of national environmental significance or involve Commonwealth areas or Commonwealth actions.
- Some State Governments are currently reviewing their environmental assessment legislation to incorporate strategic environmental assessment.
- In the Northern Territory, environmental impact assessment of new developments specifically addresses regional and local biodiversity issues.
- In New South Wales, the Threatened Species Conservation Act 1995, Fisheries Management Act 1994 and the Environmental Planning and Assessmer Act 1979 require that a species impact statement is prepared for any development where it is likely to significantly affect threatened species, populations or ecological communities.

The concurrence of the Director-General of the National Parks and Wildlife Service or the Director-General of Fisheries (as appropriate) must be obtained before consent can be granted. Funding has been provided to develop threatened species survey and assessment guidelines for the purpose of informing development-oriented assessment (including Environmental Impact Statements and Species Impact Statements). These guidelines will provide a set of general principles which can be adapted to suit local circumstances and form a basis for local councils wanting to develop their own guidelines. The process of their development will involve wide consultation.

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 At the local government level in Australia, planning legislation in each State or Territory generally requires bodies making decisions on development applications to consider environmental impacts. This is in addition to any requirements that might apply under environmental impact legislation.

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	From: Friday, 13 December 2002 4:55 PM Sent: Friday, 13 December 2002 4:55 PM To: SPP Consultation Cc: Image: Consultation Subject: Submission - Proposed SPP for Natural Disaster Mitigation	
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!	SPP Submission InterScan_SafeSta	
<u>י</u> זי,	Dear Acting Director,	
. ' . '	I attach my submission in relation to the Proposed SPP for Natural Disaster Mitigation.	
. 1	A copy of the submission has been sent to ERM Town Planning Consultants for their information.	
	Regards,	•
 	Fictor Sebills	
	Direct Direct Telephone to Tele	
\square	(300 accord 1110, 511 Submitsbion 00300/342 V3.40C)	
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Level 38, Central Plaza-One-Brisbane Qld 4000

13 December 2002

Your ref	CDS 4889	
Our ref		
Phone		
Email		
Doc no	Brisbane\003807342	

State Planning Policy Acting Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 Brisbane Qld 4001

By email

Dear Sir

Proposed State Planning Policy for Natural Disaster Mitigation

Thank you for your letter dated 21 October 2002 inviting me to make a submission on the Proposed State Planning Policy for Natural Disaster Mitigation.

Your letter is addressed to me as a solicitor of Freehills. Whilst I happen to be employed as a solicitor at Freehills, my views are not necessarily those of Freehills and this submission should not be taken to be an expression of the views of Freehills.

1 Submission

I have read and considered the Proposed Policy. I believe it:

- is based upon the sound principle of discouraging development that might otherwise increase threat to life and property on account of bushfire, flood and landslide;
- is an **appropriate mechanism** for managing development that could be affected by the natural hazards of bushfire, flood and landslide; and
- will **place an important check** in the development assessment regime of Queensland.

Accordingly, I support the Proposed Policy.

2 Proposal for complementary amendments

I submit that changes could be made to the *Integrated Planning Act 1997* to ease public confusion surrounding the implementation of the Policy.

2.1 Complex regime

As more elements, such as the Proposed Policy, are inserted into Queensland's development regime, the regime becomes more complex and difficult for the public to comprehend. This is undesirable and in conflict with the purpose of the *Integrated Planning Act 1997* (s.1.2.1). As the explanatory notes to this Act explain:

"... in recent decades, community consciousness of a broader range of environmental and social considerations has increased. This has been coupled with greater demands for public accountability and public involvement in the decision making process. Corresponding pressure on governments to respond has resulted in more and more layers of State and local government regulation being added to deal with each new issue, with little thought being given to the impact on, and objectives of, the system as a whole. The result is the proliferation of ad hoc regulation that often impedes, rather than promotes, the fulfilment of community expectations." (Page 1)

The need to regulate development that could increase danger to life and property from natural hazards has become an issue of the public consciousness, particularly following the Thredbo disaster and recent bushfires. Whilst the Proposed State Planning Policy for Natural Disaster Mitigation could be perceived as government responding to that consciousness, it could also be perceived as another layer being added to the development regime and resulting in add hoc regulation.

2.2 Duty to consider impacts of policy

In introducing this Proposed Policy, it is incumbent upon government to consider the impact upon, and the objectives of, the development regime of Queensland as a whole. In some respects, the Policy itself addresses this aim. It encourages cooperation amongst local governments and state departments.

However, I submit that the aim could be better achieved by the Policy's introduction being coupled with the introduction of a mechanism for promoting wider public awareness of the Policy's effects on particular properties. I submit that the appropriate mechanism for this is notification in Planning and Development Certificates as to whether particular properties are located in a Natural Hazard Management Area.

Planning and Development Certificates are obtained through local governments, usually by purchasers inquiring about particular properties. The *Integrated Planning Act 1997* specifies, at ss.5.7.9-11, what information should be included in Planning and Development Certificates. Public awareness about the effects of the State Planning Policy for Natural Disaster Mitigation would be enhanced if Planning and Development Certificates advised whether a particular property was in a Natural Hazard Management Area or not. This would draw the mind to the existence of the Policy and its effects. Later development would be approached with an appreciation of the Policy's existence.

2.3 Specific amendments recommended

Requiring local governments to notify in Planning and Development Certificates whether a particular property is in a Natural Hazard Management Area can be achieved through amendments to the *Integrated Planning Act 1997* as follows:

- Section 5.7.9, at the end, insert
 - "(d) a statement as to whether the premises are located in a Natural Hazard Management Area"
- Section 5.7.10(1), at the end, insert
 - "(g) a statement as to whether the premises are located in a Natural Hazard Management Area"
- Section 5.7.11(1)(c), at the end, insert
 - "(iii) whether the premises are located in a Natural Hazard Management Area"
- Schedule 10, after the definition of "native vegetation" insert

"Natural Hazard Management Area means an area that is a Natural Hazard Management Area pursuant to the State Planning Policy for Natural Disaster Mitigation [policy number/year];"

3 Conclusion

I support the State Planning Policy for Natural Disaster Mitigation. I am concerned to ensure that the Policy is integrated into Queensland's development regime further than the extent permitted by the Policy when it is read alone.

Section 1.2.2(1)(a) of the Integrated Planning Act 1997 provides that if a function or power is conferred on an entity, the entity must perform the function or powerin a way that advances the Act's purpose. Accordingly, in implementing the Proposed State Planning Policy for Natural Disaster Mitigation, the Department of Emergency Services and the Department of Local Government and Planning are obliged to implement the Policy in a way that advances the purpose of the Integrated Planning Act 1997.

The amendments recommended in this submission would further integrate the Proposed Policy into the development regime of Queensland and advance the purpose of the *Integrated Planning Act 1997*.

Once again, I thank you for inviting me to make a submission. Should you wish to discuss my views further, I can be contacted on **Contact and Contact**

Yours faithfully

SUBMISSION SPP- NATURAL DISASTER MITIGATION

SUBMITTER'S NAME:

SUBMITTER'S ADDRESS:

132 VALLEY DRIVE
TALLEBUDGERA OLD 4228
Tel:
Rux:
Rmail: 1

DATE

13 DECEMBER 2002

GROUNDS OF SUBMISSION

Natural hazards do not have to become natural disasters. They need to be properly managed. Rather than accept their own responsibilities, there has been a tendency by all Governments to use legislation to pass Governmental responsibility onto other parties, being other Governments and statutory bodies or to professional and technical consultants or private individuals and organizations. This approach, with the increase in *'red-tape'* and public confusion but no real solution to the actual problem, appears to be happening in the draft SPP.

The SPP applies where "the development is proposed within a natural hazard management area." What the SPP then does is to make many areas that have very little actual hazard risk part of the natural hazard management area. This SPP is trying to use arbitrary quick- fix basic standards to trigger Natural Hazard Management Areas that are not entirely relevant to solving the real problem but will delay, confuse and create administrative night-marces for many development applications that represent minimal natural disaster risk for Federal, State or Local Governments.

The Policy Approach (Section 5.2) and intention "is that, wherever practicable, natural hazard management areas should be identified through a comprehensive and detailed natural hazard assessment study," but no resources are applied to enable these assessment studies and no real criteria have been specified to use in the assessment study if it was to be completed. The relevant criteria and risk level should be specified in the SPP or the SPP will become a bureaucratic nightmare with no benefit in reducing natural disasters.

Even if the policy intention has merit, the effect will be to pass responsibility, administrative burden and cost onto other parties when natural disaster mitigation is a State Government responsibility that is better resolved by providing appropriate resources to Local Government and by regional planning rather than making individual development applications under the IPA and IDAS carry the burden.

Natural disasters by definition do not apply generally to individual developments and on the whole action by individual developments will not avoid or prevent natural disasters. This SPP really represents an administrative burden of "red-tape" being passed onto the community under the IPA for State Government convenience without any real result. Section 4.1 says "Mitigation means measures to reduce the severity of, or eliminate the risk from, disasters. Mitigation is usually thought of in terms of prevention and community preparedness." These matters should not use development applications under IPA as the prime solution since most of the problems and risks are historical (we now are aware of the problem and cost), and they must include the whole community and existing development in cost effective solutions.

The Bushfire Hazard Management area is based on individual assessment of development applications rather than a Local Area or Community basis, even if the development application is for an in-fill development, based on Queensland Fire and Rescue Service Medium and High hazard area of the Bushfire Risk Analysis maps. While Annex 3.3 (b) allows for hazard management areas to be "suitably modified following a review (e. g. 'ground truthing') by the local government", this standard is totally dependent on the reliability of QFRS maps which are regional in nature and the criteria used for determining Medium and High Hazard areas on those maps.

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In the case of Gold Coast City Council, which is one of the few local governments to have completed a Bushfire Management Strategy, the GCCC uses QFRS personnel as their consultants to evaluate Bushfire Mitigation Plans prepared by developers' consultants in individual development applications. The QFRS are unlikely to amend their regional Bushfire Risk Analysis maps. Therefore, much land in the loosely qualified Medium and High hazard areas will never be developed even if permitted by Planning Schemes or with suitable mitigation measures in place because the developer, the Council, the QFRS and any consultants providing reports could be considered liable for future bushfire risks. The alternative of no development may well increase the overall bushfire risk through increased ground fuel loads than if a development with suitable mitigation measures in place was approved.

Fire in individual homes will never be eliminated; that's why we must have a reliable Fire Service. Bushfire or wildfire depends on many factors such as type of vegetation, ground fuel loads, rainfall patterns, slope, human error, access and availability of fire fighting resources. These aspects of bushfire are better addressed at a community or regional level than in the process under the Integrated Planning Act for individual development applications. These issues should be addressed primarily in Community Infrastructure provisions of Planning Schemes and not arbitrarily against future individual development applications.

Quality hazard reduction of ground fuel loads, buffer zones and fire-breaks on the out-skirts of development will be far more effective in bushfire control than most fire mitigation measures in individual new development applications that will be regulated by this SPP if it is enacted as proposed. Most of these outer areas are Government controlled land as National Parks, local parks and nature buffer zones so the SPP should be directed at Governments, State and Local, rather than as another imposition on private landowners during development applications under the IPA. Private landowners will find it difficult and expensive to develop land and eventually it will not be viable to continue the existing use of the land or to pay rates and land taxes on it. Development approvals already contain buffer zones where this is deemed necessary.

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Landslide is not a major hazard on private land in Australia, with most occurrences being on Government controlled land and contributed to by past Government policies or decisions. The AGSO report "Wollongong Landslides: Hazard Modelling and Risk Assessment" states "Landslide in Australia, for the most part, is not seen as a major threat to our urban communities," and in Australia, there have been 37 recorded fatal landslides since 1842 which have been responsible for the deaths of 83 people. This includes 18 killed at Thredbo in July, 1997 and 9 killed at the Gracetown cliff collapse in September 1996.

The SPP in Section 5.6 says "Although landslides can occur on lesser slopes (slope being only one of a number of factors that determine landslide hazard), the 15% threshold was adopted as the threshold for landslide hazard as slopes steeper than this are generally regarded as having a greater potential for landslide hazard." Any legislation as indistinct as this, i. e. generally regarded and greater potential, used to define a natural hazard will cause confusion and require a lot of time in Court for clarification and not improve the natural risk or outcome.

Landslide should not be included at all as an assessment under IPA development applications in this SPP. The administrative burden on all applications for a minimal risk should not be included in this legislation. The SPP should only refer to State and Local Government facilities where most occurrences will happen and be addressed in the community infrastructure sections of Planning Schemes. A list and cost should be compiled historically on the actual extent of natural disasters caused by landslide and the cause of the landslide analysed. This analysis would show that there is not a major threat in Queensland from landslide on private land and any risk should be incorporated in the Standard Building Regulations rather than IDAS development applications.

Any mention of landslide hazard should be included as part of the Standard Building Regulations and addressed by engineers when designing the type of building or structure and in foundation and excavation procedures. For individual IPA development applications, landslide is not a major natural hazard and no natural disaster could occur, other than intense rainfall, major earthquake or tsunami, that would not be included as a geotechnical report accompanying a development application. Engineering solutions can be found for any potential unknown greenhouse effects.

To consider an arbitrary measure of "all land with a slope of 15% or greater" as a test to trigger potential landslide hazard is an abuse of legislative power and a lack of understanding of the real risk. The SMEC Report for GCCC on Landslip Study for the City of Gold Coast, which is referred to in A 9.6 of the SPP, defines "a landslide (or landslip) as a downslope movement of a soil or rock mass as a result of shear failure at the boundaries of the mass."

SMEC also says landslide movement occurs in three main forms:-

- 1) by sliding along a failure surface
- 2) by falling down a steep slope
- 3) by flowing as suspended mass, usually in water c.g. a mudslide or debris flow.

property should be discouraged in areas of high or medium hazard severity, unless the planning strategy includes clear mechanisms aimed at ensuring that appropriate levels of safety will be achieved through the development assessment process." What is the point of consultant reports and mitigation measures when the onus of determining appropriate levels of safety and clear mechanisms lie with the assessment manager?

The real problem is that too many areas under the SPP are classified as natural hazard management areas with inaccurate and arbitrary measures and no clear definition of "compatibility" with the "nature of a natural hazard" or criteria to assess this compatibility are available in the legislation. If the State Government wants to stop most new development applications in the State, they should be honest enough to state this plainly to the electorate, rather than introduce bureaucratic legislation that will eventually have this effect. Assessment managers will not be able to assess or approve development and developers will not waste time and money to deal with such uncertainty and unreliability. Values for freehold land will be affected.

Section 7.8 applies to existing development commitments but very little definition is given to incentives, development bonuses or mechanisms to approve developments. Unless these are specific and applied in good faith by assessment managers, the developer inevitably must proceed to the Planning and Environment Court with its associated risk, cost and time delay to achieve an economic result.

Outcome 6 requires Planning Scheme Codes. When Codes are specified they are often considered in isolation in reference to the particular problem that they address. However, as most development will have up to 10 Codes applicable, the cumulative effect of each Code on a particular development will act to require refusal of most developments even if satisfactory mitigation measures are adopted. Under the IPA, the effect of Codes is that they are mandatory and allow very little or no assessment manager discretion even if a development has public benefit or planning merit.

It will be impossible for most development applications to satisfy the Outcomes under the proposed SPP. As a test of this fact, before any legislation is presented, assessment should be made of past approved developments to see if they would be approved under the proposed SPP and new planning Codes. I suspect very few developments would be approved and, if approved, approval conditions would make them no longer economic without a large increase in land prices. Supply of land will be disrupted by the additional delays in approving development applications, also increasing the cost of new land.

Once legislation adopts an arbitrary value as a standard with the intention of generating further activity by local governments who have limited resources to do the work, then the arbitrary value will become the standard as the risk is too high for the local government, developers or consultants to justify a different standard, even with a majority of public support which would be difficult to demonstrate. Everyone wants to avoid responsibility and cost to themselves and pass the cost or blame to someone else.

SMEC'S risk assessment of site features includes slope angle, slope shape, site geology, material strength and thickness, concentration of surface water, concentration of groundwater, evidence of instability, rock fall, slope of rock face, orientation of defect system, and evidence of instability. Rainfall intensities are often causal factors. Stability of sloping ground is controlled by three main factors being the angle of the ground surface, the strength of the materials below the ground surface and the level of water within the slope.

Landslide should not be part of this SPP but should be covered in the Standard Building Regulations. An arbitrary standard of "all land with a slope of 15% or greater" in Annex 3, as a default where local government studies have not been undertaken, is not a suitable measure of a natural hazard or its risk. Most development land in Queensland that is economic for development or close to existing infrastrucure will be either flat and flood-prone or on slopes of 15% or greater. The slope test needs to be abandoned, or include other relevant factors or increased to at least 25% slope.

The proposed GCCC Code for "Steep Slopes or Unstable Soils" permits development over 25% slope when an acceptable Geotechnical or Slope Stability Assessment Report is provided with the development application. Land which is identified as medium and high hazard rating on GCCC records has been rated as very low by specific individual geotechnical analysis. If the Queensland Government is serious about addressing landslip issues it should determine accurate risk profiles for landslide, not just 15% slope, and fund geotechnical studies for each Local Government included in the SPP rather than imposing an arbitrary value where studies have not been completed.

Outcome 1 under Section 6.1 requires development to be "compatible with the nature of natural hazard". How can 'compatible' be assessed without definition and appropriate criteria? What level of risk is acceptable, how do you assess and value mitigation measures and how do you enforce the mitigation measures? I do not think adequate thought has been applied to achieving practical solutions to the problems raised by the SPP for either Local Government or the general public. State Government must find practical, workable solutions and adequate funding rather than legislating the problem and responsibility away from themselves.

Outcome 2 only applies when the development "is otherwise consistent with Outcome 1", which does not make any sense when Outcome 1 requires development within natural hazard management areas to be compatible with the nature of the natural hazard, but Outcome 2 applies to "Development that is not compatible with the nature of the natural hazard but is otherwise consistent with Outcome 1". How does development become 'compatible' with the nature of the natural hazard? If it is 'not compatible' how can it be 'otherwise consistent'? What weight and value is given to mitigation measures?

Outcome 5 and Section 7.7 almost prevent any development in natural hazard management areas that increases the "number of people living, working or congregating" therein. By definition, the act of development will trigger this event (more people) or you would not need a development application, so very little development could satisfy Outcome 5. "In particular, uses such as residential development that are likely to materially increase the risks to life or personal

The SPP Guideline has legal status. This guideline should be more specific and include technical criteria for assessing development applications so that the Planning and Environment Court will not required to finalise every development application. Section 3.2 (i) requires "the assessment manager must have regard to the SPP when assessing development applications." Section 3.6 even encourages local government or assessment managers to plan or assess "more stringently or in more detail than required by the SPP."

It will not take the bureaucracy of Local Government long to follow the example of State Government bureaucracy to increase requirements and pass responsibility onto someone else. Investigate the current Planning and Environment Court Appeals I ist and recent Court decisions to verify this eventuality. Development applications will not be worth the risk because, if a development application is refused by the assessment manager, how can a landowner ever sell their land for use other than in its current state or pay rising rates and land taxes on increasingly uneconomic land. It will not matter if the Planning Scheme permits or encourages development, the Codes will actually prevent any development from occurring. Councils and the State Government must forsee the effect of this proposed SPP and the combined restrictive use of Codes under IPA on future development approvals if economic growth is to continue in Queensland.

Unless the 'regard' is specified accurately so developers know what the assessment criteria is, how assessment managers will apply the criteria and how it interacts with environmental and overall community requirements, developers will not be able to plan their development or have a reasonable chance of approval. The IPA already permits inexpensive appeals by submitters even if the assessment manager approves a development application, so economic development in Queensland will become very expensive and time consuming. Is this really the best way to address problems of Natural Disaster Mitigation or avoid State Government responsibilities? When a disaster occurs, the State Government is still responsible for the communities best interests.

The real problem is that too many areas under the SPP are classified as natural hazard management areas with inaccurate and arbitrary measures and no clear definition of *"compatibility"* with the *"nature of a natural hazard"* or criteria to assess this compatibility are available in the legislation. If the State Government wants to stop most new development applications in the State, they should be honest enough to state this plainly to the electorate, rather than introduce bureaucratic legislation that will eventually have this effect. Assessment managers will not be able to assess or approve development and developers will not waste time and money to deal with such uncertainty and unreliability. Values for freehold land will be affected.

Small and medium developers will not be able to afford the cost and uncertainty of development applications and large developers will progress directly to Court to finalise the uncertainty created by these SPP provisions. Contrary to the Position Statement for the SPP for development to "minimize the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment" the end result may be very little economic activity as the administrative process is not worth investing in and land becomes to expensive to develop or for the public to buy it.

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Facts and Circumstances to Support the Grounds

1 am not an expert in many of these matters but as a small developer on the Gold Coast, 1 have experienced first hand the difficulties of development applications when only a few of the restrictions imposed by the proposed SPP have been applied. 1 would never again make a development application on the Gold Coast. 1 have developed a Park Residential land subdivision of 60 lots on the Gold Coast since 1987. The final stage required a new development application and 1 have been negotiating with Council planners for two years, lodged the development application in October 2001, had the application refused in May 2002 and lodged a Planning and Environment Court Appeal in June, 2002.

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The application has been assessed under the transitional Albert Shire Planning Scheme that has a clause regarding development on slopes over 20% general landform where there are specific criteria, among other things, for Council to consider when assessing applications. We satisfy all criteria and have limited building to defined building envelopes on less than 20% slope, but are unable to receive approval. The land is noted on the SMEC Landslip Analysis as medium and high hazard rating yet a site-specific assessment by a recognized geotechnical expert rates the goetechnical risk factor as "very low" or negligible. Council have accepted this as positive for the development but are unable to approve the development.

Under the Gold Coast Bushfire Management Strategy, primarily as a result of slope, the land is rated as medium to high bushfire hazard. An independent Bushfire Mitigation report rates the site as low to medium and includes a number of mitigation measures and development features that will significantly improve the bushfire risk for the surrounding area of 300 homes but Council has used bushfire risk to refuse the development application. The development is an infill development surrounded by existing Park Residential and urban development such that no real wildfire risk exists yet rating on bushfire hazards has prevented development.

When the Gold Coast's new Living City Planning Scheme is in force and up to 12 Codes apply to new development there is no chance of gaining a development approval as many of the Codes are inconsistent with each other and complete compliance with all Codes together cannot be achieved. Please carefully consider the actual effect and benefits of the proposed SPP before any legislation is approved as ill-conceived legislation will have lasting detrimental effects. I am able to substantiate this information if required and would be happy to explain my views in greater detail if it is required.

13 December 2002

Enquirtes: Phone: Our Ref; 560179

10 December 2002

Attention: State Planning Policy Acting Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

PUBLIC SUBMISSION ON THE PROPOSED STATE PLANNING POLICY FOR NATURAL DISASTER MITIGATION

Thank you for providing the opportunity for Caims City Council to comment on the Draft State Planning Policy for Natural Disaster Mitigation.

Calms City Council (CCC) is generally supportive of the introduction of a state wide policy to ensure the natural hazards or flood, bushfire and landslide are adequately considered when making decisions about development.

Comments on the draft policy in relation to specific hazards include:

Flood

 CCC fully supports the Queensland Government's position that the appropriate flood event for determining a natural hazard management area is the 1:100 year average recurrence interval (ARI) flood, CCC has adopted this level in the preparation of its new planning scheme, the Draft Caims Plan.

Bushfire

CCC supports the Queensland Government's description of a natural hazard management area for bushfire and agree with the default definition of medium and high hazards areas on the Bushfire Risk Analysis maps produced by the Queensland Fire and Rescue Service.

It is also noted that the Queensland Fire and Rescue Service should be nominated as the referral agency to evaluate future development applications.

Landsilde

 Council supports the Queensland Government's description and methodology of identifying a natural hazard management area for landslides and the default definition of all land with a slope of 15% or greater.

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General Comments

Appendix 5: Performance Criteria for Assessing the compatibility of development in natural hazard management areas

It is noted that in the draft Code the indicators of compatibility require reports to be prepared, This is contrary to recent advice received by the Department of Local Government and Planning that states that requesting reports can not be considered an acceptable measure.

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Council requests to be kept informed of any future developments in regard to this policy.

Yours faithfully

l j Chief Éxecutive Officer

	DAKY	- ATTAI MICHANA WOUR.	
	QUEENSLAND POLICE Bundaberg District Off 256 Bourbong Street, Bundaberg	SERVICE	
	P.O. Box 1214 Bundaberg Q 4	670	
	TELEPHONE FACSIMILE		
WLise	DEPARTMENT OF EMERGENCY SERVICES 2 1 NOV 2002 EXECUTIVE SERVICES DG ODUO 602	Our Ref: 02/35411 Ref Ngour Raf: OSCR2002/12127 1 9 NOV 2002 DISTRICT OFFICE	
18 November 2002		BUNDABERG	•
Director General Department of Emergen GPO Box 1425 BRISBANE QLD 400 SUBJECT: Dr	cy Services 1 raft State Planning Policy and Guidelin	nes for Natural disaster Mitigation.	
Thank you far your invit	ations to comment on the above draft		· · ·
Please be advised that f document.	following consultation with selected staf	ff, I have no useful addition to submit to the	
Yours sincerely			
			· · ·
DISTRICT OFFICER			

QUEENSLAND POLICES SERVICE

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BUNDABERG DISTRICT

GUIGE Brisbana City Contraction of the **Brisbane City Council** DISASTER MITIGATION UNITOATE 13/12/02 City Planning Urban Management Division with the second Lavel 18 69 Ann Street ATTENTION MX 324.7 8480 Brisbane Qid 4000 0 . PO Box 1434 Brisbane Old 4001 FROM PHONE 3403 9032 \bigcirc Telephone 07 3403 Facsimile 07 3403 6314 RE SUBHASSION - DRAFT SPP đ PAGES З As discussed, please find caunal's submission for the arabt State Flanning Policy for Natural Discister Mitigation to follow. Original in mail icei Hank 1 3 DEC 2002 IF THIS FACSIMILE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, PLEASE TELEPHONE 07 3403 5404 G: CPS OFFICERS PSCP2 TEMPLATE PAXCPB. WPD



É ...

Brisbane City Council ABN 72 002 765 795

City Planning Urban Management Division Level 16 69 Ann Street Brisbane Old 4000 GPO Box 1434 Brisbane Old 4001

 Contact-name:
 3403 9032

 Phone:
 3403 6314

 Your Ref:
 CDS 4899

 Our Ref:
 305/10/10

13 December 2002

Acting Director Disaster Miligation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Attention: State Planning Policy

Dear Acting Director,

Draft State Planning Policy - Natural Disaster Mitigation

Thank you for the opportunity to comment on the above draft State Planning Policy (SPP). Council is confident that the *Brisbane City Plan 2000* already incorporates the principles of the draft SPP with regard to mitigation of the adverse impacts of flooding, bushfire and landslide.

Council, however, intends to further address the intentions of the draft SPP with respect to land stability and bushfire bazard when preparing Local Plans for relevant emerging community areas.

We wish to bring the following points to your attention:

- There is a need to define both habitable and non habitable floor levels (page 30, section 6.20).
- The location of uses such as conservation areas, grazing or other agricultural activities and sports fields in floodway or drainage corridors would be supported, however extensive parking areas or low density residential uses in these areas would not be supported (page 38, section 7.10).
- The terms 'flood', 'floodplain' and 'floodway' do not take into account the issues of overland flow paths and pipe overflow paths that are common in urban areas. Provision should be made for a definition for 'local flooding', which includes these concepts (page 41, Glossary).
- There is a need to clarify whether flood hazard mapping requires depiction of both the ARI 100 line and design flood line or if they can be substitute for one another (page 46, Appendix 2).

ONCESTIVE CONTINUES AND POLICIES SPP (NATURAL DISASTER MITIGATION)/RESPONSE.DOC.DOT Thank you once again for the opportunity to comment on this very important draft State Planning Policy and Guideline.

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Yours faithfully

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Mangoor City Blooming

Manager City Planning URBAN MANAGEMENT DIVISION

> -G:\CP\$\PROJECT\$\TOWN-PLAN, LOCAL LAWS AND POLICIES\SPP (NATURAL-DISASTER-MITIGATION)\RESPONSE.DOC.DOT

Grounds for QSA's Submission-

1. The Public Records Act 2002 states in Part 2 – Public Records 8 (1) A public authority is responsible for ensuring the safe custody and preservation of records in its possession.

2. The Queensland Government Information Architecture Best Practice Guide to Recordkeeping states in Principle 5: Recordkeeping must be reliable and secure ţ^

... public authorities should develop, implement and monitor

• Disaster preparedness and recovery strategies and processes.

Supporting Facts

- Queensland State Archives has many examples of public records damaged by natural disasters such as the 1974 Brisbane Flood.
- To recover and make these damaged records available to the public entails a large commitment of funds and labour.
- The Queensland State Archives' Preservation Services has trained staff to recover and preserve records damaged by natural disasters.
- Preservation Services staff carry out regular Disaster Preparedness and Recovery workshops for public records for government agency staff.

Should you require further information on this matter please contact , our Manager of Preservation Services at Queensland State Archives on

Yours sincerely

Director and State Archivist Queensland State Archives

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F-1	From:	
. 1	Sent: Tuesday, 17 December 2002 3:40 PM	
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() ;	Disaster and Rescue Services, DES	
• •		
11	Dear Sir, attached please find the response from the cold City Coursel, which will also	
• /•	me faxed and mailed at the same time. We apologise for the delay and discussion with	
\Box	We look forward to get furthe	
	for our residents and ratepayers in Gold Coast.	
1 1 1 F 7	<pre><<comment draft="" on="" policy.doc="">></comment></pre>	
11 En	Regards	
: 	Strategic and Environmental Planning	
	FOID Coast City Council PO Box 5042	
	Gold Coast MC QLD 9729	
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1	This e-mail and its contents is confidential to Gold Coast City Council	
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Nerang Office

WF30/44/06

Attention: State Planning Policy Acting Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRSSBANE QLD 4001

Dear Sir,

SUBMISSION REGARDING THE DRAFT STATE PLANNING POLICY FOR NATURAL DISASTER MITIGATION

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Gold Coast City Council (GCCC) is pleased to have been involved in the development of the State Planning Policy for Natural Disaster Mitigation and to have this opportunity to comment on the draft policy.

The following issues and comments are limited specifically to flood events and reflect our experiences in developing and implementing Council's floodplain management strategy over the last six years as they relate to this draft policy.

In relation to defining the term "floodplain", GCCC wishes to point out that Probable Maximum Flood (PMF) varies significantly from location to location and a great deal of debate exists amongst the hydrologists as to what should constitute a PMF. GCCC would like to suggest that the floodplain should be defined as per the term "Rare" or "Extreme" floods as outlined in the latest revision of Australian Rainfall and Runoff (ARR, 2000).

The document clearly states its focus and application under the planning scheme as well as its relationship with other legislation. However, it may be beneficial to identify that it relates only to 'future', and as such represents one option in the suite of disaster mitigation efforts.

There appears to be no recommendation regarding the regular review of the 'defined natural hazard area'. This may be a particularly valid consideration as further investigations into influences such as climate change impact, availability of improved modelling tools, availability of better geographic information, adoption of best practice planning tools etc.

It would appear that the document does not specifically require a Local Authority to adopt a flood event within a specified timeframe. Until such time, the State Planning Policy does not come into effect. Whilst this policy provides guidance to achieve consistency for those authorities that have adopted a flood event, this does not include all authorities. Proactive local authorities with access to adequate funding are likely to seek advice from other bodies in developing their floodplain management strategies in the absence of such a policy. Therefore, this document needs to make provision to encc authorities to adopt a flood event within specified timeframes. Howe to be placed on the issue of assessing flood hazard and risk from the s

The policy requires that the Natural Hazard Areas be identified in the policy publicly This includes mapping, "where practicable", which suggests limited support for publicly available flood maps per se. The accompanying guidelines refer to the "IPA Plan Making Guidelines 1/01" for further advice. This issue is more specifically addressed in the State Flood Risk Management Policy Discussion Paper where publicly available flood maps are proposed as one means of enhancing flood information. If this becomes a requirement of the final policy, and if the policy is accorded the status of legislation, legal protection may be secured for Local Authorities in this regard. Comments regarding this discussion paper are required by the end of February 2003.

In defining a flood, if the definition recognised the temporary nature of water coverage in areas not normally covered, this may avoid confusion with, for example, newly created waterbodies.

The Floodplain Management Study as outlined in Appendix 2 Section A2.33 includes the "...adoption of a flood mitigation program...". It may be more appropriate to include the "recommendation of a flood mitigation plan" with subsequent development of a flood mitigation program approved by Council. A flood mitigation program requires detailed technical investigations which should be considered by the community. Including that process within the Flood Management Study is likely to delay its completion. Furthermore, that study should effectively act as a guide for making future decisions, rather than encompassing all the future decisions. Is there any need to make a statement about future reviews of the Management Study and its effectiveness in achieving its stated goals?

Outcome 2 requires that an incompatible development proposal."...does not result in an unacceptable level of risk to people or property...". An unacceptable level of risk is to be determined by the community. This in itself may be a significant project and perhaps should form part of the progressive development of a Management Plan and future decision making process.

2.15

When assessing compatibility of a proposed development in a Natural Hazard Management Area, one of the indicators as stated in section 1.1 states that the development proposal "...does not result in a material increase in the number of people living or working in the natural hazard management area (flood)...". Adhering to this indicator would require a significant conceptual change to the approach adopted by Gold Coast City Council and is likely to be subject to legal challenge based on previous legal decisions. Council's development assessment process focuses on assessing the outcomes and impacts of proposed developments rather than a blanket approach that rejects development in that area per se.

Performance Criteria 2 Section 2.1 addresses the issue of flood storage capacity through importation of fill. However, this is only triggered if it affects more than 10 cubic metres of soil. This would seem to ignore the adverse cumulative effects likely to result in an extensive developing area or in a particularly sensitive floodplain.

The Performance Criteria related to community infrastructure identifies a recommended flood level of 1:500 ARI for "stores of valuable records or items of historic or cultural

significance (eg. Galleries, libraries)". This may require amendments to existing or draft planning schemes, as is the case for Gold Coast City Council.

This policy only applies to developments with the Natural Hazard Management Area, as well as all community infrastructure, but does not apply to external areas which impact on the Natural Hazard Management Area. Other planning codes must be developed to adequately address the interrelationships between these areas.

Should you wish to clarify any issues contained in the above letter please do not hesitate to contact.

Yours faithfully

MANAGER STRATEGIC & ENVIRONMENTAL PLANNING

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From: Sent:	VV EO	Nesday, 18 December 2002	8-27 AM			
To: Cc:	SPP	Consultation	0.27 AIVI			
Subject:	Subr	ission - SPP Natural Disaste	er Mitigation			
Submission 171202.doc	InterScan_SafeSta mp.txt					
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Planning Pol	icy including	Guildeline: Natural	Disaster Mitiga	tion.		
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TOWNSVILLE CITY COUNCIL

addressed to: The Chief Executive Officer PO Box 1268 Townsville Qid 4810. Telephone: 4727 9473 Fax No.: 4727 9052 AUSDOC OX 41447 Townsville

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All communications to be

ADMINISTRATION BUILDING, WALKER STREET TOWNSVILLE ABN: 81 143 904 097 DEPARTMENTAL FACSIMILE NUMBER (07) 4727 9052

In reply please quote ref.: S011503 VGL:VGL

Attention: State Planning Policy Acting Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 Brisbane QLD 4001

Tuesday 18th December 2002

SUBMISSION -- DRAFT STATE PLANNING POLICY NATURAL DISASTER MITIGATION

Please accept the following comments in response to the Draft State Planning Policy including Guideline: Natural Disaster Mitigation.

- 1. The concept of a consolidated document that deals with natural disaster mitigation is a good one. However issues have been left out of the document that should be included. The effect of winds is addressed in the Building Code of Australia (BCA) and should remain there. However the other effects of cyclones and other tropical weather systems should be contained within a single document. To this end, storm surge and wave action should be taken out of the State Coastal Management plan and included in the SPP Natural Disaster Mitigation. A thrust of the Integrate Planning Act has been to minimise the amount of pieces of legislation that must be dealt with in developments. The SPP Natural Disaster Mitigation should follow that constructive lead, and include the elements listed above.
- 2. The identification of the 1 in 100 event as being the controlling event is of concern;
 - Annex 3 (3.1) of the SPP reads as follows, "A natural hazard management area (flood) is land inundated by a Defined Flood Event (DFE)".
 - Appendix A2.7 of the SPP guideline then provides the following direction, "The Queensland Government's position is that, generally, the appropriate flood event for determining a natural hazard management area (flood) is the 1:100 year ARI flood."
- The basis for the adoption of the defined flood event appears to be a historical one, where the 1% ARI has been accepted with little assessment of the consequences of larger or lesser floods. This may be satisfactory for urban areas in more southern latitudes. If the State now wishes to impose this position on

local authorities, it should undertake studies, which evaluate costs, benefits and impacts of their chosen defined flood events throughout the State and provide some justification for their assumptions. Further work also needs to be done on the implications, which may result if Councils are financially unable to meet these guidelines.

 Local authorities are able to adopt a different DFE if they decide it appropriate. However, as proposed in Appendix A2.7 of the SPP guideline, local authorities, *"will be expected to demonstrate that the proposed DFE is appropriate to the circumstances of the locality"*. This document is a State Govt document, and as such, it should prove why the 1 in 100 year event is appropriate, rather than local authorities proving the opposite.

- 3. Appendix 5 (A5.3 A 1) of the SPP guideline requires that development does not 'compromise the safety' of people from all flood events up to and including the DFE. As a large portion of Townsville would be within a natural hazard management area (should a 1 in 100 year event be chosen), developers will need to prove that safety is not compromised. A definition for 'compromising safety' is required from the State against which applications should be assessed.
- 4. Appendix 5 (A5.3 A 3) of the SPP guideline requires that development should not concentrate flood flows nor pond waters. Stormwater infrastructure including pipes, open drains and detention basins concentrate and pond waters. Clarification of this issue is required.
- 5. The flood immunities proposed to be provided for Community Infrastructure are provided within Appendix 7 of the SPP guideline, and are in terms of the Recommended Flood Level (RFL). A child care centre for example has an RFL of 1 in 200 years. The note in A7.3 A 1 then requires that evacuation roads be constructed above the RFL. There are no roads in Townsville with a 1 in 200 year immunity, and the implications of providing this are enormous. This appears incongruous with the position that no RFL has been set for state controlled roads. Clarification is sought on this inconsistency between standards being imposed on State agencies and local authorities through this SPP.
- 6. The SPP does not apply to schools. The State Government should advise why this is the case.
- 7. Clarification is sought on part 6.3 of the SPP. It appears to infer that development should not be allowed in natural hazard management areas, unless there is an overriding public interest, or "the development proposal is a development commitment and it would have a lower level of risk than generally applies to development in the vicinity". These warrants for development appear extremely rigid. It would generally be difficult to prove public interest on a land development site, however with filling of a site, it may be perfectly acceptable to allow development. To meet the other warrant, a developer would need to prove that a site is at less risk than other development in the vicinity. Whilst there may be higher risk associated with a development (when compared to other nearby developments) the level of risk may be acceptable to proceed. Clarification should be sought on the intent of the State Government on this issue.

Yours faithfully

STRATEGIC PLANNING OFFICER CITY PLAN

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LOCAL GOVERNMENT ASSOCIATION OF QUEENSLAND INC.



Local Government House 25 Evelyn Street Newstead Qid 4006 PO Box 2230 Fortitude Valley BC Qid 4006 Phone

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FACSIMILE TRANSMISSION

TO:	DES		17 December 2002	our ref:
ATTENTION:	Tony O'Rourke	FAX #:	3247 8480	YOUR REF:
FROM	LGAQ	# OF PAGES:	3	······································

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Original to follow in the mail.

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Flanning and Development Policy Officer



Local Government House 25 Evelyn Street Newslaad Old 4006 FO Box 2230 Fortitude Valley BC Qld 4006 Phone (07) 3000 2222 Fox (07) 3252 4473

16 December 2002

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17/12/02.

Acting Director **Disaster Mitigation Unit** Counter Disaster & Resource Services Department of Emergency Services GPO Box 1425 Brisbane QLD 4001

LOCAL GOVERNMENT

ABN 11 010 883 293

ASSOCIATION

Attention: State Planning Policy

Dear

Local Government Association of Queensland Submission on draft State Planning Policy (SPP) Natural Disaster Mitigation

The Association supports the preparation of a State Planning Policy for Natural Disaster Mitigation. The improved planning and performance for natural disaster mitigation holds significant economic, social and environmental benefits for Queensland communities.

The Association submission in representing Queensland Local Government acknowledges the submissions made by individual Local Governments, which include issues and circumstances for their Local Government area.

General Comments:

1. The State Planning Policy cannot require Councils to undertake additional studies at a cost to Local Government.

It is recognised that all levels of Government will need to improve their understanding and planning response to natural disaster mitigation. However the level and nature of the study undertaken will vary markedly between Local Governments due to the Individual Local Governments capacity and resourcing constraints. Due to low levels of impact and/or significant resource constraints a Local Government may not be able to undertake more detailed mapping or investigation. In this regard it is suggested that Annex 3, A3.2 be amended by the inclusion of the following underlined amendment.

...Local Governments proposing to adopt a lower DFE in their planning scheme to determine a natural hazard management area (flood) for a particular locality will be expected to demonstrate that the proposed DFE is appropriate to the circumstances of their locality including capacity and resourcine constraints.

Section 7.2 of the Guidelines:

The variation in scape should depend on the capacity and resourcing constraints of the Local Government, size and distribution of the population, development in areas....



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Further amondments will also be required throughout the draft SPP and Guideline to ensure the application of a consistent approach to this issue.

- 2. Annex 3 section A3.2 details a requirement for Councils to adopt a Defined Flood Event and to demonstrate why a DFE of other than 100 (ARI) is appropriate. It is noted that situations may occur where Councils have adopted a significantly different DFE in seeking to improve the existing level of flood protection and where there is lack of data at 100 ARI. Where Councils are clearly seeking to improve the level of flood protection but unable to map the 100 ARI this approach should be noted and accepted within section A3.2.
- 3. For all Councils in the process of finalising IPA Schemes no additional work or amendment of Planning Schemes can be undertaken in response to or required by the draft SPP.
- 4. Storm Surge represents a significant if not larger threat to coastal urban development than flooding. It is considered that the guidelines and supporting information for both the draft SPP on Natural Disaster Mitigation and State Coastal Management Plan be prepared with consistent approaches and formats.
- 5. The Association supports the limitation of the SPP to Flooding, Fire and Landslide. The comments made by Councils in relation to Dam burst are noted and further consideration should be given to its inclusion or otherwise in the SPP.
- 6. The Association requests clarification regarding the application of the SPP to selfassessable activity under the Standard Building Regulation 1993 (SBR) such as fill associated with building works, in natural hazard management areas.
- 7. The Association notes the significant resource requirements for the DES in the implementation of the draft SPP in both short and medium term. A program for the education, implementation and support for the draft SPP must accompany the finalisation of the SPP.

In conclusion, the Association supports the intent and substantive provisions of the SPP, the comments relate to the ongoing application and the interpretation of the provisions to ensure they reflect the diversity of Queensland Local Government as an independent level of Government. The Association looks forward to the finalisation and application of the SPP Natural Disaster Mitigation.

If you have any questions regarding the submission please feel free to contact Malcolm Griffin, Planning and Development Policy Officer on **Contact Malcolm** or email

Yours sincerely |

DIRECTOR POLICY AND RESEARCH

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Queensland

Governmen

1 7 DEC 2002

DEPARYMENT OF EMERGENCY SERVICES

EXECUTIVE SERVICES

Office of the Director-General

Department of Primary Industries

Enquiries: Ron Beck Telephone: +61 7 323 40001

1 2 DEC 2002

Dear

Director-General Department of Emergency Services PO Box 1423 BRISBANE OLD 4001

V) -> SPP tom f

DRAFT STATE PLANNING POLICY AND GUIDELINE FOR NATURAL DISASTER MITIGATION

Thank you for your letter dated 21 October 2002 in which you invited officers of the Department of Primary Industries (DPI) to participate in consultation on the draft State Planning Policy (SPP) and Guideline for Natural Disaster Mitigation.

Committee that is preparing the SPP. We will continue to contribute to the drafting process.

I wish to convey to you that DPI supports the preparation of this SPP "in principle":

DPI Forestry, a commercial business group of the DPI, has a strong interest in the proposed SPP. DPI Forestry is responsible for the management and protection of Crown plantations and marketing of Crown native forests.

Development adjacent to forestry areas poses a risk to life, property and forest assets, and I applaud your initiative to prepare a SPP that will address these issues by appropriate land buffers and other town planning measures.

Yours sincerely

Director-General

Department of Primary Industries celebrating 2002 Year of the Outback

Level 11 Forestry House 160 Mary Street GPO Box 944 Brisbane Queensland 4001

Facsimile Email Mobile	1	
Website	www.dpi.qld.gov.au	
Call Centre	13 25 23	
RecFind	02/14697	
DPI F Ref	398.08	(BS)

o.tb_fortmanagerlexecutive\director-generalNetters\02-14697 draft spp.doc

From: To: Date: Subject:

Hi



No change to the aspect compass please. Comments were wrong.

Possible addition to A3.15, to be placed under the Table 2.

" For site specific assessment of a particular development on a slope, if the development is downhill from the hazard, the slope effect may be taken as zero. The fire intensity will, be less. On steep slopes burning heavy fuels may roll downhill, and trees may burn down, so setbacks from the hazard need to still be observed."

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Page

-> Kay by by

Addition to Appendix 5, B, 6.1. after 2000, add " and where lot size allows, have the minimum setbacks described in 6.2."

Appendix 5, B, section 2, reinstate 2.4 from the August draft, namely "AND 2.4 Buildings and other permanent structures have the following minimum setbacks from hazardous vegetation: (a) 1.5 times the predominant mature canopy tree height in any adjoining bushfire hazard vegetation; AND (b) 5 metres from any retained vegetation strips or small areas vegetation within individual lots." These last two at request of DPI, plus urban and rural officer at Maroochydore. I support their case.

Regards. У Original Message-----From: Sent: Monday, 2 December 2002 11:53 AM To: Subject: Re: FW: Draft SPP - Bushfire

I believe that a northerly or north west wind is the worst fire wind and during this NW wind the humidity is certainly lower. I do not know who stated otherwise but suspect it may have been one of our urban bretheren. For example I have heard one local urban officer mention on the radio that a SE wind with high humidity was the worst for fire weather, this indicates to me that they do not know what they are talking about and this statment raised the ire of our land management agencies. Regards,

n 11/28/02 08:57am >>>

, I agree that NW may not be the worst fire wind for NQ , but there is still the North aspect Hil exposure to sun factor for drying of fuels. What should the compass look like , and what is the change latitude. At Rocky, lat 25, NW is still the worst aspect for fire winds and drying., and SW the next. Regards, I

Orig	ginal Message
From:	
Sent:	Wednesday, 27 November 2002 4:39 PM
To:	
	emergency.qld.gov.au];.FSMITH
Subject	Draft SPP - Bushfire

Subject:

Hi

>>>

As you are aware we will on ly have a short time to finalise the SPP once the consultation period finishes on 13 December. We need your advice and input on the following issues as soon as possible:

We have received feedback at a couple of workshops that the aspect degree ranges (ie. 1. the "compass") appear more suited to southern parts of Australia than Queensland and especially northern Queensland. Could you please either confirm that the current material is correct, or revise to take account of this feedback.

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2. _____and ______i waid that you are not satisfied with ursin 'Protecting your home against bushfire attack' as an Indicator of Compatibility in Appendix 5, and wanted to replace this with more specific, detailed indicators. We will also need this revised material quickly to finalise the SPP and Guideline.

Could you please provide the information required to address these is	sues asap, but by the 13
December at the latest.	
Regards	

Senior Project Officer State Planning Policy Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services Tel: (

Fax: Emai . .

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The Department of Housing has reviewed the draft State Planning Policy from an agencywide perspective and provides comments at Attachment A for your consideration.

The Department supports your efforts to improve the planning and management of natural disaster mitigation through the measures proposed in the State Planning Policy and wishes you well in its implementation.

If you require any further information, please telephone Mr Peter Chapman, Acting Manager, Affordable Housing Unit, Public Housing and Housing System Initiatives, or who will be happy to assist.

Yours sincerely

Director-General <u>Department of Housing</u> 17/2/2002

Office of the Director-General

Level-13 61 Mary Street GPO Box 690 Brisbane Queensland 4001 Australia Telephone 07 3224 5248 Facsimile 07 3224 5544 Email dgoffice@housing.qld.gov.au Website www.housing.qld.gov.au
Attachment (A) Comments on Draft State Planning Policy for Natural Disaster Mitigation (including Guideline)

Policy,Reference	Issue the	a Resolution
	Draft State Planning Policy for Natural Disaster	Mitigation
1. Purpose of the Policy	 Identification of State's Interest The State Planning Policy for Natural Disaster Mitigation (the SPP) sets out the State's interest in ensuring that the natural hazards of flood, bushfire and landslide are adequately considered when making decisions about planning and development 	 Comment: Supported. The Department of Housing supports the purpose of the SPP, as it will provide consistency across the State in land use planning and improve decision-making to mitigate the adverse impacts of natural hazards upon development.
 2. Application of the Policy The SPP applies to development involving/including the actions or activities described in Part (a) of Annex 1. 	 Department of Housing's development activity The Department of Housing conducts "residential development" activity as part of our housing provision for our clients. This activity is included in Part (a) df Annex 1 via development that could increase population or building densities in natural hazard management areas for flood, bushfire or landslide. 	 Comment: Supported. The Department supports provisions that may apply to its future siting and design of housing if it involves increasing densities of residential development in natural hazard management areas.
 2.4 Areas to which the Policy applies The SPP generally applies throughout Queensland. However, the application of the SPP for bushfire and landslide is limited to the local governments listed in Annex 2. 	 Application of the SPP For bushfire, the SPP will apply to local government areas listed in Annex 2, A2.1. If a local government has not adopted a natural hazard management area (bushfire) the Medium and High hazard areas on the Bushfire Risk Analysis maps produced by Queensland Fire and Rescue Service will apply. For landslide, the SPP will apply to local government areas listed in Annex 2, A2.3. If a local government has not adopted a natural hazard management area (landslide) then all land with a slope of 15% or greater will be the landslide hazard management area. The Department owns dwellings and vacant sites in almost all of the local powernment area [landslide] and 2.3 	 Comment: Supported. The Department supports the approaches presented for the application of the SPP with regard to bushfire and landslide.

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Policy Reference		Sue	Resolution
	Draft State Planning Po	licy Guideline for Natural Di	saster Mitigation
7. Making and amending a	Reflection of Development C		
planning scheme		dicollies in Planning Scheme	Comment: Supported.
 Outcomes 4, 5 and 6 	 Development Outcomes 4, 5 identifying natural hazard reflecting the SPP in plan reflecting the SPP in detail 	and 6 concern respectively: management areas; ning strategies; and iled Planning Scheme measures.	• The Department supports these development outcomes and their relationship with IPA Planning Schemes.
General Comment	Content and usefulness of D	raft Guideline	Commonth Summer Lit
'.	The Draft SPP Guideline is a		Comment: Supported.
: :	assistance to users in impleme	nting the SPP.	• The Department supports the intention and content of the Guideline to assist with implementation of the SPP.
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•	REFERRAL SHEET	F-
	DEPARTMENTAL REFERENCE NUMBER: D6 021170 REPLY REQUIRED BY NO LATER:	· · ·
	REFERRED TO:	۲ :
	Executive Director, Strategic and Executive Services Division	•
	Executive Director, Business Support Services	. :
	Executive Director, Counter Disaster and Rescue Services	:
	Commissioner, Queensland Ambulance Service	
	Commissioner, Queensland Fire and Rescue Service	
	ACTION REQUIRED:	
	Prepare Final Reply for Director-General's Signature	· · · · ·
	Reply Direct	: : : :
· · · · · ·	Please Action	
	For information and any Necessary Action/ATTENTION	. j .
	For Information Only	· · · ·
	Ministerial Brief	
	Director-General Briefing Note	•
	COMMENTS:	
	forworded to DMU 24/12/02.	
	FOR FURTHER INFORMATION, PLEASE CONTACT: EXECUTIVE SERVICES UNIT TELEPHONE: 3247 8818 EXT NO: 94818	
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Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services **GPO Box 1425 BRISBANE QLD 4001**

Dear Sir/Madam

I refer to a letter dated 21 October 2002 from Mr M Kinnane, Director-General, Emergency Services, inviting participation in the public consultation on the draft State Planning Policy and Guideline for Natural Disaster Mitigation (SPP).Dr Stable has requested that I respond on his behalf.

Queensland Health generally supports the draft SPP efforts in managing natural flood, bushfire and landslide hazards through land use planning and assessment processes. The benefits of minimising risk to people, property, economic activity and the environment in natural hazard areas through development and community infrastructure are self evident. Officers from Queensland Health have reviewed the document and provide the following comments:

Section 2.4 Areas to which the Policy applies

It is stated in the State Planning Policy (SPP) that this Policy only applies to those areas listed in Annex 2. (A2.1 Bushfire and A2.3 Landslide). Jericho Shire appears in A2.1 Bushfire but not in A2.3 Landslide. The few slopes in Jericho Shire are of sufficient gradient as to place people and property at risk from landslide and could warrant the inclusion of Jericho Shire under Annex 2.3 Landslide.

CQ Power maintains a Gas Fired Power Station in the Barcaldine Shire local government area. This power station supplies to the state power grid with the capability of supplying power to the entire Central West in an emergency. Barcaldine Shire Council is not included in Annex 2.1 Bushfire. The hazard posed by bushfire to this facility could be considered of State significance warranting the shire's inclusion in Annex 2.1 Bushfire.

Office 19 th Floor _ Queensland Health Building	Postal GPO Box 48 BRISBANE QLD 4001	Phone (07) 323 41 170	Fax (07) 323 ⁻ 41482	
147 - 163 Charlotte Street				3
BRISBANE QLD 4000				

It is noted that the policy and supporting guideline advocate community based risk assessment. It is also noted that the notion of establishing a community's risk threshold is mentioned under section 6.35 of the guideline. Although information provided or referred to in Appendix 1 provides some guidance on risk management, Queensland Health is particularly interested in what guidance is available to communities to establish a community's risk threshold.

Should officers of your department require further information, Queensland Health's contact is Principal Adviser Environmental Health (General) on telephone

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Yours sincerely

General Manager, Health Services しく ハー/2002

Maroochy Cares, Maroochy Dares ... "Because we care about the lifestyle of the residents of Maroochy Shire, we must dare to hire Counc do things differently - by protecting our environment, seeking out opportunity, promoting our diversity, developing our economic future and enhancing our sense of community." Your Reference: Our Reference: Enquiries: pmr 1/5714 Direct Telephone: Direct Fax No.: ABN 60 983 072 606 Email: 19 December 2002 Attention: State Planning Policy Acting Director **Disaster Mitigation Unit** Counter Disaster and Rescue Services Department of Emergency Services **GPO Box 1425** 2.3560 2002 **BRISBANE QLD 4001** Dear Sir or Madam:

Draft State Planning Policy and Guideline for Natural Disaster Mitigation

I refer to the invitation for public submissions on the draft State Planning Policy and Guideline for Natural Disaster Mitigation.

Please find attached a submission that responds to the provisions set out in the draft SPP. Maroochy Shire Council resolution of 18 December 2002 supports in principle the draft SPP and Guideline for Natural Disaster Mitigation.

However several technical discrepancies have been identified by Council staff that relate to the draft SPP Guideline and Maroochy Shire's planning scheme, Maroochy Plan 2000. These points have been attached along with the current code provisions of Maroochy Plan 2000 for the three natural hazards of bushfire, flood and landslide.

If you have any further enquires, or wish to discuss any of the issues raised in more detail, please contact

Yours sincerely

CTING CHIEF EXECUTIVE OFFICER

Please quote our file reference number on your reply for fast tracking within Council

Address: Maroochy Shire Council Cnr Currie & Bury Streets Nambour Qld. Telephone: (07) 5475 8501	Australia	Postal: The Chief Executive Officer	:
Facsimile: (07) 5441 8338 Email: maroochy@maroochy.qld.gov.au		Nambour Qld Australia 4560 Website: www.maroochy.qld.gov.au	

Maroochy Shire Council submission on the draft State Planning Policy and Guideline for Natural Disaster Mitigation

Introduction

Maroochy Shire Council supports in principle the draft State Planning Policy for Natural Disaster Mitigation as outlined in the Council resolution passed 18 December 2002.

The current provisions of the draft SPP are consistent with the current provisions of the Maroochy Plan 2000. The following table outlines the provisions of the Maroochy Plan 2000 and the relevant aspects of the draft SPP.

Draft SPP for Natural Disaster Mitigation	Maroochy Plan 2000
Natural Hazard - Flood	 Comprehensive Assessment Special Management Area (SMA) for flood prone land
· · · · · · · · · · · · · · · · · · ·	Design Code for Flooding
Natural Hazard – Bushfire	 Figure 4-2.1.7(a) Possible Bushfire Prone Areas for Maroochy Shire Code for Development in Bushfire Prone
	Areas
Natural Hazard – <i>Landslide</i>	 Comprehensive Assessment SMA for land with a slope greater than 25%
	 Specific Assessment SMA for areas known or suspected of being geologically unstable
	 Code for Development on Steep or Unstable Land
· · ·	 Recently completed Shire-wide Landslip
a presentation and the second s	Hazard Study

The provisions of the Maroochy Plan 2000 are consistent with the approach and intention of the draft SPP for Natural Disaster Mitigation. Provisions for flooding and landslip represent best practice methodology and achieve a high level of consistency with the draft SPP. Provisions with bushfire comply with the minimum requirements under the draft SPP.

However there are technical discrepancies between code provisions of the draft SPP Guideline and the Maroochy Plan 2000. Proposed Indicators of compatibility in the draft SPP Guideline vary in some cases with Acceptable Measures from Maroochy Plan 2000. The following is a summary of these technical discrepancies.

Flood

Maroochy Shire Council is supportive of the approach taken for greater planning controls on land at risk to flooding.

The following tables outline the technical discrepancies which exist between the draft SPP Guideline (Appendix 5) and the Design Code for Flooding (Altachment A) from Maroochy Plan 2000.

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Differing Requirements between the draft SPP Guideline for Flood (Appendix 5) and Maroochy Plan 2000

ltem	State Planning Policy	Maroochy Plan 2000	Issues and Implications.		
1	Defines floodplain and flood- prone land as land subject to inundation by the probably maximum flood (PMF).	Defines flood-prone land as land inundated by the 100 year ARI flood event.	Maroochy Plan 2000 wording could be made consistent with the SPPNDM.		
2	Indicator of Compatibility (IC) 2.1 refers to fill greater than 10m ³ . Earthworks exceeding is define as assessabl Operational Works.		Self assessable operational works between 10m ³ and 50m ³ may compromise the intent of the SPPNDM.		
3	IC 3.1 allows parts of buildings located below the Defined Flood Event (DFE) to include car parks and storage areas.	<u>All</u> floors (and openings to basement car parks) are to be above the 100 year ARI flood level with freeboard.	IC 3.1 allows a higher risk to removable items. This IC might be used to argue that reduced development standards comply with the Maroochy Plan 2000 performance criteria.		
4	IC 4.1 and 4.2 allow all public infrastructure to be flood-prone.	Requires electrical and mechanical infrastructure to be above the 100 year ARI flood level.	IC 3.1 allows a higher risk to electrical and mechanical infrastructure. This IC might be used to argue that reduced development standards comply with the Maroochy Plan 2000 performance criteria.		
5	Recommended flood levels for community infrastructure based on 200 and 500 year	Floor levels for emergency services and hospitals have increased freeboard above	Flood level information for 200 and 500 year ARI flood		
	ARI floods.	the 100 year ARI event.	majority of locations and would require significant work to establish.		

Wording and Usability of draft SPP Guideline for Flood (Appendix 5)

Item	State Planning Policy	lssue	Possible Alternatives
1	Performance Criteria (PC) in General.	The PC only refers to "development". There is a risk that this will be interpreted as the development being assessed, not cumulative impacts of similar development in the balance of the catchment and on the floodplain.	All performance criteria be redrafted to state that the cumulative effects of similar development within the whole of the catchment and on the floodplain must be addressed.
2	Indicator of Compatibility (IC) 1.1 dot point 3 does not address cumulative impact.	Single development in isolation usually is not a tangible issue. Issue only evident with full development of the catchment and floodplain.	Redraft IC 1.1 dot point 3 to address cumulative impact of development.

MSC submission on the draft SPP for Natural Disaster Management

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3	IC 1.1 dot point 4 includes a note guiding compliance.	The status in law of the note is uncertain yet the contents of the note are required for certainty in assessing the IC.	Redraft IC 1.1 dot point 4 to include the contents of the note.
4	IC 1.2 appears to be redundant.	If IC 1.1 is not met by a development, the proponent needs to demonstrate that PC 1 is satisfied.	Delete IC 1.2.
5	PC 2 refers to hazard increase, but does not identify how it is measured (what units of measure).	It might be argued that a development that does not escalate the flood hazard category as defined in A2.30 complies, while the hazard factors (A2.27) may be increased.	Redraft PC 2 to reference the factors of flood hazard (A2.27), rather than just the flood hazard (A2.30).
6	The development conditions for which IC 2.1 is applicable is unclear.	It is not clear if IC 2.1 it to just apply to earthworks up to 10m ³ , or to any size earthworks, with only the last phrase relating to developments with less than 10m ³ of earthworks.	Redraft IC 2.1 to state developments involving less than 10m ³ of earthworks are deemed to comply (unless the intent is different).
7	IC 2.3.2 includes a note guiding compliance.	The status in law of the note is uncertain yet the contents of the note are required for certainty in assessing both IC 2.3.1 and 2.3.2.	Redraft IC 2.3 (before sub- paragraphs) to include the contents of the note.

Bushfire

Maroochy Shire Council is supportive of the approach taken for greater planning controls on land at risk to bushfire.

Maroochy Shire Council currently relies on the hazard areas on the Bushfire Risk Analysis Maps produced by the Queensland Fire and Rescue Service. The Code for Development in Bushfire Prone Areas (refer Attachment B) of Maroochy Plan 2000 has been prepared to be consistent with the advice offered in the *Bushfire Hazard Planning in Queensland* (first dated 1993) prepared by the Queensland Fire and Rescue Service and then the Queensland Department of Local Government and Planning.

Differing Requirements between the draft SPP and Maroochy Plan 2000

Item	State Planning Policy	Maroochy Plan 2000	Issues and Implications.
1	IC 1.2.2 Development does not involve any new building work other than a minor extension (<20m ² GFA) to an existing building.	Bushfire Code does not apply to a Detached house, Annexed unit, Caretaker's residence or Display home, including outbuilding and structures	Maroochy Plan 2000 wording could be made consistent with the SPPNDM.
2	IC 4.1 Residential lots are located in areas of lower bushfire hazard, in accordance with the	Development does not increase the number of lots within the bushfire prone area.	SPP distinguishes between residential and non residential lots, whereas Maroochy Plan 2000 does

	 A principles of Protecting your home against bushfire attack, Department of Local Government and Planning 2000. 3 IC 6.1 Residential buildings are sited to minimise bushfire exposure in accordance with the principles of Protecting your home against bushfire attack, DLGP 2000. 		Bu be	rea. ildings are sited or at sited: In an existing cleare area able to accommodate the building(s) with an	ole to d	not. Maroochy Plan 2000 v need to be amended t ensure consistency wi SPPNDM.	vill o th the	
					adequate firebreak, or Away from the tops or ridgelines and other to on north to west facin vegetated slopes	or If han g		
		IC 8.1 The dev provides poten purchasers of I local governme detailed informa including: The nature bushfire haz on the lot	reloper tial ots and the ent with ation of the zard present	Marc such	pochy Plan 2000 has r requirements	no M vi S	Aaroochy Plan 2000 /ording could be made onsistent with the PPNDM.	
	<u> </u>	 Responsibili managemen fuel in veget maintenance areas and bu separation of 	ties for fire at (including ated areas, of open illdings,					
		 Measures avoing ongoing fire h mitigation (incomplanting of fire species, use of flammable fen screens, sepa assets from hase 	ailable for nazard cluding e-resistant of non- icing and ration of azards)					
		 The intended management of internal vegeta and public area 	of retained ted strips as					

Landslide

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Maroochy Shire council is supportive of the approach taken for greater planning controls on land at risk to landslide.

Maroochy Shire Council has recently completed a Shire-wide Landslip study to identify areas which are at risk to landslide. The study has received acclaim by recently receiving two planning awards at the 2002 PIA QLD Division Planning in Excellence Awards. The study will be incorporated into the next round of amendments for the Maroochy Plan 2000.

The study identifies areas of risk to landslide through mapping techniques that show varying levels of risk to landslip (e.g. very high, high, medium, low), which relates to the degree of slope, existing vegetation, soil types and drainage qualities. Depending on the level of risk development will become code or impact assessable, for example very high and high risk will result in development being impact assessable and medium risk being code assessable. Maroochy Plan 2000 has an existing code for landslide, the Code for Development on Steep or Unstable Land (refer Attachment C).

The Performance Criteria outlined in the draft SPP Guideline for Landslide (Appendix 5) is consistent with the code provisions outlined in the Maroochy Plan 2000 (Attachment C). However the code provisions of the Maroochy Plan 2000 identify greater detail in aspects such as density and form, and siting and design of buildings. It is recommended these aspects require attention as part of the Indicators of Compatibility for Landslide of Appendix 5 of the SPP Guideline.

Conclusion

Maroochy Shire Council supports in principle the approach of the draft State Planning Policy for Natural Disaster Management. However there are several technical discrepancies between the draft SPP Guideline and the code provisions of the Maroochy Plan 2000, as outlined in this submission.

Maroochy Shire Council emphasises the importance of consistent measures between provisions set out in Local Government planning schemes and State Government requirements to avoid the potential for multiple standards which could potentially impact on planning decisions.

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MAROOCHY PLAN 2000 DESIGN CODE FOR FLOODING

MSC submission on the draft SPP for Natural Disaster Management

2. GENERAL LAND USE AND DEVELOPMENT CODES

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(2) Element: Provisions applicable to Reconfiguring a Lot (to create one or more additional lots).

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PERFORMANCE CRITERIA	ACCEPTABLE MEASURES	
P1 Development must not materially intensify the use of bushfire prone land, or must provide for the highest intensity of use in the parts of the site which are least bushfire prone and limits the intensity of use elsewhere	A1 Development does not increase the number of lots within the bushfire prone area.	
P2 Where reconfiguring a lot involves opening a new road, the road layout must be kept simple to allow easy and safe movement away from any encroaching fire, and provides for alternative safe access routes should access in one direction be blocked in the event of a fire.	 A2.1 The road layout provides for "through-roads" and avoids culde-sacs and "dead end" roads. OR A2.2 Where the use of a single entry road is unavoidable because of topographical constraints, a suitably established and maintained fire-trail is incorporated to allow for safe access to a "through-road" in an alterative direction to the road. 	(`)
 P3 Firebreaks must be provided by: roadways situated around the outside of the development site, or fire breaking trails: 	 A3 Where the reconfiguring of a lot involves the creation of a new road, firebreaks are provided by: (a) a minimum 20m cleared road reserve located between the development site and surrounding vegetated lands, or 	
 situated around or through individual lots as required, situated between the development site and surrounding vegetated areas, having sufficient width to both serve as an effective fire break and allow continuous access for firefighting vehicles, and being in secure tenure and maintained. 	 (b) secure fire breaking trails provided between the development site and surrounding vegetation lands where such trails: have a minimum cleared width of 6m, have a maximum gradient of 1 in 4, are constructed and maintained to prevent erosion and provide continuous access for firefighting vehicles, allow for vehicle access at least every 200m, and provide passing or turning areas at least every 400. 	·
 P4 Development of lots must have a sufficient supply of water for firefighting purposes, including: connection to a reticulated water supply scheme if available, with conveniently located hydrants, or where a reticulated supply is not available, the provision of a dam, lake, water tank or swimming pool having sufficient capacity for water pumping in times of bushfire. 	 A4.1 Premises are connected to a reticulated water supply having a water pressure complying with the Queensland Water Resource Commission "Water Supply Guidelines" for firefighting in times of bushfire emergency. OR A4.2 Premises have a dam, on-site water tank or swimming pool having a total minimum capacity of 45,000L for firefighting purposes in times of bushfire emergency. 	Volume Four

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ATTACHEMENT C

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MAROOCHY PLAN 2000 CODE FOR DEVELOPMENT ON STEEP OR UNSTABLE LAND

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MSC submission on the draft-SPP for Natural Disaster Management=

2.1.4 Code for Development on Steep or Unstable Land

PREAMBLE

The physical condition, environmental values and visual appeal of steep land (ie. with slopes generally greater than 15%), or land prone to landslip and/or subsidence (including in those areas identified on Regulatory Map No. 1.2), may be adversely affected by:

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- · earthworks (excavation and filling),
- removal of vegetation,
- the erection of buildings and other structures (like swimming pools, tennis courts, retaining walls, roads and driveways),
- on-site disposal of effluent, stormwater and wastewater, and
- other significant changes to natural surface or underground drainage patterns.

PURPOSE

- The purpose of this code is to provide for the avoidance or minimisation of undesirable consequences by ensuring development on steep or unstable land, and involving;
 - the erection of buildings and other structures and services;
 - the alteration of natural landform;
 - significant disturbance to natural vegetation;
 - significant changes to natural surface or underground drainage flows;

is consistent with the desirable physical, environmental and visual characteristics of such land and is carried out in accordance with best management practices.

(2) Development is intended to be on land with slopes generally less than 25%. Development on land with greater slope may only occur if the development proposed on steeper land:

ELEMENTS

(1) Element: Site Suitability

OBJECTIVE

To ensure that steep and unstable land, on which development is proposed, is physically capable of supporting the development and that physical constraints are identified and appropriately considered throughout the design process such that the development and associated works, poses no unacceptable risk to the public, users and surrounding land. (a) is consistent with the character intent of the relevant Precinct as outlined in Volume 3; and/or

- (b) has an overriding community benefit; and/or
- (c) will achieve acceptable levels of geological/environmental impact and design outcomes.

APPLICABILITY

- The provisions of this code apply to development being any:
 - Material Change of Use, or
 - Building Work (other than where a development approval for material change of use exists and the building work is in accordance with that development approval and the development approval has not lapsed), or
 - · Operational Work, or
 - Reconfiguring a Lot to create additional lots (other than for conservation) purposes.

on land with slopes generally greater than 15% or on other land known or suspected of being geologically unstable (including those areas of unstable land shown on Regulatory Map No. 1.2), and including Hillslope houses.

- (2) The code contains elements which address:
 - · Site Suitability, and
 - Désign and Siting of Buildings and Infrastructure
- (3) The following Planning Scheme Codes may also be applicable depending on the nature of the development and the location of the site:
 - Operational Work Site Development.
 - Landscaping design,
 - Operational Work Engineering,
 - · Codes for Residential land use,
 - Codes for Commercial or Community use,
 - Codes for Industrial land use,
 - Local Area Codes,
 - Code for Extraction, Excavation and Filling.



2. GENERAL LAND OPMENT. CODES USE DE

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PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
P1 cont. • maintenance, where possible, of natural landforms and vegetation,	cladding, etc.) to be compatible with surrounding natural landscape or streetscape.
 development is not visually intrusive, particularly from ridge lines, public open spaces, major 	A1.3 to A1.8 apply to both self-assessable and assessable development:
tourist roads and other critical vantage points, outside of the site, and is capable of proper drainage so as not to adversely impact on water quality issues, and	A1.3 Where a previous investigation of the site has been undertaken in accordance with Element 1 of A2.1 or as part of a previous development application on the site, buildings and other structures are designed and sited in accordance with the findings and recommendations of the investigation.
 development occurs on less steep parts of the site that do not unacceptably increase the visibility of the buildings from adjacent areas and in a form that allows natural 	AND A1.4 The building (including carparking structures) has a maximum undercroft height at the perimeter of the building of 3 metres above ground level; or
landforms and vegetation to be maintained as much as possible.	 Incorporates undercroft skirting or screening (eg. timber battens) to the full height of any undercroft area higher than 3 metres above ground level at the perimeter of the building, or
P2 Buildings and other structures must be designed and sited to	• For assessable development - incorporates landscape screening for the full height of the undercroft.
minimise adverse impacts on amenity of neighbouring sites with egard to ensuring acceptable: natural light and ventilation, views and outlook, and	AND A1.5 For buildings other than Detached houses, the extent of excavation (cut) and fill is revegetated in accordance with Council's Code for Landscaping Design immediately following completion of the works.
privacy.	AND
and the second sec	Side and Rear Boundary Building Sethack (see Figure 2 1 4/a)).
	A1.6.1 Residential buildings on land with slopes of more than 15% are setback 1.5 metres from the side or rear boundary of the site for a height of 4.5 metres (above natural ground level), and then setback an additional 0.5 metres up to a height of 6.0 metres (above natural ground level), and then with planes projected at 45 degrees from a height of 6.0 metres (above natural ground level) at a point 2.0 metres in from the side or rear boundary of the site, and are not higher than 10.0 meters and 2 storeys above natural ground level. OR A1.6.2 All other buildings on land with slopes of more than 15%
	are setback 1.5 metres from the side or rear boundary of the site for a height of 4.5 metres (above natural ground level), and then setback an additional 0.5 metres up to a height of 6.0 metres (above natural ground level), and then with planes projected at 45 degrees from a height of 6.0 metres (above natural ground level) at a point 2.0 metres in from the side or rear boundary of the site, and are not higher than:
	 10.0 metres and 2 storeys above natural ground level where an adjacent existing mature vegetation canopy does not exist, or
	 for assessable development, the height of adjacent existing mature vegetation canopy (where the development does not adversely impact the vegetation canopy). AND

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Continued over page.

2 GENERAL LAND USE AND DEVELOPMENT CODES

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
P5 Development of new premises being at an appropriate density and in a form, which allows for the environmental values of the site to be sustained to Council's satisfaction, having particular regard to: • biodiversity • ecological processes; • visual landscape values • rosion and sedimentation; • water guality; • land stability; and • stormwater dramage	 A5 Where acceptable levels of environmental impact will be achieved, any development of residential premises on urban land with slopes generally more than 25% is at a density of not more than: one dwelling per 4000 m² of site area for hillslope houses, or one dwelling per 800 m² of site area for multi-unit residential premises.





Planning Scheme Codes

(Amended 7 May, 2002) Maroochy Plan 2000



Treasury

DEPARTMENT OF EMERGENCY SERVICES 0 2 JAN 2003 EXECUTIVE SERVICES

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Director-General Department of Emergency Services Level 3 Block B Emergency Services Complex Corner Park Road and Kedron Park Road KEDRON QLD 4031

Dear

Thank you for your recent letter and similar correspondence addressed to Mr Glenn Poole, Assistant Under Treasurer, inviting Treasury to participate in public consultation on the draft State Planning Policy and Guideline for Natural Disaster Mitigation (SPP).

The development of this SPP is an important contribution towards the State arrangements for mitigating the impact of natural disasters. The policy document is comprehensive and I congratulate you and your staff for the effort in developing this SPP. Treasury views and comments on the draft are enclosed.

Thank you for the opportunity to participate in the public consultation process on the draft SPP. Should any further information be required on the matter please contact

) on telephone

Yours sincerely

Under Treasurer

Encl.

Executive Building 100 George Street Brisbane GPO Box 611 Brisbane Queensland 4001 Australia Telephone +61 7 3224 2111 Facsimile +61 7 3221 5488 Website www.treasury.qld.gov.au ABN 90 856 020 239 Attention: State Planning Policy Acting Director Disaster Mitigation Unit Counter Disaster and Rescue Service Department of Emergency Services GPO Box 1425 BRISBANE OLD 4001

Draft State Planning Policy and Guideline for Natural Disaster Mitigation

Queensland Treasury Submission

Overall, Treasury has no major concern with the Draft State Planning Policy and Guideline for Natural Disaster Mitigation (SPP). Treasury recognises the importance of having a State Planning Policy for making decisions about development in natural hazard-prone areas as a means of mitigating the impact of natural disasters in the State.

Treasury has the following comments to make on the SPP for improving its understanding and implementation.

General Comments

The references provided in the document in order to comply with the policy are somewhat complicated, often referring the reader to an Annex and/or to an Appendix etc. It would assist the readers if cross-references are made clearer and presented in a manner that would minimise the need for moving from one part of the document to another and from the policy to the guideline.

In addition, development applications are already required to comply with a number of guidelines and processes as set out by the Integrated Planning Act. The proposed SPP for Natural Disaster Mitigation appears to be a comprehensive document and may result in increased time and costs (in terms of assessment time and compliance) faced by developers, both public and private, submitting development applications.

In this context, it may be useful to compare the policies and guidelines that other States have developed in response to the 1998 changes made to the Commonwealth guidelines for Natural Disaster Relief Arrangements funding to determine whether there is scope for the requirements of the document to be streamlined.

Specific Comments

Para 1.1 Purpose of the Policy (page 1)

The rationale behind the policy is not clear to the reader. The draft Guideline, on page 23, states that in 1998 changes were made to the Commonwealth guidelines for the Natural Disaster Relief Arrangements funding such that ongoing financial assistance from the Commonwealth is linked to evidence of mitigation for likely or recurring natural disasters or a commitment to develop and implement such a strategy within a reasonable timeframe. The policy document should refer to this requirement as well as provide any other reasons for the development of the policy.

Para 6.4 Identifying natural hazard management areas and severity of hazard (page 4)

It is stated that "the natural hazard management area for flood hazard is dependent on a local government adopting a flood event for the management of development in a particular locality". Under this scenario, it appears that it may be possible for some local governments not to adopt a flood event and avoid coming within the purview of the policy. This may create inequities and inconsistencies in implementing the policy. In order to avoid such problems, there should be some arrangements to specify appropriate time lines for local governments to adopt flood events in flood hazard-prone areas.

Draft Guidelines Para 4.8 Climate change (page 23)

This section states that "there is currently no State position on the anticipated effects of climate change". This may be misinterpreted by some readers to infer that the Queensland Government has not given any consideration to the issue. However while there may not be an "official" State position, it should be recognised that research by the Queensland Government on this issue has been ongoing for a number of years and the Government has implemented a number of policy initiatives in response to addressing the potential impacts of climate change identified by the research.

Given that the predicted changes resulting from climate change are likely to have significant effects on Queensland, such as reductions in annual rainfall, increased risk of bushfire and increased flood risk, it may be useful to draw on this information to develop a State position on the anticipated effects of climate change so that this can be taken into consideration in future planning both for business and Government.

For example, in recent years, research on the potential impacts on Queensland has been undertaken by the CSIRO and supplemented by research by Government agencies. In 2001 the Queensland Government released the direction statement – Queensland Greenhouse Policy Framework: A Climate of Change which includes a relatively detailed list of the potential impacts of climate change on Queensland and emphasised the vision for Queensland to be able to adapt to climate change. Other policy initiatives developed by the Queensland Government include the Queensland Greenhouse Strategy, the Queensland Energy Policy – A Cleaner Energy Strategy and a vegetation management framework.

Draft Guidelines Paras 6.23 to 6.28 Can overriding need be demonstrated? (pages 28,29)

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The provisions/process for determining overriding need in the public interest where the proposed development is incompatible with the nature of a natural hazard needs further clarification. For instance, does a developer need to undertake some formal cost-benefit analysis and if so how should the developer set about it? The Guidelines should provide some general details/guidelines for conducting such analysis with the aim of ensuring consistency across the application of the SPP.

Mal Grierson Director-General Ref: CTS00001/03

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Department of Public Works

Mr Mattingen

Director-General Department of Emergency Services GPO Box 1425 Brisbane QLD 4001

Dear

Re: Draft State Planning Policy and Guideline for Natural Disaster Mitigation

I refer to your letter of 21 October 2002 inviting submissions on the draft State Planning Policy (SPP) for Natural Disaster Mitigation and the attached Guideline.

The Department of Public Works has been represented on the Government Advisory Committee established to assist in the development of the State Planning Policy and has been providing input and comment during the development of the draft State Planning Policy on which wider comment has been sought. The Department of Public Works supports the intent of the State Planning Policy and the policy direction incorporated in the draft State Planning Policy and Guideline.

The Capital Works Management Framework (CWME), a policy of the Queensland Government, requires all agencies engaged in the delivery of services through community infrastructure to adopt best practice processes and procedures for all new building projects. The Capital Works Management Framework requires all agencies to identify and evaluate all risks pertaining to a site and at all stages of the capital works delivery process. This includes assessment of the effects of natural disasters and the inclusion in the project proposal of plans to address any risk involved. Subsequent to approval of the State Planning Policy, the Department of Public Works will examine the Capital Works Management Framework with a view to including specific reference to the requirements of the State Planning Policy.

The Department of Public Works contact officer for further issues related to the State Planning Policy or Capital Works Management Framework is Manager Asset Management Policy Branch, and can be contacted on telephone

Yours faithfully

Director-General

Level 7 80 George Street Brisbane GPO Box 2457 Brisbane Queensland-4001 Australia Telephone +61 7 3224 6507 Facsimile +61 7 3224 5616 Appendix D

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Summary of Issues raised during Consultation Stage

Appendix D: Summary of Issues Raised During the Consultation Stage

兒園	Issue Raised or Views Expressed	Co	mment
N	atural Hazard Management Areas (Flood)	10000	AND STATE OF THE
0	Definition of flooding includes "dam break", but it is not addressed further in the SPP. Suggests that dam break flooding be removed as were earthquake and strong winds.	•	Agree. Amend SPP to make clear that dam break flooding is not included.
	and landslide). The default DFE should be based on the "flood of record", that is the largest flood since records began at that particular locality. This would prevent undue development in the period until a detailed flood assessment becomes available. For example, this would have been beneficial in Charleville.	•	The lack of reliable flood data for many parts of the State make it impracticable to mandate a default flood level that would be equally applicable to all parts of the State. The approach adopted in the Draft SPP was based on extensive consultation with local governments and others and should be retained.
•	Two submissions consider that the definition of "floodplain" is inappropriate as it is based on the PMF (Probable Maximum Flood) which is not necessarily representative of the current extent of the floodplain. One submission suggests that floodplain be defined as outlined by Australian Rainfall and Runoff (ARR). One submitter was concerned about the delay in implementing the SPP's flood elements and recommends that the 1:100 ARI flood be used as the default flood NHMA.	0	The definition is from Floodplain Management in Australia – Best Practice Principles and Guidelines. While the submitter's arguments appear to have merit, it seems advantageous to retain consistency in definitions. No amendment proposed.
•	Need to distinguish between Appendix 2 and Appendix 7 for PC that relate to Flood Plain Management and Stormwater Management. Most Councils have design standards for stormwater. Stormwater flooding can be surcharge from pipe or open channel drainage, not just from watercourses.	•	The SPP and Guideline should be amended to make it clear that they address only flooding associated with defined watercourses.
Ð	Definition of PMF is the flood that "could conceivably occur" whereas the Institution of Engineers use "could reasonably occur". Also IE (Aust) refer to the PMF as the "PMP Design Flood". Need to ensure consistency with nationally agreed definitions	.0	The definition used in the SPP is taken from SCARM report 73 "Floodplain Management in Australia, Best Practice Principles and Guidelines" published in 2000. No amendment required
•	A2.20 – indicates that Bureau of Meteorology (BoM) data is available from NR&M. This may not be the most current data, refer to BoM only. Change phrase "hydrologic models where BOM operates a flood warning system" to "possible hydrologic models or flood forecasting studies where BoM operates a flood warning system".	•	The SPP should be amended as proposed.
8	Section 2.3.2 (p. 67) of SPP Guideline refers to the need for the hydraulic report to assess the "cumulative impacts of all existing and likely future development in the floodplain". It is considered imperative that the 'existing situation' and 'cumulative impacts' of	•	This section of the Guideline should be amended to clarify requirements.

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Issue Raised or Views Expressed. Comment development be addressed in the hydraulic report. This should be explicitly stated in the notation. The proposed approach recognises that flood data is not available in many areas to identify an appropriate There were some suggestions that timeframes for application of the flooding components of DFE at this time. The 8 year limit under IPA for reviewing planning schemes effectively sets the the SPP could be too long maximum time limit for addressing all requirements of the SPP. Defining 'flood' – if recognised temporary nature of water coverage in areas not normally Definition of flood should be amended to refer to temporary indundation. covered, may avoid confusion with, eg. newly created waterbodies. · The issue of Council approval is a procedural matter which is captured by the existing words (i.e. Floodplain Management Study (Appendix 2, A2.33) includes '... adoption of a flood 0 "adoption of ... "). No amendment required. mitigation program'. More appropriate to include the 'recommendation of a flood mitigation plan' with subsequent dev. of a flood mitigation program approved by Council - requires detailed technical investigations should be considered by community. PC2, 2.1 relating to flood storage capacity through importation of fill was questioned. The threshold in the SPP should be amended to provide a maximum volume of fill (say 50 cubic metres) Given that it is only triggered if it affects > 10 cubic metres of soil, it seems to ignore but provide the flexibility for local governments to adopt lower thresholds where appropriate to their adverse cumulative effects likely to result in an extensive developing area or in a particularly sensitive floodplain. circumstances. One submission expressed concern at the requirement of IC1.1 relating to evacuation access The issues of evacuation should be revisited. There are problems with the current proposals and a new roads to be above RL1:200. It was expressed that this could not be achieved within the approach should be developed. particular local government area without considerable implications. Suggest that this be adopted in SPP as maximum threshold but make it clear that local governments can use lower thresholds if appropriate to local conditions (see comment in relation to PC2, 2.1 above) ... IoC 2.1 - suggest using 50 cubic metres Appendix 5 - The use of the term development may be interpreted as the development · The term "development" does refer to the particular development proposal being assessed. It can only . being assessed not cumulative impacts of similar development in the balance of the work that way, through assessment of individual applications. The cumulative impacts are assessed catchment and on the floodplain. Suggest that all PC be redrafted such that the cumulative under PC 2. No specific amendment required. effects of similar development within the whole of the catchment and on the floodplain must be addressed. IoC 2.3.3 includes a note guiding compliance. The status of the note is uncertain in law so These sections of the Guideline should be redrafted to clarify the status of notes. redraft to include the note in IoC 2.3 before the subparagraphs Defined Flood Event (DFE) Two submissions question use of the 1:100 year ARI DFE. ۰ 1:100 year is the preferred Defined Flood Event (DFE) approach for identifying the natural hazard One submission suggests SPP should require consideration of public safety in areas above . management area (flood). LGs are encouraged to do flood hazard assessment studies to determine an DFE (e.g. 500 year flood), and consideration of unacceptable modifications to flood appropriate DFE that is suitable to the local conditions. No amendment to SPP recommended.

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	Issue Raised or Views Expressed	-C	ompont
0	behaviour that may adversely impact on DFE or lesser floods. 6.5, p4 -need to consider residual risk to PMF, best practice - not necessarily 1:100. One submission suggests use of ARI terminology is not consistent with a risk management approach & should be replaced, or used in conjunction with AEP (Annual Exceedance Probability) terminology. Also suggests there should be some explanation of the probability of various AEP events occurring over a design or planning timescale. One submitter noted that Draft SPP uses both ARI and AEP. Using the term year in relation to flood events, as ARI does, is likely to cause confusion in the community about when such an event may occur. Prefer the use of a probability measure (e.g. 1:100 or 1%)	0	 Adopting the 1:100 DFE is the preferred minimum set by the SPP for land use planning and development assessment purposes. This is appropriate for the SPP. Residual risk is addressed via other means (eg. counter disaster plans etc.) The Green book – Floodplain Managément in Australia uses both AEP and ARI however the points made by the submitters are valid. Recommend SPP be amended to use AEP terminology.
Nat	rural Hazard Management Areas (Landslide)	-	
e	Suggestions for technical improvements and references (including using shadow angles to determine the runout distance of debris flows). Section 6.4 (p 4. of SPP) refers to the need to calculate slope of the 'development site'. Due to the nature of landslide and bushfire hazard, it may be necessary to consider slope and bushfire issues on adjoining land.	•	Recommend that the shadow angle technique be referenced in the Landslide appendix to the SPP Guideline. Recommend that the phrase "and relevant adjacent areas" be added to the last sentence in para 6.4.
	Proposes that Stanthorpe Shire should not be included where SPP applies for landslide. Shire contains slopes in excess of 15%, however, landslide risk are small. No incidences of landslide in recent history and no evidence of instability. The geology of the Shire mitigates against landslide. Appendix 8 – diagram and text are contradictory as the diagram shows a line which is at an angle to the contours and item 2 of the text refers to a line perpendicular. Diagram and text need to be consistent and made clearer.	0	Determining landslide risk should be based on a geological stability study, in particular for areas where future development is likely. NR&M and global assessment of DES identified Stanthorpe Shire as including land over 15% and concluded that the SPP should apply to this area for landslide. No amendment recommended. Review and amend Appendix 8 as necessary.
	Redcliffe City has not been listed in Annex 2, A2.3 for Landslide (p 13 of SPP). It is understood that Redcliffe Council have commissioned a report entitled "Redcliffe Peninsula Foreshore Cliffs Study", which has indicated the potential for failure of cliff faces in a number of locations.	• La Re re	Landslide has been assessed as being not of State significance in Redcliffe. Nothing in the SPP prevents Redcliffe CC addressing local landslide issues in a manner consistent with the SPP. No amendment required.
Nat	ural Hazard Management Areas (Bushfire)		
0	Suggestion for linking of Bushfire Prone Areas for SBR and NHMA (Bushfire)	•	Recommend that approaches be made to amend the SBR to align it with the approach in the SPP.
	Appendix 5 (Performance Criteria) - B - Bushfire (Indicators of compatibility, section 1) -	0	The SPP already includes the opportunity for applicants to undertake site specific bushfire risk

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	Jasue Raised or Views Expressed	
•	One submission expressed surprise that the SPP does not cover earthquake. Recognises that SBR specifies construction standards for buildings (eg. earthquake loadings). Considers that infrastructure (eg. trunk water supply infrastructure) may have significant roles following earthquake events. No standards or Guidelines exist for this. Bundaberg City in region specifically affected by earthquake and some guidance from State through SPP as to how Councils should be addressing earthquake is considered appropriate.	 Acid sulfate soils (addressed in another SPP), sea level rise, salinisation, and drought are addressed through other Government mechanisms. Paragraphs 4.2 to 4.4 of the SPP and 2.3 of the SPP Guideline explain this adequately. No amendment proposed. SPP does not cover earthquake, as adequately covered by SBR, BCA and AS for buildings. While there may be a need for standards or Guidelines for the types of infrastructure described in the submission, this is outside the scope of the SPP. No amendment proposed.
Co	mmunity Infrastructure	
0	Include 'storage areas for public records under the Public Records Act 2002' Concerned with wording in Appendix 7 that promotes design solutions catering to a 1:200 year flood event for police facilities. The performance criteria should also provide confirmation that there will be numerous circumstances where it will not be possible to achieve this standard. Recommended that Appendix 7 be modified to reinforce information in Outcome 1, namely "except where: there is an overriding need for reasonably available for the proposal".	 Recommend that this reference be included in the SPP and Guideline. The Recommended Flood Levels in Appendix 7 should be read in conjunction with Outcome 3 – 'where practicable'. These concerns area already addressed in SPP Guideline (paragraphs 6.47 to 6.49). No amendment required.
	One submission suggests using increased freeboard requirements to determine flood levels for community infrastructure	 Recommend that this be incorporated in the Guideline as an alternative approach where the Recommended Flood Levels are not known
•	1 October 2002 – Electrical Safety Act 2002 commenced – imposes electrical safety obligations to ensure electrical safety. Electricity entities must ensure 'works' are electrically safe. Works of an electricity entity means the electrical equipment and electric line associated equipment, controlled or operated by the entity to generate, transform, transmit or supply electricity. 'Operating works' under the Electricity Act 1994 (Annex 1(b) of SPP) include non-electrical equipment such as fuel stocks, operated by an electrical entity. In view of this the definition of types of electricity related community infrastructure should be reviewed.	 The definition of community infrastructure in Annex 1, Part (b) is consistent with IPA, Schedule 5. However, the <i>Electrical Safety Act</i> 2002 definition better targets the type of infrastructure with which the SPP should be concerned. Amend the SPP to include the <i>Electrical Safety Act</i> 2002 definition of "works".
0	Energex must 'follow'/support development patterns and must connect to an exiting network – requiring sometimes electricity assets constructed in areas restricted by SPP.	 Exempt development is not affected by the SPP. Appendix 7 currently includes 1:500 ARI Recommended Flood Levels for power stations, major switch yards and substations. In view of the submitters arguments re: substations, it may be appropriate to reduce the RFL to 1:200 (consistent with that proposed for the

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Issue Raised or Views Expressed

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	Unlike roads, SPP makes neither specific exemption nor recognition of this aspect of an electricity network. Application of the SPP to substations not reflective of development process causing need for substations and an unnecessary cost. Certain aspects of electricity infrastructure are exempt development for IPA:	Co	electrical components of a water treatment plant), and to include a fifth dot point, "electricity works (not specifically listed in this table)" below State-controlled roads in Appendix 7. The requirements for power stations and major switch-yards appear reasonable. Amendments to SPP as noted above
	 Operational work for a public sector entity, addition of transformers within an existing sub-station, and Electricity distribution lines up to 66 kv. Energex requests removal of reference to electricity infrastructure from SPP. Section 5, 5.8 States position - 1:100 ARI conflicts with Appendix 7, part A - power stations, major switch yards and substations - AS of 1:500 ARI. Energex submits that 1:100 ARI is State's 	•	Electrical infrastructure is vital to community safety during natural hazard events and should be retained in the SPP. A higher level of flood immunity is appropriate for infrastructure of this importance. No amendment required.
•	position at should be applied throughout Appendix 7 (in reference to electricity infrastructure). Concern and suggestions about proposed provisions relating to access to community infrastructure Amend Outcome 3 as follows: "Wherever practicable and affordable, community infrastructurewith a specified level of risk and the nature of the community infrastructure." Why are LG roads not included in Annex 1.1(b)?	•	Provisions relating to access should be reviewed. Wherever practicable includes the notion of affordability as indicated by the reference to "available resource allocations" in para 6.47. Para 6.48 refers to "the role and function of the infrastructure". No amendment is required. The intention was to pick up major roads of State significance as these are the vital lifelines for the community.
Inte • • Refe	grated Planning Act One submission raised concerns about the validity of the Integrated Planning Act and the processes undertaken One submission suggested need for a mechanism (either in SPP or IPA) to allow Minister for LGP to sign off on planning schemes for particular parts of SPP due to the 3 clearly defined separate elements of the SPP (i.e. flood, bushfire and landslide). One submission suggested changes that could be made to IPA requiring LGs to notify whether property is in a NHMA on Planning and Development Certificates. rrral or Concurrence Agency Status	•	Concerns relating to the Integrated Planning Act to be forwarded to the Department of Local Government and Planning This would need to be done through IPA rather than through the SPP. No amendment to the SPP is required. Matter for consideration by DLGP. No amendment to the SPP is required.
•	Not clear in the SPP whether the State Government will have a referral role for	• 0	It is not currently proposed that State Government have a referral role. Would require an amendment of

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	Issue Raised or Views Expressed	213 225	
	development applications within a NHMA.	周期	Comment
C	osts and Funding	+	the IPA Regulation. No amendment of the SPP is required.
•	Concern in a submission that those LGs not covered by the proposed SPP (Maps 1 and 2) will be excluded from Commonwealth assistance programs eg. the NDRA. Also, the undertaking of studies required to implement the SPP will involve significant costs to Council and State Government should address this.	2) the to	 Some LG areas are exempt from applying to the SPP for bushfire and landslide hazard, based on the level of hazard in these areas being considered low and not of state significance. This does not stop these LGs being proactive. These LG areas need to address flood hazard and incorporate the SPP for flood. Commonwealth assistance funding for disaster relief is available to these LG where they have evidence of mitigating flood (the likely or recurring natural hazard). Incorporation the SPP and
9	Councils currently advanced in preparing IPA Scheme may not be able to satisfy requirements of Draft SPP within timeframes. Significant resources required to accurately map flood, bushfire and landslide. The time, availability of resources and advanced stage of draft IPA scheme should be considered in State Agency review of IPA schemes. One submission suggested the inclusion in Annex 3, A3.2 of the underlined words " that the proposed DFE is appropriate to the circumstances of their locality <u>including capacity</u> and resourcing constraints" and in para 7.2 of the Guideline "the variation in scope should depend on the <u>capacity and resourcing constraints of the local government size and</u>		 provide evidence of mitigation. The NDRA are used for relief. The NDRMSP provides funds to assist in implementing SPP. Councils are encouraged to do studies over time to achieve the Outcomes of the SPP. If this is not possib for the preparation of current draft IPA schemes, then LGs should indicate what they intend to do achieve the SPP Outcomes over time to be included in the next review of IPA schemes. It is probably better to confine interpretative advice of this nature to the Guideline, so text similar in inter to that proposed for para 7.2 should be incorporated.
-	distribution of the population "	1	
CU	mpensation and Liability	1.	Noted the SPR address in the second sec
•	Concern about compensation and liability impacts of SPP	governme Queenslar	overnments are already addressing these issues. The SPP will ensure a consistent approach througho ueensland. No amendment required
	ensure a LG is not liable for compensation for loss of yield as a result of incorporation of the SPP.	•	S5.4.4 of IPA already includes a limitation on compensation for a change affecting development "that, had it happened under the superseded PSwould have led to significant risk to persons or property from natural processes (including flooding, land slippage or erosion) and the risk could not have been reduced by conditions attached to a development approval". This existing provision provides adequate protection for LGs in the implementation of the SPP.

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	Issue Raised or Views Expressed	Comment
Co	nsideration of Environmental Values and Impacts	
o	Position Statement says "development should minimise the potential adverse impacts of flood bushfire and landslide on <u>and the environment</u> ". Environmental impacts are not fully reflected in Outcomes, performance criteria and indicators of compatibility.	 Recommend the addition of text clarifying that the SPP does not support hazard mitigation works that would result in unacceptable impacts on environmental or amenity values. It would not be appropriate to add performance criteria and indicators of compatibility for this issue as they are not directly related to hazard mitigation and would be more appropriately addressed under other areas.
•	SPP should not adversely impact the outcomes of the Koala Coast SPP.	 The two SPPs need to be interpreted in conjunction. There is no specific conflict between them. Redland SC's submission supports the SPP. No amendment required.
0	One submitter is concerned that the SPP does not "properly protect the environment in all its aspects from the impact of developments in or near disaster prone areas". The submission proposes a number of amendments including the addition of two new appendices (Conserving Nature and Landscapes) as well as significant number of specific amendments that are nearly all directed at protecting environmental values.	 Propose to add new text after para 6.8 clarifying that the SPP does not support hazard mitigation works that would result in unacceptable impacts on environmental or amenity values. It would not be appropriate to add performance criteria and indicators of compatibility or lots of new text about this issue as they are not directly related to hazard mitigation and would be more appropriately addressed under other measures such as the Vegetation Management Act and other planning and
Ro	les and Responsibilities	o solution and other planning scheme measures.
0	Role of the Commonwealth – include in Roles and Responsibilities of Guideline (words provided).	 The suggested text does not assist the implementation of the SPP. Recommend that it not be included.
•	Role of State Agencies - SPP focused on role of LG in planning process - appropriate due to responsibility of LGs under IPA. SPP should also acknowledge State agencies important role in land use planning aspects of NDM, including:	 SPP operates under IPA and deals with land use planning and development assessment. The various roles and responsibilities are outlined in Section 8 of the Guideline. No amendment required.
0	Areal extent of natural disaster issues - beyond LG boundaries.	
0	Expertise/traditional role of State agencies on management of natural disasters.	
0	Traditional role of State agencies to mitigation, particularly in relation to information to back up any planning measures.	
0	Expectation by LG of the prominent role to be adopted by State agencies.	
Pa	rticular site issues	
a	One submission raised the implication of the Draft SPP for one particular site with drainage problems. Concerns related to Council's proposed resumption of land.	 Not relevant to SPP. Responded to separately.

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DRAFT State Planning Policy

for Natural Disaster Mitigation

page 2, 29/08/2002



NOT GOVERNMENT POLICY For Consultation Purposes

23 August 2002

POSITION STATEMENT

The Queensland Government considers that development should minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment.

1. PURPOSE OF THE POLICY

1.1 This State Planning Policy ('the SPP') sets out the State's interest in ensuring that the natural hazards of flood, bushfire, and landslide¹ are adequately considered when making decisions about development.

2. APPLICATION OF THE POLICY

2.1 Under the *Integrated Planning Act 1997* (IPA), the SPP has effect when development applications are assessed, when planning schemes are made or amended, and when land is designated for community infrastructure².

Development to which the Policy applies

- 2.2 The SPP applies to development involving:
 - the actions or activities described in part (a) of Annex 1;
 - the community infrastructure described in part (b) of Annex 1.
- 2.3 In addition, the SPP addresses development that has the potential to increase the extent or severity of natural hazards but this aspect of the SPP only applies when planning schemes are being made or amended.

Areas to which the Policy applies

2.4 The SPP generally applies throughout Queensland. However the application of the SPP for bushfire and landslide is limited to the local governments listed in parts (a) and (b) respectively of Annex 2.

3. USING THE POLICY

- 3.1 The main outcome statements are depicted in bold type (Outcome 1 Outcome 6) and must be read in conjunction with the rest of the text.
- 3.2 Technical terms are described in Section 9: Glossary.
- **3.3** The Draft SPP Guideline: Natural Disaster Mitigation, as amended from time to time, provides advice about how to implement the SPP, and is declared to be 'extrinsic material' under the Statutory Instruments Act 1992³.

¹ See Section 9, Glossary

² The SPP Guideline describes in more detail how the SPP applies.

4. THE NEED TO MITIGATE THE ADVERSE IMPACTS OF NATURAL HAZARDS

- 4.1 A natural hazard is a naturally occurring situation or condition with the potential for loss or harm to the community or environment. Natural hazards do not have to become natural disasters. Effective land use planning is an important means of reducing the community's vulnerability to natural hazards and promoting resilient communities.
- 4.2 In Queensland the main natural hazard threats are cyclones/severe storms, floods, storm tide inundation, bushfires, landslide and earthquake. The risks and consequences from these hazards vary around the State depending on the location, the physical characteristics of land and the type of development. Cyclones are particularly potent natural hazards as the consequences of a cyclone can include a combination of flood, storm tide inundation, strong winds and landslide. For the purposes of this SPP the consequences of cyclones are regarded as separate hazards.
- 4.3 As the hazards associated with strong winds and earthquakes are not amenable to clear spatial definition, they are difficult to address through land use planning mechanisms. Design and construction standards are the most appropriate mechanisms for mitigating risk from earthquakes and strong winds. For example, the *Standard Building Regulation* specifies construction standards for buildings and most non-building structures. Therefore strong winds and earthquakes are not addressed by this SPP.
- 4.4 Storm tide inundation hazard is addressed under the *State Coastal Management Plan*, and is therefore excluded from this SPP except to the extent that cumulative impacts (e.g. flooding can be exacerbated under storm tide conditions) may need to be considered in determining the extent and severity of hazard under this SPP.
- 4.5 Natural disasters are a significant and rising cost to the community. They are estimated to have cost Queensland an average of \$239 million per year (in 1999 prices) in direct and indirect tangible costs between 1967 and 1999⁴. In addition there are significant intangible costs associated with loss of life, injury, human suffering, loss of productivity, and environmental damage.
- **4.6** The Queensland Greenhouse Policy Framework⁵ acknowledges the growing scientific consensus that the enhanced greenhouse effect is changing the world's climate, and that Queensland will be vulnerable to the effects of climate change. Predicted changes include reductions in annual rainfall but increased rainfall intensity, increased risk of bushfires, and increased flood risk and damage to transport infrastructure and low-lying human settlements. The nature of these changes will vary across Queensland. These changes will have significant impacts on the nature and extent of natural hazards and, consistent with the precautionary principle, should be assessed when undertaking natural hazard assessments or developing natural hazard mitigation strategies.
- 4.7 Inappropriate development in areas susceptible to natural hazards significantly increases the risks (and associated costs) to the community. This SPP aims to minimise these risks by

³ Refer to the SPP Guideline for an explanation of "extrinsic material".

⁴ Bureau of Transport Economics Report 103, *Economic Costs of Natural Disasters in Australia*, Commonwealth of Australia 2001.

⁵ Queensland Greenhouse Policy Framework: A Climate of Change, State of Queensland, September, 2001.

ensuring that the potential adverse impacts of natural hazards are adequately considered when development applications are assessed, when planning schemes are made or amended and when land is designated for community infrastructure.

5. THE POLICY APPROACH

- 5.1 The SPP requires the identification of *natural hazard management areas*⁶ within which minimising risks to the community should be a key consideration in development assessment and the preparation of planning schemes. Until natural hazard management areas are identified in planning schemes, the natural hazard management areas outlined in Annex 3 should be used for development assessment.
- 5.2 In relation to certain important types of community infrastructure⁷, the SPP aims to ensure that they are able to maintain operation during and immediately after major natural hazard events wherever practicable. The SPP applies to these types of community infrastructure throughout Queensland⁸, not only within natural hazard management areas.

6. DEVELOPMENT OUTCOMES AND DEVELOPMENT ASSESSMENT

- 6.1 When development applications are assessed against this SPP or land is designated for community infrastructure, regard must be had to Outcomes 1 to 3, and the remainder of Section 6. However, this SPP is not to be used when assessing development applications for building work assessable only against the *Standard Building Regulation*.
- 6.2 The assessment manager needs certain information when assessing development applications for consistency with Outcomes 1 to 3. If not provided with a development application, such information should be the subject of an information request under IDAS.

Development in Natural Hazard Management Areas

6.3 Within natural hazard management areas, the SPP applies to the development listed in part (a) of Annex 1.

Outcome 1: Within natural hazard management areas, development to which this SPP applies is compatible with the nature of natural hazard⁹, except where:
there is an overriding need for the development in the public interest, and no other site is suitable and reasonably available for the proposal; or
the development proposal is a development commitment¹⁰, and it would have a lower level of risk than generally applies to development in the vicinity.

⁹ See Section 9, Glossary.

⁶ See Section 9, Glossary.

⁷ See part (b) of Annex 1.

⁸ Except, in relation to bushfire and landslide, those local government areas not included in Annex 2.

¹⁰ See Section 9, Glossary.

Identifying Natural Hazard Management Areas and severity of hazard

- 6.4 Annex 3 describes the natural hazard management areas for flood, bushfire and landslide that apply to this outcome. Information on the location of natural hazard management areas, and in some instances the severity¹¹ of hazard within those areas, may be obtained from State or local government. However in the case of landslide hazard for which the natural hazard management area may be based on a slope calculation¹², the slope of the development site may need to be determined when preparing a development application.
- 6.5 The natural hazard management area for flood hazard is dependent on a local government adopting a flood event for the management of development in a particular locality¹³. Until this occurs the SPP does not take effect for development assessment in relation to flood hazard in that locality.
- 6.6 Information on the severity of natural hazards will not always be available, but where it is available should be provided with the development application. The SPP Guideline provides further information on how to identify natural hazard management areas and the severity of hazard.
- 6.7 When assessing applications for development, the Assessment Manager will need to confirm whether the proposed development is located within a natural hazard management area. The Assessment Manager will also need to confirm the severity of hazard where such information is available.

Determining Development Compatibility

6.8 Development within natural hazard management areas is compatible with the nature of the natural hazard when it complies with the relevant performance criteria in the SPP Guideline. The development application should demonstrate that the development proposal complies with the performance criteria.

Overriding need

- 6.9 Outcome 1 aims to ensure that development is compatible with the nature of the natural hazard However, in some cases, it may be possible to demonstrate that a proposed development that is incompatible would meet a particular public need to an extent that would override the risk associated with the natural hazard.
- **6.10** Determining an overriding need in the public interest will depend on the circumstances of the particular development proposal. The proposal should result in a significant overall benefit to the whole or a significant part of the community in social, economic or environmental terms that outweighs the adverse impacts arising from the development's exposure to natural hazards. Also, the development application should demonstrate that a similar benefit could not be achieved by developing other suitable and reasonably available sites. Increased risk to people is a significant consideration when determining overriding need ¹⁴.

¹¹ Areas are often classified according to the estimated severity of a particular hazard in that location (e.g. High, Medium, Low severity). Classification in this fashion is not always necessary or appropriate. However where such information is available it should be used to assist development assessment.

¹² Refer to Annex 3.

¹³ See Section 9, Glossary.

¹⁴ The SPP Guideline provides advice about interpreting 'overriding need'.
6.11 A development proposal that is consistent with Outcome 1 because of an overriding public need must also be consistent with Outcome 2.

Development Commitments

- 6.12 An existing development commitment that is not compatible with the nature of the natural hazard is consistent with Outcome 1 provided it would have a lower level of risk than generally applies in the locality. Compliance with this criterion will depend on the particular circumstances. The SPP Guideline provides advice on assessing development proposals against this criterion.
- 6.13 A development proposal that is consistent with Outcome 1 because it is a development commitment must also be consistent with Outcome 2.

Outcome 2: Development that is not compatible with the nature of the natural hazard but is otherwise consistent with Outcome 1: • does not result in an unacceptable level of risk to people or property; and • minimises: as far: as practicable the adverse impacts from natural hazards

6.14 Development achieves Outcome 2 when it is brought as near as practicable to the level required to comply with the performance criteria for compatibility with Outcome 1, and the development would not result in unacceptable levels of risk to people or property. Assessment of the latter requirement will require consideration of both the on-site and external impacts of the proposed development. The SPP Guideline provides advice on assessing achievement of Outcome 2.

Community Infrastructure anywhere in Queensland

6.15 When assessing development applications or designating land for community infrastructure described in part (b) of Annex 1, regard must be had to Outcome 3.¹⁵

Outcome 3: Wherever practicable, community infrastructure to which this SPP applies is located and designed to function effectively during and immediately after natural hazard events commensurate with a specified level of risk.

6.16 Wherever practicable, community infrastructure should be capable of performing its role in maintaining the health, safety and wellbeing of the community in the event of a natural disaster. However, locating and designing community infrastructure to withstand any natural hazard event, no matter how severe, would be unrealistic. Accordingly, the SPP Guideline sets out appropriate levels of risk for differing types of community infrastructure, and provides advice on assessing community infrastructure proposals against Outcome 3. Locating and designing community infrastructure to withstand these specified levels of risk also needs to be weighed

¹⁵ Community infrastructure that involves any of the actions and activities in part (a) of Annex 1 and is located in a natural hazard management area should also have regard to Outcomes 1 and 2.

against the need for that infrastructure to serve the community effectively in normal circumstances when there is no natural hazard event.

7. MAKING AND AMENDING A PLANNING SCHEME

7.1 Planning schemes should aim to achieve Outcomes 1 to 3 by identifying natural hazard management areas, and containing appropriate planning strategies and development assessment measures.

Identifying Natural Hazard Management Areas

Outcome 4: Natural hazard management areas are identified in the planning scheme

7.2 Identifying and, where practicable, mapping areas potentially affected by flood, bushfire and landslide is necessary to assist in formulating planning strategies and detailed planning measures that minimise risks to people, property, economic activity and the environment. The SPP Guideline provides advice on how to identify natural hazard management areas and severity of hazard (where appropriate). The SPP Guideline also provides advice on including the impacts of climate change when identifying a natural hazard management area.

Reflecting the SPP in Planning Strategies

Outcome 5: The planning scheme contains planning strategies that aim to:

 ensure that development in natural hazard management areas is compatible with the nature of the natural hazard;
 minimise the impacts from natural hazards on existing developed areas; and
 prevent development from materially increasing the extent or the severity of natural hazards.

- **7.3** Allocated land uses and associated development within natural hazard management areas should be consistent with Outcomes 1 to 3.
- 7.4 The planning scheme should include strategies aimed at minimising the impacts of natural hazards on areas of existing development. In particular, new development in existing developed areas should provide the optimum level of protection from natural hazards that is achievable under the circumstances of the particular locality. The SPP Guideline contains advice on how this can be achieved.
- 7.5 The planning scheme should also include strategies that prevent material increases in the extent or the severity of natural hazards. In relation to flooding, the planning scheme should aim to maintain the flood carrying capacity of rivers, streams and floodways, and the flood storage function of floodplains and waterways. The SPP Guideline contains advice on how this can be achieved.

Outcome 6: The planning scheme measures:
a) include a code(s) designed to achieve development outcomes consistent with Section 6 and Outcome 5; and
b) ensure that development to which this SPP applies is assessable or self-assessable against that planning scheme code(s). The planning scheme, or planning scheme policy(s), specifies the information expected to be submitted with development applications subject to the code(s).

- 7.6 The combination of development assessment tables, code(s) and other assessment measures in the planning scheme needs to ensure that all relevant development is assessed against specific development standards that are consistent with Section 6. The SPP Guideline provides further advice on how this can be achieved.
- 7.7 Section 6 describes the information that should be submitted with development applications. The planning scheme or supporting planning scheme policy(s) should make it clear that where such information is not provided with a development application, that information will be subject to an information request under IDAS.

8. INFORMATION AND ADVICE ON THE POLICY

- 8.1 Queensland Department of Emergency Services can provide information and advice on interpreting and implementing the SPP, the relevant contacts in appropriate agencies for specific natural hazard mitigation issues, planning for and managing disaster risks, sources of financial assistance for undertaking disaster risk management studies, hazard studies, developing disaster mitigation plans, and the interpretation and use of the Bushfire Risk Analysis Maps.
- **8.2** Queensland Department of Local Government and Planning can provide advice about reflecting the SPP in planning schemes and the operation of IDAS.
- **8.3** Queensland Department of Natural Resources and Mines can provide advice on landslide and floodplain management issues, and the latest climate change science advances.
- **8.4** Queensland Environmental Protection Agency can provide advice and information on storm tide and climate change issues.

9. GLOSSARY

- 9.1 The following terms are used in the SPP as defined below.
- Average recurrence interval (ARI): a statistical estimate of the average period in years between the occurrence of a flood of a given size or larger (eg. floods with a discharge as big as or larger than the 100-year ARI flood event will occur on average once every 100 years). The ARI of a flood event gives no indication of when a flood of that size will occur next.

- Bushfire: an uncontrolled fire burning in forest, scrub or grassland vegetation. Also referred to as wildfire.
- *Climate change:* a change of climate, which is attributed directly or indirectly to human activity which alters the composition of the global atmosphere, and is in addition to natural climate variability observed over comparable time periods.
- **Defined flood event (DFE):** the flood event adopted by a local government for the management of development in a particular locality. The DFE is generally not the full extent of flood prone land.

Development commitment: includes any of the following:

- development with a valid development approval;
- exempt development, self-assessable development or development only assessable against the *Standard Building Regulation*;
- development clearly consistent with the relevant zone (or equivalent) in a planning_____
- scheme;
 a subdivision or other reconfiguration of allotment boundaries consistent with the requirements of the relevant planning scheme; or
- development consistent with a designation for community infrastructure.
- **Flood:** the inundation of land by expanses of water, where the land is normally dry. It may result from prolonged or very heavy rainfall, severe thunderstorms, monsoonal rains in the tropics, tropical cyclone, or dam break.
- Floodplain: an area of land adjacent to a creek, river, estuary, lake, dam or artificial channel, which is subject to inundation by the Probable Maximum Flood (i.e. flood-prone land).
- **Floodway:** the area of a floodplain where significant discharge or storage of water occurs during a DFE. If a floodway is filled or even partially blocked it would cause a significant redistribution of flood flow, or significant increase in flood levels.
- **IDAS:** Integrated Development Assessment System: IDAS is a framework that establishes a common statutory system under the *Integrated Planning Act 1997* for making, assessing and deciding development applications, regardless of the nature of development, its location in Queenslan or the authority administering the regulatory control.
- Landslide: a movement of material downslope in a mass as a result of shear failure at the boundaries of the mass. Landslides can be triggered by both natural changes in the environment and human activities.
- *Mitigation:* is any measure intended to reduce the severity of, or eliminate the risk from, a natural hazard.
- Nature of natural hazard: the important characteristics of the hazard including the type of hazard and its severity.
- Natural disaster: a natural hazard event that severely disrupts the fabric of a community and requires the intervention of the various levels of government to return the community to normality.

- Natural hazard: a naturally occurring situation or condition with the potential for loss or harm to the community or environment. The natural hazards addressed in this SPP are flood, bushfire and landslide.
- Natural hazard management area: an area that has been defined for the management of a hazard (flood, bushfire or landslide), but may not reflect the full extent of the area that may be affected by the hazard (e.g. land above the 1:100 ARI may flood during a larger flood event). Natural hazard management areas for flood, bushfire or landslide are described in Annex 3.
- **Risk:** a concept used to describe the likelihood of harmful consequences arising from the interaction of hazards, community and the environment.

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Development to which this Policy applies

A1.1 This SPP applies to development:

- a) that in natural hazard management areas for flood, bushfire or landslide:
 - increases the number of people living, working, or congregating in those areas (e.g. residential development, shopping centres, tourist facilities, industrial or commercial uses involving large numbers of workers or customers);
 - involves institutional uses where evacuating people may be particularly difficult (e.g. hospitals, education establishments, child care, aged care, nursing homes and high security correctional centres);
 - increases the amount of flammable, explosive or noxious materials that are manufactured or stored in bulk;
 - involves changing the natural flows or characteristics of floodwater in a natural hazard management area (flood) that has the potential to adversely affect the existing flood hazard (e.g. filling or vegetation removal); or
 - involves changing the existing ground level (other than the removal or placement of topsoil), removal of vegetation (other than that required to clear a site for a single dwelling and any ancillary buildings and structures, or for routine management including bushfire protection measures), or redirecting the existing flow of surface or groundwater in a natural hazard management area (landslide).
- b) anywhere in Queensland to the following types of community infrastructure:
 - police and emergency services facilities including emergency shelters;
 - hospitals and associated institutions;
 - stores for valuable records or items of cultural or historic significance;
 - State-controlled roads;
 - railway lines, stations and associated facilities;
 - aeronautical facilities;
 - communication network facilities;
 - operating works under the Electricity Act 1994; and
 - water cycle management infrastructure.

Annex 2

A2.1 For bushfire the SPP applies in the following local government areas as they were defined on 15th April 2002:

÷

Atherton Shire Council Banana Shire Council Bauhinia Shire Council Beaudesert Shire Council Bendemere Shire Council Biggenden Shire Council Boonah Shire Council Booringa Shire Council Bowen Shire Council Brisbane City Council	Hinchinbrook Shire Council Inglewood Shire Council Ipswich City Council Isis Shire Council Jericho Shire Council Johnstone Shire Council Jondaryan Shire Council Kilcoy Shire Council Kilkivan Shire Council Kingaroy Shire Council	Tiaro Shire Council Toowoomba City Council Townsville City Council Waggamba Shire Council Wambo Shire Council Warwick Shire Council Whitsunday Shire Council Wondai Shire Council Woocoo Shire Council
Broadsound Shire Council	Kolan Shire Council	<u>Cherbourg Aboriginal Council</u>
Bungil Shire Council Bundelvin Shire Council	Laidley Shire Council	Hope Vale Aboriginal Council
Burgekin Shire Council	Livingstone Shire Council	Lockhart River Aboriginal Counc
Caboolture Shire Council	Logan City Council Maalyay City Council	Napranum Aboriginal Council Deles Island Abasisinal Council
Caucondre Sinte Council	Marcaba Shine Council	Paim Island Aboriginal Council
Callione Shire Council	Marceoa Smre Council	Woorabinda Aboriginal Council
Caloundra City Council	Marborough City Council	Wujai Wujai Aboriginal Council
Camboova Shire Council	Malybolough City Council Millmerran Shire Council	Tarrabali Aboriginal Coulon
Cardwell Shire Council	Mirani Shire Council	
Chinchilla Shire Council	Miriam Vale Shire Council	
Clifton Shire Council	Monto Shire Council	
Cook Shire Council	Mount Morgan Shire Council	
Cooloola Shire Council	Mundubbera Shire Council	
Crows Nest Shire Council	Murgon Shire Council	
Dalrymple Shire Council	Murilla Shire Council	
Douglas Shire Council	Nanango Shire Council	
Duaringa Shire Council	Nebo Shire Council	
Eacham Shire Council	Noosa Shire Council	
Eidsvold Shire Council	Perry Shire Council	
Emerald Shire Council	Pine Rivers Shire Council	
Esk Shire Council	Pittsworth Shire Council	
Etheridge Shire Council	Redcliffe City Council	
Fitzroy Shire Council	Redland Shire Council	
Flinders Shire Council	Rockhampton City Council	
Gatton Shire Council	Rosalie Shire Council	
Gayndah Shire Council	Sarina Shire Council	
Gladstone City Council	Stanthorpe Shire Council	
Gold Coast City Council	Tara Shire Council	
Herberton Shire Council	Taroom Shire Council	
Hervey Bay City Council	Thuringowa City Council	

The areas subject to this SPP are not altered by administrative changes to local government boundaries or names.

A2.2 For landslide the SPP applies in the following local government areas as they were defined on 15th April 2002:

	Atherton Shire Council	Jondarvan Shire Council	Bamaga Island Council
•	Banana Shire Council	Kilcov Shire Council	Cherbourg Aboriginal Council
	Bauhinia Shire Council	Kilkiyan Shire Council	Hope Vale Aboriginal Council
	Beaudesert Shire Council	Kingarov Shire Council	Iniinoo Aboriginal Council
	Biggenden Shire Council	Kolan Shire Council	Lockhart River Aboriginal Council
	Boonah Shire Council	Laidley Shire Council	Manoon Aboriginal Council
	Bowen Shire Council	Livingstone Shire Council	Napranum Aboriginal Council
•	Brisbane City Council	Logan City Council	New Manoon Aboriginal Council
	Broadsound Shire Council	Mackay City Council	Palm Island Aboriginal Council
	Burdekin Shire Council	Mareeba Shire Council	Umagico Aboriginal Council
	Burnett Shire Council	Maroochy Shire Council	Woorabinda Aboriginal Council
	Caboolture Shire Council	Maryborough City Council	Wujal Wujal Aboriginal Council
	Cairns City Council	Mirani Shire Council	Yarrabah Aboriginal Council
	Calliope Shire Council	Miriam Vale Shire Council	
	Caloundra City Council	Monto Shire Council	
	Cambooya Shire Council	Mt Morgan Shire Council	
	Cardwell Shire Council	Nanango Shire Council	
	Clifton Shire Council	Nebo Shire Council	
	Cooloola Shire Council	Noosa Shire Council	
	Cook Shire Council	Peak Downs Shire Council	
	Crows Nest Shire Council	Perry Shire Council	
	Dalrymple Shire Council	Pine Rivers Shire Council	
	Douglas Shire Council	Redland Shire Council	
	Duaringa Shire Council	Rockhamton City Council	
	Eacham Shire Council	Rosalie Shire Council	
	Emerald Shire Council	Sarina Shire Council	
	Esk Shire Council	Stanthorpe Shire Council	
	Fitzroy Shire Council	Taroom Shire Council	
	Gatton Shire Council	Thuringowa City Council	
	Gayndah Shire Council	Tiaro Shire Council	
	Gladstone City Council	Toowoomba City Council	
	Gold Coast City Council	Torres Shire Council	
	Herberton Shire Council	Townsville City Council	
	Hervey Bay City Council	Wambo Shire Council	
	Hinchinbrook Shire Council	Warwick Shire Council	
	Ipswich City Council	Whitsunday Shire Council	
	Isis Shire Council	Woocoo Shire Council	
	Johnstone Shire Council		

The areas subject to this SPP are not altered by administrative changes to local government boundaries or names.

Natural Hazard Management Areas

Flood

- A3.1 A natural hazard management area (flood) is land inundated by a Defined Flood Event (DFE)¹⁶.
- A3.2 The Queensland Government's position is that, generally, the appropriate flood event for determining a natural hazard management area (flood) is the 1:100 year average recurrence interval (ARI) flood. However it may be appropriate to adopt a different DFE depending on the circumstances of individual localities. This is a matter that should be reviewed when preparing or undertaking relevant amendments to a planning scheme. Local governments proposing to adopt a lower DFE in their planning scheme to determine a natural hazard management area (flood) for a particular locality will be expected to demonstrate that the proposed DRI is appropriate to the circumstances of the locality management area (flood) for the circumstances of the locality management area (flood) for the circumstances of the locality management area (flood) for a particular locality will be expected to demonstrate that the

Bushfire

- A3.3 A natural hazard management area (bushfire) is:
 - a) an area adopted by a local government for a particular locality consistent with the conclusions of a bushfire hazard assessment study; or
 - b) where such a study has not been undertaken, an area adopted by a local government for a particular locality, reflecting the Medium and High hazard area of the Bushfire Risk Analysis Maps produced by Queensland Fire and Rescue Service, suitably modified following a review (e.g. "ground truthing") by the local government; or
 - c) where an area has not been adopted by local government, the Medium and High hazard areas on the Bushfire Risk Analysis Maps produced by Queensland Fire and Rescue Service.

Landslide

A3.4 A natural hazard management area (landslide) is:

- a) an area adopted by a local government for a particular locality consistent with the conclusions of a geological stability study; or
- b) where such a study has not been undertaken, an area adopted by a local government for a particular locality that includes all land of 15% and greater slope and other land known or suspected by the local government as being geologically unstable, together with other areas that the local government considers may be adversely affected by a landslide event¹⁷; or
- c) where an area has not been adopted by a local government, all land with a slope of 15% or greater¹⁸.
- A3.5 The SPP Guideline provides information on methodologies for identifying potential natural hazard affected areas in planning schemes, and advice on sources of financial assistance available for such studies.

¹⁶ See Glossary, Section 9.

¹⁷ For example, land below an area known or suspected as being geologically unstable.

¹⁸ Refer to the SPP Guideline for a suitable methodology to calculate slope.

STATE PLANNING POLICY

GUIDELINE

for

Natural Disaster Mitigation

NOT GOVERNMENT POLICY For Consultation Purposes

28 August 2002

State Planning Policy Guideline for Natural Disaster Mitigation Draft – No Official Status

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1. PURPOSE OF THE GUIDELINE

- 1.1 The purpose of the Guideline is to provide advice and information on interpreting and implementing State Planning Policy for Natural Disaster Mitigation (the SPP), which is a statutory instrument expressing the State's interest in mitigating natural disasters.
- **1.2** The SPP declares this Guideline to be 'extrinsic material' under the *Statutory Instruments* Act 1992, thereby giving the Guideline legal status in assisting in the interpretation of the SPP¹.
- **1.3** The information contained in the SPP Guideline is not intended to be a complete technical guide to the assessment and management of natural hazards.

2. SCOPE OF THE SPP

- 2.1 The State Planning Policy for Natural Disaster Mitigation (the SPP) aims to ensure that the natural hazards of flood, bushfire and landslide are adequately considered when making decisions about certain development.
- **2.2** For the purposes of the SPP and SPP Guideline, relevant natural hazards are defined as follows:
 - Flood is the inundation of land by expanses of water, where the land is normally dry. It may result from prolonged or very heavy rainfall, severe thunderstorms, monsoonal rains in the tropics, tropical cyclone or dambreak.
 - **Bushfire** is an uncontrolled fire burning in forest, scrub or grassland vegetation, also referred to as a wildfire.
 - Landslide is movement of material downslope in a mass as a result of shear failure at the boundaries of the mass. Landslides can be triggered by both natural changes in the environment and human activities.
- 2.3 The SPP only deals with certain natural hazards. It does not address technological or biological disasters such as chemical spills, plagues or pestilence, exotic diseases, space debris or bridge collapse. The SPP does not deal with natural hazards already addressed in other documents, such as storm tide inundation, which is dealt with by the *State Coastal Management Plan* (SCMP)². The SPP does not deal with earthquake and strong wind as these are addressed through design and construction standards (i.e. the *Standard Building Regulation*).

¹ Extrinsic material is defined in the Statutory Instruments Act as "relevant material not forming part of the statutory instrument or the Act under which the statutory instrument was made".

² However storm tide hazard may need to be considered in determining the extent and severity of flood hazard. See Section 4 of the SPP.

2.4 Tropical cyclone and severe storm events and the associated risks of damage are difficult to control through land use planning. However some consequences of cyclones and severe storms can be addressed through land use planning, and other consequences are addressed through building and design standards. For example, flood and landslide, two consequences of cyclones and severe storms, are addressed in the SPP. As already mentioned severe wind, a further consequence of severe storms and cyclones, is addressed by the *Standard Building Regulation*.

3. APPLICATION OF THE SPP

Effect of the SPP

3.1 Under the Integrated Planning Act 1997 (IPA), the SPP has the following effect:

Development Assessment

- **3.2** The SPP applies to assessable development³, except building work that is only assessable under the *Standard Building Regulation*, in the following ways.
 - (i) IPA Planning Schemes Where an IPA planning scheme is in force, the assessment manager must have regard to the SPP when assessing development applications under the Integrated Development Assessment System (IDAS)⁴.
 [NB: The Integrated Planning & Other Legislation Amendments Act 2001 amended the role of SPPs in development assessment, but when this Guideline was written the amendments were not expected to take effect until 2003. The SPP therefore applies to development applications made before those amendments take effect in the following ways:
 - Where the SPP has been appropriately reflected in the planning scheme⁵, the SPP is not considered separately in development assessments.
 - Where the SPP has not been appropriately reflected in the planning scheme, the assessment manager must have regard to the SPP when assessing development applications subject to impact assessment under IDAS.]
 - (ii) *Transitional Planning Schemes* Where a transitional planning scheme is in force, the assessment manager must have regard to the SPP when assessing development applications requiring development approval under a planning scheme.
 - (iii) Schedule 8 of IPA: For assessable development not addressed by a planning scheme and subject to assessment under the Integrated Planning Regulation, the assessment manager must have regard to the SPP when assessing relevant development proposals. For example, in areas under the jurisdiction of Aboriginal and Torres Strait Islander

³ Assessable development is defined in the Integrated Planning Act as

⁽a) development specified in schedule 8, part 1; or

⁽b) for a planning scheme area—development that is not specified in schedule 8, part 1 but is declared under the planning scheme for the area to be assessable development.

⁴ See Glossary, Section 9

⁵ Each planning scheme must identify those State Planning Policies that have been appropriately reflected.

(ATSI) community councils, the SPP applies only to development that is assessable against Schedule 8 of IPA. ATSI councils have not been required to prepare planning schemes.

Making or amending Planning Schemes

3.3 The SPP is to be appropriately reflected in planning schemes to ensure that the State's interests in natural disaster mitigation are interpreted in the local context when planning for future development and making decisions on development applications.

The SPP is appropriately reflected when the planning scheme seeks the same outcomes as the SPP and all aspects of the planning scheme are consistent with the SPP to an extent that satisfies the Minister for Local Government and Planning (acting for the State Government on the advice of the Department of Emergency Services [DES]).

Land designated for Community Infrastructure

3.4 Under the IPA, the SPP must be considered when designating land for community infrastructure.

Other considerations

3.5 Nothing in the SPP restricts a local government, assessment manager or designator from addressing the planning for and management of the risks associated with the natural hazards addressed in the SPP more stringently or in more detail than required by the SPP.

Development to which the SPP applies

3.6 The SPP applies to development described in Annex 1 of the SPP. It should be noted that the SPP applies to the development listed in part (a) of Annex 1 only where the development is proposed within a *natural hazard management area*⁶. The SPP applies throughout Queensland for the types of community infrastructure listed in part (b) of Annex 1. Figure 1 shows how the SPP applies to community infrastructure depending on its location.

⁶ See Glossary, Section 9.

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Areas to which the SPP applies

3.7 The SPP applies throughout Queensland for flood, and to the local government areas identified in Annex 2 of the SPP for bushfires and landslides. These areas are shown on the maps on the following pages. The main reason for exempting the local government areas not listed in Annex 2 of the SPP for bushfire is that the predominant vegetation types in these areas are a low bushfire risk and their hazard is considered of local rather than State significance. For landslide, the SPP applies to local governments where there are areas with steep slopes that may place people and property at risk from landslide.





4. THE NEED TO MITIGATE THE ADVERSE IMPACTS OF NATURAL HAZARDS

Natural disasters

- 4.1 Natural hazards such as floods, bushfires and landslides become natural disasters when they severely disrupt the fabric of a community and require the intervention of the various levels of government to return the community to normality⁷. Mitigation means measures taken to reduce the severity of, or eliminate the risk from, disasters. Mitigation is usually thought of in terms of prevention and community preparedness.
- 4.2 Two trends have emerged in relation to natural disasters. The number of deaths from natural disasters has decreased because of improved warning systems, better practice in building construction, and enhanced emergency responses. However, the cost of restoration and rehabilitation following the impact of a natural disaster has risen because more development is located in hazard prone areas, the increasing value of people's possessions, and the populations in these areas have increased. These three factors result in more people and property being vulnerable to natural disasters.

Role of land use planning

4.3 Land use planning can limit and over time reduce the impacts of natural disasters. The SPP will shape land use planning and development decisions to create settlement patterns that reduce vulnerability to many flood, landslide or bushfire events.

Costs associated with natural disasters

- 4.4 Natural disasters are estimated to have cost the Australian community \$1.13 billion per year (in 1999 dollars) between 1980 and 1999, and to have cost Queensland an average of \$239 million each year in direct and indirect tangible costs between 1967 and 1999⁸.
- 4.5 There is a range of other intangible costs associated with natural disasters that adversely affect the interests of the State, regions and local communities. These costs include loss of life, injury, emotional suffering, loss of memorabilia, reduced quality of life, reduced productivity, weakened economy, loss of employment, associated loss to business and primary producers, increased costs of insurance, degraded environment, and loss of species and habitats. It is widely recognised that the intangible costs of natural disasters, whilst difficult to estimate, are very substantial and are therefore very important when considering the benefits of mitigation measures⁹.

⁷ Alice Zamecka and Graham Buchanan, *Disaster Risk Management*, Queensland Department of Emergency Services 2000 p.8

⁸ Bureau of Transport Economics Report 103 Economic Costs of Natural Disasters in Australia, Commonwealth of Australia 2001

⁹ Ibid pp 87-9

Climate Change

- **4.6** The Queensland Greenhouse Policy Framework¹⁰ acknowledges growing scientific consensus that the enhanced greenhouse effect is changing the world's climate, and that Queensland will be vulnerable to the effects of climate change. Predicted changes include reductions in annual rainfall but increased rainfall intensity, increased risk of bushfires, and increased flood risk and damage to transport infrastructure and low-lying human settlements. These changes will have significant impacts on the nature and extent of natural hazards, and where practicable should be assessed when developing hazard mitigation strategies.
- 4.7 The SPP addresses this issue by seeking to ensure that climate change is considered when certain natural hazards assessments are undertaken. However it does not appear feasible at this stage to consider climate change for bushfire hazard assessments.
- **4.8** There is currently no State position on the anticipated effects of climate change. Information sources about climate change are provided in Appendix 8. This information may assist local governments to form a view about likely climate change impacts on their areas.

Natural disaster mitigation measures

4.9 The SPP is a significant natural disaster mitigation measure. The SPP complements other mitigation measures used by the Commonwealth, State and local government such as early warning systems, public education programs, counter disaster plans, and physical mitigation measures such as firebreaks and levees.

Eligibility for Commonwealth and Queensland government funding programs

- **4.10** A further reason to mitigate natural disasters is to meet changes to Commonwealth and State government guidelines for funding for natural disaster relief, capital works and transport infrastructure.
- 4.11 From July 1998, Commonwealth guidelines concerning the Natural Disaster Relief Arrangements (NDRA) funding were changed so that ongoing financial assistance from the Commonwealth for restoration of public assets is linked to evidence of mitigation for likely or recurring natural disasters, or a commitment to develop and implement such a strategy within a reasonable timeframe. Implementing the requirements of the SPP will assist local governments and State government agencies to demonstrate that this guideline requirement is being met. Details of the NDRA funding program can be obtained at website <u>www.dotars.gov.au</u>

¹⁰ Queensland Greenhouse Policy Framework: A Climate of Change, Queensland Government, September, 2001.

4.12 In 2002 the Queensland Government's Local Governing Bodies Capital Works Subsidy Scheme (funded by the Department of Local Government and Planning) and the Transport Infrastructure Development Scheme (funded by the Department of Main Roads) were amended to include criteria requiring project proponents to consider the risk of natural hazards and mitigation measures where appropriate.

5. THE POLICY APPROACH

- 5.1 The SPP introduces the concept of *natural hazard management areas* as the principal mechanism for triggering the development outcomes and development assessment components of the SPP. Natural hazard management areas for flood, bushfire and landslide are defined in Annex 3 of the SPP.
- 5.2 The intention of the SPP is that, wherever practicable, natural hazard management areas should be identified through a comprehensive and detailed natural hazard assessment study (refer to Appendices 2 to 4 of this SPP Guideline for advice on appropriate study approaches). Outcome 4 of the SPP requires natural hazard management areas to be identified when planning schemes are made or amended, and these should be integrated with the planning strategies and detailed planning measures required under Outcomes 5 and 6 of the SPP.
- **5.3** Natural hazard management areas have been defined in a manner that enables the SPP to take effect immediately upon commencement for development assessment purposes.
- 5.4 For bushfire and landslide this is achieved through the use of "cascading" definitions of the natural hazard management areas. Where the natural hazard management areas for bushfire and landslide have not been adopted by the local government, based on the findings of a hazard assessment study, the definitions default to other datasets.
- 5.5 In the case of bushfire this is the medium and high hazard areas on the Bushfire Risk Analysis Maps produced by the Queensland Fire and Rescue Service (note that for bushfire purposes the SPP applies only to those local governments listed in part (a) of Annex 2 of the SPP – see Map 1).
- 5.6 For landslide natural hazard management areas the default definition is all land with a slope of 15% or greater (only for those local governments listed in part (b) of Annex 2 of the SPP see Map 2). Although landslides can occur on lesser slopes (slope being only one of a number of factors that determine landslide hazard), the 15% threshold was adopted as the threshold for landslide hazard as slopes steeper than this are generally regarded as having a greater potential for landslide hazard.
- 5.7 A default mechanism for flood hazard management was not adopted for the SPP as reliable State-wide flood data was not available. Because of this, the development assessment

components of the SPP only apply in relation to flood where a local government has adopted a Defined Flood Event (DFE)¹¹, or equivalent, for land use planning purposes. Over time, as planning schemes are made or amended, or local governments adopt a DFE for particular localities, development assessment measures for flood hazard will apply.

5.8 In relation to flood hazard management, the SPP sets out the State's position that, generally, the appropriate flood event for determining a natural hazard management area (flood) is the 1:100 year Average Recurrence Interval (ARI) flood. However, the SPP recognises that the adoption of a lower DFE may be appropriate depending on the circumstances of individual localities. The adoption of a lower DFE would require local government to demonstrate by thorough analysis that the proposed level of flood protection is appropriate to the circumstances of the locality.

6. DEVELOPMENT OUTCOMES AND DEVELOPMENT ASSESSMENT

Introduction

6.1 The SPP applies to development assessment from the date of commencement of the SPP. The following sections provide guidance on how to achieve SPP Outcomes 1 to 3.

Achieving Outcomes 1 and 2 of the SPP

Outcome 1: Within natural hazard management areas, development to which this SPP applies is compatible with the nature of natural hazard¹², except where:

 there is an overriding need for the development in the public interest, and no other site is suitable and reasonably available for the proposal; or
 the development proposal is a development commitment¹³ and it would have a lower level of risk than generally applies to development in the vicinity.

6.2 Figure 2 sets out the process for achieving Outcomes 1 and 2. The following sub-sections provide advice and guidance on the implementation of each of the steps.

¹¹ See Glossary, Section 9.

¹² See Glossary, Section 9.

¹³ See Glossary, Section 9.



Is the proposed development in a natural hazard management area? (Step 1)

- 6.3 Outcome 1 of the SPP applies to development in natural hazard management areas. It is first necessary to identify whether the development proposal is located within a natural hazard management area, and if so, the severity of hazard that applies (if different natural hazard severities have been identified).
- 6.4 Although it is intended that, over time, all natural hazard management areas will be identified on the basis of a comprehensive and detailed study, Annex 3 of the SPP defines natural hazard management areas in a manner that enables the SPP to be implemented from the date of its commencement (see Section 5 of this Guideline for more information on the approach adopted in the SPP).
- 6.5. Information on natural hazard management areas should be sought from the local government in the first instance. Only where the local government has not identified a natural hazard management area based on a specific technical assessment, should the default natural hazard management areas outlined in Annex 3 of the SPP be used.
- 6.6 In relation to natural hazard management areas (flood) it should be noted that the local government will be the only source of information on flooding. Where the local government has not adopted a Defined Flood Event (DFE) for the management of development in a particular locality, then this SPP does not apply for development assessment purposes in relation to flood. However the local government may have measures in its planning scheme that will require the consideration of potential flood hazard when development applications are prepared and assessed.
- 6.7 Information about the severity of the hazard may be available for the development site. If so, this information should be provided to the assessment manager by the proponent.
- 6.8 The applicant should determine whether any part of the site of a development proposal is located within a natural hazard management area. Where part of the subject site is included in a natural hazard management area, but the development proposal does not adversely impact on the area, the application should include sufficient information to demonstrate this. In such circumstances, the assessment manager should assess the submitted information and, if it reaches the same conclusion, may determine that further assessment is not required in relation to the SPP (refer to Figure 3). These instances will be assessed on a case-by-case basis and are at the discretion of the assessment manager.
- 6.9 If the site is not included in a natural hazard management area, or the assessment manager determines that the proposal is not likely to impact on a natural hazard management area, no further consideration of the SPP is required in relation to Outcome 1.

Figure 3: Example – Effect of the SPP where part of the site is within a natural hazard management area.



In this example assessment against the SPP may not be required.

Does the SPP apply to the development? (Step 2)

- 6.10 For land located within a natural hazard management area, part (a) of Annex 1 of the SPP describes the types of development to which the SPP applies.
- 6.11 In relation to the types of development listed in part (a) of Annex 1, the SPP applies as follows:
 - (i) To material changes of use or reconfigurations of a lot that:
 - Increase the number of people living, working or congregating in the natural hazard management area (e.g. residential development, shopping centres, tourist facilities, industrial or commercial uses involving large numbers of workers or customers); or
 - Involves institutional uses where evacuating people may be particularly difficult (e.g. hospitals, education establishments, child care, aged care, nursing homes and high security correctional centres); or
 - increases the amount of flammable, explosive or noxious materials that are manufactured or stored in bulk (for the purposes of the SPP bulk quantities comprise quantities that are

equivalent to or exceed the minimum quantities set out to determine a Large Dangerous Goods Location (LDGL) in the Dangerous Goods Safety Management Regulation); or

- (ii) To building or other work that:
- involves changing the natural flows or characteristics of floodwater in a natural hazard management area (flood) that has the potential to adversely affect the existing flood hazard (e.g. filling or vegetation removal); or
- involves changing the existing ground level (other than the removal or placement of topsoil), removal of vegetation (other than required to clear a site for a single dwelling and any ancillary buildings and structures, or for routine management including bushfire protection measures), or redirecting the existing flow of surface or groundwater in a natural hazard management area (landslide);
- 6.12 If the development proposal does not include any of the actions or activities identified in part (a) of Annex 1 of the SPP, Outcome 1 does not apply.

Determine if development is compatible (Step 3)

- 6.13 The characteristics of natural hazards throughout a natural hazard management area are not uniform. For example, in areas where floodwaters move rapidly and are deep the severity of the hazard will be greater than on the fringe of the flood area. The types of uses that would be suitable on the fringe may not be suitable in more hazardous areas. Development proposals within natural hazard management areas therefore should be tailored to the nature of the hazard on a development site. Appendix 5 of the SPP Guideline provides performance criteria and associated indicators of compatibility that should be used to determine whether or not a development proposal is compatible with each of the natural hazards.
- 6.14 The application should demonstrate that the development meets the relevant performance criteria. Specific studies may need to be provided to either demonstrate compatibility, or support an assessment that the severity of the hazard is different to that shown on local government or State Government maps.
- 6.15 Development that is not compatible with the nature of the natural hazard can still achieve Outcome 1 if it meets either of the exceptions listed in Outcome 1. These exceptions relate to existing development commitments and overriding need in the public interest, and advice on interpreting these exceptions is provided under Step 4 and Step 5 respectively.

Existing development commitments (Step 4)

6.16 The SPP allows development that is incompatible with the nature of a natural hazard to be approved where it is an existing development commitment and the development would have a lower level of risk than generally applies to development in the vicinity.

- 6.17 The assessment manager will need to determine whether a development proposal is an existing development commitment. This may require the assessment manager to assess the development proposal for consistency with the overall outcomes (and/or intent) of the relevant zone (or equivalent), the associated development assessment table and any applicable codes.
- 6.18 Secondly, the development should result in a level of risk that is lower than the level of risk that generally applies to other development in the vicinity. This requires both internal and external risks to be considered. Generally a development proposal that would result in adverse impacts on existing or approved development external to the site (e.g. by increasing the extent or severity of the natural hazard on adjoining properties) would not be acceptable, and should only be approved if it meets the overriding need test set out in Step 5 below.
- 6.19 The second part of the assessment relates to the direct risks to the new population and/or property associated with the development proposal. The relevant performance criteria and associated indicators of compatibility at Appendix 5 could be used as a checklist when assessing and comparing the relative levels of risk of the proposed and existing development. The test is concerned with the overall level of risk associated with the development, and will require a balanced assessment against the range of risk factors identified in Appendix 5.
- 6.20 A lower level of risk for only one of these risk factors, provided the other risk factors are equivalent to those generally applying to development in the vicinity, would be sufficient to achieve the "lower level of risk" required by Outcome 1. For example, in relation to flood risk, if the habitable floor levels and flood warning times etc associated with the proposal are the same as those generally applying to other development in the vicinity, but the development proposal would have a safer evacuation route then, on balance, the development proposal would satisfy Outcome 1.
- 6.21 A particular issue that may need to be considered as part of this element of the assessment relates to the intensity of the development proposal. Other things being equal, a greater intensity of development (e.g. a multi-unit dwelling in an area comprised predominantly of houses) would result in a higher level of risk than generally applies in the area. However, this may be acceptable if other aspects of the development proposal reduce the level of risk (e.g. if r multi-unit development proposal in an area of low-set dwellings had habitable floor space only on upper levels).
- 6.22 A development proposal that meets these tests, and therefore achieves Outcome 1 of the SPP, will still be required to meet Outcome 2.

Interpreting Overriding Need in the Public Interest (Step 5)

6.23 Development that is incompatible with the nature of a natural hazard can be approved on the grounds of overriding need in the public interest. Determining such overriding need will necessarily depend on the circumstances of the particular development proposal. This section of the SPP Guideline sets out the main principles for evaluating an overriding need in the public interest.

6.24 Firstly, the degree of net economic, social and/or environmental benefits to the community should be established and secondly, if there are net community benefits, the likelihood of suitable alternative sites being generally available should be assessed.

a) Assessing net benefits to the community

- 6.25 The overall social, economic and environmental benefits of a proposed development located within a natural hazard management area where the development proposal is incompatible should be weighed against the consequences of the proposed development.
- 6.26 Such development should either serve an essential community need (e.g. a health-care facility), significantly improve the community's access to services (e.g. a community centre or other facility that reduces travel times for a significant proportion of the community), provide
 <u>significant long-term economic benefit (e.g. a major new employment opportunity, or an-</u>industry with synergies with existing activities in the area), or provide significant environmental benefits (e.g. where other alternative sites would require clearing of remnant vegetation).
- **6.27** The SPP specifically states that for the community benefit to be "overriding", it must outweigh the adverse impacts from the development's exposure to natural hazards. These impacts include:
 - the increased risk to life, property and/or the environment;
 - the increased demand for emergency services; and
 - the potential risk of increased community pressure for hazard remediation works.
- 6.28 Any increased risk to human lives needs to be given significant weight in determining overriding need.

b) Assessing alternative sites

- 6.29 A broad assessment of specific alternative sites should be undertaken as follows:
 - *I*: Identify the site requirements of the proposed development, including location needs, physical site characteristics, access and servicing.
 - 2: Identify sites or general locations that meet those site requirements and are situated:
 - outside the natural hazard management area; or
 - within the natural hazard management area but with a lower severity of hazard.
 - 3: Evaluate identified sites/locations in terms of their consistency with the planning scheme (or adjoining planning scheme if suitable sites can be identified in an adjoining local government area).

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4: Consider in general terms whether land ownership of any preferred alternative site(s) is likely to present a major obstacle to assembling an appropriate parcel of land for the proposed development.

[NB: The fact that the applicant owns, or has an option on, the site that is the subject of the application and that it is consequently available for the proposed development does not in itself justify an "overriding need".]

Does the Development Proposal achieve Outcome 2? (Step 6)

Outcome 2: Development that is not compatible with the nature of the natural hazard but is otherwise consistent with Outcome 1: does not result in an unacceptable level of risk to people or property; and

- minimises as far as practicable the adverse impacts from natural hazards.
- 6.30 Outcome 2 applies to development that is not compatible with the nature of the natural hazard (see Step 3 above), but satisfies either of the exceptions in Outcome 1 (see Steps 4 and 5 above). Development achieves Outcome 2 when it is brought as near as practicable to the level required to comply with the performance criteria for compatibility with Outcome 1, and the development would not result in unacceptable levels of risk to people or property.
- 6.31 There will be some circumstances where a development proposal that minimises the adverse impacts of natural hazards as far as practicable should not be approved because it would still result in an unacceptable level of risk to people or property.
- 6.32 The need to apply the 'unacceptable risk' test is most likely to arise in relation to flood hazard. This is because a geotechnical assessment can be used to identify clear development requirements in relation to landslide hazard (which may include an assessment that the site is not suitable for development i.e. the level of landslide risk is unacceptable), and on-site mitigation measures will normally be available to reduce bushfire risk to acceptable levels.
- 6.33 However flood hazard is difficult to manage within individual sites, and on-site mitigation measures may be inadequate to reduce the level of risk associated with a development proposal to an acceptable level.
- 6.34 The document Floodplain Management in Australia: Best Practice Principles and Guidelines defines risk as 'the chance of something happening that will have an impact on objectives. It is measured in terms of consequences and likelihood...Risk is often thought of as the "downside of a gamble".

- 6.35 An unacceptable level of risk may be thought of as one where an informed community would decide not to accept the consequences and likelihood of a particular risk. The key characteristic of unacceptable risk is that it determined by the community rather than an individual or particular group within the community. The best way to determine a community's risk thresholds is through a natural disaster risk assessment study using the process outlined in Appendix 1.
- 6.36 Where such a structured, community-based assessment of unacceptable levels of risk is not available, it will be the responsibility of the assessment manager to determine whether a particular development proposal would result in an unacceptable level of risk.
- 6.37 As noted above unacceptable risk levels will vary between communities and over time (e.g. a major disaster can have immediate effects on perceptions of risk within a community).
 However the following table adapted from the previously mentioned SCARM report can be used as a guide. The table shows land uses appropriate to various levels of severity of hazard (based on matching land use and flood hazard to both maximise the use of the floodplain and minimise the risks and consequences of flooding.

	Level of Severity	
High	Medium	Low
Rural	Rural	Rural
Recreation	Recreation	Recreation
Open Space	Open Space	Open Space
Environment	Environment	Environment
Commercial *	Residential *	Residential
Industry *	Commercial *	Commercial
Clubs *	Industrial *	Industrial
	Clubs *	Clubs
	Schools *	Schools
	Public Institutions	Public Institutions
	Caravan Parks	Caravan Parks
	Council	Council
	Police	Police
	\$	Telephone Exchange
		State Emergency Services
		Hospitals
		Homes for Elderly
		Museums/Libraries
* with special controls	* with special controls	

Appropriate land uses across the floodplain:

Note 1: See Appendix 2 for definitions of levels of severity. Source: Floodplain Management in Australia, Best Practice Principles and Guidelines, SCARM Report No. 73

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State Planning Policy Guideline for Natural Disaster Mitigation Draft -- No Official Status **6.38** Where suitable measures to achieve Outcome 2 have not been included in the development proposal, the assessment manager should negotiate suitable measures with the development proponent or include them as reasonable or relevant conditions of development approval. The detailed elements supporting the performance criteria in Appendix 5 of this Guideline provide guidance as to the types of measures that may be required to achieve Outcome 2.

Document the facts (Step 7)

- **6.39** Applicants preparing development applications involving land that is contained within a natural hazard management area should provide the following information as part of the development application:
 - <u>Plans illustrating the location of the proposed development and the relationship between</u> the proposed development and the natural hazard management area (e.g. where part of the site of the development proposal is included in a natural hazard management area, but the development proposal does not affect that area and is not likely to impact on it, the application should include sufficient information to demonstrate this);
 - A description of the development proposal; and
 - A report outlining compliance of the proposed development with the relevant performance criteria or alternatively, demonstrating that it meets the requirements set out in Steps 4, 5 and 6 above.

Role of the Assessment Manager (Step 8)

- 6.40 To comply with the requirements of the SPP in relation to Outcomes 1 and 2, the role of the assessment manager is to:
 - assess the application against the SPP and planning scheme; and
 - impose reasonable or relevant conditions to achieve Outcomes 1 and 2.
- 6.41 The assessment manager should not approve development applications that do not achieve Outcomes 1 and 2 of the SPP.

Achieving Outcome 3 of the SPP

Outcome 3: Wherever, practicable, community intrastructure to which this SPP applies is located and designed to function effectively during and immediately after natural hazard events commensurate with a specified level of risk.

- 6.42 Outcome 3 applies to community infrastructure anywhere in Queensland, including in natural hazard management areas.
- 6.43 The types of community infrastructure to which the SPP applies are set out in part (b) of Annex 1 of the SPP as follows:
 - police and emergency services facilities including emergency shelters;
 - hospitals and associated institutions;
 - stores for valuable records or items of cultural or historic significance;
 - State-controlled roads;
 - railway lines, stations and associated facilities;
 - aeronautical facilities;
 - communication network facilities;

operating works under the Electricity Act 1994, and

- water cycle management infrastructure.
- 6.44 Valuable cultural or historical records are irreplaceable and they should not be exposed to undue risk from natural hazards. The other types of community infrastructure listed above provide important emergency response or recovery roles, or provide transportation, communication links or service networks that are important to the safety, health and well being of the community.
- 6.45 Outcome 3 requires that these types of community infrastructure are located and designed to ensure resilience during and after natural hazard events wherever practicable. This requirement applies regardless of which of the following mechanisms is used for the community infrastructure proposal:
 - A development application under IDAS;
 - Allocation of land in a planning scheme; or
 - Designation of land for community infrastructure under section 2.6.7 of IPA.
- 6.46 Appendix 7 to this Guideline presents performance criteria against which a community infrastructure proposal must be assessed to determine compliance with Outcome 3.
- 6.47 There may be instances where the development proposal should proceed but it is not practicable to achieve compliance with Outcome 3. For example it may not be possible to achieve the level of immunity from flooding recommended in Appendix 7 because of other relevant considerations. These could include locational requirements such as the need to provide acceptable levels of service (e.g. response times) within service catchments; and the need to balance competing demands for services and facilities throughout the State with available resource allocations.
- 6.48 This assessment will need to be decided on the basis of the circumstances associated with individual proposals, and will involve the consideration of the following matters:
 - The role and function of the infrastructure including during a natural hazard event;

- The potential impacts on the community should the infrastructure be operationally impaired by a natural hazard;
- The cost and benefits of mitigation measures (including alternative locations) and the consequences of not requiring mitigation measures;
- Taking the foregoing into account, and the resources and priorities of the responsible public sector entity, the level of protection from and resilience to natural hazards that is considered appropriate for the infrastructure; and
- The requirements about works or the use of land that are proposed to provide the appropriate level of protection from and resilience to the adverse impacts of natural hazards. These requirements could include location, siting and design measures.
- 6.49 As a simple example, it would not be practicable to require a fire or police station to locate outside a natural hazard management area if this increases emergency response times and results in an overall increase in community risk. Similarly because network infrastructure, such as roads, join fixed points (e.g. towns) there may be no alternative to traversing areas subject to natural hazards. As a result it will often not be practicable or cost-effective to achieve optimum levels of immunity from natural hazards for network infrastructure.
 - **6.50** The responsibility for determining compliance with Outcome 3 will rest with either the assessment manager or the community infrastructure designator depending on which of the mechanisms outlined above is used.

7. MAKING AND AMENDING PLANNING SCHEMES

Introduction

7.1 In order to achieve Outcomes 4 to 6 of the SPP, planning schemes should identify particular information, and contain appropriate planning strategies and development assessment measures.

Achieving Outcome 4 of the SPP

Outcome 4: Natural hazard management areas are identified in the planning scheme

7.2 During the process of making or amending planning schemes, local governments are required to assess the potential impacts of development in areas subject to the natural hazards of flood, bushfire and landslide. This assessment includes the determination of natural hazard management areas and may include the assessment of relative levels of severity in relation to

particular hazards. The scope of studies will vary between local governments, and sometimes between different locations within the same local government area. The variation in scope should depend on the size and distribution of the population, the degree of risk to people, property, economic activity and the environment posed by development in areas affected by natural hazards, and the availability or difficulty of obtaining and analysing information. The assessment may also need to take into account the potential impacts associated with climate change.

- 7.3 Local governments are encouraged to undertake natural hazard assessment as part of a comprehensive disaster risk management process that would also provide information to assist in developing appropriate planning scheme outcomes. Appendix 1 of this SPP Guideline provides information on disaster risk management studies including potential sources of financial assistance. Appendices 2 to 4 set out recommended principles and methodologies for identifying natural hazard management areas for the purposes of making or amending planning schemes.
- 7.4 The scope of studies to be undertaken will be determined by the local government in consultation with relevant State Government Departments during the process of making or amending planning schemes. Natural hazard management areas should be clearly identified in the planning scheme through the use of techniques such as overlays, consistent with the approach and terminology suggested for planning schemes in the *IPA Plan Making Guideline 1/01* published by the Department of Local Government and Planning. The most appropriate presentation will depend on the structure and format of the particular planning scheme.

Achieving Outcome 5 of the SPP

Outcome 5: The planning scheme contains planning strategies that aim to:
ensure that development in natural hazard management areas is compatible with the nature of the natural hazard;
minimise the impacts from natural hazards on existing developed areas; and
prevent development from materially increasing the extent or the severity of natural hazards.

- 7.5 Where practicable, the planning scheme's land use strategies should give preference to future land uses that would achieve the development outcomes (Outcomes 1 to 3) in Section 6 of the SPP. Public safety should be the main consideration in seeking to achieve these outcomes, with planning strategies devised to achieve optimum levels of safety within the planning scheme area.
- **7.6** Uses involving the actions or activities listed in parts (a) and (b) of Annex 1 of the SPP need to be considered when developing the land use strategy. When allocating land uses in natural

hazard management areas, planning schemes should give preference to those uses that are less susceptible to the risks posed by the particular hazard, and impose development requirements that lessen the risk of the hazard.

- 7.7 In general land use strategies that do not increase the number of people living, working or congregating in natural hazard management areas, and avoid the establishment or intensification of other uses or works that are likely to increase the adverse impacts of the natural hazard would achieve Outcome 5 of the SPP. In particular, uses such as residential development that are likely to materially increase the risks to life or personal property, should be discouraged in areas of high or medium hazard severity, unless the planning strategy includes clear mechanisms aimed at ensuring that appropriate levels of safety will be achieved through the development assessment process.
- **7:8** Where there are existing development commitments¹⁴, for example in areas of existing development, strategies that provide more workable outcomes, without adversely affecting the development commitment could be considered. Strategies for achieving this could include:
 - incentives such as development bonuses to encourage alternative uses that are less susceptible to the hazard; and
 - mechanisms for encouraging a high proportion of the total development onto those parts of the area that are least affected by the hazard.
- 7.9 Planning strategies should also seek to ensure development does not occur in a manner that is likely to result in an increase in the extent or severity of a natural hazard. This element of the planning strategies is mainly relevant to flood hazard, although localised increases in flood duration or depth may be acceptable where they occur as part of an overall flood management strategy that will result in net benefits to the community.
- 7.10 Uses that would not impede the flow of floodwaters should be encouraged in flood ways and drainage corridors. Suitable uses may include parks, conservation areas, grazing or other agricultural activities, low impact recreational uses such as sports fields, extensive parking areas, buffer areas around high impact industrial activities, or even low density residential uses with appropriate safeguards.
- **7.11** The flood storage capacity of floodplains also needs to be protected, and specific development requirements (e.g. limiting the extent of earthworks or requiring compensatory storage capacity) will need to be devised and incorporated in the planning scheme strategies.

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¹⁴ See Section 9, Glossary.

Achieving Outcome 6 of the SPP

Outcome 6: Th	e planning scheme meas	iures:	
(a)	include a code(s) design	ned to achieve develo	pment outcomes
	consistent with Section	6 and Outcome 5; ai	id in the second s
(b)	ensure that developme	nt to which this SPP	applies is assessable or
	self-assessable against	that planning scheme	• code(s).
Th	e planning scheme, or pl	lanning scheme polic	y(s), specifies the
information information in formation of the second s	ormation expected to be	submitted with deve	lopment applications
sut	pject to the code(s).		

7.12 Detailed planning scheme measures should be prepared generally in accordance with the approach and terminology suggested for planning schemes in the *IPA Plan Making Guideline* 1/01 published by the Department of Local Government and Planning.

- 7.13 Information to be included in codes and related sections of the planning scheme will depend on the nature of the code, but will broadly include the following:
 - purpose of the code;
 - applicability of the code to development/land within the relevant area;
 - specific definitions; and
 - performance criteria and possible implementation measures to achieve the performance criteria to enable assessment of compatibility of development.
- 7.14 The codes may take the form of specific hazard management codes or be incorporated into broader codes as appropriate. For example, landslide hazard can be addressed as part of broader code dealing with development on hillsides or steep slopes that may also address environmental and visual amenity issues.
- 7.15 Appendix 5 provides examples of performance criteria and associated indicators for achieving compatible development within natural hazard management areas for flood, bushfire and landslide. Appendix 7 provides similar information for the types of community infrastructure to which the SPP applies. These performance criteria and indicators of compatibility, suitably adapted to reflect local knowledge and conditions, could be used as a basis for the preparation of codes
- 7.16 Planning scheme preparation will also involve the identification of appropriate levels of assessment for development within natural hazard management areas. This could involve different levels of assessment for areas of different hazard severity and/or the linking of assessment levels to specific types of development such as those contained in Annex 1 of the SPP. Overlay mapping may be used to identify particular areas to be subject to assessment in relation to natural hazard management.

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8. ROLES AND RESPONSIBILITIES

Applicant/Developer

- **8.1** The applicant identifies the location of natural hazard management areas on the subject site and the severity of hazard (where applicable), demonstrates that the proposal achieves the relevant development outcomes, and incorporates appropriate management techniques into the development proposal.
- **8.2** The developer implements reasonable and relevant conditions of approval in relation to natural hazard management areas as imposed by the assessment manager.

Local Government/Assessment Manager

- **8.3** Assessment Managers have regard to the SPP during development assessment. Assessment Managers should impose reasonable or relevant conditions on development to minimise risk from natural hazards, and should not approve development applications that are unable to achieve development outcomes 1 to 3 of the SPP.
- **8.4** Local Governments appropriately reflect the SPP in planning schemes by identifying natural hazard management areas and including suitable strategies and detailed measures to achieve the SPP's outcomes.

Queensland Department of Emergency Services (DES)

- **8.5** DES reviews draft planning schemes to ensure that the SPP has been appropriately reflected to achieve the State's interest in respect of natural hazard management and conveys that advice to DLGP.
- **8.6** DES provides advice on interpretation and implementation of the SPP and should be consulted by local governments about integrating the SPP into planning schemes.
- **8.7** DES to provide advice about the appropriate level of hazard assessment to determine natural hazard management areas when preparing planning schemes.
- **8.8** DES provides advice on the appropriate agencies and officers to contact in relation to specific natural hazard management issues.

Queensland Department of Local Government and Planning (DLGP)

8.9 DLGP, in conjunction with other State agencies, reviews planning schemes and amendments to ensure that the SPP has been appropriately reflected into planning schemes.

Queensland Department of Natural Resources and Mines (DNRM)/ Environment Protection Agency (EPA)

- **8.10** NRM and EPA provide advice on interpreting relevant sections of the SPP and on the relationship between the SPP and other relevant existing State legislation.
- 8.11 EPA provides information about storm tide inundation issues and planning for climate change.
- **8.12** DNRM provides information about landslide and floodplain management issues, and the latest climate change science advances.

Minister designating and/or developing Community Infrastructure

8.13 The designator has regard to the SPP to ensure the outcomes of the SPP are achieved in relation to the specified types of community infrastructure.

Community

8.14 The Community has a role in providing input into the undertaking of disaster risk management studies, the preparation of planning schemes and comment in relation to development applications.

9. GLOSSARY

- AS 3959 1999: the Australian Standard "Construction of Buildings in Bushfire-Prone Areas".
- AS/NZS 4360: the Australian/New Zealand Standard for risk management. This standard forms the basis for natural disaster risk assessment and management.
- Average recurrence interval (ARI): is a statistical estimate of the average period in years between the occurrences of a flood of a given size or larger (eg. floods with a discharge as big as or larger than the 100-year ARI flood event will occur on average once every 100 years). The ARI of a flood event gives no indication of when a flood of that size will occur next.
- Bushfire: is an uncontrolled fire burning in forest, scrub or grassland vegetation, also referred to as a wildfire.
- **Climate change:** is a change of climate, which is attributed directly or indirectly to human activity which alters the composition of the global atmosphere, and is in addition to natural climate variability observed over comparable time periods.
- **Defined Flood Event (DFE):** is the flood event adopted by a local government for the management ______of development in a particular locality__ The DFE is generally not the full extent of the flood ______ prone land.

Development commitment: includes any of the following:

- development with a valid development approval;
- exempt development, self-assessable development or development only assessable against the Standard Building Regulation;
- development clearly consistent with the relevant zone (or equivalent) in a planning scheme;
- a subdivision or other reconfiguration of allotment boundaries consistent with the requirements of the relevant planning scheme; or
- development consistent with a designation for community infrastructure.

Disaster Risk Management: is a systematic process that produces a range of measures that contribute to the well-being of communities and the environment. The process considers the likely effects of hazardous events and the measures by which they can be minimised

Existing developed area: is an area that is either developed or has the required development approvals for a use or combination of uses that would commonly be considered urban (including residential, industrial, commercial and associated supporting land uses) or rural residential in nature.

- *Flood:* is the inundation of land by expanses of water, where the land is normally dry. It may result from prolonged or very heavy rainfall, severe thunderstorms, monsoonal rains in the tropics, tropical cyclone or dam break.
- Floodplain: is an area of land adjacent to a creak, river, estuary, lake, dam or artificial channel, which is subject to inundation by the **Probable Maximum Flood** (ie. flood-prone land).
- **Floodway:** is the area of a floodplain where significant discharge or storage of water occurs during a DFE. If a floodway is filled or even partially blocked it would cause a significant redistribution of flood flow, or significant increase in flood levels.
- **IDAS:** Integrated Development Assessment System is a framework that establishes a common statutory system under the *Integrated Planning Act 1997* for making, assessing and deciding development applications, regardless of the nature of development, its location in Queensland or the authority administrating the regulatory control.
- Landslide: is movement of material downslope in a mass as a result of shear failure at the boundaries of the mass. Landslides can be triggered by both natural changes in the environment and human activities.
- *Mitigation:* is any measure intended to reduce the severity of, or eliminate the risk from, a natural hazard.
- Natural disaster: is a natural hazard event that severely disrupts the fabric of a community and requires the intervention of the various levels of government to return the community to

Natural hazard management area: is an area that has been defined for the management of a hazard (flood, bushfire or landslide), but may not reflect the full extent of the area that may be affected by the hazard (eg. land above the 1:100 ARI may flood during a larger flood event). Natural hazard management areas for flood, bushfire or landslide are described in Annex 3 of the SPP.

- Natural hazard: is a naturally occurring situation or condition with the potential for loss or harm to the community or environment. The natural hazards addressed in this SPP are flood, bushfire and landslide.
- Nature of natural hazard: is the important characteristics of the hazard including the type of hazard and its severity.

Probable Maximum Flood (PMF): is the largest flood that could conceivably occur at a particular <u>location, resulting from the probable maximum precipitation. The PME defines the extent of</u> flood-prone land. Generally, it is not physically or financially possible to provide general protection against this event.

Risk: is a concept used to describe the likelihood of harmful consequences arising from the interaction of hazards, community and the environment.

APPENDIX 1: DISASTER RISK MANAGEMENT

Local Governments and Disaster Risk Management

- A1.1 The identification of areas prone to natural hazards in a planning scheme can be used to guide the location and form of future development so that potential risks associated with development in areas prone to natural hazards are avoided or minimised. It is recommended identification of natural hazard management areas be undertaken as part of a disaster risk management process, which considers, plans for and manages the potential effects of natural disasters prior to them occurring.
- A1.2 A natural disaster risk assessment provides a structured community-based approach to assessing land prone to natural hazards. This can be used to assist local governments making decisions about the future development pattern through the planning scheme making process.
- A1.3 The following publications provide detailed guidance in relation to risk management, and in particular explain the opportunities and potential disaster risk management process approaches for local government:
 - Australian/New Zealand Standard for Risk Management (AS/NZS 4360: 1999)
 - Disaster Risk Management A Zamecka and G Buchanan, Queensland Department of Emergency Services 2000
 - Disaster Risk Management Guide: a How-to Manual for Local Government Counter Disaster and Rescue Services, Queensland Department of Emergency Services 2000.
- A1.4 Figure 1 (on the following page) presents an overview of the disaster risk management process. The following paragraphs, taken from the *Disaster Risk Management Guide: a How-to Manual for Local Government* (page 6) summarise the tasks involved in each step.
 - Establish the Context: Identify strategic and organisational issues that may apply to the disaster risk management process. Develop the project management plan and initial risk evaluation criteria.
 - Identify Risks: Identify and describe the nature of the hazards, community and environment. Examine vulnerabilities of the community and environment and identify the risks that the community is facing.
 - Analyse Risks: Examine the risks for the likelihood and consequences and assign the levels of risk.
 - Evaluate Risks: Compare the risks with the risk evaluation criteria (adjust where necessary) and rank the risks in order of priority for treatment.
 - Treat Risks: Select and implement appropriate treatments for dealing with risks.
- A1.5 The disaster risk management process is underpinned by a continuous requirement for:
 - Communication and Consultation: It is necessary to include all stakeholders in the process. If the process is going to be successful it requires commitment from all parties influenced by it.

- Monitoring and Review: It is necessary to ensure that the disaster risk management
 process remains valid by conducting regular reviews. It is necessary to monitor the
 implementation of selected mitigation treatments and to ensure that disaster risk
 management as a cyclic and continuous improvement process is integrated into broader
 Council planning.
- *Effective Documentation:* It is necessary to document all the steps taken to demonstrate that the process is conducted correctly and to satisfy audit.



Figure 1. Main elements of the Disaster Risk Management process

Source: Disaster Risk Management Guide: a How-to Manual for Local Government Counter Disaster and Rescue Services, Queensland Department of Emergency Services 2000.

page 33

State Planning Policy Guideline for Natural Disaster Mitigation Draft – No Official Status

Draft: 28 August 2002

Incorporating Disaster Risk Management into Local Government Planning

- A1.6 Disaster risk management can be a useful and important part of preparing planning schemes in accordance with the requirements of the *Integrated Planning Act*.
- A1.7 Identifying, analysing and evaluating the risks of potential development areas in relation to flood, bushfire and landslide hazards for a local government area provide a key input into planning scheme preparation. Natural hazards can be mapped and included within the planning scheme by using overlay maps or other techniques to identify natural hazard management areas and the identification and evaluation of risk can be used to inform strategy development.

Financial Assistance

Ar.8 As at 2002 Infrancial assistance is available to local governments, Aboriginal and Forres Strait Islander Community Councils and River Improvement Trusts to undertake natural hazard mapping as well as risk assessments and technical studies relating to various hazards including flood, bushfire and landslide. The Natural Disaster Risk Management Studies Program (NDRMSP) introduced by the Commonwealth government in 1999-2000 with the support of State governments, offers two thirds funding— one third each from the Commonwealth and Queensland governments for natural disaster risk studies including natural hazard studies. The successful applicant is required to provide the final third of the funding. For further information on this program, contact the Disaster Mitigation Unit of Counter Disaster and Rescue Services in the Department of Emergency Services or access website: www.dotars.gov.au/ndr/risk.htm

APPENDIX 2: UNDERTAKING NATURAL HAZARD ASSESSMENT - FLOOD

What is a flood?

- A2.1 A flood is "the inundation of land by expanses of water, where the land is normally dry. It may result from prolonged or very heavy rainfall, severe thunderstorms, monsoonal rains in the tropics, tropical cyclone, or dambreak."
- A2.2 The behaviour of floodwaters varies across the floodplain and over the duration of a flood event, as well as between different flood events. This is the principal reason for the need to understand the full range of floods, up to and including the Probable Maximum Flood (PMF)

Az.g. Different-parts of the flood plain-perform different functions during a flood. Eloodways provide the major flow paths for floodwaters and are typically aligned with obvious natural channels. Flood storage areas fill and then empty during the passage of the flood peak and are typically very low velocity zones. The remainder of the flood plain can be described as flood fringe areas.

What is a defined flood event?

- A2.4 A floodplain is determined as the extent of land inundated by the PMF. However, for the purposes of managing floodplain land use and development, it is generally impractical (and probably overly cautious) to adopt the PMF for development control.
- A2.5 Generally a much more likely flood is used for this purpose and is referred to as the "Defined Flood Event" (DFE)¹⁶. The SPP defines a DFE as "the flood event adopted by a local government for the management of development in a particular locality". The natural hazard management area (flood) is based on the DFE. The determination of the DFE should be based on a rational appraisal of the impacts of a range of floods and the social and economic benefits of development.
- A2.6 Historically, the 1% Annual Exceedence Probability flood (AEP) equivalent to 1/100 yr Average Recurrence Interval (ARI) - has been accepted as the preferred DFE, with little assessment of the consequences of larger, less frequent floods or the potential for allowing development based on a lesser flood.

¹⁵ Probable Maximum Flood (PMF): The largest flood that could conceivably occur at a particular location, resulting from the probable maximum precipitation. The PMF defines the extent of flood-prone land. Generally, it is not —physically or financially possible to provide general protection-against this event:

¹⁶ Defined Flood Event (DFE): The flood event selected for the management of flood hazard. DFEs do not define the extent of flood-prone land, which is defined by the Probable Maximum Flood (PMF).

Natural hazard management area (flood)

- A2.7 A natural hazard management area (flood) is described in annex 3 of the SPP as follows: "land inundated by a Defined Flood Event (DFE)... The Queensland Government's position is that, generally, the appropriate flood event for determining a natural hazard management area (flood) is the 1:100 year average recurrence interval (ARI) flood. However it may be appropriate to adopt a different DFE depending on the circumstances of individual localities. This is a matter that should be reviewed when preparing or undertaking relevant amendments to a planning scheme. Local governments proposing to adopt a lower DFE in their planning scheme to determine a natural hazard management area (flood) for a particular locality will be expected to demonstrate that the proposed DFE is appropriate to the circumstances of the locality."
- Az.8 Outcome 4 of the SPP requires natural hazard management areas for flood to be identified in planning schemes. Natural hazard management areas (flood) trigger the development outcomes and development assessment requirements specified in Outcomes 1 and 2 of the SPP, and are also required to enable the development of the planning strategies and detailed measures required by Outcomes 5 and 6 of the SPP.
- A2.9 In identifying natural hazard management areas (flood), a local government will need to select a DFE. Identification of a DFE does not mean more extreme events cannot occur (up to the PMF). Residual risk (ie the risk of a flood that exceeds the DFE) should be addressed in Local Government Counter Disaster Plans and emergency procedures.
- A2.20 The Department of Natural Resources and Mines (DNRM) has developed the following advice for identifying natural hazard management areas (flood).

Methodology for identifying Natural hazard management area (flood)

- A2.12 Natural hazard management areas (flood) ideally should be determined from a comprehensive floodplain management study. The process outlined in *Floodplain Management in Australia:* Best Practice Principles and Guidelines (SCARM Report 73, CSIRO Publishing) (the SCARM Report) is recommended when undertaking a floodplain management study and preparing a floodplain management plan.
- A2.12 In its most comprehensive form, a floodplain management study set out in the SCARM Report is likely to be time-consuming and expensive. It maybe beyond the capacity or needs of some local governments, particularly those with low-growth and a low-rate-base.
- A2.13 Therefore some of the steps below also set out alternative methods. These alternatives recognise the varying levels of flood data, resources, and need for flood management information that exist across Queensland. Flood studies should be tailored to meet the needs and resources of local governments. Nevertheless local governments should ensure that they properly assess flood risk.
- A2.14 The SCARM report process comprises the following steps:

Step 1: Establishment of a Floodplain Advisory Committee

- A2.35 This Committee's role is to assist local governments to develop and implement a plan for the management of the floodplain. The committee should comprise a balanced mix of elected, administrative and community representatives.
- A2.16 Local Government should carefully consider how it consults with the community in the flood study process, the need for and composition of a committee, and the terms of reference of any such committee.

Step 2: Carrying out Flood Studies

- A2.37 "The flood study defines the nature and extent of the flood hazard across the floodplain, by providing information on the extent, level and velocity of floodwaters and on the distribution of flood flows"¹⁷.
- A2.18 Current best practice in floodplain management calls for an understanding of the full range of floods possible up to and including the probable maximum flood (PMF). This information is unlikely to be available unless generated by a recent and comprehensive flood study.
- A2.19 Flood studies are used to determine the flooding characteristics of an area for a range of flood events. They typically have two components:
 - Hydrologic study is used to derive rainfall and resultant stream flows for nominated Annual Recurrence Interval (ARI) events from existing rainfall and stream flow information. Throughout Australia, long-term rainfall records for a particular catchment are more likely to be available than long term stream flow data. Hence, the hydrologic study typically comprises synthesising rainfall for desired ARIs (eg 1 in 100yr, 1 in 200 yr, 1 in 500 yr, etc.) from the available record using accepted methods and routing it through the catchment to arrive at stream flows. The stream flows are then assigned the ARI of the rainfall from which they were generated. The calculations to derive these synthetic stream flows are typically checked or "calibrated" against any stream flow records that exist and any necessary adjustments made to ensure the match with recorded events is satisfactory.

Where a sufficiently long stream flow record does exist, a peak flood flow frequency analysis could be applied and used to assign ARIs directly to flood flow rates. A flood frequency analysis is also typically carried out as a check to the rainfall based approach.

• *Hydraulic analysis* takes the stream flow "outputs" from the hydrologic analysis and estimates the flood flow behaviour (ie. flow rates, velocities, depths and extent and duration of inundation) as it passes through the floedplain. It is the hydraulic analysis,

¹⁷ See page 3 in the Floodplain Management in Australia: Best Practice Principles and Guidelines (SCARM Report 73)

which produces the flood hazard information of direct relevance to floodplain management planning, including the development of suitable planning scheme measures.

A2.20 In Queensland, the principal sources of data for carrying out a flood study are:

- Commonwealth Bureau of Meteorology (BoM) rainfall records, historical flood levels (at BoM referenced stream gauges) and hydrologic models where BoM operates a flood warning system;
- DNRM stream flow records at gauged locations, rainfall data including BoM data, hydrologic and hydraulic studies where undertaken by the Department, topographic data (contour information at variable intervals from the State Aerial Photography Program);
- Environment Protection Agency tide and storm surge data, marine works approvals;
- Infrastructure Agencies (including State Government) existing hydraulic analysis and as constructed details for road and railway formations, bridges and other infrastructure on the floodplain; storage/discharge relationships for major dams, etc.;
- Local government ground levels from sewerage plans, surveys for specific projects, council roadworks, drainage plans etc. and historical flood levels.

Flood study alternatives

A2.21 Reductions in the effort and expense of conducting a comprehensive flood study may be available through the alternative flood information sources discussed below. These are a compromise between the cost and time involved in a comprehensive flood study and the suitability of information for planning decisions.

A2.22 The shortcomings to be aware of in using these alternatives are:

- Floodplain and catchment characteristics can have a significant impact on the level of hazard associated with possible floods that are more extreme than those covered by available information, for example, on a western Queensland floodplain the difference in depth between a 1 in 100 year ARI flood and a 1 in 200 year ARI flood may be only 0.5m with little increase in velocities, whereas on a coastal floodplain the difference in depth may be metres with flow velocities also many times greater;
- The consequences of larger floods remain unknown which has implications for emergency response planning and the siting of critical installations such as hospitals, police and emergency services.
- A2.23 Historical flood data: Where historical flood data exists and is of a suitable quality, it may be possible to use this information without any further detailed hydrologic or hydraulic analysis. The

minimum requirements in this instance however would be for a suitably qualified professional engineer to:

- carry-out a flood frequency analysis of the available historical data to indicate the likely ARI of the recorded events;
- consider floodplain and catchment modifications (eg changed land use) that may affect run-off or flow regimes;
- plot the extent of inundation as estimated from the data available for the flood event(s) on which development controls are to be based;

identify the likely significant flow paths (floodways), which need to be preserved if
 adverse changes to the flooding regime are to be avoided.

Historical data may include:

- formally recorded gauge height records for a number of floods;
- formally surveyed peak flood levels throughout the area of interest;
- photographs of an historical flood;
- "high-water" marks recorded on public or private property; and
- interviews with long-term residents.

Every effort should be made to source as much historical data as possible and in this respect, all avenues should be pursued (eg Council records, local newspapers, the community, etc).

Where a historical flood level is chosen as the DFE, some assessment of its Average Recurrence Interval is necessary to give an indication of the level of flood risk that is being accepted.

A2.24 Existing flood studies: A number of river systems in Queensland have been, at some time in the past, the subject of a flood study. In many cases however, these studies were either limited in their scope, or performed a number of years ago. As a result they should ideally be updated with current data and techniques and/or extended to cover the full range of floods and incorporate catchment development changes as well as future scenarios.

Notwithstanding this, where existing studies are available they can be valuable sources of information provided their relevance can be established. If the study is more than 5 to 10 years old, a suitably qualified professional engineer should review the study outputs, the assumptions and data on which the study was based and the techniques used to model the hydrology and floodplain hydraulics.

Assuming an existing flood study can be established as relevant, it may be acceptable to adopt the study outputs directly, or through some level of interpretation by a suitably qualified professional engineer, as the basis for further studies/assessments of flood risks and mitigation measures.

- A2.25 Topography: There may be circumstances where the topography suggests floods are not an issue (ie large elevated areas with no significant watercourses such as plateaux). Care should be taken in making such a determination, as land subject to flood hazards is not always obvious.
- A2.26 Lack of flood history: It may be considered unnecessary to evaluate flood risk based on the lack of flooding instances. Again caution needs to be exercised in dismissing or downgrading the importance of flood risk considerations on the basis of a lack of flood history alone. Many instances of previously believed "flood free" localities have turned out to be the opposite. Generally it is the case that either no one recorded earlier floods because the area was only recently developed and/or the last flood was poorly recorded and long enough ago to have dropped from current memory. Population turnover at a locality can have a similar effect, dulling the community's consciousness of the local flood hazard.

Caution must be exercised when making a judgement as to whether a locality is susceptible to floods. This situation is only likely to apply to fairly small townships where all development has or is occurring in elevated areas. It should also be noted that while mainstream flooding may not be an issue in such circumstances, stormwater drainage might still represent a flood risk.

Definition of Flood Hazard

- A2.27 Determination of the level or severity of flood hazard is of considerable significance to the appropriateness or otherwise of various land uses. Careful matching of land use to flood hazard both maximises the benefits of using the floodplain and minimises the risks of flooding. As it is a function of flood behaviour, the degree of hazard also varies across the floodplain in response to the following factors:
 - flow depth;
 - flow velocity;
 - rate of flood level rise (including warning times);
 - duration of inundation.
- A2.28 The risks that a flood hazard poses are also dependent on a number of "vulnerability" factors including:
 - size and nature of population exposed to the hazard;
 - availability of evacuation routes; and
 - susceptibility of structures to flood damage.
- A2.29 Quantification of the degree of hazard posed by floodwaters has generally relied on analysis of the effects of the flow depth and velocity on individual elements, such as structures, and the ability of people and vehicles to move through the floodwaters to reach safety. This assessment may be then modified on the basis of warning/evacuation times.
- A2:30 Appendix J of the SCARM Report defines flood hazard as follows:

- Low there are no significant evacuation problems. If necessary, children and elderly
 people could wade to safety with little difficulty; maximum flood depths and velocities
 along evacuation routes are low: evacuation distances are short. Evacuation is possible
 by a sedan-type motor vehicle, even a small vehicle. There is ample time for flood
 forecasting, flood warning and evacuation: evacuation routes remain trafficable for at
 least twice as long as the time required for evacuation.
- Medium fit adults can wade to safety, but children and the elderly may have difficulty: evacuation routes are longer; maximum flood depths and velocities are greater. Evacuation by sedan-type vehicles is possible in the early stages of flooding, after which 4WD vehicles or trucks are required. Evacuation routes remain trafficable for at least 1.5 times as long as the necessary evacuation time.
- High—fit adults have difficulty in wading to safety; wading evacuation routes are longeragain; maximum flood depths and velocities are greater (up to 1.0 m and 1.5 m/s respectively). Motor vehicle evacuation is possible only by 4WD vehicles or trucks and only in the early stages of flooding. Boats or helicopters may be required. Evacuation routes remain trafficable only up to the maximum evacuation time.
- Extreme boats or helicopters are required for evacuation; wading is not an option because of the rate of rise and depth and velocity of floodwaters. Maximum flood depths and velocities are over 1.0 m and over 1.5 m/s respectively.

Step 3: Carrying out a Floodplain Management Study and preparation of a Floodplain Management Plan

- A2.31 "The flood management study identifies and compares options to manage flood hazard"¹⁸.
- A2.32 The purpose of a floodplain management study is to use flood hazard information and information on current and potential future floodplain use to determine:
 - the impacts for existing floodplain uses;
 - how those impacts can be managed;
 - the effects of future floodplain uses on the risks to existing and future development; and
 - how best to manage future development.
- A2.33 As such, a floodplain management study is the preferred method for determining the DFE(s). Following the sourcing of adequate flood hazard information (as discussed above) the steps in carrying out a floodplain management study are:
 - Flood damage assessment for each flood event;
 - Community (people) vulnerability assessment;

¹⁸ See page 14 of the Floodplain Management in Australia: Best Practice Principles and Guidelines (SCARM Report 73)

- Economic impact assessment (if considered significant enough to separate from flood damage assessment);
- Assessment of floodplain development scenarios;
- Assessment of flood mitigation scenarios;
- Adoption of a flood mitigation program;
- Determination of DFE(s) based on an acceptable level of risk; and
- Development of local floodplain management policy and hydraulic assessment criteria.
- A2.34 In many instances, this logical progression may not be appropriate because of over-riding local pre-conditions. For example, there maybe a pre-existing DFE, mitigation works may be already predetermined (eg a water supply augmentation may dictate that a dam be raised and as part of the raising, a flood mitigation component may be included) or floodplain development may be constrained in some areas by other issues.
- A2.35 The principal sources of data for carrying out floodplain management plans in Queensland are:
 - DNRM Property data such as ownership and property boundary location (land title information and the Digital Cadastral Data Base);
 - Published stage-flood damage curve data from sources such as ANU and reproduced by the DNRM in the Regional Flood Mitigation Program Bulletin;
 - Infrastructure Agencies (including State Government) existing risk studies for major infrastructure; and
 - Local government.
- **A2.36** Having undertaken a comprehensive floodplain management study or suitable alternative approach as outlined below an appropriate DFE can be determined for each locality in the local government area. The key issues to be considered include:
 - potential economic and social impacts of a range of flood events;
 - community desires and expectations;
 - environmental values of and objectives for the floodplain;
 - consistency with adopted DFE's in adjoining localities (whether or not within the same local government area);
 - emergency response requirements eg. warning times, refuges, evacuation routes, recovery measures, etc; and
 - management and mitigation measures.

Floodplain Management Planning Alternatives

A2.37 In any given locality, the factors that affect flood risk and the way in which it is managed will differ. Factors such as existing level of risk, opportunity to influence development due to growth, the availability of existing flood studies, historical flood data, other constraints on development such as environmentally sensitive areas, community aspirations and topography will all influence the amount of work required to formulate an appropriate floodplain management plan.

- A2.38 The alternatives discussed below are intended for low-rate base councils with a low growth rate to assist implementing the SPP. The shortcomings to be aware of are:
 - Apart from hydraulic and hazard implications, a variety of other factors affect the most appropriate land use and type of development for a particular area of the floodplain, for example socio-economic aspects and environmental considerations. These factors can only be weighed appropriately in the strategic framework of a floodplain management plan.
 - Applying these guidelines to isolated developments cannot take into account the cumulative impact of ongoing development. Again, cumulative impacts can only be correctly assessed as part of the planning process that underlies the formulation of a floodplain management plan.
- A2.39 Limited Potential for Growth in Flood Risk: The SPP requires the consideration of the impacts of flood in the assessment of development and the preparation of local planning schemes. Where the potential for new development is small, the impact of the SPP in reducing the locality's exposure to natural hazard risks will likewise be reduced.

Nonetheless development controls that adequately deal with potential flood risks still need to be in place. So in cases where there is limited new development, selection of a DFE with which to define a natural hazard management area (flood) could be simply on the basis of a historical flood level without detailed assessment of the potential flood impacts.

- A2.40 Existing Flood Impact Information: This approach is similar to the situation described above where existing flood hazard information can be a substitute for conducting a full flood study. If a flood impact (ie. the consequences of flood events) assessment or flood impact data as a result of a recent flood event is available, it may be possible to reduce the work necessary to develop an appreciation of the consequences of floods for the locality concerned and hence the risk that the community is prepared to accept.
- A2.41 Existing Knowledge of Community Aspirations: There may be circumstances where a community has clearly indicated the level of flood risk they will accept and this has been communicated to the local government. In this case, process steps aimed at informing and educating the community about the local flood risk and gaining an appreciation of the level of flood risk acceptable to the community may not be required.

Caution again must be exercised here because:

- it is unlikely the "community view" will be totally unanimous and hence a number of people may feel disenfranchised by a simple acceptance of the (believed) current majority view;
- inevitably, the current view has resulted from the level of flood information available to and experience of that community. This is likely to change significantly should this information be shown to be erroneous either through a new study or flood event;

 community acceptance is more often than not predicated on the level of appreciation of flood impacts and on what level individuals understand and accept how a flood will actually affect them.

Except in circumstances where the community has good information and has been well educated and/or well experienced in floods and flood impacts, care should be taken in assuming that the community accepts what the community says it accepts.

Step 4: Adoption and Implementation of the Floodplain Management Plan

- A2.42 "The floodplain management plan comprises a coordinated mix of measures that address existing future and residual flood problems" (SCARM Report, p. 16). The plan sets out the results of the studies, the links to flood emergency plans and should include planning responses. The development of appropriate planning scheme outcomes for flooding as set out in the SPP is one result of the adoption of the floodplain management plan.
- A2.43 The plan should also be reviewed at regular intervals or after severe floods to examine changes in flood behaviour, roles and responsibilities of agencies and community aspirations.

Climate Change

- A2.44 The potential impacts of climate change should be addressed as part of the flood study. To date, there have been no conclusive studies that quantify the impact of climate change due to the greenhouse effect on either the frequency or intensity of major (flood) rainfall events across Queensland. It is however important to consider the potential adverse consequences of climate change on flooding in the local context and to remember that, in addition to possible impacts on rainfall and run-off, conditions such as sea level rise and an increase in the southern excursions of tropical cyclones may have significant implications for at least coastal floodplains. Climate change information should be sought initially by contacting bodies such as CSIRO Climate and Atmosphere and the Queensland Centre for Climate Applications, DNRM, however interpretation should be undertaken by a suitably qualified professional engineer.
- A2.45 Sources of information of the effects of climate change on flooding are included in Appendix 9.

Draft: 28 August 2002

APPENDIX 3: UNDERTAKING NATURAL HAZARD ASSESSMENT -BUSHFIRE

What is a bushfire?

- A3.1 A bushfire is "an uncontrolled fire burning in forest, scrub or grassland vegetation, also referred to as a wildfire".
- A3.2 Bushfire may occur on most vegetation and topography types in Queensland, where there is a fuel path of sufficient dryness to be flammable.

Natural hazard management area (bushfire)

A3.3 A natural hazard management area (bushfire) is described in Annex 3 of the SPP as follows:

- a) an area adopted by a Local Government for a particular locality consistent with the conclusions of a bushfire hazard assessment study; or
- b) where such a study has not been undertaken, an area adopted by a Local Government for a particular locality, reflecting the Medium and High hazard area of the Bushfire Risk Analysis Maps produced by Queensland Fire and Rescue Service, suitably modified following a review (eg. "ground truthing") by the Local Government; or
- c) where an area has not been adopted by Local Government, the Medium and High hazard areas on the Bushfire Risk Analysis Maps produced by Queensland Fire and Rescue Service.
- A3.4 Outcome 4 of the SPP requires natural hazard management areas (bushfire) to be identified in planning schemes (except for those local government areas to which the SPP does not apply in relation to bushfires refer to Annex 2 of the SPP). Natural hazard management areas (bushfire) trigger the development outcomes and development assessment requirements specified in Outcome 1 of the SPP, and are also required to enable the development of the planning strategies and detailed measures required by Outcomes 5 and 6 of the SPP.
- A3.5 The following methodology has been developed to assist local governments and developers to identify natural hazard management areas (bushfire). It is an appropriate method for land use planning purposes, and is suitable for use by local governments when identifying natural hazard management areas (bushfire) as part of the plan making or amending process and also for site-specific bushfire hazard assessments.
- A3.6 However, other methodologies may also be appropriate. Local governments or their consultants should contact the QFRS to discuss alternative methodologies and ensure that they are acceptable.

Climate Change Impacts

A3.7 Climate change is expected to cause a gradual change in vegetation health and vigour, and some species and vegetation communities will be advantaged over others. Climate change

impacts will be reflected over time through changes to vegetation communities and fuel characteristics. These changes are difficult to predict and are likely to occur very gradually over a long time frame. The changes to bushfire hazard associated with climate change impacts will generally be outweighed by changes caused by human activity in the short term. For these reasons it is not practicable to consider the impacts of climate change in bushfire hazard assessment studies at present.

Methodology for Identifying Bushfire Management Areas

- A3.8 The methodology involves both quantitative and qualitative assessments. The quantitative element requires an assessment of three key characteristics of land (factors) that have been found to be the main determinants of the severity of bushfire hazard. These factors are vegetation communities, slope and aspect.
- A3.9 The area to be assessed should be disaggregated into sub-units according to vegetation communities, slope and aspect characteristics. The tables below provide the ranges that should be applied for the analysis of each of the three factors. These ranges will also help to determine the sub-units that should be used to conduct the assessment. The size of the sub-units, and level of accuracy of the resultant bushfire hazard map, may vary with the extent of the area being assessed, the characteristics of the land and vegetation communities, and the accuracy of the base information being used.
- A3.10 Each sub-unit is allocated a score for each of the three factors. The total score for each subunit determines the severity of bushfire hazard for that sub-unit. A qualitative review of these findings should then be undertaken to verify the results of the quantitative assessment.
- A3.11 The qualitative review should consider the known bushfire behaviour.
- A3.22 Finally, a safety buffer of land in close proximity to identified bushfire hazard areas needs to be included within the *natural hazard management area* (*bushfire*). The safety buffer is required because bushfires can affect unvegetated land in close proximity particularly due to winds fanning flames, smoke, embers and radiant heat.

Step 1: Assessment of Vegetation Communities

A3.13 The different types of vegetation communities determine the rate at which dry fuel accumulates. Some vegetation communities protect fuel from drying out in all but extreme bushfire seasons, and can then be susceptible to very destructive bushfires. Alternatively, vegetation communities may expose fuels to drying, and therefore be frequently available for burning. Frequent bushfires can result in the development of bushfire tolerant grassy woodlands or grasslands, and less destructive bushfire behaviour. The characteristics of different vegetation communities are reflected in Table 1. This table also presents the hazard scores for a range of vegetation communities. Vegetation community data is available in digital map form from the Queensland Herbarium, Environmental Protection Agency at a scale of 1:100,000.

Table 1: Hazard scores and associated fire behaviours for various vegetation communities.

Wegetation communities	Fire behaviour	THERICU SECORE
Wet-sclerophyll forest, tall eucalypts (>30m), with grass and mixed shrub understorey.	Infrequent fires under severe conditions, flame lengths may exceed 40m, floating embers attack structures for 1hr, radiant heat and direct flame are destructive for 30minutes.	10
Paper bark heath and swamps, eucalypt forest with dry-shrub ladder fuels.	Fire intensity depends on fuel accumulation, but can be severe, with flame lengths to 20m, spot fires frequent across firebreaks, radiant heat and direct flame for 15 minutes.	8
Grassy eucalypt and acacia forest, exotic pine	Fire intensity may be severe with flame lengths to 20m, but less attack from embers.	6
plantations, cypress pine		100, 0, 11 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
forests, wallum heath.		
Native grasslands (ungrazed), open woodlands, canefields.	Fast moving fires, available to fire annually to 4 years. Usually no ember attack, radiant heat for >10m, duration <2 minutes.	5
Intact acacia forests, with light grass to leaf litter, disturbed rainforest.	Fires infrequent, usually only burn under severe conditions, relatively slow fires, usually little ember attack.	4
Orchards, farmlands, kikuyu pastures.	Fires very infrequent, slow moving, may be difficult to extinguish, frequent fire breaks.	2
Grazed grasslands, slashed grass.	Grazing reduces intensity and rate of spread of fire, duration <2minutes.	2
Desert lands (sparse fuels), mowed grass.	Gaps in fuel, usually slow fire spread.	1
Intact rainforest, mangrove forest, intact riverine rainforest.	Virtually fire proof.	0

Note 1: Vegetation assessment should be based upon examination of the vegetation on the subject site and surrounding the subject site. Narrow strips of vegetation may be flammable, however bushfires will not generally reach their full intensity where bushfire fronts are less than 100 metres wide. For this reason the following examples may be viewed as having the next lower hazard score (ie paperbark heath would have a score of 6 not 8, cypress pine forest 5 not 6):

Areas with a linear shape (eg. roadside vegetation beside a cleared paddock), and

- Units of vegetation of less than 50 hectares in areas and more than one kilometre from the nearest extensive vegetation.
- A3.14 Where the vegetation community is assessed as having a vegetation community hazard score of zero, no other factors need to be taken into account and the relevant sub-units should be given a Low severity of overall bushfire hazard. No further action is required.

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Step 2: Assessment of Slope.19

A3.15 Studies have shown that fires burn more quickly and with greater intensity up slopes, generally doubling every 10 degrees of slope. Also, the steeper the slope the more difficult it is to construct ring roads, firebreaks and provide access for emergency crews. Trees situated downhill from structures will have their crowns close to the structures. This presents bushfire hazards particularly for exposed structures such as timber decks. Table 2 presents the hazard scores for different categories of slope.

Table 2: Hazard scores for slope

Slope	Hazard score	
Gorges and mountains (>30%)	5	
Steep Hills (>20% to 30%)	4	
Rolling Hills (>10% to 20%)	3	
Undulating (>3% to 10%)	2	
Plain (0% to 3%)	1	

Step 3: Assessment of Aspect

- A3.16 Aspect affects bushfire hazard due to the effects that exposure to direct sunlight has on different vegetation communities, including the drying rates of fuels. Aspect also correlates closely with exposure to low humidity winds that increase bushfire intensity. In extremely broken country where there is a variety of aspects, the predominant aspect should be used.
- A3.17 As aspect has only a minor influence on flatter land, aspect is not considered to be significant on land with a slope less than 5%. Table 3 lists the hazard score for different aspects and Figure 1 illustrates the compass degree ranges for each aspect category.

Table 3: Hazard score for Aspect

Aspect	Hazard score
North to North-West	3.5
North West to West	3
West to South	2
North to East	1
East to South and all land under 5 % slope	0

¹⁹ See Appendix 8 for the methodology for calculating slope.



Figure 1: Compass degree ranges for each aspect category

Step 4: Combining scores to identify the severity of bushfire hazard

A3.18 The scores for the individual factors determined for vegetation communities, slope and aspect are added together to give a total for each sub-unit as follows:

Total hazard score = vegetation community hazard score + slope hazard score + aspect hazard score

A3.19 The total hazard score determines the severity of bushfire hazard for each sub-unit as set out in Table 4.

Table 4: Hazard score ranges to identify the severity of bushfire hazard.

Total hazard score Severity of bushfire hazard	
13 or greater	High ²⁰
6 to 12.5	Medium
1 to 5.5	Low

²⁰ Buildings in High severity bushfire hazard areas should be constructed in accordance with the Level 1 requirements of AS3959-1999. This can be achieved by designating these areas as "bush fire prone areas" under Section 55 of the Standard Building Regulation 1993.

Step 5: Field Verification

A3.20 Preliminary bushfire hazard maps should be prepared based on the results of Step 4 above by aggregating all sub-units with similar levels of bushfire hazard severity into high, and medium severity classifications²¹. Field verification or 'ground truthing' of these preliminary results should then be undertaken. A number of sample areas should be evaluated to test the accuracy of the preliminary bushfire hazard findings.

Step 6: Qualitative Assessment

- A3.21 Known bushfire behaviour complements the quantitative assessment and should be considered as part of the qualitative review.
- A3.22 Known bushfire behaviour is extremely difficult to use as a quantitative planning tool. This is because the absence of bushfire even for an extended period of time does not mean that an area will not burn, and may lead to massive fuel accumulation with dangerous bushfire behaviour if it does ignite. Known bushfire behaviour may identify sites where combinations of slope and wind have lead to severe bushfire behaviour in the past, and where extra precautions to protect assets might be required. The reliability of known bushfire behaviour may be difficult to assess and Queensland Fire and Rescue Services should be consulted if problems are indicated.

Step 7: Safety Buffers

- A3.23 The final step in identifying bushfire management areas is to add a safety buffer, as land adjacent to bushfire hazard areas is vulnerable to bushfire attack from these areas.
- A3.24 Any land within 100 metres of an area identified as having a High bushfire severity classification should be included in the High bushfire hazard area, and any land within 50 metres of an area identified as having a Medium bushfire severity classification should be included in the Medium bushfire hazard area²². The safety buffers should be integrated into the preparation of maps identifying bushfire management areas. Table 5 shows the width of the safety buffers that apply to the various bushfire hazard severity classifications.

Table 5: Total hazard score and severity of bushfire hazard with safety buffers.

-Total hazard score	Severity of bushfire	Width of
	hazard	Safety buffer
13 or greater	High	100 metres
6 to 12.5	Medium	50 metres
1 to 5.5	Low	Not applicable

Areas of Low bushfire hazard severity may also be mapped, but the natural hazard management area (bushfire) for the purposes of the SPP comprises only areas identified as being of High or Medium severity.

²² Safety buffer areas on the boundary between High and Medium bushfire severity areas should be included in the High bushfire severity area.

APPENDIX 4: UNDERTAKING NATURAL HAZARD ASSESSMENT LANDSLIDE

What is a Landslide?

A4.1 A landslide is "is movement of material downslope in a mass as a result of shear failure at the boundaries of the mass. Landslides can be triggered by both natural changes in the environment and human activities".

What causes Landslides?

- A4.2 Landslides have several causes, including geological, morphological, physical and human. Geological causes include weak materials, weathered materials jointed materials adversely oriented structures, and contrasts in permeability. Morphological causes include a steep slope, wave erosion, or fluvial erosion. Physical causes are rainfall, rapid snowmelt, and thawing. Humans can cause landslides by excavating, removing vegetation, irrigating and mining.
 - A4.3 Landslide triggers include intense rainfall, earthquake shaking, volcanic eruption, storm waves, or rapid stream erosion. Intense rainfall is by far the most common trigger of landslides in Australia. During rainfall, rapid infiltration, soil saturation and rising pore-water pressures, cause a decrease in the effective strength of slope materials. Loose or weak materials, such as colluvium mantling are especially prone to landslides triggered by intense rainfall.

Climate Change Impacts

A4.4 Climate change is predicted to result in increased rainfall intensity. Any assessment process that considers rainfall intensity should be based on a consideration of likely climate change impacts.

Landslide Risk Factors

- A4.5 Landslide risk cannot be assessed by single factors such as slope angle or soil type or soil thickness. Some steep hillsides can be stable while major landslides have occurred on slopes lower than 7 degrees in eastern Australia. Similarly, soils behave differently in different situations.
- A4.6 Although no single set of characteristics can hope to define the complex relationships between the physical environment and land instability, there are two basic principles that should be remembered. First, it is likely that landsliding will occur where it has occurred in the past, and secondly, landslides are likely to occur in similar geological, geomorphological and hydrological conditions as they have in the past.

- A4.7 The characteristics of a landslide prone area may include a combination of some of the following:
 - 1. Evidence of instability. If there is any sign of irregularity, the risk of landslide may be high. Evidence includes:
 - a. surface creep (eg trees tilted);
 - b. minor surface irregularity (eg areas of hummocks and depressions);
 - c. major surface irregularity (eg benches of abnormal or irregular flat areas in uniform sloping areas scars, areas stripped of vegetation during slope movement and cracks; linear features showing lateral displacement of the ground surface; and debris mounds, deposits of soil and rock on or at the base of slopes);
 - d. presence of scarps (ie linear features showing the location of vertical displacement of the ground surface);
 - e. evidence of rockfall or instability; and
 - f. evidence of disturbed infrastructure (eg tilted powerlines and fences, broken pipes and fractured drains, cracking or titling of walls, cracking or slumping of embankment slopes, cracking and fall of material from excavated slopes);
 - 2. Recent or historical natural forest vegetation clearing or thinning significantly increases the risk of landslide;
 - 3. Steeper slope angles are usually more at risk;
 - 4. Slope shape -concave shapes are usually more at risk;
 - 5. Site geology -weak materials are usually more at risk;
 - 6. Colluvial thickness may increase the probability of landslides occurring;
 - 7. Concentration of surface water -surface water on crests and upper slopes;
 - 8. Concentration of groundwater; and
 - 9. Existing development modifications can significantly alter the risk of slope instability. For example, poor disposal of run-off water or sewage can significantly increase risk.

Natural Hazard Management Areas (Landslide)

- A4.8 A natural hazard management area (landslide) is described in Annex 3 of the SPP as:
 - a) an area adopted by a Local Government for a particular locality consistent with the conclusions of a geological stability study; or

- b) where such a study has not been undertaken, an area adopted by a Local Government for a particular locality that includes all land of 15% and greater slope and other land known or suspected by the Local Government as being geologically unstable, together with other areas that the Local Government considers may be adversely affected by a landslide event²³; or
- c) where an area has not been adopted by a Local Government, all land with a slope of 15% or greater.
- A4.9 Outcome 4 of the SPP requires natural hazard management areas (landslide) to be identified in planning schemes (except for those local government areas to which the SPP does not apply in relation to landslide - refer to Annex 2 of the SPP). Natural hazard management areas (landslide) trigger the development outcomes and development assessment requirements specified in Outcomes 1 and 2 of the SPP, and are also required to enable the development of the planning strategies and detailed measures required by Outcomes 5 and 6 of the SPP.

Identifying Landslide Management Areas

- A4.20 The methodology to be used for undertaking a landslide hazard assessment should be tailored to the local conditions. Local governments, their consultants and proponents should consider proposed methodologies and ensure that they are appropriate to their particular circumstances.
- A4.11 Examples of landslide hazard assessment techniques may be found in the following documents:
 - Landslide Risk Management Concepts And Guidelines, Australian Geomechanics Journal Vol 35, No 1, March 2000, prepared by the Australian Geomechanics Society, Subcommittee on Landslide Risk Management should be used as the basis for undertaking landslide and hazard and risk assessments. This document establish uniform terminology, outlines a framework for landslide risk management, provides guidance on methods which should be used to carry out risk analysis and provides information on acceptable and tolerable risks.
 - Geotechnical Risk Associated with Hillside Development, Australian Geomechanics News - Number 10 1985, (1985) Walker, B et al.
 - Guidelines for Control of Slope Instability within the City of Gold Coast, Gold Coast City Council, Queensland.
 - Landslip Study for the City of Gold Coast, (SMEC, 1999) Gold Coast City Council.
 - Slope Stability and its Constraints on Closer Settlement on Tamborine Mountain, Southeast Queensland, (Willmott, 1981), Geological Survey of Queensland.

²³ For example, land below areas prone to landslide.

- Landslide Hazards in Hillside Development: The Geological Approach to Landslide Risk Assessment, Local Authority Assessment of Development Applications on Potentially Hazardous Slopes, (1982) W. F. Willmott.
- "A Method of Zoning Landslide Hazard" (McGregor and Taylor, 2001), Australian Geomechanics Journal Vol 36, No 3, September 2001 is an example of a quantitative technique for zoning landslide hazard that has been used in Queensland.
- Community Risk in Cairns A Multi-hazard Risk Assessment, (Grainger, Jones, Leiba and Scott, 1999), Australian Geological Survey Organisation.

APPENDIX 5: PERFORMANCE CRITERIA FOR ASSESSING THE COMPATIBILITY OF DEVELOPMENT IN NATURAL HAZARD MANAGEMENT AREAS.

- A5.1 The following tables provide Performance Criteria and Indicators of Compatibility that should be used to determine compatibility with the nature of hazard as required under Outcome 1 of the SPP. Development proposals that demonstrate compliance with each of the Performance Criteria that is applicable to the particular development, achieve Outcome 1 of the SPP.
- A5.2 The Performance Criteria state the outcomes that the development proposal must achieve. The Indicators of Compatibility are acceptable ways of achieving the Performance Criteria. There may be other ways to achieve the Performance Criteria, and a development proposal that does not comply with one or more of the Indicators of Compatibility must provide sufficient information to demonstrate how the alternative approaches achieve the corresponding Performance Criterion.
- A5.3 An Indicator of Compatibility may have a number of parts, and there may be a number of Indicators of Compatibility associated with a single Performance Criterion. In either case all of the elements must be satisfied unless some are identified as alternatives. This approach is shown by the use of the word "and" as a linking mechanism between these elements. The word "OR" is used to identify alternatives. When used within a single Indicator of Compatibility "OR" identifies that the linked parts are alternative ways of complying with that indicator. When used between Indicators, "OR" identifies that the following Indicator can be used as alternative means of achieving the Performance Criterion.

A. FLOOD:

Performance criteria	Indicators of compatibility
1. Development does not compromise the safety of people from all floods up to and including the DFE.	 Development is compatible when: 1.1 The development proposal: does not result in a material increase in the number of people living or working in the natural hazard management area (flood); and does not negatively impact on the ability of traffic to use evacuation routes or unreasonably increase traffic volumes on identified evacuation routes; and does not result in shortened flood warning times; and has at least one road access that will remain passable for the performance of emergency evacuations for all floods up to and including the DFE (Note: this will generally require roads to be constructed above the DFE plus an allowance for longitudinal drainage, although within low hazard areas (see Appendix 2 for the definition of low hazard areas) emergency evacuation routes

	 acceptable)²⁴ OR 1.2 The development proposal is accompanied by a flood assessment report²⁵ that demonstrates to the satisfaction of the assessment manager (or designator) that the development proposal otherwise complies with Performance Criterion 1.
 Development does not increase the flood hazard for adjacent or other property on the 	 Development is compatible when: 2.1 It does not detrimentally affect flood storage capacity or flood conveyance characteristics through the importation of fill to the site, or any alteration to a watercourse or floodway, or other
floodplam.	 Correction of the satisfaction of the assessment manager, that the development complies with any applicable development criteria set out in an adopted floodplain management plan. OR 2.3 Where a floodplain management plan does not exist, the proponent submits a hydraulic assessment report that demonstrates, to the satisfaction of the assessment manager, that either: 2.3.1 Changes to the flood characteristics at the DFE are contained on the subject site (i.e. no changes to depth, duration or velocity of flood waters and no reduction in warning times elsewhere on the floodplain); or
	 2.3.2 Any changes to the flood characteristics at the DFE outside of the subject site arising as a result of: loss of flood storage; loss of/changes to flow paths; acceleration or retardation of flows; do not increase the risks to existing populations and property or adversely affect the interests of other landowners. (Note: the hydraulic report will need to assess the cumulative impacts of all existing and likely future development in the floodplain).

²⁴ Emergency evacuation routes are only required for development that involves people living, working or congregating on the site.

²⁵ A flood assessment report should include an assessment of the development proposal against the relevant performance criteria, and may require a specific hydraulic and hydrologic investigation undertaken by suitably qualified professional engineer.

 Development is designed to minimise the damaging impacts of flooding, should it occur. 	 Development is compatible when: 3.1 Any parts of buildings located below the DFE are used for purposes that will not be severely affected by floodwater (e.g. carparking and/or the temporary storage of other readily removable items). AND 3.2 Development provides for the passage of floodwaters without the creation of localised hazard zones due to, for example, the concentration of flood flows or ponding of floodwaters.
4. Essential services	Development is compatible when:
with the development (electricity, gas, water supply, sewerage, and telecommunications) are designed and constructed to maintain their function during a DFE.	 AND 4.2 Infrastructure is designed and constructed to resist all hydrostatic and hydrodynamic forces as a result of inundation by the DFE.

B. BUSHFIRE

Ge	neral	Indicators of companionaly
1.	Development does not compromise the safety of people or property from bushfire.	 Development is compatible when: 1.1 A site specific bushfire hazard assessment²⁶ demonstrates that the development will not be in an area of High or Medium bushfire hazard²⁷. OR 1.2 The development will: 1.2.1 not result in a material increase in the number of people living, working or congregating in the area; or 1.2.2 not involve any new building work other than a minor extension (<20m2 Gross Floor Area) to an existing building. OR 1.3 The development complies with performance criteria 2-8 in this table (as applicable to the particular development).

The methodology for bushfire hazard assessments is set out in Appendix 3 of the SPP Guideline
 If the development proposal complies with this Indicator of Compatibility no further assessment is required against the SPP.

	Development that will result in multiple buildings or allotments
	 2. Firebreaks provide: (a) adequate access for firefighting and other emergency vehicles; and (b) setbacks between assets and hazardous vegetation. 2. Evelopment is compatible when: (a) adequate access for firefighting and other emergency which are the boundary of the lots and the hazard; and (b) has a minimum cleared width of 20 metres; and (c) has a constructed road width and weather standard complying with local government standards. OR
	to the boundaries of the lots and the adjoining bushland, and the fire/maintenance trails: (a) have a minimum cleared width of six metres; and (b) have formed width and gradient, and erosion control devices to local authority standards; and (c) have vehicular access at each end; and (d) provide areas for vehicles to pass or turn; and (e) are either located on public land, or an access easement is granted in favour of the local authority and fire brigades. (A combination of perimeter roads and fire/maintenance trails may be acceptable). AND 2.3 Bushland within the development (e.g. creek corridors and other retained vegetation) is provided with firebreaks at intervals that allow burning of sections and access for bushfire response.
•	 3. Roads provide for the safe and effective operational use of fire fighting vehicles, and evacuation of residents and emergency personnel. 3.1 Roads are designed and constructed in accordance with applicable local government and State government standards; AND 3.2 Road gradients are not more than 12.5%; AND 3.3 Culs-de-sac are avoided except where a perimeter road isolates the development from hazard OR the culs-de-sac are provided with an alternative access linking the cul-de-sac to other through roads.
	 4. Residential lots are designed to mitigate bushfire hazard and provide safer sites for dwellings. 4.1 Residential lots are located in areas of lower bushfire hazard, in accordance with the principles of <i>Protecting your home against bushfire attack</i>, Department of Local Government and Planning, 2000.

1P	ગાળિતાલા આપેલા 👘	Indicators of compatibility
		 access to buildings and fire fighting infrastructure, and the incorporation of suitable on-site bushfire mitigation measures. AND 4.3 Residential lots are not located in areas with known severe bushfire behaviour²⁸.
5.	An adequate and accessible water supply is provided for fire fighting purposes.	Development is compatible when: 5.1 The development is provided with a reticulated water supply that is reliable and has sufficient flow and pressure characteristics for fire fighting purposes at all times. OR
		5.2 For residential development each lot has an onsite swimming
	19,000 0000 - 1000 0000 10,000 0000 0000	contains not less than 5,000 litres per dwelling.
Al	ll Development	
•	Buildings are sited to minimise the bushfire hazard and maximise the protection of life and property from bushfire. ²⁹	 Development is compatible when: 6.1 Residential buildings are sited to minimise bushfire exposure in accordance with the principles of <i>Protecting your home against bushfire attack</i>, Department of Local Government and Planning, 2000. AND 6.2 Non-residential buildings: (a) have the following minimum setbacks from hazardous vegetation³⁰: 1.5 times the predominant mature canopy tree height in any adjoining bushfire hazard vegetation; and 5 metres from any retained vegetation strips or small areas of vegetation within individual lots; and (b) are separated from other buildings and structures to minimise the spread of fire between buildings; and (c) are sited so that less susceptible elements of the development are sited closest to the bushfire hazard.

²⁸ See Appendix 3.

For reconfiguring a lot applications, building envelopes or similar mechanisms should be used to control the siting of 29 buildings.

Hazardous vegetation comprises vegetation communities with a hazard score of 6 or more in Table 1 of Appendix 3. 30

 7. Development that materially intensifies 7 the use of High bushfire hazard areas incorporates effective siting, design and management measures to minimise bushfire hazard. 	 Development is compatible when: The development does not materially increase the number of people living, working or congregating in the area or involve the storage or manufacture of flammable, explosive or noxious materials in bulk within the High bushfire hazard area.
8. New residents are D informed about the 8. nature of the bushfire hazard and mitigation measures.	 evelopment is compatible when: 1 The developer provides potential purchasers of lots and the local government with detailed information including: (a) the nature of the bushfire hazard present on the lot; (b) responsibilities for fire management (including fuel in vegetated areas, maintenance of open areas and buildings, separation of assets); (c) measures available for ongoing fire hazard mitigation (including planting of fire resistant species, use of non-flammable fencing and screens, separation of assets from hazards); and (d) the intended management of retained internal vegetated strips and public areas.

³¹ Buildings in High severity bushfire hazard areas should be constructed in accordance with the Level 1 requirements of AS3959 –1999 "Construction of buildings in bushfire-prone areas". This will require High severity bushfire hazard areas to be designated under Section 55 of the Standard Building Regulation 1993.

areas to be designated under Section 55 of the *Standard Building Regulation 1993*. ³² See Appendix 6 for guidance on the preparation of Bushfire Management Plans.

C. LANDSLIDE

 Development does not compromise the safety of people or property from landslide. 	 Development is compatible when: 1.1 The development does not result in any new building work other than an addition to an existing building; and does not require the removal of vegetation; and does not alter ground levels or stormwater conditions. OR
	1.2 A site specific geotechnical analysis prepared by a registered
	 protessional engineer is provided to address any potential stability problems and describes solutions that are implemented to ensure: the long term stability of the site; and the long term stability of the proposed development; and access to the site will not be restricted during a landslide event to the satisfaction of the assessment manager.

APPENDIX 6: UNDERTAKING A BUSHFIRE MANAGEMENT PLAN

When is a Bushfire Management Plan Required?

A6.1 The SPP requires the preparation of a Bushfire Management Plan (BMP) for development that materially increases the number of people living, working or congregating, or that involve the storage or manufacture of flammable, explosive or noxious materials in bulk in a High severity bushfire hazard area. A BMP may also be required for certain types of community infrastructure in either a High or Medium severity bushfire hazard area.

Who should prepare a BMP?

AG-2---A BMP should be prepared by a suitably qualified professional with appropriate technical expertise in the identification and mitigation of bushfire hazard. Suitable professionals may include those in the environmental management, landscape architecture, architecture, town planning and civil engineering fields.

Who should be consulted?

A6.3 At a minimum the local government, responsible Rural and/or Urban Fire Brigade, and managers of adjacent parks or reserves should be consulted. It is also desirable to consult other agencies or individuals, such as previous owners of the site or neighbours, who may have local knowledge of the severity and nature of the bushfire hazard.

What should be included in the BMP?

- A6.4 A comprehensive BMP should include the following:
 - (a) An assessment of the nature and severity of the bushfire hazard affecting the site. This should comprise a detailed site-based assessment using the methodology set out in Appendix 3 of this Guideline. The assessment should also address other site-specific factors that are important in devising suitable bushfire mitigation strategies. These factors could include matters such as: likely direction of bushfire attack, environmental values that may limit mitigation options, location of evacuation routes and/or safety zones.
 - (b) An assessment of the specific risk factors associated with the development proposal, including matters such as the nature of activities and materials to be conducted/stored on the site, numbers and types of persons likely to be present, particular warning and/or evacuation requirements.
 - (c) A plan for mitigating the bushfire risk identified in (a) and (b). The plan should address each of the Performance Criteria in Appendix 5, and recommend specific mitigation actions for the proposed development including:

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(1) Road and lot layout and land use allocations;

- (2) Fire breaks and buffers;
- (3) Building locations or building envelopes;
- (4) Landscaping treatments;
- (5) Warning and evacuation procedures and routes;
- (6) Fire fighting requirements including infrastructure;
- (7) Any other specific measures including external sprinkler systems, alarms etc;
- (8) Purchaser/resident education and awareness programs; and

(9) Ongoing maintenance and response awareness programs.

What level of detail is required?

- A6.5 The level of detail required will vary with the nature of the development proposal and site, and with the type of development application.
- A6.6 If the application must be followed by another application before works can commence (e.g. a Material Change of Use application that must be followed by a Reconfiguration of a Lot application), then matters of detail could be dealt with at the later application stage.
- A6.7 The level of detail required to accompany a particular application should be determined in consultation with the assessment manager. However, it is recommended that, at a minimum, items (a), (b) and (c) (1) (3) outlined above should be addressed in any BMP.
APPENDIX 7: PERFORMANCE CRITERIA FOR THE COMMUNITY INFRASTRUCTURE SPECIFIED IN PART (B) OF ANNEX 1 OF THE SPP

- A7.1 The following tables provide Performance Criteria and Indicators of Compatibility that should be used to determine compliance with Outcome 3 of the SPP. Development proposals must demonstrate compliance with each of the Performance Criteria that is applicable to the particular development.
- A7.2 The Performance Criteria state the outcomes that the development proposal must achieve. The Indicators of Compatibility are acceptable ways of achieving the Performance Criteria. There may be other ways to achieve the Performance Criteria, and a development proposal that does not comply with one or more of the Indicators of Compatibility must provide sufficient information to demonstrate how the alternative approaches achieve the corresponding Performance Criterion.
- A7.3 An Indicator of Compatibility may have a number of parts, and there may be a number of Indicators of Compatibility associated with a single Performance Criterion. In either case all of the elements must be satisfied unless some are identified as alternatives. This approach is shown by the use of the word "and" as a linking mechanism between these elements. The word "OR" is used to identify alternatives. When used within a single Indicator of Compatibility "OR" identifies that the linked parts are alternative ways of complying with that indicator. When used between Indicators, "OR" identifies that the following Indicator can be used as alternative means of achieving the Performance Criterion.

A. FLOOD:

Per	formance criteria	Indicators of compatibility
1.	The community infrastructure is able to function effectively during and immediately after flood hazard events.	 Community infrastructure development: 1.1 Is not located in an area that has been identified by flood hazard mapping as being below the Recommended Flood Level (RFL) for that community infrastructure shown below and has at least one road access that will remain passable for the performance of emergency evacuations for all floods up to and including the RFL. (<i>Note: this will generally require evacuation access roads to be constructed above the RFL plus an allowance for longitudinal drainage, although within low hazard areas (see Appendix 2 for the definition of low hazard areas) emergency evacuation routes constructed to a level not more than 300mm below the RFL may be acceptable)</i>³³.

³³ Emergency evacuation routes are only required for development that involves people living, working or congregating on the site.

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Draft: 28 August 2002

Recommended Flood Levels for 1 Type of Community Infrastructure	ommunity Infrastructure Recommended Flood Level
 Emergency services 	1:500 ARI
 Emergency shelters 	1:200 ARI
 Police facilities 	1:200 ARI
Hospitals	1:500 ARI
 Nursing homes and similar care facilities 	1:200 ARI
 Stores of valuable records or items of historic or cultural 	1:500 ARI
significance (e.g. galleries	
 State controlled roads Railway lines, stations and associated facilities Aeronautical facilities Communication network facilities 	No specific recommended flood level but development proponents should ensure that the infrastructure is optimally located and designed to achieve suitable levels of service, having regard to the processes and policies of the administering government agency.
 Power stations 	1:500 ARI
 Major switch yards 	1:500 ARI
 Substations 	1:500 ARI
 Sewerage treatment plants³⁴ 	DFE
Water treatment plants ³⁴	1:200 ARI
 1.2 Is water dependent and cannon alternate location above the R 1.3 Includes a comprehensive ass community infrastructure can during and immediately after 	DR t reasonably be fulfilled at an FL. DR essment that demonstrates that the continue to function effectively the applicable RFL event

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³⁴ The recommended flood level applies only to electrical and other equipment that, if damaged by floodwater or debris, would prevent the plant from resuming normal function quickly after a flood event. This equipment should either be protected from damage or designed to withstand inundation.

B. BUSHFIRE

Performance criteria	Indicators of compatibility
1. The community infrastructure is able to function effectively during and immediately after bushfire hazard events.	 1.1 Community infrastructure is not located in a natural hazard management area (bushfire); OR 1.2 A site specific bushfire hazard assessment³⁵ demonstrates that the development will not be in an area of HIGH or MEDIUM bushfire hazard; OR 1.3 The development will not result in any new building work other than a minor extension (<20m2 Gross Floor Area) to an existing building;
	OR 1.4 A Bushfire Management Plan (see Appendix 6) is prepared that demonstrates that the community infrastructure can continue to function safely and effectively during and after bushfire hazard events, and the development proposal complies with the recommendations of the Plan.

C. LANDSLIDE

Performance criteria	Indicators of compatibility
1. The community infrastructure is able to function effectively during and immediately after landslide hazard events.	 1.1 Community infrastructure is not located in a natural hazard management area (landslide); OR 1.2 The development does not result in any new building work other than an addition to an existing building; and does not require the removal of vegetation; and does not alter ground levels or stormwater conditions. OR 1.3 A site specific geotechnical analysis prepared by a registered professional engineer is provided to address any potential stability problems and describes solutions that are implemented to ensure: the long term stability of the site; and the long term stability of the site; and access to the site will not be restricted during a landslide event, to the satisfaction of the assessment manager.

³⁵ The methodology for bushfire hazard assessments is set out in Appendix 3 of the SPP Guideline

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APPENDIX 8: CALCULATING SLOPE FROM A TOPOGRAPHIC MAP



Length of measured line = 1.7 cm, 1.7 X 25 000/ 100 = 425m Elevation Change = 20m (read off contours) Percentage Slope = 20/425 X 100 = 4.7% slope

- A8.1 Slope can be given in two different ways, a percent gradient and an angle of the slope. This SPP Guideline uses percent gradient. The methodology for calculating the percent gradient of a slope is as follows:
 - 1. Decide on an area for which you want to calculate the slope (note, it should be an area where the slope direction does not change; do not cross the top of a hill or the bottom of a valley).
 - 2. Once you have decided on an area of interest, draw a straight line perpendicular to the contours on the slope. For the most accuracy, start and end your line on, rather than between, contours on the map.
 - 3. Measure the length of the line you drew and, using the scale of the map, convert that distance to metres.
 - 4. Determine the total elevation change along the line you drew in metres (i.e. subtract the elevation of the lowest contour used from the elevation of the highest contour used). You do not need to do any conversions on this measurement, as it is a realworld elevation change.
 - 5. To calculate a percent slope, simply divide the elevation change in metres by the distance of the line you drew (after converting it to metres). Multiply the resulting number by 100 to get a percentage value equal to the percent slope of the hill. If the value you calculate is, for example, 20, then what this means is that for every 100 metres you cover in a horizontal direction, you will gain (or lose) 20 metres in elevation.

APPENDIX 9: OTHER INFORMATION SOURCES

A9.1 Other information sources local governments, assessment managers and proponents may find useful in the preparation and assessment of development applications and the making and amending of planning schemes.

A9.2 General

- Building Code of Australia.
- Community Risk in Cairns: A multi-hazard risk assessment, Australian Geological Survey Organisation (AGSO) – Geoscience Australia.
- Community risk in Mackay: A multi-hazard risk assessment, Australian Geological
 Survey Organisation (AGSO) Geoscience Australia
- Economic Costs of Natural Disasters in Australia, Report 103, Bureau of Transport Economics.
- IPA Plan Making Guidelines 1/01, Department of Local Government and Planning, 2001
- Natural Hazards and the risk they pose to South East Queensland, Australian Geological Survey Organisation (AGSO) Geoscience Australia.
- Standard Building Regulation 1993.
- State Counter Disaster Organisation Act 1975 requiring Local Government Counter Disaster Plans and Disaster Mitigation Plans.
- State Counter Disaster Plan (2001), Queensland Department of Emergency Services.
- State Policy for Vegetation Management on Freehold Land, (2000) Department of Natural Resources and Mines.

A9.3 Disaster Risk Management

- Australian/New Zealand Standard for Risk Management, AS/NZS 4360:1999.
- Disaster Risk Management, (2000) Queensland Department of Emergency Services.
- Disaster Risk Management Guide: A How-to Manual for Local Government, (2000), Queensland Department of Emergency Services.
- Natural Disaster Risk Management Guidelines for Reporting, Queensland Department of Emergency Services.

A9.4 Flood

- Floodplain Management in Australia: Best Practice Principles and Guidelines (SCARM Report 73), CSIRO Publishing.
- Emergency Management Australia Guidelines (Managing the Floodplain, Emergency Management Planning for Floods affected by Dams).
- Queensland Department of Natural Resources and Mines: Dam safety, dam emergency action plans – links to and implications of the Queensland Safety Management. Guidelines for Referable Dams and guidelines for failure impact assessment of water dams.
- State Coastal Management Plan, (2001) Queensland Environmental Protection Agency.

A9.5 Bushfire

- A Guide to Fire Management in Queensland (Incorporating fire management theory and departmental practice), (2000) Queensland Department of Natural Resources and Mines
- Australian Standard 3959 1999 Building in Bushfire Prone Areas.
- Australasian Fire Authority Council Guidelines.
- Building in Bushfire-prone areas: Information and advice, SAA HB 36-1993, Standards Australia, Commonwealth Scientific and Industrial Research Organisation (CSIRO).
- Bushfire Hazard Planning in Queensland, (1998) Queensland Fire and Rescue Services
- Bushfire Management Strategy, (April 1998), Gold Coast City Council, Queensland.
- Bushfire Prone Areas: Siting and Design of Residential Buildings (1997) Queensland Department of Local Government and Planning, and Queensland Fire and Rescue

Services, Construction of buildings in bushfire-prone areas, Australian Standard (AS 3959-1999) Second reference.

- Planning for Bushfire Protection: A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners, (2001) New South Wales Planning and NSW Rural Fire Service.
- Protecting your home against bushfire attack (2000), Department of Local Government and Planning.

A9.6 Landslide

- Australian Emergency Manuals Series Part III Reducing the Community Impact of Landslides, (2001), Emergency Management Australia.
- Forest clearing and landslides on the basalt plateaux of South East Queensland, (1984) W. F. Willmott.
- Geotechnical Risk Associated with Hillside Development, Australian Geomechanics News - Number 10 1985, (1985) Walker, B et al.
- Guidelines for Control of Slope Instability within the City of Gold Coast, Gold Coast City Council, Queensland.
- Landslide Hazards in Hillside Development: The Geological Approach to Landslide Risk Assessment, Local Authority Assessment of Development Applications on Potentially Hazardous Slopes, (1982) W. F. Willmott.
- Landslide Risk Management Concepts And Guidelines", Australian Geomechanics Journal Vol 35, No 1, March 2000, prepared by the Australian Geomechanics Society, Sub-committee on Landslide Risk Management.
- Landslip Study for the City of Gold Coast, (1999) Gold Coast City Council, Queensland

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• Slope Stability and its Constraints on Closer settlement on Tamborine Mountain, Southeast Queensland (Willmott), Geological Survey of Queensland, 1981.

A9.7 Climate Change

- Climate change in Queensland under enhanced greenhouse conditions: first annual report, 1997-1998 (1999), Walsh, K. J. E., Allan, R. J., Jones, R. N., Pittock, A. B., Suppiah, R., and Whetton, P. H.), Aspendale, Vic.: CSIRO Atmospheric Research.
- Climate change in Queensland under enhanced greenhouse conditions: second annual report, 1998-1999 (2000), Walsh, K. J. E., Hennessy, K. J., Jones, R. N., Pittock, A. B., Rotstayn, L. D., Suppiah, R., and Whetton, P. H., Aspendale, Vic.: CSIRO Atmospheric Research.
- Climate change in Queensland under enhanced greenhouse conditions third annual report, 1999-2000 (2001), Walsh, K., Hennessy, K., Jones, R., McInnes, K.L., Page, C. M., Pittock, A.B., Suppiah, R. and Whetton, P., CSIRO consultancy report for the Queensland Government, Aspendale. <u>http://www.dar.csiro.au/impacts/consult.html</u>
 - Queensland Greenhouse Policy Framework: A Climate of Change, Queenstand Government (September 2001).
- <u>www.longpaddock.qld.gov.au</u>
- <u>www.env.qld.gov.au</u>
- <u>www.treasury.qld.gov.au</u>
- <u>www.transport.qld.gov.au</u>
- <u>www.dar.csiro.au</u>
- www.marine.csiro.au
- <u>www.greenhouse.gov.au</u>
- http://www.pacinst.org/wildlife.html
- http://www.ipcc.ch/pub/SYRtechsum.pdf
- http://www.unep.ch/ipcc/pub/wg2SPMfinal.pdf

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Department of Emergency Services

Date	14 March 2002	Reference	cds 3603
То	Executive Director Counter Disaster and Rescue Services		
From	Principal Policy Officer Disaster Mitigation Unit	Telephone	2
Subject	Selection of a Consultant – State Planning P Associated Guidelines	olicy for Natural D	saster Mitigation and

PURPOSE

42 . 4

To seek your approval to engage Environmental Resources Management Australia (ERM) to undertake the development of the State Planning Policy for Natural Disaster Mitigation and Associated Guidelines.

BACKGROUND

- On 21 December 2001 the Executive Director, Counter Disaster and Rescue Services approved an authority to Invite Offers for the Development of the State Planning Policy on The cost estimate for this Natural Disaster Mitigation and Associated Guidelines. consultancy was \$145,000 comprising \$74,000 in 2001-02 and up to \$71,000 in 2002-03. Attachment A is a copy of the memo of approval to engage a consultant.
- The brief seeks a consultant to undertake the following:

Stage 1 (Prepare SPP Guidelines)

- Provide town planning advice in relation to the SPP;
- Prepare supporting guidelines to the draft SPP;
- Prepare a report on the context and contents of the draft SPP and supporting guidelines for community distribution;
- Prepare and deliver presentations to key stakeholders, being the Royal Australian Planning Institute (RAPI), the Local Government Association of Queensland (LGAQ) and the Urban Development Institute of Australia (UDIA); and
- Prepare a concise report on issues raised and proposed solutions.

Stage 2 (Public Consultation)

- Prepare and deliver presentations to stakeholders/community meetings;
- Prepare a summary report and a concise condensed State-wide summary report; and
- Make recommendations as a result of consultation in relation to the draft SPP and supporting guidelines.
- Invitations to suppliers were advertised in the Courier Mail on 16 January 2002 and suppliers were given 22 days to submit their fixed price offers. Four suppliers tendered. . The tenderers were:
 - Lee Consulting Services Pty Ltd (Lee)
 - GHD Pty Ltd (GHD)

- PPK Environment and Infrastructure (PPK), and
- Environmental Resources Management Australia Pty Ltd (ERM). ERM are proposing to use Buckley Vann Town Planning Consultants as sub consultants.
- An Offer Evaluation Panel consisting of representatives from Strategic and Executive Services, Counter Disaster and Rescue Services, Queensland Fire and Rescue Service, and the Department of Local Government and Planning met on 19 February 2002 to evaluate the offers. Following this meeting a series of clarifying questions were asked of ERM and PPK. These consultants were considered to have provided the best bids and additional information was needed from these consultants to finalise their evaluations. The Panel reconvened on 4 March 2002 to consider the additional responses and re-evaluate the ERM and PPK offers in light of this additional information.

CURRENT ISSUES

- The Offer Evaluation Panel considers that ERM is the preferred tenderer. The Panel considered that ERM's proposal best met the tender requirements because of ERM's and Buckley Vann's (as sub consultant) considerable town planning expertise and experience, management skills, the proposal's appropriate balance of town planning and technical advice and their strong track record. The Offer Evaluation Report (attachment B) evaluates each tender.
- It is proposed to divide the consultancy into two parts. The first is for stage 1 for \$57,910. It is intended to enter into a contract for Stage 1 as soon as possible. The engagement of ERM to undertake the public consultation associated with the SPP and associated guidelines (ie Stage 2 for a value of \$44990) will be subject to your further approval and will follow a decision by the Department on the public consultation process for the draft State Planning Policy and associated Guidelines. This is consistent with the tender documents, which stated that stage 2 was an optional stage.
- The public consultation program associated with the release of the draft SPP and associated Guidelines is intended to be extensive, however, its precise format is not finalised. The public consultation program will be determined following an assessment of the anticipated response to the draft SPP and associated Guidelines and the best means of gathering public submissions. The program will be finalised prior to Government endorsement of the release of the SPP (expected in August 2002). It is possible that a different approach to public consultation than that set out in the brief may result from this review.
- Stage 1 is expected to be largely completed by September 2002. Amendments to the Guidelines however may be required after the public consultation program is completed (ie November 2002).

RECOMMENDATION

- It is recommended that a contract be established with Environmental Resources Management Australia (ERM) to undertake stage 1 for a contractual value of \$57,910.
- That you note the attached Offer Evaluation Report.

• That you note that the engagement of ERM to undertake the public consultation for Stage 2 will be subject to your further approval and will follow a decision by the Department on the public consultation process.



Acting Director Disaster Mitigation Unit



Executive Director Counter Disaster and Rescue Services Approved / Not Approved Date: 19/3/02-

SUPPORTED / NOT SUPPORTED



Executive Manager, Acquisition Management Date: 18 103/02





MINISTERIAL BRIEF

D029727

STATE E	LECTORATE	copy to just of a oi or	
Date	21 December 2001	Reference E201486	
То	The Honourable the Minister for Emergency Premier in North Queensland	Services and Minister Assisting the	
From	Richard Wood, Team Leader, State Planning Policy, Disaster Mitigation Unit	Telephone 94471	
Subject	Review of Submissions - State Planning Polic	cy for Natural Disaster Mitigation	
	SE Cog	suplease t. SY.	

PURPOSE

- To advise the Honourable the Minister about the outcomes of the public consultation on the intent to prepare a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment (SPP).
- To seek the Honourable the Minister's support to proceed to prepare a Draft SPP.

BACKGROUND

- On 8 August 2001, the Department of Emergency Services (DES) issued for public comment a Discussion Paper about the intent to prepare a SPP. Approximately 1100 Discussion Papers were distributed to stakeholders in all levels of government, industry groups, professional bodies, peak agencies, community organizations and the general community.
- Presentations about the SPP were given to the Government Advisory Committee, Local Government Association of Queensland and Royal Australian Planning Institutue conferences. About 100 people attended these presentations.
- Thirteen public workshops were held throughout the State in October 2001. Workshops were held at Mount Isa; Townsville; Mackay; Rockhampton; Roma; Toowoomba; Bundaberg; Sunshine Coast; Cairns; Longreach; Gold Coast; and two in Brisbane. Approximately 320 people attended the workshops.
- In addition, 49 written submissions have been received about the intention to prepare a SPP.
- Attachment A is a summary report about the outcomes of the public consultations about the intention to prepare a SPP. The report was prepared by Environmental Resources Management Australia Pty Ltd (ERM), the consultants that facilitated the workshops throughout the State. Attachment B is a copy of all the written submissions. Attachment C is a table summarising the written submissions and providing DES's response to the submissions. Attachment D is DES's analysis of the issues raised through the public consultation process.

CURRENT ISSUES

- The Minister for Local Government and Planning, pursuant to Schedule 4 Section 2(1) of the *Integrated Planning Act 1997 (IPA)*, must consider all submissions and decide whether a proposed SPP should be prepared.
- ERM's key findings from the public workshops are:
 - o that there is strong support for the development of a SPP;
 - that the hazards of major concern are flooding, landslides and bushfires. There was also support for storm surge to be addressed as a natural hazard;
 - that the SPP should not be prescriptive but rather define a methodology that allows for flexibility of implementation at the local and regional level; and
 - o that the SPP should be supported by practical guidelines, incorporating triggers, codes, standards and performance criteria.
 - Principal issues of concern related to liability, compensation, timing, implementation at the local level, funding arrangements, data availability and the incorporation of the SPP into local planning documents.
- ERM recommends that a draft SPP on natural disaster mitigation should be prepared. A full list of ERM's recommendations are located on pages 4.1 –4.6 of its report (Attachment A).
- The overwhelming majority of submissions supported the development of a SPP. Three (3) of the 49 written submissions received did not support the development of the SPP. These submissions are from:
 - Sarina Shire Council which regarded the SPP as unnecessary principally because the issues were well covered by other SPPs and the State Coastal Management Plan (SCMP);
 - Orban Development Institute of Australia which supported a proactive approach to natural disaster mitigation but regarded the introduction of an SPP at a similar time to IPA planning schemes as inappropriate, because the SPP would duplicate the development assessment system. It proposed that DES concentrate on guidelines rather than prepare a SPP.
 - o Mr James Durmisov who commented that risk assessment was a landowner/prospective purchaser decision.
 - On balance, DES considers that a draft SPP should be prepared for further public consultation. DES's main conclusions are:
 - that a SPP should be prepared in relation to flood, bushfire and landslide. The impacts of cyclones and severe storms (such as flooding and landslide) should be addressed by the SPP. Earthquakes and strong winds should also be considered in the SPP in relation to the design of structures (ie other than buildings) not covered by the Building Code of Australia.
 - Coastal hazards (such as storm surge and coastal erosion) are addressed through the SCMP. To avoid duplication the SPP should not address these issues. DES will be involved in the development of Guidelines associated with the SCMP.
 - that the SPP has limited application to Aboriginal and Torres Strait Islander (ATSI) Local Governments because these Councils do not currently have planning schemes. DES, in consultation with the Department of Aboriginal and Torres Strait Islander Policy (DATSIP) and the Department of Local Government and Planning (DLGP), needs to consider complimentary mitigation techniques in these areas;
 - that the timing of the SPP document is not ideal given that IPA planning schemes need to be in force by March 2003. Over the past 15 months DES has advised Local Government that they need to consider natural disaster mitigation in their IPA planning

scheme development. This advice has provided Local Governments with adequate advance notice that planning schemes should address this issue.

- o that data on natural hazards and measurement methods varies across the State, compromising the assessment of risk. Initially some Local Governments will be assessing risk based on limited data;
- o that climate change effects must be considered in risk assessment processes;
- that there is a need to liaise closely with other Government agencies to achieve an effective outcome. In particular, the Department of Natural Resources and Mines (DNRM) as the lead agency for flooding, the Environmental Protection Agency (EPA) as the agency responsible for planning in relation to coastal hazards through the SCMP and DLGP as the agency ultimately responsible for the preparation of an SPP.
- that the name of the SPP be changed to "State Planning Policy for Natural Disaster Mitigation". This is a shorter title that suitably reflects the objectives of the SPP.

CONSULTATION

 A Government Advisory Committee (GAC), comprising 10 State Government Departments considered the summary table, the ERM report and DES's analysis report at a meeting on 6 December 2001. The GAC supported the further development of the SPP.

ACTION SOUGHT

- That the Honourable the Minister consider all submissions, DES's response to the proposed submissions, the report by ERM on the outcomes of the public workshops, and DES's analysis reports;
- That the Honourable the Minister sign the attached letter to the Minister for Local Government and Planning requesting, pursuant to Schedule 4 Section 2(1) of the *Integrated Planning Act 1997* (IPA), that she consider all submissions made in relation to the SPP and decide whether to prepare a draft SPP dealing with natural disaster mitigation.
- That the Honourable the Minister note that DES will investigate complimentary means of implementation of the objectives of the SPP in ATSI Local Government areas.

Executive Directo	er	U Director-Gen	eral
Hon Mike Reynold Minister for Emer	s, AM MP gency Services		
Comments	· · · · · · · · · · · · · · · · · · ·		

Mrs Nita Cunningham Minister for Local Government and Planning PO Box 31 BRISBANE ALBERT STREET QLD 4002

Dear Mrs Cunningham,

On 8 September 2001, the Department of Emergency Services (DES) issued for public comment a Discussion Paper proposing the development of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment (SPP).

Approximately 1100 stakeholders in all levels of Government, industry groups, professional bodies, peak agencies, community organisations and the general public were advised about the proposal to prepare a SPP. The public consultation period closed on 9 November 2001.

A comprehensive program of consultation was undertaken during the consultation period. This included presentations to the Government Advisory Committee (GAC) established to assist DES prepare the SPP, the Local Government Association of Queensland and the Royal Australian Planning Institute conferences and thirteen public workshops held throughout Queensland in October 2001.

The public workshops were held in Mount Isa; Townsville; Mackay; Rockhampton; Roma; Toowoomba; Bundaberg; Sunshine Coast; Cairns; Longreach; Gold Coast; and two in Brisbane. Approximately 320 people attended the public workshops.

In addition, 49 written submissions have been received from the full range of stakeholder groups i.e. Local, State and Federal Governments, professional bodies, and interest groups.

The public consultation process has raised a number of important issues. The majority of submissions have recognised the valuable contribution that a SPP could make to land use planning for natural disaster mitigation. A small number of submissions have not supported the introduction of a SPP. The submissions that do not support the introduction of a SPP make legitimate points, such as introducing a SPP after many IPA planning schemes are in force would duplicate the development assessment system and that some Local Governments are already adequately addressing natural hazards in their planning schemes.

However, on balance, it is considered that a SPP will significantly assist natural disaster mitigation efforts and is worthy of development.

The GAC established to assist the Department develop the SPP comprises representatives from 10 State Government agencies, including Mr Jeremy Harle of the Department of Local Government and Planning. On 6 December 2001, a meeting of the GAC considered the outcomes of the public consultation about the intention to prepare the SPP and supported the preparation of a draft SPP for further public consultation.

A summary of the outcomes of the public workshops, prepared by the consultants that facilitated the workshops (Environmental Resources Management Australia Pty Ltd (ERM)) is included as attachment A. Attachment B is a copy of all the written submissions. Attachment C is a summary of the written submissions and DES's comments regarding the submissions. Attachment D is DES's report addressing the major issues raised during the public consultation.

I have considered the above information and believe that a SPP should be prepared in relation to flood, bushfire and landslide. Earthquakes and strong winds should also be considered in the SPP in relation to the design of structures (other than buildings) not covered by the Building Code of Australia. The impacts of cyclones and severe storms (such as flooding and landslide) should also be addressed by the SPP. Coastal hazards such as storm surge and coastal erosion are being addressed through the State Coastal Management Plan (SCMP) and DES is liaising with the Environmental Protection Agency in the development of guidelines associated with the SCMP.

I therefore request, pursuant to section 2(1) of Schedule 4 of the *Integrated Planning Act* 1997, that you consider all submissions made in relation to the proposed SPP and make a decision to support the development of a draft SPP for natural disaster mitigation for further public consultation.

Should you require further information, please contact Director, Disaster Mitigation Unit, on telephone number l, Acting

Yours sincerely



HON MIKE REYNOLDS AM, MP Minister for Emergency Services Minister assisting the Premier in North Queensland

GLM-3

ATTACHMENT A

STATE PLANNING POLICY FOR LAND USE PLANNING FOR NATURAL DISASTER MITIGATION AND DEVELOPMENT ASSESSMENT

Preparation Stage Consultation Report

For: DEPARTMENT OF EMERGENCY SERVICES

> December 2001 8010165RP2 FINAL 20 12 01

Report No. 8010165RP2 FINAL 20 12 01

This report has been prepared in accordance with the scope of services described in the contract or agreement between Environmental Resources Management Australia Pty Ltd ACN 002 773 248 (ERM) and the Client. The report relies upon data, surveys, measurements and results taken at or under the particular times and conditions specified herein. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the Client. Furthermore, the report has been prepared solely for use by the Client and ERM accepts no responsibility for its use by other parties.

Approved by:		
Position:	Project Director	
Signed:		
Date:	20 December, 2001	

Environmental Resources Management Australia Pty Ltd Quality System

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APPENDICES

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- B. INTENT TO PREPARE PUBLIC NOTICES
- C. SPP WEBSITE PAGE
- D. WORKSHOP SUMMARIES

ENVIRONMENTAL RESOURCES MANAGEMENT AUSTRALIA

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GLOSSARY OF ACRONYMS

- AGSO Australian Geological Survey Organisation
- ATSI Aboriginal and Torres Strait Islander
- BCA Building Code of Australia
- BoM Bureau of Meteorology
- DATSIP Department of Aboriginal and Torres Strait Islander Policy
- DES Department of Emergency Services
- DLGP Department of Local Government and Planning
- DMR Department of Main Roads
- DNRM Department of Natural Resources and Mines
- DOFA Federal Department of Finance and Administration
- DPW Department of Public Works
- DSD Department of State Development
- DTRS Federal Department of Transport and Regional Services
- EMA Emergency Management Australia
- EPA Environmental Protection Agency
- GAC Government Advisory Committee
- IPA Integrated Planning Act 1997
- LGAQ Local Government Association of Queensland
- LGCDCs Local Government Counter Disaster Committees
- LGCDPs Local Government Counter Disaster Plans
- D NDRA Natural Disaster Relief Arrangements
- D NDRMSP Natural Disaster Risk Management Studies Program
- RAPI Royal Australian Planning Institute
- RFMP Regional Flood Mitigation Program
- SCDO State Counter Disaster Organisation
- G SCDO Act State Counter-Disaster Organisation Act 1975
- SDMC State Disaster Mitigation Committee
- SPP State Planning Policy
- the SPP State Planning Policy for Land Use Planning for Natural Disaster Mitigation and Development Assessment
- UDIA Urban Development Institute of Australia

EXECUTIVE SUMMARY

PROJECT OVERVIEW AND CONTEXT

This report summarises the outcomes of consultation during the Preparation Stage of a prospective State Planning Policy for Land Use Planning for Natural Disaster Mitigation and Development Assessment (the SPP). It has been prepared by Environmental Resources Management Australia (ERM), on behalf of the Queensland Department of Emergency Services (DES). The report provides a summary of the issues, problems, solutions and opportunities raised by stakeholder groups State-wide in public forums and written submissions during September, October and November 2001. It reports on the approach taken to the consultation workshops and major themes and issues arising from the workshops. The Report includes recommendations as to the implications of the consultation outcomes for the preparation of the SPP.

Under the Integrated Planning Act 1997 (IPA), consultation in relation to the preparation of a State Planning Policy (SPP) involves two stages:

Stage 1 – Preparation Stage associated with the Intent to Prepare a SPP;

Stage 2 – Consultation Stage associated with the Draft SPP and Supporting Guidelines.

In June 2001, ERM was commissioned by DES to undertake Stage 1 of the preparation of the SPP. This involved two elements. Initially, a stakeholder workshop was held and a Discussion Paper was prepared to provide the basis for wider consultation. Subsequently, as required by IPA, DES publicly notified the Intent to Prepare a State Planning Policy and the Discussion Paper was released for comment for a period from 8 September to 9 November 2001. During this period, ERM and DES conducted 13 workshops and two stakeholder briefings in locations around the State, attended by representatives from Federal, State and Local Governments, the business community, community groups, environmental/ conservation groups, professional organisations, academia and the general public.

The purpose of the consultation was to identify and discuss issues, problems, constraints and opportunities in land use planning for natural disasters and to identify, where possible, examples of best practice in dealing with these issues across the State. Priority was placed on determining stakeholder views on the need for a SPP, and if a need was identified, the types of natural disasters to be included. Consultation also sought to identify the stakeholder groups which should be actively encouraged to be involved in consultation activities and to determine the preferred means of communication for the dissemination of information in the later stages of the process.

E.1

INFORMATION DOCUMENTS AND DISTRIBUTION

During the SPP Preparation Stage, information documents including copies of the Discussion Paper and summaries of workshop presentations and outcomes have been widely distributed to stakeholders and made readily available to interested persons. Approximately 1100 people/ organisations received the discussion paper. A website page was established for the SPP and provided an overview of the scope and purpose of the SPP and its limitations.

MEDIA

There was interest shown in the workshops and the SPP by media in most locations that the workshop sessions were held. Media coverage included television, radio and newspaper press. It is anticipated that this coverage will assist in raising awareness and interest in the potential future preparation of the SPP.

SUBMISSIONS

A proforma for submissions was included in the Discussion Paper and on the website. Opportunities were provided for postal or electronic lodgement. Stakeholders were encouraged at the workshop sessions to lodge submissions. 42 submissions were lodged during the period 8 September to 3 December 2001, 19 of which were on the submission proforma. Five submissions were lodged electronically. More than 70% of submissions were prepared by persons and/or stakeholder groups who had attended a workshop presentation.

WORKSHOPS

13 workshops and two stakeholder presentations were held with approximately 320 people attending the workshops and a further 90 attending the stakeholder presentations to the Local Government Association of Queensland and Royal Australian Planning Institute. The workshops were conducted in a two part format, with a presentation on the discussion paper and issues, followed by in depth small group workshops. The workshops were facilitated by ERM and DES staff and were based on a number of key questions and focus areas. The questions prompted thought and comments from the stakeholders on examples, practical solutions and good policy addressing the various natural hazards. Questions probed the need for a SPP, the types of natural hazards to be addressed and the technical information required to draft and implement the SPP.

Attendance at the workshops was not evenly spread across stakeholder groups, with government representatives comprising 85% of participants. Of the 267 government

representatives, 11 were from Federal Government, 146 from State Government and 110 were from Local Government. Representatives from community groups, professional organisations, industry groups, academia and non-government organisations comprised the remaining 48 persons or 15%. There was a low level of representation by conservation/environmental groups, developers, the business community and the wider community.

MAJOR THEMES

There was strong support for, and minimal opposition to the development of the SPP. Concerns were, however, raised in relation to matters of detail such as the ability to practically implement the SPP across the State, the potential imposition of additional 'hurdles' for developers and the potential loss of control/power by local governments.

General support was received for all hazards identified in the Discussion Paper being considered, however stronger emphasis was placed on flooding, bushfires and landslip as principal hazards of concern in most areas. The common views of participants expressed in relation to each hazard were:

- Flooding Almost without exception, flooding was identified as a significant, and in many cases the most significant, natural disaster facing each region and overwhelming support was received for its inclusion in the SPP. Regional differences between urban and rural areas including appropriate flood levels, warning times and the extent of flood impact were identified as important considerations.
- Landslides People in areas including Townsville, Cairns and Mackay identified landslides as a relatively common hazard within the region and a principal issue of concern. People in areas less affected by landslide were generally supportive of its inclusion in the SPP.
- Bushfires The effects of bushfires were experienced in most regions across the State and there was strong support generally for the inclusion of bushfires in the SPP. There was support for widening of the term to "wildfire" and it was identified that there is a range of management and mitigation measures already effectively dealing with the effects of bushfires.
- Cyciones In the northern Queensland coastal areas, cyclones were identified as a common problem, however, it was generally agreed that land use planning was likely to be effective only in relation to the subsequent effects of cyclones ie. flooding and landslides which would be addressed elsewhere. It was generally agreed that the building codes were satisfactorily addressing building controls in relation to wind loadings and that a SPP was unlikely to be able to further assist in planning for or

mitigating the impacts of cyclones. The need to consider storm surge as a related issue was consistently emphasised, together with suggestions that there be crossreferencing to the State Coastal Management Plan - Queensland's Coastal Policy (the State Coastal Plan) as a minimum.

Severe Storms – As with cyclones, the ability of land use planning mechanisms to plan for and mitigate severe storms was questioned. It was observed that the effects of the storms such as flooding and landslides could be more effectively managed within the SPP than the event itself and that building codes and Australian Standards may satisfactorily address building controls in relation to matters such as wind loading.

Earthquakes – While it was generally acknowledged that earthquakes had potentially high impacts and should be included, the low probability of difficulty in predicting these events suggested that a lower priority be given to earthquakes for inclusion in the SPP.

There was strong support for the inclusion of storm surge in the SPP as a separate and related (to flooding/cyclones/storms) issue, despite confirmation that this would be addressed by the State Coastal Plan. It was further suggested that the SPP consider the cumulative effects of natural disasters. A range of other disasters, both natural and human-induced, were raised in workshops.

Operationally, there was general concern about the implementation of the SPP at a local level and particularly in relation to the potentially prescriptive nature of the SPP. It was strongly expressed that the SPP should adopt a common methodology or approach to land use planning for natural disaster mitigation and development assessment, whilst allowing sufficient flexibility within the policy to enable its effective application at a local or regional level. Other operational issues commonly raised included the need to recognise existing legislative mechanisms and processes such as development application processes under the *Integrated Planning Act* and the need to develop practical 'how-to' implementation guidelines.

Liability, compensation and insurance, particularly in relation to the increased vulnerability of local governments, were major themes at most workshop sessions. Liability concerns also raised, particularly in relation to reliability of hazard mapping, concerns relating to increased litigation costs. Compensation was predominantly raised in the context of changed planning schemes.

A number of factors currently limiting planning for and management of natural disasters were frequently raised. These include lack of data and limited data availability (primarily related to hazard mapping), limited funding, a lack of a common resource base and limited expertise and skills in some local government areas (particularly smaller shires). Hazard mapping and community education and awareness were widely agreed as potential measures

to assist the planning process, and it was suggested that the SPP provide specific guidelines and/or standards in relation to these measures.

There was a high level of consistency in the comments made in all workshops and in submissions. The main differences between regions related to the differing levels of emphasis or priority placed on each of the hazards and the extent to which each of the hazards impacted on the regions and the availability of access to resources, particularly funding, data and skilled personnel.

There was concern raised that with the majority of local governments currently focussed on the preparation of new planning schemes in accordance with IPA by March 2003, the likely timing for the adoption of the SPP would not allow sufficient time for Councils to incorporate it. There was support, however, for the expeditious development of the SPP to enable it be used as widely as possible in the preparation of planning schemes and, for those schemes already well advanced, in the review of IPA planning schemes over time. It was noted that all Local Governments would be able to use the SPP in relation to development assessment.

It was commonly agreed that the practical application of the SPP could be achieved through the incorporation of 'how-to' guidelines. Specific measures such as standards, design provisions, model codes, triggers, criteria, benchmarks or performance indicators for Statewide application were all identified as useful measures for adoption, and it was generally agreed that the Policy should set minimum standards for application across the State, while allowing sufficient flexibility for local governments to adopt higher standards where necessary.

Clear and concise definitions for risk and associated levels (high, medium, low), acceptable levels of risk and the approach for mapping at risk areas were regarded as essential inclusions within the SPP to ensure a common approach across the State of Queensland. It was further suggested that the SPP could adopt a policy framework that could be included in planning schemes.

The need for financial assistance and personnel support programs for local governments was consistently raised as a concern and potential constraint to the effective implementation of the proposed SPP in local areas. The cost implications of the SPP for smaller scale developments were also raised.

POTENTIAL LAND USE PLANNING MECHANISMS

In the workshops, each of the six natural hazards identified in the discussion paper (flooding, landslides, bushfires, cyclones, severe storms and earthquakes) was considered in detail. Consideration was given as to whether land use planning mechanisms such as planning schemes could be reasonably used to mitigate potential effects. There was also discussion as

to whether mitigation infrastructure could be put in place to provide a physical barrier to reduce potential impacts. The potential role of development assessment in applying conditions specific to particular development proposals was also discussed. The potential outcomes and solutions in relation to each hazard are discussed in *Chapter 3* of the Report.

COMMUNITY CONSULTATION EVALUATION

The strong commitment to consultation resulted in high levels of attendance and interest at workshops. There was a good representation at the workshops from State Government, Local Government, Federal Government and community-based groups (particularly those with an interest in fire management). There was a low representation from environmental groups, developers, the business community and individuals.

The decision to hold regional workshops proved to be successful. In particular, the decision to hold forums in western and central regional centres was widely supported by stakeholder groups. Participation in the workshops in all areas was active. The small groups proved to be an excellent forum for the investigation of stakeholder views on the SPP and its scope and issues.

The preparation of the Discussion Paper and its distribution prior to the workshops provided a good base level of information and common ground for participants to react to and comment on. The usefulness of this form of information dissemination was favourably commented on by many participants.

KEY FINDINGS

Key findings arising from the consultation are:

- There is strong support for the development of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment.
- Significant hazards of concerns to the majority of regions are flooding, landslides and
 bushfires. There was also strong support for storm surge to be addressed as a natural hazard;
- Participants in consultation held the view that the State Planning Policy should not be prescriptive in its approach but define a State-wide methodology for natural disaster mitigation and planning, allowing flexibility for implementation at the local and regional level.
- The State Planning Policy should be supported by practical guidelines, incorporating triggers, codes, performance based criteria and standards.

Principal issues of concern related to liability, compensation, timing, implementation at the local level, funding arrangements, data availability and the incorporation of the State Planning Policy into local planning documents.

RECOMMENDATIONS FOR DEVELOPMENT OF THE SPP

It is recommended that a draft State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment be prepared and that it be developed in two stages.

The first stage would be the development of the SPP addressing the principal issues of concern, namely flooding, landslides and bushfires, enabling the development of a SPP to provide a State direction to assist Local Governments in the consideration of land use planning for natural disaster mitigation and development assessment in planning schemes prior to the March 2003 deadline. It is recommended that the issue of storm surge be addressed within this stage of the Policy as part of the consideration of flooding. This could be by way of reference to the State Coastal Plan or by inclusion of provisions that work together with and build on the provisions of the State Coastal Plan in the SPP for Land Use Planning for Natural Disaster Mitigation and Development Assessment. DES is currently liaising with EPA in the development of the Guidelines for the State Coastal Plan SPP.

The second stage of the SPP would involve the undertaking of research into the issues of earthquakes, cyclones and severe storms to determine the extent to which land use planning could practicably address these natural hazards.

In relation to the overall direction of the SPP and Guidelines, it is recommended that:

- the SPP contain broad principles and measures for land use planning for natural disaster mitigation and development assessment, and that practical and detailed Guidelines be developed to support the SPP. This approach would ensure consistency across the State, maximising opportunities for increased safety and community education, data and information sharing, and appropriate location of key infrastructure items, whilst ensuring planning and risk assessment is appropriate and effective at a local level;
- in as far as practicable, all Local Governments should prepare an all-hazards risk assessment and associated mapping program for incorporation into the planning scheme. Funding programs will be required to assist local authorities in the preparation of these studies, particularly smaller and/or rural local councils. Alternatively, hazard mapping may be done on a state or regional level, undertaken by a relevant state department or organisation. However, mapping must be undertaken at a scale that ensures the resultant maps are useful at a local level. Statewide hazard maps may be appropriate in relation to earthquakes, severe storms and

Chapter 1

INTRODUCTION

1.1 PROJECT OVERVIEW AND CONTEXT

This report summarises the outcomes of consultation during the Preparation Stage of a prospective *State Planning Policy for Land Use Planning for Natural Disaster Mitigation and Development Assessment* (the SPP). It has been prepared by Environmental Resources Management Australia (ERM), on behalf of the Queensland Department of Emergency Services (DES).

Early in 2001, approval was granted by the Minister for Local Government and Planning, jointly with the Minister for Emergency Services, to proceed with the intent to prepare a State Planning Policy with a working title of *Land Use Planning for Disaster Mitigation and Development Assessment*.

Under the Integrated Planning Act 1997 (IPA), consultation in relation to the preparation of a State Planning Policy (SPP) involves two stages:

Stage 1 - Preparation Stage associated with the Intent to Prepare a SPP;

□ Stage 2 – Consultation Stage associated with the Draft SPP and Supporting Guidelines.

In June 2001, ERM was commissioned by DES to undertake Stage 1 of the preparation of the State Planning Policy. This involved two elements. Initially, a stakeholder workshop was held at the Sea World Nara Resort on the Gold Coast and a Discussion Paper (see *Appendix A*) was prepared to provide the basis for wider consultation. Subsequently, as required by IPA, DES publicly notified the Intent to Prepare a State Planning Policy and the Discussion Paper was released for comment for a period from 8 September to 9 November 2001. During this period, ERM and DES conducted 13 workshops and two stakeholder briefings in locations around the State, attended by representatives from Federal, State and Local Governments, the business community, community groups, environmental/conservation groups, professional organisations, academia and the general public.

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- Preparation of summary reports for each of the stakeholder workshops; and
- Preparation of a Consultation Report (this report), reporting and analysing the outcomes of the consultations and providing supporting technical advice, reasoned options and recommendations regarding policy directions.

DES staff were involved in the review and distribution of the workshop summaries to the workshop participants and in the collection, review and summarising of all formal written submissions received on the discussion paper.

1.4 SCOPE OF REPORT

This Consultation Report provides a summary of the issues, problems, solutions and opportunities raised by stakeholder groups State-wide in public forums and written submissions during September, October and November 2001. It reports on the approach taken to the consultation workshops and major themes and issues arising from the workshops. The Report includes recommendations as to the implications of the consultation outcomes for the preparation of the State Planning Policy. Chapter 2

CONSULTATION APPROACH

2.1 OVERVIEW

Consultation workshops were held in locations across the State during October 2001 (refer to *Section 2.6*) and were attended by representatives from Federal, State and Local Governments, business and development industry, Local Government bodies, community groups, environmental and conservation groups, professional organisations, academia and the general community. The workshops were open to all interested persons.

DES advertised the opportunity to participate in the consultation process for the SPP in two ways (see *Appendix B*). First, the Intent to Prepare a State Planning Policy was publicly notified in newspapers circulating throughout Queensland and the supporting Discussion Paper was on public display from 8 September to 9 November 2001 (ie. for more than the required 40 business days). The Public Notice invited persons with relevant interests to attend the regional workshops, detailing times, dates and locations of the intended workshops and relevant contact details. Secondly, DES issued letters of invitation to key stakeholder groups, taken largely from the stakeholder database established during the initial round of consultation. The Discussion Paper (*Appendix A*) was distributed to stakeholders prior to the workshops to facilitate discussion and maximise workshop participation.

2.2 DISCUSSION PAPER

The purpose of the Discussion Paper (*Appendix A*) was to act as a catalyst during the first round of public consultation, to identify interests of the various stakeholders and investigate the possibility of developing a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. As SPPs are limited to dealing with land use planning and development assessment, the Discussion Paper considers matters at a broad level and deals specifically with land use and town planning matters.

The Discussion Paper outlines its purpose and scope and contains technical information relating to natural hazards, planning related aspects of natural disaster mitigation, development assessment and State Planning Policies. It details the current planning context, including the relationship between natural hazard management and IPA, implications and approaches for land use planning and specific issues relating to planning for each of the natural disasters. Two principal options are presented and discussed. The Discussion Paper also outlines the next stage in the preparation process for the SPP and includes a proforma for interested parties to make submissions on the Discussion Paper and the SPP.

2.3 INFORMATION DOCUMENTS AND DISTRIBUTION

During the SPP Preparation Stage, information documents including copies of the Discussion Paper and summaries of workshop presentations and outcomes have been widely distributed to stakeholders and made readily available to interested persons. A stakeholder database was established prior to the initial consultation workshop and has been subsequently developed with the further identification of interested parties. In particular, copies of the Discussion Paper were distributed to all parties on the database prior to the consultation workshops, with additional copies made available through the regional offices of the Department of Emergency Services. Approximately 1100 people/ organisations received the discussion paper.

A website page was established specifically for the State Planning Policy and this page provides an overview of the scope and purpose of the State Planning Policy and its limitations (*Appendix C*). The page contains links to an electronic copy of the Discussion Paper and a submission proforma that enabled the lodgment of electronic submissions.

2.4 SUBMISSIONS

A proforma for submissions was included in the Discussion Paper and on the website. Opportunities were provided for postal or electronic lodgement. Stakeholders were encouraged at the workshop sessions to lodge submissions. Details including final dates, web address and contact details were emphasised during the workshop sessions. 42 submissions were received, 19 of which were on the submission proforma (see *Chapter 3*). Five submissions were lodged electronically.

2.5 MEDIA

There was interest shown in the workshops and the SPP by media in most locations that the workshop sessions were held. Media coverage included television, radio

and newspaper press. It is anticipated that this coverage will assist in raising awareness and interest in the potential future preparation of the SPP.

2.6 WORKSHOPS

13 workshops and two stakeholder presentations were held and are summarised in *Table 2.1* and *Appendix D*. Approximately 320 people attended the workshops and a further 90 attended the stakeholder presentations to the Local Government Association of Queensland and Royal Australian Planning Institute. The workshops were conducted in a two part format, with a presentation on the discussion paper and issues, followed by in depth small group workshops. The workshops were facilitated by ERM and DES staff and were based on a number of key questions and focus areas. The questions prompted thought and comments from the stakeholders on examples, practical solutions and good policy addressing the various natural hazards. Questions probed the need for a SPP, the types of natural hazards to be addressed and the technical information required to draft and implement the SPP.

Table 2.1 SUMMARY OF WORKSHOP LOCATIONS AND PARTICIPANTS

Location	Venue	Date	Time	Attendees
Mt Isa	Terrace Gardens Function Centre	10 Oct 01	9am- 11:45am	 Local Government - 3 from 3 Councils State Government - 13 from 7 Depts Community Groups - 1 from 1 Group Industry - 1 from 1 Group Regional Strategy Group - 2 from 2 Groups TOTAL 20 Attendees
Townsville	Southbank Convention Centre	11 Oct 01	9:30am- 12:30pm	 Local Government - 11 from 4 Councils State Government - 17 from 12 Depts Community Groups - 1 from 1 Group Industry - 1 from 1 Group Professional Organisations - 1 from 1 Org TOTAL 31 Attendees
Mackay	Mecure Motor Inn	12 Oct 01	11:30am- 3:00pm	 Local Government - 9 from 4 Councils State Government - 14 from 6 Depts Community Groups - 3 from 3 Groups Industry - 2 from 2 Groups TOTAL 28 Attendees
Rockhampton	Central Motor Inn	15 Oct 01	11:30am- 3:00pm	 Local Government - 21 from 9 Councils State Government - 12 from 8 Depts Federal Government - 1 from 1 Dept Community Groups - 1 from 1 Group TOTAL 35 Attendees
Toowoomba	Toowoomba City Golf Club	16 Oct 01	11:15am- 3:00pm	 Local Government ~ 14 from 11 Councils State Government ~ 8 from 4 Depts Community Groups - 1 from 1 Group Industry - 1 from 1 Group TOTAL 24 Attendees

·····				Level Covernment - 7 from 8 Councils
Bundaberg	Burnett	17 Oct 01	11:30 am-	State Government – 9 from 4 Depts
•	Riverside		3:00pm	 Industry - 3 from 3 Groups
	Motel			TOTAL 19 Attendees
		10.0 / 01	77.15	 Local Government – 9 from 5 Councils
Sunshine	Noosa North	18 Oct 01	11:15am-	 State Government – 9 from 3 Depts
Coast	Shore		3:00pm	 Federal Government – 1 from 1 Dept
	Retreat			 Industry – 1 from 1 Group
				TOTAL 20 Attendees
	Rome Bowle	19 Oct 01	2-00pm-	 Local Government - 6 from 4 Councils
кота	Roula DOWLS	1) 0001	4:30pm	 State Government – 2 from 2 Depts
	Club		4:50pm	 Federal Government – 1 from 1 Dept
			L	TOTAL 9 Attendees
Cairns	Sheridan	22 Oct 01	10:00am-	 Local Government – 11 from 5 Councils
			1.30mm	 State Government – 12 from 11 Depts
	Plaza Hotel		Lisophi	 Federal Government – 1 from 1 Dept
				Community Groups - I from I Group
				 Professional Organisations - 6 from 6 Orgs
				Academia – 1 from 1 Institution
				TOTAL 32 Attendees
Brishane 1	Virginia	23 Oct 01	9:30am-	Local Government - 2 from 2 Councils
	Palma		12:30pm	Local Government Bodies - I Hold I Body
	Paims		12.000	State Government - 29 from 20 Depts
	International]	1	Federal Government - 2 from 2 Depts
	Plaza Hotel			Protessional Organisations = 2 from 2 Groups
		1.		Community Groups – 2 from 2 Groups
				• Industry - 2 Hom 2 Groups
			<u> </u>	I OTAL TO Attendees
Brisbane 2	Virginia	23 Oct 01	2:00pm-	State Covernment - 10 from 5 Depts
	Palms	1	5:00pm	Eederal Covernment - 4 from 2 Depts
	Tatamatianal			 Industry – 5 from 5 Group
	International			TOTAL 26 Attendees
	Plaza Hotel	<u> </u>	<u></u>	Local Covernment - 4 from 4 Councils
Longreach	Albert Park	24 Oct 01	12noon -	 State Government - 3 from 3 Depts
	Motor Inn		2:30pm	 Industry - 1 from 1 Group (also representing a
			_	Council)
		·		TOTAL 7 Attendees
				 Local Government – 6 from 3 Councils
Gold Coast	Sea World	26 Oct 01	9:30am -	 State Government – 8 from 5 Depts
	Nara Resort		12:30pm	 Federal Government – 1 from 1 Dept
				 Professional Organisations – 2 from 2 Orgs
		1		 Industry – 4 from 3 Groups
				 Academia - 1 from 1 Institution
				 Non-govt Organisations – 2 from 1 Org
				TOTAL 24 Attendees
		5 Sent 01	11 00am -	Approx 50 Councillors and Council Officers from
LGAQ	Townsville	Depror	10 20	Local Governments across the State
Conference	Casino		12.30pm	Approx 40 Planners and related professionals
RAPI	Parkroyal,	5 Oct 01	11.30am-	from public and private organisations
Oueensland	Surfers		12noon	community groups and environmental groups.
	Dending		1	
Conterence	l'aracise		<u>k</u>	

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Chapter 3

CONSULTATION OUTCOMES

3.1 OVERVIEW

The Preparation Stage provided opportunities for stakeholders across Queensland to be involved in the consideration of a State Planning Policy for Land Use Planning for Natural Disaster Mitigation and Development Assessment. The outcomes of the consultation will provide an important input into the decision of whether to proceed with the State Planning Policy and, in the case of a positive decision, provide useful suggestions for the future development and implementation of the Policy. Comprehensive consultation and input from a diversity of stakeholders has enabled the early identification of issues, concerns and opportunities and will facilitate the preparation of a focussed State Planning Policy, minimising time taken in later stages of the process should the decision be made to proceed.

3.2 LEVEL OF RESPONSE

Total attendance at the regional workshop sessions was approximately 320. A further 90 people attended the LGAQ and RAPI conference sessions.

Attendance at the workshops was not evenly spread across stakeholder groups, with government representatives comprising 85% of participants. Of the 267 government representatives, 11 were from Federal Government, 146 from State Government and 110 were from Local Government. Representatives from community groups, professional organisations, industry groups, academia and non-government organisations comprised the remaining 48 persons or 15%. There was a very low level of representation by conservation/environmental groups, developers, the business community and the wider community.

42 submissions were lodged during the period 8 September to 3 December 2001. More than 70% of the submissions were prepared by persons and/or stakeholder groups that had attended a workshop presentation.

3.3 MAJOR THEMES

3.3.1 Common Themes

The primary objective of the consultation workshops was to obtain feedback on the options presented in the Discussion Paper relating to the development of a State Planning Policy to deal with land use planning for natural disaster mitigation and development assessment. There was strong support from workshop attendees and submitters for the development of the SPP. There was minimal opposition expressed to the development of the SPP and/or preference for the alternative option. Concerns were, however, raised by various participants as to the likely effectiveness of the Policy and its possible implementation implications. These concerns primarily related to the potential loss of control/power by local governments in dealing with planning for natural disasters, the ability to practically implement the SPP across the State and the imposition of additional 'hurdles' for developers to overcome as a result of the SPP.

Where support was expressed for the SPP, input was sought as to the natural hazards which should be addressed. General support was received for all hazards identified in the Discussion Paper being considered, however stronger emphasis was placed on flooding, bushfires and landslip as principal hazards of concern in most areas. The common views of participants expressed in relation to each of the natural hazards are outlined as follows.

- □ Flooding Almost without exception, flooding was identified as a significant, and in many cases the most significant, natural disaster facing each region and overwhelming support was received for its inclusion in the SPP. Regional differences between urban and rural areas including appropriate flood levels, warning times and the extent of flood impact were identified as important considerations.
- Landslides People in areas including Townsville, Cairns and Mackay identified landslides as a relatively common hazard within the region and a principal issue of concern. People in areas less affected by landslide were generally supportive of its inclusion in the SPP.
- Bushfires The effects of bushfires were experienced in most regions across the State and there was strong support generally for the inclusion of bushfires in the SPP. There was support for widening of the term to "wildfire" and it was identified that there is a range of management and mitigation measures already effectively dealing with the effects of bushfires.

3.2

Cyclones - In the northern Queensland coastal areas, cyclones were identified as a common problem, however, it was generally agreed that land use planning was likely to be effective only in relation to the subsequent effects of cyclones ie. flooding and landslides which would be addressed elsewhere. It was generally agreed that the building codes were satisfactorily addressing building controls in relation to wind loadings and that a SPP was unlikely to be able to further assist in planning for or mitigating the impacts of cyclones. The need to consider storm surge as a related issue was consistently emphasised, together with suggestions that there be cross-referencing to the State Coastal Management Plan - Queensland's Coastal Policy (the State Coastal Plan) as a minimum.

Severe Storms – As with cyclones, the ability of land use planning mechanisms to plan for and mitigate severe storms was questioned. It was observed that the effects of the storms such as flooding and landslides could be more effectively managed within the SPP than the event itself and that building codes and Australian Standards may satisfactorily address building controls in relation to matters such as wind loading.

Earthquakes – While it was generally acknowledged that earthquakes had potentially high impacts and should be included, the low probability of difficulty in predicting these events suggested that a lower priority be given to earthquakes for inclusion in the SPP.

There was strong support for the inclusion of storm surge in the SPP as a separate and related (to flooding/cyclones/storms) issue, despite confirmation that this would be addressed by the State Coastal Plan. It was further suggested that the SPP consider the cumulative effects of natural disasters.

A range of other disasters, both natural and human-induced, were raised in workshops. These included storm surge, dam break, grass and wildfires, drought, erosion including coastal erosion, pestilence and plagues, mad cow disease, chemical spills and greenhouse effect.

Operationally, there was general concern about the implementation of the SPP at a local level and particularly in relation to the potentially prescriptive nature of the SPP. It was strongly expressed that the SPP should adopt a common methodology or approach to land use planning for natural disaster mitigation and development assessment, whilst allowing sufficient flexibility within the policy to enable its effective application at a local or regional level. Other operational issues commonly raised included the need to recognise existing legislative mechanisms and processes such as development application processes under the *Integrated Planning Act* and the need to develop practical 'how-to' implementation guidelines.

____ENVIRONMENTAL RESOURCES MANAGEMENT AUSTRALIA
Liability, compensation and insurance, particularly in relation to the increased vulnerability of local governments, were major themes at most workshop sessions. Liability concerns also raised, particularly in relation to reliability of hazard mapping, concerns relating to increased litigation costs. Compensation was predominantly raised in the context of changed planning schemes.

A number of factors currently limiting planning for and management of natural disasters were frequently raised. These include lack of data and limited data availability (primarily related to hazard mapping), limited funding, a lack of a common resource base and limited expertise and skills in some local government areas (particularly smaller shires). Hazard mapping and community education and awareness were widely agreed as potential measures to assist the planning process, and it was suggested that the SPP provide specific guidelines and/or standards in relation to these measures.

3.3.2 Specific Issues

The following table lists the planning issues raised during consultation in relation to the identified hazards.

Flooding

There is a need to balance community and environmental issues eg vegetation and silt build-up are being protected by the EPA and consequently increasing flooding in surrounding areas.

Appropriate measures should be applied to non-residential development in flood prone areas eg. limitations to the storage of chemicals.

The differences between inland and coastal flooding need to be taken into account.

There should be consistency in flood modelling techniques rather than a consistent flood level.

The cumulative impacts of development and the associated changes to flooding patterns are a problem.

Accuracy and reliability of data was questioned, particularly in relation to currency of data given changed development in catchments.

Most damage from floods occurs from flash flooding and more frequent flood events. The water is fast moving and more debris-loaded. The larger floods cause slow gradual inundation and do not cause the same structural damage.

Setting a flood level may not be sufficient as the velocity of flood waters may need to be considered.

The need to maintain access and evacuation routes in flood prone areas is important.

The SPP should not restrict uses (eg agriculture) which rely upon flood plains for good soil and can only occur in these at risk areas.

Landslides

Mitigation infrastructure can be provided for landslides.

Slope and soil type analyses may assist in planning decisions in susceptible areas.

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Address issues relating to location of and standards for development in susceptible areas, including opportunity for declaring 'exclusion' areas.

Land use planning for landslides must be based on local knowledge and mapping. It may be too expensive to produce State-wide mapping in sufficient detail to be of use in landslide risk assessment.

Gold Coast City Council approach to landslides in Planning Schemes is good example.

Bushfires

The definition of bushfires should be changed to wildfires thus considering grass and brush fires.

Perhaps site management practices and education programs could achieve more than land use controls. Many people have no idea of the implications and risk of building in certain areas.

Firebreaks and vegetation clearing and management should be mandatory for all new rural properties. If development is allowed in bushfire prone areas, there should be an obligation to have a good community education program.

Require compulsory burning-off as a management tool in rural areas to assist in reducing fuel loadings. Map risk areas so that Councils are able to advise all residents of bushfire risks for specific areas.

Communities should be involved in the development of risk assessment and mitigation strategies.

Bushfires may be a greater problem in coastal, urbanising and steep areas.

Recognised expert/specialist fire consultants should be identified by DES.

Bushfire risk is generally in undeveloped areas; townships face lesser risk due to limited vegetation.

SPP could call up the national standard AS3959 "Construction of Buildings in Bushfire Prone Areas".

Cyclones

Incorporate storm surge into the SPP to ensure consistency.

Prepare overlay maps identifying cyclone-prone areas for use by Local Governments.

Consider the type/ strength of cyclone event, so that variable controls can be implemented.

The SPP can only really address the consequential impacts of cyclones such as flooding. An education program, rather than direct controls, would be more effective.

Severe Storms

Review of the Building Code in terms of wind strength provisions.

Planning measures may include undergrounding of powerlines, vegetation guidelines, fencing etc. but needed to be subject to cost/ benefit analysis, especially in rural areas.

There is a need to design new areas with access/egress alternate routes.

Educate on the dangers of storms and risk reduction through management of on-site "loose" items.

Consider overland flow paths and plan for lesser rain events.

Earthquakes

It is too difficult to plan in a land use sense for earthquakes; building codes are sufficient controls.

Controls could ensure location of State infrastructure eg. hospitals in lower risk areas.

Restrict development in high risk areas.

3.3.3 Differences between Regions

There was a high level of consistency in the comments made in all workshops and in submissions. The main differences between regions related to the differing levels of emphasis or priority placed on each of the hazards and the extent to which each of the hazards impacted on the regions. For example, the Cairns and Townsville regions potentially experience the effects of all hazards identified, including at times the cumulative impacts of hazards. Participants in these regions were strongly supportive of the SPP and for the inclusion of all hazards identified in the Discussion Paper. Participants in these regions also strongly advocated that storm surge be addressed in the SPP or, at the least, referenced to the State Coastal Plan. In comparison, the south-east Queensland locations, including Sunshine Coast and Brisbane, were primarily concerned with the impacts on flooding and bushfires, with lesser priority on severe storms, landslides and cyclones, while the western areas of Mt Isa, Longreach and Roma were concerned with flooding, and in the case of Roma, severe storms. There was a stronger emphasis in rural areas for the inclusions of issues such as drought, erosion and dam break.

Regional differences were evident in the level of importance placed on access to resources, particularly funding, data and skilled personnel. Whilst most regions raised lack of data, limited funding and/or lack of local expertise as constraints to natural disaster planning and management, rural shires expressed greater concern about these issues. The workshops in rural regions, whilst supportive of the SPP, consistently raised concerns regarding the resulting imposition of actions/studies that rural councils could not afford, did not have the expertise to undertake and/or did not consider a priority for the limited funding and resources available.

During discussions of the implementation of the SPP, urban/coastal areas were concerned with how the Policy could be implemented in established areas and its application to both infill and existing development. Rural/ western areas, on the other hand, questioned the relevance of the Policy in these areas, as only limited development was occurring and therefore, there were only limited opportunities for implementation.

3.4 ISSUES AND SOLUTIONS RAISED

3.4.1 Development of a State Planning Policy

The proposal to develop a State Planning Policy for Land Use Planning for Natural Disaster Mitigation and Development Assessment was strongly supported by a great majority of participants at all workshops/presentations held and submitters. It was

generally agreed that there was a need for a consistent approach to natural disaster planning and mitigation across the State and that the SPP would be an appropriate way to achieve this, particularly as it would be binding on both State and Local Governments.

A common view across regions and stakeholder groups was that it would be both inappropriate and ineffective for the SPP to adopt a prescriptive approach, but rather that it should mandate a State-wide methodology and allow flexibility for application at the local or regional level. With their current role in land use planning for natural disaster mitigation, it was stressed that local governments should retain the associated decision making power and discretion.

3.4.2 SPP Implementation Issues

i. Timing

There was concern raised that with the majority of local governments currently focussed on the preparation of new planning schemes in accordance with IPA by March 2003, the likely timing for the adoption of the SPP would not allow sufficient time for Councils to incorporate it. There was support, however, for the expeditious development of the SPP to enable it be used as widely as possible in the preparation of planning schemes and, for those schemes already well advanced, in the review of IPA planning schemes over time. It was noted that all Local Governments would be able to use the SPP in relation to development assessment.

DES has been involved in providing advice and comment on its State Interest for planning schemes that have been or are being prepared. Over the last 18 months, DES has raised natural disaster mitigation, in some form, as an issue that Local Governments need to address in preparing IPA planning schemes. Further, Local Governments are now aware of the proposal to prepare a SPP for natural disaster mitigation through the public consultation process. Therefore, IPA planning schemes currently under preparation should be addressing natural disaster mitigation.

In addition, within South-East Queensland, 18 Local Governments agreed to the recommendations of the South-East Queensland Regional Framework for Growth Management made in 2000. The recommendations included a requirement that Local Governments identify and map natural hazards and incorporate provisions within planning schemes.

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ii. Benefit of the SPP

The benefit offered by the SPP over the existing situation would be the introduction of a consistent and articulated approach that would be available for use by Local Governments in all stages of scheme preparation. This would supersede the current "case-by-case" approach and enable resources and effort to be concentrated on local issues rather than revisiting the basic principles and options in relation to each planning scheme.

A further issue raised regarding planning schemes was the approach for inclusion of the SPP within planning schemes and how this related to the implementation of the Policy. The principal issue of concern in this respect was the weight each document held in planning and management of natural disaster mitigation. A favoured option suggested that, following incorporation of the SPP into local government planning schemes, the planning scheme would become the principal document for land use planning for natural disaster mitigation and that the provisions of the SPP would "fall away" ie. no longer be applicable. This approach is contemplated by IPA and is currently adopted by the State Planning Policy for Planning and Management of Coastal Development involving Acid Sulfate Soils. It was, however, noted that this approach may not allow for changes in the research and understanding of natural hazard risk assessment and planning.

It was commonly agreed that the practical application of the SPP could be achieved through the incorporation of 'how-to' guidelines. Specific measures such as standards, design provisions, model codes, triggers, criteria, benchmarks or performance indicators for State-wide application were all identified as useful measures for adoption, and it was generally agreed that the Policy should set minimum standards for application across the State, while allowing sufficient flexibility for local governments to adopt higher standards where necessary.

Clear and concise definitions for risk and associated levels (high, medium, low), acceptable levels of risk and the approach for mapping at risk areas were regarded as essential inclusions within the SPP to ensure a common approach across the State of Queensland. It was further suggested that the SPP could adopt a policy framework that could be included in planning schemes.

iii. Possible Format/ Direction of the SPP

The proposed SPP could be incorporated into planning schemes:

- by use of broad, overarching Desired Environmental Outcomes;
- in Performance Criteria or Acceptable Solutions relating to issues (hazards) or land uses;

- in Codes or Planning Scheme Policies either as a Natural Hazards Code or Code for individual hazards eg. bushfires, flooding or landslide management; and
- in DES and other Departmental concurrence or referral agency triggers.

The identification of hazard prone areas and associated level of risk is important for understanding the future development options in relation to developable land. While location within a designated hazard prone area should not necessarily preclude development, development opportunities should reflect the associated level of risk for that area and planning should ensure the careful protection and management of potential impacts on the natural and built environment and community wellbeing. Standard risk assessments and mapping are therefore the basic requirements to enable local governments to assess development in relation to the potential implications of natural hazards.

Mapping which may be required to be undertaken to enable the inclusion of the SPP provisions within planning schemes include basic flood, bushfire, landslip and possibly storm surge mapping. Related studies needed to prepare the mapping may include geological studies, vegetation assessments, historical flooding and storm surge information. The approach to storm surge could be developed between DES and EPA, particularly as regards the relationship between the SPP and the State Coastal Plan.

iv. Cost Implications

The need for financial assistance and personnel support programs for local governments was consistently raised as a concern and potential constraint to the effective implementation of the proposed SPP in local areas. It was frequently indicated that local governments, particularly smaller/rural Councils, could not bear the financial burden of additional mapping and research requirements, with already limited resources. Establishing links with existing NDRMSP funding arrangements was identified as offering some opportunities in dealing with this issue, with each level of government already committed to financing one-third of study costs.

The cost implications of the SPP for smaller scale developments were raised. For example, the costs associated with rigorous assessments and reporting to demonstrate compliance with the SPP could be prohibitive and unsustainable for small development projects.

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v. Best Practice Examples

A number of best practice examples were suggested for consideration during the drafting of the SPP during the consultation process. These are summarised in the following table.

Table 3.1	BEST PRACTICE EXAMPLES SUGGESTED IN CONSULTATION

Issue	Best Practice Examples				
Flooding	 Best Practice for Floodplain Management In Australia prepared by CSIRO 				
riooung	Report to the Insurance Council of Australia – Legal Liability of Floodplain				
	Management				
	 NSW Floodplain Management Policy 				
	 Gold Coast-Coomera/Nerang flood assessments 				
	 Sand and Gravel Extraction Guidelines 				
	 Gatton Shire Flood Hazard Management Policy 				
	 AUSTROADS Standards for Road Construction 				
Landslides	 Gatton Shire Landslides Policy 				
	 Gold Coast City Council Landslides Policy 				
	Maroochy Shire Steep Land Development Code				
Bushfires	 Bushfire Hazard Planning by DLGP and QFRS 				
	Victorian Country Fire Authority - Design for Rural Development Areas				
	NSW Bushfire Management techniques and policies				
	Ash Wednesday Fire Risk Model				
	Toowoomba Escarpment Management Plan				
	Gatton Shire Bushfire Policy				
	Gold Coast City Council Bushfire Management Plan				
	Maroochy Shire Bushfire Code				
Cyclones	 Disaster Risk Management document prepared by DES 				
	 Mackay City Council storm surge mapping 				
	Darwin storm surge mapping				
Severe	 No suggestions made 				
Storms					
Earthquakes	No suggestions made				
Others	 Disaster Risk Management document prepared by DES for all disasters 				
	 Institute of Engineers publication relating to rainfall and rulion 				
	AGSO report on natural hazards in Cairns, Mackay, Glaustone and SEQ regions				
	 Swan Shire (WA) policy on rural subcivisions 				
	EMA land use planning				

3.4.3 Potential Land Use Planning Mechanisms

In the workshops, each of the six natural hazards identified in the discussion paper (flooding, landslides, bushfires, cyclones, severe storms and earthquakes) was considered in detail. Consideration was given as to whether land use planning mechanisms such as planning schemes could be reasonably used to mitigate potential effects. There was also discussion as to whether mitigation infrastructure could be put in place to provide a physical barrier to reduce potential impacts. The potential role of development assessment in applying conditions specific to particular development proposals was also discussed. The potential outcomes and solutions in relation to each hazard are summarised in *Table 3.2* and discussed in the following sections.

Table 3.2	POTENTIAL LAND USE PLANNING MECHANISMS TO
	MITIGATE NATURAL HAZARDS

	Land Use Planning	Mitigation Infrastructure	Development Assessment
Flooding	X	X	X
Landelides	x	X	X
Buchfires	x	x	X
Cuclones			X
Severe Storms	· · · · · · · · · · · · · · · · · · ·		X
Earthquakes	×	X	X

3.4.4 Flooding

i. Planning Issues

Land use planning and development assessment issues related to flooding can be consolidated into three dominant themes:

- the use of flood levels as a planning measure;
- consideration of incremental and off-site effects ie. downstream impacts; and
- the extent to which planning measures and approaches should be local or regional rather than State-wide.

It was widely agreed in the workshops and submissions that it would be inappropriate to set a consistent flood level across the State as the impacts of flooding are influenced by localised conditions. Flood levels were perceived as a useful measure that should be determined and adopted at a local or regional level.

In discussion about changes to, and particularly intensification of, development and the implications for flood levels and flow patterns, need for consideration of incremental and off-site effects of flooding events was consistently raised. Participants in various locations provided case examples of instances where development has resulted in unexpected impacts due to changed flow paths and flood patterns. This was extended to changes in environmental conditions, including the revegetation of creeks banks and the silting of rivers/waterways and the difficulties that arise as a result of conflicting interests. Changes to existing conditions and, therefore, flood patterns and flow paths reduce the applicability of data and information. The difference between major flooding events and localised or flash flooding was raised on several occasions, with local areas identifying flooding 'hot-spots'. Regional differences in terms of warning times and recovery times were noted and evidenced the need for flexibility in the SPP.

ii. Planning Measures

There was support for a SPP approach that sets an agreed methodology or approach to be used across the State rather than prescribed flood levels. The setting of flood levels was supported on a localised or regional basis but not a State-wide basis. There was strong support for the view that flood levels should be determined on the basis of local studies and investigations.

Consideration of issues including access arrangements, evacuation routes and location of infrastructure were regarded as key strategic decisions which could possibly be addressed in Guidelines, to be supplemented by specific development provisions including habitable floor levels, stormwater drainage at the development assessment stage. Issues to be addressed in the preparation of planning schemes included environmental issues (vegetation build up in rivers/creeks), potential for dam break and the introduction of new flood levels in areas with established levels and development.

Flood mapping and the identification of risk areas (high, medium and low) were regarded as effective tools for planning and mitigation for flooding events.

3.4.5 Landslides

i. Planning Issues

Landslides are often the result of a combination of factors, including heavy and/or ongoing rainfall (such as that associated with flooding, storms or cyclones), slope, soil conditions, groundwater and interference as a result of development and/or clearing of trees and vegetation. The need to consider the potential for these events in conjunction with cyclones and/or storms was a planning issue identified in those regions potentially affected by both hazards.

Competing objectives were identified as a potential problem in planning for landslides, given the preference for residential development with views and the potential difficulties this may cause where hillsides are identified as at-risk areas.

ii. Planning Measures

It was suggested that mitigation infrastructure could be applied to landslide with the use of fences, retaining walls and terracing techniques to stabilise hillsides and protect development from falling soil and rocks. The identification of 'exclusion areas' or 'control areas' and requirements for soil and slope analyses prior to development were recognised as potentially effective methods for planning for and mitigating against the potential impacts of landslides. It was suggested that the onus be placed on the developer to demonstrate that development can occur safely and appropriately in areas identified as being at-risk.

The imposition of measures on a site-specific basis was regarded as useful given the localised nature of influential factors to these events (soil type, slope gradient and surrounding development).

3.4.6 Bushfires

i. Planning Issues

Bushfires were acknowledged within all workshops as being an important hazard which could be appropriately addressed by the SPP. Bushfires were identified as a common threat to all regions in Queensland and a hazard where the risk can be easily and accurately assessed. In particular, the consideration of location of new development, access and escape routes and vegetation management were considered important to the planning of areas of potential risk from bushfires.

It was suggested that there is a public perception that bushfires are a greater problem in coastal, urbanising and steep areas. It was generally agreed that a comprehensive education program was required regardless of the outcomes of the SPP. This could include educating communities about the risks and involving them in development of risk assessment and mitigation strategies. Education could inform people that proper individual site management reduces the risk of damage even in high risk areas. There was a belief that Councils should be able to advise residents of bushfire risks for all areas. There was support for mapping of risk areas and differential standards for service by Rural Fire Services eg. no service being provided to areas identified as extreme risk areas.

Rural areas are experiencing particular problems in relation to bushfires, particularly large rural acreage lots as some are occupied by temporary residents. The difficulty comes in poor management of properties and the inability of the Rural Fire Service to know if residents are on the land and need protection.

ii. Planning Measures

It was considered by some that the most effective measures for bushfire management are site management practices and education programs rather than land use controls, due to the vast majority of at risk areas already containing development. It was suggested that new development could be designed in accordance with and assessed against a State-wide code or policy on bushfires included as part of the SPP. Best practice guidelines identified as useful guides or frameworks in relation to the Policy include the Department of Local Government and Planning and the Rural Fire Service "Guide to Bushfire Management", AS3959 "Construction of Buildings in Bushfire Prone Areas" and the Gold Coast City Council Bushfire Management Policy. It was suggested that DES should identify recognised expert/specialists fire consultants to be utilised in designing and assessing new proposals.

3.4.7 Cyclones

i. Planning Issues

The principal consideration when planning for cyclones was the recognition that land use planning cannot mitigate cyclone events but is more effective in managing the consequential effects, including storm surge, flooding and landslides. Cyclones and the consequential effects were of principal concern to residents of coastal locations in northern Queensland. With the diverse and often extreme nature of weather conditions in these areas, land use planning should consider the potential impacts of simultaneous and/or subsequent natural disasters.

There was widespread support for the building and construction standards contained in the Building Code of Australia and Australian Standards.

Education programs were perceived as particularly important, to educate residents in planning development before and safety and risk minimisation during cyclone events. Examples used included programs to educate people on the need to include 'shelter' areas in development, and to remove loose items or potential 'missiles' eg outdoor furniture prior to cyclone events, and to raise awareness regarding the location of evacuation routes and shelters.

Identified issues for consideration in relation to the land use planning for and mitigation of the effects of cyclones (such as flooding) and included the identification of evacuation routes, location of emergency services and key infrastructure items including hospitals, secondary or alternative access arrangements, the multi-purpose use of facilities (eg. use of halls/schools as evacuation centres) and building design. Setbacks from the coastline and areas subject to storm surge were further considerations identified.

ii. Planning Measures

There was general agreement that existing building codes and Australian Standards adequately deal with building and construction issues in relation to mitigation of cyclone impacts. There was, however, support for the further investigation of planning measures which could potentially complement the building codes and Australian Standards.

Suggestions for further investigation included the specific consideration of cyclone impacts when considering other natural hazard issues such as flooding, storm surge and landslide. It was suggested that the potential mapping of cyclone-prone areas be investigated, although there was not universal agreement that such maps would be able to be developed to identify future risk areas.

Specific development provisions could also be used to minimise the impacts of cyclones and related events. The Building Code of Australia (BCA) currently specifies standards for buildings located in cyclone-prone areas. These standards could be supplemented by planning scheme provisions relating to building setbacks, design and landscaping. It is noted that the effects of cyclones are identified as a coastal hazard in the State Coastal Plan and that provisions exist within Coastal legislation relating to erosion prone areas, coastal building lines and control districts which require development to be set back from the coastal line. The State Coastal Plan also addresses the location of development on the coast.

3.4.8 Severe Storms

i. Planning Issues

It was identified that planning could not mitigate severe storms but could have limited effect in mitigating impacts. With the damaging effects arising as a result of the high winds, heavy rain and/or hail, there are few measures beyond building design that can be employed to reduce the impacts of these events.

It was noted that flooding, storm surge and landslide may occur as a result of severe storms and that consideration should be given to the impact of the combined effects.

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ii. Planning Measures

There was general agreement that, as with cyclones, existing building codes and Australian Standards adequately deal with building and construction issues in relation to mitigation of severe-storm impacts. There was, however, support for the further investigation of planning measures which could potentially complement the building codes and Australian Standards.

Suggestions for further investigation included the specific consideration of storm impacts when considering other natural hazard issues such as flooding, storm surge and landslide. It was suggested that the potential mapping of storm-prone areas be investigated, although there was not universal agreement that such maps would be able to be developed to identify future risk areas.

Specific development provisions could also be used to minimise the impacts of cyclones and related events. These could include planning scheme provisions relating to building setbacks, design and landscaping. The placing of powerlines underground to minimise the impacts of severe storms was suggested.

3.4.9 Earthquakes

i. Planning Issues

There was limited discussion on earthquakes, probably due to the low probability of these events. There was a lack of widespread knowledge of the measures available to plan for earthquakes, other than in relation to the location of essential services away from known high-risk areas. There was concern about the likely costs involved if studies were required to be undertaken by Local Government. Current building code and Australian Standards (AS1170 Part 4) provisions were regarded by many to be sufficient measures given the low likelihood of events.

ii. Planning Measures

Experts in relation to earthquakes have indicated that it is possible to identify earthquake risk areas based on ground conditions and that planning controls (particularly in relation to the location of essential services) can be developed linked to this. Regional strategies have been undertaken in relation to Cairns, Mackay, Gladstone and South-East Queensland.

3.4.10 Other Issues that could be considered in the SPP

i. Storm Surge

The need to consider storm surge within the SPP was raised on several occasions. While it was acknowledged that the storm surge issue was being addressed by the State Coastal Plan, there was a common view that it should also be addressed or referenced in the proposed State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment together with other forms of inundation hazard.

Planning issues for storm surge include the location of key infrastructure items away from surge areas, setbacks from the coastline, stormwater drainage design and evacuation and access routes. Effective planning measures suggested included mapping of areas susceptible to storm surge and the identification of 'no-go' areas, codes for coastline development and site specific development provisions.

ii. Climate Change/Greenhouse

During the conduct of the workshops there was discussion of the possible future expansion of the SPP to address and deal with the implications of climate change and greenhouse issues. During a number of the workshops participants outlined recent increases in Council minimum floor levels taking sea water rise and storm surge into consideration and generally supported the possible coverage of this topic within a SPP. It was suggested that climate change and greenhouse may be causing more frequent and more destructive natural disasters. Given this, it was considered timely that a SPP be developed to address land use planning for natural disaster mitigation and development assessment and there was support for the specific consideration of climate change/ greenhouse issues within the SPP.

It is noted that the effects of climate change in relation to coastal management are addressed in the State Coastal Plan in policy 2.2.1 "Adaptation to climate change" and policy 2.2.4 "Coastal hazards". The latter makes specific mention of sea level rise. If the SPP is to address climate change in some way, the relationship with the State Coastal Plan will need to be considered.

iii. Liability/Compensation

General concern was expressed regarding the liability issues associated with the mapping of "at risk" areas, particularly in relation to determining and setting the boundaries of identified areas. Comments were made that local authorities will have difficulties determining definite boundaries to risk areas due to inaccurate, out of date and/or limited data. Compensation and additional litigation costs were identified as further potential financial burdens for local governments in the event of planning scheme changes to accommodate risk areas and the resulting removal of development rights in some areas. Many participants raised questions about the responsibility of compensation payments and the liability for local governments, particularly in relation to risk mapping. There were many suggestions that the SPP could clarify Councils' liability and could, perhaps together with other legislative amendments (possibly to the *Local Government Act* or the *Integrated Planning Act*), reduce or remove liability in instances where proper risk assessment and planning practices had been undertaken.

It was suggested that the adoption of a State-wide mapping methodology would reduce the chances of the improper mapping and assessment of risks. The development industry indicated reluctance to support any policy that made risk assessment the responsibility of development proponents.

3.4.11 Other Issues not able to be addressed by the SPP

There were a number of issues raised in workshops and submissions that are related to natural disaster mitigation but would not fall within the scope of the SPP.

i. Indigenous Issues

The Community Services (Aborigines) Act 1984, the Community Services (Torres Strait) Act 1984 and the Local Government (Aboriginal Lands) Act 1978 created 34 Aboriginal and Torres Strait Islander (ATSI) Councils. These Councils are recognised under IPA and are thereby bound by its requirements. IPA does, however, provide exemptions in relation to planning scheme preparation where ATSI Councils can opt not to prepare a planning scheme under IPA. Currently none of the 34 ATSI Councils has a planning scheme.

In ATSI areas, a SPP is only applicable to development that is assessable development (and then only when such developments are impact assessable) defined within Schedule 8 of IPA – Assessable, Self Assessable and Exempt Development.

A SPP therefore has a relatively limited application in ATSI Councils and there is a need to consider other techniques to introduce natural disaster mitigation into land use decisions in these areas. The Department of Aboriginal and Torres Strait Islander Policy (DATSIP) has raised this issue in its submission. DES, DATSIP and DLGP need to consider how the outcomes and principles of the SPP can be incorporated in the planning undertaken in ATSI Councils.

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The limited application of the SPP to ATSI Councils and the need to consider other techniques is agreed. However, alternative mitigation strategies for indigenous communities should be undertaken in addition to the SPP and this does not diminish the need to create a SPP for the 123 Local Governments that have planning schemes.

It was suggested in workshops that the SPP and Guidelines could be adopted voluntarily in ATSI communities or possibly through amendments to the Community Services Act.

ii. Building Code of Australia (BCA) and Australian Standards

The inability of a new SPP to retrospectively control existing development was well recognised within the workshops. It was suggested that tighter building controls and codes would assist in making existing development more capable of withstanding the impacts of certain natural hazards. The BCA is currently used in the developing and adopting of specific measures and design controls for buildings in bushfire prone areas, steep land and strong wind areas.

Australian Standards provide direction for design and building construction in relation to specific issues. Australian Standards of direct relevance to the SPP include those related to bushfires, high wind and earthquakes.

There was widespread support for these controls and some submitters considered that the BCA, together with Australian Standards, are sufficient to control land use and development in relation natural disaster mitigation ie. that no further controls or the SPP are needed.

The SPP would not cover the areas already managed by the BCA and Australian Standards, which deal with building and construction matters. The purpose of the SPP would be to address land use planning and development assessment issues and to identify planning measures that would deal with the issues on a wider than single-site basis and would complement the BCA and Australian Standards.

iii. Insurance Implications

Insurance implications of the mapping of risk areas were raised on various occasions. It was suggested that insurance companies could, on the basis of risk mapping, determine premiums based on identified risk, as occurs with existing arrangements relating to home insurance and the risk of break and enter. The consequence would be likely to be higher premiums of changes to insurance coverage for higher risk areas, as occurs currently in some areas that have been identified as flood-prone. It was suggested that insurance providers should provide incentives for properties/developers in higher risk areas to demonstrate the application of management principles for natural disasters.

iv. Community Awareness/ Education

Support was expressed for the preparation of an information pack by local governments for potential land purchasers, to enable purchasers to identify risk. This would enable a prospective purchaser to identify all necessary risks to a property and to then make an informed decision on the purchase of that property. Recent initiatives by the Gold Coast City Council were discussed in one workshop, including a proposal to include hazard mapping and property information relating to natural hazards on the Council website.

v. Other Hazards

The issue of other natural hazards to be potentially addressed by the proposed SPP was probed during small group workshop sessions. A range of hazards was identified, including human-induced hazards and exotic diseases. During further discussions, it was generally agreed that these issues fall outside the ambit of the proposed State Planning Policy for Land Use Planning for Natural Disaster Mitigation and Development Assessment. The suggested additional hazards and issues that were identified included:

Tsunamis;

- Chemical spills;
- Pests and pestilence;
- □ Algal blooms;
- Drought;
- □ Erosion;
- □ Salinity;
- □ Foot and mouth disease;
- Fire ants; and
- □ Mad cow disease.

These issues are not considered appropriate to be addressed in the SPP.

3.5 COMMUNITY CONSULTATION EVALUATION

A decision was made by the Department of Emergency Services to undertake extensive consultation early in the Preparation Stage of the SPP. This resulted in high levels of attendance and interest at workshops, with approximately 320 people attending the workshops and a further 90 attending the Stakeholder sessions with LGAQ and RAPI.

There was a good representation at the workshops from State Government, Local Government, Federal Government and community-based groups (particularly those with an interest in fire management). There was a low representation from conservation/environmental groups, developers, the business community and individuals.

The decision to hold regional workshops proved to be successful. In particular, the decision to hold forums in western and central regional centres was widely supported by stakeholder groups with reasonable levels of attendance in areas such as Longreach, Mt Isa and Rockhampton. Participation in the small groups workshops in all areas was excellent, within most participants actively involved in discussions on the topics. The small groups proved to be an excellent forum for the investigation of stakeholder views on the SPP and its scope and issues.

In addition to the participation at the workshops, 42 written submissions were lodged to 3 December 2001. Approximately 70% the submissions were prepared by persons and/or stakeholder groups that had attended a workshop presentation. Submissions were wide-ranging and generally presented similar viewpoints and issues.

The preparation of the Discussion Paper and its distribution prior to the workshops provided a good base level of information and common ground for participants to react to and comment on. The usefulness of this form of information dissemination was favourably commented on by many participants. Feedback on the Discussion Paper was generally positive and commended the DES and consultant team for the drafting of a through document. One participant commented that the Discussion Paper was well prepared and provided an excellent example of a Statement of Intent, prepared for the purposes of advertising a State Planning Policy. It was commented that the Discussion Paper was detailed and achieved its purpose.

3.5.1 Recommendations for Future Consultation Stages

The following recommendations for future consultation activities are made based upon ERM observations and experiences and upon stakeholder comments. As outlined above, the conduct of the workshops in key regional and rural areas was considered to be valuable and appropriate by the consultation team and stakeholder participants. In particular, the workshops in some of the more remote areas proved to be positive, enhancing the participation of people in these areas and recognising the value of such participation. It is suggested that the same cities/towns be nominated to hold future workshops in the Consultation Stage for the draft SPP. Given the opportunity for early input, experience suggests that this level of stakeholder interest will be at least maintained, if not improved in the later stages of consultation and preparation. This may have implications for the number of workshops to be held in later stages should a similar approach be adopted. Allowances should be made for additional workshops in those areas that showed high levels of interest during this first stage.

All venues were suitable for the conduct of the workshops, however, some locations could be improved with respect to the origin of the majority of participants. For example, it is suggested that increased patronage from Brisbane based stakeholders would occur if future activities are held within the CBD rather than suburban Brisbane, and similarly if workshop locations are centrally located on the Sunshine Coast, such as Maroochydore.

In some of the rural centres, some participants were still required to drive up to two to three hours to attend the workshops. Those people indicated their support for workshops in the middle of the day, allowing them to participate without having to have a particularly early or late day. It is suggested that similar timings be adopted for those regional workshops.

Chapter 4

RECOMMENDATIONS FOR THE SPP

4.1 FINDINGS AND RECOMMENDATIONS

4.1.1 Key Findings

Key findings arising from the consultation during the Preparation Stage include the following.

- There is strong support for the development of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment.
- Significant hazards of concerns to the majority of regions are flooding, landslides and bushfires. There was also strong support for storm surge to be addressed as a natural hazard;
- Participants in consultation held the view that the State Planning Policy should not be prescriptive in its approach but define a State-wide methodology for natural disaster mitigation and planning, allowing flexibility for implementation at the local and regional level.
- The State Planning Policy should be supported by practical guidelines, incorporating triggers, codes, performance based criteria and standards.

Principal issues of concern related to liability, compensation, timing, implementation at the local level, funding arrangements, data availability and the incorporation of the State Planning Policy into local planning documents.

4.1.2 Recommendations for Development of the SPP

It is recommended that a draft State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment be prepared and that it be developed in two stages.

The first stage would be the development of the SPP addressing the principal issues of concern, namely flooding, landslides and bushfires, enabling the development of a SPP to provide a State direction to assist Local Governments in the consideration of land use planning for natural disaster mitigation and development assessment in planning schemes prior to the March 2003 deadline. It is recommended that the issue of storm surge be addressed within this stage of the Policy as part of the consideration of flooding. This could be by way of reference to the State Coastal Plan or by inclusion of provisions that work together with and build on the provisions of the State Coastal Plan in the SPP for Land Use Planning for Natural Disaster Mitigation and Development Assessment. DES is currently liaising with EPA in the development of the Guidelines for the State Coastal Plan SPP.

The second stage of the SPP would involve the undertaking of research into the issues of earthquakes, cyclones and severe storms to determine the extent to which land use planning could practicably address these natural hazards.

In relation to the overall direction of the SPP and Guidelines, it is recommended that:

- the SPP contain broad principles and measures for land use planning for natural disaster mitigation and development assessment, and that practical and detailed Guidelines be developed to support the SPP. This approach would ensure consistency across the State, maximising opportunities for increased safety and community education, data and information sharing, and appropriate location of key infrastructure items, whilst ensuring planning and risk assessment is appropriate and effective at a local level;
- in as far as practicable, all Local Governments should prepare an all-hazards risk assessment and associated mapping program for incorporation into the planning scheme. Funding programs will be required to assist local authorities in the preparation of these studies, particularly smaller and/or rural local councils. Alternatively, hazard mapping may be done on a state or regional level, undertaken by a relevant state department or organisation. However, mapping must be undertaken at a scale that ensures the resultant maps are useful at a local level. State-wide hazard maps may be appropriate in relation to earthquakes, severe storms and possibly cyclones. It is noted that the level of risk is unlikely to vary significantly at a local level in relation to these events;
- the preparation of model codes for hazard planning and management be considered – possibly for each of the hazards identified ie. Code for Bushfire Management, Code for Landslide Prone Areas, Flood Management Code etc. Examination of existing hazard strategies and planning measures will provide guidance for the preparation of Codes. Some examples that could be considered include:
 - Best Practice for Floodplain Management in Australia (DNRM);
 - NSW Floodplain Management Policy;

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- Gold Coast City Council policies for Landslides, Flood Management and Bushfires;
- Bushfire Hazard Planning by DLGP and QFRS; and
- Disaster Risk Management and supporting guidelines prepared by Queensland Department of Emergency Services;
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the planning strategies and measures for hazard prone lands should advance the Integrated Planning Act's purpose through adopting a management approach based on the following principles:

- Development should be avoided in land designated as area at extreme risk of hazard impact; and
- Development limitations should be consistent with level of risk assigned to lands (ie. high, medium or low risk);
- technical studies should be required for development proposals in at risk areas (for areas at medium level of risk or higher). For example, geological studies should be required in areas prone to landslide, flooding and flow path studies should be undertaken in flood prone areas. These studies must identify how existing conditions will change as a result of the development proposal, how potential impacts may be mitigated and the implications of the likely changes; and
- in relation to development assessment, performance based development criteria should be incorporated within the planning scheme, with onus placed on developer to demonstrate the suitability of development proposals in particular locations.

i. Flooding

It is recommended that:

- the SPP deal with land use planning and development assessment in relation to mitigation of flood impacts;
- an approach be considered for the SPP that sets an agreed methodology or approach to be used across the State rather than prescribed flood levels;
- the SPP investigate the setting of flood levels on a local or regional basis determined on the basis of local studies and investigations;
- the SPP identify matters to be considered in the development of planning schemes and these include flood mapping and the identification of risk areas (high, medium and low), location of development in relation to flood-risk

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areas, environmental issues (vegetation build up in rivers/creeks), potential for dam break and the introduction of new flood levels in areas with established levels and development;

 the SPP Guidelines consider issues including access arrangements, evacuation routes and location of infrastructure; and

the SPP identify matters to be considered in development assessment including the consideration of site-specific matters such as habitable floor levels and stormwater drainage.

ii. Landslide

It is recommended that:

- the SPP deal with land use planning and development assessment in relation to mitigation of landslide impacts;
- an approach be considered for the SPP that sets an agreed methodology or approach to be used across the State rather than prescribed slope gradients;

the SPP identify matters to be considered in the development of planning schemes and these include and the identification and mapping of landslide risk areas (high, medium and low) based on slope gradient, soil type, groundwater levels and surrounding development; location of development in relation to landslide-risk areas, environmental issues and the introduction of new controls in developed areas;

 the SPP Guidelines consider issues including access arrangements, evacuation routes and location of infrastructure; and

the SPP identify matters to be considered in development assessment including the consideration of site-specific matters such as location and siting of buildings, mitigation infrastructure, vegetation protection and stormwater drainage.

iii. Bushfire

It is recommended that:

the SPP deal with land use planning and development assessment in relation to mitigation of fire impacts and that consideration be widened to include other types of fire such as grass fire and "wildfire";

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an approach be considered for the SPP that sets an agreed methodology or approach to be used across the State;

the SPP identify matters to be considered in the development of planning schemes and these include the identification and mapping of wildfire risk areas (high, medium and low), location of development in relation to wildfire-risk areas, environmental issues (including vegetation management), and the introduction of controls in relation to developed areas development;

 the SPP Guidelines consider issues including access arrangements, evacuation routes and location of infrastructure; and

the SPP identify matters to be considered in development assessment including the consideration of site-specific matters such as access/ egress, vegetation management, and location of habitable buildings.

iv. Cyclones

It is recommended that:

- the SPP specifically consider cyclone impacts in relation to other natural hazards such as flooding and landslides;
- research be undertaken to determine whether additional land use planning mechanisms can be developed that would assist in the mitigation of cyclone impacts including the identification of risk areas (high, medium and low) and location of development in relation to risk areas, access arrangements, evacuation routes, location of infrastructure and matters to be considered in development assessment including the consideration of site-specific matters such as vegetation management and site layout.
- v. Severe Storms

It is recommended that:

- the SPP specifically consider severe-storm impacts in relation to other natural hazards such as flooding and landslides;
- research be undertaken to determine whether additional land use planning mechanisms can be developed that would assist in the mitigation of severe-storm impacts including the identification of risk areas (high, medium and low) and location of development in relation to risk areas, access arrangements, evacuation routes, location of infrastructure and matters to be

considered in development assessment including the consideration of sitespecific matters such as vegetation management and site layout.

vi. Earthquakes

It is recommended that:

research be undertaken to determine whether additional land use planning mechanisms can be developed that would assist in the mitigation of earthquake impacts including the identification of risk areas (high, medium and low) and location of development in relation to risk areas, access arrangements, evacuation routes and location of infrastructure.

vii. Other issues that could be addressed in the SPP

It is recommended that consideration be given in the drafting of the SPP to:

- storm surge and the relationship between the SPP and the State Coastal Plan;
- climate change/ greenhouse and the likely implications in relation to the natural disasters being considered;
- liability and compensation issues particularly in relation to Local Government.

4.2 TIMING, FUNDING AND RESPONSIBILITY

The proposed two stage approach for the preparation of the State Planning Policy was founded on timing related issues associated with the March 2003 deadline applying to all Queensland local governments for the completion of IPA compliant planning schemes. It is considered that the staged preparation of the Policy, dealing with the highest priority hazards for the State prior to the deadline, would provide the best opportunity for local governments to consider the issues raised by the State Planning Policy in their planning scheme preparation.

Other hazards could be considered in a later amendment to the Policy, ensuring the preparation of a well prepared and comprehensive document. The inclusion of all issues in a single stage State Planning Policy is not considered feasible given the range and depth of issues involved and the relatively short timeframe available.

While allowing the opportunity for a comprehensive preparation process, this approach may require local governments to revisit recently completed planning

schemes for consideration of the second stage State Planning Policy, potentially duplicating or increasing efforts. This would be dependent on the timing of amendments arising from this process as there may be opportunity for changes to be made as part of the scheduled planning scheme review process in accordance with IPA requirements.

In the case of implementation of State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment, DES may take on referral agency responsibilities, and in some cases, act as assessment manager, in the assessment of development applications. This would have resourcing implications.

Consideration will need to be given to funding arrangements/assistance that may need to be provided, particularly to smaller or under-resourced local governments, due to SPP recommendations and requirements. By way of example, the SPP Guidelines could potentially specify a uniform approach and base level of information required across the State in relation to hazard mapping. Compliance with the SPP in this regard may require the dedication of funds over and above those available for natural disaster planning and mitigation in particular local areas.

4.3 FURTHER STUDIES

The need for additional information and data relating to the occurrence, nature and likely impacts of natural disasters across the State was clearly emphasised by the majority of stakeholder groups. Additional studies into flood patterns, potential earthquake activity; geological studies in areas subject to landslip, and bushfire 'hotspots' were identified as desirable inputs to the planning process which may be beyond the capacity of available financial resources, time and/or expertise.

A range of existing and current studies and research programs were identified during the consultation programs as potential information sources to reduce the requirements in obtaining supporting data and information. These studies and programs included:

Central Queensland University and Australian Emergency Management Institute
 research into earthquakes;

- Bureau of Meteorology greenhouse and climate change research;
- CSIRO relevant studies and research program; and
- AGSO reports on Natural Hazards in the Cairns, Mackay, Gladstone and South-East Queensland regions and additional research.

During the Preparation Stage, it was advised that DNRM has commenced studies towards the possible preparation of a State Planning Policy in relation to Flooding.

A whole-of-Government approach is being proposed in relation to this issue. DES is liaising with DNRM with a view to delineating roles and responsibilities of each agency.

4.4 STAKEHOLDERS

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Continuing consultation with key stakeholder groups is strongly recommended. Stakeholder groups poorly represented at workshops sessions included conservation and environmental groups, developers and local business/economic development groups, and individuals. It is suggested that these groups are specifically targetted during the preparation of the State Planning Policy and associated consultation processes.

Other stakeholder groups currently absent from consultation activities, identified during the workshop sessions, including service suppliers such as Energex and Ergon and Port Authorities.

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APPENDICES

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Appendix A

DISCUSSION PAPER



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This Discussion Paper is Pepared and published solely and strictly for the purposes of public discussion. Its contents do not commit the Government nor a Minister thereof either to the views expressed nor to a particular direction for future action

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Glossary of Acronyms Acknowledgements

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- a AGSO Australian Geological Survey Organisation
- BoM Bureau of Meteorology
- DES Department of Emergency Services
- D DLGP Department of Local Government and Planning
- DMR · Department of Main Roads
- DNRM Department of Natural Resources and Mines
- DOFA Federal Department of Finance and Administration
- DPW Department of Public Works
- DSD Department of State Development
- DTRS Federal Department of Transport and Regional Services
- D EMA Emergency Management Australia
- D EPA Environmental Protection Agency
- IPA -- Integrated Planning Act 1997

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- LGCDCs Local Government Counter Disaster Committees
- D LGCDPs Local Government Counter Disaster Plans
- D NDRA Natural Disaster Relief Arrangements
- D NDRMSP Natural Disaster Risk Management Studies Program
- RAPI Royal Australian Planning Institute
- D RFMP Regional Flood Mitigation Program
- SCDO State Counter Disaster Organisation
- SCDO Act State Counter-Disaster Organisation Act 1975
- SDMC State Disaster Mitigation Committee
- □ SPP State Planning Policy

A number of organisations were consulted during a Focus Workshop in July 2001 and contributed to the contents of this Discussion Paper. These organisations included:

- □ all three levels of government;
- academics in land use planning, disaster management and climatology; and
- peak organisations for industry professional and community organisations.

A list of organisations that contributed can be found at Appendix C.

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This chapter introduces the Discussion Paper and its purpose.

Natural disasters affect every State and Territory in Australia and directly affect the everyday lives of residents in communities vulnerable to those hazards. In the past 25 years, Australia has experienced a major disaster on average every four years. These have included Cyclone Tracy, Ash Wednesday Bushfires, Newcastle Earthquake, Thredbo Landslide and major flooding around Brisbane, Nyngan, Charleville, Katherine and Benalla. There are other significant disasters which occur throughout Australia on an annual basis. Natural disasters are estimated to have cost \$1.14 billion per year between 1967 and 1999 (Bureau of Transport Economics).

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Although plans for responding to and recovering from natural disasters are usually well developed, measures for the prevention, forward planning and mitigation of impacts are generally less well developed. Land use planning and planning standards can make a significant contribution to minimising or reducing risks to the community and the natural environment from these types of events.

This Discussion Paper investigates the possibility of developing a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. The policy would be used to guide development in advance of a disaster, thus aiming at decreasing the risks of impacts on society, infrastructure, the economy and the environment. Natural hazards are meteorological or geological phenomena that have the potential to negatively impact on communities and the environment. Natural hazard events can create disaster situations for communities and the environment. Even relatively minor impacts of natural hazards can become significant over time and in terms of the ongoing economic, social and environmental costs. The cumulative impacts of natural hazards are magnified if these events repeatedly affect the same areas.

There are direct, indirect, tangible and intangible costs associated with natural hazards and natural disasters. These costs include:

- □ loss of life;
- physical suffering;
- emotional suffering;
- □ damage to property;
- reduced productivity;
- □ degraded environment;
- loss of species and habitats;
- damaged infrastructure;
- weakened economy;
- loss of employment;
- associated loss to business and primary producers;
- increased costs of Insurance; and
- reduced quality of life.

There are six natural hazards of importance to Queensland being considered for inclusion in the State Planning Policy.

<u>Cyclones</u> are intense low pressure systems that are characterised by a spiral circulation pattern with dense clouds and mean surface winds exceeding gale force (60 km/hr) near the centre. Cyclones often cause severe damage due to the high speed winds and consequential impacts such as storm surge and flooding. Storm surge will be dealt with in the State Coastal Management Plan and this proposed State Planning Policy will call up that Plan. development assessment issues. State Planning Policies address matters that have to be considered when making planning decisions rather than merely offering advice. They play a key role in shaping new planning schemes and are used by Local Governments and State Government departments when assessing development applications.

A State Planning Policy may be supported by guidelines providing advice on implementation and can refer to other relevant documents such as Australian Standards.

A State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment (the SPP) is being considered as a potential means to:

- make clear the State's interest in land use planning as it relates to natural hazards;
- guide development decisions and the preparation of planning schemes that reduce the community's vulnerability to the impacts of natural hazards;
- encourage consistency across Queensland in land use planning for natural hazard mitigation; and
- provide a policy context and support for Local Governments and the State Government to make decisions concerning development applications in areas subject to natural hazards.

Through Local Government planning schemes and in the assessment of development applications, the State Planning Policy would influence decisions on the location and/or requirements for future development, including infrastructure in the Local Government area. After assessing the impact of a proposed development on the safety of the community, Local Governments may, where appropriate, require the development application to be amended or refuse an application.

As natural hazards exist throughout Queensland, it would be reasonable that the policy applies State-wide. The SPP would, as provided for in IPA, be binding on the Crown. Thus all State departments and agencies would be required to consider the implications of the SPP for State development and community infrastructure projects.

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A State Planning Policy cannot eliminate all risks to communities associated with natural disasters and cannot affect past land use decisions. There are important limits on the scope of the SPP. For example:

- This State Planning Policy could consider addressing natural hazards such as cyclone, flooding, landslides, bushfires, severe storms and earthquake. These natural hazards, however, can only be addressed in terms of land use planning and development assessment. It is possible that direct and effective land use planning and development control measures may only appropriately be developed to deal with some aspects of these natural hazards as they impact upon vulnerable communities.
- A State Planning Policy cannot resolve directly issues associated with established urban areas and existing developments.
- A State Planning Policy cannot direct Local Governments to adopt specific mitigation methods such as a 'no development in a floodplain' strategy or require Local Governments to build levees to protect development in a floodplain. Rather, a State Planning Policy may require Local Governments to implement methods to reach mitigation outcomes based on the intent of the State Planning Policy and appropriate to the natural hazard risks identified in the Local Government area.
- A State Planning Policy would place the responsibility on Local Governments and relevant State Government departments to identify and manage risks associated with natural disasters.

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This State Planning Policy will not address technological hazards such as chemical spills, exotic diseases, bridge collapse, space debris and other incidents not related to natural disasters. However, the Policy may make provision for dealing with flooding caused by a dam break.

The SPP would not replace other initiatives Local Governments can take to mitigate natural disasters. Other supplementary initiatives could include, for example, early warning systems, public education programs, counter disaster plans, disaster mitigation plans, relocation or acquisition of properties, and building levees and culverts. The SPP would not replace other standards and requirements such as the Building Code of Australia. This chapter considers the Queensland planning context and the potential link between land use planning and natural hazard mitigation.

Land use planning and planning standards can make a significant contribution to minimising or reducing risk to the community and to the natural environment from natural hazards. This chapter will discuss how land use planning under the *Integrated Planning Act 1997* (IPA) can address natural hazard impacts on vulnerable communities and infrastructure in general, and in relation to identified natural hazards. The focus is on mitigation.

The impact of natural hazards is dependent upon the interaction of three systems:

- Physical systems: geophysical and climatic conditions at local, regional, national and international levels along with the health of the environment;
- Social systems: socio-demographic characteristics, such as income, age, mobility and education, of communities impacted by natural hazards; and
- Built systems: quantity, quality and location of buildings and infrastructure, including roads, bridges and communication networks.

The risk of increased impacts as a result of natural hazards is rising because of changes in the interaction between communities, hazards and the environment. Global warming may be increasing the frequency and severity of certain natural hazards such as bushfires, cyclones and storm surges in many areas. At the same time, regional and local changes to the environment have decreased the ability of natural systems and communities to cope with the impacts of those hazards. The increasing desire of people to live in established urban areas is resulting in increased demand for urban land. This has resulted in increased pressure for the development of areas that are potentially more susceptible to hazards and the associated interference with natural processes and landforms, such as the filling of areas that serve as natural flood retention basins, and the removal of vegetation to facilitate development and rural activities.

Changes in the socio-economic makeup of communities have also increased the risk of natural hazards. There has been an increase in the inequality of wealth, particularly between regions, which has made certain populations more vulnerable to losses from natural hazards, particularly economically disadvantaged communities which cannot afford adequate risk reduction measures.

Land use planning can play a key part in reducing current and future community risk by identifying in advance the areas with increased risk and ensuring that new development does not occur or occurs in a controlled manner within those areas. It requires the balancing of many interests including private sector needs, public policy requirements, equity, long-term economic development, environmental conservation, amenity, community safety and well-being. It also requires careful community planning, education and considered environmental and resource management strategies.

In Queensiand, Local Governments plan for and control development through planning schemes prepared under the *Integrated Planning Act 1997* (IPA). Most existing planning schemes were prepared under previous legislation and include little guidance or control in relation to land use planning for natural disaster mitigation and development assessment.

There are no formal policy or guidelines providing direction or consistency across the State and this has resulted in a varied approach to natural hazards planning. Some Local Governments have adopted quite extensive and stringent planning controls dealing with matters such as flooding, bushfires and landslips and how development may occur in areas prone to impact from those hazards. Others have few or no planning mechanisms or controls. One reason for the differences in the level of planning and planning controls between Local Governments is the differences in the baseline data available. Detailed information is available for some areas whilst in others no data is available. In recent years, this situation has been able to be redressed by the provision of ongoing funding through the Natural Disaster Risk Management Studies Program, described further in Appendix B.

The principal land use control and management framework for the State is the *Integrated Planning Act 1997* (IPA) which controls the forward planning and development assessment processes. IPA has created a system that provides for comprehensive and integrated assessment and decision making, whilst seeking to achieve ecological sustainability.

As part of their wider planning responsibilities, the planning control of natural hazards is a responsibility of Local Governments under IPA. The State's interests in relation to natural disasters are formally considered when Local Governments are preparing planning schemes and in relation to those development applications for which State Government departments are the assessment manager or a referral or concurrence agency. The ecological sustainability principles and associated text within IPA recognise that the Act's purpose can be advanced through State Government activities as well as Local Government planning schemes. The purpose of the Act includes 'coordinating and integrating planning at the local, regional and State levels' as a way of seeking to achieve ecological sustainability. This includes the drafting of State Planning Policies such as that being contemplated in this Discussion Paper.

The creation of a State Planning Policy specifically focussed on the control and management of natural hazard impacts would ensure that this matter of State interest is incorporated within future planning scheme provisions, and considered within specific development applications and proposals.

2.4.1 Planning schemes

Planning schemes are the principal instruments for consolidating and expressing planning policies relating to each Local Government area. IPA requires that State Planning Policies be appropriately reflected in planning schemes.

The introduction of IPA has required that all Queensland Local Governments prepare new planning schemes consistent with the desired outcomes and requirements of IPA prior to March 2003. To date, only a handful of IPA Planning Schemes are in operation throughout Queensland. Most Local Governments are preparing their IPA Planning Schemes which are required to specifically address and integrate State Planning Policies and requirements.

Planning Schemes can be drafted to address and ensure compliance with a State Planning Policy in a number of ways, including:

 inclusion of Strategic Policy directions as part of a Desired Environmental Outcome for the scheme;

- identification of land which is particularly at risk to damage from natural hazards and formulation of land use strategy to direct and control the form and limits of development in areas susceptible to natural hazards. This would include hazard and risk mapping. An example would be the prevention or limiting of urban development in areas of known potential threat from flooding;
- creation of planning scheme codes specifically addressing natural hazards; and
- inclusion of requirements for development to produce site specific plans for identified natural hazards, eg. a bushfire management plan.

Any State Planning Policy must be reflected in Local Government planning schemes. Where Planning Schemes have already been adopted in accordance with IPA, development must comply with applicable State Planning Policies and the provisions can be applied at the development assessment phase of the planning process.

2.4.2 Development assessment

Under IPA, Local Governments and State Government have the responsibility for managing development assessment. This includes the consideration of State Planning Policies in relation to development applications and acting as referral or concurrence agencies where such roles have been established in the IPA Regulations.

The following issues need to be addressed in any planning relating to natural hazards. These issues could be considered basic principles for developing a SPP.

Information on natural hazards and land use patterns, and activities that are increasing the potential risks to communities and infrastructure from those hazards, must be gathered, together with information as to which activities and land uses are likely to result in increased risks.

- Appropriate opportunities for natural hazard management should be identified and adopted to encourage a proactive rather than a reactive approach to natural hazard management.
- Clear policies and guidelines should be formulated for effective management of natural hazards and the implications of those upon land use planning.
- The role and responsibilities of stakeholders should be clearly defined and reviewed regularly.
- All tiers of government, industry and the community need to work together towards common resource considerations and management objectives.

This section outlines planning approaches that may be applied to natural hazards.

2.6.1 Disaster risk management

Many current natural hazard impact management approaches are reactive and short term, concentrating on the response to disasters. However, hazard Impact management has been undergoing a shift over recent years and the focus is being widened to seek to reduce community risk and increase community safety in advance of disasters.

Effective planning requires sound background and baseline information which can be derived by following a disaster risk management approach as outlined by Australian and New Zealand Standard AS/NZS 4360. This standard is used in Natural Disaster Risk Management Studies Program (NDRMSP) Initiatives and has been trialed effectively in various Queensland Local Governments. Further information about NDRMSP can be found in Appendix B. Applying the AS/NZS 4360 standard involves the process described in Figure 1: establishing the context, identifying risks, analysing, evaluating and treating those risks, and communicating, consulting, monitoring and reviewing. To establish the context, a description is required of the scope and nature of the issues that need to be addressed to ensure community safety and well-being. This includes:

- an understanding of crucial elements that will support or impair the disaster risk management process and an understanding of the structure of the project such as the boundaries of the study;
- the terms of reference; and
- the sequence of activities.

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The active and visible support of the Chief Executive Officer and the nomination of a disaster risk management team leader and resources are crucial to the success of the project. Developing risk evaluation criteria at the onset of the project is important to determine the definition and rating of terms such as 'likelihood' and 'consequence' as well as the acceptability or non-acceptability of risks.

When identifying risks, hazards with some realistic chance of occurrence need to be identified and the nature of the community potentially at risk needs to be described e.g. age, background and socio-economic characteristics. Identified risks are examined for the likelihood and consequence of occurrence and are rated according to the level of risk using technical, economic, legal, social, humanitarian and other criteria. Decisions are then made on which risks need to be treated and which can be accepted, with unacceptable risks being prioritised so that the most significant risks are addressed first. Treatment strategies are developed for each risk, with options being selected which will reduce each risk to an acceptable level based on reasons such as effectiveness, cost and social justice issues. When treatments for the various risks are selected and plans developed and implemented, it is important to communicate, consult, monitor and review the risks and treatments.



Figure 1: Main Elements of the Disaster Risk Management Process Source: Queensland Department of Emergency Services, Disaster Risk Management

Natural hazards mapping is central to, but is not the same as, effective disaster risk management planning. Natural hazards mapping identifies the type and likely location of natural hazards in a given area. Natural disaster risk management planning identifies where these hazards may impact on vulnerable communities and infrastructure with disastrous impacts. Factors, issues and systems can be identified. modelled and mapped for each natural hazard to identify areas of higher risk or potential risk. Such maps can be used in planning schemes and development assessment to control the location and form of development. It is desirable that such mapping conforms to a common State or National standard.

2.6.2 Planning schemes and development assessment

Land use planning can be used to control where and how development occurs. By controlling the extent and form of development in at risk areas, the potential for damage in the event of a disaster occurring can be reduced. Provisions can be included in planning schemes and in relation to development assessment. Projectspecific measures can include the preparation of site management plans that outline the site specific characteristics and risks that specific natural hazards may impose, the most appropriate management techniques for the site, and emergency response plans to deal with specific hazards and disasters. A State Planning Policy can recommend approaches to land use planning for natural disaster mitigation to be used in planning scheme preparation and development assessment.

2.6.3 Mitigation infrastructure

Increasingly, mitigation infrastructure, such as construction of dams, and mitigation measures to control flooding and stormwater run-off, is being used in established urban areas and emerging urban areas to assist in the mitigation of impacts. However, there is residual risk where design standards are exceeded by the impact of the natural hazards. For example, a levee is designed to a certain flood level. level is exceeded, overtopping of the levee will occur. A State Planning Policy can recommend approaches for the consideration of appropriate mitigation measures.

2.6.4 Complementary measures

There are many complementary regulations and codes that assist in the mitigation of the impacts of natural disasters. For example, buildings can be designed to withstand the winds from cyclones and storms, or to withstand ground movements as a result of earthquake activity. Standards to do this are contained within the Building Code of Australia, Standard Building Regulations and various Australian Standards. These are important and effective management techniques, but do not fall within the ambit of a State Planning Policy.

This section outlines key planning and mitigation measures for each natural hazard. For each hazard, development assessment strategies can include the preparation of site management plans that outline the site specific characteristics and risks that specific natural hazards may impose, the most appropriate management techniques for the site, and emergency response plans to deal with specific hazards and disasters.

2.7.1 Cyclones and storm surge

At present, mitigation and control measures for cyclones and storm surges are generally reactive and are very short term in nature. They include cyclone watches and cyclone warnings issued by the Bureau of Meteorology when a cyclone or developing cyclone is likely to affect coastal or inland communities. Building control measures apply in at risk areas.

From a land use planning perspective, it is very difficult to effectively control and reduce the risks of damage from cyclones. Some of the related impacts from flooding and storm surge may, however, be addressed by land use planning measures. Land use planning can limit the amount and intensity of development in areas with the greatest risk of impact from a storm surge. Planning can also take into account potential risk of flooding as a result of heavy rain caused by a cyclone (see Section 2.7.2). The issue of storm surge will be covered and managed through the State Coastal Management Plan and will not be included in this State Planning Policy. This State Planning Policy will refer to the State Coastal Management Plan to ensure consistency in Queensland Government policy.

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2.7.2 Flooding

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There is no consistent approach to the setting of flood level development limits and flood modelling in Queensland. For example, in some areas Local Governments regulate development based on the 1 in 100 year flood level whilst others base it on different levels such as the 1 in 50 year flood level. This situation increases costs and inefficiencies. The availability of accurate and consistent flood data and the use of consistent planning approaches would assist in the making of informed planning decisions, provide better protection for communities and may reduce the potential for litigation. An issue which needs to be considered is the extent of liability for Local Governments that may exist in relation to the publication and use of flood mapping.

Land use planning can limit the amount and intensity of development in areas with the greatest risk of impact from flooding particularly low lying and flood plain areas. This is of particular concern as the decreasing stock of land available for urban development is resulting in increased pressure for the development of at-risk areas. In addition, development assessment should seek to ensure that the drainage and flood retention ability of an area is not reduced as a result of heavy rain. Increased mapping and the development of consistent planning standards are needed. <u>Flood mitigation infrastructure</u>: There are increasing amounts of flood mitigation infrastructure around and throughout the State particularly control dams, weirs and levees. Flood mitigation infrastructure is built to a design level and there is residual risk.

2.7.3 Landslides

Quantitative risk assessment may be used in the land use planning response to landslide risk. Hazard ratings may be used to evaluate landslide risk within Local Government areas based on consistent criteria such as ground surface slope, sub surface profile, and depth of groundwater. The Gold Coast City Council "Guidelines for Control of Slope Stability within the City of Gold Coast" has been put forward as an example of best practice.

Land use planning can be used to limit development to areas of appropriate slope and site conditions, reducing the risk of landslips affecting development. Conditions can also be imposed in relation to development approvals, specifying site-specific requirements for management of this issue.

2.7.4 Bushfires

With increasing demand for rural residential and rural retreats it is likely that fire-prone areas will continue to experience development pressure and the likelihood of property damage from bushfires may increase. Risk factors need to be appropriately managed if bushfire devastation is to be avoided. Land use planning for bushfire risk management includes the provision of passive protection measures incorporating siting, layout design and construction of buildings and landscaping. These are a reliable and effective way of reducing the impact and damage of bushfires. The opportunity exists to declare and plan for bushfire prone areas. <u>Risk identification and land use planning</u>: Areas subject to the threat of bushfires can be identified and ranked for low, medium or high bushfire risk. Planning measures can include limitation on development in risk areas or areas where fire services are not available, requirement of inclusion of firebreaks, and provision of water supply for firefighting.

The nature and unpredictability of storms means that it is very difficult to effectively control and reduce the risks of damage. Control measures predominantly relate to the issuing of warnings and predictions. These give residents a short period of time to prepare for storms, thus marginally minimising some impacts like damage to portable items such as cars, and garden furniture.

Little can be done in relation to land use planning to prevent damage as a result of storm activity. Some of the related impacts from flooding and storm surge may, however, be addressed by land use planning measures. The following strategies can be used to mitigate the effects of severe storms.

Land use planning: Development can be designed on a site specific level to ensure that impacts such as strong winds and flash flooding are not impeded by the design of the development. Development can be designed to allow the flow of waters and prevent the tunnelling of winds.

2.7.6 Earthquakes

Earthquakes pose a relatively low risk of occurrence in Queensland, but have potentially high consequences. Earthquake exposure can be planned for, however, information is required to assess land use options which balance safety, development and the environment. Susceptibility mapping is a key tool which can be developed for Local Governments to use in assessing risks. Land use planning can exclude development from identified areas of higher earthquake risk, perhaps along identified fault lines and known unstable areas.

Mitigation infrastructure planning can seek to ensure that key infrastructure items are designed to resist damage by minor to moderate earth movement activity as well as being located and designed so as to minimise the time required to repair and replace any necessary infrastructure as a result of any earthquake activity.

2.7.7 Summary

Land use planning is an effective tool to mitigate the effects of natural hazard impacts on vulnerable communities. A summary of the planning measures which may be used in relation to natural hazards is outlined in the following table.

	Land Use Planning	Mitigation Infrastructure	Development Assessment
Cyclones			x
Flooding	×	x	×
Landslides	x		x
Bushfires	×		. x
Severe storms			x
Earthquakes	x .	x	x

The purpose of this Discussion Paper is to provide a catalyst during the first round of public consultation, to identify the interests of the various stakeholders and provide input to facilitate the drafting of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment.

The options discussed in this chapter are:

- maintain and support the current approaches; and
- develop a State Planning Policy for Land Use Planning for Natural Disaster Mitigation and Development Assessment.

The relative disadvantages and advantages associated with each option are discussed.

3.1.1 Maintain and support the current approaches

It is possible to continue with the current multiple approaches to natural hazards planning and management. These could be supplemented by the development of Statewide planning guidelines to assist Local Governments in preparing planning schemes that take natural hazards into account. This option could also be supported by training and education programs as well as specific amendments to existing legislation such as the Local Government Act to minimise Local Government liabilities with respect to public access to flood information.

There are a number of problems and deficiencies that are apparent in the current approaches. These include:

- lack of land use planning for disaster mitigation and development assessment;
- inconsistent approaches across the State, for example in relation to flood level modelling and use;
- lack of information on which to base land use planning (this can contribute to litigation in relation to planning decisions which can be costly and time-consuming);

- lack of comprehensive support and guidance on how to incorporate planning for natural disaster mitigation and development assessment in planning schemes and with State activities; and
- lack of compulsion to consider mitigation of the effects of natural disasters in Queensland.

Maintaining the current approaches and not developing a State Planning Policy is a limited option. Research and targeted consultation undertaken to date indicates that there is an identified need for a comprehensive and consistent approach to land use planning for natural disaster mitigation and development assessment. The lack of a State-wide policy framework to deal with land use planning for natural disaster mitigation appears to be currently limiting the scope of IPA planning schemes.

Key issues to be considered in relation to this approach relate to the apparent multiplicity of and conflict between current approaches and provisions and whether continuation of these approaches achieves the best planning outcomes for Queensland.

3.1.2 Develop a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment

The development of a State Planning Policy would allow for the common elements of natural hazards planning and mitigation management to be drawn together into a comprehensive document. This would result in a consolidated resource which could be used by Locai Governments and the State Government in the preparation of planning schemes and the assessment of development applications.

In relation to specific areas of State Government responsibility, a State Planning Policy could define areas of State interest and policy direction and address planning for State infrastructure. The State Planning Policy and supporting guidelines would provide a framework, support and guidance to address land use planning for natural disaster mitigation and development assessment. It would also provide a level of consistency for Local Governments to apply standards (risk mapping and model siting requirements for development etc) for each of the natural hazards. Chapter 2 discusses in some detail the likely nature of planning measures that could be covered in the proposed State Planning Policy, including:

- Land use planning A State Planning Policy could provide direction on the location and management of development in at risk areas through hazard/risk mapping and development of appropriate planning tools. It could also provide a basis for development assessment in relation to applications concerning land in at risk areas.
- Mitigation infrastructure A State Planning Policy could recommend approaches to the location of, and planning implications of, mitigation measures (such as construction of dams and mitigation measures to control flooding and stormwater run-off).

These could be used in developing natural hazard mitigation frameworks into planning schemes as well as forming triggers for natural hazard risk assessments to be undertaken at a development application stage. Development of a State Planning Policy could provide a strengthened basis for decision-making and reduce challenges to decisions. A State Planning Policy for natural disasters would need to have some flexibility to allow for the incorporation of additional baseline information as it becomes available. A State Planning Policy would also need to provide flexibility for local circumstances to be addressed within an overall framework. In addition, a State Planning Policy could provide an opportunity to:

- address issues such as planning for climate change (greenhouse);
- assess disaster risk and develop mitigation strategies which may be required as a basis for Natural Disaster Relief Arrangements (NDRA) funding for likely or recurring natural disasters (see Appendix B for NDRA information);
- Increase the likelihood of better insurance cover because natural disaster risk could be linked to commercial risk by insurance companies; and
- reduce potential litigation.

The Department of Emergency Services and Department of Local Government and Planning would be responsible for preparing and administering the State Planning Policy. The Department of Local Government and Planning's responsibilities would include ensuring that advice from the Department of Emergency Services about interpreting the State Planning Policy is integrated with Local Governments' planning schemes in a way that is balanced with other relevant planning considerations in the local area.

Local Governments and State Government would be required to consider the State Planning Policy when making decisions on applications for new developments as specified in the State Planning Policy.

The Department of Emergency Services and other State Government Departments would be available to provide advice to Local Governments on interpreting the State Planning Policy in particular situations. This Discussion Paper has been primarily prepared as a resource document for key stakeholders to respond to during the public consultation process. It should assist in identifying the interests of the various stakeholders and input to facilitate the drafting of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment.

The Department of Emergency Services welcomes comments during the development of the State Planning Policy which will address land use planning as it relates to natural disaster risk management issues in planning and development assessment. You are invited to make comment during the upcoming consultation program detailed in the table below.

If the Ministers decide to proceed to prepare a State Planning Policy, a proposed State Planning Policy will be drafted and will be available for public consultation in line with the requirements of the *Integrated Planning Act* 1997.

The intention of public consultation is to encourage as many stakeholders as possible to contribute to the development of the State Planning Policy within publicly advertised timeframes. Stakeholders are encouraged to make a written submission within the advertised timeframe. Submissions can be posted, faxed, or emailed to the Disaster Mitigation Unit. Stakeholders can also speak with Department of Emergency Services officers involved in the development of the State Planning Policy. Contact details for the office are below. In addition, representatives of key stakeholder groups who are authorised by their organisation to speak on its behalf, may request a meeting with a Departmental representative within the advertised consultation period.

Written submissions are due by Friday 9 November 2001 should be addressed to:

Director

Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001



A suggested proforma for your submission follows. This proforma is also available on the Department of Emergency Services website: www.emergency.qld.gov.au/community/spp

	Purpose				
State Planning Policy	For stakeholder to comment on the subject matter and scope of the proposed policy	September to 9 November 2001			
Preparation Phase	A series of regional workshops will be undertaken to promote discussion on this Discussion Paper. Comments can be made at public consultation meetings and/or In a written submission. Public workshop meetings will be advertised in early September In the <i>Courler-Mail</i> and major regional papers.	October 2001			
Decision to Proceed	Decision by the Minister for Emergency Services and the Minister for Local Government and Planning as to whether to proceed to prepare a State Planning Policy.	Early 2002			

The following is a suggested proforma for submissions on the intent to prepare a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. Interested Individuals and representatives of organisations are encouraged to make a written submission regarding the Discussion Paper. Written submissions close on Friday 9 November 2001.

Name of submitter (e.g. organisation)	
Name of author or Mr/Mrs/Mss/Dr contact person	
Work number	Mobile number
Contact address for correspondence	
Stakeholder group - please tick the appropriate	te box:
 Local Government Queensland Government or agency Commonwealth Government Peak Group industry professional community conservation other (please specify) 	 Academic climatology land use planning disaster management other General community member Property developer Property owner Insurance industry representative Consultant or advisor on land
 Industry Group insurance tourism primary Industry mining other (please specify) 	planning of other natural hazards

What is your preferred option for land use planning for disaster management and mitigation within Queensland, or what alternative option would you prefer? (see Chapter 3 and Appendix B).

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What natural hazards should be included in the State Planning Policy? (see Section 1.2 and Appendix A)

Cyclones Floods Landslides Bushfires Severe storms Earthquakes

Other?	Please	specify
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comment				
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There are a number of issues identified in Chapter 2 concerning natural disaster management and land use planning. Are there other issues which are not identified?

☐ Yes ☐No

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If yes, please give details of unidentified issues.

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Chapter 2 outlines land use planning measures to mitigate natural disasters. Do you support these measures?

🗋 Yes	🗌 No
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Are there other measures which could be adopted in a State Planning Policy?

🗌 Yes 🗌 No

Please describe any additional land use planning measures that could be considered for a State Planning Policy (see Chapter 2). Please specify whether or not your comments refer to a specific natural hazard.

Are there basic principles which should be the foundation of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment which would ensure that future urban development is undertaken in a manner that minimises the potential for disastrous impacts from natural hazards? (see Chapter 2, Section 2.5).

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The following documents were utilised as reference and baseline information.

- Bureau of Transport Economics, *Economic Costs of Natural Disesters in Australia*, January 2001.
- Emergency Management Australia, Planning Safer Communities Land Use Planning for Natural Hazards, 2000.
- Gold Coast City Council, Guidelines for Control of Slope Instability within the City of Gold Coast.
- □ Harle, J, *State Planning Policies under the IPA*, June 2001.
- D Queensland Department of Emergency Services, Disaster Risk Management, 2000.
- Queensland Department of Local Government and Planning, *Bushfire Prone Area Siting and Design of Residential Buildings*, December 1997.
- Queensland Department of Natural Resources and Mines, Draft State Flood Mitigation Policy Discussion Paper, July 2001.
- Queensland Fire Service, Bushfires Hazard Planning in Queensiand, November 1993.
- Royal Australian Planning institute, RAPI Policy on Mitigation Of Natural Disaster Hazards, June 2001.

- D State Counter Disaster Organisation, State Counter Disaster Plan, March 2001.
- The following websites were accessed and information utilised:
- Emergency Management Australia www.ema.gov.au
- Natural Disaster Relief Arrangements funding www.finance.gov.au/scripts/search.idq
- Queensland Department of Emergency Services www.emergency.qld.gov.au
- □ State Counter Disaster Organisation www.disaster.qld.gov.au

Each year natural hazards have the potential to affect the State's economy, the social wellbeing of Queensland residents, and to cause significant loss of life and disruption as a result of damage to property, the environment and infrastructure. It is estimated that, for every dollar spent on natural disaster mitigation, at least two to three dollars are saved in response and recovery costs.

Nationally, the average annual cost of disasters has been estimated to be \$1.14 billion with the total cost of most disasters being between ten and fifty million dollars (Bureau of Transport Economics). The Federal Government, under the Natural Disaster Relief Arrangements, provides funding assistance to States, Territories and Local Governments to alleviate the financial burden by providing natural disaster relief payments and infrastructure restoration. In 1999/2000 Natural Disaster Relief Arrangements funding for Queensland was \$102.4 million (Queensland Treasury). These figures do not represent the total cost of disasters. Funds under the Natural Disaster Relief Arrangements only partly reimburse States, Territories and Local Governments. These figures exclude the costs of environmental damage, consequential loss by small business and primary industries, insurance payouts and other costs borne by individuals. These excluded costs are estimated to be several times the infrastructure restoration costs. There are also social and human costs: deaths, injuries, social disruption, shattered lives and mental anguish.

By disaster type, the most costly natural disasters for Queensland between 1967 and 1999 were floods (46.7% of costs), cyclones (37.6%), severe storms (15.6%) and bushfires (0.2%) (Bureau of Transport Economics).

Financially and socially it is in everyone's best interests to mitigate natural disasters. Clearly, it is in the State's interest to manage the risks to provide for safer communities and minimise financial, social, cultural and environmental costs.

While natural phenomena such as cyclones, severe rain and earthquakes cannot be prevented, it is increasingly clear that disaster losses – rather than stemming from unexpected and uncontrollable events – are the predictable result of the Interactions between three major systems. These systems are:

- the natural physical environment, including natural hazards;
- the social and demographic characteristics of communities experiencing disasters; and
- the constructed environment, including buildings, roads and bridges.

More and more, effects of disasters are the result of human action or inaction. Settlement patterns have changed, resulting in significant populations locating in areas subject to potential hazards such as low-lying land prone to flooding, coastal areas exposed to cyclones and storm surge, and fire hazardous areas.

The following sections describe each of the natural hazards listed in Chapter 1 in more detail.

Tropical cyclones (also known as hurricanes in North America and typhoons in Asia) are like giant whirlwinds of air and dense cloud spiralling at over 120 km/hr around a central 'eye' of extreme low pressure. The cyclone season is usually from December to April and affects the Queensland Coast, with the greatest threat north of the Tropic of Capricorn. Cyclones occur frequently in the Southern Hemisphere with an average of 10 cyclones per year. Cyclones often produce winds in excess of 200km/h which can cause extensive damage to property and turn debris into dangerous missiles. They can also bring flood rains, which cause further damage to property and can cause huge seas, putting vessels in danger both in harbour and out at sea.

Cyclones are often accompanied by storm surges. A storm surge is a raised dome of seawater typically 60km to 80km across and two to five metres above the normal sea level. As a cyclone reaches the coast the huge winds whip up the sea and push the dome of water over low-lying coastal areas. A storm surge comes in like a rapidly rising tide except it can be extremely dangerous and destructive. The effects of a storm surge are dependent on the state of the tide. Storm surges are most dangerous when accompanied by a high tide because they raise the sea level up to five metres and can cause significant damage to infrastructure, buildings, human life and the environment. The combined water level is known as a storm tide.

Floods occur when water covers land which is normally dry. They may result from prolonged or very heavy rainfall, severe thunderstorms, monsoonal (wet season) rains in the tropics, or tropical cyclones. People who live near rivers or in low-lying coastal areas live with the greatest threat of floods.

The 1974 Brisbane Flood was triggered by the weakening Cyclone Wanda which crossed the Queensland coast on 24 January some 150 kilometres north of Brisbane. The cyclone only caused minor wind damage but added heavy rainfall to an already saturated river catchment. It also triggered the monsoonal air mass over southern Queensland into periods of intense rain over a five day period. Among the highest recordings were 1,318 mm (almost 60 inches), whilst in Brisbane itself 819 mm of rain fell, producing the worst city flooding in Australian history. Sixteen people died and three hundred were injured. Eight thousand people were made homeless. Fifty-six homes were swept away and 1,600 homes were largely submerged. Thirteen thousand buildings were affected.

Common types of flooding in Australia Include the following.

<u>Slow-onset floods</u> - Flooding of rivers in the vast flat areas of Queensland may last for one or more weeks. Floods in these areas can lead to major losses of livestock and damage to crops as well as extensive damage to towns.

<u>Rapid-onset floods</u> - These floods are generally much more damaging and can pose a greater risk of loss of life and property. This is because there is generally much less time to take preventative action, and the flow of water is more dangerous.

<u>Flash floods</u> - Flash flooding results from relatively short, intense bursts of rainfall, often from thunderstorms. It can occur in almost all parts of Australia, poses the greatest threat of loss of life and can result in significant property damage and social disruption.

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A landslide (or landslip) is a downslope movement of a soil or rock mass as a result of shear failure at the boundaries of the mass. The dominant movement is lateral and failure takes place over a relatively short period of time. The displaced material mass can be large or small and may move an extensive distance at considerable velocity. Soil creep, which is slow and occurs without a well defined failure surface, is not classified as a landslide.

Landslide movement occurs in three main forms:

- by sliding along a failure surface;
- by falling down a steep slope; and
- by flowing as suspended mass, usually in water, for example mudslide or debris flow.

The stability of sloping ground is controlled by three main factors: the angle of the ground surface, the strength of the materials below the ground surface and the level of water within the slope. The potential that a landslide may be present or may occur requires consideration of the factors that contribute to landsliding, which involves a geotechnical assessment of site conditions. This geotechnical study should provide an evaluation of the level of site hazards in relation to landsliding and in particular classify those into a hazard rating.

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The classification of landslide hazards can be used in the planning of proposed development, the design of proposed development, the reduction of the likelihood of landsliding in existing development and the design of landslide remedial works.

Fire is an integral component of the environment of Queensland. Bushfires have taken a terrible toll throughout Australia and it has been a common misconception that there is often little that can be done to contain the risk and to minimise damage. Bushfire prone areas are areas that can support a bushfire or are likely to be subject to bushfire attack.

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For a fire to start and to continue burning, three things (in balance) are necessary: there must be fuel available to burn, sufficient heat to cause and maintain ignition and sufficient oxygen to sustain combustion. All fire fighting methods aim at breaking the fire triangle in one way or another and basically involve removing fuel from the path of the fire, cooling the fuel below ignition temperature or covering the fuel to cut it off from the oxygen supply. Passive protection measures incorporating siting, layout design and construction of buildings and landscaping are the most reliable and effective ways of reducing the impact and damage of bushfires. Severe storms are the most frequently occurring hazard in Australia, particularly in Queensland. Severe thunderstorms develop when dense, cold air overlies less dense, warm, moist air. Solar heat, a front or a trough triggers them. Most severe storms in Queensland occur between the months of September and March, and can be divided into two categories - severe thunderstorms and land gales. Severe storms can occur anywhere in Australia and cause more damage than any other natural hazard. Severe storms normally occur in localised areas and don't usually affect large areas as do cyclones or floods.

In 1996, of the 23 natural disasters in Australia costing more than \$5 million, 15 were severe storms, accounting for \$772 million of the total \$1,258 million. In Brisbane on 18 January 1985, a severe hailstorm and tornado passed over Brisbane breaking thousands of windows, damaging many cars and tearing off many roofs. In just 30 minutes it caused insured losses of \$299 million and a total estimated cost of \$385 million (State Counter Disaster Organisation website).

Severe thunderstorms occur when strong rising currents of air develop and heat energy stored in the air and water vapour is converted into electrical energy. When the atmosphere is particularly unstable and the wind flow provides an efficient input of energy to a growing cloud, a severe thunderstorm develops with accompanying updrafts and downdrafts. The Bureau of Meteorology defines severe thunderstorms as those which produce hailstones with a diameter of two centimetres or more, wind gusts of 90 km/hr or more, flash floods and/or tornadoes.

Most thunderstorms are not severe enough to produce these phenomena, but they all produce lightning.

<u>Heavy rain</u> occurs when intense updrafts produce raindrops through condensation of moist air. As raindrops become too large to be supported they fall, producing heavy rain which can exceed 200 mm per hour, causing flash floods.

<u>Hail</u> forms in a thunderstorm when raindrops freeze at high levels and are then recycled through up and down drafts, growing all the time. Hailstones larger than cricket balls have been observed in Australia. Such large, jagged ice hazards can inflict serious damage or even fatal injury.

Lightning and thunder: Lightning is the discharge produced when differences in ground and atmospheric electrical charges are large enough (several hundred-million volts) to overcome the insulating effect of air. An average thunderstorm can release several hundred megawatts of electrical power. Lightning strokes may occur within a cloud, between clouds, or between the cloud and the ground. Statistically, lightning poses a greater threat to individuals than most other natural hazards. On average lightning causes five to ten deaths and over 100 injuries in Australia each year.

Land gales are gale force winds over land with a speed of 62 km/hr or more. They are caused when large differences in atmospheric pressure are concentrated over a small distance. This can occur between a low pressure system and strong high pressure systems, or near intense cold fronts.

Earthquakes are a shaking or trembling of the Earth's crust caused by the release of huge stresses due to underground volcanic forces, the breaking of rock between the surface, or by a sudden movement along an existing fault line. Earthquakes are unpredictable and strike without warning. They range in strength from slight tremors to great shocks lasting from a few seconds to a few minutes.

In the last 80 years there have been 17 earthquakes in Australia registering six or more on the Richter Scale. Australia's rate of earthquakes is about one every five years. compared to a world average of about 140 per year. At 10:27am on 28 December 1989, Newcastle was partially devastated by a moderate earthquake measuring 5.6 on the Richter Scale. Newcastle was the first lethal earthquake in Australia claiming 13 lives and injuring 150 others. It caused extensive damage to about 35,000 homes and 3,000 buildings with 70,000 buildings in the regions suffering some form of damage. Insured losses reached \$1,124 million while the estimated total damage to Newcastle was \$4,480 million (State Counter Disaster Organisation website).

The Newcastle experience showed that a lethal earthquake can occur in parts of Australia considered to be of low seismic risk. It has resulted in improved building codes and practices, and closer monitoring of seismic activity. Since 1994, buildings in identified risk areas of Australia (including homes) are now required to be constructed to resist earthquakes. In addition electricity and telephone lines, gas, sewer and water mains can be damaged; landslides, faults, subsidence and even tidal waves can be caused. Each stakeholder group has a range of roles in natural hazard management and planning. The following sections outline some current roles and responsibilities.

Local Governments have a primary responsibility under the *Integrated Planning Act 1997* for land use planning. Specific responsibilities with which Local Government is charged under IPA include the preparation of IPA-compliant planning schemes and assessment of development applications. Additionally, every Local Government is to ensure that arrangements are in place to deal with any disaster event that is considered likely to impact upon its area of responsibility.

Responsibilities

Local Governments are responsible for a number of key land use planning tasks in relation to natural hazards. These include:

- drafting and implementation of planning schemes;
- development assessment; and
- disaster risk assessment as an input into the development of planning scheme and development assessment requirements.

Planning schemes and strategic planning

The *Integrated Planning Act 1997* (IPA) requires all Queensland Local Governments to prepare planning schemes in accordance with IPA by March, 2003.

Strategic planning at a land use planning level generally occurs as part of the review of planning schemes. Strategic planning provides a significant opportunity for Local Governments to designate land that is and is not appropriate for development for specific land uses. During these phases, Local Governments carefully consider the land development options for land and designate land for appropriate use based on demand and land suitability (including assessing risks for natural hazards). It is at this stage that development standards are formulated to apply across the Local Government area.

Development assessment

IPA delegates the responsibility of assessing most development applications to Local Government. It is through this development application and assessment process that project-specific opportunities exist for the control and prevention of inappropriate land use planning in relation to natural hazards management.

Disaster risk assessment and development of mitigation strategies

It is a responsibility of Local Governments to assess disaster risk and develop and implement appropriate disaster mitigation strategies for their Local Government area. Risk assessment and hazard mapping is often best done by two or more Local Governments in combination especially when natural features such as rivers flow through adjoining Local Governments.

Department of Emergency Services (DES) has developed guidelines to assist Local Governments in the undertaking of Disaster Risk Management. DES recommends that Local Governments apply the Australian and New Zealand Standard AS/NZS 4360 to assess disaster risk within their Local Government Årea. This can provide a basis for addressing natural hazards within planning schemes and development conditions (See 2.6.1).

The responsibility for hazard mapping lies primarily with Local Governments and Aboriginal and Torres Strait Islander Community Councils. Hazard mapping is an essential step in assessing disaster risk in a community and determining where land use planning can be used as a mechanism for reducing risk. Without accurate information on hazard and risk, effective land use planning cannot be undertaken.

A number of Local Governments have undertaken hazard mapping, particularly for flood. Less prevalent is hazard mapping for other hazards, such as storm surge, earthquake, landslip and bushfire. The Natural Disaster Risk Management Studies Program (NDRMSP) provides funding for hazard mapping and risk assessment and is proving a major impetus for risk assessment (including hazard mapping) for Local Governments in Queensland. Some hazard mapping and other related information is available through Australian Geological Survey Organisation (AGSO) and Department of Natural Resources and Mines (DNRM). The Rural Fires Division of the Queensland Fire and Rescue Authority. Department of Emergency Services, provides free fire hazard mapping to Local Governments and Queensland Government departments and agencies.

The *Community Services (Aborigines) Act 1984* and the *Community Services (Torres Strait) Act 1984* gives Aboriginal and Torres Strait Islander Communities the ability to form independent Councils. These Council's are recognised under the *Integrated Planning Act 1997* and are thereby bound by its requirements. It does however provide exemptions in relation to planning scheme preparation where such Councils can opt not to prepare a planning scheme.

A State Planning Policy is applicable to development within an Aboriginal and Torres Strait Islander Council, where no scheme exists, and where the development is assessable development as defined within 'Schedule 8 -Assessable, Self Assessable and Exempt Development' of the *Integrated Planning Act 1997*. State Government has a number of significant roles in the planning, prevention, mitigation of and response to natural hazards and disasters. These include legislative abilities such as those associated with State Planning Policies as wellas administrative and control functions through official organisations and committees. The role of the State Government and its agencies is outlined below.

State Planning Policies require significant ongoing commitment to implementation from the responsible State agencies. That commitment requires inputs to planning schemes, but is also likely to extend to development assessments and possibly appeals against decisions on development applications.

Land use planning related tasks and roles in relation to natural hazards include:

- policy formulation;
- program funding;
- development assessment;
- disaster mitigation activities through the State Disaster Mitigation Committee; and
- specific departmental planning roles and functions.

Policy formulation and planning schemes

State Government departments and agencies are responsible for ensuring the protection and management of State assets and the provision of policy direction and comment on matters of State interest. Departments and agencies have responsibilities to provide input to the preparation of planning schemes in their area of interest. State interests are formally considered when Local Governments are making decisions about the forward planning and detailed development assessment measures in planning schemes.

Program funding

The State Government in its role as primary controller of State funding has the opportunity to further develop specific aspects and issues of State interest, by increasing or decreasing funding for that issue. Sometimes funding is jointly provided by the Federal Government and the relevant Local Government. The State Government also provides funding to facilitate education programs associated with the introduction and implementation of State Planning Policies.

Natural Disaster Risk Management Studies Program (NDRMSP)

The Federal Government introduced the NDRMSP in 1999-2000, with the support of State Governments. This Program offers significant funding support to Local Governments, Aboriginal and Torres Strait Islander Community Councils and River Improvement Trusts to undertake hazard mapping, risk assessments and technical studies relating to all the hazards identified in this paper. The Federal and State Governments each provide a third of the necessary project funding to successful applicants, who are also required to provide a third of the resources.

The Department of Emergency Services (DES) actively promotes and administers the NDRMSP in Queensland. The NDRMSP has been well received by Queensland Local Governments, which have attracted about 60% of Federal Government annual funding nationally to date. Eighty-nine projects have successfully applied for funding so far (July 2001), with the value of the projects totalling \$7.5 million (Department of Emergency Services).

Regional Flood Mitigation Program (RFMP)

The Federal Government provides funding for flood mitigation works, warning systems and land resumptions. The Federal and State each provide one third of project funds, with the applicant (usually Local Government) providing the remaining third. While this program mostly funds mitigation capital works, it can also fund resumptions of flood-prone land and is therefore supportive of appropriate land use planning.

Local Government Mitigation Plans

DES promotes all Local Governments developing Mitigation Plans by March 2003. Financial incentives are in place to encourage lower rate base Local Governments to undertake mitigation plan development.

Local Governing Bodies Capital Works Subsidy Scheme and Transport Infrastructure Development Scheme

Consultation is underway with the Local Government Association of Queensland and Local Governments to tie receipt of funding from these schemes to disaster risk management. The intention is to encourage Local Governments to mainstream natural disaster risk management principles into everyday capital works and infrastructure development.

Development assessment

State Government departments act as assessment manager in relation to some applications and also provides comment in relation to many applications for which Local Government is the assessment manager. It is through this development application and assessment process that project-specific opportunities exist for the control and prevention of inappropriate land use planning in relation to natural hazards management.

Disaster mitigation activities

The State Counter Disaster Organisation

The State Counter Disaster Organisation Act 1975 (SCDO Act) establishes the State Counter Disaster Organisation (SCDO), which is the peak counter-disaster policy and planning advisory group in Queensland. The role of the SCDO is to:

- coordinate the resources necessary to ensure that all steps are taken to plan for and counter the effects of a disaster; and
- give advice and assistance to the Minister for Emergency Services on all matters with

DES, on behalf of the SCDO, develops the disaster management policy for Queensland.

The State Disaster Mitigation Committee

The State Disaster Mitigation Committee (SDMC) was established in 1999 by the Queensland Government pursuant to the provisions of PART 2 of the SCDO Act to provide advice to the Minister for Emergency Services. It comprises representatives from ten State Government Departments, the Local Government Association of Queensland and two Local Governments and is chaired by the Director-General, Department of Emergency Services. The role of the SDMC is to advance disaster mitigation practices in Queensland. Mitigation through effective land use planning has been one of several key issues of interest to, and promoted by, the SDMC.

Department of Emergency Services

The SCDO Act is the primary legislation dealing with disasters in Queensland. The Act is administered by the Minister for Emergency Services. The Act establishes the State Counter-Disaster Organisation, the functions of which are to co-ordinate the resources necessary to ensure that all steps are taken to plan for and counter the effects of a disaster, and to give advice and assistance to the Minister with respect to counter disaster.

The Department of Emergency Services (DES) provides funding to Local Governments for the NDRMSP as well as incentives for Local Government Mitigation Plans. In addition, DES has undertaken a State-wide Local Government Education and Awareness Program and developed publications to educate Local Governments in the disaster risk management process and mitigation plan development. Land use planning is an integral aspect of these processes.

Department of Natural Resources and Mines

The Department of Natural Resources and Mines (DNRM) administers the Regional Flood Mitigation Program (RFMP) in Queensland. In addition, DNRM has the prime responsibility for management of rivers and dams and is currently preparing a draft flood plain policy. Response plans for dam break are overseen by DNRM in consultation with DES. DNRM is a member of the SDMC.

Environmental Protection Agency

The Environmental Protection Agency (EPA) is a member of the SDMC. The *Coastal Protection and Management Act 1995* provides the EPA with jurisdiction over coastal areas of Queensland. The State Coastal Management Plan, which will have the effect of a State Planning Policy, has implications for land use in coastal areas. It is likely that the issues of land use in areas vulnerable to storm tide will be dealt with through the Coastal Management Plan, and reference to this document would be made in the proposed State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment.

The Department of Local Government and Planning and the Department of Main Roads

The Department of Local Government and Planning (DLGP) and the Department of Main Roads (DMR) are members of the SDMC, and are developing initiatives to incorporate mitigation criteria in their respective Departmental funding programs which support Local Government infrastructure development. This is described under Program Funding above. The DLGP, in conjunction with other State agencies is also responsible for the preparation and implementation of State Planning Policies. To July 2001, four State Planning Policies covering issues of State interest have been created. These are:

- Development and Conservation of Agricultural Land - State Planning Policy 1/ 92, which sets out broad principles for the protection of good quality agricultural land from inappropriate developments;
- Planning for Aerodromes and other Aeronautical Facilities - State Planning Policy 2/92, which sets out broad principles for protecting airports and associated aeronautical facilities from encroachment by incompatible developments in the interests of maintaining operational integrity and community safety;
- Conservation of Koalas in the Koala Coast -State Planning Policy 1/97, which sets out the broad principles for the protection of koala habitat in the Koala Coast from inappropriate development.
- Planning and Management of Coastal Development Involving Acid Sulfate Soils -State Planning Policy 1/00, which considers that coastal development involving acid sulfate soils should be planned and managed to avoid potential adverse effects on the natural and built environment (including infrastructure), and human health.

Each policy outlines key planning control criteria that should prevent, manage or mitigate the impacts of the particular issue covered by that policy. State Planning Policies have effect throughout the State unless the policy states otherwise, such as the Koala Coast policy.

Department of Public Works

The Department of Public Works (DPW) is a SDMC member. DPW is cognisant of land use planning and design considerations in public buildings such as hospitals, schools and emergency services buildings and is developing departmental policy guidelines regarding these issues.

Department of State Development

The Department of State Development (DSD) has incorporated considerations of disaster resilience of infrastructure, including land use planning, in its State Infrastructure Plan. DSD is a SDMC member agency.

The Federal Government is interested in the broader protection and management of natural hazards. The potential impacts of natural hazards on national assets such as heritage protected reserves and significant ecosystems, as well as the Australian community, have broad implications for this tier of government.

The Commonwealth Government actively promotes disaster mitigation through several agencies including:

- Emergency Management Australia (EMA);
- The Department of Transport and Regional Services (DTRS);
- The Department of Finance and Administration (DOFA);
- □ The Australian Geological Survey Organisation (AGSO); and
- Bureau of Meteorology (BoM).

Emergency Management Australia

EMA has been influential in providing an increased focus on disaster mitigation in the last five to ten years. It has developed guidelines on disaster risk management and provided training on these techniques. EMA has been active in information exchange and advocacy of disaster mitigation through the Mitigation Working Party, comprising Commonwealth, State and Territory Governments and industry representatives (Royal Australian Planning Institute (RAPI). Master Builders Association and the Insurance Council of Australia.) EMA provides ongoing research support on mitigation matters and has worked with RAPI to develop draft Land Use Planning Guidelines for disaster mitigation.

The following organisations were consulted and provided input into the Discussion Paper.

- Australian Geological Survey Organisation
- Brisbane City Council
- Bureau of Meteorology
- Cairns City Council
- Centre for Disaster Studies, James Cook University
- □ CHEM Unit, Counter Disaster and Rescue Services, Dept of Emergency Services, Qld
- Community Safety and Risk Management, Queensland Fire and Rescue Authority, Department of Emergency Services, Qld

- Counter Disaster and Rescue Services, Department of Emergency Services, Qld
- Department of Aboriginal and Torres Strait Islander Policy, Qld
- Department of Employment and Training, Qld
- Department of Families, Qld
- Department of Finance and Administration, Commonwealth
- Department of Housing, Qld
- Department of Local Government and Planning, Qld
- Department of Main Roads, Qld
- Department of Natural Resources and Mines, Qld
- Department of Primary Industries, Qld
- Department of Public Works, Qld
- Department of State Development, Qld
- Department of Transport and Regional Services, Commonwealth
- Disability Services Queensland
- Disaster Mitigation Unit, Department of Emergency Services, Qld
- Disaster Operations, Counter Disaster and Rescue Services, Dept of Emergency Services, Qld
- Emergency Management Australia, Commonwealth
- Environmental Protection Agency, Qld
- D Environmental Resources Management Australia
- □ Gold Coast City Council
- Insurance Council of Australia
- Local Government Association of Queensland
- D Logan City Council
- D Mount Isa City Council
- Property Council of Australia
- Queensland Conservation Council
- Queensland Council of Social Services
- Queensland Health
- Queensland Police Service
- Queensland Rail
- Queensland Transport
- Redland Shire Council
- Royal Australian Planning Institute
- Rural Operations, Queensland Fire and Rescue Authority, Dept of Emergency Services, Qld
- □ School of Design and Built Environment, Queensland University of Technology
- School of Geography, Planning and Architecture, University of Queensland
- Strategic and Executive Services, Dept of Emergency Services, Qld
- D Thuringowa City Council
- Tourism Queensland.

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Appendix B

INTENT TO PREPARE PUBLIC NOTICES

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8010165RP2 FINAL 20 12 01/20 DECEMBER 2001

Public Notice of Intention To Prepare a State Planning Policy on Natural Disaster Mitigation and Development Assessment.

The Honourable Nita Cunningham, Minister for Local Government and Planning, and the Honourable Mike Reynolds, Minister for Emergency Services and Minister Assisting the Premier in North Queensland, are proposing to prepare a State Planning Policy under the Integrated Planning Act 1997.

The Policy will address natural disaster mitigation through land use planning and development assessment, and will apply throughout Queensland.

The Department of Emergency Services invites submissions on:

- What issues should be addressed by the State Planning Policy, and
- How those issues should be addressed.

The Department of Emergency Services will report all submissions to the two Ministers. Following consideration of submissions, the Ministers will decide how to proceed. Once a draft State Planning Policy is prepared, further public consultation will occur on the proposed Policy.

The Department will hold consultation forums on the proposed State Planning Policy at:

Mount Isa Townsville Mackay Rockhampton Toowoomba Bundaberg Sunshine Coast Roma Cairns Brisbane Longreach Gold Coast

Wednesday 10 October Thursday 11 October Friday 12 October Monday 15 October Tuesday 16 October Wednesday 17 October Thursday 18 October Friday 19 October Monday 22 October Tuesday 23 October Wednesday 24 October Friday 25 October

The Department has prepared a discussion paper "Land Use Planning for Natural Disaster Mitigation and Development Assessment".

To register to attend these consultation forums and receive a copy of the discussion paper, telephone 07 3247 8977 before Friday 28 September 2001. Copies of the discussion paper are also available on website: www.emergency.qld.gov.au/community/spp

If you are interested in making a submission, you are encouraged to obtain a copy of the discussion paper.

Written submissions should be directed to: The Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Email: j

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The closing date for submissions is 9 November 2001.

Queensland Government Department of Emergency Services Counter Disaster and Rescue Services

Draft

INTENTION TO PREPARE

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STATE PLANNING POLICY

Land Use Planning for Natural Disaster Mitigation and Development Assessment

1. BACKGROUND

What is a natural disaster in the Queensland context?

There are six natural hazards of importance to Queensland:

- cyclone, including damage from severe wind and storm surge;
- riverine flooding, including flash flooding;
- landslide;
- bushfire;
- severe storms including tornadoes and hailstorms; and
- earthquake.

What are the trends in natural disasters and natural disaster management?

Two trends in the effects of natural hazards have emerged over the last two decades.

- 1. Loss of life from disasters has decreased because of improved warning systems, better practice in building construction and other works, and enhanced emergency responses.
- 2. The cost of restoration and rehabilitation following the impact of a hazard has risen because:
 - of population increase;
 - the community has more assets; and
 - there is more development in disaster prone areas.

These three factors result in more people and property being vulnerable to natural disasters.

What are the costs of natural disasters?

The risk and direct cost of natural disasters in Queensland is increasing. Each year natural disasters have the potential to affect the State's economy, the social well being of Queenslanders, and to cause significant loss of life, and damage to property, infrastructure, people and the environment.

In 1999/2000 natural disasters in Queensland resulted in \$150 million damage to public infrastructure alone. This damage was largely to roads, bridges and public buildings.

The Commonwealth Government, under the Natural Disaster Relief Arrangement, provides funding assistance to States and Territories to alleviate the financial burden associated with the provision of natural disaster relief payments and infrastructure restoration. In 1996/7 National Disaster Relief Arrangement funds for Queensland were \$71.6 million. In the following financial year these funds

were \$87.1 million. By 1998/9 Natural Disaster Relief Arrangement funds for Queensland were \$79.6 million, and in 1999/2000 this figure had risen to \$102.3 million.

These figures do not represent the total cost of disasters. Funds under the Natural Disaster Relief Arrangements only partly reimburse States, Territories and Local Governments for disaster relief, as the expenditure of the State, Territory or Local Government must exceed a certain threshold before they are eligible for Commonwealth funds. Natural Disaster Relief Arrangements funding only covers a prescribed range of eligible assets and for a prescribed range of natural disasters. In addition, these figures exclude indirect costs such as the costs of personal and business losses and . financial hardship, disruption to networks and public services, the costs of agriculture (eg agistment), and the costs of clean-up, alternative accommodation and emergency and relief agencies. Neither do these costs include the costs of intangibles such as environmental damage, loss of memorabilia, health impacts, dislocation, death and injury, or loss of or damage to cultural and heritage issues. Available estimates of intangible costs suggest that they are very substantial. Research indicates that they should not be ignored because they cannot be estimated and that excluding intangible costs can lead to a significant understatement of the costs of disasters¹. Some estimate that indirect and intangible costs are three to four times the infrastructure restoration costs. Further, even those not directly involved in a disaster may be affected. For example, a natural disaster may affect insurance premiums, businesses continuity and viability, and employment.

From July 1998 the guidelines to the Commonwealth's contribution to Natural Disaster Relief Arrangements funds linked ongoing financial assistance for restoration of public assets to evidence of mitigation for likely or recurring natural disasters. Local Governments are the principal beneficiaries of the Natural Disaster Relief Arrangements funding therefore implementation of mitigation strategies are essential.

Financially and socially it is in everyone's best interests to mitigate natural disasters. Research shows that for every dollar spent on natural disaster mitigation, at least two dollars are saved in response and recovery costs. Clearly, it is in the State's interest to manage the risks to provide for safer communities and minimise financial, social, cultural and environmental costs.

Can the effects of natural disasters be controlled?

While natural phenomenon such as cyclones, severe rain and earthquake cannot be prevented, it is increasingly clear that disaster loss, rather than stemming from unexpected and uncontrollable events, is the predictable result of the interactions between:

- the natural physical environment, including natural hazards; •
- the social and demographic characteristics of communities experiencing disasters; and
- the constructed environment, including buildings, roads and bridges.

More and more, disasters are the result of human action or inaction. Settlement patterns have changed, resulting in significant populations locating in areas subject to potential hazards such as low-lying land prone to flooding, coastal areas exposed to cyclones and storm surge, and fire hazardous areas.

Some locations are not suitable for settlement or building infrastructure if life and property is to be protected from natural hazards. These areas can be identified in Local Government planning schemes and strategic plans. With suitable building design, or maintenance of or changes to ecosystems, other areas prone to natural hazards can sustain settlement and infrastructure.

¹ Bureau of Transport Economics Report 103 Economic Costs of Natural Disasters in Australia, 2001 pp 87-89 C:\WINDOWS\TEMP\Intention to prepare brochure fs 13 July 2001.doc

As buildings and associated infrastructure are developed at greater densities in areas disposed to natural hazards, improved building designs can reduce the exposure of infrastructure to the impacts of natural hazards and better protect people living in these areas. For example, a bridge can be built at an elevation that will avoid flood damage and a levee can be built in an appropriate location to a height considered suitable following a risk analysis study. A bridge and a levee will protect the community against floods up to the flooding level for which it is designed.

The manner in which an ecosystem is treated can affect natural disaster mitigation. For example, tourism and recreation activities often occur in areas prone to the impact of natural hazards because these are often physically attractive destinations for holidaymakers. In a cyclone-prone area, maintaining natural buffers such as sand dunes and vegetation between the ocean and dwellings can reduce the impacts of high seas and strong wind upon tourist accommodation. Similarly, preserving swamps maintains natural flood retention basins, and retaining vegetation on steep hillsides keeps hillsides stable and reduces the risk of landslide. However, some ecosystems are not compatible with human habitation unless mitigation strategies are implemented. For example, to protect residents and housing from the risk of bushfire in high risk areas, adequate clearing around dwellings and more than one access road from residences are desirable.

Natural hazards impact differently on different people. For example, the very young, aged and physically disabled are less mobile and, consequently, more at risk if located in a disaster prone area. Others are less able financially to purchase property in flood-free areas, protect themselves from the impacts of natural disasters through insurance, and are less able to recover from financial losses. Those who are more financially able may purchase properties in locations with desirable views immediately adjacent to beaches and these properties may be vulnerable to changing sand dune patterns, cyclone impact and storm surge.

Why is a Local Government planning scheme important?

Land use planning can increase or decrease the risk and impact of natural disasters on people and property and/or the impacts of natural disasters. To mitigate effectively the devastating impacts of natural disasters, hazard reduction is best incorporated into Local Government planning schemes that control land use, as these plans are more effective than stand-alone mitigation proposals.

Planning schemes that mitigate natural disasters provide other advantages to residents. For example, a planning scheme that offers protection against natural disasters and describes desired environmental outcomes and performance criteria for natural disaster mitigation would assist in demonstrating to the insurance industry that the Local Government has strategies to assist in providing for the well being and safety of the community and property. The insurance industry could then assess the risk and offer realistic premiums to the constituents of Local Governments.

Planning schemes, which take active steps to mitigate natural disasters, can protect Local Governments from and during legal action. A person or statutory body may be liable for damage caused to a claimant if they had a duty of care to the claimant and that duty was breached. In a range of cases Australian courts have found Local Government liable for negligent acts in relation to land use. In other cases, courts have found that Local Governments are not liable. Litigation is expensive and best avoided, if possible. Costs include not only the amount nominated in a court judgment, if found liable, but other costs which occur regardless of who wins a case. These costs include legal costs, considerable inconvenience, loss of management time, and possible negative publicity.

2. STATE PLANNING POLICIES

What is a State Planning Policy?

State Planning Policies describe the State Government's position on planning and development matters of State significance. Under the *Integrated Planning Act 1997*, Local Governments are required to integrate matters of State interest into planning schemes.

What is the purpose of the State Planning Policy?

The purpose of the State Planning Policy is to:

- Make clear the State's interest in land use planning as it relates to natural disasters
- Reduce the community's vulnerability to the impacts of natural hazards
- Encourage consistency across Queensland in natural disaster mitigation management, and
- Assist Local Government decision-making processes concerning development applications in areas subject to natural disasters.

What will be the scope of this State Planning Policy?

The State Government intends to prepare a State Planning Policy to address natural disaster mitigation through land use planning and development assessment. The purpose of this policy will be to reduce the community's vulnerability to the impacts of natural disasters. Planning guidelines will support this policy and provide Local Governments with technical advice and information on how to implement the policy.

A State Planning Policy will support Local Governments in their decision-making processes concerning development applications in areas subject to natural hazards. The State Planning Policy will oblige Local Government planning schemes to:

- identify hazard prone areas;
- develop appropriate desired environmental outcomes and performance criteria for these areas; and
- apply appropriate development policies and standards to hazard prone areas.

Each of these three obligations is best achieved through the application of the risk management approach described in the Australian/New Zealand Standard AS/NZS 4360:1999, *Risk Management*. This approach will reduce the community's vulnerability to natural disasters because it will provide Local Government with tools with which to make informed decisions about planning scheme matters in relation to mitigating natural disasters.

Through Local Government planning schemes, the State Planning Policy will influence decisions on the location and/or requirements for future development, including infrastructure in the Local Government area. After assessing the impact of a proposed development on the safety of the community, Local Government may, where appropriate, require the development application to be amended or, if necessary, may refuse the application. For example, consideration would need to be given to the risks involved in building a nursing home on a floodplain and to the risk of landslip to buildings below a proposed new road.

As natural disasters occur throughout Queensland, the policy will apply Statewide.

What are the limitations of a State Planning Policy?

A State Planning Policy cannot eliminate all risks to communities associated with natural disasters or past land use decisions. There are important limits on the scope of the State Planning Policy. For example, the proposed State Planning Policy:

- cannot resolve directly issues associated with established urban areas and existing developments:
- cannot direct Local Government to adopt specific mitigation methods such as a 'no development in a floodplain' strategy or require Local Government to build levees to protect development in a floodplain. Rather, a State Planning Policy would require Local Governments to implement

methods to reach mitigation outcomes based on the intent of the State Planning Policy and appropriate to the natural hazard risks identified in their Local Government area;

- will place the responsibility on Local Governments to identify and manage risks associated with natural disasters;
- will consider addressing natural hazards (geohazards) such as cyclone, severe winds, flooding, landslides, bushfires; severe storms, and earthquake (storm surge will be addressed in the State Coastal Management Plan and this State Planning Policy will refer to that instrument for storm surge). <u>These natural hazards, however, can only be addressed in terms of land use planning</u> and development assessment; and
- will not address technological hazards such as chemical spills, exotic diseases, bridge collapse, space debris and other incidents not related to natural disasters. However, the policy may make provision for dealing with flooding caused by a dam break.

A State Planning Policy does not replace other initiatives Local Government can take to mitigate natural disasters. Other supplementary initiatives could include, for example, early warning systems, public education programs, counter disaster plans, relocation or acquisition of properties, and building levees and culverts.

How would the State Planning Policy be administered?

The Department of Local Government and Planning is responsible for administering State Planning Policies. In relation to this proposed policy, the Department of Local Government and Planning's responsibilities would include ensuring that advice from the Department of Emergency Services about interpreting the State Planning Policy is integrated with Local Governments' planning schemes in a way that is balanced with other relevant planning considerations in the local area. If a Local Government planning scheme has not been developed, Local Governments would be required to consider the State Planning Policy when making decisions on applications for new developments.

In addition, the Department of Emergency Services (DES) would be available to provide advice to Local Governments on interpreting the State Planning Policy in particular situations.

KEY STAKEHOLDERS

What stakeholders have been identified?

The first step in the preparation of a State Planning Policy is to obtain input from interested stakeholders who can contribute to the formulation of the policy. Public consultation is an essential and valued part of preparing a State Planning Policy. Identified stakeholders include:

The community. Local communities have an intimate knowledge of their local area and its environmental conditions, and many residents have directly experienced the impacts of natural disasters. As a result, community concerns have escalated about development inappropriate to community safety.

Local Governments. When developing planning schemes, Local Governments have requested from the Department of Emergency Services clear and consistent direction, guidance and support in relation to disaster mitigation.

Property developers. The property development industry has an interest in planning and development regulations that provide clarity, certainty, and a range of options to achieve a desired outcome to avert disasters or minimise their impacts, where possible.
Property owners. Property owners have an interest in knowing what hazards may impact on their property. They also have an interest in knowing that new developments or infrastructure will not place their property at risk. For example, a levee may protect some properties but may exacerbate the flood problem elsewhere.

Insurance Industry. The insurance industry has an interest in linking commercial risk with hazard risk. When these links are made, the industry can assess the financial viability of potential insurance products and calculate premiums for these products.

Commonwealth and State Government agencies. Several Commonwealth and State Government agencies have an interest in town planning, floodplain management, coastal protection, and the built environment. In addition, the clients and interests of other government agencies are affected by natural disasters.

Local Government Association of Queensland Incorporated. As the peak body of Local Government in Queensland, the Local Government Association of Queensland has an interest in the State Planning Policy because it will affect all Queensland Local Governments.

Aboriginal and Islander Co-ordinating Councils. These Councils are the peak bodies for Aboriginal and Islander Local Governments and have an interest in the State Planning Policy because it will affect their communities.

Consultants and advisors offering planning and development services. Many Local Governments and property developers engage town planning and other consultants. Town planning consultants engaged by Local Governments develop planning schemes and/or deal with various town planning issues. Consultants need to be aware of the requirements of a proposed State Planning Policy.

Not-for-profit charitable organisations and voluntary organisations. Many not-for-profit charitable organisations and voluntary organisations are involved in assisting individuals and families affected by natural disasters. The assistance provided by these organisations varies widely and can include immediate assistance in cleaning up natural disasters such as that offered by the State Emergency Service and assistance provided after the impacts of the natural disaster are felt such as shelter, food, clothing, financial assistance and trauma counselling.

Professional and peak bodies. Various professional organisations represent the interests of key stakeholders such as town planners, engineers, property developers and managers, and key industry groups such as the tourism industry.

Tertiary institutions. Tertiary institutions educate future professionals in town planning, land use management, and disaster mitigation. Academic research can assist in understanding more about disaster mitigation.

Conservation groups. Natural disasters and town planning affect the natural and built environment. Conservation and environmental groups have an interest in the effects of mitigating natural disasters.

Other groups with an interest in the development of the State Planning Policy are invited to contact the office of the Director, Disaster Mitigation Unit, Counter Disaster and Rescue Services, Department of Emergency Services on 07 3247 8969. These groups will be invited to contribute to the development of the policy during consultation processes.

How can I contribute to the development of this State Planning Policy?

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The Department of Emergency Services welcomes your comments during the development of the State Planning Policy which will address land use planning as it relates to natural disaster risk management issues in planning and the development assessment.

There will be two formal opportunities to provide comment and you are invited to make comment at both stages.

The first opportunity follows the Minister for Local Government and Planning's advertised statement that the State Government intends to prepare a proposed State Planning Policy. This state is known as the 'preparation' stage. The purpose of this stage is for stakeholders to comment on the subject matter and scope of the proposed policy to mitigate natural disasters. This discussion paper is intended to assist interested parties with their submissions on the Queensland Government's intent to prepare a State Planning Policy on Natural Disaster Mitigation and Development Assessment.

The second opportunity is known as the 'consultation' stage and will follow the development of the proposed State Planning Policy. The purpose of this consultation phase is for stakeholders to comment on the purpose and general effect of the proposed policy. Copies of the proposed policy will be available for inspection and purchase.

Stakeholders will have forty business days to comment during both phases. Comments can be made by participating at advertised public consultation meetings and/or in a written submission within the advertised timeframe for comment.

Prior to 'preparation' stage, a focus group with key representatives of each of the stakeholder groups identified met with the Department of Emergency Services to identify natural disaster issues and possible solutions to mitigate these issues. This Discussion Paper has drawn from the deliberations of the focus group as well as additional research. The intention of this Discussion Paper is to open up discussion to all interested participants by providing an initial point of discussion to focus the first consultation phase.

Other issues and possible solutions will be welcomed during the 'preparation' phase for consideration during the development of the proposed policy and supporting guidelines.

Where will consultation meetings be held?

As the policy is intended to cover the whole of Queensland, public consultations will be advertised in the Department of Emergency Services twelve operational Counter Disaster and Rescue Services districts:

- Beenleigh;
- Brisbane;
- Bundaberg;
- Cairns;
- Gympie;
- Longreach;
- Rockhampton;
- Roma;
- Mackay;
- Mt Isa;
- · Toowoomba; and
- Townsville.

Workshops in these twelve regions will be held where sufficient people register to attend by the advertised closing date for registrations.

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At these workshops, participants will work with staff from the Department of Emergency Services and a consultant town planning team engaged by the Department to assist with the development of the State Planning Policy and supporting guidelines.

What will be the benefits of attending public consultation meetings?

The intention of public consultation is to encourage as many stakeholders as possible to contribute to the development of the State Planning Policy within publicly advertised timeframes.

You are encouraged to attend public consultation meetings so that you can put forward your views on the issues and propose solutions for the policy and guidelines. Attendance will also give you the opportunity to hear and understand the perspectives of other stakeholders and work with them to offer possible solutions to the issues of natural disaster risk management in town planning and managing development.

How can I participate if I cannot attend a public consultation meeting?

If you are unable to attend a public consultation meeting or there are insufficient people registered to attend a workshop in your area to make the meeting viable, there are other ways you can contribute.

Stakeholders are encouraged to make a written submission within the advertised timeframe. Submissions can be posted, facsimiled, or emailed to the Disaster Mitigation Unit. Stakeholders can also speak with Department of Emergency Service's officers involved in the development of the State Planning Policy and guidelines. Contact details for the office are below.

In addition, representatives of key stakeholder groups who are authorised by their organisation to speak on its behalf, may request a meeting with a Departmental representative within the advertised consultation period.

Where can I send my written submission and how can I contact the Disaster Mitigation Unit? Written submissions should be addressed to:

Principal Policy Officer State Planning Policy Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Submissions can also be sent by facsimile or email:

Fax:		
1 un		

Phone:

In considering your comments please refer to the sections outlining the limits of the scope of the State Planning Policy and use the submission format recommended in this Discussion Paper.

As a participant in the consultation process, what can you expect from the Department of Emergency Services?

The Department of Emergency Services will:

- Arrange for the Minister for Local Government and Planning to advertise in the *Courier Mail* the intention to prepare a State Planning Policy and, when developed, the availability of the proposed State Planning Policy. These advertisements will include the timeframe for consultation.
- Distribute this Discussion Paper to known stakeholders and distribute it to others who request a copy or respond to the public advertisement.
- Provide a Discussion Paper to registered attendees for the initial consultation workshop.
- Offer consultation meetings in twelve Queensland regions.
- Develop a proposed policy and supporting guidelines from the issues and proposed solutions raised during the initial focus group meeting and 'preparation' phase. The availability of these documents will be advertised and they will be available for perusal and purchase.
- Provide an acknowledgement letter to the return address on written submissions.
- Provide written notes to workshop participants on the outcomes of the consultation meeting they attended.
- Provide opportunities to representative(s) approved by the organisation they represent to discuss
 relevant issues or to put the views of their organisation to a representative of the Department.
- Develop a final draft policy and supporting guidelines following public consultation on the proposed documents.
- Provide to the Department of Local Government and Planning the final draft policy and supporting guidelines
- Distribute the final policy and supporting guidelines to Local Governments and other interested parties.

Appendix C

SPP WEBSITE PAGE





Planning Act 1997, describes the State Government's position on development issues

key role in shaping new Local Government planning schemes and are used by Local Governments and State Government agencies when assessing development applications.



Planning can avoid develo high land slip

Magnetic Island landslip, 1998

What is the purpose and scope of this State Planning Policy? The purpose of this State-wide State Planning Policy is to:

- make clear the State's interest in land use planning as it relates to natural disasters;
- reduce the community's vulnerability to the impacts of natural hazards;
- encourage consistency across Queensland in natural disaster mitigation management; and
- assist Local Government decision-making processes concerning development applications in areas subject to natural disasters.



on communities could through land use



The State Planning Policy will con addressing natural hazards such : flooding, landslides, bushfires, sev and earthquakes. These natural h however, can only be addressed i use planning and development as Storm surge will be addressed in t Coastal Management Plan and th Planning Policy will call up that Pl;

A State Planning Policy will suppo Governments in their future decisi processes concerning developme in areas subject to natural hazard: require Local Government plannir

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Earthquakes are low risk but high consequence natural disasters. Planning measures could be used to avoid high risk areas.

A State Planning Policy does not replace other initiatives Local Government can take to mitigate natural disasters. Other supplementary initiatives could include, for example, early warning systems, public education programs, counter disaster plans, relocation or acquisition of properties, and building levees and culverts.

A copy of a discussion paper is available for download here:



Click on the above image to download the cover and backpage of the Discussion Paper (PDF / 4 pages / 85KB)

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Click on the above image to download the contents of the Discussion Paper (PDF / 36 pages / 490KB)

The documents are provided in Adobe Acrobat (PDF) format. If your computer does not have the free Adobe Acrobat Reader, please <u>click here</u> to transfer to the Adobe website.

A hard copy of the Discussion Paper can be obtained by telephoning

Public consultation

Public consultation of the Intent to Prepare a SPP took place from 10 September to 9 November

O Back to top

Three hundred and twenty (320) people attended the workshops. Thirty nine (39) written submissions have also been received form a full range of stakeholder groups (i.e. Local, State and Federal agencies, professional bodies, interest groups and concerned citizens).

The Minister for Local Government and Planning and the Minister for Emergency Services and Minister Assisting the Premier in North Queensland will consider all submissions and decide whether to proceed with developing the SPP.



The Department of Emergency Services' purpose is to save lives, protect property and help preserve the natural environment through the delivery of emergency and disaster management services. Last updated 04 December 2001. For information regarding this site, contact webmaster@emergency.gld.gov.au © 2001 Department of Emergency Services, Queensland.

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ABOUT US SERVICES MEDIA

- COMMUNITY
 Community Safety
 Inititatives
- Calendar of Events
- The Early Years
- State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment



Public Notice of Intention to Prepare a State Planning Policy on Disaster Mitigation and Development Assessment.

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The Department of Emergency Services invites submissions on:

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- How those issues should be addressed.

The Department of Emergency Services will report all submissions to the two Minister consideration of submissions, the Ministers will decide how to proceed. Once a draft S Policy is prepared, further public consultation will occur on the proposed Policy.

The Department will hold consultation forums on the proposed State Planning Policy a

Mount Isa Townsville Mackay Rockhampton Toowoomba Bundaberg Sunshine Coast Roma Cairns Brisbane Longreach Gold Coast Wednesday 10 October Thursday 11 October Friday 12 October Monday 15 October Tuesday 16 October Wednesday 17 October Thursday 18 October Friday 19 October Monday 22 October Tuesday 23 October Wednesday 24 October Friday 26 October

The Department has prepared a discussion paper "Land Use Planning for Natural Dis and Development Assessment".

To obtain a copy of the discussion paper <u>click here</u>, and/or to register to attend forum, please telephone 07 3247 8977 before Friday 28 September 2001.

Written submissions should be directed to: The Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Email submissions to

The closing date for submissions is 9 November 2001. Please <u>click here</u> to fill in proforma for submissions.



The Department of Emergency Services' purpose is to save lives, protect property and help preserve the natural the delivery of emergency and disaster management services. Last updated 26 October 2001. For information contact webmaster@emergency.gld.gov.au © 2001 Department of Emergency Services, Queens <u>Copyright</u> | Disclaimer Appendix D

WORKSHOP SUMMARIES

8010165RP2 FINAL 20 12 01/20 DECEMBER 2001

	STATE PLANNING POLICY ON LAND USE PLANNING FOR NATURAL DISASTER MITIGATION AND DEVELOPMENT ASSESSMENT - REGIONAL CONSULTATION WORKSHOPS
-	Time/Date: 9.00-11.45 10 October 2001 Location: Mt Isa (Terrace Gardens Function Centre)
o C Over atten	Overview Comments: (venue suitability, timing, tone and conduct of meeting) all, venue was good, organisation and equipment were as requested, tone of the meeting was positive and most dees participated actively.
PAR	TICIPANTS
	Attendees (20):
	Local Government (3 from 3 Councils): (Carpentaria Shire); (Cloncurry Shire);
	(Mt Isa City)
	Community Group (1 from 1 Group): (Whitsunday Rivers Improvement Trust)
	Regional Strategy Group (2): [no name recorded] (Southern Gulf Catchments Incorporated), [MITEZ]
a	State Government (13 from 7 Departments or Agencies): (Main Roads);
	(DPI); (Disaster District Co-ordinator); (DATSIP),
	(Q-Build – Far West);
	(State Emergency Service and Counter Disaster);
	Industry (1): (Maunsell Australia)
	Facilitators: (ERM), (ERM), (ERM)
	Apology: (Mt Isa City)

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WORKSHOP PROGRAM AND SUMMARY

(1) DES Introduction

(2) ERM Overview and Presentation on SPP

(3) General Q&A Session

(SES and Counter Disaster) raised issues relating to flooding and liability of Local Government using an example from Johnstone Shire where flood levels are based on 1 in 50 year events. Flooding occurred in the next flood event. A High Court decision found that the Local Government was not liable. Sandy Vigar (SV) responded by saying that many Local Governments identify 'lines' on maps but will not rely on them. The SPP will provide clarity and comfort for Local Governments in this case.

(QFRS Rural Fire) - How does IPA offload responsibilities on State or Local Governments if development occurs in identified risk areas? SV – IPA requires planning schemes be prepared by Local Governments and these planning schemes must recognise State interests (ie: SPPs). Planning schemes addresses responsibilities of Local Governments – and for these areas, Local Governments are liable. State Government agencies are identified as concurrence agencies under the IDAS process and have responsibilities in assessing development applications.

- LC raised a further query relating to communities making bad development decisions and subsequently passing the responsibility on to Local Governments, claiming LG did not identify 'safe areas'. SV indicated that the SPP will allow mapping of hazard prone areas, after which the onus will be placed on the applicant to demonstrate why a particular development should occur in prone or at risk areas.
- a sees patterns/impacts.
- (Whitsundays Rivers Improvement Trust) asked the question Where do community groups get a say? (in the process of the preparation of the SPP).. SV responded by saying that the workshop was the appropriate time when issues were being identified and the preferred approach being considered. SV indicated that community groups will also have the opportunity to provide input at the time the draft SPP is placed on public notification and when Local Government planning schemes are being advertised.

(Chamber of Commerce/MITEZ) – identified that there was a distinct lack of representation by the business community at the workshop. Faye Smith responded by encouraging attendees to inform her of possible stakeholders and their contact details

(4) Due to time limitations in Mt Isa, **Sector Construction** presented the final part of the presentation prior to the Morning Tea break, providing an overview of the 'Where to from Here'. Sandy introduced the group sessions.

(5) Morning Tea Break

Small Group Workshops (refer to following summary)

(6) Small Group Workshop Summary – two groups

ISSUES (RELEVANT TO SPP)	DETAILS	SOLUTION/ACTION
Support for development of a SPP	Support was received for investigation into all hazards identified in the Discussion Paper. Flooding was identified as the most significant issue, with lower priority given to landslides. It was suggested that cyclones may not need to be included as their impacts may be addressed in other hazards.	Consider in the drafting of a SPP.
Hazards to be addressed in a SPP	Priority hazards for the SPP were flooding and bushfire but there was strong support for all six hazards to be further investigated.	The priority focus may be on flooding and bushfires with all six areas to be investigated.
	There was discussion of other types of hazard such as chemical spills, pest management, foot and mouth disease, dam break, blue-green algae and drought but it was generally agreed that these fell outside the ambit of this SPP.	Other hazards raised could be considered.
	A planning solution raised relating to all natural hazards considered the option of making all development in high risk	

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	areas subject to impact assessment, thereby putting the onus onto the applicant.	
Implementation	There was discussion about the cost of development limitations, a need to balance the costs and benefits, possible insurance costs if development occurs in areas identified as at risk.	
Mapping	One group stated that the SPP should identify processes and standards for mapping of risk areas.	Consider in the drafting of the SPP.
	It was identified that while some flood maps do exist for the Mt Isa region, these maps were dated and difficult to read. The issue of cost and data availability to update these maps was subsequently raised.	Consider a consistent approach to data capture and base mapping – possible use of Digital Cadastral Database.
	Floodplain modelling was regarded as a useful tool, however, constraints were identified in obtaining necessary data.	•
Guidelines	One group suggested that Guidelines should give guidance on how planning tools such as hazard maps can be used.	Consider in the drafting of the Guidelines.
Liability	Concern was expressed in one group about the potential liability of Local Government and the costs of litigation.	A SPP would provide a sounder base for defence of actions (provided they follow the SPP).
	Concern was raised in relation to liability in the event of risk mapping turning out to be wrong eg. if development is identified as being outside a risk area but subsequently is found to be at risk.	
Lack of a common resource	There is a need to consolidate information into one accessible	Consider in the drafting of the SPF

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base	location and to establish what is desirable/best practice. The opportunity for electronic distribution and sharing of data was raised and the issue of linkages between all relevant documents/information sources was identified.	and Guidelines.
	Consideration should be given to gathering historical data and anecdotal advice in relation to hazard impacts.	
	The lack of necessary skills and expertise in smaller/rural local governments was identified as a constraint.	
	It was identified that average indicators of climatic conditions were not always appropriate measures, with the incidence of seasonal variations in particular locations and extreme events.	
Community education and awareness	There is a need for greater community education and awareness. Establishing a community consultation committee within the community was raised as an option to address this problem.	Consider in the implementation of the SPP. Establish mechanisms for ensuring increased community education.
Rural Issues	One group identified the conflict arising between economic development in rural shires and the principle of restricting development of hazard prone land. It was raised that the SPP would present another obstacle to enabling development to occur in rural areas.	
Flooding	Whilst flooding is recognised as a disaster, it was also identified as a economic advantage for the Mt Isa community. This community provides 23% of the nation's fresh water runoff,	Consider in the drafting of the SPP.

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e	establishing the need for effective water conservation methods.	
I I I I I	ssues including food shortages, isolation, evacuation routes were raised as significant problems arising as a result of flooding. The need to ensure consideration of stormwater drainage was also raised.	
	What level should be used eg. Q50, Q100, highest recorded flood level, probable maximum? Should it vary between regions? There was no consensus view as to the level to be used. However, it was suggested that there was long term benefit in setting a flood level. The comment was made that average levels were not particularly useful to deal with extreme and localised events.	
	There was discussion about the need to balance community and environmental issues eg vegetation built up in rivers.	
	There was discussion about whether or not dambreak should be a separate issue or part of flooding generally. Dam break is an issue for this region due to a dam failure in Cloncurry and the number of tailings dams.	
	There was discussion over appropriate measures to be applied to non-residential development in flood prone areas eg: limitations would need to be applied to industrial and commercial activities, particularly in relation to the storing of chemicals.	
Bushfires	Rural bushfires were regarded as a more significant issue compared to bushfire in urban areas in the Mt Isa region.	Consider in the drafting of the SPP.
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	There was discussion about including grassfires in the definition.	
	Need to consider location, access, vegetation management.	
	Discussion about firebreaks and the need to maintain them.	
Landslides	Landslides were not regarded a significant issue for this region, but that they should be considered in a State-wide policy.	
	It was suggested that site specific measures would be appropriate for the management of sites subject to landslides.	Consider in the drafting of the SPP.
Earthquakes	It was suggested that site specific measures, including soil profile studies, would be appropriate for the management of sites subject to earthquakes.	Consider in the drafting of the SPP.
Cyclones	The suggestion was made that cyclones may not need to be included, with the effects of cyclones already included in flooding and severe storms.	· · · · ·
Severe Storms	There were no specific comments on these.	
(7) Any additions to stakeho	lder list and contact details	
(8) Issues raised not related t	to SPP.	
There was discussion of othe mouth disease, blue-green al the ambit of this SPP.	r types of hazard such as chemical spills, pest management, foot and gae and drought but it was generally agreed that these fell outside	

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WORKSHOP PROGRAM AND SUMMARY				
1) DES Introduction				
(2) ERM Overview and Presen	(2) ERM Overview and Presentation on SPP			
(3) Small Group Workshop Su	mmary – four groups			
ISSUES (RELEVANT TO SPP)	DETAILS	SOLUTION/ACTION		
Support for development of a SPP	All (Some concern was expressed in relation to whether the SPP would be able to be implemented, and that it would need to be clear, concise and able to be interpreted the same way by all users. There was also a majority view that while a common approach was a good idea it needed to have flexibility to deal with local situations). One group suggested the development of a Model	Care should be taken in drafting the SPP to ensure that the drafting addresses the concerns. Consider a Model Code		
	Code. One Group suggested that Benchmark Development Sequencing (BDS) should include natural hazards (LG uses BDS for water, sewerage, roads, bridges, infrastructure). One group suggested that a cost/benefit approach should be used to enable "tradeoffs" to be made between different costs and impacts.	Consider in Guidelines.		
Hazards to be addressed in a	Priority hazards for the SPP were flooding, bushfire	The priority focus may be on		

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SPP	and landslides but there was strong support for all six hazards to be further investigated. Other hazards suggested for further investigation and	flooding, bushfires and landslides with all six areas to be investigated.
	supported by the workshop groups were inclusion of other fire types such as grass and wildfire, salinity, erosion.	considered.
	There was discussion of other types of hazard such as chemical spills, pest management, foot and mouth disease, fire ants, and mad cow disease but it was generally agreed that these either fell outside the ambit of this SPP or could not be addressed through land use planning.	These issues are outside the ambit of the SPP.
	There was discussion of other legislative mechanisms and the need to ensure that strong cross referencing exists particularly in relation to storm surge, coastal issues, and acid sulfate soils. There were suggestions made that these issues, particularly storm surge, could be more appropriately considered within this SPP.	Consider in the drafting of the SPP.
	Possible approaches include differing measures/standards for development occurring or proposed in high and low risk areas.	Consider in the drafting of the SPP.
Mapping	One group stated that the SPP should identify	Consider in the drafting of the

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	processes and standards for mapping of risk areas.	SPP.
	Lack of data availability was raised as an issue by one group.	Consider a consistent approach to data capture and base mapping – possible use of Digital Cadastral Database.
Guidelines	One group suggested that Guidelines should give guidance on how planning tools such as hazard maps can be used.	Consider in the drafting of the Guidelines.
Liability	Concern was expressed in three groups about the potential liability of Local Government and the costs of litigation. This was also related to the definition of areas of acceptable risk.	A SPP would provide a sounder base for defence of actions (provided they follow the SPP).
	Concern was raised in relation to liability in the event of risk mapping turning out to be wrong eg. if development is identified as being outside a risk area but subsequently is found to be at risk.	
Compensation	Concern was expressed in two groups as to whether compensation would arise and if so who would be liable in relation to designation of high risk areas and consequent restriction of development. Also, the question of how the level of compensation should be determined.	Consider in the drafting of the SPP. Note that SPP will only apply in respect of future development not existing development.
Lack of a common resource	There is a need to consolidate information into one,	Consider in the drafting of the

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base	accessible location (SPP) and to establish what is desirable/ best practice. There needs to be agreement between agencies (including local governments) as to the direction to be taken and communication between discipline areas eg. planning and engineering. Consideration should be given to gathering historical data and anecdotal advice in relation to hazard impacts.	SPP and Guidelines.
Community education and awareness	There is a need for greater community education and awareness. Local governments could develop an information pack to enable potential purchasers of land to easily identify risk. An example was given of the information pack prepared by Johnstone Shire in relation to potential rural land purchases and self managed risk management processes by the potential buyer.	Consider in the implementation of the SPP.
Flooding	 Planning needs to take into account changed situations and incremental and off site consequences eg. revegetation of river corridors, leading to flooding where it hasn't happened before. Accuracy and reliability of data was questioned, particularly in relation to currency of data given changed development in catchments etc. What level should be used eg. Q50, Q100, highest recorded flood level, probable maximum? Should it 	Consider in the drafting of the SPP and Guidelines.
	vary between regions? There was no consensus view as	<u>, </u>

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	to the level to be used. The comment was made that average levels were not particularly useful to deal with extreme and localised events.	
Bushfires	 Need to consider location, access, vegetation management. Discussion about firebreaks and the need to maintain them. Need to consider buffer areas in development beside Unallocated State Land (QFRA). One participant suggested that firebreaks should be considered to be mitigation infrastructure. 	Consider in the drafting of the SPP and Guidelines. These issues could be addressed as part of the land use planning (planning scheme – codes, development provisions) and DA process.
Landslides	Mitigation infrastructure can be provided for landslides eg: retaining walls, protection walls. Planning needs to take into account changed situations and incremental and off site consequences eg. buffer areas.	Consider in the drafting of the SPP.
Earthquakes	There were no specific comments on these.	

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Cyclones	One comment was made that overlay maps could be prepared to identify cyclone-prone areas and that Local Governments could consider more stringent measures.	Consider in the drafting of the SPP and Guidelines. This approach would be dependent on the level of data availability.
Severe Storms	There were no specific comments on these.	
(4) Issues raised not related to SPP.There was discussion of other types of hazard such as chemical spills, pest management, foot and mouth disease, fire ants, and mad cow disease but it was generally agreed that these fell outside the ambit of this SPP.		
There was discussion that loc enable potential purchasers of information pack prepared b purchases and self managed		

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WORKSHOP PROGRAM AND SI	UMMARY	
(1) DES Introduction		
(2) ERM Overview and Present	ation on SPP	
(3) General Q&A Session		
 Mackay C sea level, will be covered will be covered by the S in this State Planning Po Discussion Paper was w WD commented that the (4) Small Group Workshop Sur 	ity Council) asked if issues relating to the greenhouse effect d in the SPP or State Coastal Management Plan. tate Coastal Management Plan. said that Green olicy should it be developed. wup workshop sessions, wup workshop session sess	ct, including the resulting rise in (SV) clarified that these issues nhouse issues are to be considered ncil) commented that the n Paper for the preparation of SPP.
ISSUES (RELEVANT TO SPP)	DETAILS	Solution/Action
Support for development of a SPP	Most - Some concern was expressed in relation to whether the SPP would be able to be implemented, and that it would need to be clear, concise and able to be interpreted the same way by all users. There was also a majority view that while a common approach was a good idea it needed to have flexibility to deal with local situations.	Care should be taken in drafting the SPP to ensure that the drafting addresses the concerns.
	Support was expressed for the reasons that the SPP will help to protect the State's interests, will raise awareness	

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	of decision makers, increase consistency, reduce Local Government liability and will meet community expectations of safety in residential areas. It was also suggested that the SPP would address issues that local governments do not have the time or resources to cover.	
	Some members of one group did not support the SPP for the reason that it would be too prescriptive and remove local government control/decision making power. One representative from Local Government thought that the Queensland Government should not have referral agency powers.	
	Views from two groups expressed that the community has an expectation that they are already protected by government from impacts on natural disasters in land use planning and development assessment issues. A community analysis was suggested to ascertain community expectations.	
· ·	Once group thought the SPP should provide guidance on the location of hospitals and emergency services in relation to natural hazards.	- ·.
Hazards to be addressed in a SPP	Priority hazards for the SPP were flooding, severe storms, bushfire and landslides but there was strong support for all six hazards to be further investigated. It was raised that perhaps the SPP should also address	The priority focus may be on flooding, severe storms, bushfires and landslides with all six areas to be investigated.

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the impacts of cumulative or simultaneous hazards.	
The SPP could consider the impacts of cumulative or simultaneous hazards.	
It was suggested that perhaps bushfires could be addressed by a statewide code or planning guidelines to be included in planning schemes. Other hazards suggested for further investigation and supported by the workshop groups were plagues and	Other hazards raised could be considered. These issues are outside the ambit of the SPP.
pestilence, wild and grass fires, greenhouse effect and salinity also the loss of habitats, dengue fever. There was discussion of other types of hazard such as chemical spills and dust storms but it was generally agreed that these fell outside the ambit of this SPP.	Consider in the drafting of the SPP.
There was discussion about including dam break and providing guidance to Local Government in directing development away from dams and water storage areas.	
There was discussion of other legislative mechanisms and the need to ensure that strong cross referencing exists particularly in relation to storm surge, coastal issues, and acid sulfate soils. The SPP should reflect consistency with The River Trust legislation and plans and cross reference these documents.	Consider in the drafting of the SPP.
Comments were made about the opportunities for integration or development of linkages between the	

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<u></u>	SPP with the regional planning process. It was further recognised that there was an need to integrate land use planning and disaster mitigation with the recovery and response processes to ensure consistency. Specific mention was made to the Emergency Risk Management Process.	
Mapping	One group stated that the SPP should identify processes and standards for mapping of risk areas, ensuring a common approach for all hazards. However, it was commented that mapping hazards may have implications for increased litigation. Lack of data availability and cost of mapping was raised as an issue by one group. The need for various mapping was identified including earthquake risk, storm surge, river levels and flow paths. It was suggested that mapping should incorporate various layers including base data (topography/contours), annual risks (seasonal changes), existing development and landuse.	Consider in the drafting of the SPP.Consider a consistent approach to data capture and base mapping – possible use of Digital Cadastral Database.
Guidelines	One group suggested that Guidelines should give guidance on how planning tools such as hazard maps can be used. SPP needs to provide guidelines for the granting of relaxations for development in prone or at risk areas.	Consider in the drafting of the Guidelines. It was suggested that the SPP provide the broad policy statements and the guidelines include the technical detail.

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	SPP needs to define 'declared areas' and 'acceptable risk'.	
Liability	Concern was expressed in three groups about the potential liability of Local Government and the costs of litigation. This was also related to the definition of areas of acceptable risk.	A SPP would provide a sounder base for defence of actions (provided they follow the SPP).
	Concern was raised in relation to liability in the event of risk mapping turning out to be wrong eg. if development is identified as being outside a risk area but subsequently is found to be at risk.	
Lack of a common resource base	There is a need to consolidate information into one, accessible location and to establish what desirable/ best practice is. There needs to be agreement between agencies (including local governments) as to the direction to be taken and communication between discipline areas eg. planning and engineering. Consideration should be given to gathering historical data and anecdotal advice in relation to hazard impacts.	Consider in the drafting of the SPP and Guidelines.

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Best Practice Examples	Q	Disaster Risk Management Approach which can then pick up community expectations	Consider integration and cross- referencing with SPP.
	۵	Flood Alert Systems for Cattle Creek and Pioneer Rivers	
	٥	Best Practice Floodplain Management in Australia (Department of Natural Resources and Mines)	×
	a	Mackay City Council Storm Surge Maps distributed to all households (5 Levels)	
		Sand/Gravel Extraction Guidelines (to prevent undermining levee systems in Pioneer River)	
Community education and awareness	There awar prov expe	e is a need for greater community education and eness. Community involvement would also ide an indication of local concerns and ctations.	Consider in the implementation of the SPP.
	It wa orga on th evac duri	is suggested that there may be a need for recovery nisations to be included in the SPP process based ne need to plan for community infrastructure (eg: uation centres, emergency centres) to be used ng the recovery/relief process.	
	It washou shou impi cons	as suggested that local government representatives ald also undergo an education process prior to the lementation of the SPP to ensure effective and distent application across the state.	Consider local government education process prior to release of SPP.

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	Information on risk areas should be readily available to the community through local government.	
Flooding	Planning needs to take into account changed situations and incremental and off site consequences eg. revegetation of river corridors, etc leading to flooding where it hasn't happened before.	Consider in the drafting of the SPP.
	Accuracy and reliability of data was questioned, particularly in relation to currency of data given changed development in catchments .	
- - -	A view was expressed that setting a flood level may not be sufficient and that the velocity of flood waters may need to be considered.	
	Establishing flood levels and development levels/floor heights were regarded as reasonable solutions by some groups. The need to consider the effects of both major and localised flooding events was raised.	
•	The need to maintain access and evacuation routes in flood prone areas was identified by one group as an important consideration. Another group raised the issue of planning alternative routes and access points.	
Bushfires	Need to consider location, access, vegetation management. Discussion about firebreaks and the need to maintain them.	Consider in the drafting of the SPP.

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	Need to consider buffer areas in development beside Unallocated State Land (QFRA). One participant suggested a Statewide Code for Bushfire Management may be an appropriate tool.	Consider opportunities for a Statewide Code.
Landslides	Mitigation infrastructure can be provided for landslides. Slope and soil type analyses may assist in planning decisions in susceptible areas. Planning needs to take into account changed situations and incremental and off site consequences eg. buffer areas.	Consider in the drafting of the SPP. Draw on current experiences to determine effectiveness.
	The SPP should address issues relating to location of and standards for development in susceptible areas, including opportunity for declaring 'exclusion' areas.	
Earthquakes	Susceptibility considerations. A planning solution raised included restricting development away from fault lines.	

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Cyclones	One comment was made that overlay maps could be prepared to identify cyclone-prone areas and that Local Governments could consider more stringent measures.	Consider in the drafting of the SPP.
Severe Storms	There were no specific comments on these.	

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Workshof	PROGRAM AND SUMMARY
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(1) DES Introduction

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(2) ERM Overview and Presentation on SPP

(3) General Q&A Session

- Councillor Margaret Strenlow (Mayor, Rockhampton City) made the comment that the preparation of the State Planning Policy process be a collaborative process involving both state and local governments as equal parties, and that it needed to occur from the beginning of the process. Cr Strenlow pointed out that local government have the primary responsibility for land use planning and commented that, for this reason, should be equally involved in the preparation of the SPP. Cr Strenlow stated that she agreed with the need to develop a SPP. Cr Strenlow stated that DES supports this idea and involved the Local Government Association of Queensland and representatives of Local Governments in the focus workshop, which was additional to the requirements of the IPA controls for the development of an SPP.
- Cr Brian Dorey (Livingstone Shire) commented that the preparation of the SPP must ensure a co-ordinated process of incorporation into planning schemes across the state.
- Line (Livingstone Shire) made the comment that network facilities, including roads and transport infrastructure, servicing communities were not being dealt with and needed to be considered for disaster mitigation and recovery reasons.

across the state eg: flood levels. Trevor also discussed the cost of mapping, describing it as a multi-million dollar exercise that local governments cannot afford.

(BoM) commented that no reference had been made to the impacts of State Government major infrastructure development on land use and the implications on data relevant prior to the construction of these infrastructure items. An example provided was the construction of a railway embankment in a floodplain and the resultant changes in flood patterns on the river floodplain. Data used prior to the construction of the embankment was no longer be relevant given the changes to flood patterns, resulting from the Queensland Government infrastructure development. Stated that the Queensland Government infrastructure development needs to consider its impacts and that a SPP will affect Queensland Government agencies was well as Local Governments. comments by saying that development applications were (DNRM) followed up on not dealing with issues including the hardening up of catchments and tree clearing on slopes. SMALL GROUP WORKSHOP SUMMARY - FOUR GROUPS SOLUTION/ACTION ISSUES (RELEVANT TO SPP) DETAILS Care should be taken in drafting Majority (Some concern was expressed in relation to Support for development of the SPP to ensure that the whether the SPP would be able to be implemented, and a SPP drafting addresses the concerns. that it would need to be clear, concise and able to be interpreted the same way by all users. There was also a majority view that while a common approach was a good idea it needed to have flexibility to deal with local situations). Two participants raised concerns that if the policy was too flexible it would lose its impact. Three participants were of the view that a SPP was not required - that these issues were currently being adequately dealt with by local government and were the responsibility of local government. Concern was

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	expressed in relation to having to revisit planning schemes recently prepared to incorporate the outcomes. Views were expressed that there is a community expectation that governments will protect communities from avoidable impacts of natural hazards.	
Hazards to be addressed in a SPP	Priority hazards for the SPP were flooding, cyclones, bushfires and severe storms but there was strong support for all six hazards to be further investigated. Other hazards suggested for further investigation and supported by the workshop groups were inclusion of acid sulfate soils, dam break and pestilence.	The priority focus may be on flooding, bushfires and landslides with all six areas to be investigated.
	There was discussion of other types of hazard such as chemical spills, exotic disease, tsunamis but it was agreed that these fell outside the ambit of this SPP.	These issues are outside the ambit of the SPP.
	There was discussion of other legislative mechanisms and the need to ensure that strong cross referencing exists particularly in relation to storm surge, coastal issues, and acid sulfate soils. There were suggestions made that these issues, particularly storm surge, could be more appropriately considered within this SPP.	
	It was considered by one group that risk assessments should be undertaken on a regional scale and responsibility should not be placed on individual local governments. Other participants indicated that is	

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······	should be local government to define acceptable risk or	
	level of immunity.	
Mapping	One group stated that the SPP should identify processes and standards for mapping of risk areas. The identification of high risk areas as priority areas, with the intention to direct immediate funding to these areas was suggested.	Consider in the drafting of the SPP.
	Lack of data and its accuracy was raised as an issue by one group. The need to ensure that mapping and modelling was consistent across the State was also identified and it was suggested that the SPP could determine minimum standards for data capture.	Consider a consistent approach to data capture and base mapping – possible use of Digital Cadastral Database.
Guidelines	Guidelines were raised as an alternative to the SPP – to assist local government in the incorporation of issues into planning schemes.	Consider in the drafting of the Guidelines.
	Triggers/Criteria were identified as potentially useful measures to identify at risk or prone areas and to be included in guidelines.	
	Guidelines should not be too prescriptive so as to ensure they can be implemented at the micro-level.	
	One group suggested that the guidelines incorporate standard codes for development assessment. The development of model codes for planning schemes was	

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	also suggested.	
Liability	Concern was expressed in three groups about the potential liability of Local Government and the costs of litigation. This was also related to the definition of areas of acceptable risk.	A SPP would provide a sounder base for defence of actions (provided they follow the SPP).
	Concern was raised in relation to liability in the event of risk mapping turning out to be wrong eg. if development is identified as being outside a risk area but subsequently is found to be at risk.	
Compensation	Concern was expressed as to whether compensation would arise and if so who would be liable in relation to designation of high risk areas and consequent restriction of development. Also, the question of how the level of compensation should be determined.	Consider in the drafting of the SPP. Note that SPP will only apply in respect of future development not existing development.
Lack of a common resource base	There is a need to consolidate information into one, accessible location and to establish what desirable/ best practice is. There needs to be agreement between agencies (including local governments) as to the direction to be taken and communication between discipline areas eg. planning and engineering.	Consider in the drafting of the SPP and Guidelines.
	Consideration should be given to gathering historical data and anecdotal advice in relation to hazard impacts.	

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Costs	The issue of cost to local government to develop and implement policy in relation to the SPP, including acquiring data and preparing maps, was raised in several groups. It was identified that small local governments cannot afford to undertake studies or mapping, particularly those local government areas subject to several natural disasters.	
Community education and awareness	There is a need for greater community education and awareness. This was raised particularly in relation to the development of new residential areas where flooding or other disasters has not been experienced. Need to increase farmer's awareness of bushfire prone areas on their land	Consider in the implementation of the SPP.
Flooding	 Planning needs to take into account changed situations and incremental and off site consequences eg. revegetation of river corridors leading to flooding where it hasn't happened before. Flooding issues in Rockhampton will differ to those across the state as Rockhampton residents generally have about 2 weeks notice of likely flooding events. Whilst it is recognised that there needs to be flexibility in the flood level adopted across the state to allow for 	Consider in the drafting of the SPP.

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	uniformity on a regional or catchment level and that the State should determine these levels.	
	Accuracy and reliability of data was questioned, particularly in relation to currency of data given changed development in catchments.	
	The document entitled Floodplain Management in Australia – Best Practice was raised as a valuable information resources and an example of best practice.	
	The problems associated with introducing new flood levels into areas already constructed on floodplains were raised.	
	There was a discussion about considering the return period to magnitude. There was a discussion about a SPP addressing the impact of a flood rather than its return period.	
Bushfires	Need to consider location, access, evacuation routes, provision of buffers and vegetation management. Discussion about firebreaks and the need to maintain them.	Consider in the drafting of the SPP.
	It was commented that the past practice of firebreaks and burning between the roads and firebreak (therefore not allowing the fire to 'jump') was effective but is no longer used.	
	It was raised by one participant that there were already	

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:	various measures in place dealing with bushfires. Mitigation infrastructure for bushfires included road construction and layout.	
Landslides	 Mitigation infrastructure can be provided for landslides eg: retaining walls. Planning needs to take into account changed situations and incremental and off site consequences eg. buffer areas. The conflicting interests of residents (who prefer residential allotments with views) and Councils' attempting to introduce landslip measures was raised. 	Consider in the drafting of the SPP.
Earthquakes	There were no specific comments on these.	

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Cyclones	One comment was made that overlay maps could be prepared to identify cyclone-prone areas and that Local Governments could consider more stringent measures.	Consider in the drafting of the SPP.
	Land use planning measures were identified as considerations for cyclones eg: setback from coast.	
	A view was expressed that the State Coastal Management Plan does not address adequately storm surge and that this SPP may need to address this even more thoroughly.	
Severe Storms	The implementation of building codes to deal with the impacts of severe storms was suggested as solution by one group.	
(4) Tours related not related t	o SPP	
(4) Issues raised not related to SFT. There was discussion of other types of hazard such as chemical spills, pest management, tsunamis but it was generally agreed that these fell outside the ambit of this SPP.		

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	STATE PLANNING PC	DLICY ON LAND	USE PLANNING FOR NATURAL DISASTER MITIGATION
1		DMENT ASSESS	MENT - REGIONAL CONSULTATION WORKSHOPS
	AND DEVELO	CIVILIAI ILOGLUGI	
		Time/Date:	11.15-3.00pm 16 October 2001
		Location:	Toowoomba (City Golf Club)
		LUCATION	
	o	v timing, tone	e and conduct of meeting)
	Uverview Comments: (venue suitability	equipment we	re as requested, tone of the meeting was positive and most attendees
Over	rall, venue was good, organisation ind v	equipment	· · · · · · · · · · · · · · · · · · ·
parti	icipated actively.		
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	RTICIPANTS		
D	Attendees (24):		
	Facilitators:		
	Notetakers:		

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WORKSHOP PROGRAM AND S	UMMARY	
(1) DES Introduction(2) ERM Overview and Presen	tation on SPP	·
(3) Small Group Workshop Su	mmary – four groups	SOLUTION/ACTION
ISSUES (RELEVANT TO SPP)	DETAILS	
Support for development of a SPP	There was general support for a SPP if undertaken in a regionalised approach. However most people present believed that the Councils were already planning and doing the measures for Natural Hazards, and this may create overlap and redundancy in the SPP. There was support for the SPP to consider flooding, bushfire and landslides, with cyclones as a secondary focus. It was thought that planning for the other hazards should deal with the consequential impacts. There was also a majority view that while a common approach was a good idea it needed to have flexibility to deal with local	Consider in the drafting of a SPP Consider in the drafting of a SPP Consider in the drafting of a SPP Consider in the drafting of a SPP
	situations, particularly flood levels.	
Additional hazards to be addressed in a SPP	There was a view expressed that there is potential to include drought and pests within the SPP.	Consider in the drafting of a SPP
Implementation	Natural hazards occur across local government boundaries. A question was raised as to how the SPP can make Councils deal with cross boundary issues.	Consider regionalised mapping in the drafting of the SPP

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	A participant pointed out that many Local Government planning schemes will be drafted and or completed before the SPP is completed.		
	A question was raised about the source of funding for the implementation of the SPP, with most Councils likely to be unable to self fund implementation.		
	It was considered that there is a need to ensure that Councils and the community consistently apply the controls of a SPP.	Consider in the drafting of a SPP	
~	There was support for keeping a list of management issues in the SPP covering issues such as communications and warning systems.	- -	
1.	Planning schemes can be drafted to control the form of buildings. The draft Toowoomba planning scheme has made the building of houses code assessable and includes the use of Australian Standards as part of the assessment.		
	It was considered that there needs to be complete correlation between land use planning (eg planning scheme preparation) and development assessment.	Consider in the drafting of a SPP	
	SPP should nominate responsible agencies for each task required by the SPP. Need for DES to become a referral agency for development applications that trigger the SPP as well as having input into the drafting of planning schemes.	Consider in the drafting of a SPP	
Mapping	Problems of data availability or the lack of data and the cost of filling data gaps was raised. Councils may not be willing to self	Consider in the drafting of a SPP	

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	fund the acquisition of the data.	
-	There is a challenge to ensure all data is correct and compatible.	
	There was support for regionalised mapping as State wide mapping is considered to be too broad and local level is considered to be too narrow.	
	Standardised mapping of high/medium/low hazard areas was raised.	
Guidelines	Potential need to develop codes/guidelines for implementation eg (a) assessment code for fire/flood/bushfire/landslide which would include generic terminology, (b) particular standards relating to flooding and (c) including design provisions for major infrastructure to ensure they are better than usual.	Consider in the drafting of a SPP
Liability	A state wide mapping methodology would set a consistent methodology, which might then increase the liability for local councils.	Consider in the drafting of a SPP
	SPP considered to be the only way to pass the responsibility of good planning on to the developers rather than the residents or Councils	
Lack of a common resource base	A question was raised if a survey of all Councils had been completed to fully assess what information and what level of information was actually held by Councils.	Consider completing a survey as part of future SPP work
Flooding	Consistent flood levels were not considered to be viable because the difference between a O50 and O100 was not significant in the	Consider in the drafting of a SPP

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	Darling Downs area, whilst in other areas it is a significant change.	
• •	It was stated that problems were being caused downstream by adjoining upstream planning approvals of works in flood plains. Subdivisions design should include two entry points, one of which is flood immune and should also nominate meeting points in public land Subdivisions road networks can be designed to assist in drainage, eg roads orientated to manage flows not block them.	Consider in the drafting of a SPP
Bushfires	Need for some standard in terms of fire breaks, revegetation for bushfire mitigation (fire resistant species), houses to include tanks for fire fighting purposes and couplings for use by trucks.	Consider in the drafting of a SPP
	Definition of bushfires should be modified to include grassfires	Consider in the drafting of a SPP
	A view was expressed that there is a need to balance land uses and bushfire management. For example, generally livestock keep the understorey clear of vegetation reducing the risks of firestorms, but the livestock cause environmental damage.	
	Local problems include large 30 acre rural blocks, some of which contain residents whilst others don't. Difficulty comes in poor management of properties and the inability of the Rural Fire Service to know if residents are on the land and need protection.	
	Need for properties to have their own property firebreaks and for Councils to promote/educate regarding proper property management. Need to recognise that proper individual site	

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	management reduces the risk of damage even in high risk areas.	
• •	Subdivisions should be designed to include two entry/exit points, so that one route is always available.	
	A view was expressed that a State wide consistent approach may be difficult (eg provision of firebreak in humid and arid areas will differ).	
	There was support for the SPP to call up the Building Code of Australia for fire design	
Landslides	A view was expressed that there is a need for independent geotechnical investigations of sites prior to approvals being granted in at risk areas.	Potentially incorporate into associated guidelines
Earthquakes	There was a view that the SPP should either plan for earthquakes everywhere or nowhere. The difficulty arises because generally people do not know where the fault lines are located.	

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Cyclones	Deal with consequential issues eg storm surge.	Consider in the drafting of a SPP
	Some locations may be more vulnerable eg the eastern side of Castle Hill in Townsville.	
	Need to educate people on property management to reduce the amount of material able to become airborne during cyclones and storm events.	
Severe Storms	May be possible to deal with the consequences via flood control and build standards.	
Best Practice Examples	The Victorian Country Fire Service- Design Manual for Rural Development Areas.	Consider documents in the drafting of an SPP
	Other initiatives from others States eg Blue Mountains Fire Management initiatives.	
1	Ash Wednesday Fire Risk Model.	
	Toowoomba Escarpment Management Plan- developed by Toowoomba Council and the QFRS.	
	Gatton Shire Flood Hazard Management Plan.	
	Gatton Shire Bushfire Policy.	
	Gatton Shire Landslides Policy.	
	Gold Coast Council Bushfire Management Plan.	
Additional Issues	Potentially the need to include a "X" in the matrix relating to the possible use if mitigation infrastructure for landslides and bushfires. Examples included fire breaks and water storage tanks for bushfires and retaining walls, rock bolts and stronger	Consider in the drafting of a SPP

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infrastructures in areas prone to landslides.	
It was generally considered that significant infrastructure (such as	
hospitals, power stations and sewerage treatment facilities should	
not be placed in high risk areas.	
There was a view that the SPP should support suitable uses for no	
risk areas.	
A question was raised as to how the initial stakeholder group for	
the workshop was formulated, with concern that some important	
groups with experience in the area had not been invited eg	
Tableland councils. It was explained that the initial workshop	Consider in the drafting of a SPP
was a scoping exercise with the LGAO invited and 7	
representatives from 6 Local Governments.	
Limitations of the State Planning Policy to control existing and	
approved development was recognised. It was suggested that the	
best approach was to ensure tighter building controls were	
implemented through the Building Code of Australia. There was	
a suggestion that this was perhaps the best outcome and that the development of a State Planning Policy was a secondary benefit.	
development of a state Finitianity toney was a secondary second	
There was support for location planning to ensure that significant	
assets (such as nursing homes, hospitals) are not in high risk areas	
Roads are important for movement and major roads should be	
located or built to avoid risk from hazards.	
There was a view that a SPP needs to define extreme, high .	
medium and low risks and that it should contain a clear statement	

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medium and low risks and that it should contain a clear statement of principles.	
There was a view expressed that there are significant issues which need to be addressed in existing developed areas.	
(4) Issues raised not related to SPP.	
 Encourage insurance companies to provide incentives for properties that demonstrate the application of management principles for hazard management. 	
Need for better signage of chemical storage on rural properties. Danger created for fire fighters entering properties to fight fires and potential unknown risks within buildings.	

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8010165 – State Planning Policy Regional Workshops

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STATE PLANNING POLICY ON LAND USE PLANNING FOR NATURAL DISASTER MITIGATION AND DEVELOPMENT ASSESSMENT - REGIONAL CONSULTATION WORKSHOPS

Time/Date: 11.30-3.00pm 17 October 2001 Location: Bundaberg (Burnett Riverside Motel)

Overview Comments: (venue suitability, timing, tone and conduct of meeting)
 Overall, venue was good, organisation and equipment were as requested, tone of the meeting was positive and most attendees participated actively.

PARTICIPANTS

□ Attendees (19):

INDICIANCES, Faye Omniti (DEO//)

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WORKSHOP PROGRAM AND SUMMARY			
(1) DES Introduction		,	

(2) ERM Overview and Presentation on SPP

(3) Q & A Open Forum Discussion and Small Group Workshop (2 Groups) Summary (see following section)

	ISSUES (RELEVANT TO SPP)	Solution/Action
Support for development of a SPP	There was general support for a SPP, however the fact that some Councils have little or no baseline data and existing planning will not make it easy to implement.	Consider in the drafting of a SPP
	A view was expressed that the Integrated Planning Act does not currently address Natural Disaster related issues, and a SPP would be a good way to incorporate this aspect.	
Natural Hazards to be considered	All hazards were discussed with no clear decision on which hazards to include emerging. It was agreed that bushfires and flooding could be covered. With some doubt over the ability to include earthquakes. One out of two groups thought landslides, severe storms and cyclones should be included.	Consider in the drafting of a SPP
	Drought – two people thought that drought should be included (eg a development should not be allowed if there is insufficient water) This was considered particularly relevant when land considered to be unsustainable farming land is subdivided for development as residential development is thought to require more water than that required to sustain farming.	Consider in the drafting of a SPP

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	Wave Set Up – one person questioned if storm surge would also address wave set up issues (wave swell) One out of two groups questions the inclusion of tsunami within the SPP.	
Implementation	There was a question as to what appeal process would be available for Councils and individual developers to appeal against the implications of the SPP and the associated planning scheme content.	
	There was a question as to what enforcement powers the SPP will have and a statement that the extent of those powers will be critical to the successful implementation of the SPP. There was support for the SPP having "teeth".	
	Views were expressed that the onus should be on the applicant to site development in an area without natural hazard implications.	Consider in the drafting of a SPP
	Funding for smaller less affluent local government to undertake technical studies to inform Planning Schemes was considered insufficient.	
	A financial viability question for smaller developers or individuals was raised if a number of technical investigations are required as part of any or all future development applications. Larger developers were thought to be able to bear the cost but smaller developers may not.	
	A view was expressed that to incorporate SPP matters into a planning scheme takes significant lead time and that by the time a	

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	SPP is drafted most schemes will be well advanced, making	
	incorporation of SPP matters difficult. A comment made that	
	perhaps it is unrealistic to expect Councils to incorporate these	
	issues within the current 2003 IPA schemes.	
	State Government is bound by a SPP. It was raised that the onus	
	was being placed on Local Government to implement the SPP but	
	similar onus was not being applied to State Government.	
	There was a suggestion that the DES should become a concurrence	
	agency as part of the SPP implementation, to assess applications	
	compliance with the SPP.	
	There was support for DES being a referral agency as it was	
	There was support for DED being a referrar agency as in the	
	considered this hight give local governments decease to expert	· ·
	information.	
	A view was expressed that currently the views of Council officers	Consider in the drafting of a
	including town planners, are often overlooked by Councilors in	SPP
	making development decisions. Decisions are thought to be made	
	on political grounds rather than sound planning grounds. A SPP	
	was considered a way to remove this loophole.	
		Consider in the drafting of a
	There was a question as to the implications of the SPP upon	SPP
	Infrastructure Charges Plans and Benchmark Development	
	Sequencing.	
	ocquertang,	Consider in the Drafting of an
	If a SPP goes ahead extensive education for Local Government	SPP
	officers on the applicability of the SPP will be required.	
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Consider in the drafting and implementation of a SPP
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Liability/ Compensation	Question was raised about potential compensation for developers who are negatively affected by the new SPP and liability of State Government or local government.	
SPP content	Consistency and clarity in drafting of SPP is required to ensure development conditions are defendable in Court eg Good Quality Agricultural Land SPP was considered by participant to be not defensible, based on a development decision in the Isis Council.	Consider in the drafting of a SPP
	State should set minimum standards but be flexible to allow Local Government to set higher standards based on community expectation. The SPP should provide guidance on risk quantification.	Consider in the drafting of a SPP
	It was questioned if the SPP would dictate what event a Planning Scheme needs to consider, eg congruence of a storm surge with flood, earthquake with flood.	
	Need to discuss SPP terms in plain English, such as what is meant by land use planning and development assessment and what an SPP can do to influence a Planning Scheme.	Consider in the drafting of a SPP
Bushfires	Bushfires were considered by one group to be the greatest common threat to the region and a hazard where the risk can be easily and accurately assessed.	
	Codes need to be developed to be included as part of the SPP.	Consider in the drafting of a SPP
	Should consider the findings of the DLGP and the Rural Fire Service "Guide to Bushfire Management"	Consider in the drafting of a

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	A representative from DPI – Forestry indicated its belief that no restrictions should be placed on plantations or use of their land as a result of SPP. DPI currently has management plans in place to guard against bushfire hazards and they feel that these more than adequately address bushfire risk. DPI has historical fire records for their forest areas, which could be used as part of regional risk analysis.	SPP
Flood	The two workshop groups did not believe that a consistent flood level was possible to be set to control development. The belief was that it was necessary to vary the level across Shires to allow for local variations. A view was expressed that a State wide or regional level would not be workable.	Consider in the drafting of an SPP
·	One group outlined the key river systems in the area, which included the Kolan, Isis and Auburn. That groups view was that consistency in flood level limits was not considered an issue. The view was that the State should identify minimum levels and then Local Governments could decide if higher level should be adopted based on community expectations.	Consider in the drafting of an SPP
	One group considered that the redevelopment of existing areas could be a problem if a SPP was created. The belief was that it would be difficult to apply the same controls to new 'greenfield' development and to in-fill development.	
Landslides	Not considered to be a significant issue in the area, although the significance of it on a statewide level was recognised.	

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Earthquakes	Earthquakes were considered to be a district wide problem. If they are to be included in a SPP additional baseline information will be required (available from Central Queensland University and Australian Emergency Management Institute)	Consider in the drafting of an SPP
	It was considered doubtful that a SPP could cover earthquakes, largely due to the current lack of information on the topic.	
Cyclones	Need to consider Storm Surge along with Cyclones and the possibility of a Tsunami.	Consider in the drafting of an SPP
Severe Storms	Views were expressed in one of the two groups that developments should place powerlines underground to minimise the damage caused by strong winds	
Infrastructure	It was questioned by one group how the SPP would affect Infrastructure Charges Plans and how the new Council Infrastructure Charges Plans would deal with new infrastructure required for Natural Hazard management	

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Best Practice Examples	3 Pilot flood and storm surge studies completed for Hervey Bay, Cairns and Mackay.	Consider in the Drafting of an SPP
	Department of Local Government and Planning and Rural Fire Service manual on Bushfire Hazard Planning was considered an excellent document	
(4) Issues raised not related to Currently little overall empha government approach to the		

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STATE PLANNING POLICY ON LAND USE PLANNING FOR NATURAL DISASTER MITIGATION AND DEVELOPMENT ASSESSMENT - REGIONAL CONSULTATION WORKSHOPS

> Time/Date: 11.15-3.00pm 18 October 2001 Sunshine Coast (Noosa North Shore Retreat) Location:

Overview Comments: (venue suitability, timing, tone and conduct of meeting)

Overall, venue was good, organisation and equipment were as requested, tone of the meeting was positive and most attendees participated actively.

Any immediate action required and responsible person None.

PARTICIPANTS

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Attendees (20): O

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WORKSHOP PROGRAM AND SUMMARY		
(1) DES Introduction		
(2) ERM Overview and Presentation on SPP		

(3) Q&A Open Forum Discussion and Small Group Workshop Summary (four groups)

ISSUES (RELEVANT TO SPP)	DETAILS	SOLUTION/ACTION
Support for development of _ a SPP	There was general support for a SPP, however it was thought that it could not address cyclones, severe storms and doubts were also raised in relation to the applicability of a SPP in relation to	Consider in the Drafting of an SPP
	earthquakes.	Consider in the Drafting of an SPP
	It was considered that planning for cyclones and storms should deal more with the consequential impacts eg flooding.	
- -	There was some wariness among Council representatives, as they are already planning and undertaking measures to address natural hazards, and these representatives stated that a SPP may over ride or make redundant their current policies and work.	
Hazards to be addressed in a	See row above concerning support for development of a SPP.	Consider in the Drafting of an SPP
SPP	A view was expressed that there is potential to consider some aspects of drought. It was considered that drought is best addressed by infrastructure rather than land use planning eg ensuring that areas have adequate water supply	
	BOM representative stated that this agency is investigating	<u> </u>

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<u></u>	Greenhouse and climate change issues and that the SPP could incorporate climate change into the SPP.	
	Pest inundation was raised as a possible hazard to consider.	
Implementation	Currently the referral trigger only occurs for impact assessable applications, question as to what happens with code assessable applications, will the SPP apply? There was a question on the possible role of the DES as an assessment manager and a suggestion that the DES becomes a referral agency for applications.	Consider in the Drafting of an SPP
	There was a question as to how the SPP would deal with in-fill development within established areas and if an SPP could actually set a generic flood level to be applied across all areas.	
	Concern that a SPP may be too restrictive on Councils, particularly the enforcement of mandatory minimum levels and exclusion areas.	Consider in the Drafting of an SPP
	Concern over the cost implications of mandatory hazard investigations and mapping, particularly on small Councils. It was thought that for the SPP to be successful it will require large amounts of funding.	Consider in the Draming of an SFI
	A variety of information is currently held by a number of different organisations. There is a need to compile all of this information into a single resource database.	
	Consultation with the community on natural hazards should be compulsory. The knowledge contained within the local	

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	authorities is not being asked for.	Consider in the Drafting of an SPP
	Possibly the SPP needs to recognise a link between the SPP and Counter Disaster Plans. The Counter Disaster Plans provide weighting for the prioritisation of capital works programs.	
Mapping	Concern that the local governments have very fine detail mapping, which may become irrelevant if the State imposes state wide broad level mapping. Concern was raised that the broad level mapping would not suffice and that the fine detail mapping was essential.	Consider in the Drafting of an SPP
Matrix	Possibly include infrastructure for bushfires (eg fire breaks) and flood (eg flood warning systems) as part of disaster mitigation infrastructure.	Consider in the Drafting of an SPP
Flooding	Doubt was raised over the ability to incorporate a State wide flood level, with the need for regional and local variations raised as an alternative. It was considered that levels need to be varied depending upon the land use, eg urban or higher density areas should have a higher level than rural areas.	Consider in the Drafting of an SPP
	Opinion was expressed that the SPP should standardise what type of event planning schemes should plan for and model on eg flood and storm surge and high tide or similar combination. That way all Councils will have a standardised methodology and starting point.	Consider in the Drafting of an SPP
	Noosa Council has considered the impact of dam break within	<u> </u>

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S	some of its recent flood studies	
	Concern was raised on the ability of the SPP to have an impact on existing development. It was considered that the existing development and infrastructure is too expensive to relocate to new lower or non- risk areas.	Consider in the Drafting of an SPP
	A view was expressed that the SPP needs to be careful not to restrict development (eg agriculture) from certain areas, which rely upon flood plains for good soil and can only occur in these at risk areas.	
	A view was expressed that the SPP could state Desired Environmental Outcomes rather than recommending a consistent standard State-wide level.	
Bushfires	Sunshine Coast Councils have joined together to form a joint working group to address bushfires.	Consider in the Drafting of an SPP
	Bushfires should be changed to wildfires. One example of rewording was that the definition in the discussion paper should be amended to add after 'wooded areas' "or other vegetation types"	
	Concern was raised that the people have no idea of the implications and risk of building in certain areas. Education needs to be improved.	Consider in the Drafting of an SPP
:	A view was expressed that firebreaks and vegetation clearing and management should be mandatory for all new rural properties.	Consider in the Drafting of an SPP

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	A view was expressed that development should not be allowed to	
	adjoin existing plantation forest areas.	
	It was considered that another mechanism is required to require existing developments to consider bushfire planning or control where this has not already occurred.	Consider in the Drafting of an SPP
	It was considered that if development is allowed in bushfire prone areas, there should be an obligation to have a good community education program.	
	There was a view expressed that there may be a need to require compulsory burning-off as a management tool within rural areas to assist in reducing fuel loadings. It was considered that this could be complemented by an education brochure on why burning-off is necessary.	
Landslides	It was agreed that the state planning policy should address landslides.	Consider in the Drafting of an SPP
	A view was expressed that land use planning for landslides needs to be based on local knowledge and mapping. It was considered that it would be too expensive to produce state wide mapping in sufficient detail to be of use in landslides risk assessment.	
	A view was expressed that a SPP should prevent development on areas at risk of landslide.	
Earthquakes	Doubt was raised in relation to the ability to plan in relation to earthquakes.	

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		a the table of the of the CDD
	It was agreed that the cost benefits versus risk were not great enough to warrant significant changes to development areas. It was agreed that control through the Building Codes was adequate.	Consider in the Dratting of an SPP
Cyclones	A view was expressed that the type of cyclone event needs to be considered and that, variable controls could be implemented based on this approach.	Consider in the Drafting of an SPP
	A view was expressed that a SPP can only really address the consequential impacts such as flooding and strong winds. It was considered that an education program, rather than direct controls, was more likely. This included, for example, education programs on site management to remove items that may become airborne.	Combiner in the Dramany or an or a
Severe Storms	It was considered that there is a need to design new areas with access/egress alternate routes. A view was expressed that there is a need to educate on the dangers of storms and risk reduction through appropriate management of on-site "loose" items. A view was expressed that detailed design needs to consider overland flow paths and plan for lesser rain events	Consider in the Drafting of an SPP

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Additional Issues	There was a question as to how the SPP may deal with climate change and greenhouse issues. Noosa Council is currently investigating to incorporate into their scheme. A view was expressed that the ability to plan for climate change within the SPP and planning schemes would depend on the lifespan of the SPP and the planning schemes. It was considered	Consider in the Drafting of an SPP
	that, in the long term, climate change would have a significant impact, whereas in the short time it may have very little.	
	There was support for the SPP to specifically call-up the Building Code of Australia and other similar controls.	
	When the issue of planning for multiple simultaneous hazards was raised, there was a view expressed that Local Governments should take a risk assessment approach as recommended in the Australian and New Zealand standards.	
Best Practice Examples	Suggestion that examples from other States be sourced. However it was thought that other States currently deal with the issues in an uncoordinated manner.	Consider in the Drafting of an SPP
	Queensland Urban Drainage Manual was considered to be a useful resource which addresses some in-fill issues	
	NSW Department of Land and Bushfire Management- Guidelines for Bushfire Management.	
	There was a suggestion that CSIRO be approached for relevant documentation.	

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· · · ·	AUSTROAD Standards for Road Construction was	
1	recommended.	
	Maroochy Shire Bushfire and Steep Land Development Codes	
	Watoocky office of the second	
1	were recommended.	······································
		-
((4) Issues raised not related to SPP.	
	 Encourage insurance companies to provide incentives for properties that demonstrate the application of management principles for hazard management. 	
	 Need for better signage of chemical storage on rural properties. Danger created for fire fighters entering properties to fight fires and potential unknown risks within buildings. 	
1	 Possibility of differential insurance and the implications on insurance if people build in known risk areas 	
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	STATE PLANNING POLICY ON LAND U	ISE PLANNING FOR NATURAL DISASTER MITIGATION ENT - REGIONAL CONSULTATION WORKSHOPS
	Time/Date: Location:	2-4.30pm 19 October 2001 Roma (Roma Bowls Club)
Overal Overall	erview Comments: (venue suitability, timing, l, venue was good, organisation and equipment pated actively.	tone and conduct of meeting) were as requested, tone of the meeting was positive and all attendees
D An Nil.	y immediate action required and responsible j	person
PARTI	CIPANTS	
	Attendees (9):	
	Local Government (6 from 4 Councils):	
	Fire)	
	Federal Government (1 from 1 Departr	nent):
	Facilitators:	

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WORKSHOP PROGRAM AND SUMMARY

(1) DES Introduction

(2) ERM Overview and Presentation on SPP

(3) General Q&A Session

Discussion about nature and availability of NDRMSP funding.

(4) Small Group Workshop Summary – one group

	ISSUES (RELEVANT TO SPP)	DETAILS	SOLUTION/ACTION
S a	Support for development of SPP	All supported the development of a SPP considering all six issues identified in the Discussion Paper, possibly with earthquakes being a lower priority.	Proceed with formulation of a SPP
E	Hazards to be addressed in a SPP	There should be a State-wide direction allowing for regional approaches/ solutions and priorities	Consider in drafting of SPP
		Additional hazards – there was consensus that bushfire should be widened to "wildfire". There was a suggestion that biodiversity should be considered and another suggestion that biological/chemical hazards could be considered	Consider in drafting of SPP
	Mapping	There was strong support for mapping of risk areas and for bringing it together at a regional level to identify regional risk and allow sharing of resources.	Consider in the drafting of the SPP.

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Guidelines	Guidelines should allow for regional variations in relation to solutions.	Consider in the drafting of the Guidelines.
Liability and Insurance	Concern was expressed about the potential liability of Local Government in the setting of flood levels. Consider regional setting of flood levels by local governments.	Consider possible legislative support.
	There was support for the idea of differential insurance for different levels of risk.	
Lack of a common resource base	There was support for the development of a common resource base in the form of guidelines and best practice guidelines.	Consider in the drafting of the SPP and Guidelines.
Community education and awareness	There was considered a need for greater community education and awareness. DES could develop an information pack to enable communities to easily identify risk and to use appropriate materials (eg fencing in storm / cyclone areas), planting etc to minimise risk.	Consider in the implementation of the SPP.
	There is an assumption in the community that hazard issues are being looked at by "government" and that community interests are already protected.	
Flooding	There was discussion of the approaches being taken by different Councils. All Councils represented had undertaken or were undertaking flood studies. Murweh has recently adopted an Interim Flood Policy	Consider in the drafting of the SPP.

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requiring habitable areas to be above maximum recorded flood level and is considering levees. Roma has undertaken flood studies and will include the results in new IPA planning scheme (currently at Statement of Proposals stage). Warroo has included measures in draft planning scheme to go to Council shortly.	
There was support for a regional approach to the issue.	
There was discussion about the differing impacts of a set level eg. Q50 or Q100 on different communities and the need to allow for regional circumstances.	
There was discussion about the potential conflict between achieving all weather access and the possible flooding implications of major roadworks construction above flood level.	
Land uses in various catchments, including modified farming practices, have resulted in changed flood patterns.	
Need to consider impacts and duration of flooding rather than setting a blanket level.	
Comment was made that in some cases gullies and creeklines that had been floodways were being vegetated and not permitted by EPA to be cleared.	

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	up because of runoff and that this was worsening flooding but was not allowed by EPA to be cleared.	
Bushfires	Support for mapping of risk areas and differential standards for service by rural fire services. People should be aware of fire risk and if a conscious choice is made to live in a high risk area, people should not expect rural fire volunteers to put their lives at risk to protect property.	Consider in the drafting of the SPP.
	There was consensus that bushfire should be widehed to "wildfire".	
	Communities should be involved in the development of risk assessment and mitigation strategies. Strategies should provide for education of new owners and residents moving into an area to be aware of risks.	
	Perceived to be a greater problem in coastal, urbanising and steep areas.	
Landslides	Support for inclusion in SPP but not considered to be a great problem in this region.	Consider in the drafting of the SPP.
Earthquakes	Support for inclusion in SPP but not considered to be a great problem in this region although one participant noted that he had experienced earthquakes in Surat but that because development was generally low-rise	Consider in the drafting of the SPP.

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<u> </u>	timber buildings impacts were low.	
Cyclones	Support for inclusion in SPP but not considered to be a great problem in this region.	Consider in the drafting of the SPP.
Severe Storms	Storms are a regular occurrence in the region. Suggestions for planning measures included undergrounding of powerlines which would also improve visual amenity (but needed to be subject to cost impacts, especially in rural areas), vegetation guidelines, fencing etc. Comment was made that stormwater runoff was causing problems like localised flooding.	Consider in the drafting of the SPP.
 (5) Issues raised not related to SPP. There was discussion of other types of hazard such as chemical spills. There was discussion about the Building Code of Australia and comment was made that further consistency across the State and Australia should be considered eg. cyclone bolts/ tie downs are required in northern Queensland when similar impacts are experienced from storms in southern Australia but such measures are not required. 		

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WORKSHOP PROGRAM AND SUMMARY (1) DES Introduction (2) ERM Overview and Presentation on SPP (3) Q&A Session (JCU) asked what types of development applications are not required to take account of a SPP? SV clarified that it depended on the way in which SPPs are framed - they may specify particular areas/developments that are subject to the SPP or may apply across whole of planning scheme areas. (Mareeba Shire) questioned the basis for funding claims in relation to studies undertaken under the at the Department of Natural Disaster Risk Management Arrangements. FS directed TC to contact Emergency Services (3247 8484). (Cairns Chamber of Commerce) disagreed with the representation that the SPP is likely to reduce costs for developers, indicating that he thought it would represent another cost to developers. He stated that there hasn't been a SPP developed to date that hasn't resulted in increased costs and stated that all local governments were adequately dealing with these impacts at present. (Mareeba Shire) questioned the status of the Disaster Risk Management document, in terms of whether or not future amendments will be made. PW made the comment that the document incorporates a very high level of risk and that this perhaps was not appropriate and that the criteria used to categorise risk needed to be reworked. Cr Jeff Pezzutti (Cairns City) commented that it would be difficult to develop an effective SPP to apply across the D whole state given the geographic and climatic differences. JP suggested that the state should be divided into geographic regions by latitude, with policies applying to the regions. SV commented that this had been raised in other workshops and a potential solution was the development of a common approach across the state but allowing the flexibility to adapt to localised conditions.

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(RAPI) asked how the SPP could be applied in Aboriginal areas. SV indicated that advice was currently being sought in relation to this and suggested that the SPP may not be mandatory in these locations. Brendan Nelson (Cairns City) questioned who determined acceptable level of risk. He referred to the AGSO website where it is indicated that landslip areas in the Cairns region, 1:8000 chance was identified as an acceptable level of risk. SV commented that the SPP may require consideration of these issues but leave the decision making with LG. (BoM) questioned why drought had not been included. SV commented that planning could not do very much about drought. (QT) commented that even though storm surge was covered in State Coastal Management Plan, perhaps it should also be included in the SPP for the purposes of consistency. This was strongly supported by each of the four groups. (Disaster District Coordinator) questioned whether or not the SPP could set standards governments must abide by. SV indicated that it could or it could provide alternative solutions also. (DLGP) indicated that storm surge should be included in the SPP given the significant proportion of the State affected and on the basis that the State Coastal Management Plan may not be sufficiently effective in its dealing with these issues. Greg Underwood (Cairns City) supported this notion, indicating that there should be consistency across the State in dealing with storm surge. (Mareeba Shire) commented that if the SPP did not set standards then local governments were likely to be facing litigation from developers and for this reason local governments may need protection from developers. SV indicated that the SPP could set standards or alternative solutions and that the SPP would assist in providing support for local governments. (DMR) commented that the SPP would have to deal with standards in some way otherwise its effectiveness would be limited.

(4) Small Group Workshop Summary – four groups

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ISSUES (RELEVANT TO SPP)	DETAILS	SOLUTION/ACTION
Support for development of a SPP	Support was received from all participants for the development of a SPP. There was also a majority view that while a common approach was a good idea it needed to have flexibility to deal with local situations. It was identified that a potential approach was the setting of a minimum risk assessment standard, with power resting with local government to determine higher standards if required. There was support for the right of the community/purchaser to know all the risks for the area.	Care should be taken in drafting the SPP to ensure that the drafting addresses the concerns.
Hazards to be addressed in a SPP	Priority hazards for the SPP were flooding, bushfire and landslides but there was strong support for all six hazards to be further investigated. Strong support was received for the inclusion of storm surge in the SPP, and one participant was strongly advocating dealing with storm surge as a separate issue (as opposed to its links with flooding and cyclones). It was commented that the consequential impacts of cyclones and severe storms were the concern rather than the disasters themselves.	The priority focus may be on flooding, bushfires and landslides with all six areas to be investigated.
	Other hazards suggested for further investigation and supported by the workshop groups were inclusion of drought, beach erosion, dam break and tsunamis. One group, which raised dam break as a potential hazard,	Other hazards raised could be considered.

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	decided it should be excluded because it is not a natural hazard.	
	Support was also received for the inclusion of greenhouse effect in the SPP and the associated implications for the worsening of natural hazards and their impacts.	
Mapping	One group suggested that the SPP should make provision for the identification of 'no-go' areas and acceptable areas in relation to development.	Consider in the drafting of the SPP. Consider a consistent approach to
	Lack of data availability was raised as an issue by one group.	data capture and base mapping – possible use of DCDB.
	It was identified that the state-wide mapping of hazards had some benefits in the identification of source locations, flow paths and impacts.	
	It was identified that hazard maps may have a multi- purpose function.	
Guidelines	One group suggested that Guidelines should give guidance on how planning tools such as hazard maps can be used.	Consider in the drafting of the Guidelines.
	One group thought a SPP should use AGSO research to state where development should not occur.	
	One group considered that a SPP needs to establish a minimum standard and may need to be embodied in	

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	legislation to make it stronger.	
	One group recommended the inclusion of benchmarks.	
	One person considered that the State should include in the first draft, information on what each local government is doing in relation to this topic.	
Planning Scheme/Development Issues	It was raised that the SPP needed to ensure a more strategic approach to planning key infrastructure such as hospitals; airstrips, key access routes, to ensure these key infrastructures are not located in 'at risk' areas and facilities could be appropriately used during times of disaster. This included ensuring buildings were built to withstand more extreme disasters (eg: category 4 or 5 cyclones) rather than lower impact disasters.	
	Increased communication between local and State government was raised, particularly in relation to conflicting legislation and also in relation to the shared responsibility in the implementation of the SPP. Problems were recognised for the implementation of	
	the SPP in local government areas where standards already exist.	
	It was suggested that once planning schemes incorporate natural hazard planning, the planning scheme may become the dominant document and the SPP fall away.	
	One group identified the need for development	

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	applications to incorporate studies (eg: geotechnical) to demonstrate site suitability for development. This was related to placing the onus on developer/owner and has implications for reducing liability for local governments.	
	It was suggested benchmark standards should be included in planning schemes in relation to issues including infrastructure and access arrangements.	
	One group raised the issue that planning schemes need to allocate additional land for growth and change and also to allow for natural processes in and around new development.	· .
	One group raises the issues that lower socio-economic communities being attracted to more affordable, higher risk areas.	
Liability	Concern was generally expressed about the potential liability of Local Government and the costs of litigation. This was also related to the definition of areas of acceptable risk.	A SPP would provide a sounder base for defence of actions (provided they follow the SPP).
	Concern was raised in relation to liability in the event of risk mapping turning out to be wrong eg. if development is identified as being outside a risk area but subsequently is found to be at risk.	
Compensation	Concern was expressed in two groups as to whether compensation would arise and if so who would be liable in relation to designation of high risk areas and	Consider in the drafting of the SPP. Note that SPP will only apply in respect of future

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	consequent restriction of development. Also raised was the question of how the level of compensation should be determined.	development not existing development.
Lack of a common resource base	There is a need to consolidate information into one, accessible location and to establish what is desirable/ best practice. There needs to be agreement between agencies (including local governments) as to the direction to be taken and communication between discipline areas eg. planning and engineering. Consideration should be given to gathering historical data and anecdotal advice in relation to hazard impacts.	Consider in the drafting of the SPP and Guidelines.
Community education and awareness	There is a need for greater community education and awareness. Local governments could develop an information pack to enable potential purchasers of land to easily identify risk.	Consider in the implementation of the SPP.
Best Practice Measures	 Flooding policies used in other Australian states. Institute of Engineers publication relating to Australian Rainfall and Runoff. NSW Bushfire Service documentation and practises. Darwin storm surge mapping. AGSO report on natural hazards in the Cairns region. 	

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	Mareeba Shire Council history of flood damage.	
	Swan Shire (WA) policy on rural subdivision.	
	Cairns City Council documenting on rates notices all properties below Q100.	
Flooding	 Planning needs to take into account changed situations and incremental and off site consequences eg. revegetation of river corridors, leading to flooding where it hasn't happened before. Accuracy and reliability of data was questioned, particularly in relation to currency of data given changed development in catchments etc. What level should be used eg. Q50, Q100, highest recorded flood level, probable maximum? Should it vary between regions? There was no consensus view as to the level to be used. The comment was made that average levels were not particularly useful to deal with extreme and localised events. One group considered that the NSW model should be adopted as a means of preventing development, if minimum standards concerning velocity and depth of waters are not met. 	Consider in the drafting of the SPP.
Bushfires	There was discussion about the need to consider location, access, and vegetation management. There	Consider in the drafting of the SPP.

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	maintain them.	
	There was also considered to be a need to allocate buffer areas in development sites beside Unallocated State Land (QFRS).	
	One participant suggested that firebreaks should be considered to be mitigation infrastructure.	
Landslides	A view was expressed that mitigation infrastructure can be provided for landslides.	Consider in the drafting of the SPP.
	Planning needs to take into account changed situations and incremental and off site consequences eg. buffer areas.	
Earthquakes	There were no specific comments on these issues.	

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Cyclones	 One comment was made that overlay maps could be prepared to identify cyclone-prone areas and that Local Governments could consider more stringent measures. Concern was expressed in one group that the Coastal Control Districts may not have the power required to ensure effective management of storm surge if they follow the setup for coastal erosion groups which exclude urban areas. There was support for storm surge being addressed in the SPP as a separate hazard by all groups. One group suggested that power lines could be placed underground. 	Consider in the drafting of the SPP.
Severe Storms	There were no specific comments on these.	

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WORKSHOP PROGRAM AND SUMMARY

(1) DES Introduction

(AGSO/Geoscience Australia) – Geohazards Risk Reduction and Planning

 Following Ken's presentation, Joe Ross (Redland Shire) commented on the need to ensure the adaptability of new studies/measures, particularly if implementation is the responsibility of local governments. KG agreed that it was important the findings of such studies were not lost and measures were adopted instantly.

(3) ERM Overview and Presentation on SPP

(4) Q & A Session

- **(***RAPI***)** asked that, in the instances where planning schemes are developed and incorporate the SPP principles, will the SPP continue to have effect or will the planning scheme become the principal policy document? SV clarified that this is one approach that could be taken. SB raised the issue that commitment would be required by State Government to the SPP in the event of litigation raised against local governments. SB further commented that the SPP could be used for non-planning related issues.
- Russell Cuerel (DNRM) commented that dam break should be included in the SPP on the basis that it is an extreme flood event. RC also identified the Floodplain Management – Best Practise Guidelines in Australia as an example of best practise.
- (*Redland Shire*) made the comment that the SPP should clearly identify that responsibility for implementation lies with the Local Government.

(5) Small Group Workshop Summary – four groups

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ISSUES (RELEVANT TO SPP)	DETAILS	SOLUTION/ACTION
Support for development of a SPP	Support was received by all participants for the preparation of the SPP. It was generally agreed that the SPP should identify a reasonable minimum risk consistently across the State, but ensure local governments retain the power to set higher standards if this is considered necessary. It was agreed that the SPP should identify a consistent methodology and should have the necessary level of support from the government to ensure its strength in implementation.	Care should be taken in drafting the SPP to ensure that the drafting addresses the issues.
Hazards to be addressed in a SPP	Support was received for inclusion of all hazards, with priority hazards identified as flooding, bushfire and landslides. It was commented that cyclones and severe storms were perhaps a lower priority and the impacts were the concern rather than the hazards themselves.	The priority focus may be on flooding, bushfires and landslides with all six areas to be investigated.
	There was discussion of other types of hazard such as erosion, drought, dam break, fireants, mosquitos and mad cow disease but it was generally agreed that these fell outside the ambit of this SPP.	These issues are outside the ambit of the SPP.
	There was discussion about the need to consider the effects of climate change	
	There was discussion of other legislative mechanisms and the need to ensure that strong cross referencing	

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	exists particularly in relation to storm surge, coastal issues, and acid sulfate soils. There were suggestions made that these issues, particularly storm surge, could be more appropriately considered within this SPP. One group suggested the SPP adopt a regional approach, splitting the state up according to regional conditions, or dividing the state into urban/rural areas.	
Mapping	One group stated that the SPP should identify processes and standards for mapping of risk areas.	Consider in the drafting of the SPP.
	Lack of data availability was raised as a significant issue. It was commented that the SPP should identify a long term approach to mapping given the constant changes occurring in the landscape.	Consider a consistent approach to data capture and base mapping – possible use of DCDB.
	It was suggested that mapping identify 'no-go' areas in relation to development.	
Best Practice Examples	Floodplain Management in Australia – Best Practice Guidelines.	
	Bushfire risk hazard mapping	
	EPA flooding consultation groups	
	Report to the Insurance Council of Australia – Legal Liability of Floodplain Management	

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Guidelines	It was strongly suggested that the SPP needed to be supported by practical guidelines to facilitate implementation. It was considered that the guidelines must bind state and local governments and should be able to be implemented at local government level. One group suggested that Guidelines should give guidance on how planning tools such as hazard maps can be used. There was a further suggestion that the SPP should consider a more rigorous/prescriptive approach. It was commented that the SPP will need to clarify the concurrence role of the state government. Performance indicators and benchmarks were considered by one group to be necessary inclusions into guidelines.	Consider in the drafting of the Guidelines.
Liability	Concern was generally expressed about the potential liability of local government and the costs of litigation. This was also related to the definition of areas of acceptable risk and identification of key risk areas.	A SPP would provide a sounder base for defence of actions (provided they follow the SPP).
Compensation	Concern was expressed as to whether compensation would arise and if so who would be liable in relation to designation of high risk areas and consequent restriction of development. Also, the question of how	Consider in the drafting of the SPP. Note that the SPP will only apply in respect of future development not existing

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	the level of compensation should be determined. Compensation and existing use rights were viewed as considerable constraints to the implementation of the SPP.	development.
Planning schemes/ Development Issues	 SPP should require consideration of location and protection of key infrastructure items eg: schools, hospitals, emergency services. The consideration of the SPP and related issues within indigenous communities is a challenge to be overcome within SPP given that these communities are not bound by IPA. It was suggested that the SPP and guidelines could be adopted voluntarily in these communities or through amendments of the <i>Community Services Act</i>. 	Consider in the drafting of the SPP and Guidelines.
Lack of a common resource base	There is a need to consolidate information into one, accessible location and to establish what desirable/ best practice is. Consideration should be given to gathering historical data and anecdotal advice in relation to hazard impacts.	Consider in the drafting of the SPP and Guidelines.

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Funding	The relationship between the SPP and NDRA funding was identified as requiring further consideration.	Consult with relevant state and local government agencies on these matters.
	One participant suggested that there might be	
	opportunity to use infrastructure charges plans as a	
	funding source for mitigation infrastructure.	
	A 'user-pays' principle was suggested by one group , suggesting that people wishing to develop in high risk areas should be required to pay accordingly (insurance premiums.)	
	One group suggested introducing financial incentives	
	for people to move development proposals or existing	
	developments out of high risk areas and subsequently	
	introducing development standards to ensure the areas remain development-free.	
Community education and	There is a need for greater community education and	Consider in the implementation
awareness	awareness of potential risks and impacts of disasters	of the SPP.
	and also of evacuation routes and access alternatives.	
	The inclusion of indigenous community needs was	
	raised as an issue requiring further consideration.	
Flooding	Planning needs to take into account changed situations	Consider in the drafting of the
	and incremental and off site consequences eg.	SPP.
	revegetation of river corridors leading to flooding	
	where it hasn't happened before.	

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	Accuracy and reliability of data was questioned, particularly in relation to currency of data given changed development in catchments, etc.	
Bushfires	Need to consider location, access, vegetation management. Discussion about firebreaks and the need to maintain them. It was suggested that firebreaks should be considered to be mitigation infrastructure.	Consider in the drafting of the SPP.
Landslides	Mitigation infrastructure can be provided for landslides. Planning needs to take into account changed situations and incremental and off site consequences eg buffer areas	Consider in the drafting of the SPP.
Earthquakes	There were no specific comments on these.	

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Cyclones	There were no specific comments on these.	Consider in the drafting of the SPP.
Severe Storms	There were no specific comments on these.	

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STATE PLANNING POLICY ON LAND	USE PLANNING FOR NATURAL DISASTER MITIGATION
AND DEVELOPMENT ASSESSM	MENT - REGIONAL CONSULTATION WORKSHOPS
Time/Date:	2.00-5.00pm 23 October 2001
Location:	Brisbane (Virginia Palms)
200	v
Overview Comments: (venue suitability, timing, tone Overall, venue was good, organisation and equipment wer participated actively. (AGSO) presentation received.	and conduct of meeting) :e as requested, tone of the meeting was positive and most attendees Geohazard Risk Reduction and Planning' was highly relevant and well
PARTICIPANTS	
Attendees (26):	
Local <u>Government (7 from 5 Councils)</u> :	(Esk Shire), (Ipswich City), (Logar
City), (Logan City),	(Pine Rivers Shire), (Caboolture Shire), (Esk
Shire)	
	Bruce McCoist (DES-OERS)
Facilitators:	

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Γ	WORKSHOP PROGRAM AND S	MMARY	
	(1) DES Introduction		
	(2) (AGSO/Geoso	ence Australia) – Geohazards Risk Reduction and Planning	
	(3) ERM Overview and Present	tion on SPP	· ·
	(4) Small Group Workshop Su	mary – three groups	
	ISSUES (RELEVANT TO SPP)	DETAILS	Solution/Action
	Support for development of a SPP	There was general support for a SPP, however most people present believed that the Council's were already planning and doing the measures for Natural Hazards, and this may create overlap and redundancy in the SPP.	Consider in the Drafting of an SPP
		SPP should primarily consider flooding, bushfire and landslides, with earthquakes as a secondary focus. Planning for the other hazards should deal more with the consequential impacts.	Consider in the Drafting of an SPP
		Need for a regionalised approach to the SPP and be outcome based.	Consider in the Drafting of an SPP
		There was also a majority view that while a common approach was a good idea it needed to have flexibility to deal with local situations, particularly flood levels.	Consider in the Drafting of an SPP
•	Hazards to be addressed in a SPP	Suggestion that drought and salinity should be considered by the SPP.	Consider all additional hazards in the drafting of an SPP

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· · · · · · · · · · · · · · · · · · ·	Potential to consider Greenhouse and global warming, The Bureau and Meterology is currently undertaking studies into the longer term effects. Question was how far in advance should we be planning 30 or 50 years. Potential to consider coastal storm erosion and big wave damage. Potential to consider Radon which is a naturally decomposing radioactive substance which is adverse to human habitation.	
	Potential to consider algal blooms.	
	Potential to incorporate dam break as part of the flooding scenario or separately.	
Implementation	As in-fill development occurs it should be required to comply with new standards and not old requirements, particularly building controls.	Consider in the Drafting of an SPP Consider in the Drafting of an SPP
	All available information should be compiled into a single database location and shared amongst Councils only for the cost of transfer.	
	NDRMA studies is the only way that small Council's can complete the required mapping.	Consider in the Drafting of an SPP
	Create ability for property owners or buyers to complete a risk assessment search of a property. An opinion was raised that the success of the SPP on individual land owners will be based upon full disclosure of information to all levels and users.	Consider in the Drafting of an SPP

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	by the Coastal Management Plan, but for comprehensiveness it needed to be included in the SPP as well.	Consider in the Drafting of an SPP
	Need to consider storm erosion and big waves in coastal areas.	
	Most damage from floods actually occurs from flash flooding and more frequent flood events. The water is fast moving and more debris loaded. The larger floods cause slow gradual inundation and do not cause the same structural damage.	
	It was considered too difficult to develop standardise flood levels across the state or even regions. Localised variations prevent standardised levels, it would be better to establish a set of controls to prescribe how councils should determine what localised level to apply.	
Bushfires	Council's should be able to advise all residents of particular bushfire risks for specific areas.	
	It was considered that perhaps the most could be achieved through site management practices and education programs rather than land use controls.	
	Bushfire control and planning could be a SPP by itself.	
	SPP could call up the national bushfire standard (Standards Australia) which is to be released shortly.	
Landslides	It was generally agreed that the SPP could addresslandslides.	
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	terms of wind strength provisions.	
Additional Issues	The cost implications of making all major roads above the 1:50 flood lines would be astronomical. It would surely be preferable to have better quality roads than an having all year access.	Consider in the Drafting of an SPP
Best Practice Examples	 Gold Coast is considered to be one of the leading local governments in terms of planning and management of bushfires. Gold Coast- Coomera/Nerang flood assessments. US based risk assessment company is interested into coming to Australia. Linked with Bridgeman Business Solutions (See attendance list for contact details). EMA land use planning: NSW revised floodplain management manual. 	Consider in the Drafting of an SPP



(5) Issues raised not related to SPP.	
	Involvement of the Insurance Companies and potential funding from those companies for the risk assessments.	

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WORKSHOP PROGRAM AND SUMMARY

(1) DES Introduction

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(2) ERM Overview and Presentation on SPP

(3) Q & A Session

• Shire) queried whether funding would be available for works to be undertaken after the studies had been undertaken. FS directed the query to from DES.

• (SES and Counter Disaster) clarified that the majority of Shires in the area have had funding allocated for studies and stated that some are in the third stage of their studies.

RB questioned whether the SPP would just be a duplication of policies given that local governments are currently
considering these in their Planning Schemes. SV stated that one possibility could be that the SPP would require local
governments to consider these issues within their planning schemes and that the SPP would fall away once
incorporated into the planning scheme. SV stated that this approach was adopted by the Acid Sulfate Soil SPP.

DG commented that it was important for the SPP to have 'teeth' to ensure that it could stand up in legal battles. SV
indicated that the development of the SPP would provide legal support for local governments given that it will have the
force of law.

DG commented that to receive NDRA funding, local governments are required to undertake risk assessment and that
those local authorities not undertaking these studies will not be eligible to apply. SV indicated that it is going that way
anyway because the guidelines for NDRA funding state that applicants may be required to provide evidence of
mitigation for likely or recurring natural disasters. SV stated that the SPP will provide assistance in this sense.

DG raised the issue of data availability and accuracy, indicating that the data available in relation to flooding in
particular is very old. DG also commented that there is a historical practice of locating development adjacent to
watercourses, without setbacks/buffer areas provided. These are existing problems occurring in the area and
commented that if the SPP was to be effective, it would need to have strength in implementation, rather than just
providing guidance or acting as a further hindrance to development.

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- (Boulia Shire) commented that many of the rural towns in this area are landlocked by watercourses and the location of significant infrastructure items (eg: airstrips) are highly susceptible to flooding given the topography of the land.
- DG discussed the liability issues associated with declaring at risk or prone areas, using an example in Mackay where
 properties were devalued due to the declaration that they were at risk of storm surge and flooding.
 Indicated that
 the SPP will need to be able stand up against liability claims and compensation claims.

(4) Small Group Workshop Summary – one group

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ISSUES (RELEVANT TO SPP)	DETAILS	Solution/Action
Support for development of a SPP	It was agreed by all participants that an SPP was required to ensure a consistent approach across the State. Concern was expressed in relation to the implementation of the SPP and the need for it to be clear and concise. While it was considered that the SPP may not be very effective in rural areas, support was received on the basis that the SPP would require all local governments to examine these issues. The need for funding for the implementation of the SPP was strongly expressed during the workshop. This was considered an issue for low rate-based local governments in particular. It was agreed that the SPP should not set specific solutions, rather mandate a state-wide approach and allow flexibility for application at the local level.	Care should be taken in drafting the SPP to ensure that the drafting addresses the concerns.
Hazards to be addressed in a	There was agreement that it was appropriate to	The priority focus may be on

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SPP	consider all the hazards, however, it was indicated that flooding and bushfires were the priority hazards in this area.	flooding, bushfires and landslides with all six areas to be investigated.
Rural Issues	Concern was expressed regarding the effectiveness of the SPP in rural areas such as Longreach given the limited development occurring and therefore, limited opportunities to implement the SPP. With limited opportunity to effect past land use decisions and the existing situation, concern was expressed as to how the SPP could effect rural areas.	
	It was commented that the SPP would need to adopt a clear and simplistic approach in its application to ensure its effectiveness in rural areas. It was commented that often policies developed in urbanised areas were not appropriate for rural areas.	
	One participant made the comment that some members of the community may only be able to afford land located in at risk areas.	
Liability	General concern was expressed about the potential liability of Local Government and the costs of litigation. This was also related to the definition of areas of acceptable risk.	A SPP would provide a sounder base for defence of actions (provided they follow the SPP).
	Concern was raised in relation to liability in the event of risk mapping turning out to be wrong eg. if development is identified as being outside a risk area	

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	than being based on population. It was raised that even if the onus is placed on the developer to demonstrate why development is suitable in at risk areas, in the event of the disaster, local and state authorities need to repair damages and protect the community.	
Community education and awareness	Community education was seen as a useful mitigation measure, ensuring the community are aware of at risk areas and the potential impacts of hazard events.	Consider in the implementation of the SPP.
Flooding	 The problems associated with setting flood levels was raised with the comment that flooding events are not consistent. It was indicated that the variability of the data would make it difficult to mitigate against flood events. The setting of habitable floor areas within planning schemes was raised as a measure that should be employed in rural areas. The cumulative impacts of development and the associated changes to flooding patterns was identified as a problem experienced in rural areas. 	Consider in the drafting of the SPP.
Bushfires	The risk in relation to bushfires is generally in the undeveloped areas, with the townships not facing significant risk due to limited vegetation in these areas.	

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	Rural areas are more at risk of grass fires.	
Landslides	There were no specific comments on these.	
	The second secon	
Earthquakes	There were no specific comments on mese.	
Cyclones	There were no specific comments on these.	
Severe Storms	There were no specific comments on these.	

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Environmental Resources Management Australia

STATE PLANNING POLICY ON LAND USE PLANNING FOR NATURAL DISASTER MITIGATION AND DEVELOPMENT ASSESSMENT - REGIONAL CONSULTATION WORKSHOPS

Date/Time: Friday 26 October 2001 (9.30am – 12.30pm)

Location: Gold Coast (Sea World Nara Resort)

Overview Comments: (venue suitability, timing, tone and conduct of meeting)

Overall, venue was good, organisation and equipment were as requested, tone of the meeting was positive and most attendees participated actively. (AGSO) presentation 'Geohazard Risk Reduction and Planning' was highly relevant and well received.

ATT	INDEES	
PART	ICIPAN	ITS
	Atter	ndees (24):
	a	Local Government (6 from 3 Councils):
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		Contraction of the standard of
		Emergency Service and Counter Disaster)
		Federal Government (1): Peter Baddiley (Bureau of Meterology)
1		Industry (4 from 3 industry representatives):
		Chamber of Commerce), C
		(Landplan Australia)
		(Urban Development Institute of
		Australia)
		Academic (1): (QUT Carseldine)
	D	Non-Government Organisations (2 from 1 Non-Government Organisations):, Management of Gold Coast and Hinterland
		Environmental Council), Contemporation (Gold Coast and Hinterland Environmental Council),
	Faci	litators: 1, (ERM), (ERM), (DES), contrologica (ERM)
	Not	etakers: (DES), (DES), (DES)

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WORKSHOP PROGRAM AND SUMMARY

(1) DES Introduction

(AGSO/Geoscience Australia) – Geohazards Risk Reduction and Planning

- (3) ERM Overview and Presentation on SPP
- (4) Q & A Session

(2)

- Local Government and State Government Assessment Managers What about private certifiers? They are the biggest decision makers for development in landslide prone areas. Need to link private certifiers with Council assessment process. Needs complementary education program for community and Local government.
- Consider cumulative impacts of natural hazards droughts, bushfires and floods.
- □ Increased risk due to climate change needs to be better covered in Discussion Paper. Eg. Large droughts and longer rain periods.
- Landslides are an important issue on Gold Coast in many cases earthworks to building pads are undertaken without approval.
- Setons' (Self Enforcing Ticketable Offences Notice System) could be used to enforce IPA and would assist with enforcing unauthorised vegetation clearing and allow 'on the spot fines' to be issued.
- □ Flooding a consistent approach with variations is much better than current approach
- □ SPP will need to consider the negative aspects of cost/time to the development industry.
- The deadline for IPA Schemes will not allow incorporation of SPP -- will result in extra layer for approvals.

(5) Small Group Workshop Summary – three (3) groups





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when they are processing real estate transactions in relation to natural hazards. GCCC are launching a website to provide this information.	
It was suggested that overseas experience shows that information release has not generally impacted on property values.	
Need to incorporate an education program to accompany an SPP.	Consider in the drafting of the SPP.
Suggestions that the cumulative effect (eg. development approvals below flood level or filling) of development needs to be considered when assessing development.	Consider in the drafting of the SPP.
The SPP should provide benefits for the Local Government Address compensation issues for land that is currently zoned and may be restricted as the result of natural hazard assessment and provide support for court challenges to decisions based on SPP grounds.	Consider in the drafting of the SPP.
There is currently a varied commitment to risk management amongst the Councils. SPP needs to include controls to require Council's to consider natural hazard assessments and mitigation. The impacts upon bio-diversity needs to be considered as an impact, not only human and development impacts.	Consider in the drafting of the SPP. Consider in the drafting of the SPP.
Enforcement should consider the IPA provisions relating to the rectification of land. These are currently applied in a very limited sense and should be reviewed in relation to non compliance with the SPP, eg clearing of land that increases the risk of impact from	

	a hazard.	
Mapping	AGSO research needs to be highlighted for use by local authorities.	Consider in the drafting of the SPP.
Guidelines	Need to develop a guideline that outlines how Local Governments should assess risk and develop risk management tools.	Consider in the drafting of the SPP and guidelines.
Liability	The community needs to know what risks are around them, then the Community can make a decision about the acceptable tolerance of risk. Need to emphasise through education to developers that there are costs and penalties for not complying with the SPP.	· · ·
Lack of a common resource base	Agreement that there is limited information available to all Council's on what hazards are present and that not all Council's have the same baseline information. Guidance on what to do about the information gaps is required.	Consider in the drafting of the SPP.
	Release DCDB info to Local Government and consultants. Cost/Benefit need to be addressed in SPP.	Consider in the drafting of the SPP.

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Flooding	Significant difference between inland and coastal flooding needs to be recognised. Not possible to set consistent flood levels.	Consider in the drafting of the SPP.
	Need a significant improvement in mapping to assist Councils in developing non "challengable" levels against which to assess development	Consider in the drafting of the SPP.
	Recognise the need to address floodplain management. It was suggested that potentially this issue may need to be addressed as an individual SPP.	
	Consistency in flood modelling techniques rather than a consistent flood level was considered a preferred approach. Details on providing a consistent methodology to undertake modelling could be provided in the guideline.	Consider in the drafting of the SPP.
	When Planning Schemes are reviewed, then baseline modelling should also be reviewed.	Consider in the drafting of the SPP.
Bushfires	Recognised Expert/Specialists fire consultants should be identified by DES.	
	GCCC approach to bushfires in Planning Schemes is a good example.	Consider in the drafting of the SPP.
Landslides	GCCC approach to landslides in Planning Schemes is good example.	Consider in the drafting of the SPP.
Earthquakes	Earthquakes are currently adequately controlled through building design standards.	

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ATTACHMENT B



Counter Disaster and Rescue Services

Written Submissions

for the Intention to Prepare a

State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment

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"Many of these are relevant to the Cairns region in some form. That is why is vital forus to have input from Cairns people" Mr Reynolds said.

Mr Reynolds said he would analyse and consider written submissions jathered from the Cairns workshop in conjunction with the Minister for Local Government and Planning, Nita Cunningham.

They would then make recommendations on whether or not a proposed SPP should be developed.

 State Planning Policies address matters that must be considered when naking planning decisions.

> "They play a key role in shaping new planning schemes and are used by '.ocal Governments and State Government departments when assessing development applications," Mr Reynolds said.

> Contact

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which you are subscribed is 'accessconsultant@cyberwizards.com.au'.
 Please ensure that you use the email address exactly as it appears,

> especially in relation to upper and lower case characters.

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STATE PLANNING POLICY SUBMISSIONS

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Nos	SSN	Organisation
1	1022	Community
2	992	Community
3	991	Community
4	990	Community
5	16	Banana Shire Council
6	30	Brisbane City Council
7	35	Burdekin Shire Council
8	230	Bureau of Meteorology
9	38	Caboolture Shire Council
10	39	Cairns City Council
111	40	Calliope Shire Council
12	945	Department of Aboriginal and Torres Strait Islander Policy
13	973	Department of Emergency Services
14	912	Department of Health
15	1032	State Council of River Trusts Queensland
16	983	Department of Main Roads
17	969	Department of Natural Resources and Mines
18	70	Gatton Shire Council
119	923	GEO Positioning Services
20	526	Gold Coast and Hinterland Environmental Council
21	73	Gold Coast City Council
22	185	Herbert River Improvement Trust
23	78	Hinchinbrook Shire Council
24	84	Ipswich City Council
25	92	Kingaroy Shire Council
26	971	Livingstone Shire Council
27	124	Noosa Shire Council
28	1031	Queensland Fruit & Vegetable Growers
29	1008	Queensland Transport
30	569	Community
31	141	Sarina Shire Council
32	1010	Community
33	911	Tourism Queensland
34	207	Urban Development Institute of Australia (Qld)
35	1033	Express Plan Approval Services
36	209	Royal Australian Planning Institute
137	5	Department of Families
38	202	Department of State Development
39	1038	Australian Greenhouse Office
40	129	Pine Rivers Shire Council
41	291	Department of Justice and Attorney-General
42	223	Department of Primary Industries
43	52	Cooloola Shire Council
44	204	Department of Public Works
45	228	Department of the Environment and Heritage
46	4	Environmental Protection Agency
47	227	Queensland Rail
48	222	Department of Housing
49	201	Department of Natural Resources and Mines

Process to Date

We have concerns about the process to date, in that none of our comments about the need to protect the environment and conserve biodiversity as part of the risk management planning seem to have been incorporated in the current discussion paper.

Attendance at the initial workshop (July, 2001) and comments made seem to have made no difference to the focus on the immediate safety of settlements only. In order to continue to provide a safe environment, we not only have to look at where we put settlement in relation to current hazards, but also, the ongoing and cumulative effects of such placement, both in terms of human safety and the long-term ability of the environment to support human life.

For example, while landslip risk in the southeast corner, including the Gold Coast, appears to be low because of the small numbers of people residing in the hills, the existing land use rights will result in many more people living in the area. With the resultant earthworks, clearing of vegetation to lower bushfire risk, and runoff and drainage patterns changed, there will be increased risk of landslip.

Further soil creep, which is slow and occurs without a well defined failure surface, is not classified as landslide in the paper (Appendix A, page 23), but with the subsequent erosion and siltation of our waterways, will significantly increase the risk of flooding downstream, and therefore should be prevented through land use planning.

The removal of vegetation for settlement not only increases landslip risk, but the placement of settlements in high bushfire zones means the ongoing destruction of vegetation in an attempt to reduce the fuel and reduce the wildfire hazard. This leads to loss of biodiversity as many forest types cannot regenerate with constant burning. -but means do future to future to the future to the set types cannot regenerate with constant burning.

The second workshop (October, 2001) used a process whereby three groups expressed their views on what the SPP should contain. The summary at the end seemed to only address those issues that were common to the three groups. With only one conservationist in the room, again my comments on environmental protection and biodiversity conservation were seemingly ignored. This summary was so rushed that there was not even time to ask questions of the presenters to clarify why some items were left out.

There is little mention in the discussion paper of slower disaster processes – climate change including extended drought/ sea level rise/ loss of vegetation and smaller species. The paper discusses the symptoms and crisis points not the continuing contributions and causes. This policy can be linked to many initiatives already in place and avoid duplication.

Uses emphasis on engineering solutions instead of balance to design in and prevent risks. Development assessment covers this to some extent but not on a 50-year scheme with climate change predictions as a guide or worst case scenario modelling, eg. cyclone plus flood plus failing infrastructure plus spring/ king tides plus sea level rise plus no prevention planning plus intensive living resort scenarios.

What Issues should the Proposed SPP address?

After considering and researching land use planning for natural disaster mitigation and development assessment, a number of issues have been identified by the Gecko membership as requiring inclusion and attention in the proposed State Planning Policy. These include, but are not necessarily limited to the following:

- 1. The natural environment should be viewed as a stakeholder in any policy developed as so many components of the natural environment are essential to the maintenance of biodiversity and the high quality lifestyle the community and governments expect.
- 2. Gecko would prefer that careful consideration be given to limiting development by recognizing the conservation value of the natural environment and how natural systems operate, and in so doing, avoid the situation of environmental problems arising in the future.
- 3. The predictions of climate change need to be more thoroughly addressed. There is little discussion, for example, of the predicted increase in occurrence and severity of cyclones, including their travel further south maintaining greater force as they hit the coast. This increase in cyclonic activity should have grave implications for land use planning, yet the second workshop curiously concluded that cyclones should not be addressed in this SPP.
- 4. While drought was considered not to be able to be addressed through this SPP due to its nature as a chronic condition rather than a single event, we feel that it is important that drought be addressed. Climate change predictions of longer, more intense drought periods with increased propensity for wildfire, again, should have grave implications for land use planning. The need for water to control bushfire and the provision of drinking and production water and the need to provide for ecological flows to our river systems should be a key part of land use planning for disaster mitigation.
- 5. The consideration of storm surge in the Coastal Management Plan is no reason to separate it from this SPP. Storm surge has many implications for flooding and can occur together with other natural events and increase their potential for disaster.
- Earthquakes, volcances and resulting trunamis or tidal waves should also be considered. While they are more rare in occurrence, there may be some planning measures available which can avoid or lower the disaster when they do occur.
- 7. The SPP should include cross-references to relevant environmental legislation such as the Vegetation Management Act (1999) and the Water Act (2000).
- The SPP should set out, and have provision for, enforcement of clear guidelines for Environmental Impact Studies and set Desired Environmental Outcomes for planning schemes.

- 9. Recommendations of the Review of the National Strategy for the Conservation of Australia's Biological Diversity (ANZECC, June 2001) which relate to this policy are many, and include:
 - 9.1. Fire: Reduce the adverse impacts of altered fire regimes on biological diversity. Other objectives, such as the protection of human life and property have to be balanced with biodiversity conservation objectives (page 56). 9.2. Impacts of climate change: If global climate change causes climatic zones to
 - shift across the continent of Australia, integrated strategic planning will be essential to ensure Australia's biodiversity survives. Reserves need to be selected, designed, linked with vegetation corridors and managed to provide the conditions for biodiversity to be able to gradually alter its distribution in response to climate change (page 57).
 - 9.3. Environmental assessment: Ensure that the potential impacts of any projects, programs and policies on biological diversity are assessed and reflected in planning processes, with a view to minimizing or avoiding such impacts (page 58).

These concerns must be addressed when determining any land use policy changes for disaster mitigation.

10. There needs to be an open, accountable process put in place for an expert and independent technical review panel to be established and to provide advice on issues such as modeling techniques and hazard science. The right for the public to know and access documents and applications for all types of developments, in order to both improve the environmental outcomes and reduce the impacts on the environment and increase public confidence in the assessments must be supported.

Issues to be addressed outside the SPP

- 1. The need for reduction in greenhouse gas emissions, both by planning more public transport friendly communities, and by requiring energy efficient housing design and technology. This should be achieved immediately both through planning scheme requirements and through changes to the Building Code, and should be binding on landholders, the State and local governments.
- 2. The ability in IPA for a Council to take action on minor infringements of vegetation clearing and earthworks conditions by, for example, imposing an onthe-spot fine for landholders, machinery operators and private certifiers, without going to Court as required under IPA. This is known as SETONS - self enforcement ticketable offences notification system.
- 3. Local Government must be able to sue private certifiers for dereliction of their
- 4. There needs to be the ability to prohibit development with mapped areas to at least
- 5. There needs to be adequate compliance and enforcement of planning scheme provisions & policies
- 6. There needs to be the political will to control growth in keeping with the
- biological and physical constraints of the area.

- 7. Assessment officers need to be trained and certified in the assessment of natural hazard prone areas.
- 8. On-going training and information to community re hazards
- 9. Notification requirements of development in hazard prone areas must be retained.
- 10. Conservation of biodiversity needs must be included in the assessment of any
- 11. Assessment of emergency service requirements per capita must be addressed.
- 12. Revegetation of landslip prone areas should be top priority.
- 13. Construction guidelines on sloping sites must be implemented.
- 14. There needs to be a holistic approach, which incorporates all the ongoing and
- cumulative impacts of one hazard on another, and addresses the reduction of exposure to natural disaster from a whole of government approach. 15. Impacts must be able to be considered on land other than that the subject of the
- development application. Anything exacerbating the risk to other properties must include penalties.
- 16. Councils need to be resourced and indemnified for identification and review oflands subject to natural disaster.

Community Contribution

There are a number of actions we would like to see follow on from this first consultation stage. Gecko would like an opportunity to study the draft policy, which should incorporate considerations raised by the community, when it becomes available.

Both the general community and conservation groups need to be fully involved in the consultation process to develop the State Planning Policy.

Summary

Gecko wishes to contribute to future consultations and looks forward to further opportunities to prepare submissions on drafts of the State Planning Policy. Gecko expects to be kept fully informed of the progress of the policy development.

The natural environment is a key stakeholder in the development of a State Planning Policy on land use planning for natural disaster mitigation and development assessment. The conservation and protection of the natural environment is essential in sustaining and maintaining biodiversity and a high quality life-style for the community.

Gecko - The Gold Coast and Hinterland Environment Council expects that the integrity of the natural environment and the rights of the community to a healthy, clean and safe environment will be priorities for the State Government.

¹ Media Release 20/10/01 "Human Actions Worsen Natural Disasters" aunouncing the paper "Unnatural Disasters", Janet Abramovitz, World Watch Institute Paper 158

HUMAN ACTIONS WORSEN NATURAL DISASTERS

Media Release - Worldwatch Institute 20/10/01

More people worldwide are now displaced by natural disasters than by conflict. In the 1990s, natural catastrophes like hurricanes, floods, and fires affected more than two billion people and caused in excess of \$608 billion in economic losses worldwide-a loss greater than during the previous four decades combined. But more and more of the devastation wrought by such natural disasters is "unnatural" in origin, caused by ecologically destructive practices and an increasing number of people living in harm's way, finds a new study by the Worldwatch Institute, a Washington D.C.-based environmental research organization.

"By degrading forests, engineering rivers, filling in wetlands, and destabilizing the climate, we are unraveling the strands of a complex ecological safety net," said Senior Researcher and author of Unnatural Disasters Janet Abramovitz. "We have altered so many natural systems so dramatically, their ability to protect us from disturbances is greatly diminished."

Also contributing to the rising toll of disasters is the enormous expansion of the buman population and the built environment, which put more people and more economic activities in harm's way. One in three people-some 2 billion-now live within 100 kilometers of a coastline. Thirteen of the world's 19 megacities (with over 10 million inhabitants) are in coastal zones. The projected effects of global warming, such as more extreme weather events and sea level rise, will only magnify potential losses.

Although "unnatural disasters" occur everywhere, their impact falls disproportionately on poor people as they are more likely to be living in vulnerable areas and they have fewer resources to prepare for or recover from disasters. Between 1985 and 1999, 96 percent of recorded disaster fatalities were in developing countries.

The Intergovernmental Panel on Climate Change (IPCC) estimates that future impacts of climate extremes will affect the poor disproportionately. Viet Nam and Bangladesh, for example, are projected to lose more than 70,000 square kilometers of land, affecting some 32 million people. Rich countries will not be spared either. The entire Mediterranean coast is especially vulnerable to sea level rise, as are the U.S.'s Atlantic and Gulf coasts.

Economic losses from "unnatural disasters" are greater in the developed world-the earthquake that rocked Kobe, Japan in 1995, for example, cost more than \$100 billion, making it the most expensive natural disaster in history. Smaller losses often hit poor countries harder, where they represent a larger share of the national economy. The damage from 1998's Hurricane Mitch in Central America was \$8.5 billion-higher than the combined gross domestic product of Honduras and Nicaragua, the two nations hardest hit.

Few of the losses in poor countries are insured. In the period 1985-99, the vast majority of insured losses-some 92 percent-were in industrial nations.

"Expanding the financial safety net for poor countries is essential," said Abramovitz. "So too is maintaining and restoring nature's ecological safety net in all countries. Dunes, barrier islands, mangrove forests and coastal wetlands are natural 'sbock absorbers' that protect against coastal storms. Forests, floodplains, and wetlands, are 'sponges' that absorb floodwaters. Nature provides these services for free, and we should take advantage of them rather than undermining them."

For example, China now recognizes that forests are ten times more valuable for flood control and water supply than they are for timber, and has halted logging in the Yangtze River watershed. The loss of 85 percent of the forests in the upper Yangtze River worsened the 1998 flood that affected 223 million people. Viet Nam has restored 2,000 hectares of mangroves in a successful effort to provide a buffer fromcoastal storms as well as much-needed jobs in fisheries. The U.S. could prevent a repeat of the devastating 1993 Mississippi flood by restoring just half of the wetlands lost in the upper Mississippi Basin-a move that would affect no more than three percent of surrounding agricultural, forest, and urban land.

To date, much of the response to disasters has focused on improving weather predictions before the events and providing humanitarian relief afterwards-both of which have saved countless lives. "Yet, too often long-term mitigation efforts are overlooked by the public and politicians alike," says Abramovitz. "Money invested in disaster mitigation yields several fold returns in recovery cost savings. Considering the social and ecological losses that are also prevented, it's clear that mitigation is a great investment."

Unnatural Disasters also suggests several other specific mitigative measures: Community-based disaster preparedness is essential in preventing and responding to the full array of disasters that societies now face. Rather than subsidizing environmentally unsound settlement and development practices, governments need to direct new construction and settlement out of harm's way. Infrastructure in vulnerable locations can be built or reinforced to withstand hazards. Debt relief for developing nations can free up resources for desperately needed disaster prevention efforts. Better hazard mapping can further improve early warning and disaster preparedness schemes, keeping human and economic losses as low as possible.

Contents:

Ordering Information for Paper 158

Electronic

Paper 158 is available for \$5 as a PDF file which can be downloaded from the order page, http://secure.worldwatch.org/cgi-bin/wwinst/WWP0158PW

From:Jodie StephensTo:Jodie StephensDate:9/11/01 15:05:22Subject:Submission - SPP Disaster Mitigation

Attached please find Gecko's submission on the State Planning Policy for Disaster Mitigation.

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Yours for Earth

Co-ordinator Gecko - Gold Coast & Hinterland Environment Council Duringan St Currumbin Qld 4223 Ph: Fax: Mob www 9th November, 2001

Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Fax:			
Email			

Dear Sir/Madam:

Proposed State Planning Policy: Land Use Planning for Natural Disaster Mitigation and Development Assessment

Thank you for the opportunity to make a submission to the development of the Proposed State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. Please find attached a submission re the Proposed State Planning Policy.

As the peak environmental group in the region, Gecko - The Gold Coast and Hinterland Environment Council is essentially concerned with the integrity of the environment in the largest growing urban center in Australia. Gecko looks forward to being invited to a full participation in the on-going consultations in the development of the Proposed State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment.

Please keep us informed of future developments and consultation processes in this regard.

Yours faithfully,



Gecko Gold Coast and Hinterland Environment Council

Submission on

Proposed State Planning Policy on

Land Use Planning for Natural Disaster Mitigation and Development Assessment

Endorsements

Gecko – The Gold Coast and Hinterland Environment Council agrees that a consistent approach to Land Use Planning for Natural Disaster Mitigation and Development Assessment is required and welcomes the initiative shown by the State Government.

We would like to point out, however, that the development of State Planning Policies was a State Government obligation under the protocols developed for the implementation of the Integrated Planning Act, and should have been addressed before now. We fear that this SPP is being developed too late to make a difference to the Gold Coast City Council Planning Scheme.

With the hazardous landscape of the Gold Coast, including its exposed coastline, steep slopes, high bushfire risk, narrow valleys, high rainfall, small floodplains and volcanic soils with high landslip risk, the Gold Coast should not be expected to accommodate high numbers of people.

We are also concerned for the protection of the high variety of plants and animals that the Gold Coast supports. Any planning for the placement of human settlements and infrastructure must consider the conservation of our biodiversity, as required under the National Strategy for the Conservation of Australia's Biological Diversity (1996).

A recent study by the Worldwatch Institute¹ emphasizes the need for such a State Planning Policy:

"More people worldwide are now displaced by natural disasters than by conflict. In the 1990s, natural catastrophes like hurricanes, floods, and fires affected more than two billion people and caused in excess of \$608 billion in economic losses worldwide-a loss greater than during the previous four decades combined. But more and more of the devastation wrought by such natural disasters is "unnatural" in origin, caused by ecologically destructive practices and an increasing number of people living in harm's way... Rather than subsidizing environmentally unsound settlement and development practices, governments need to direct new construction and settlement out of harm's way."

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The second workshop (October, 2001) used a process whereby three groups expressed their views on what the SPP should contain. The summary at the end seemed to only address those issues that were common to the three groups. With only one conservationist in the room, again my comments on environmental profection and biodiversity conservation were seemingly ignored. This summary was so rushed that there was not even time to ask questions of the presenters to clarify why some items were left out.

There is little mention in the discussion paper of slower disaster processes – climate change including extended drought/ sea level rise/ loss of vegetation and smaller species. The paper discusses the symptoms and crisis points not the continuing contributions and causes. This policy can be linked to many initiatives already in place and avoid duplication.

Uses emphasis on engineering solutions instead of balance to design in and prevent risks. Development assessment covers this to some extent but not on a 50-year scheme with climate change predictions as a guide or worst case scenario modelling, eg. cyclone plus flood plus failing infrastructure plus spring/ king tides plus sea level rise plus no prevention planning plus intensive living resort scenarios.

What Issues should the Proposed SPP address?

After considering and researching land use planning for natural disaster mitigation and development assessment, a number of issues have been identified by the *Gecko* membership as requiring inclusion and attention in the proposed **State Planning Policy.** These include, but are not necessarily limited to the following:

- 1. The natural environment should be viewed as a stakeholder in any policy developed as so many components of the natural environment are essential to the maintenance of biodiversity and the high quality lifestyle the community and governments expect.
- 2. *Gecko* would prefer that careful consideration be given to limiting development by recognizing the conservation value of the natural environment and how natural systems operate, and in so doing, avoid the situation of environmental problems arising in the future.
- 3. The predictions of climate change need to be more thoroughly addressed. There is little discussion, for example, of the predicted increase in occurrence and severity of cyclones, including their travel further south maintaining greater force as they hit the coast. This increase in cyclonic activity should have grave implications for land use planning, yet the second workshop curiously concluded that cyclones should not be addressed in this SPP.
- 4. While drought was considered not to be able to be addressed through this SPP due to its nature as a chronic condition rather than a single event, we feel that it is important that drought be addressed. Climate change predictions of longer, more intense drought periods with increased propensity for wildfire, again, should have grave implications for land use planning. The need for water to control bushfire and the provision of drinking and production water and the need to provide for ecological flows to our river systems should be a key part of land use planning for disaster mitigation.
- 5. The consideration of storm surge in the Coastal Management Plan is no reason to separate it from this SPP. Storm surge has many implications for flooding and can occur together with other natural events and increase their potential for disaster.
- 6. Earthquakes, volcanoes and resulting tsunamis or tidal waves should also be considered. While they are more rare in occurrence, there may be some planning measures available which can avoid or lower the disaster when they do occur.
- 7. The SPP should include cross-references to relevant environmental legislation such as the Vegetation Management Act (1999) and the Water Act (2000).
- The SPP should set out, and have provision for, enforcement of clear guidelines for Environmental Impact Studies and set Desired Environmental Outcomes for planning schemes.

- 9. Recommendations of the Review of the National Strategy for the Conservation of Australia's Biological Diversity (ANZECC, June 2001) which relate to this policy are many, and include:
 - 9.1. Fire: Reduce the adverse impacts of altered fire regimes on biological diversity. Other objectives, such as the protection of human life and property have to be balanced with biodiversity conservation objectives (page 56).
 - 9.2. Impacts of climate change: If global climate change causes climatic zones to shift across the continent of Australia, integrated strategic planning will be essential to ensure Australia's biodiversity survives. Reserves need to be selected, designed, linked with vegetation corridors and managed to provide the conditions for biodiversity to be able to gradually alter its distribution in response to climate change (page 57).
 - 9.3. Environmental assessment: Ensure that the potential impacts of any projects, programs and policies on biological diversity are assessed and reflected in planning processes, with a view to minimizing or avoiding such impacts (page 58).

These concerns must be addressed when determining any land use policy changes for disaster mitigation.

10. There needs to be an open, accountable process put in place for an expert and independent technical review panel to be established and to provide advice on issues such as modeling techniques and hazard science. The right for the public to know and access documents and applications for all types of developments, in order to both improve the environmental outcomes and reduce the impacts on the environment and increase public confidence in the assessments must be supported.

Issues to be addressed outside the SPP

- 1. The need for reduction in greenhouse gas emissions, both by planning more public transport friendly communities, and by requiring energy efficient housing design and technology. This should be achieved immediately both through planning scheme requirements and through changes to the Building Code, and should be binding on landholders, the State and local governments.
- The ability in IPA for a Council to take action on minor infringements of vegetation clearing and earthworks conditions by, for example, imposing an onthe-spot fine for landholders, machinery operators and private certifiers, without going to Court as required under IPA. This is known as SETONS – self enforcement ticketable offences notification system.
- Local Government must be able to sue private certifiers for dereliction of their duty.
- 4. There needs to be the ability to prohibit development with mapped areas to at least the 1:25000 scale.
- 5. There needs to be adequate compliance and enforcement of planning scheme provisions & policies
- 6. There needs to be the political will to control growth in keeping with the biological and physical constraints of the area.

- 7. Assessment officers need to be trained and certified in the assessment of natural hazard prone areas.
- 8. On-going training and information to community re hazards
- 9. Notification requirements of development in hazard prone areas must be retained.
- 10. Conservation of biodiversity needs must be included in the assessment of any development.
- 11. Assessment of emergency service requirements per capita must be addressed.
- 12. Revegetation of landslip prone areas should be top priority.
- 13. Construction guidelines on sloping sites must be implemented.
- 14. There needs to be a holistic approach, which incorporates all the ongoing and
- cumulative impacts of one hazard on another, and addresses the reduction of exposure to natural disaster from a whole of government approach.
- 15. Impacts must be able to be considered on land other than that the subject of the development application. Anything exacerbating the risk to other properties must include penalties.
- 16. Councils need to be resourced and indemnified for identification and review of lands subject to natural disaster.

Community Contribution

There are a number of actions we would like to see follow on from this first consultation stage. Gecko would like an opportunity to study the draft policy, which should incorporate considerations raised by the community, when it becomes available.

Both the general community and conservation groups need to be fully involved in the consultation process to develop the State Planning Policy.

Summary

Gecko wishes to contribute to future consultations and looks forward to further opportunities to prepare submissions on drafts of the State Planning Policy. Gecko expects to be kept fully informed of the progress of the policy development.

The natural environment is a key stakeholder in the development of a State Planning Policy on land use planning for natural disaster mitigation and development assessment. The conservation and protection of the natural environment is essential in sustaining and maintaining biodiversity and a high quality life-style for the community.

Gecko - The Gold Coast and Hinterland Environment Council expects that the integrity of the natural environment and the rights of the community to a healthy, clean and safe environment will be priorities for the State Government.

Attachment:

¹ Media Release 20/10/01 "Human Actions Worsen Natural Disasters" announcing the paper "Unnatural Disasters", Janet Abramovitz, World Watch Institute Paper 158

HUMAN ACTIONS WORSEN NATURAL DISASTERS Media Release – Worldwatch Institute 20/10/01

More people worldwide are now displaced by natural disasters than by conflict. In the 1990s, natural catastrophes like hurricanes, floods, and fires affected more than two billion people and caused in excess of \$608 billion in economic losses worldwide-a loss greater than during the previous four decades combined. But more and more of the devastation wrought by such natural disasters is "unnatural" in origin, caused by ecologically destructive practices and an increasing number of people living in harm's way, finds a new study by the Worldwatch Institute, a Washington D.C.-based environmental research organization.

"By degrading forests, engineering rivers, filling in wetlands, and destabilizing the climate, we are unraveling the strands of a complex ecological safety net," said Senior Researcher and author of Unnatural Disasters Janet Abramovitz. "We have altered so many natural systems so dramatically, their ability to protect us from disturbances is greatly diminished."

Also contributing to the rising toll of disasters is the enormous expansion of the human population and the built environment, which put more people and more economic activities in harm's way. One in three people-some 2 billion-now live within 100 kilometers of a coastline. Thirteen of the world's 19 megacities (with over 10 million inhabitants) are in coastal zones. The projected effects of global warming, such as more extreme weather events and sea level rise, will only magnify potential losses.

Although "unnatural disasters" occur everywhere, their impact falls disproportionately on poor people as they are more likely to be living in vulnerable areas and they have fewer resources to prepare for or recover from disasters. Between 1985 and 1999, 96 percent of recorded disaster fatalities were in developing countries.

The Intergovernmental Panel on Climate Change (IPCC) estimates that future impacts of climate extremes will affect the poor disproportionately. Viet Nam and Bangladesh, for example, are projected to lose more than 70,000 square kilometers of land, affecting some 32 million people. Rich countries will not be spared either. The entire Mediterranean coast is especially vulnerable to sea level rise, as are the U.S.'s Atlantic and Gulf coasts.

Economic losses from "unnatural disasters" are greater in the developed world-the earthquake that rocked Kobe, Japan in 1995, for example, cost more than \$100 billion, making it the most expensive natural disaster in history. Smaller losses often hit poor countries harder, where they represent a larger share of the national economy. The damage from 1998's Hurricane Mitch in Central America was \$8.5 billion-higher than the combined gross domestic product of Honduras and Nicaragua, the two nations hardest hit.

Few of the losses in poor countries are insured. In the period 1985-99, the vast majority of insured losses-some 92 percent-were in industrial nations.

"Expanding the financial safety net for poor countries is essential," said Abramovitz. "So too is maintaining and restoring nature's ecological safety net in all countries. Dunes, barrier islands, mangrove forests and coastal wetlands are natural 'shock absorbers' that protect against coastal storms. Forests, floodplains, and wetlands, are 'sponges' that absorb floodwaters. Nature provides these services for free, and we should take advantage of them rather than undermining them."

For example, China now recognizes that forests are ten times more valuable for flood control and water supply than they are for timber, and has halted logging in the Yangtze River watershed. The loss of 85 percent of the forests in the upper Yangtze River worsened the 1998 flood that affected 223 million people. Viet Nam has restored 2,000 hectares of mangroves in a successful effort to provide a buffer from coastal storms as well as much-needed jobs in fisheries. The U.S. could prevent a repeat of the devastating 1993 Mississippi flood by restoring just half of the wetlands lost in the upper Mississippi Basin-a move that would affect no more than three percent of surrounding agricultural, forest, and urban land.

To date, much of the response to disasters has focused on improving weather predictions before the events and providing humanitarian relief afterwards-both of which have saved countless lives. "Yet, too often long-term mitigation efforts are overlooked by the public and politicians alike," says Abramovitz. "Money invested in disaster mitigation yields several fold returns in recovery cost savings. Considering the social and ecological losses that are also prevented, it's clear that mitigation is a great investment."

Unnatural Disasters also suggests several other specific mitigative measures: Community-based disaster preparedness is essential in preventing and responding to the full array of disasters that societies now face. Rather than subsidizing environmentally unsound settlement and development practices, governments need to direct new construction and settlement out of harm's way. Infrastructure in vulnerable locations can be built or reinforced to withstand hazards. Debt relief for developing nations can free up resources for desperately needed disaster prevention efforts. Better hazard mapping can further improve early warning and disaster preparedness schemes, keeping human and economic losses as low as possible.

Contents:

Ordering Information for Paper 158

Electronic

Paper 158 is available for \$5 as a PDF file which can be downloaded from the order page, http://secure.worldwatch.org/cgi-bin/wwinst/WWP0158PW

SSN: 73.

21

From:	
To:	
Date:	
Subject:	



<<submission.doc>>

Att:

Hello

Following the release of your discussion paper "State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment" and the workshop held on the Gold Coast on the 26 October 2001, please find attached our submission on this proposed policy.

Submission on SPP disaster mitigation

Regards,

Coordinator Infrastructure Planning Strategic & Environmental Planning GOLD COAST CITY COUNCIL PO Box 5042, Gold Coast Mail Centre, 9729 phone

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email
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This e-mail and its contents is confidential to Gold Coast City Council and un-authorised use is strictly prohibited. Gold Coast City Council Comments on proposed Disaster Mitigation SPP

GOLD COASH CHEY COUNCIL

Submission on the Discussion Paper of September 2001.

STATE PLANNING BOLICY ON LANDUSE REANNING FOR NATURAL DISASTER MUUGAFION AND DEVELOPMENT ASSESSMENT?

contact person phone number email address postal address Coordinator Infrastructure Planning

Gold Coast City Council PO Box 5042 Gold Coast Mail Centre Q 9729

Council welcomes the opportunity to comment on this proposed State Planning Policy, and submits these comments in addition to the input from Council staff to the workshop held on the Gold Coast on the 26 October 2001.

This submission covers the following areas.

- general comments;
- need for legislative protection;
- terminology;
- coastal erosion.

General comments

Council would support the development of the proposed State Planning Policy (SPP), as it would provide a strong framework to encourage a comprehensive review of natural disaster mitigation needs of local government. Currently, disaster management focuses on response after an event, and although plans for this are well documented and rehearsed, there appears to be little formal incentive or guidance on mitigation issues.

Although this Council now has or is developing policies for bushfires, major flooding and landslides, the experience is that in some areas at least, the development of mitigation measures and the application of policy is slow and difficult partly because of the absence of firm government policy.

Although the SPP will address this issue from the point of view of land use under the Integrated Planning Act 1997, it is expected that the process would include a thorough examination of needs and options, and result in the development of policies to manage the risk faced by the community.

Need for legislative protection

Even though risk mitigation policies may be developed, one of the problems facing local

4.2 Proforma for submission

The following is a suggested proforma for submissions on the intent to prepare a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. Interested individuals and representatives of organisations are encouraged to make a written submission regarding the Discussion Paper. Written submissions close on Friday 9 November 2001.



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0 9 OCT 2001

Weak return? terrately should be tooluded in the State Planning Polloy? (see Section 1.4 and Apparter Cr Cyclines Ziernels Manuslides ZBushines ZSavere Storiks Z autopetices. CUMER PHERESE ROLES white ants and poor drainage weeds unprocted Machay has be cause of at or h b There are a multiply of Usares identification (highler 2) concerning native) disaster mension of the fact use planning. Are dress one resource which are not dentified? V Kest it was pleased and reading or unrelemined babe The road from San's Road / Glenpark lt St compon lectric pole aque la egaid bolice renared they dre to happen von illings and use plain the measures to mitteato hatman distances. Dooyou support the sa measures? 2No 2 Anenienes oliter meastross which could be added on the since Peterine Policy Ver No Breaser describe any additional Ennel association express that coulds ne consulered for ESPate. Plan ing Policy is each biologically interesting ally weather or poly our commanies rates to a social method bazard. have to needs Kimer River The lilting it an tides Are, there stack of includes, which should be the foundation of a Store Planning Policy on Land Use. Planning for Natural Disaster Mitigation on Development Assessment which would ensure that foure under revelopment is underfaken in a manner that minimises the poronital for disastrous impacts rom natural hazings (see Chapter 2, Section 2,9). blood gates on 17/11/00 and maching. This is Nor scussion Paper only not Government policy

20

2 Uba Street, Mt. Pleasant. MACKAY, 4740. 2/10/01.

for the Pioneer

irector Disaster Mitigation Unit ounter Disaster and Rescue Services PO Box 1425 BRISBANE QLD 4001. Dear Sir,

These are extracts from PIONEER PAGEANT written by shire Council (now part of Maokay City Council). In 1862 - The ketch "Preato" was the first vessel to come up the Pioneer River up to a mooring half a mile past the iospital Bridge. This is how the Pioneer River was described in 1862 - "The river, after flowing twenty five miles on an easterly course, instead of running straight into the ocean, was confined between two sandbanks and turned to the south and west or two miles, its mouth obscured except when the rush of muddy water at flood time ade its presence conspicuous." Now the River runs between two training walls direct into the ocean. Above the Forgan Bridge it can be described to-day as a river of sand. There are only two datum points which I can determine in 2001, one is the

southern bank at the Hospital Bridge, and the other was the building now demolished, . east of Forgan Bridge. Quote - "In October 1863 a 3I perch allotment fetohed £100 (\$200), over 25 times the upset price. It was an expensive purchase & within IO years it was engulfed by the Pioneer River, yet the site remained valuable, Michelmore's large premises were built on piles." The mooring half a mile past the Hospital Bridge is close to the site of the

t River Estate mill on the northern bank and this mill was damaged by Cyclone G wrote "In Their Own Hands" - "After the 1958 flood, which severely damaged Foulden township, a striking example of the build up of silt over the years was noticed. A wrecked fence was found to have been built over a completely covered earlier fence. On further digging an even older fence was found on a level about three feet lower than the second one." This mill was shifted to a site north of Fursden Creek.

1918 would be remembered as the year of the "CYCLONE" as it devastated Mackay and the whole countryside to south beyond Sarina, West to Netherdale and north to Bloomsbury. Winds reached 193 kph, crops destroyed, livestock drowned and infracture wrecked. A tidal surge came up the River and swept a ship into the Sydney Street Bridge (site of Forgan Bridge) and spans of the bridge collapsed. Rainfall for the month of January was 216 cm. and the death toll was 30. After this cyclone the City Fathers said that no residences and infractures should be built east of Juliet Street. In 2001 this is a very huge suberb (East Mackay), and most of this area is

Between 1934 & 1958, 12 hectares of land (30 acres) have been lost from the reclaimed land, (ex mangroves). northern bank of the Pioneer River as well as the Foulden township and nothing has n done to protect North Mackay from Pioneer River floodwaters after 43 years. Government wanted to provide a safer route and levee bank but was opposed byethe Conservationists, Bird Watchers and Sunfish. This flood damaged the Hospital Bridge, Forgan Bridge (one span sank), Buffalo Hall disappeared, Cremone Hotel was damaged and had to be demolished, four people were killed, the Foulden township was wrecked; with 3 houses missing and I4 houses were shifted to other sites as the residents spent the night of the flood on top of the roofs of the houses. The Pioneer River - and Fursden Creek became one raging torrent of floodwater. I was involved in the

My guess is the Pioneer River will break into Barnes Creek during a future rescue the following morning. large flood as the present course of the Pioneer River has silted up. Mackay is a flood plain protected from flood waters by levee banks but has nil protection from tidal waves as experienced during the 1918 cyclone. Tracy was 217 kph. and Vance was 269 kph. I do not know the flow of the flood & ebb tides in the Pioneer River, but the Constant Creek area has flood tides of 3.5 hours and ebb tides of 9 hours and the larger tides carry a lot of silt during flood (in coming) tides and can swamp a punt or small dingy if an anchor gets snagged. In 1883 Wharf Creek (HABANA) could cope with 80 tons vessels and today one could not float a tinny. The machinery for the old Habana Sugar Mill came through here. The road used in I883 is still there except for the last IOO metres which washed away in the last 40 ddd years.
Regarding the construction of four fishway systems within Mackay's Goosepond reek Recreational Reserve, in my opinion, it will increase the flow of water in this ystem. The Mt. Pleasant Shopping Centre's water flows underground directly into the system. The Greenfields Shopping Centre in I958 had over five feet of water over 70% of its area and it was classed as a holding pond, but it has been filled in and drained of massive infracture has been built thereon, together with five more subdivisions upnd massive infracture has been built thereon. together with five more Subdivisions upstream of Greenfields. I wrote to **Example**. I sincerely hope it does NOT impact on North ackay.

In the PDC Directories which includes Mackay, Mathematical & Whitsundays, in Mackay alone, there are at least 50 streets with SAME or SIMILAR names; eg. it. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at Beaconsfield, South Maokay and Slade Point; Evan St. and Evans Ave.; Douglas Grs. It. at the help of the Ombudsman. We did have two Nindaroos and two irakalas, which could be confusing when an Ambulance or a Fire Engine is urgently irakalas, which could be optimized areas we have over IOO names which can be

confused. It took Mackay 77 years (1939) to get a port and we are doing the same for a lecent safe road system, Mackay deserves a direct all weather road to its Port. The multi-modal Corridor is proposed to follow the present rail line to the Harbour but multi-modal Corridor is proposed to follow the present rail line to the Harbour but i. The already has been fish kills here due to further drainage exposing acid sulphate soils. Acid sulphate soils have to be drained if disturbed, otherwise they become bog noles. I rang Stuart Holley (Infractructure Services Executive Manager with the Mackay Gity Council) and told him that the Authorities "oured" a very bad area of acid sulphate soil in Malcomson St. about 30 years ago and has lasted this period in time. I am not happy with the traffio calming devices on Mackay's roads as emergency.

I am not happy with the traifio caiming devices on making broken is the fine vehicles cannot negotiate them. We have radar guns for this purpose and if the fine is inadquate the first time, you keep on doubling up until it hurts his pocket. I lrive a four wheel drive, sometimes with a boat & trailer and it wrecks the running gear of the trailer.

gear of the traffer. I was a Cane Inspector with Farleigh Mill from 18/5/53 to 31/12/94 and measured bane paddocks manually for approx. 35 years and then with aerial photoes and calculated by computor. The old system is by far the most accurate providing you with datum by computor. The old system is by far the most accurate providing you with datum points. I was in the area from the Pioneer River to the Northern Beaches Area for 28 years but ended up elsewhere in the latter years.

years but ended up elsewhere in the latter years. I got some information from (a very good local Historian) IOO years in IOO days (1900 to 1999) put out by The Daily Mercury and I kept diaries from 1960 to 1994, but the destroyed our field books this year; WHY, I do not know? Yours faithfully,



preferred land option: The development of a State Planning Policy, preferably strengthened by amendments to the IPA, is essential. Continuation of the current approach will inevitably place people at significant risk and lead to massive economic loss.

ID_991

What natural hazards should be included: cyclones

What natural hazards should be included: floods

What natural hazards should be included: landslides

What natural hazards should be included: bushfires

What natural hazards should be included: severe storms

What natural hazards should be included: earthquakes

Include other natural hazards: East coast lows

Comments on what natural hazards should be included: The discussion paper uses the generic term 'cyclone'. Whilst this term could be seen to embrace east coast lows (so-called 'winter cyclones'), the term is typically understood to relate to tropical cyclones. In the south-east of the State, east coast lows are a much more common hazard. They do not receive the same attention or warning as their tropical equivalent (eg they are not named or tracked in the same way) yet they cause more deaths from drowing and greater maritime losses. It would be preferable to either list them separately or include discussion of them when dealing with 'cyclones'.

The separation of storm tide hazard is a concern. I would be more comfortable if all inundation hazards were wealt with under the SPP. The fact that a different bureaucratic agency has 'responsibility' for storm tide (under the coastal management banner) is a receipe for conflict, confusion and inconsistency. For example, would areas along Bulimba Creek or the Brisbane River that would be subject to storm tide inundation be covered by the coastal management plan?

Other issues not identified: Yes

Details unidentified: Will the SPP provide or identify standards and establish risk thresholds. The discussion paper suggests, for example, that it will not set standards such as the 100 year ARI level as a standard for flooding, yet it correctly states that the development of evaluation criteria is an essential first step in risk management. Certainly, in my experience, local governments are seeking to have such standards set by the State Government, thus reducing their exposure to challenge in the Planning and Environment Court.

There are some planning policies that have been shown to exacerbate risk. For example, heritage restrictions in Sydney have contributed greatly to the cost of repairing hail damage where householders have been required to replace material such as slate or terra cotta roofing with the same material rather than with more resilient material. That should be avoided.

Do you support Ch. 2 planning measures: Yes

Are there other measures which could be adopted in a State Planning Policy: Yes

Describe any additional land use planning measures: There needs to be close linkage between building code measures which are aimed at reducing building and infrastructure vulnerability with the planning process at the local level. This is particularly the case with exposure to severe winds.

There is also a tendency for newer standards to combine building standards and planning standards. The soon to be released bushfire code is a case in point as will be the landslide and inundation standards when they are finalised. This valuable and logical inkage should be catered for.

Are there basic principles which should be the foundation of a State Planning Policy: Put simply, the easiest ways to reduce risk are to reduce exposure (ie by keeping developments out of harms way) or vulnerability (typically addressed by engineering standards). This relationship should be the guiding principle of the SPP.

The community is looking for guidance and it will not be sufficient for the SPP to simply shift the responsibility for setting standards, especially for inundation hazards, to individual local governments.

From: To: Date: Subject:



Yesterday I sent in some comments on the SPP discussion paper via the electronic proforma. I realise that I forgot to include a number of comments, especially relating to basic principles. Following are additional comments.

2

As a principle, flood studies should be conducted on a whole-of-catchment basis where practical, especially in coastal areas. There have been problems in the past where, because of a lack of cooperation between neighbouring local governments, that adequate modelling and flood plain management has not taken place. This is especially a concern where a river forms the boundary between local governments. I am also aware of examples in the past where flood modelling was done which ignored potential conditions both upstream and down stream of the river segment flowing through a particular local government area.

Inundation modelling (including storm tide) for planning purposes should, as a rule, be required to include the impact of events with average recurrence intervals (ARI) through to PMF (probable maximum flood) rather than the widespread practice of only modelling to the 100 year ARI level. Intervals of 50, 100, 200, 500, 1000 and PMF is recommended as best practice. This is needed to identify the potential residual risk.

The 'precautionary principle', especially regarding climate change, should be enshrined. It may require State authorities to set values for such things as forecast sea level rise to avoid debate between developers and councils who employ their own 'experts' (eg the problems that Redcliffe had in the late 1980s).

It would be helpful to set risk levels for key or sensitive facilities above those set for residential and commercial development that ensure their availability after disaster. These would include facilities such as hospitals, emergency service and police facilities, communications centres, key lifeline facilities, as well as hazardous facilities. In some areas in the US such facilities may not be sited in areas exposed to risk in events with ARI of less than 5000 years. A similar principle is already included in the Building Code and should be extended to planning practice. This is especially important given that the SPP will be binding on State Government agencies. The SPP should explicitly preclude Cabinet approval to developments which over-ride council approvals where they are in conflict with hazard control requirements (eg the Lang Park re-development which is in flood prone land).

The SPP should also be made applicable to re-development or areas or key facilities in hazard-prone localities. For example, if the zoning of an area in a known flood risk zone is to be changed from its original single residential dwelling zone to medium density zone the current flood control levels should apply. Similarly if a key facility such as a hospital is to redeveloped its siting should be governed by current hazard control requirements (eg the case of Cairns Hospital) rather than simply utilising the existing and inappropriate location.

Administration. I am concerned that the discussion paper indicates that the SPP will not be binding and that local governments will only need 'to consider' it. Its application should be mandatory. I also wonder where DES is going to find the expertise needed to provide the scientific and technical advice needed to provide advice to LGA as suggested in 3.2. If such advice is to be outsourced I would hope that there is some form of accreditation of consultants to ensure that they have appropriate gualifications and experience.

Please contact me if you need clarification on any of the above.

Geographer ABN 55 880 118 101

Phone: Fax: Email: Snail mail:

, Caboolture, QLD, 4510

"It is better to inspire action than to give advice."

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1D: 990

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	From: To: Date: Subject:	9/26/01 8:30pm Re: SPP (Natural Disaster Mitigation) Submission
*	Contact I	p: Planning Officer, Local Government
	Original Mes From: To: Sent: Monday, S Subject: Re: SP	eptember 24, 2001 8:50 PM P (Natural Disaster Mitigation) Submission
	Apologies. I hav please with som	re forwarded your email to second now. Can you provide me e details eg telephone number? and what stakeholder gorup
	you may be from eg academic (field)	local government, town planner, member of the community, , industry rep (eg insurance, engineer) etc? This will
,	help us communicate	e better with our stakeholders. Many thanks.
	>>> Please forward Original Me From To: Sent: Monday, Subject: Re: SF	09/24/01 08:04pm >>> ssage September 24, 2001 9:46 AM PP (Natural Disaster Mitigation) Submission
	Thank you J number. Could you plea	Please log
	>>> STATE PLANN	ING POLICY SUBMISSION
	I wish to make	a brief submission relating to the State Planning Policy
	Natural Disaste addressed in th	er Mitigation. I believe the following issues need to be ne policy:
ł	1. Floods 2. Landslides 3. Bushfires (e between	.g. SPP could stipulate firebreak/setback distances
	urban de 4. Severe Stor	relopment and fireprone bushland areas). ms (e.g. underground power should be mandatory for new
	develop 5. Earthquake of	ment) s (the location of hazardous land uses should take account
	earthq	uake risk and /or tremor frequency).
	There need to and management	be consistent guidelines across the state for the planning of these issues.
/	l l	

/e Smith - He: SPP (Natural Disaster mingation) Submission.

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From: To: Date: Subject:



Fwd: Re: SPP (Natural Disaster Mitigation) Submission

These people have put in a submission and I have emailed them asking for their contact number and stakeholder group which they have supplied. I've given this to Angela to input into the database. Could you please check that the information is there? Cheers.

er off



BANANA SHIRE COUNCIL

COUNCIL CHAMBERS, PRAIRIE STREET, BILOELA, QLD _ 6 NOV 2001

ABN: 85 946 116 646

All communications to be addressed to The Chief Executive Officer POSTAL ADDRESS: P.O. Box 412, Biloela, Old 4715 EMAIL: enquiries@banana.qld.gov.au FACSIMILE: (07) 4992 3493 TELEPHONE: (07) 4992 9500 WEBSITE: http://www.banana.gld.gov.au

KML:alc 01/10/46508-22806 File No.: E-0005

2 November 2001

Dear Sir,

RE: State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment - Submission

I refer to your letter of the 12 September 2001 relating to the development of the State Planning Policy on Land Use Planning for Natural Disaster Mitigation & Development Assessment and seeking submissions.

Council tabled your letter at the October Ordinary Meeting where it was resolved to make a submission on the Discussion Paper. Please find attached the completed proforma.

Please direct any queries you may have to Council's Shire Planner and the second on telephone (

Yours faithfully

John Hooper, CHIEF EXECUTIVE OFFICER.



Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE Q 4001

4.2 Proforma for submission

The following is a suggested proforma for submissions on the intent to prepare a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. Interested individuals and representatives of organisations are encouraged to make a written submission regarding the Discussion Paper. Written submissions close on Friday 9 November 2001.



19

What natural hazards should be included in the State Planning Policy? (see Section 12 and Appendix A) Cyclones Metioods Metandslides Mebushfires DeSevere storms Defarthquakes Other? Please specify Drought. While drought is probably dealt with separately it can have implications for development assessment eq temporary feedlots-durate There are a number of issues identified in Chapter 2 concerning natural disaster management and land use planning. Are mere other issues, which are not identified? 20 Yes INO If yes please give details of unidentified issu Remove for your use There is a requirement of a great deal ind resea to implement rensive) back mitigation o W authoriber with small small rate base. Chanter 2 obtilines and use planning measures to mitigate natural disasters. Do you support these to measures? 1 Yes DiNo Are there other measures which could be adopted in a State-Planning Ed WINO. П describe any additional land use planning measures that could be considered for a State Flanning whether or not your comments refer to Are there basic principles which should be the foundation of a State Planning Policy on Land Use Planning for Natural Disaster Miligation and Development Assessment which would ensure that nuture urban development is undertaken in a manner that minimises the potential for disastrous impacts from natural hazards? (see Chapter 2, Section 2.5). is the difficulty that it can only it on new development Discussion Paper only, not Government policy



Brisbane City Council

	· · · · · · · · · · · · · · · · · · ·					
To:	Director, Disaster Mitigation Unit, Counter Disaster and Rescue Services	Date:	9 November 2001	Level 16, 6	Level 16, 69 Ann Street	
Affn:		Fax:	32478480	Brisbane (21d 4001	
	Steve Greenwood, LGAQ	Pages:	2			
From:	n: Peter Rollston, Program Officer, BCC					
Re:	Submission to SPP on Land Use Planning for Natural Disaster Mitigation			Phone: Facsimile: Email: Internet:	07 3403 9549 07 3403 6314 Pocp4@brisbane.qld.gov.au www.brisbane.qld.gov.au	

This submission is made in response to the recently circulated discussion paper regarding the SPP for Land Use Planning for Natural Disaster Mitigation.

BCC supports the current initiative to address statewide deficiencies in the mapping of potential impacts of natural disasters.

Extensive work has been undertaken by local governments in Queensland to map areas effected by natural hazards and this work has frequently played a major role in shaping the strategic direction of communities and regions.

This valuable work has sometimes been prepared in isolation from surrounding local authorities and has sometimes been undertaken at particular localities by developers as a condition of development approval. The quality and accessibility of these locality specific studies has varied considerably across Queensland councils.

It is agreed that an ongoing problem for Queensland has been inconsistent approaches to natural disasters, most notably mapping and policies relating to flooding.

Scope of Land Use Planning Response

The natural hazards considered most relevant to land use planning in Queensland are storm surges associated with cyclones, flooding, landslides and bushfires. Earthquakes, severe storms and strong winds associated with cyclones are considered to be impacts most effectively addressed by a suite of building regulations best contained in the Standard Building Regulations.

Earthquake planning may benefit from a statewide mapping of earthquake risk linked to specific discussion of earthquake design standards in the Standard Building Regulations.

Preferred Option for Land Use Planning

The preferred approach for land use planning for disaster mitigation in Queensland is as follows:

- The compilation of the extensive current local government studies, mapping and policies relating to storm surge, flooding, landslides and bushfires,
- Benchmarking of existing mapping standards and levels of control,

IF THIS FACSIMILE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, PLEASE TELEPHONE THE ABOVE SENDER, THANK YOU.

- Selection of an agreed standard of mapping and associated policy settings,
- The mapping of areas effected by these hazards across the state in accordance with the agreed standards. It is suggested that mapping is best undertaken at the regional level in accordance with existing regional planning boundaries, with possible exceptions made where this approach is at odds with river catchment boundaries, and
- The release and regular updating of regional map series regarding storm surge, flooding, landslips and bushfires to be read in conjunction with an SPP detailing policy implications of • various categories (ie a clear explanation of the implications of Q100 floodlines).

Regional planning forums should have the responsibility for these projects, jointly funded and resourced by local and state governments and involving all stakeholders and community consultation where relevant.

Another less resource intensive approach would be applying general policy directions to accredited existing datasets where found to be adequate for the area, an approach similar to that used by the SPP for Good Quality Agricultural Land.

Existing Sources of Compiled Information

DLGP's Population Information and Forecasting Unit has already digitally compiled and regularly updates available flooding, storm surge and landslip mapping across over 25 local authorities in Queensland, encompassing all metropolitan areas and major regional centres and their hinterlands.

This data was compiled for the Broadhectare Study. Each dataset was nominated for inclusion by participating local governments where these natural hazards effectively prevented or significantly constrained residential development from occurring. This compiled data set will provide a valuable 'first cut' overview of the state of existing information.

Suggested Basic Principles forming the foundation for preparation of the SPP

- Existing regional forums fund regional compilation and production of base data and seek to minimise cost through the use of extensive existing base data.
- Any revision of existing mapping and policy which changes land use rights be undertaken in collaboration with local communities
- Mapped results and policies do not obfuscate the source of risk (ie flood, landslip) and includes direct plain English links between base data and policy implications.

Conclusion

In conclusion, the preparation of this SPP is supported subject to its provisions being directly linked to a consistent set of maps for each natural hazard prepared in collaborative and open processes at the regional level by existing regional planning bodies.

Contact Details

Please call Peter Rollston on 3403 949 with any further queries.

Peter Rollston Program Officer **City Planning**

IF THIS FACSIMILE TRANSMISSION IS INCOMPLETE OR ILLEGIBLE, PLEASE TELEPHONE THE ABOVE SENDER, THANK YOU.

From: To: 13/11/01 16:41:26 Date: Electronic Proforma for SPP DP Subject: Below is the result of your feedback form. It was) on Tue Nov 13 16:40:59 EST 2001 submitted by Name of submitter: BURDEKIN SHIRE COUNCIL Title: Mr Name of author: Work number: Mobile number: Contact address: Burdekin Shire Council, P.O. Box 974, AYR. Q.4807 Stakeholder Group: local government preferred land option: 3.1.2 Develop a State Planning Policy on land use planning for Natural Disaster Mitigation and Development Assessment. What natural hazards should be included: cyclones What natural hazards should be included: floods What natural hazards should be included: landslides What natural hazards should be included: bushfires What natural hazards should be included: severe storms What natural hazards should be included: earthquakes Include other natural hazards: Heatwaves and chemical spills. Comments on what natural hazards should be included: The report on natural hazards and the risk they pose to South-East Queensland includes a chapter on heatwaves and it is considered appropriate that the State Planning Policy also develop mitigation strategies to address this natural hazard.

Chemical spills mitigation should also be investigated as a natural hazard.

- Electronic Proforma for SPP DP

Other issues not identified: Yes

Details unidentified: As above.

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Do you support Ch. 2 planning measures: Yes

Are there other measures which could be adopted in a State Planning Policy: Yes

Describe any additional land use planning measures: The Council can appreciate the difficulties associated with planning for heatwaves as a natural hazard.

Are there basic principles which should be the foundation of a State Planning Policy: The principles in 2.5 of the discussion paper should be considered basic principles for developing a State Planning Policy.

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What natural hazards should Other? Please spec Will Carl Marter R.w. 2 4 3 LARCE LANES - IF N C. S. S. S. S. S. * AT A NUMBER OF REGIONAL MEETING PARTICIPANTS AND DIFFICURTY IN ADDRESSING INTER AXS + ELVERE STORMS . WE SUPLEST HAND THE HADALDS, PARTICUL PATHER THAN AS AN ENTITY EG ON Dinc 9148 240 OF THEIR COMPOSENT HAZACOS HENNY CURI/FLOODING+ STORM ALLINGARB TO RELATED DOLONESS SICHAS THE STATE CONSTANTION ind the for The THE so REC THE WAR AR 138 LETHERE 4 WOER RANNING GOVE LITTLE RESPECT TO JAMAGINE WINDE QUESTION : AS LOOKE DO ESTABLISA MONTE NO LESS VULLERABLE TRAT FAR IN AS COSTRATO TO LITHUS LOOK CONT BUNDAPLES BIT INVOLUNCE 13, 182 UES NOT. DECUSIONS THAT THE' WITH ACCOUNT WILLSBEE BILLITY TO STATE-SCALE HELDAPS ŗ 11424008 GNSIDERATION MAY NEED TO SE GIVEN TO CLIMATE CHARTE ISSUES FOR LONDER -D2 CURSIF ACTOR OF TO CURATE VACAD CAY ACTORSOUTH

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From: To: Date: Subject: Jim Davidson

8/11/01 15:31:10 Further to the BoM written submission

Hi Jodie

Earlier today, **Constitution** (Regional Director Queensland) faxed you the BoM written submission to the State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. I trust you received it. We now have 2 additional comments to make.

Please add the following text to the points already made at the bottom of the proforma on Page 19 of the booklet:

¹¹ The Bureau would strongly support the adoption of consistent (State-wide) standards for the design of structures and designation of land-use planning zones that are based on sound scientific analysis (including risk assessment and management) of all available information.¹¹

Please add the following text to other unidentified issues:

It is essential that there be only one authoritative source (and acknowledged) for the different types of warning. Conflicting warning messages can cause significant concerns and additional problems in disaster situations. ^N

Regards. Jim.

Jim DAVIDSON Qld Weather Services Manager Bureau Of Meteorology Tel

Fax Mot

CC:

grd@alto1.gld.bom.gov.au





Caboolture Shire Council

7 November 2001

Enquiries: Direct Phone: | Direct Fax:



= 9 NOV 2001

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Our Ref:

621/17/5 (rr)

Your Ref:

Director Disaster Mitigation Unit Counter Disaster & Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear Sir

Re: State Planning Policy - Land Use Planning for Natural Disaster Mitigation and Development Assessment.

Caboolture Shire Council at its meeting to be held on 20 November 2001, will be considering a report in relation to the abovementioned State Planning Policy, and Council's participation in the development of the Policy.

It will be recommended that Council gives '*in principle*' support to the formulation of this Policy, and you will be advised of Council's decision following this meeting.

I have completed the submission proforma and enclosed herewith.

Should further information be required concerning this matter please contact Council's Planning & Strategy Unit as above referenced.

Yours faithfully

MANAGER PLANNING & STRATEGY

Enclosure

State Planning Policy – Land Use Planning for Natural Disaster Mitigation and Development Assessment - Submission

Name of submitter: (e.g. organisation)	Caboolture Shire Council				
Name of author or contact person	Mr Leo Jensen				
Email address:					
Contact Telephone:	Work Number: Mobile Number:				
Contact address for correspondence:	Manager Planning & Strategy Caboolture Shire Council PO Box 159 CABOOLTURE QLD 4510				
Stakeholder group	Local Government				
What is your preferred option for land Queensland, or what would you prefer	d use planning for disaster management and mitigation within ?				
Incorporation of codes into various IPA Planning Schemes. SPP should set framework and broad parameters, but issues will vary from Local Government to Local Government.					
What natural hazards should be includ Cyclones Floods Landslin	ded in the State Planning Policy? des 🗹 Bushfires 🏛 Severe Storms 🗖 Earthquakes				
Other? Please specify					
No comment.					

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There are a number of issues identified in Chapter 2 of the Discussion Paper of September 2001 concerning natural disaster management and land use planning. Are there other issues which are not identified?

T YES NO

If yes, please give details of unidentified issues

No Comment.

Chapter 2 outlines land use planning measures to mitigate natural disasters. Do you support these measures?

Are there other measures which could be adopted in a State Planning Policy?

Please describe any additional land use planning measures that could be considered for a State Planning Policy (see Chapter 2). Please specify whether or not your comments refer to a specific natural hazard

Scope for any policy to address emergency natural hazards (ie. algae blooms in fresh and salt water bodies). Whilst blooms may be linked to land use practices, the occurrence of such bloom impacts on land use planning and practice, terrain, industry natural ecosystems.

Are there basic principles which should be the foundation of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment which would ensure the future urban development is undertaken in a manner that minimises the potential for disastrous impacts from natural hazards?

No comment



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From: To: Date: Subject:



8/10/01 10:50:35 State Planning Policy on Natural Disaster Mitigation and Development Assessment

Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services PO Box 1425 BRISBANE QLD 4001

Re: Submission on the Intent to Prepare a State Planning Policy

Name of Submitter: Cairns City Council Name of Author:

Contact Address: PO Box 359 CAIRNS QLD 4870 Stakeholder Group: Local Government

I would like to advise the following points to the above topic.

1. A State Policy approach is supported such that a consistent approach to disaster mitigation is achieved not only state wide, but nationally.

2. The policy should not be overly prescriptive, but needs to specify best practice standards where they exist, e.g. minimum flood immunity for new development.

3. Significant involvement of local authorities needs to be achieved during the policy preparation process in order that Local Government ownership of the policy is assured.

4. Local Government planners, engineers and emergency management personnel will all benefit from the adoption of a State Planning Policy and I believe will be supportive of the policy approach taken.

In respect of the above points I would like to be personally involved in the development of the State Planning Policy.

Regards

Manager, Strategic Planning Cairns City Council

Cairns City Council Disclaimer

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Angele-Please !! Brogen- Please !! Brogen- please

JAB:CD1 & CS7

YOUR REPERENCE

9 November, 2001

The Director Disaster Mitigation and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear Sir,

Re: Discussion Paper State Planning Policy – Disaster Mitigation

Thank you for the opportunity to comment on the discussion paper on the possibility of developing a State Planning Policy on Land Use Planning For Natural Disaster Mitigation and Development Assessment. It is noted that the discussion paper acknowledges that a State Planning Policy as proposed would have some limitations in that the natural hazards nominated could only be addressed in terms of land use planning and development assessment by the policy.

Council agrees with the statement in the discussion paper that land use planning can play a key part in reducing current and future community risks by identifying in advance the areas with increased risk. However, Council also concurs with the statement that, one reason for the differences in the level of land use planning between local governments is the differences in baseline data available.

While a disaster risk management approach can be followed to identify the risks, Council is concerned that there is sometimes little or no information available on these risks in a geographical sense.

For example, earlier this year the Australian Geological Survey Organisation produced a document titled "Community Risk in Gladstone – A Multi-Hazard Risk Assessment" which attempted to quantify the risks of cyclone, earthquake, severe storm, flood, landslide, heat wave and bush fire risk to the Gladstone Region. The following was concluded regarding the "riskiness" of Gladstone from the report:

Tropical Cyclone Wind: Total damage to 700 houses in the area.

Storm Tide Inundation: 247 structures will experience over floor inundation.

<u>Flood</u>: There is currently insufficient information available on which to base a risk assessment.

Earthquake: The risk is as high as Newcastle but AGSO has insufficient data at this stage to estimate the risk for the study area.

Severe Thunderstorms: We do not have enough information at present to quantify the level of risk.



Community, Environment & Industry in Furtnership

COUNCIL CHAMBERS

CALLIOPE

GUDDINGLAND 4680

POSIAL ADDRESS POST OFFICE BOX 231 C A L L I O P.E QUEENSLAND 4680

TELETHONE (07) 4975 8100

FACSIMILE

(07) 4975 7106

EMAIL

csc@calllope.qld.gov.au

PLEASE ADDRESS ALL CORRESPONDENCE TO THE CHIEF EXECUTIVE OFFICER <u>Heat wave</u>: 4287 people (Australia – wide) died between 1803 and 1992 from heat wave... it is not possible to provide a specific risk assessment.

Bushfires: Generally do not kill people in Queensland, although some property damage.

Landslides: Only one recorded in the area.

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The general conclusion from the above is that there is very little quantitative information upon which to make a risk assessment if land use planning is required to take this into account.

Calliope Shire Council has a land area of over 5000km² and a rate base of 15,000 people. The most useful disaster mitigation information collected to date by Council at its own expense has been on flooding and storm surge. This data covers 100km² of the Shire. The cost of collecting information over the whole of the Shire for several other types of disasters would most likely be prohibitive for this community. The State Government needs to invest heavily in data gathering before the State Planning Policy would be effective.

The goal to achieve a consistent direction across the State for natural hazards planning is an admirable one. The proposed policy should take into account the fact that the needs of Local Government Shires to mitigate these disasters is as diverse as the weather patterns and terrain.

If a State Planning Policy was to be introduced, it could consist of "layers" of requirements, based on the adoption of new integrated Planning Act planning schemes. For example:

Section	Content	Applicable to	
1	Broad performance criteria to consider in a IPA planning scheme.	All local government	
2	Matters to be considered in Planning Scheme	All local government	
3	More detailed requirements including Default and optional codes	Areas with non-IPA Planning Schemes	

The broad performance based criteria in Section 1 could be along the lines of not exacerbating the exposure of people or property to the risk associated with natural disaster. ie not allowing higher density development on flood prone land etc.

The matters to be considered in producing a Planning Scheme in section 2 would be flooding (rainfall & storm surge), landslides and bush fires. Five lines on each topic should be sufficient.

Section 3 follows the format of the proposed changes to the Standard Building Regulation. This section would contain what have been

termed "default" and "optional" codes of practice. A default code applies if the local government does not, by resolution of Council, adopt a different or amended code. An optional code is only applicable if called up by Council by resolution. Codes are proposed as follows:

Code	Туре		I IZI BÖYDDI 6 K. MA
Flood and Som		flood immunities and freeboards for various types of development.	
Bush Fire Code	Optional	Stipulates bush fire mitigation measures for various types of development in various mapped areas	•
Landslide Code	Optional	Stipulates triggers for landslide studies and mitigation for various types of development in various types of soils and formations or mapped areas.	
Earthquake Code	Optional	Stipulates earthquake mitigation measures for various types of development in various mapped areas	

A planning scheme is adopted by a resolution of Council, and as such it would be satisfactory to utilise the State Planning Policy prior to adoption of the planning scheme. The State Planning Policy Codes would more than likely form a good basis for codes that are included in a Council planning scheme.

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In summary, a State Planning Policy would be an appropriate instrument to ensure natural disaster mitigation is considered in the compilation of a planning scheme and the assessment of development. Generally however, little information is available to assess the risk of disasters, and much investigation is required at prohibitive expense for local government. It would be of general benefit to local government to map areas of high risk from natural hazards before imposing a State Planning Policy, so that the implications could be better understood.

Should you have any queries in regard to this matter, please call Mr

Yours faithfully

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Department of Aboriginal and Torres Strait Islander Policy 2

001511

Ms A/Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear

Thank you for seeking comments from the Department of Aboriginal and Torres Strait Islander Policy (DATSIP) regarding the development of the proposed State Planning Policy for Extractive Resources and Extractive Industry (SPP). DATSIP provides advice about the cultural, environmental, economic and physical interests of Aboriginal and Torres Strait Islander Queenslanders and welcomes the opportunity to provide comments.

I trust that the following comments will be useful in the preparation of the SPP. Should <u>you have any further inquiries regarding this submission</u>, please contact the second of the second se

Yours sincerely



Level 1 Enterprise House 46 Charlotte Street Brisbane PO Box 397 Brisbane Albert Street Queensland 4002 Australia Telephone 07 3224 2011 Facsimile 07 3404 3572 Website www.indigenous.qld.gov.au ABN 84 150 594 360

DATSIP comments on the Proposed State Planning Policy on Land Use and Planning for Natural Disaster Mitigation and Development Assessment

Introduction

Queensland has a widely dispersed population of Aboriginal and Torres Strait Islander peoples living in a wide variety of social and economic circumstances with varying exposures to natural disaster hazards and plans to mitigate risks. Significantly, a large proportion of the Aboriginal and Torres Strait Islander population live in areas where natural disaster risks are high because of their remote geographic locations with high probability of natural disaster events and low levels of mitigation. The Department of Aboriginal and Torres Strait Islander Policy (DATŠIP) recognises the benefits of land use planning for natural disaster mitigation and support the development of the SPP to inform and assist local governments prepare planning schemes. However DATSIP considers there are particular issues associated with Aboriginal and Torres Strait local governments that need to be taken into consideration when preparing the SPP.

Some Statistics

Data from the Australian Bureau of Statistics 1996 Census indicates that in 1996 there were 95,533 Aboriginal and Torres Strait Islander Queenslanders. (It is anticipated this figure will increase when 2001 Census figures are available.) Of these 95,533 people:

- 26,566 were living in large metropolitan locations (locations of over 100,000 people). Indigenous people comprise 1.6% of the total population dwelling in large metropolitan locations, and 27.8% of the total Indigenous population live in large metropolitan areas.
- 16,204 were living in regional cities (locations of between 25,000 and 99,999 people). Indigenous people comprise 3.5% of the total population dwelling in regional cities, and 17.0% of the total Indigenous population live in regional cities.
- 5,675 were living in large rural locations (locations with a population of between 10,000 and 24,999 people). Indigenous people comprise 3.0% of ٠ the total population dwelling in large rural locations, and 5.9% of the total Indigenous population live in large rural locations.
- 23,233 were living in small rural locations (locations with a population of between 1,000 and 9,999 people). Indigenous people comprise 6.1% of the total population dwelling in small rural locations, and 24.3% of the Indigenous population live in small rural locations.
- 23,855 Indigenous Queenslanders live outside urban areas (locations of less than 1000 people), which represents 25.0% of the total indigenous

population. By comparison, 19.4% of the total Queensland population live outside urban areas.

From a natural disaster risk perspective it is significant that these demographic figures show that almost 50% of Aboriginal and Torres Strait • Islander Queenslanders live in small rural locations or outside urban areas, mainly in remote and isolated locations.

Aboriginal people and Torres Strait Islanders also live under several local government jurisdiction types throughout Queensland including:

- > 123 'mainstream' local governments established under the Local Government Act 1993:
- > 2 local governments established under the Local Government (Aboriginal Lands) Act 1978;
- > 15 Aboriginal Community Councils established under the Community Services (Aborigines) Act 1984, and
- > 17 Torres Strait Islander Community Councils established under the Community Services (Torres Strait) Act 1984.

In the 34 Aboriginal and Torres Strait Islander local government jurisdictions there are approximately 16,875 Aboriginal and Torres Strait Islander residents out of a total of 20,980 residents. This indicates that approximately 18% of Queensland's Aboriginal and Torres Strait Islander population lives in areas under Aboriginal and Torres Strait Islander local government jurisdiction. The remainder, approximately 78,658 (ie 82%), of Queensland's Aboriginal and Torres Strait Islander people live in the 123 'mainstream' local government areas.

Application of the SPP

The State Planning Policy will be prepared within the framework established by the Integrated Planning Act 1997 (IPA) and will be given effect through local government planning schemes, development assessments decisions on community infrastructure by State and local governments. Through planning schemes and in the assessment of development applications, the State Planning Policy would influence decisions on the location and/or requirements for future developments, including infrastructure in the Local Government Area. Local governments would assess proposed developments against the natural disaster risk information contained in their planning scheme, ascertain a development's impact on the safety of the community, consider the provisions of the SPP and, where appropriate, require the development application to be amended or refuse the application.

The Discussion Paper states that "[a]s natural hazards exist throughout Queensland, it would be reasonable that the policy applies State-wide." DATSIP supports this objective but considers that State-wide consistency in the application of the SPP will be difficult to achieve because the 32 Community Councils constituted under the Community Services (Aborigines) Act 1984 and the Community Services (Torres Strait) Act 1984 are not developing IPA compliant planning schemes. The 2 local governments constituted under the Local Government (Aboriginal Lands) Act 1978 are also unlikely to develop IPA compliant planning schemes. This is because IPA provides that the preparation of an IPA compliant planning schemes is optional for these local governments jurisdictions.

The 34 Aboriginal and Torres Strait Islander local government jurisdictions are however bound by the development assessment provisions of IPA. Obviously these local governments will be constrained when applying development assessment provisions because of the lack of natural disaster risk information that a planning scheme would contain. Application of the SPP in these local governments areas will therefore not be consistent with the rest of the State and their communities will continue to be exposed to a higher risk of impact from natural disasters than the communities of local government areas that prepare planning schemes.

Therefore the SPP should develop or identify an alternative mechanism to facilitate land use planning for Aboriginal and Torres Strait Islander local governments in order to achieve State-wide consistency in natural disaster mitigation and development assessment. This is particularly important given the vulnerability of these communities and their exposure to natural disasters. It is also pertinent to quote from the new Queensland Government Priorities, released recently by the Premier, which, in part, state:

Safer and More Supportive Communities

All Queenslanders want to live in communities where they are protected from harm, where the differences between people are respected, and where everyone is treated with fairness and dignity.

The State Government is committed to building safer and more supportive communities by ...minimising the risk and impact of emergencies and disasters....

The Community Services Acts and land use planning

As discussed previously, there are 15 Aboriginal Community Councils established under the Community Services (Aborigines) Act 1984, and 17 Torres Strait Islander Community Councils established under the Community Services (Torres Strait) Act 1984 (Community Service Acts). The Community Service Acts are administered by DATSIP and are currently undergoing review.

There is a possibility that the Community Services Acts review process could provide an opportunity to include provisions for land use planning suitable for Aboriginal and Torres Strait Islander Community Councils, and this planning process could be referred to by the SPP. It is recommended that Department of Emergency Services consult with DATSIP to discuss the Community Services Acts review process and identify options for an appropriate land use planning process for Aboriginal and Torres Strait Islander Community Councils that could be incorporated into the Acts.

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A land use planning process for Aboriginal and Torres Strait Islander Community Councils under the *Community Services Acts* could address the issues identified in section 2.4.1 of the Discussion Paper to ensure compatibility with the State Planning Policy. This planning process would result in a land use plan that addressed:

- identification of strategic policies and desired outcomes for land use;
- identification of land which is particularly at risk to damage from natural hazards and formulation of land use strategy to direct and control the form and limits of development in areas susceptible to natural hazards. This would include hazard and risk mapping. An example would be the prevention or limiting of urban development in areas of known potential threat from flooding;
- creation of codes specifically addressing natural hazards; and
- inclusion of requirements for development to produce site specific plans for identified natural hazards, eg. a bushfire management plan.

Any amendments to the *Community Services Acts* to provide for land use planning must be developed in consultation with Aboriginal and Torres Strait Islander Community Councils and their representative bodies to ensure that any new provisions are appropriate and achievable for Aboriginal and Torres Strait Islander local governments.

Resourcing for natural disaster risk assessment and mitigation

Regardless of whether Aboriginal and Torres Strait Islander local governments develop IPA compliant planning schemes, or conduct land use planning under the *Community Services Acts*, or voluntarily identify natural hazards risks and mitigation, they will inevitably incur a cost for land use planning for natural disaster mitigation. The costs would be significant and given that Aboriginal and Torres Strait Islander local governments rely heavily on Commonwealth and State Government grants, they would require specific financial assistance to implement a planning process.

The Natural Disaster Risk Management Studies Program (NDRMSP) provides resourcing to local governments to conduct hazard mapping, risk assessment and technical studies relating to natural hazards. The funding formula for the NDRMSP requires a 1:1:1 contribution from Federal, State and local governments and experience has shown that natural disaster risk management studies cost in the vicinity of \$60,000. This equates to around \$20,000 to be contributed by the local governments that successfully apply for NDRMSP funding.

Only two Aboriginal and Torres Strait local governments have successfully applied for funding from the NDRMSP to date. This is primarily because of the limited financial resources and competing priorities for scarce resources in the other Aboriginal and Torres Strait local governments. This indicates that consideration needs to be given to reducing or waiving the required contribution from low income local governments, or specific grants provided to them so that they are able to access NDRMSP funding. DATSIP understands that the SPP has no direct influence over the NDRMSP but it should be recognised that without assistance Aboriginal and Torres Strait local governments will be unable to conduct an adequate planning process, even if they are required to do so by legislation.

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To assist and guide Aboriginal and Torres Strait Islander local governments develop land use plans that include natural disaster mitigation provisions, and to inform development assessment processes, the SPP should be developed consistent with the basic principles proposed in section 2.5 of the Discussion Paper. Consistent with section 2.5, the basic principles for developing an SPP

information on natural hazards and land use patterns, and activities that should be that it includes: are increasing the potential risks to communities and infrastructure from ٠

- those hazards, must be gathered, together with information as to which activities and land uses are likely to result in increased risks; appropriate opportunities for natural hazard management should be
- identified and adopted to encourage a proactive rather than a reactive ٠ approach to natural hazard management; clear policies and guidelines should be formulated for effective
- management of natural hazards and the implications of those upon land
- the role and responsibilities of stakeholders should be clearly defined and
- all tiers of government, industry and the community need to work together towards common resource considerations and management objectives. •

DATSIP Natural Disaster Mitigation SPP submission 6 Poor command/control procedures. These lead to: -Lack of identified "on scene" appliances/ resources. Uncontrolled road closures. Improper dissemination of information, leading to: -Inconsistent/ un-coordinated fire attack procedures Unsatisfactory or inefficient use of resources. Improper procedures by on scene crews.

The majority of these problems identified will reoccur at every incident as concerns will always be raised and the feeling of "we could have done better" is inevitable. Of course we can always do better, the objective is to save lives, prevent injury and property lose in an effort to reduce the trauma to both man and nature and maintain the life style that living with nature brings us.

The identification of wildfires as a risk, which can be planned for, albeit only really aimed at the prevention of the effects, acknowledges the desire to create communities that are safe from this natural disaster.

The creation of buffer zones consisting of firebreaks and fire resistant vegetation around new communities, the provision of water features that can be utilised as filling points for fire appliances. Turn-around facilities to allow fire appliances to escape from high-risk areas, provision of fire shelters and mechanisms to alert the greater community of the risks associated with living in the area and the approach of a wildfire. Australian Standards 3959 specifies the types of construction suitable to wildfire prone areas. The standard acknowledges that improvements to the safe and successful construction of homes in wildfire prone areas must be accompanied by measures taken in the areas of planning, subdivision, siting and landscaping.

The Building Code of Australia also addresses the problems associated with development of Class 1,2 &3 buildings in bush fire prone areas.

As with all Natural disaster situations, we can only plan to reduce the threat and the potential damage that the incident can bring. Every effort should be made to plan our communities to coexist with nature while still ensuring a safe and protected environment.

ate Planning Policy	on Land Use Planning - Department of	Emergency Services	Page 1 of 3 SSN:9
	ensland Government	HOME LINKS FEEDBA	CK CONTACT S
ABOUT US	Suggested proforma for written submis Use Planning for Natural Disaster Mitig	sions concerning the Stat ation and Development As	te Planning Pol ssessment
MEDIA	Name of submitter: (e.g. organisation)	Central Public Heal	th Uni
Calendar of Events The Early Years State Planning Policy on Land Use Planning for Natural Disaster Mitigation and	Name of author or contact person: Mr □ Mrs □ Ms ☑ Miss □ Dr □		
Development Assessment VOLUNTEERS	Email address:		
KIDS' PAGE	Work Number:	Mobile Number:	_
	Contact address for correspondence:		

Director Env	iro	nmental Health	
PO Box 946 Rockhampton	Q	4700	

the appropriate box:

 □ Local Government ☑ Queensland Government or agency □ Commonwealth Government □ Peak Group □ industry □ professional □ community □ conservation other (please specify) 	 Academic climatology land use planning disaster management other (please specify) General community member Property developer Insurance industry representative Consultant or advisor on land planning or other natural hazards Other
□ Industry Group □ insurance	
tourism	
□ primary industry	
└─ mining other (please specify)	

1

What is your preferred option for land use planning for disaster management a within Queensland, or what would you prefer? (see Chapter 3 and Appendix B, <u>Discussion Paper here</u>)

Develop a State Planning P{olicy on Land Use Planning for natu Disaster Mitigation and Development Assessment.

What natural hazards should be included in the State Planning Policy? (see Sec Appendix A, <u>download the Discussion Paper here</u>)

☑ Cyclones ☑ Floods ☑ Landslides ☑ Bushfires ☑ Severe Storms ☑ Ea

Other? Please specify

Comment Support administration of the SPP as outlined in Chapter 3.2

There are a number of issues identified in Chapter 2 of the Discussion Paper of 2001 concerning natural disaster management and land use planning. Are there which are not identified? (download the Discussion Paper here)

□ YES 🗹 NO

If yes, please give details of unidentified issues

Chapter 2 outlines land use planning measures to mitigate natural disasters (<u>do</u> <u>Discussion Paper here</u>). Do you support these measures?

VES NO

Are there other measures which could be adopted in a State Planning Policy? \Box YES \heartsuit NO

Please describe any additional land use planning measures that could be consi State Planning Policy (see Chapter 2). Please specify whether or not your comm to a specific natural hazard (download the Discussion Paper here).

Are there basic principles which should be the foundation of a State Planning P Land Use Planning for Natural Disaster Mitigation and Development Assessmen would ensure the future urban development is undertaken in a manner that mini the potential for disastrous impacts from natural hazards? (see Chapter 2, Secti download the Discussion Paper here).





Fax to: Mr Richard Wood Emergency Services Brisbane Fax No: 3247 8475

Following your discussions with Mrs Pat Butto, Chair State Council of River Trusts Queensland, the following comments are submitted on issues in the Discussion Paper. September 2001, <u>State Planning Policy on Land Use Planning for Natural Disaster</u> <u>mitigation and Development Assessment.</u>

General Comments:

Queensland's 17 River Trusts are closely involved in the mitigation of flood damage and currently provide advice and influence land management decisions where rivers or streams are involved, as part of assessments of applications by their respective Local Authorities.

The State's River Trusts have a close interest in the development of the proposed planning policy, and the legislation under which they operate is very important to them and their local authorities.

The discussion paper raises a number of questions for Trusts. They include:

- Whether the Trusts should also have primary responsibility under the IPA given their role in dealing with flood events and damage to land, rivers and in some areas very extensive flood mitigation and river stabilisation infrastructure they manage and maintain.
- Whether the Trusts established flood mitigation and river management strategies which link closely to the broader regional natural resource management should be recognised under the IPA.

The States River Trusts have a key role in disaster mitigation. They address flood mitigation and river stabilisation for their respective local authorities with the benefits of the *River Improvement Trust Act (1940)* and its links to the State Government.

Pat Botto PO Box 83 Proserpine Q 4800 Ph/Fax 49451052 Email botto@whitsunday.net.au Tim Smith PO Box 5318 MC Townsville Q 4810 Ph 0418 725585 Fax 47997736 Norm Craswell 3 Aylesbury St, Fig Tree Pocket Q 4069 Ph 33785986 Fax 3378 6687 Email normie@gil.com.au
Trusts are one of the key stake holder groups in relation to Natural Disaster Mitigation and Development assessment as they are the agencies best placed to act to overcome flood damage and restore stability to land and rivers in times of emergency.

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Comments of Matters in the Paper

Comments in relation to Section 2 are summarised on the proforma for submissions attached.

Some other comments are made as well. In terms of "where do we go from here" the State Council of River Trust Queensland, would like the opportunity to comment on the draft State Planning Policy in due course.

Natural Hazards 1. Appendix A

Trusts work to manage the risks and mitigate the financial, economic, social and environmental loss.

In coastal North Queensland (Mackay to Mossman not including Townsville / Thuringowa area), the Trusts have established a total of over \$100 Million in flood mitigation and river stabilisation assets.

After severe flooding events, the maintenance cost has commonly been less than 2 or 3% of that value. The North Queensland committees have come to rely on this infrastructure as part of the overall management of flood risk.

Rules and Responsibilities 2. Appendix B

River Trusts play an integral part of the local authority's strategiy development and planning reviews. Local authorities value the provisions of the RIT legislation which deals with emergencies where land and rivers are involved

In the last three years many of the Trusts have successfully sought funding under the Natural Disaster Risk Management Studies Program to undertake risk assessments, technical studies or establish networks related to the management of hazards identified in the discussion paper, and which extend to improved management of the infrastructure on which local urban and rural communities and industry now depend. Local authorities have seen fit to do it that way through Trusts. Trusts believe this role should be recognized in any documentation of roles and responsibilities of Stake holdes in the proposed planning policy.

JT Smith **Executive Officer** 15.11.2001

What natural bezards should be included in the State Manning Polloy? (dise Section 1.2 and Appendix A) 🖸 Severe storms 👘 Earthquakea ☐¥u¢Infres Cycliones EFfoods 🗋 Landskolas Other? Please specify break Severe scoving on value able locit Vands rem Comment Δ Lot ъ (los) want chanyos of asuver a a logi *.* VIVOV W Reconduce, **A**DOLLK den antrai There are a number of indues identified in Chapter 2 concerning satural disaster management and land use planning. Are there other issues which are not blentified? Nº Yes nio. If yes, please give details of unidentified lisuas. Know Ingrand ment പ uniterent allo INNANCINA AST wnJ AL DI Stratin us رت ANNA anin 1 W.S. rantation Q. . 26 40 1224 s vel 1 () Chapter 2 outlines land use planning metageneration fighte natural distance. Do you support these measures? L]-No Yeş Are there other measures which could be adopted to a State Planning Policy? No. 📋 Y 😽 ł Please describe any additional land use planning measures that could be considered for a State Planning Policy (see Chapter 2). Pibase spacify whather or not your contiments when to a specific natural hazard. 1511 O_{2} Are there basic principles which should be the foundation of a State Planning Policy on Land Usa Planning for Batural Disaster Miligation and Disasterioran Association (International Association) which would ensure that future urban development is undertaken in a manager that initiation the potential for disastrous impacts from natural hezarita? (bee Chapter 2, Section 245). 491 ŝ ò £

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Department of Main Roads

7 November 2001

Director Attention Faye Smith Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 Brisbane Qld 4001

Dear Ms Smith

Proposed State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment

Thank you for your letter of 10 October 2001, which confirmed the registration of my town planning officer, Mr Chris Fogarty, for attendance at the Toowoomba workshop on 16 October 2001, and which also invited submissions on the above proposed policy.

My submission for the proposed state planning policy is attached to this letter.

Yours sincerely

District Director (Border)

Encl.: Main Roads Border (Warwick) Submission for a Proposed State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment

Transport Planning Unit Department of Main Roads 306 Wood St Warwick Queensland 4370 Locked Bag 1 Warwick Queensland 4370 ABN 57 836 727 711 Our ref 810/79(5) P10835 E7828 Your ref Enquiries Chris Fogarty Telephone +61 7 (07) 4661 6325 Facsimile +61 7 (07) 4661 6380

What ontomic hazards should be broughed in the since clampines? of you set section it's and AppendicA ■Princes - Principles C Entering - Entering - Entropekees Any definition of bush fire should include grass fires. I believe the proposed new state planning policy could not mitigate the effects of cyclones, severe storms or earthquakes to any significant degree. This was a finding of the Toowcombog workshop, with most in agreement. n hang ara sa nipiber or issues remained in Chepter 2 cohearding remainipaster rener graphicately and The also in the Arc Reneration estees which she nor define 19 li yes gleassi give datailistai dingannie e sonas " In regards to bushfires, a more specific problem associated with this Issue is ensuring the safety of people travelling the state-controlled road network Road reserves with areas of high concervation value may pose hozard to road users, but cannot be cleared. This issue should be recognized in any section advising councils on identifying bushfive nazavid aveas ດີເມື່ອນອກ 2000ເປັນປະສາຊາດ ເຮືອ ມີສາມາດ ກາວສຽນແລະ ມີດ້ານເມື່ອຍນີ້. ປະທິດແມ່ ກາວສະຫຍາດ ແມ່ນ ຈາກຄະນາຍະນາຍັງແລະອາ inexe needer Ck Yes 1.30and the second state of th P. 105 - SAME r base desertes any additional bios sits debining mansches en boolid de considered for a state. Plantify References clauder 21 Place steally, while to det principitation and plantic a specific bail july associations In section 2.7.4 you should recognize that planning schemes could be used by council to identify areas where extensive rural/residential or rural subdivision is innapropriate (due to five hazad) Are there basic principles which should be the toundation of a State Planning follow on Land User. Planning for Mathematical state Mitigation and the elopment Assessment which would ensure that nutre urbain development is undertaken in a manner, that minimises the potential formasticous impacts from natural hazards? (see "Ghapter 2, Section (2.9). 22 and an the and the second se Discussion Paper only, not Government policy

Remove for your use

4.2 Proforma for submission

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What as well textines should be facilitied in the State Platence Policy? (see Section 1.2 and Appendix 🗸 o vitones - 🗠 Moores - Manualstidos - Marsantes - Moevene storms - Mercinque txes Chinese Blacks dolar RUSE AVULSION AND STORM SURGE Comment When rivers change course the impact infrastructure and people is often then periodic flooding states. n such . it shalls be include monities There are volumber of Issees, required to Chapter 2 concerting natural diseases menagement and land dee planting. Are there effer issues which are no identified a LING. - Masa h van gebeergive derelik er unitarilise issees to enalu ned is There an order or not de whether Extremeter fleshing ild processo. 1 in 1000 years but its 594 consequence needs. to be ensened. Anopios 2 onlines land and plantifier the sources to mitgette nature plaasters. Do you support these, interals interal - Ale Yels Are: Interesting interaspines, philoin could the antipped prices States Philointee, Polity of Please desider by additional but as glanologi dessides trait considered or solarity or a Secol Panalog Policy (see Glanico 2) (stease specify wistligt or for your solution by display protection substraits Bust Practice for flood matigation planning system which laning should Are there basic onnelptes which should be the foundation of a State Planning Policy on Land Use Planning to: Ni fural OSaster Milliphicit of Dovelopment Assessment which would ensure that rouge Them development is undertaken in a manner that minimises the polential for discrete injects from include hazards (Gee Chapter 2, Section 2(5) reloaners need

Discussion Paper only not Government policy



- 9 NOV 2001 SSN: 70.

OUR REF: 1.1/17/7 YOUR REF: ENQUIRIES: Veroinca Schilling DIRECT DIAL: 54620355

8 November 2001

The Director Disaster Mitigation Unit Counter Disaster & Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear Sir/Madam

PROPOSAL FOR STATE PLANNING POLICY ON LAND USE PLANNING FOR NATURAL DISASTER MITIGATION & DEVELOPMENT ASSESSMENT.

Please find enclosed a copy of Council's submission in relation to the above matter.

While Council recognizes the impact of natural disasters have on the community and has already included criteria for bushfire and landslip in its draft IPA Planning Scheme, Council is concerned about the implications such a policy may reduce the flexibility in how Council deals with natural disaster planning. The absence of information in some instances on the extent of impacts from natural disasters may require a flexible approach at a local level in planning for these events, unless extensive time and resources are available for such investigations.

Council would appreciate the opportunity to discuss this policy further with representatives of Disaster Mitigation Unit.

It is trusted that, these concerns will be incorporated into the decision on whether or not this policy proceeds.

Yours faithfully

Veronica Schilling MANAGER PLANNING & DEVELOPMENT vs:km

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GATTON SHIRE COUNCIL Mannes ale subminitely leter according and MS/MISS/Dr VERONICA SCHILLING Nentriet, eis aluteniebr wir isterest states 0419784359 Weiblennumitter 07-54620355 MERENELINICE PO BOX BZ C. C. I. I. HIG. I. SIGIOTERST COM Poleiser: Presidente GATTON 4343 Servenced group sub-sector the appropriate free Acardamine \mathbf{Z} allianside to Ely Chinele State of COVERNMENTS OF SERVICE Finite Level Deministration Cammunitedille Clevelstinen eligerister inginereifeineleini Petere Shelder - alinar intelesting. (interestion) Septemi annu uning menior e our first filly िशिहाहारि<u>भ</u>्यान्त्रभाषान्त्र s energiaine the second Projeten W a. Waler onder (directeration of) Inferier interest weight states Schendlerne on and istele on lend ifeinining, the Divisit Sellundi Peresities. . Chibren Industing Greatures La las infinites alistein's intelleting ininieis: ANNER PRESENT STRENGT Mitale Stantic anti-interior and the start denotes the content of the start and the start and the start and the where interestings are interesting and strate we wanted and the second strategy and the second strategy and the an SPP provided that it is flexible Develop does not result in Local Gover absorbing builty for future disasters Further more the should address this issue on a regional be supported basis and should develop appropriate data where required. SPP MUST be promoted as a tool nor NONCS epla cement on-ground for bn gades Dr the the rura tire holders (UNICTING SC 300 will deather not assist developed areas 8 Discussion Paper only, not Government policy

When namen newsion sindulo to inducted in the State Phonney Follo // (StateScience 1.2 and Appendix A - Eendinentalkeis Prefersionites: Severe durits Civentines Creaters Channestteles Citrary Pleases substity The impacts /affects of cyclunes + storms is generally assumed to be floods & C (r) an a citation andslides There are at number of Sausa dominant in Chapter 2 Jone Immediately (Beaster manageneric and anot Tuse decision was there after second with the other second after V Yest NO il yes, please give repuls of indeptified sames nisks and damage from of nitiaation needs to be recognitised planning morenty ccessful most VORS 190 mout Chapter 2 pugnes legeruse delimitig ceseures to muterite neuroledisesters. Do you soppor hejse ma-suma W Yess Avec inequal differ measures, which could be autopletty in a State Palaning Pullows The steel YE BY N Please dade die envy additional Briense, plending, meesures that could be considered for a State Planting Rolliny (200 Planting 2), Please specify, Wolfrer on non your consideration but specific religion preservat above outlined Ave there besic anticipites which should be the formeliter of a Stere Plenning Policy on Land Use Planning for Matural Disase: Mitgation and Development Assessment when would ensure that much intern davelopment is durated on the amenical their minimises draverighted for disastrous improve from natural hazardsz (see Cheliter 2, Sector 25) common SENSE! ORGANISATION LOCAL /REGIONAL SPP IS TO REDVIE RECOCINITION THAT ICY FUTURE PROBLETING Discussion Paper only, not Government policy NOT CURRENT MES

From:Kevin ParkesTo:Jodie StephensDate:8/11/01 8:54:20Subject:Submission for State Planning Policy

Dear "istephens"

I have attached body Disaster Mitigation.doc as my submission.

I have followed proforma as mauch as possible.

I have also copied and pasted submission below if a security problem exists with your system with attachments.

Regards

Kevin Parkes

Mr. Kevin Brian Parkes

Business Hours Phone 07 4771 6121 Mobile Number 0407 641 681

P.O. Box 5260 Townsville 4810

Stakeholder Description: General Community member. Property Owner

My preferred option for Disaster Mitigation is follows.

A State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment with certain provisions is as follows.

Development proponents with development applications with a value over, say \$500,000 would be required to provide Hazard Mapping and Assessment to AS/NZ 4360 as part of development process. The hazard mapping should include all risks and include extreme events.

Previously recognized local or regional hazards should be included and the development proposals must demonstrate mitigation rather than exasperation impacts.

The reasoning for suggesting that hazard mapping is performed as part of development proposal is that the proponents in many instances would have a greater capacity of identifying mitigation options than many regulatory authorities. Mitigation options could be part of the development construction, and developers could gain considerable commercial advantage if they were able to demonstrate that their developments were both conducive to modern lifestyle and "safe".

In time residential and commercial developments that were not regarded as "safe" would not be commercially viable.

Up to this time there has been a general policy of all levels of Government to withhold extreme event scenarios from public scrutiny so as "not to cause unnecessary public concern". In this era where market forces dominate all aspects of domestic and commercial activity this

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If the public sector is incapable of implementing viable extreme event responses, every opportunity must be made available to private and corporate sectors to both plan their own "survival procedures" and allow those that can assist those that can't.

All natural hazards as identified in the Discussion Paper including Cyclones, Floods, Landslide, Bushfires, Sever Storms and Earthquakes should be included in the State Planning Policy.

There are other hazards that should be included in the State Planning Policy that have an impact on Natural Disaster Mitigation.

Information on previous land use particularly if there is any evidence, either historical or physical of occupation and or usage by any government department or by any extractive or industrial enterprise should be included in the Hazard Mapping process.

Government Departments particularly the Department of Defence have adopted a long-term policy of not divulging any detailed information regarding their prior land use activities or information regarding any infrastructure that they may have built on or beneath their property prior to disposal and future development.

I am presently performing both a physical and aerial photographic audit of what defence infrastructure was constructed in the Townsville / Thuringowa region during World War 2 to allow recording for posterity reasons.

All though this project is in the very early research stages there is already a substantial amount of information that is increasing in both volume and quality that indicates that what was considered common knowledge regarding the extent of military engineering thought to have been performed in the Townsville / Thuringowa is grossly underestimated.

From approximately 1890 to somewhere in the mid 1950s there was a considerable amount of military engineering and possibly water reticulation infrastructure built in the greater Townsville / Thuringowa region that even today is not adequately documented or common knowledge. The knowledge that some of this engineering was performed in excess of 100 years ago and is still a well kept military secret is in itself a source of concern.

This infrastructure probably includes in excess of 200 Kilometers of military communications tunnels (subways) along with their associated drainage pumping stations, drainage wells and there is also evidence of large underground infrastructures being built in Mount Louisa, Mount Stuart, Many Peaks Range and Castle Hill.

To date I have not sighted any documents that acknowledge that any of these objects ever existed yet the photographic and physical evidence is probably conclusive. Any form of effective town planning yet alone planning for natural disaster mitigation options would be very difficult under these conditions of ignorance.

The tunnels (subways) as yet identified and mapped in the Townsville / Thuringowa region are normally 15 metres below natural ground surface, up to 10 metres in height and 6 - 10 metres wide. Tunnels of this size and nature could have a considerable impact on flood and drainage patterns and also could impact upon any surface infrastructure built upon them. They can easily be identified as a possible contributing cause of both public and private property damages.

These tunnels could also be recycled as drainage or communications corridors.

Other infrastructure was built in Castle Hill and also the slopes and surrounds of Mount Louisa. Both these locations have been subjected to landslides in recent times. Prior knowledge of the military engineering involved in localities such as this would be have been invaluable in planning natural disaster mitigation options and imperative to hazard mapping.

There are several locations in Townsville / Thuringowa region where hardened command and control infrastructure was constructed and they were either used up to today, abandoned or sealed off depending upon them being an above ground or below ground construction. The above ground structures such as at Green Street now serves as a hardened headquarters for the State Emergency Services. The Combined Operational Intelligence Centre, which is on same site and of underground construction, was sealed off.

There are other similar sites in Townsville, Stuart and Roseneath that I am aware of. All of these localities could be utilized as shelters for both the general public and emergency personal during extreme events.

Cities such as Townsville are capable of sheltering but a small percentage of their population during extreme events. To date there has been very little consideration of using our wartime infrastructure as emergency shelters yet they were built at great public expense for such eventualities.

The secrecy that government departments persist in retaining long after its necessity expires is possibly the single biggest inhibiting factor regarding the formulation of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. This is true especially in the areas of Queensland identified as being developed into fortresses during WW2; that is Brisbane and Townsville.

The present Local, State and Commonwealth Governments policies of not divulging any useful information regarding past military engineering activities is presently serving no-ones better interests.

Mr. Kevin Brian Parkes

Business Hours Phone 07 4771 6121 Mobile Number 0407 641 681

P.O. Box 5260 Townsville 4810

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If the public sector is incapable of implementing viable extreme event responses, every opportunity must be made available to private and corporate sectors to both plan their own "survival procedures" and allow those that can, assist those that can't.

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Gold Coast & Hinterland Environment Council Assoc Inc 534:526

139 Duringan Street, Currumbin Qld 4223 Telephone (07) 5534 1412 Facsimile (07) 5534 1401 Website; www.gecko.org.au Email: gecko@onthenet.com.au

and Environment Council

9th November, 2001

Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 QLD---- ~4001 BRISBANE

07 3247 8480 Fax: Email: jstephens@emergency.qld.gov.au

Dear Sir/Madam:

Proposed State Planning Policy: Land Use Planning for Natural Disaster Mitigation and Development Assessment

Thank you for the opportunity to make a submission to the development of the Proposed State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. Please find attached a submission re the Proposed State Planning Policy.

As the peak environmental group in the region, Gecko - The Gold Coast and Hinterland Environment Council is essentially concerned with the integrity of the environment in the largest growing urban center in Australia. Gecko looks forward to being invited to a full participation in the on-going consultations in the development of the Proposed State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment.

Please keep us informed of future developments and consultation processes in this regard.

Yours faithfully,

Sheila Davis President



Augela - Meare veries f.



the peak regional anvironmental body

Gecko Gold Coast and Hinterland Environment Council

Submission on

Proposed State Planning Policy on

Land Use Planning for Natural Disaster Mitigation and Development Assessment

Endorsements

Gecko – The Gold Coast and Hinterland Environment Council agrees that a consistent approach to Land Use Planning for Natural Disaster Mitigation and Development Assessment is required and welcomes the initiative shown by the State Government.

We would like to point out, however, that the development of State Planning Policies was a State Government obligation under the protocols developed for the implementation of the Integrated Planning Act, and should have been addressed before now. We fear that this SPP is being developed too late to make a difference to the Gold Coast City Council Planning Scheme.

With the hazardous landscape of the Gold Coast, including its exposed coastline, steep slopes, high bushfire risk, narrow valleys, high rainfall, small floodplains and volcanic soils with high landslip risk, the Gold Coast should not be expected to accommodate high numbers of people.

We are also concerned for the protection of the high variety of plants and animals that the Gold Coast supports. Any planning for the placement of human settlements and infrastructure must consider the conservation of our biodiversity, as required under the National Strategy for the Conservation of Australia's Biological Diversity (1996).

A recent study by the Worldwatch Institute¹ emphasizes the need for such a State Planning Policy:

"More people worldwide are now displaced by natural disasters than by "More people worldwide are now displaced by natural disasters than by conflict. In the 1990s, natural catastrophes like hurricanes, floods, and fires affected more than two billion people and caused in excess of \$608 billion in economic losses worldwide-a loss greater than during the previous four decades combined. But more and more of the devastation wrought by such natural disasters is "unnatural" in origin, caused by ecologically destructive practices and an increasing number of people living in harm's way... Rather than subsidizing environmentally unsound settlement and development practices, governments need to direct new construction and settlement out of harm's way."

¹Media Release 20/10/01 "Human Actions Worsen Natural Disasters" announcing the paper "Unnatural Disasters", Janet Abramovitz, World Watch Institute Paper 158 Gold Coast City Council Comments on proposed Disaster Mitigation SPP

government is its potential exposure to litigation arising out of the adoption (or paradoxically, nonadoption) of mitigation measures.

Council has previously written to the Department on this matter, pointing out the need for legislative protection against litigation, if the relevant Council has taken reasonable steps to develop and implement appropriate disaster mitigation policies. This type of legislation exists in some southern States.

It is frequently believed that by introducing mitigation measures, Councils are highlighting areas at risk, and are thereby exposing themselves to litigation from those who believe that the development should never have been permitted by the Council in the first place. Obviously, if the Council is aware of a risk, it is also exposed to liability if it neglects to take adequate steps.

We believe that it is vital that Councils are given legislative protection against litigation if they take reasonable measures for disaster mitigation, especially if they take this action as a result of the SPP.

Terminology

There is some concern for the need for a consistent approach to the terminology used in disaster mitigation language.

There has been considerable debate in the past about "bushfire" vs "wildfire". However, it was decided to use the term "bushfire" because it was a term easily understood and recognized by the public, and public awareness is recognized as one of the important answers to managing bushfire hazard. In addition, from a practical point of view, it would not be easy to map "bushfire hazard" if the term "grass fire" were to be included, as the level of hazard could change from year to year depending on a very variable fuel load. The Gold Coast City Council Potential Bushfire Hazard Map does not map grasslands (or indeed cane fields), partly for that reason.

A further issue is the use of the terms "hazard" and "risk", and the use of these terms in different Councils.

One reviewer felt that the discussion paper didn't adequately distinguish between "hazard" and "risk" in the Discussion Paper. They do mean different things, and have different implications for the work generated for Local Government by the proposed SPP. For example, Gold Coast City Council has mapped "potential bushfire HAZARD", which considers the intrinsic physical features of vegetation, slope and aspect. Logan City Council, on the other hand, went further to mapping "Bushfire RISK areas". Having prepared a map of bushfire hazard, Logan then assessed the likelihood that bushfire would threaten particular houses and the likely response time of emergency services to those houses etc. in order to assign a level of RISK.

Brisbane's Draft City Plan has useful definitions distinguishing between the two, and these may be worthy of consideration by the Department of Emergency Services during the preparation of the proposed SPP.

Hazard: A situation or intrinsic property with the potential to cause harm to people, property or the environment.

Risk: the likelihood of harm occurring from a hazard.

Gold Coast City Council Comments on proposed Disaster Mitigation SPP

Coastal erosion

Coastal erosion is one of the most devastating natural hazards facing coastal Queensland, and deserves a greater prominence in planning that it currently has. It has potentially a greater impact on the State than some other natural hazards.

On the Gold Coast, the City's economy took 3 to 4 years to recover from the effects of the 1967 cyclone. In 2002, the potential impact is more severe because of the greater investment since 1967. Furthermore, it has been estimated that the direct losses in the first 12 months following severe erosion, for the northern beaches areas of the Gold Coast *alone*, are as follows (no indirect impacts are included).

1 in 25 year storm	\$305 million
1 in 50 year storm	\$1.2 billion
1 in 100 year storm	\$3 billion

Given that tourism on the Gold Coast contributes roughly 30% of the State's tourism revenue, the potential impact on Queensland is severe.

Council is currently developing Local Area Plans for a range of coastal areas, including Coolangatta, Mermaid Beach, and Broadbeach, as these areas face continuing development and redevelopment. An SPP including coastal erosion would place some focus on the financial aspects of ecological sustainability of these areas.

Although it appears that coastal erosion will be considered to some extent by the State Coastal Management Plan, there will inevitably be some overlap between the SPP and the Coastal Management Plan.

It is important therefore, that coastal erosion is identified in the SPP as a natural hazard in its own right, and given greater prominence either in the SPP or the Coastal Management Plan, because of its potential economic impact on the economy of the State.

From: To:



Date:6/11/01 16:28:31Subject:Submission on 'Land Use Planning for Natural Disaster Mitigation and DevelopmentAssessment' discuss

The Herbert River Improvement Trust supports the submission made by the Hinchinbrook Shire Council. [Each body operates within the same geographical limits, ie the Shire boundaries. Postal address is the same also. Please address correspondence to Trust Secretary, PO Box 366, Ingham, Q, 4850.] Trust Engineer and Manager Engineering Services - Hinchinbrook Shire Council Phone: Fax: ************** ******* The information contained in this e-mail, together with any attachments, is intended only for the person or entity to which it is addressed, and may contain confidential and/or privileged material. Any form of review, disclosure, modification, distribution and/or publication of this e-mail message is prohibited. If you have received this message in error, please inform the sender as guickly as possible, and delete this message, and any copies of this message, from record your computer and/or your computer system network leane For please

SHIRE OF HINCHINBROOK

"The Natural Place To Be"

25 LANNERCOST STREET, INGHAM PO BOX 366, INGHAM OLD 4850 ceo@hinchinbrook.qld.gov.au TELEPHONE: (07) 4776 4600 FACSIMILE: (07) 4776 3233 ABN: 46 291 971 168



All correspondence to be addressed to the Chief Executive Officer

Your Ref: CDS00789/2 Our Ref: RWC 045/0004 Document2 Enguiries: Rob Clark Ph 4776 4603

30th October 2001

- 2 NOV 2001

Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE Q. 4011

Dear Sir

<u> Proposed State Planning Policy – Land Use Planning – Natural Disaster Mitigation and Development Assessment</u>

Thank you for the opportunity to make a submission regarding the above proposal. Mayor Keith Phillips and I attended the Townsville workshop and I now provide our formal response to your discussion paper.

What is our preferred option for land use planning for disaster management and mitigation within Queensland, or what alternative option would we prefer?

We support the concept of being proactive in preventing development in inappropriate places that increase the risk of loss of life or property from natural disasters. To what extent you can control/regulate development via State Planning Policy is debateable in view of the wide range of type/severity and extent of natural disaster that can befall a community.

For example most of our Shire is contained within the Herbert River flood plain and our community rely heavily on our early warning flood alert system and generally lift property above expected flood levels and minimise property loss. Most financial loss occurs to crops and road and rail infrastructure.

We have GIS mapping of all of the various flood events including our major floods in 1967 and 1977 and development approvals require habitable floor areas to be built above known flood heights. We can quickly and easily provide these flood heights, however we stress to the recipient that they relate to AHD flood heights on the adjacent road and they need to ascertain the relevant AHD level of their land and property.

..../2

We note that storm tide risk is being dealt with under the Coastal Management Plan. In our case we are participating in a jointly funded (Federal/State and Council) storm surge risk assessment mapping project with the outcome to be used for counter disaster planning (eg evacuation planning) during a cyclone event.

From my observations at the Townsville workshop while the forum appeared to "support" the concept of a State Planning Policy the common view being expressed was that each locality has different circumstances. For example a flood event in Ingham is entirely different in terms of impact, timing, duration etc compared to say neighbouring Thuringowa City Council and consequently planning responses will also be different.

We are all familiar with the existing SPP's which have readily identifiable criteria that enables them to be applied consistently throughout the State eg., Preservation of Good Quality Ag Land and Acid Sulphate Soils. If we are to have a SPP for disaster risk management then it needs to have great flexibility to allow for local circumstances otherwise we believe that planning guidelines should suffice.

What natural hazards should be included in the SPP?

If we are to have an SPP then cyclones, floods, landslides, bushfires and severe storms should be included, however planning for severe storms is difficult bearing in mind their unpredictable nature. Similarly for cyclones it is more likely to be the related impacts such as flooding that can be addressed. Earthquakes maybe an issue for some communities but I would suspect it is more a building code issue than a SPP issue.

Are there any other issues not identified in Chapter 2

No the discussion paper is very comprehensive in this regard.

Do we support land use planning measures to mitigate natural disasters outlined in Chapter 2?

Flooding

In Ingham current and future residential development is concentrated on "known" flood free land. Mapping is historical by nature and generally can relate only to fixed points usually on road infrastructure. If planning focuses on accommodating reasonable "flood events" then it is possible and right to "protect" future development from flood damage.

Landslides

It is not an issue in our Shire but my observations at the workshop of the Townsville experience is that general risk mapping can be undertaken but specific site assessment would be a development responsibility.

Bushfires

Again this issue is not a serious threat to urban communities in our Shire and generally is controlled by annual burning off by the urban fire brigades. We also point out that the definition of "bushfires" in Chapter 1 makes no mention about wildfires and normal grassfires which can threaten life and property depending on amount of fuel and weather conditions prevailing.

Severe storms

Again not a major issue for our Shire while major flooding in our shire is usually associated with a cyclone or low pressure system.

Earthquake

Refer to my earlier comments regarding applicability of land use planning to this natural hazard

..../3

Basic principles as the foundation of a State Planning Policy to ensure future urban development is undertaken in a manner that minimises the potential for disastrous impacts.

- Need to recognise that each local government has different circumstances that will affect the severity of impact and a community may well accept varying degree of risk provided they have other adequate protection. For example a landowner in lingham in a flood prone area will still want to build on the land but will fill it to raise the habitable area above known flood height. In a flood event that person would expect Council to provide (and we do) flood information service that allows the removal of vehicles etc to high ground and avoid property damage.
- Hazard and risk mapping can be expensive exercises and many communities do not have the resources to fund them to any great extent. Similarly small developments are not in a position to fund detailed assessments. In the absence of such information would a State Planning Policy prohibit development?

Thank you for the opportunity to comment on the discussion paper. I look forward to hearing the outcome of your deliberations.

Yours faithfully

A S Harvey CHIEF EXECUTIVE OFFICER

R.W. Clark Manager Corporate Services Submission on 'Land Use Planning for Natural Disaster Mitigation and Development Assessment' dBagesd

From:



Date: Submission on 'Land Use Planning for Natural Disaster Mitigation and Development Subject: Assessment' discuss

The Herbert River Improvement Trust supports the submission made by the Hinchinbrook Shire Council. [Each body operates within the same geographical limits, ie the Shire boundaries. Postal address is the same also. Please address correspondence to Trust Secretary, PO Box 366, Ingham, Q, 4850.]

Trust Engineer and Manager Engineering Services - Hinchinbrook Shire Council Phone: Mobile: Fax:
Email: Hogeneonia , o

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quickly as

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computer and/or your computer system netw



City Council *Quality Lifestyle*

8 November 2001

Dear Sir

Re:

Proposed State Planning Policy Planning for Natural Disasters Mitigation and Development Assessment

The Council of the City of Ipswich wishes to offer the following comments as a submission in relation to the proposed SPP.

Your Reference:

Our Reference:

Telephone No.:

Contact Officer: John Adams

F. JSA:GMW

3810 6251

GENERAL/OVERVIEW:

It is pleasing to see that the Departments are consulting about relevant matters to be included in the SPP before a draft has been produced.

It is agreed that there may be advantages in having such a policy, providing certain matters are addressed, as outlined below.

SPECIFIC ISSUES:

The following specific issues are raised in relation to the proposed SPP:

1. Resourcing:

Specific natural hazard identification and mapping is a specialist field of work which can be very resource intensive and quite costly. It is important that Local Government not be expected to bear the cost burden of detailed natural hazards studies as part of the IPA plan making process. State and federal funding through initiatives such as the Natural Disaster Risk Management Studies Program is important to ensure adequate technical information is provided as a crucial input to the planning process.

Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001 Please Address All Correspondence to: Chief Executive Officer Ipswich City Council A.B.N. 61 461 981 077 PO Box 191 Ipswich Qld 4305 Telephone: (07) 3810 6666 Facsimile: (07) 3810 6731 Email: council@gil.com.au Website: www.ipswich.qld.gov.au 24

= 9 NOV 2001 SSN: 84

2. Scope of SPP:

The discussion paper recognises the difficulties associated with effective land use planning controls for cyclones, severe storms and earthquakes. These hazards tend to warrant attention more so through Building Code standards than planning scheme provisions. Conversely planning scheme provisions may assist in mitigating natural disasters in relation to flooding, land slippage and bushfires.

The discussion paper also raises the issue of the SPP addressing planning for climate change (i.e. greenhouse effects). Concern is raised as to how effective this would be given, the high degree of uncertainty associated with such 'change'. Inclusion of 'motherhood statements' about climate change (without accurate supporting information) are likely to be generally ineffective and may unduly frustrate the development process.

3. <u>Recognition of Differences in Planning for Greenfield Areas -v- Existing Developed or</u> Committed Areas:

It is critically important that the SPP recognises the need for a different approach in relation to existing developed areas or areas which are already committed for development compared to Greenfield areas which are undeveloped and without existing approvals.

Greenfield areas provide an opportunity for the application of 'best practice' standards and approaches, whereas existing use rights need to be recognised in respect of existing and committed development areas. The SPP should also consider how to 'transition' natural disasters development standards between greenfield and established areas.

The SPP should also consider whether differing approaches should be pursued in respect of differing land uses (e.g. whether residential development should be treated differently to commercial and industrial development).

Consideration should also be given to compensation issues arising as a result of planning scheme changes in respect of natural disaster mitigation.

4. Flexible Approach:

It would be useful if the SPP outlined a range of approaches and standards which Local Governments could adopt or adapt to suit their local circumstances. Given the diversity of communities across Queensland and the competing forces of local constraints and opportunities, it is important that the SPP not adopt a 'one size fits all' approach to natural disaster planning throughout the state.

Yours faithfully

John Adams PLANNING MANAGER

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4.2 Proforms for submission

Remove for your use

The following is a suggested proforma for submissions on the intent to prepare a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. Interested individuals and representatives of organisations are encouraged to make a written submission regarding the Discussion Paper. Written submissions close on Friday 9 November 2001.

ame of submitter	KINGAROY SHIRE COUNCIL	
ime of author or	Mr/Mrs/Ms/Miss/	
lork number	Mobile number -	
ontact address for	PO BOX 336	
correspondence	KINGAROY Q 4610	
takeholder group - I	please tick the appropriate box:	
Local Government Queenstand Gover Commonwealth G Peak Group industry confessional	rnment or agency overment disaster management other	
community conservation other (please s	General community member Property developer Property developer Property owner insurance industry representative Consultant or advisor on land planning or other natural hazards Other	
insurance tourism prmary indust mining other (please i	ry specify)	
What is your preferre Queensland, or what	d option for land use planning for disaster management and mitigation within alternative option would you prefer? (see Chapter 3 and Appendix B).	
Council re	ecognises the need for natural disaste	
risk manag	gement and planning, & supports the	
developmer	nt of a State Planning Policy	

What natural hazards should be included in the State Planning Policy? (see Section 1.2 and Appendix A) Cyclones Ploods Candstides Deushfires Devere storms Dearthquakes Other? Please specify

Water supply/water contamination

Comment

There are a number of issues identified in Chapter 2 concerning natural disaster management and land use planning. Are there other issues which are not identified?

Remove

for your

E

Yes No

If yes, please give details of unidentified issues.

Distinction between urban & rural natural hazards -different levels and types of risk - different management/planning responses required -Liability issues for Council ie. if natural disasters are adequately planned for, or implications upon Council if inadequate standards are applied. Chapter 2 outlines land use planning measures to mitigate natural disasters. Do you support these measures? No Yes Are there other measures which could be adopted in a State Planning Policy? Yes NO. Please describe any additional land use planning measures that could be considered for a State Planning Policy (see Chapter 2) Please specify whether or not your comments refer to a specific natural hazard The suggested planning measures talk of 'limiting development in identified natural hazard areas. If a hazard is identified or acknowledged, then would Councils then be accepting liability for any development or pre-existing development in such areas? Are there basic principles which should be the foundation of a State Planning Policy on Land Use Planning for Natural Disaster Miligation and Development Assessment which would ensure that future urban development is undertaken in a manner that minimises the potential for disastrous impacts from natural hazards? (see Chapter 2, Section 2.5). Should be based upon the basic premise of 'reasonable and relevant' ie. What could reasonably be expected, and reasonable and relevant mitigation works/planning

strategy

Discussion Paper only, net Government policy



All communications to be addressed to the Chief Executive Officer

File Ref: Enquiries: Telephone:

LH.II 40/006/0007; 10/044/0001

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2 November, 2001

Director Disaster Mitigation Unit Counter Disaster and Rescue Services Dept of Emergency Services PO Box 1425 BRISBANE QLD 4001

Attention: Mr F Smith

Dear Sir

RE: SUBMISSION FOR PROPOSED STATE PLANNING POLICY ON LAND USE PLANNING FOR NATURAL DISASTER MITIGATION AND DEVELOPMENT ASSESSMENT

Thank you for the opportunity to attend the workshop and to comment on the above proposed State Planning Policy. Please find attached our completed proforma submission.

I wish to highlight the issue on the lack of resources of Council's to identify and map the hazards. Our Council is in the process of preparing the IPA Planning Scheme. It would greatly assist us if the State and Federal Governments can recognise our predicament and the fact that as a local government, we are very willing to have these hazards identified and mapped so that our land use planning and management is responsive to these constraints/impacts.

We will be undertaking storm surge mapping with funding assistance for the State Government. We will also be undertaking bushfire risk mapping and this is to be funded by Council's own budget.

I hope our submission and concerns will assist you in the policy formulation. Please do not hesitate to contact Linda Hime on 07-4939 9861 if you need further information.

Yours faithfully

MANAGER - DEVELOPMENT AND ENVIRONMENT

70 Anzac Parade Yeppoon

7 NOV 2001

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PO Box 600 Yeppoon Q 4703 Phone: (07) 4939 3388 Fax: (07) 4939 3290

4.2 Proforma for submission

1.1

The following is a suggested proforma for submissions on the intent to prepare a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. Interested individuals and representatives of organisations are encouraged to make a written submission regarding the Discussion Paper. Written submissions close on Friday 9 November 2001.



What natural shazards should be included to the State Elemning Policy y issue Section. If 2 and Apparence 🗸 evelones . 💆 fictory . 🗹 andslides 🖉 Bashines - 🗹 Severe stormst . 🗹 eachqueixes Storm Surge, Exposure of acid sulfate soil e Policy on acid Sulfate Soils is a "sunset polic exposure to acid Sulfate is high Misk's of I the impacts from this re area an be considered as e show natural hazard. diferes des anom becom saues depundante chapter Zoerdeen depundent dis state management drift and USA pendungs Are unare officialissons containare det depundent? ✓ Contract No. ir yas maasa ii ya daaniy or undahiinaa. There needs to be recognition that a lot of Co identify. do not have the resources to map areas that are subject to hazards In our shine for example, we are expose to all the hazards listed above. State and Feder Government needs to seriously longider providing nice at anothers have use demonstering stress to under the return designer. Do, you subject these interessed of Z Y A LINO Aver instractife muser bless, and incontent of the advantation of States Planning, Pointy 2 Places Ding: ໃນຮອງ ປະຈິດໃນອາຊົດທີ່ ແມ່ນເປັນເດິດເປັນແມ່ນອີກ ເປັນເປັນ ທີ່ສະຫຼາຍສາມາລາມເຫັດ ແມ່ນ ແມ່ນເປັນເອກ ແລະ ການ ຈາກເປັນເປັ In relation to siting of public facilities, these are normally not asessed by conneils, the public facilities need to be sited Evacuation vontes also need to avoid hazard areas to consider as part of harard planning in land use are Are Trens Basic punciples. When Spould be the reundation of a State Planning Bolley, or tand use Planning for Netwell Ossaster Mitgation and Development. Assessment, which would assure that round utbail development is under Elsen to a regimer to a mitginities. Report and for distances invite rough network plan and 27 (see Chapter 2: Section 2.5) Increase awarteness of the general public on the estes of development on hazard lands to assist in 's appearing to be obstructu Discussion Paper only not Government policy developments are not approved

NOOSA

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If telephoning or calling, please ask for:



5 November 2001

DIRECTOR DISASTER MITIGATION UNIT COUNTER DISASTER AND RESCUE SERVICES DEPARTMENT OF EMERGENCY SERVICES GPO BOX 1425 BRISBANE QLD 4001

Dear Sir/Madam,

Re: Proposed SPP on Land Use Planning for Natural Disaster Mitigation and Development Assessment

Thank you for the opportunity to attend the recent workshop on the proposed State Planning Policy. Noosa Council has for some time now realised the importance of considering natural disaster threats when carrying out land use planning. This can be illustrated through the following planning studies prepared to inform the 1997 Strategic Plan:

- Bushfire Hazard Planning in Noosa Shire (1995)
- □ Climate of Noosa Shire (1995)
- Estimated Urban Flood Damage Along the Noosa River (1995)
- □ Flooding in the Noosa River Catchment (originally 1995, then reviewed and amended in 2001)
- Landslip Hazard in Noosa Shire (1996)

The executive summaries of each of these reports are attached herewith as Appendixes 1 to 5. Full copies of the planning studies can be supplied if you are interested.

The results of these studies were spatially mapped and were relied on when allocating preferred dominant land uses across the shire. These layers of information are still considered when assessing development applications, particularly those for lot reconfiguration (subdivision).

Just this year Council has endorsed the Lake MacDonald Dam Break Flood Study, which determines the flood levels downstream of the water supply dam as a result of severe flooding combined with embankment failure. I understand DES has a copy of this study but another copy could be made available if necessary.

NOOSA COUNCIL ABN 97 969 214 121 9 Pelican Street Tewantin PO Box 141 Tewantin Q 4565 Phone: 07 5449 5200 Fax: 07 5447 1062 Email: mailbox@noosa.qld.gov.au Noosa Council generally supports the State's initiative to raise the profile of land use planning for natural disaster mitigation and development assessment. We appreciate that in general this issue has not been given the attention it deserves, and there are benefits in having a consistent approach throughout the state.

The State is particularly well placed to guide local governments in appropriate land use processes, ensuring all Councils carry out necessary disaster risk and mitigation studies, in accordance with best practice. I would suggest this should be a necessary part of preparing an IPA based planning scheme. This would seem more appropriate than setting across-the-board standards, such as stipulating a minimum flood line for development of Q100 for all of Queensland.

I look forward to learning what the State will decide to do on this matter and trust the outcome will guide Local Governments, but will not override the existing good work already undertaken by many Council's.

Yours faithfully,



BUSHFIRE HAZARD PLANNING IN NOOSA SHIRE

Executive Summary

This report comprises an analysis of bushfire hazard in Noosa Shire, based on parameters defined by the State Government in Bushfire Hazard Planning in Queensland. It finds that the recommendations within that document for the mapping of hazard ratings can be applied in Noosa Shire.

A mapping assessment has been undertaken for the whole of the Shire, except in respect of vegetation, which excludes about 7764 ha. of the Great Sandy National Park. The mapping assessment is generally consistent with the approach of the State Government publication and uses criteria of:-

- □ Slope
- Aspect
- Fire history; and
- Vegetation.

Minor modification of the criteria has been necessary, as a consequence of more detailed mapping being available or due to a better understanding of the local circumstances, as compared to the generic Queensland-wide approach of Bushfire Hazard Planning in Queensland. Fire history information has not previously been available for the Shire and the project has generated a database and mapping which will not only assist the Planning Scheme Review process, but will assist the various fire brigades that have participated in its development.

The mapping assessment concludes that:-

- 11.1% of the study area falls within an extreme bushfire hazard area. Such areas are unsuitable for urban or rural residential development.
- □ 22.2% of the study area falls within a bushfire prone area. Such areas should only be developed by application of special design considerations on the subdivision and buildings.
- □ 66.7% of the study area is not constrained by bushfire hazard. No special considerations are necessary in such locations and fire hazard provides no constraint to development.

Guidelines for the development of and incorporation in the Planning Scheme are addressed in the study, based on the recommendations of the State Government publication and the mapping assessment.
ESTIMATED URBAN FLOOD DAMAGE ALONG THE NOOSA RIVER

Executive Summary

A computer model was used to estimate the number of flooded properties and flood damage in urban areas along the Noosa River system. Both direct and indirect flood damages were assessed. Direct flood damage refers to loss in value of an object or the cost of its repair resulting from damage caused by direct contact with floodwaters, e.g. the need to have a flooded fridge replaced or repaired. Indirect flood damages refers to loss in production, revenue or wages, together with any additional accommodation, living expenses or other extra financial outlays, occasioned by the flood, e.g. the loss of wages because of time taken off work to clean up a house after floodwaters subside.

Estimates were made of urban damage along the Noosa River system caused by a range of flood events, varying from the flood with an average recurrence interval of 2 years (the '2 year ARI event') up to the probable maximum flood. (The average recurrence interval is the average number of years that elapse before a flood as big as, or bigger than, the designated event occurs, e.g. on average, the 2 year ARI event will occur once every 2 years). The damage estimates for the separate flood events were then amalgamated together statistically to provide an estimate of the 'average annual damage' to urban areas along the Noosa River system. The average annual damage represents the average cost of flood damage per year experienced by the community over a long period of time. In most years, no damage occurs because the floods are not large enough to cause damage. In some years, a modest amount of damage occurs because of medium sized floods. On rare occasions, a large amount of damage will occur because of infrequent, severe floods.

The most recent significant flood along the Noosa River was the February 1992 event, which had an ARI of perhaps 300-400 years in Lake Cootharaba and Cooroibah, an ARI of about 70 years at Tewantin, and an ARI of 20 years around and downstream of Munna Point. An estimated 540 urban properties were inundated by the February 1992 event; 385 properties were inundated below floor level, 155 properties above floor level. Most of the flooded properties were either residential (85% of the total) or commercial (11% of the total). This flood caused an estimated total damage bill'of \$1.3 M to urban areas along the Noosa River. Some 70% of this damage was in the form of direct damages and the remaining 30% in the form of indirect damages.

Properties downstream from Tewantin are subject to flooding caused by elevated water levels in Laguna Bay ('storm surge') and by river flooding. Along this reach of river - where most of the urban development In Noosa is concentrated - the 100-year ARI storm surge levels are higher than the 100-year ARI river flood levels. The 100-year ARI storm surge event would inundate an estimated 850 properties, 420 of them above floor level. The estimated total actual damage for this event is \$3.3 M. For the 100 year ARI river flood, some 700 properties would be flooded and the total actual damage bill would be \$2.4 M.

LANDSLIP HAZARD IN NOOS SHIRE

Executive Summary

This Planning Study documents the methodology and outcomes of a landslip hazard analysis undertaken for Noosa Shire. The study supplements the report Geology and Soils of Noosa Shire (Shields, 1995) which provided a preliminary coarse analysis of landslip hazard. Whilst more precise than the initial assessment undertaken by Shields (1995), the study remains a strategic exercise addressing a wide variety of land and geological types. The outcomes are appropriate for comparing land suitability at a strategic planning scale and are not intended for use in detailed site planning.

A mapping assessment has been undertaken across the Shire (excluding about 7764 ha. comprising part of the Great Sandy National Park, for which geological data was not available). Based on an analysis of the relationship between slope and underlying geology, a four level comparative rating system, indicating potential landslip hazard across the study area has been developed.

- Considerable areas of the Noosa River floodplain being flooded to relatively low depths by generally slow moving floodwaters, ie. flood hazard or the risk to life and limb is generally low.
- □ Relatively high flood levels persist for extended periods which increase inconvenience and nuisance.
- A relatively long 'warning time' is available in which downstream residents can be alerted to the severity and timing of impending flooding and can undertake necessary actions to reduce damage to their goods and possessions.

With respect to the consequences of flooding, the main issues along the Noosa River relate to the modest level of flood damage and the nuisance and inconvenience that flooding causes urban communities. As noted above, flood hazard and risk to life and limb are low along the Noosa River system.

The February 1992 flood event inundated some 540 lots, 156 of them above floor level, and caused some \$1.3 million damage. The average damage bill for urban communities along the Noosa River system is \$250,000 per annum.

The report recommends:-

- □ A design flood event with a nominal severity of 100 years ARI (Average Recurrence Interval) be adopted for planning and development purposes. This design flood event is based on:-
 - the 100 year ARI storm surge and the 20 year ARI rainfall flood for the lower reaches of the system; and
 - o the 20 year ARI storm surge and the 100 year ARI rainfall flood for the upper reaches of the system.
- □ A freeboard of 0.8 m above the design flood event be adopted as the minimum floor level for residential dwellings, in either urban or rural settings, and urban land uses along the Noosa River system. Other freeboard values may be appropriate for other uses.
- Subject to environmental and aesthetic implications, the filling of those parts of the flood plain designated as Urban Area on the 1988-95 Strategic Plan is appropriate for both new development and redevelopment. This will have no significant adverse effect on river flood heights or storm surge flood heights, though a slightly more extensive non-urban area will be inundated. The impact of filling on local flood levels needs to be investigated on a case-by-case basis.
- □ Prevention of filling in flood plain areas apart from those described above.
- □ Council and the community be aware that floods larger than the 100 year ARI event will occur at some time in the future. The consequences of such floods should be considered when making future planning decisions.

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4.2 Proforma for submission

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The following is a suggested proforma for submissions on the intent to prepare a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. Interested individuals and representatives of organisations are encouraged to make a written submission regarding the Discussion Paper. Written submissions close on Friday 9 November 2001.



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What natural hazards should be included in the State Planning Policy? (see Section 1.2 and Appendix A) Cyclones Elbods Zandslides & Bushfires Exercise stoms Dearthquakes, Other? Please specify Comment: There are a number of assues identified in Chapter 2 concerning natural disaster management and land use planning. Are there other issues which are not identified? 20 ZNO C Yes If yes, please give details of unidentified issues Remove for your use Chapter 2 outlines and use planning measures to ronigate matural disasters. Bo you support these measures? 2 Yes Are there other measures which could be adopted in a State Planning Policy? No Yes Please describe any additional land use planning measures that could be considered for a State Planning Policy (see Chanter 2). Please specify whether or not your comments refer to a specific natural hazard Are there basic principles which should be the foundation of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment which would ensure that future urban development is undertaken in a manner that minimises the potential for disastrous impacts from natural hazards? (see Chapter 2, Section 2.5) Discussion Paper only, not Government policy

- Response on SPP discussion paper from Queensland Transport

From: To: Date: Subject:

9/11/01 15:36:20 Response on SPP discussion paper from Queensland Transport

Thanks for your invitation to the Cairns Regional Workshop consultation. I have prepared a response from the Regional Transport Planning Branch, Queensland Transport (see attached). I am emailing this directly to you as backup to make sure the response is received by the Disaster Mitigation Unit.

(See attached file: Emergency Services Review.doc)

Thanks

Opinions contained in this e-mail do not necessarily reflect the opinions of the Queensland Department of Main Roads, Queensland Transport or National Transport Secretariat, or endorsed organisations utilising the same infrastructure. If you have received this electronic mail message in error, please immediately notify the sender and delete the message from your computer.

Please veraee.

Comments prepared by Raelene Corner, Regional Transport Planning Branch

What is your preferred option for land use planning for disaster management and mitigation within Queensland, or what alternative option would you prefer?

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I prefer an agreed consistent approach be taken for the whole of Queensland. A SPP could set a common approach for land use planning for disaster management and mitigation, which could be adopted by Local Governments when preparing their IPA planning schemes. Acting as an overall framework to guide decision-making, Local Governments could then establish land use planning measures to reflect local issues.

My preferred approach is developing a State Planning Policy that focuses on land use planning to mitigate natural disasters. Local Governments should adopt the SPP consistently when preparing planning schemes and in development assessment processes.

What natural hazards should be included in the State Planning Policy?

I agree with including cyclones, floods, landslides, bushfires, severe storms and earthquakes.

Cyclones cause flooding, storm surges and land slips. The discussion paper addresses flooding and land slips separately. I suggest that storm surges also be addressed separately. Tsunamis can cause tidal surges when there is blue sky, resulting from a seismic disturbance out to sea. The discussion paper identifies that earthquakes can cause tidal waves. Cyclones, severe storms or earthquakes can cause higher than normal tides. The SPP can make reference to the State Coastal Management Plan, however should address storm surges or tidal surges separately in the event that a higher than normal tide affects more than the State Coastal Management boundary.

Drought stricken areas is another natural disaster that should be considered in the SPP. Sections of Queensland are prone to long dry seasons and land use planning should reflect and mitigate these impacts. Land use planning measures could include restricting the clearing of land, identifying drought risk areas (eg. areas of low rainfall). In relation to transport, drought can reduce freight movement and create a demand where people want to transport stock and food supply to alternative areas.

There are a number of issues identified in Chapter 2 concerning natural disaster management and land use planning. Are there other issues, which are not identified?

Transport infrastructure (eg. maritime, rail corridors and road corridors) is an important element of land use planning. The design of communities should

ensure multiple access, to provide alternate routes if some routes are nonaccessible. For example, a new local arterial network running parallel to the highway with appropriate cross-links provides greater accessibility with the regional transport corridor whilst increasing the overall traffic capacity (Shaping Up guidelines, 1998, 26).

Safe access to designated shelters in a counter-disaster management plan should be considered in land use planning. In particular, government buildings, such as schools, convention centres and universities could be designed and nominated as shelters for relief management use after or during a natural disaster (eg. flooding or cyclones). Schools are usually integrated into communities and in close proximity to many residential areas.

SPP needs to encourage better practice principles in integrating transport efficiency and land use planning. For example, development is guided to low risk locations that result in compact settlement patterns, which require fewer and shorter car trips and will enable the efficient provision of public transport (Shaping Up guidelines, 1998, 26). An efficient public transport system could be used to transport people quickly away from natural disaster areas, instead of the road network becoming congested with sudden movement of mass numbers of private vehicles. Encouraging bus and train transport of people would enable emergency vehicles and transport of equipment to effectively move to natural disaster areas. Or transport stock away from natural disaster areas.

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Planning schemes and development assessment can ensure that new development be integrated with public transport services. For example, most residential development should be concentrated close to public transport (eg. within convenient walking distance to bus stops or train stations). Urban development should be situated near public transport nodes.

Chapter 2 outlines land use planning measures to mitigate natural disasters. Do you support these measures?

I support these land use planning measures to mitigate natural disasters. The regional transport planning issues (as outlined above) should also be integrated into the land use planning measures to mitigate natural disasters.

Are there other measures, which could be adopted in a State Planning Policy?

Dam collapse impacts on the transport system. Does the State Counter-Disaster Organisation Act enable the transport of excess mass and nonregistered vehicles to be transported for the purpose of natural disaster management and relief?

Native Title land is recognised in land use planning. In a natural disaster, under the State Counter – Disaster Organisation Act, can construction occur on Native Title land? (eg. construction of a drain channel to move flood water, resulting in the destruction of Indigenous culturally significant sites).

Are there basic principles, which should be the foundation of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment, which would ensure that future urban development is undertaken in a manner that minimises the potential for disastrous impacts from natural hazards?

- Integrate land use and transport planning,
- Ecologically sustainable land use planning,
- Facilitate public safety and security,
- Promote sustainable transport modes (eg. promoting cycling, pedestrian and public transport movement).
- Be flexible, adaptable and responsive.
- Implement, monitor and review
- Minimise risk by avoiding threats as far as possible.
- Where necessary, provide appropriate infrastructure (eg. emergency shelters and emergency routes that are progressively flood free).

This question only relates to future urban development. The SPP should also address land use planning for mitigating impacts of natural disasters in rural areas.

01/10/01 : 61 7 55740011 Disastar Mitigotion Unil ounter Disoster & Rescue Services Deportment of Emergency Services Facsimile: 07 3247 84 80 Fax from 5-69 01/10/01 Page lof 2 4.2 Proforma for submission The following is a suggested proforma for submissions on the Intent to prepare a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. Interested individuals and representatives of organisations are encouraged to make a written submission regarding the Discussion Paper, Written submissions close on Friday 9 November 2001.-A 15 9 Name of submitter Hauever (e.g. organisation) Per SONA Mr/Mrs/Me/Miss/Dr Name of author or ophact person 0415055 190 Mobile nymber Work number Contact address for Drive comercindence 19 2 Stakeholder group - please tick the appropriate box: Academic Lopal Government Cimatology Queenstand Government or agency. Commonwealth Government disaster management ÌT. Reak Group đ other. Industry professional community 🗀 Gèneral community mérider Property dayslopar ponservation. Property owner other (please specify). Institutes industry representative e 1 + 1 + 1 + 1 + 1 + 1 + Consultant or advisor on land planning or other natural hazarda Other 🗆 Industry Group (nsuranaa) Idurlam Insurance
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		None - there is no need for such a SPP.
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5 Broad Street arina Queensland 4737



Building & Planning Office Phone: (07) 4943 1466 Fax: (07) 4956 1508

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Sarina Shire Council

ADDRESS ALL COMMUNICATIONS TO THE CHIEF EXECUTIVE OFFICER PO Box 219 Sarina Queensland 4737

.our Ref.:

'mail:

. Uur Ref.: 18817 & C2304

or enquiries please contact:

24th October 2001

PJK:ali

Director Disaster Mitigation Unit Counter Disaster & Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear Sir/Madam

RE: <u>SUBMISSION FOR THE DEVELOPMENT OF A STATE PLANNING POLICY</u> <u>ON LAND USE PLANNING FOR NATURAL DISASTER MITIGATION</u> & <u>DEVELOPMENT ASSESSMENT</u>

I wish to advise that Council representatives attended a workshop in relation to the above on 12th October 2001 and Council has reviewed the discussion paper on this matter that was issued at the workshop.

Council resolved at its meeting on 22nd October 2001 to make the following submission in relation to a proposed State Planning Policy:

1. Sarina Shire Council believes that a State Planning Policy is unnecessary in this area as development control is already being proposed through other State Planning Policies such as the State Coastal Management Plan for development in storm surge and storm tide susceptible areas. Also the Federal requirement for the preparation of a risk management plan by 2002 will ensure that all Local Authorities have strategies in place for the mitigation of natural disasters by controlling development in susceptible areas.



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- 2. In preference to a State Planning Policy, a Statewide Code be developed for the following areas:
 - Bush Fire Management;
 - Development in Flood Prone Areas;
 - Development in Storm Surge susceptible areas; and
 - Development in Landslide prone areas.
- 3. If prescribed measurements such as RL's are included in Statewide Codes, an approved methodology should be adopted to allow Councils to deviate from the prescribed measurements where it is appropriate for localized situations.
- That the Department ensure that recovery organisations are included as stakeholders for future consultation.

It is trusted that this advice is of assistance and Council appreciates being given the opportunity to participate in this process.

Yours faithfully

Acting Chief Executive Officer

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Probability !!

Page 1



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From: To: Date: Subject:

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Dear J, in reply to the Public Notice placed in the Courier Mail sept' 15-2001, I wish to inform the Dept of my study into solar induced disasters , to be specific volcanoes ,earthquakes , cyclones , storms , droughts,

in fact any natural excessive release of pent up energy

on the sun, although incomplete (due to lack of resources) my 20 years experience may be of assistance as a probable curtailment to pending

sincerely disasters.

From: To: Date: Subject:



---- Original Message -

From:

Sent: Saturday, October 13, 2001 12:09 AM

Subject: "Solar Variations"

Dear

Thank you for your prompt reply, judging by the high sea surface temperatures flowing into the Timor Sea , early Cyclones are a distinct possibility, I envisage temperatures in excess of 31deg which can support killer storms & if early could coincide with spring tides ,

my_address = 19 Robinson place Currumbin Waters, 4223 Queensland. Solar Variations) ph

faithfully

From: To: Date: Subject:



Att:-

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as stated in my submission my study Dear is related to the Electrical angular separation between the sun the planets the buildup & release of Sunspots by inserting the dates of past disasters into a special computer program I am then able to see into the future with a fair amount of accuracy , due to an eleven year

cycle tied in to Mnt St Helens 18May 1980,

Mnt Pinatobo 20March 1991 the next one is on the

15July 2002, due to the particular Planets involved I am fearful of this particular alignment & the time it

take in the lead-up to it, the Water temp' around the top end & down to the 20Deg,S,which is likely to reach

27Deg before Xmas, for this month the new Moon is on the 15th with alignments on the 16-17-18, for dec the danger time is from the 3rd -- to --- 10th , these dates should give you some idea as to the use of this system,

in closing I hope my fears aren't realized , regards

Fw: Urgency,

From:

To: 19/11/01 11:39:41 Date: Subject: Fw: Urgency, may I draw your attention to my most likely dates for the month of Nov', N S W & VIC, have experienced adverse & damaging storms over this period, this energy can be delayed from the sun so the Earth can experience storms etc' for some days after these events. yours Original Message From: To: Sent: Tuesday, November 06, 2001 11:31 PM Subject: Urgency, Att:e, as stated in my submission my study Deal is related to the Electrical angular separation between the sun the planets the buildup & release of Sunspots by inserting the dates of past disasters into a special computer program I am then able to see into the future with a fair amount of accuracy , due to an eleven year cycle tied in to Mnt St Helens 18May 1980, Mnt Pinatobo 20March 1991 the next one is on the 15July 2002, due to the particular Planets involved I am fearful of this particular alignment & the time it will take in the lead-up to it, the Water temp' around the top end & down to the 20Deg, S, which is likely to reach 27Deg before Xmas , for this month the new Moon is on the 15th with alignments on the 16-17-18, for dec the danger time is from the 3rd --to ---10th , these dates should give you some idea as to the use of this system, in closing I hope my fears aren't realized , regards

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30 October 2001

Director Disaster Mitigation Unit Counter Disaster and Rescue Service Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear Sir/Madam

State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment

Thank you for the opportunity to review the Discussion Paper on the above mentioned proposed State Planning Policy (SPP). Tourism Queensland representatives have attended two workshops on this topic, the first in July 2001 and then again in October 2001. The Discussion Paper has also been reviewed.

Tourism Queensland (TQ) generally supports the implementation of the proposed SPP. Natural disaster management and mitigation is equally important to the tourism industry and to tourists as it is to a resident community.

Tourism is Queensland's second largest industry in terms of its contribution to Gross State Product. As an export earner, it is second only to coal. Tourism is a major growth industry, contributing significantly to job creation, export earnings and regional development. Consequences of natural disasters such as cyclones and severe storms include not only destroyed infrastructure but also the impression of unsafe holiday destinations.

Based on information presented at the workshops and in the discussion paper, it is considered important to provide a formal and consistent framework for the State to deal with and plan for natural disasters. The proposed approach to minimise the impact of natural disasters through land-use planning is supported.

Tourism issues to be considered as the SPP is developed include:

- The need to include visitor numbers and seasonal visitation patterns when planning for the impact of any natural disasters. Certain regions of Queensland have very distinct tourist seasons with resident populations almost doubling (for example, Outback Queensland and Far North Queensland) during peak seasons.
- The Department of Tourism, Racing and Fair Trading has recently completed the whole of government *Growing Tourism Strategy*. Under the strategy theme of Infrastucture and Services' there are a number of health and safety initiatives that relate to the proposed SPP. A copy of the Strategy is enclosed. The Strategy can also be accessed via the Tourism Queensland website from www.tq.com.au/hwchy/planning.htm#tourismpolicy and following the link.



• Careful consideration needs to be given to the cost of implementing the SPP and measuring where the cost burden will ultimately lie. It would be of concern to TQ if the ultimate cost of implementing the SPP fell to the development industry, as any costs to developers are simply passed onto the community.

Should you wish to discuss the above comments please contact

Yours sincerely

Manager Tourism Policy

13 NOV 2001 SSN:205



The Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001



Dear Sir / Madam,

RE: Comment on Discussion Paper on Development of State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment

The Urban Development Institute of Australia (UDIA) – Queensland, has been pleased to have had the opportunity to participate with your department in both the initial stakeholder consultation leading up to the development of the discussion paper as well as the participation in the recent workshops. We have now had the opportunity to review the discussion paper and provide the following comments for your consideration.

In providing comment we acknowledge that the effects from natural disasters are indeed matters which require a proactive approach and therefore should be matters of consideration in the IPA planning schemes of the local authorities when considering development. It is the experience of our members that many local authorities are indeed doing this currently, and this number we believe will grow as new IPA schemes are implemented over the next 12 – 18 months.

It is our contention that in this instance that option 3.1.1, Maintain and support the current approaches is the best option in order to ensure that the future IPA schemes, to be completed by March 2003 are able to embrace initiatives which go in some way to achieving acceptable environmental outcomes in instances of natural disaster. The reasoning behind this position is as follows :

There are a number of drivers which are already forcing local authorities to embrace planning for these areas, being:

- Requirement of IPA itself to set acceptable environmental outcomes for an IPA scheme and achieve sustainability
- Need for Councils to protect themselves in the face of increasing liability and thus they must ensure these issues are addressed
- 2. The time frame required to prepare a State Planning Policy and have same implemented will mean that it will not be available for incorporation into IPA schemes by March 2003. It is considered that it would be more effective to put resources into developing a policy document that local authorities could directly use in preparation of their schemes in the next 12 18 months.

The Urban Development GPO Box 2279 Institute of Australia QUEENSLAND

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Brisbane Qld 4001 Level 17-141 Queen Street Brisbane Qld 4000 Telephone 07 3229 1589 Facsimile 07 3229 7857 udia@udiaqld.com.au www.udiaqld.com.au

- 3. Following from point 2 above, it concerns our industry that this will mean that until 2010 when Local Authorities will again be required to review their IPA schemes that this State Planning Policy will in many instances duplicate systems which exist in local authorities. It will therefore have potential to unnecessarily delay the approval process due to need to refer matters under the SPP to your Department.
- 4. If a State Planning Policy is created it will mean that your department will then be involved in taking the role of a referral agency in the approval process. As such your department will have to potentially assess and provide comment on any and every application, at least in the coastal strip of the state, due to proximity to flooding, fire and land slip issues. Our members would be concerned as to whether your department has the resources to devote to timely assessment of a large number of applications in view of your other responsibilities.
- 5. A guideline would achieve consistency across the state, because in the IPA scheme development process your department would be consulted by the Department of Local Government to comment on a new scheme being prepared. Your department in response could insist on your guideline being the basis on which natural disaster matters are handled in the scheme, which Department of Local Government could then support to the local authority.

In general, we agree that the major areas which any guideline should consider are the areas of flooding, bush fire and landslide. In respect to the approach which should be adopted, we believe that the basic concept should be one of accepting that the major portion of our population choses to live in the coastal strip and as such their right and decision should be respected. Hence any approach should be soundly based on achievement of acceptable and reasonable environmental outcomes through performance based planning and not prescription.

Again, we confirm that the Institute supports your department's proactive approach to natural disaster planning and believes this is a responsible and accountable position. The development of a guideline is strongly supported but the creation of a State Planning Policy is not.

Finally, thank you for the opportunity to participate in consultation and we would be happy to meet to discuss the above matters at your convenience.

Yours sincerely Urban Development Institute of Australia (Queensland)

Chief Executive

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Chapter 4: Where to From Here

4.1 The next step

This Discussion Paper has been primarily prepared as a resource socument for key stakeholders to respond to during the public consultation process. It should assist in identifying the interests or the various stakeholders and input to facilitate the drafting of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Davelopment Assessment.

the Devartment of Emergency Services we comes comments during the development of the State Planning Policy which will address land use planning as it relates to natural disaster dak management issues in planning and development assessment. You are invited to make comment during the upcoming consultation program detailed in the table below.

If the Ministers decide to proceed to prepare a State Planning Policy, a proposed State Planning Policy will be drafted and will be available for public consultation in the with the requirements of the Integrated Planning Act 1997

The intertion of public consultation is to encourage as mary slakelioiders as possible to contribute to the development of the State Planning Poucy within publicly advertised hmefrenies.

Have your sav

Stakehelders are encouraged to make a written submission within the acvertised timeframe. Submissions can be posted, faxed, or emailed to the Disaster Miligation Unit. Stakeholders can also speak with Department of Emergency Services officers involved in the development of the State Planning Pulley. Contact details for In addition. the office are below. representatives of key stakeholder groups who are authorised by their organisation to speak on its behalf, may request a meeting with a Departmental representative within the acvertised consultation period.

written submissions are due by Friday 9 November 2001 should be addressed to:

Director

Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPD Box 1425 BRISBANE OLD 4001

Empli: istephens@energency.qid.gov.au Facsimile: 07 3247 8480 Telephone: 07 3247 8977

A suggested proforma for your submission follows. This proforma is also available on the Department of Emergency Services wobsite: www.emergency.qld.gov.au/community/shp

	Putpose	
Slato Planning Folicy	For stakeholder to comment on the autiject matter and scope of the processed policy	September 10 8 November 7201
Prederation Phose	A series of regional workshops will be undertaken to promote discussion or, the Discussion Paper. Comments our be made at public consultation meetings end/or in a writter submission. Public workshop meetings will be advented in early September in the Courter-Misil and major mented in series September in the Courter-Misil and major	Ornober 2034
Decision to Proceed	Decision by the Minister for Emergency' Services and the Minister for Local Government and Plenning as to whether to proceed to prepare	Early 2002

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4.2 Proforma for submission

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What is your proferred option for land use planning for disaster management and midgetion within Queerstand, or what alternative option would you preter? (see Chapter 3 and Appendix B)

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Royal Australian Planning Institute RAPI Old Division PO Box 223

Brisbane, Albert Street, Old 4002 A.B.N. 71 852 748 056

Telephone: (07) 3720 8764 Facsimile: (07) 3870 4072 Email: rapiqt:@ozemail.com.au

15 November, 2001

Ms

A/Director Disaster Mitigation Unit Department of Emergency Services GPO Box 1425 BRISBANE Q 4001

Dear

The Queensland community expects all levels of government to take whatever steps are required to protect their lives and property against disasters and natural hazards. Your Department has been particularly diligent in this area and we offer our sincere congratulations for 'Disaster Risk Management' book and 'Disaster Risk Management Guide: A How-to Manual for Local Government' with national recognition as 'Overall Winner' 2001 at the National RAPI Awards of Excellence.

In the context of preparing a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development assessment, the planning profession can contribute to an understanding of these implications of this initiative and accordingly we are pleased to make this formal submission in response to the recently conducted workshops.

The Royal Australian Planning Institute is the professional association of planners and those involved in community planning in Australia. The Queensland Division (RAPI) is the second largest division within RAPI and sees as one of its primary roles that of influencing the development of planning policy at local, regional, state and national level. It seeks to influence and shape policy by, amongst other actions, reviewing government and industry planning documents and standards and submitting our opinions and suggestions for consideration.

The proposed State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment as a matter of State Interest should become a means to encourage City and Shire Councils to adopt a risk management approach and incorporate this into Planning Schemes and their development assessment. Unfortunately the way natural hazards are addressed by local councils varies widely across the State and the development of State Planning Policy is a very appropriate way to address this.

The Handbook produced by the Department will assist local government in this regard, particularly in terms of encouraging a fundamental awareness of, and approach to land use planning and natural hazards and disaster mitigation.

The discussion paper presents a comprehensive overview of the important issues relevant to natural hazards and disasters. Planning schemes and development assessment are not the appropriate tools to address disasters, particularly in terms of emergency responses. Planning schemes can serve very useful purposes in the risk management process, mitigation and deliver strategies which seek to minimise exposure to natural hazards. We therefore recommend that the proposed title of this SPP should be amended to reflect the limitations planning schemes have in this regard.

Coastal Erosion

One area omitted from the Discussion paper was coastal erosion. As a natural hazard it is different in terms of impact, temporal issues and spatial distribution to storm surge. The SPP would benefit from including this as well as the other significant natural hazards already identified.

Data and interpretation

The availability of data relating to natural hazards, the means to interpret and apply this data will vary according to the location, size and resources available to individual local governments. If the State Government is to require a particular level of data and analysis to be recognised in planning schemes, then smaller local governments should be assisted to develop data and skills in this area. Due to the importance of spatial data to planning and natural hazards RAPI strongly recommends any assistance to smaller councils must be in a spatially accurate and preferably GIS form. It may be beneficial for the State to provide sufficient resources for its Department to ensure such spatial information is available on a State-wide basis, thus providing a level playing field with all local governments in Oucensland.

A Natural hazard policy Framework

One strategy to address the interpretation issues of natural hazard data would be for the SPP to establish a policy framework which is to be addressed in the planning scheme. If it can be demonstrated that a draft planning scheme has competently addressed this policy framework then this area of State Interest can be approved. The policy direction, within this policy framework in relation to planning scheme preparation and development assessment, which is sought by State Government should be clearly stated so as to facilitate the preparation and smooth approval process for planning schemes.

Consistency

The workshop presentation suggested that a consistency should be developed in the planning scheme response to natural hazards. The consistency RAPI would like to see is in the policy direction from State Government. (within and across Departments) to natural hazards and the appropriate responses within planning schemes and through development assessment.

DEOs in an SPP

Recent experience with Desired Environmental Outcomes (DEOs) in draft planning schemes suggests that this may be too restrictive for an SPP to provide a standard set of wording. This is particularly the case as the number of DEOs deemed acceptable by the Department of Local Government and Planning appears to be decreasing while the number of SPPs under preparation or already in place has increased. RAPI does not recommend standard "one-size-fits-all" DEO in a SPP.

The enduring nature of a SPP

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There appears to be options available for the relationship between a planning scheme and an SPP. One of the options is that once all the matters raised in a SPP have been incorporated into the planning scheme, the planning scheme is approved and this SPP no longer operates in this city or shire. This is in contrast with the process in place prior to the Integrated Planning Act, 1997. RAPI would prefer a situation where the SPP remains in place after all relevant matters have been incorporated into the planning scheme, to allow for changes and developments in the research and understanding of natural hazards and their risk management.

Some other potential mechanisms appropriate for Planning schemes and Development assessment

Some other mechanisms within planning schemes that may be able to address natural hazards could include

- Appropriate standard conditions attached to a development approval
- Defined precincts of natural hazards to be included in the planning scheme, particularly at the local plan level
- Infrastructure charges plans to reflect mitigation strategies to specific natural hazards eg slip areas
- Incorporation of appropriate local planning strategies such as floodplain management,
- wildfire/bushfire management, landslip strategies the scope would, of course be related to the identified hazards in the city or shire
- Local and regional hazard mapping database.

On-going involvement of RAPI

It is still early days for the SPP, but RAPI wishes to have an active role in its formulation and eventual structure of this important State Government initiative.

RAPI supports the concept of a State Planning Policy for on Land Use Planning for Natural Disaster Mitigation and Development assessment, but with wording to more accurately reflect the ability of planning to address hazards not disasters.

RAPI would like you to consider this letter as the beginning of a dialogue so that RAPI and DES can work together to protect our communities and their respective environments through integrated plan making and development assessment processes. RAPI seeks to have a continued proactive role in the future formulation of the State Planning Policy should the Minister approve its preparation.

If you desire any further input from RAPI please do not hesitate to contact the writer, or our Policy Coordinator,

Vours truly

Gary White President

Department of Families Response

<u>SSN:5</u>

Page 1

From: To: Date: Subject:

Hil



Dawn Juratowitch has asked me to forward you comments regarding the State Planning Policy on Natural Disaster Mitigation and Development Assessment. The document was supported and brief comments are attached for your consideration.

Stratenic Services

(See attached file: DISASTER PLANNING TABLE.2.doc)

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DEPARTME	NT OF FAMILIES - STATE PEANNING PO	LICY ON NATURAL DISASTER MITIGATION AND DEVELOPMENT	
REGION		COMMENTS	l
STATEWIDE SERVICES			
SERVICE			
GOLD COAST		 I would like to see the principle of the community's right to know about local disaster risks addressed in the State Planning Policy 	
CAIRNS AND TABLELAND			
TOOWOOMBA		In relation to point 2:	
WEST		• That there seemed to be unanimous support for the notion of a State Planning policy on Natural Disaster Mitigation and Development Assessment and I can certainly see that this would be advantageous for the reasons outlined in the discussion paper	
		 Irrespective of this, as a social planner I have been routinely suggesting, in our State Interest input to planning scheme preparation, that "development should not be allowed on areas vulnerable to natural disaster such as flood prone land, steep slopes etc", but 	
		 Most would agree that this is probably not a big issue – it is existing development that is the thorny issue and so we will probably always have our work cut out (in disaster recovery terms) dealing with the victims of poor planning and development decisions from years ago. The only way around this would be for governments and/or developers (with Local Government Authorities leading and facilitating this) to eventually buy up/resume such "high risk" land to use for purposes that are recreational or whatever (but not for residential use). 	

SSN: 202 .

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Queensland Government

State Development

D7835 Please quote: G Miszczak Contact officer: Contact telephone: 323 40585

13 November 2001

Director **Disaster Mitigation Unit** Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 **BRISBANE QLD 4001**

Dear Sir/Madam

State Planning Policy - Land Use Planning for Natural Disaster Mitigation and Development Assessment

Thank you for the opportunity to attend a workshop held by the Department of Emergency Services on Tuesday 23 October 2001, on the development of the , Principal Project Officer, above State Planning Policy (SPP). attended in my place due to my absence on leave.

The broad objectives of the SPP included in the Discussion Paper dated September 2001, are supported. However, land use planning and planning schemes have limited capacity to, and are not intended to address some of the natural hazards listed. Building legislation and codes (eg for cyclones, earthquakes and severe storms) may be more appropriate in these cases.

It should also be recognised that local governments are required to prepare IPA compliant planning schemes by March 2003. Therefore, the provisions of the proposed SPP may not be able to be incorporated in many schemes. This SPP may have a greater impact on planning schemes at their next review. These circumstances point to the need to incorporate 'Development Assessment' guidelines in the proposed SPP, which would be recognised in IPA planning schemes, and would assist with the assessment of development applications.

Level 5, Executive Building 100 George Street PO Box 168 Brisbane Albert Street Qld 4002 Telephone 3225 5499 Facsimile 3229 7315 Website www.statedevelopment.qld.gov.au ABN 97 406 359 732

Furthermore, to assist local government staff to develop the expertise to undertake the required level of planning to mitigate natural disasters, it is recommended that detailed 'best planning practice' guidelines be incorporated in the SPP to provide step by step procedures for undertaking the required planning. This level of assistance and detail is considered necessary to provide a state-wide uniform approach, and certainty for local governments, developers and the community. It would be the most practical means of assisting local governments to translate your agency's State Interest issues into their planning schemes.

Over the past few years, the Department of State development and its predecessor Departments, have prepared 24 information papers and 'best practice' guidelines on industrial land planning, and planning for economic development. As you may be able to benefit from our past experience, I would be happy to discuss this matter at your convenience with you or your staff, as these 'pre-IPA' papers have been very successful in raising awareness in local government on the need for, and how to address economic development issues.

Thank you for the opportunity to provide comments on your proposed SPP. Should you require clarification of any of the above issues, please contact

Yours sincerely



Manager Infrastructure Projects and Land Management

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treatment of storm surge in the Coastan Management han takes account of the full range of risks assessment and mitigation issues that may be addressed in the Land Use Planning

Policy. This may require some updating of the earlier Coastal Management Plan to include, for example,

current climate change projections in assessment of risk from storm surge.

Other issues not identified: Yes

Details unidentified: 1. Climate change is mentioned only in general terms. There is now sufficient confidence in climate change

projections of increases intensity and frequency of extreme events for these to be included in risk assessment and mitigation options for natural disasters in a Land Use Planning Policy. 2. The discussion paper does not address possible changes to the risk over time. Factors such as

climate change, population changes etc can change the risk and this should be included in Land Use

Planning.

Are there basic principles which should be the foundation of a State Planning Policy: See point 2 above re the principle of considering the potential future risk throughout the lifetime of the land use, particularly where long lived infrastructure is concerned.

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Pine Rivers Shire Council

220 Gympie Road Strathpine Old 4500 PO Box 5070 Strathpine Qld 4500 Ph: (07) 3205 0555 FAX: (07) 3205 0758

J. W. Mathews Chief Executive Officer



Telephone:

(MP 01/3392) KSey Our Rel: 116/5-1

Your Ref: -

Date: 19 November 2001

Department of Emergency Services **Emergency Services Complex** Park Road (Cnr Kedron Park Road) **KEDRON QLD 4031**

Dear Sir

PROPOSED STATE PLANNING POLICY ON LAND USE PLANNING FOR NATURAL DISASTER MITIGATION AND DEVELOPMENT ASSESSMENT

Council at its meeting held on Monday, 12 November 2001 gave consideration to a report concerning the above matter.

I wish to advise that Council supports the proposal of the State Government to develop a State Planning Policy for Natural Disaster Mitigation and Development Assessment.

Yours faithfully

Chief Executive Officer

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GPO BOX 149 Brisbane Q 400

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From: To: Date: Subject:



Subject: State Planning Policy on Land use Planning for NaturalDisaster Mitigation and Development Assessmen

Following our telephone contact this morning I would like to place on record this Departments interest in the development of this policy.

The Department of Justice and Attorney-General may have a role in implementation of the proposed policy through identification and amelioration of the risks to the State ansing out of the policy, and assisting in avoiding claims for compensation. In this regard Crown Law would be the appropriate agancy to contact.
42



Queensland Government

Department of Primary Industries

10:223

Enquiries: John Pollock Telephone: +61 7 3239 3180

23 November 2001

Director, Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear

Submission on the State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment

Thank you for providing the Department of Primary Industries (DPI) with the opportunity to input into the development of the State Planning Policy (SPP) on Land Use Planning for Natural Disaster Mitigation and Development Assessment.

DPI has the portfolio responsibilities in the areas of forestry, fisheries, animal and plant health and rural communities. Issues relating to these areas need to be incorporated within the SPP. For example, DPI has the responsibility of managing State owned forest plantations, to which bushfires are considered to be a significant natural disaster event. Development related alterations to stormwater in particular, flood flows into and out of State forests and fish habitats are also a major concern for DPI.

There are other issues that need to be considered such as the impact on animal and plant health following natural disaster events such as flooding, cyclones, severe storms and landslide. While there is limited scope to protect these areas from these events, it is important that land use planning issues are encompassed to minimise the after effects of such events.

A detailed copy of issues from a DPI perspective has been enclosed for your information purposes (attachment A). Should you have any queries in relation to this matter, please do not hesitate to contact the second second principal Policy Officer on the second s

Policy Analysis & Industry Development

Level 6 Primary Industries Building 80 Ann Street GPO Box 46 Brisbane Queensland 4001 Facsimile +61 7 3221 4049 Email pollocj@dpi.qld.gov.au Mobile 0419 667 008 Website www.dpi.qld.gov.au Call Centre 13 25 23 RecFind 01/15868 (JP:LR) AFN 78 342 684 030 This Department is supportive of the development of a SPP in relation to Natural Disaster Mitigation, and looks forward to inputting into the process through the Government Advisory Committee to which DPI is a party.

Yours sincerely



Executive Director

Att

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Attachment A

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State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment

Key issues

The Department of Primary Industry (DPI) has portfolio responsibility in the following areas:

- > Fisheries
- Forestry >
- Animal and Plant Health

As a result there are several key issues that need to be considered in the development of a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. These are as follows:

Fisheries

- Land Use Planning should avoid the use of floodplains for development purposes. This reduces the impacts of flooding while at the same time, maintains the flood ≻ plains for fisheries purposes, such as spawning, juvenile development and migration of fish and other aquatic organisms. Appropriate planning would prevent or minimise the need for mitigating action. (include in section 2.6.2, 2.6.3 and 2.7.2)
- The impact of the natural disaster event needs to be balanced against the benefits of the event. For example, the impact of flooding needs to be assessed with the Þ benefits of flooding on inshore waters and lower estuaries.
- Just as bushfires are considered as 'an integral component of the environment of Queensland' so to are floods (page 23).
- Attempts should be made through planning policies to minimise incompatible development being situated adjacent to fish habitat areas, which may be impacted further by natural disaster event.
- Infrastructure should be maintained appropriately to minimise the impact of a natural disaster effect. Eg. Removal of debris from stormwater outlets or drains to reduce the impact of flooding.

Forestry

- Inappropriate developments such as rural or urban residential areas near State owned plantations or native forests are seen as an increasing the risk potential and ۶ is likely to increase the impact resulting from a natural disaster event, in particular bushfires and flood flows into and out of a forestry estate.
- Fire issues often cause conflict between DPI forestry and neighbouring communities. In order to minimise the potential conflict between communities ۶ neighbouring a plantation and DPI forestry, it is essential that community consultation in the development of mitigating strategies take place.

- > SPP should encourage the identification of State Plantations and native forests as distinctive land uses within land use planning.
- > Land use planning should not prejudice forestry activity, including plantation expansion, as a legitimate development activity where conflict between forestry and adjacent land development can be managed.
- > Land use planning should recognise the prior rights of DPI Forestry to practice plantation management where plantations are already established.

Animal and Plant Health

- > While there is limited scope to mitigate the impact of natural disaster events on animal and plant health there is a need to incorporate animal and plant health welfare issues into land use planning, particularly in relation to post-event assessment.
- > Emergency responses for mitigating serious pest and plant diseases resulting from natural disaster events need to be developed.

General comments

- > DPI in general is concerned with the impact of natural disaster events such as floods, cyclones, storms, bushfires not only on the wildlife and plantations, but also the impact of rural and regional communities. In this respect, the State Planning Policy should provide the essential guidance to local governments to developing and implementing appropriate cost-effective mitigation strategies to address these disaster events.
- State Planning Policy should include storm surges and wildfires as components of severe storms and bushfires.
- It is important that the State Planning Policy is developed having regard for other Agency State Planning Policies, to ensure consistency, minimise duplication, and ۶ any potential conflict.

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- The State Planning Policy needs to incorporate the issues that are relevant within the context of natural disaster events. However, it should be flexible enough to > allow the individual local governments to adopt mitigation or contingency plans for natural disaster events, which are relevant to their area. Priorities should be established depending on the situation rather than a set standard.
- Consideration must be given to the fact that local governments have to deal with other State Planning Policies, and where possible, linkages should be made to ≻ these policies as well as to regulation, programs and policies of the Queensland government.
- From a Local government perspective, a risk identification analysis and strategies to minimise risk need to be undertaken. To ensure that appropriate risk Þ

identification analyses are undertaken, guidance should be required either through the State Planning Policy or through guidelines and information packages.

- In order to assess the risk in relation to natural disaster events, it is necessary to provide Local Government with the spatial information upon which to base their decisions.
- > If development is to be allowed in an area that is prone to natural disaster occurrences, then it is vital that contingency plans are developed in conjunction with the relevant State agencies and local government. That is, appropriate plans should be developed to minimise the impact, whether it be through better engineering, technological advances or emergency response strategies.
- Incorporation of early warning systems is vital to minimise the 'human' impact from natural disaster events. Should include 'animal and plant' welfare strategies.
- State Planning Policy should include in its development and implementation, appropriate policies to address climate change issues effectively. That is, Greenhouse impacts are likely to increase the impact on the occurrence of natural disaster events. Planning and mitigating for these events under such situation is critical.
- > Cross agency processes and State Planning policies should be better linked. For example, greenhouse/climate change issues and infrastructure development projects.
- While the focus is on the mitigation of impact from a natural disaster event, it is also important to incorporate how the emergency response after the event is undertaken. For example, emergency response, assistance to community, assessment of damage etc.
- It is essential that any emergency response or contingency strategy developed take into account all aspects of cross agency issues and where possible, integrate under ۶ one emergency response.
- The Government Advisory Committee responsible for the development of the SPP on Land Use Planning for Natural Disaster Mitigation and Development ۶ Assessment should look at the following issues: What are the current natural disaster events that have emergency response strategies?

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Who is responsible for their delivery? Is there multiple agency involvement? Can one process be established to represent the whole of government perspective?

Current approach to natural disaster mitigation within DPI

Use of a Corporate Governance Risk Management framework

- Representation on the State Disaster Mitigation Committee and State Disaster ۶ ۶ Coordination Group
- Representation on Local Disaster Coordination groups reporting to State Counter ≻ **Disaster** Organisation

4.2 Proforma for submission

Non:

move for

The following is a suggested proforma for submissions on the intent to prepare a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment. Interested individuals and representatives of organisations are encouraged to make a written submission regarding the Discussion Paper. Written submissions close on Friday 9 November 2001.



19

	Cyclones Droods Dandslides Dushfires DSevere storms DEarthquakes
	Other? Please specify
	STORM SURGES & WILDFIRES
•	Comment
	THESE ARE IMPORTANT NATURAL DISASTER EVENTS THE
	CAN HAVE DENIFICANT IMPACT ON INFRASTRUCICIES CONTINUES
-	4 ANIMAL AND PLANT WELFARE
r.	h
	There are a number of issues identified? use planning. Are there other issues which are not identified? Ves DNo
	THE ATTACHMENT A (DPI SUBMISSION)
ter e de	SEE MINER
	Chapter 2 outlines land use planning measures to mitigate natural disasters. Do you support these measures?
	Ves No
	Are there other measures which could be adopted in a State Planting Pointy
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1.11.1.11.11.11.11.11.11.11.11.11.11.11	Yes No.
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29 November 2001

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COUNCIL

Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear Sir/Madam

RE: Proposed State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment

RE

FAX: (07) 548

58 756

242 MARY STREET, (PO BOX

300mas-7.0

I refer your letter of 20 September 2001 seeking comments on the Discussion Paper on the above matter. Cooloola Shire Council makes the following comments with respect to Section 2.7.2 of the Discussion Paper.

As provided for in Section 53 of the Queensland Standard Building Regulation 1993 (SBR), Cooloola Shire Council, in 1997, resolved that parts of the Shire are liable to flooding and adopted minimum floor levels to which floor levels of habitable rooms must be built. The adopted level for Gympie, is equivalent to a flood of 1:50 years Average Recurrence Interval (ARI) plus 0.3 metres. Should a significantly higher (say 1:100 ARI) State-wide flood level be imposed, there may be impacts upon the amenity of existing residents due to infill development or redevelopment being constructed to the higher level. For example, residential buildings built to a higher level may overshadow adjoining properties or impact upon privacy by overlooking yards, entertainment or swimming pool areas. Where fill is used to achieve the required higher floor level, this may result in drainage problems or impediments to former overland flows.

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Department of Public Works

Ref: 1/20#17/09/01

Director-General

3 0 NOV 2001

Director-General Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear

I refer to your letter dated 17 September 2001 inviting the Department of Public Works to be part of State-wide consultations relating to the development of the State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment.

Representatives from Project Services, QBuild and Building Division attended a number of the October 2001 workshops held across the State. In addition to our representation on your Government Advisory Committee for the State Planning Policy, Assistant General Manager, QBuild has held discussions with representatives of the Disaster Policy Unit within your Department.

The development of a State Planning Policy for land use planning for disaster management and mitigation, which addresses the natural hazards contained in the Discussion Paper, is considered the preferred option. The extent of land use measures to mitigate natural disasters appears to have achieved the right balance for State and Local Governments. The Policy provides State interests that are formally considered when Local Governments are making decisions about the forward planning and detailed development assessment measures in planning schemes.

The Department of Public Works is responsible for ensuring the protection and management of State building assets and the provision of policy direction and comments on matters of State interest. *The Integrated Planning Act 1997* delegates the responsibility of assessing most development applications to Local Government. In cases where this responsibility falls on this Department, we will be committed to complying with any planning requirements associated with such a State Planning Policy.

Level 7 80 George Street Brisbane GPO Box 2457 Brisbane Queensland 4001 Australia Telephone +61 7 3224 6507 Facsimile +61 7 3224 5616 Officers from the Department of Public Works will continue to actively participate on committees and workshops for the further development of the State Planning Policy.

Yours faithfully

Director-General

cc Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services PO Box 1425 BRISBANE QLD 4001

For your information.

Director-General





Department of the Environment and Heritage Office of the Secretary DECEIVE D-5 DEC 2001

45

Ms

Acting Director Disaster Mitigation Unit Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Dear

I refer to my previous correspondence of 9 October regarding the possible development of a Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment in Queensland.

Representatives of Environment Australia and the Bureau of Meteorology (BoM) attended a consultation workshop in Brisbane on October 23. The Bureau of Meteorology subsequently prepared a written submission and lodged it with your office in early November. If you wish to discuss any elements of the Bureau of Meteorology's submission, please contact Queensland Regional Director, BoM on telephone:

The Australian Greenhouse Office (AGO) also sent an electronic submission to your office on 23 November 2001 in which the issue of climate change in the context of risk assessment and land use planning is discussed. If you wish to discuss any elements of the AGO's submission, please do not hesitate to contact the formation, Manager, Greenhouse Inventory and Science Team, AGO on telephone:

Thank you for providing the opportunity to comment on the possible development of a Policy on Land Use Planning for Natural Disaster Mitigation in Queensland. I would greatly appreciate being kept informed of progress if preparation of the Planning Policy does proceed and look forward to hearing from you in the future.

Yours sincerely

Secretary







From: To: Date: Subject:



Proposed Natural Hazards SPP comments

Page 1

Here are my comments on the material discussed at yesterdays meeting.

Regards

Policy Advisor (Statutory Planning) Coasts Wetlands and Waterways Environmental Planning Environmental Protection Agency

CC:

PO Box 155 Brisbane Albert St Q 40.02

COMMENTS ON THE PROPOSED STATE PLANNING POLICY FOR NATURAL HAZARD MITIGATION

ID:

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- 1. Shortened references to the State Coastal Management Plan should be 'State Coastal Plan' or 'SCMP'. 'Coastal management plan' is a generic reference under the Coastal Act to both the State and regional coastal management plans.
- Consistency and clarity is required regarding storm surge and the State Coastal Plan i.e. storm surge is addressed by the State Coastal Plan.
- 3. The effects of climate change in relation to coastal management is addressed by policy '2.2.1 Adaptation to climate change' of the State Coastal Plan. Furthermore, sea level rise is specifically identified in policy '2.2.4 Coastal hazards'. If the SPP is to address climate change in some way, the relationship with the State Coastal Plan will need to be considered.
- 4. Clarity is required regarding the relationship between flooding and storm tide inundation. I believe that the focus should be on where a storm tide and catchment flooding occurs at the same time. This is where the overlap occurs and where the relationship between the SPP and State Coastal Plan needs to be discussed further. For inundation from a storm tide by itself, all that is required is a reference to the State Coastal Plan.
- The effects of cyclones are identified as a coastal hazard in the State Coastal Plan. If the SPP is to address cyclones in some way, the relationship with the State Coastal Plan will need to be considered. It is however acknowledged that the State Coastal Plan focuses on storm tide inundation and erosion rather than land slides, catchment flooding and severe winds.
- 6. The consultation report suggests the consideration of coastal or building setbacks with regard to cyclones. There is already erosion prone areas, coastal building lines and control districts under the Coastal legislation which require development to be appropriately setback from the coastal line as well as the State Coastal Plan which also addresses the location of development on the coast. These existing provisions should be recognised rather than raising the need for planning measures to address them.
- 7. The consultation report (see 3.4.2) identifies storm surge mapping and storm surge information as 'necessary technical studies for inclusion of the SPP within planning schemes'. This would be best addressed between DES and EPA through the proposed Coastal hazards guideline rather than through the SPP.
- 8. The State Coastal Plan and it's relevant policies need to be clearly recognised in the consultants brief to ensure that the consultant is aware of the relationship between the 2 documents.
- As discussed at the meeting, stakeholders such as UDIA and LGAQ should be consulted during the preparation process to ensure stakeholder support.

10.001

GPO Box 1429

Brisbane Qld 4001

Brisbane Qld 4000

shane.spargo@qr.com.au

Telephone 07 3235 2069 Facsimile

07 3235 2429

E-Mail

Floor 8 Oracle House 300 Ann Street

Corporate Services Property

1



Our Ref: CPT(1)

Director Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001

Attention:

To Whom It May Concern:

STATE PLANNING POLICY ON LAND USE PLANNING FOR NATURAL DISASTER MITIGATION AND DEVELOPMENT ASSESSMENT

I refer to a request for advice from Queensland Rail (QR), regarding the development of the above-mentioned State Planning Policy (SPP). QR Property Division, as lead agent and manager of QR's real property assets provides the following comments to the Department of Emergency Services regarding the proposed SPP.

Property Division, on behalf of QR provides advice to Local Governments as part of the development and review of Local Government IPA Planning Schemes. In a similar role, advice is also given on other land use planning issues such as Regional Planning Frameworks, Regional Transport Planning, Shire Strategic Planning, Local Area Planning, and Environmental Impact Assessment Reports. Accordingly Property Division acts as QR's representative during consultation and the development of the proposed SPP where it may impact on land use planning and development assessment.

Information and comments on the Discussion Paper for the SPP have been provided below in a similar format to the proforma provided on the Department of Emergency Services website:

- QR supports the development of the SPP on Land Use Planning for Disaster Mitigation and Development Assessment, as the preferred option for directing land use planning for disaster management and mitigation within Queensland.
- QR provides no preference to the natural hazards to be included in the SPP, however would be able (through future consultation) to discuss and provide information on the potential impacts of natural hazards on rail transport infrastructure and operations in relation to land use planning and development.

- The issues identified in Chapter 2 of the Discussion Paper of September 2001 are considered adequate in establishing the potential links between land use planning and natural hazard mitigation.
- The land use planning measures outlined in Chapter 2 to mitigate natural disasters are supported, however future consultation with stakeholders such as QR may identify additional issues relevant to the development of major infrastructure, such as works undertaken by Railway Managers.

QR Property Division would appreciate further involvement in the development of this State Planning Policy and requests any future consultation be referred to the relevant contact officer below:

> General Manager Property Division Queensland Rail GPO Box 1429 BRISBANE QLD 4001

Attention: Senior Planning and Development Officer

Should you have any queries regarding this response, please contact descent (Planning and Development Officer, Property Division) on the second or e-mail

Sincerely

General Manager Property Division

11 December 2001

1D:222

Contact:Peter ChapmanTelephone:(07) 322 77792Facsimile:(07) 322 51266Email:CHAPMANPF@housing.qld.gov.au

Queensland Government

> Department of Housing

4 December 2001

Director

Disaster Mitigation Unit Counter Disaster and Rescue Services Department of Emergency Services GPO Box 1425 BRISBANE QLD 4001



Dear

Discussion Paper for the Intention to Prepare a State Planning Policy on Land Use Planning for Natural Disaster Mitigation and Development Assessment

Thank you for the opportunity to submit comments for consideration in relation to the proposed State Planning Policy (SPP). The Department of Housing supports the Department of Emergency Services (DES) in its preparation of the SPP to improve the planning and management for natural disaster mitigation.

The Department of Housing is the lead agency for housing related issues in Queensland. On 28 May 2001 Cabinet endorsed the following statement of the Government's Housing Policy:

The Queensland Government will seek to ensure that all Queenslanders have access to <u>safe</u>, secure, appropriate and affordable housing in diverse, cohesive and sustainable communities.

Consistent with the Government's housing related interests, please find attached:

- Detailed comments which define the Department's interests in land use planning relevant to the SPP and the recommendation to reflect these interests (Attachment 1).
- The Affordable Housing in Sustainable Communities Strategic Action Plan (the "Affordable Housing Strategy"), which was endorsed by Cabinet on 4 June 2001. The Strategy contains 5 Key Strategies with associated Priority Actions, including the Department's involvement in the preparation of IPA planning schemes (Attachment 2).

Office of the General Manager Public Housing and Housing System Initiatives Level 1 111 George Street GPO Box 690 Brisbane Queensland 4001 Australia Queensland Department of Housing/Queensland Housing Commission

 Telephone
 07 3247 0438

 Facsimile
 07 3235 9093

 Email Jennifer.Clark@housing.qld.gov.au

 Website www.housing.qld.gov.au

ATTACHMENT 1

Department of Housing's Comments Discussion Paper for State Planning Policy on Natural Disaster Mitigation and Development Assessment

Department of Housing's interests

Portfolio Stock

The Department of Housing is responsible for public housing and vacant land stock located within local government authorities throughout Queensland. This housing and land stock is administered through the Department's Property Portfolio Management division, and is maintained through the Department's Public Housing, Community Housing and Aboriginal and Torres Strait Islander Housing Programs.

IPA Planning Scheme Comments

The Department provides comments on housing related issues to local governments currently preparing their planning schemes under the *Integrated Planning Act 1997*. These comments pertain to the Department's State interests with regard to its core portfolio stock, as well as attempting to facilitate the maintenance and promotion of sustainable communities and affordable housing through the planning scheme generally. These comments are coordinated through the Department's Affordable Housing Unit.

Integrated Planning Act 1997 provisions for public housing

The Department is the lead agency for public housing development in Queensland. Under the *Integrated Planning Act 1997* (IPA) the Department has specific provisions relating to "development" carried out for public housing (refer to section 5, Part 6 – Public Housing). Section 5.6.3 allows development carried out for public housing to proceed without development approval from a local government, ie. development is "exempt" as defined under the IPA.

However, section 5.6 of the IPA does require the chief executive of the Department of Housing to comply with a number of provisions before starting the development, these being:

- 1. The chief executive must give the local government information (including plans and specifications) about the proposed development.
- 2. The chief executive must determine if a development is substantially inconsistent with a planning scheme.
- 3. The chief executive must publicly notify development that is considered to be substantially inconsistent with a planning scheme.
- 4. The chief executive must have regard to submissions received following the public notification before deciding whether or not to proceed with the proposed development.

These provisions have been incorporated into the IPA to provide efficiencies in costs and time associated with development applications, thereby minimising costs to the public expense in providing public housing.

Future housing construction - siting and design

Portfolio Stock

The above provisions significantly reduce the Department's statutory requirements in public notification for planning and constructing public housing under the IPA. However, the Department is very conscious of its obligations to fulfil acceptable solutions in the siting and design of public housing to minimise potential impacts that may be caused through natural disasters. In its operations, the Department therefore seeks to be consistent with State Planning Policies and local government planning schemes in the siting of new housing stock, as well as design and material standards of the building code.

Planning Scheme Comments

The Department's planning comments on housing related issues can be best interpreted and adapted by the local government authority as part of its IPA scheme preparation. This would include the consideration and incorporation of the SPP for Natural Disaster Mitigation.

RECOMMENDATIONS

- 1. That the Department of Emergency Services note the roles and responsibilities of the Department of Housing under the IPA, including the relevant public notification provisions for development assessment prescribed for public housing.
- 2. That the Department remained informed on the future preparation of an SPP, and that representatives from the Department can assist the DES in advancing a whole of government document in the preparation of this SPP.

Attachment 2:

in Sustainable Communities Affordable Housing Strategic Action Plan .



Department of Housing

Affordable Housing in Sustainable Communities Strategic Action Plan

June 2001

(the "Affordable Housing Strategy")

is now available on the Department of Housing Internet site at

http://www.housing.gld.gov.au/org/audience/content/affordable.htm

This key policy document, endorsed by State Cabinet in June 2001, can be accessed in both html and pdf versions.

Also available from the same site are:

Affordable Housing in Sustainable Communities: A Discussion Paper (November 2000)

and

Affordable Housing in Sustainable Communities Fact Sheet (October 2001)

Your feedback on the site is welcome

Further information is available on the web or by contacting the Affordable Housing Unit at the address below

Affordable Housing Public Housing and Housing System Initiatives Level 1, 111 George Street GPO Box 690 BRISBANE QLD 4001 AUSTRALIA Telephone 07 3227 7792 Facsimile 07 3225 1266 Email affordable@housing.qld.gov.au Website www.housing.qld.gov.au Queensland Dependent of Housing/The Queensland Housing Commission



The Queensland Department of Housing is providing leadership in encouraging the provision of safe, secure, appropriate and affordable housing. This leadership seeks to ensure that families and households can successfully find and keep a home, and that housing provision contributes to the sustainability of Queensland communities.

The Department's leadership role is a response to the declining affordability of housing in many areas of the State, for both home buyers and renters. In high-growth areas such as inner city and near-city areas and coastal centres, stocks of low-cost housing have fallen in recent years. Many families and individuals struggle to meet rent or mortgage payments and cover the other costs of a reasonable standard of living in these localities, or are excluded from them altogether. Rural and remote areas also show evidence of a lack of affordable housing supply to meet changing demand. Our changing population -including the growing proportion of older people and single-person households-means there is changing demand for housing types in particular locations.





The Department of Housing's role

The Department of Housing helps Queenslanders directly, by providing public housing and other assistance, and indirectly, by supporting community housing providers.

However, funding for direct housing provision is declining, and the need for affordable housing is increasing.

The costs of maintaining and servicing existing housing are also increasing.

To achieve our goal of "improving people's lives through housing", and t contribute to the government's broad strategic priorities, the Department ha initiated a number of measures to encourage the wider housing system to provide more affordable housing.

The Department's role is outlined in the Affordable Housing in Sustainable Communities Strategic Action Plan, endorsed by Cabinet in June 2001.

Affordable Housing in Sustainable Communities





 To ensure that new housing developments conform to current best practice in planning and design and do not encourage over reliance on private vehicle usage.

Agencies Responsible

Department of Housing, Queensland Transport, DCILGP and EPA.

State Interest Advice

10.1

Legislation, programs and policies requiring planning scheme measures	Legislation, programs which must not be adversely affected by a planning scheme measure	Best practice advice
 Policy: To encourage and facilitate the provision of secure, affordable and appropriate housing through the private and public sectors. To develop and manage public assets in a responsible and accountable manner for the benefit of Queenslanders in 	 Public Housing Program Community Renewal Program Community Housing Program ATSI Housing Program 	 Queensland Residential Design Guidelines (DCILGP) Local Government Housing Need Profiles** (Needs Analysis Unit - D of H)

** The Department of Housing has some capacity to provide housing needs data by local government area, and some limited capacity to provide analysis and support. We are exploring our capacity to increase resources available for this work.

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STATE PLANNING POLICY ON LAND USE PLANNING FOR DISASTER MITIGATION

Thank you for your letter requesting support for a proposed State Planning Policy (SPP) on land use planning for disaster mitigation, and the offer of funding to assist with preparation of the SPP.

I agree that disaster mitigation is a significant State issue that needs to be addressed in local government planning schemes and in development assessment. The SPP will also support the Department's mission to create better communities through preventing, planning for, responding to and recovering from, emergencies and disasters.

Therefore I support the proposed SPP. If your Minister agrees with the proposal, a formal request should be made to my Minister to undertake the notification of his intention to prepare the SPP. Once the Ministers have agreed, it will be desirable to meet as soon as possible to scope out the work program and agree on the funding arrangements.

I am aware your Department is considering a separate SPP on planning for hazardous industries. This proposal would also have my support. I suggest that should your Minister agree with this proposal, a similar formal request to my Minister be made to undertake the notification of his intention to prepare the SPP. Once the Ministers have agreed, it will again be desirable to meet to scope out the work program and agree on the funding arrangements.

Yours sincerely



16 December 1999



13th Floor, 111 George Street, Brisbane, QLD, 4001 PO Box 31, Brisbane Albert Street, QLD, 4002 Telephone: (07) 3235 4311 Facsimile: (07) 3235 4327 http://www.dcilgp.gld.gov.au



Incorporating: Aviation Services CHEM Unit Disaster Operations Disaster Policy & Research Unit SES & VMR Support Unit Business Services

DEPARTMENT OF SMERGENCY SERVICES 20 OCT 1999 **EXECUTIVE SERVICES**

Level 2, Warrian Wing Emergency Services Complex Cnr Park Rd & Kedron Park Rd KEDRON QLD 4031 GPO Box 1425 BRISBANE QLD 4001

Phone: (07) 3247 8506 Fax: (07) 3247 8480

Contact Officer: Pam Davis File Location: R:\ESD\KEDROMDirectorate\MEMO\explan dcilgp.doc

DO2000

MEMORANDUM

TO: Director-General

FROM: Executive Director, CDRS

DATE: 18 October 1999

SUBJECT: State Planning Policy on Land Use Planning for Disaster Mitigation

A Memorandum of Approval for the development of a State Planning Policy on Land Use Planning for Disaster Mitigation is attached for your signature. The development of this State Planning Policy will ensure that disaster mitigation is carried out through Local Government planning schemes.

State Planing Policies are made and adopted by the Minister for Communication, Information, Local Government and Planning (CILGP). A formal consultation process is required by the *Integrated Planning Act 1997* (the Act), thereby increasing public accountability and opportunity for community input. The requirements of the preparation, consultation and adoption stages are set out in Schedule 4 of the Act.

As it is the Minister for CILGP who is responsible for State Planning Policies, approval must be obtained from that Department to proceed with the development of the State Planning Policy. The first stage involves gaining the support of the Director-General of that Department for the preparation of a State Planning Policy.

A letter to requesting this support is also attached for your signature.







Level 2, Warrian Wing Emergency Services Complex Cnr Park Rd & Kedron Park Rd KEDRON QLD 4031 GPO Box 1425 BRISBANE QLD 4001

Phone: (07) 3247 8506 Fax: (07) 3247 8480

Incorporating: Aviation Services CHEM Unit Disaster Operations Disaster Policy & Research Unit SES & VMR Support Unit Business Services

DONCERS

Contact Officer: Pam Davis File Location: staff\pam\spp\moa d-g.doc

MEMORANDUMOFAPPROVALTO:Director-GeneralFROM:Executive Director, Counter Disaster & Rescue ServicesDATE:18 October 1999SUBJECT:State Planning Policy on Land Use Planning for Disaster
Mitigation

BACKGROUND

The Integrated Planning Act 1997 (IPA) requires that a Local Government reviews its planning scheme and either resolves that it is satisfactory or that it should be reviewed in line with the objectives of IPA. Irrespective of the decision made, a six-year rolling review of the Local Government's Planning Scheme is triggered. With 125 Local Governments this will present a continuous work load for the Department of Emergency Services in offering comments on the schemes.

IPA requires that when a Local Government is preparing a planning scheme it should incorporate any applicable State Planning Policy into the scheme. By this means the Planning Scheme provides a single integrated basis for controlling development in the Local Government area.

Local Government Planning Schemes provide the main basis for development decisions. Currently there is no statutory obligation for development applications to be reviewed in relation to hazard mitigation. Only a small proportion of Local Governments exercise any form of disaster management through their planning schemes and this is generally limited to flood management.

ISSUES

Since the advent of IPA, the volume of requests from the Department of Communication, Information, Local Government and Planning for comment on Local Government Planning Schemes, Development Control Plans and other related polices has increased considerably. These responses require considerable Departmental time and resources to respond to and are generally repetitive in nature as similar comments are often being made regarding the lack of an all hazard risk management perspective.

A State Planning Policy would be a key support mechanism to advance mitigation within Local Government areas. This approach is also consistent with the strategy of the State Mitigation Committee which is encouraging Local Governments to undertake an all hazard risk management approach to the development of disaster mitigation plans. These plans would be an input into Council's Land Use and Corporate Plans and Capital Works Programs.

A number of verbal and written requests have been received from Local Governments regarding a State mechanism to assist Local Governments to rebut development proposals in hazard prone areas. Discussions with the Local Government Association of Queensland have indicated in principle support pending consultation.

The development of a State Planning Policy on Land Use Planning for Disaster Mitigation would:

- provide support and advice to Local Governments in developing Planning Schemes;
- ensure that Local Governments address the issues of public safety in the Planning Schemes;
- ensure a level of uniformity of approach to public safety and disaster management;
- reduce the repetitive work involved in reviewing Planning Schemes; and
- assist District staff to provide a consistent approach on disaster management issues from a planning aspect.

RECOMMENDATION

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That you support the attached Proposal for the development of a State Planning Policy on Land Use Planning for Disaster Mitigation.

<u>Executive Director</u> <u>Counter Disaster & Rescue Services</u>

Approved/Not Approved/Please Discuss

DATE: 2-4/ 1-1/99





Level 3, B Block COVERNM Emergency Services Complex Cnr Park Rd & Kedron Park Rd KEDRON QLD 4031

GPO Box 1425 BRISBANE QLD 4001

Contact Phone:

P Davis (07) 3247 8506

Mr

Director-General Department of Communication, Information, Local Government and Planning GPO Box 31 BRISBANE, ALBERT STREET QLD 4002

Re: State Planning Policy on Land Use Planning for Disaster Mitigation

As you are aware, the Department of Emergency Services is committed to public safety and the wellbeing of Queensland communities. This is achieved through preventing, planning for, responding to, and recovering from, emergencies and disasters.

While loss of life from natural hazards has decreased this century (essentially due to increased warning systems and emergency service intervention), there has been a marked increase in loss of livelihood, property and infrastructure. This has been largely due to rapid urbanization and infrastructure development without due regard to certain natural hazards as planning constraints.

Commonwealth changes to the Natural Disaster Relief Arrangements (NDRA) have linked evidence of mitigation to continuing Commonwealth financial support through NDRA. Essentially Local overnments that have received financial assistance since 1 July 1996 may not receive further commonwealth NDRA support unless they can demonstrate that they have undertaken mitigation planning.

An issue for the management of disaster mitigation is the location and characteristics of new development. In some cases, the risks associated with natural hazards obviously will justify severe constraints on development, while in others development can be undertaken with certain preventative measures. Hence, Local Governments are key players in disaster mitigation, as planning schemes provide the main basis for development decisions. Only a small proportion of Local Governments exercise any form of disaster management through their planning schemes and this is generally limited to flood management.

Since the advent of the *Integrated Planning Act 1997* (IPA), the volume of requests from your Department for comment on planning schemes and other related polices has increased considerably. It is noted that responses to these are generally repetitive in nature, as similar comments are being made regarding the lack of an all hazard (bushfire, flooding, earthquake etc) risk management perspective to the plans. There is no clear statutory obligation on Local Governments to incorporate disaster

mitigation in their plans and hence no statutory obligation for development applications to be reviewed in relation to hazard mitigation. This places the community at considerable risk.

A number of verbal and written requests have been received from Local Governments regarding a State mechanism to assist Local Governments to rebut development proposals in hazard prone areas. As well, discussions with the Local Government Association of Queensland have indicated in principle support pending consultation.

As you are aware, IPA provides a number of mechanisms for the input of State interests into a planning scheme decision making process and a State planning policy is one of the main avenues for this input. State Planning Policies cover any subject which, in the opinion of your Minister, affects an economic, social, or environmental interest of the State or Region and advances the purpose of IPA, - i.e. ecological sustainability. A State Planning Policy on Land Use Planning for Disaster Mitigation fulfills these obligations and such a policy would be a key support mechanism to advance mitigation at a Local Government level.

This approach is also consistent with the strategy of the State Mitigation Committee, which is developing an all hazard risk management methodology to enable Local Governments to develop disaster mitigation plans. These plans would be an input into Councils' Land Use and Corporate Plans and Capital Works Programs.

As an alternative to a State Planning Policy, guidelines have been considered. However, past experience with guidelines prepared for bushfire risk has been that these guidelines have frequently been ignored.

In summary, the development of a State Planning Policy on Land Use Planning for Disaster Mitigation would:

- Provide support and advice to Local Governments in the development of Planning Schemes;
- Ensure that Local Governments addressed the issues of public safety in the Planning Schemes;
- Ensure a level of uniformity of approach to public safety and disaster management; and
- Provide an increased level of protection from disasters to the Queensland community.

he project would be funded by the Department of Emergency Services and jointly managed by this Department and the Department of Communication, Information, Local Government and Planning.

I therefore request that you support the preparation of a State Planning Policy: Land Use Planning for Disaster Mitigation.

A copy of the proposal is attached for your perusal.

Yours sincerely

