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EMERGENCY RISK MANAGEMENT REPORT FOR

SHOALHAVEN CITY COUNCIL

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1. EXECUTIVE SUMMARY

1,717 risk assessments were presented by the combat agencies in the Shoalhaven City Council area that were pared down to 1,176 viable assessments. From these assessments information can now be prioritised by the LEMC to control the hazards to communities and to seek funding for mitigation programs. Focus should be given to addressing the "High" and "Extreme" risks, the "Likely" and "Almost Certain" likelihood events and the consequences that are potentially "Major" to "Catastrophic".

The results provided in this report need to be expanded and validated by the LEMC prior to actions being prioritised and funded. However, the conclusions lead to a number of action elements based on the information obtained that could form the basis for recommendations and decisions by the LEMC in its report to the SEMC.

Acknowledgements

CSI would like to thank those members of the Emergency Combat Agencies and associated support agencies who took the time to be involved in the workshops and commend the LEMC on their ability to gather all the available combat and support agencies to the meetings to achieve the tasks set. Use of the same group in the future to review the data and maintain the database can lead to nothing but success. I would like to thank you for the opportunity to work with your Local Government area and in particular I would like to thank Bill Paterson and John Knowles and the team on the LEMC for their support and comments during the conduct of the project and to Kim White for reinvigorating the process. If you have any questions please do not hesitate to contact me.

2. SUMMARY OF THE PROJECT MANAGEMENT PLAN

The Shoalhaven LEMC were called together to conduct the risk assessments associated with the NSW State Emergency Management Committee (SEMC) direction to conduct community based risk assessments. The final Emergency Risk Management Plan (ERMP) and Mitigation Strategies reports were to be submitted to the SEMC by 2007 as high importance activities. While the work was undertaken within the time frame required the reports and reporting to the State SEMC was delayed due to administrative and organisational restructures. Details of the project management plan as implemented are as follows:

- Generally assist the project manager in delivery of the project,

- Liaise with all relevant stakeholders, identify key people, provide them with relevant information on the project, and gain their support for and involvement in the process,

- Convene and conduct meetings with stakeholders as necessary to develop the risk assessment process,

- Prepare and conduct workshops for stakeholders as required to implement the risk management process,

- Collect, review and analyse data and information from stakeholders and other parties and enter it into the project database software,

- Prepare and present reports to stakeholders as requested by the project manager,

- Prepare media releases and other documentation as required.

Meetings with the LEMC included representatives identified in the project management team and the project team lists developed by the LEMC. CSI sought additional representation from some of the combat and support agencies as shown in Table 1.

LEOCON	LEMO	DEMO (if available)
NSW Police	NSW Fire Brigade	NSW RFS
NSW Ambulance / Health	State Emergency Service	Local Government Authorities
Dept. of Agriculture	Electricity Supplier to region	Gas Supplier to region
Water Supplier to Region	Road Traffic Authority	Australian Rail Track Corporation
Navy Representative	Telstra	Members of LEMC not mentioned

Table 1 – Representatives on the Project Team Meetings

Those shown as highlighted were already included in the project team and the management team lists. Those not highlighted were considered necessary to get expert advice on some of the hazards addressed as part of the ERM process.

The risk assessment process followed the flow chart contained in *Australian / New Zealand Standard 4360:1999 Risk Management* (AS/NZS 4360) and is shown in figure 1. This is not the most up to date version of the AS/NZS 4360 which was reviewed in and reissued in 2004, however, the process has not been changed and the risk assessment tools shown later are copied directly from the 1999 version of the Standard into the Implementation guide used by the SEMC.
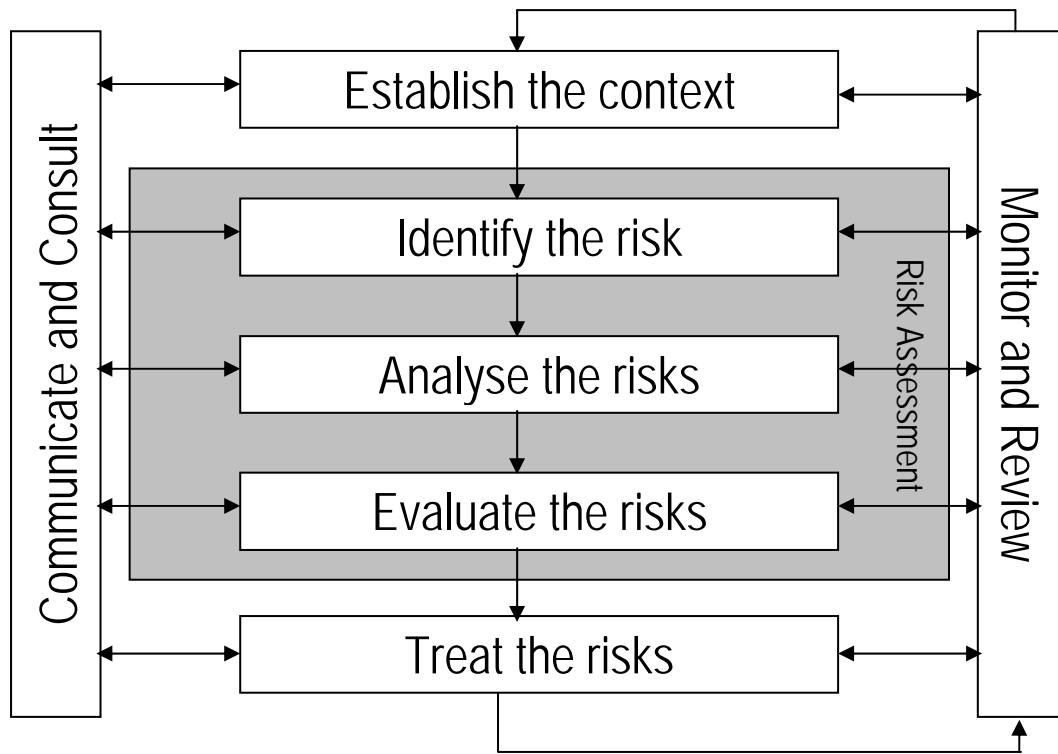
Figure 1 – Risk Management Process Flow Chart as shown in AS/NZS 4360:1999

3. ERM CONTEXT STATEMENT

The context provided in the Implementation Guide is:

> "Identify, analyse and evaluate risks with the potential to require a significant and coordinated multi agency response."

If this context was used no-one who read the assessments, and contained in the developed database, would understand why some of the other potential risks were not assessed. It was decided that all risks would be assessed and those not requiring a significant and coordinated multi-agency response would be annotated accordingly. Each of the risk assessments undertaken were entered into a database (Risk Assessment Workshop or RAW) for review by the LEMC on a regular basis.

3.1 IDENTIFIED PROBLEMS

Risk Statements

It is difficult to get untrained people to develop a risk statement based on the requirements of the standard. While the CSI facilitator did not dictate the requirements of the statement he did try to keep the participants of the process focussed on both the context and the need to keep the three elements clearly defined in the risk statements. This worked in most instances and overall the risk statements are comprehensive.

Perspective of Assessors

Every assessor and every stakeholder who provided input to the development of the risk assessments and the database of information did so from their own perspective and life experiences. In some instances this was far left field or far right field, or from an expert perspective. At all times the CSI facilitator gave the participants time to express their views and to moderate the final responses in line with the majority of attendees. Where there was an insistence of including information this was done and combined with the experts opinions contained in the risk assessment database.

Many of the risk assessments have shown an extreme risk associated with the many hazards facing communities. This may be a problem for the prioritisation of work by the LEMC, however, as the comments were presented and reviewed by the combat agencies it is believed that the prioritising of action can be left with the combat agencies to implement mitigation strategies based upon their risk assessments.

Prioritisation

The LEMC had to decide on the priorities for the implementation of the mitigation strategies. CSI suggested that with many of the hazards identified and their associated risk levels, that each could be handled independently by the responsible combat agencies and that the priorities could be handled in-house by each of the agencies. Reporting on the status of reviews, plans and outcomes could be linked to the priorities and direction of the LEMC which could include season influences. Additional details on prioritisation are contained later in the report.

3.2 PROCESS LIMITATIONS

The ERM project used the tools and descriptors provided in the SEMC Implementation Guide. While this is not the most up to date version of risk management available it was well recognised in industry and was suitable for use in the ERM context. The tools are weighted towards a risk averse organisation which is applicable when undertaking risk assessments from a community perspective. There were no known process limitations other than those described as problems at 3.1 of this report.

3.3 MANAGEMENT FRAMEWORK

Responsibility for managing the ERM Project, including the final decision making, rests with the local emergency management committee (LEMC) as they have:

- Current and appropriate authority

- Appropriate agency and stakeholder representation

- An established reporting system

- Acknowledged and accepted expertise.

The role of the Consultant was to facilitate the collection of data and information through meetings with the LEMC, the project team and the project management teams. The role extended to the development of a database for undertaking future reviews of priorities and plans based on the risk assessments undertaken and to analyse the data base and prepare the final draft report from council.

3.4 RISK EVALUATION CRITERIA

Likelihood Descriptors

Almost Certain	Expected to occur, many recorded incidents, strong anecdotal evidence, great opportunity, reason or means to occur. May occur or be exceeded once every 1-5 years
Likely	Will probably occur, consistent record of incidents and good anecdotal evidence; considerable opportunity, reason or means to occur. May occur or be exceeded once every 20 years
Possible	Might occur, a few recorded incidents in the locality and some anecdotal evidence in the community; some opportunity, reason or means to occur. May occur or be exceeded once every 100 years. Will generally be close to or exceed past records of severity.
Unlikely	Is not expected to occur. Isolated recorded incidents in this country with anecdotal evidence in other communities. Little opportunity, reason or means to occur. May occur or be exceeded once every 250 years. Will almost always break previous records of severity.
Rare	May only occur in exceptional circumstances. Some recorded events on a worldwide basis. May only occur or be exceeded once every 500 years or more. Can approach the upper theoretic limits of severity.

Table 2: Likelihood Descriptors

Consequence Descriptors

	Human Life and Health	Property, Financial and Environmental
Catastrophic	• Significant fatalities • Large number of severe injuries • Extended and large numbers requiring hospitalisation • General and widespread displacement for extended duration	• Extensive damage • Extensive personal support • Community unable to function without significant support • Significant impact on the environment and/or permanent damage
Major	• Fatalities • Extensive injuries and significant hospitalisation • Large numbers displaced (more than 24 hours duration) • External resources required for personal support	• Significant damage that requires external resources. Community only partially functioning with some services unavailable. • Some impact on the environment with long term effects • Significant financial loss – some financial assistance required.
Moderate	• Medical treatment required but no fatalities • Localised displacement of people who return within 24 hours • Personal support satisfied through local arrangements	• Localised damage that is rectified through local arrangements. Normal community functioning with some inconvenience. • Some impact on the environment with no long-term effects or small impact on the environment with long term effect • Significant financial loss
Minor	• Small number of injuries and no fatalities. First aid treatments required. • Some displaced people (less than 24 hours) • Some personal support required • Some community disruption (less than 24 hours)	• Some damage • Small impact on the environment with no lasting affects • Some financial loss
Insignificant	• No injuries or fatalities • Small number or no people are displaced for a small period of time • Little or no personal support required (support not monetary or material)	• Inconsequential or no damage • Little or no disruption to the community • No measurable impact on the environment • Little or no financial loss

Table 3: Consequence Descriptors

		CONSEQUENCES				
		Catastrophic	Major	Moderate	Minor	Insignificant
LIKELIHOOD	Almost Certain	Extreme	Extreme	Extreme	High	High
	Likely	Extreme	Extreme	High	High	Moderate
	Possible	Extreme	Extreme	High	Moderate	Low
	Unlikely	Extreme	High	Moderate	Low	Low
	Rare	High	High	Moderate	Low	Low

Figure 2: Risk Matrix

4. RISKS

4.1 HAZARD DESCRIPTION

Natural Hazards	Technological Hazards	Biological Hazards
Earthquake	Aeronautical	Communicable Disease – Animals
Extreme Cold	Bridge Collapse	Communicable Disease – Human
Fire – Bush	Building Collapse	Communicable Disease – Plants
Fire – Grass	Dam Failure	
Flood	Explosion	
Fog	Hazardous Materials	
Infestation – Animal	Fire – Industrial/Commercial	
Infestation – Insect	Fire – Residential	
Infestation – Plant	Industrial Accident	
Landslip/Rock fall/Mudflow	Land Subsidence	
Severe Storm – Electrical	Infrastructure Failure – Power	
Severe Storm – Hail	Infrastructure Failure – Water	
Severe Storm – Rain	Infrastructure Failure – Sewerage	
Severe Storm – Wind	Infrastructure Failure – Communication	
Snow Storm	Infrastructure Failure – Gas	
Tornado	Mine Accident	
	Pollution – Chemical	
	Pollution – Oil/Fuel	
	Pollution – Hazardous Waste	
	Radiological Hazards	
	Transport Accident – Air	
	Transport Accident – Rail	
	Transport Accident – Road	

Table 4: Identified Hazard

4.2 DEFINITIONS

Hazard	Definition / Description
Aeronautical	These are not aircraft accidents but include events such as the dropping of aircraft parts or space debris impacting the earth.
Bridge Collapse	Bridges that may be included are local bridges critical for transport or connectivity for access to areas to fight fires or floods
Building Collapse	Buildings can collapse due to age or earthquakes or terrorist activity or due to damage associated with another event (fire or flood)
Communicable Disease – Animals	Diseases that affect animals and are communicable from animal to animal and animal to human – Chlamydia, Foot and Mouth, Mad Cow, anthrax
Communicable Disease – Human	Diseases that affect humans and that are transmitted from human to human – measles, influenza, meningococcal
Communicable Disease – Plants	Diseases that affect plants and are communicable from plant to plant – wheat rust,
Dam Failure	Dams that store vital water for consumption or irrigation and that if they collapse will cause damage downstream or impact infrastructure or socioeconomics in the region
Earthquake	Natural phenomenon resulting a severe shaking of the ground and attached buildings and structures
Explosion	Explosions are linked to the unplanned release of damaging energies and may include pressure vessels, flammable atmospheres, gas storage facilities and containers
Extreme Cold	Temperatures below freezing for extended periods of time
Fire – Bush	Fires that relate to treed and scrub areas
Fire – Grass	Fires that relate to grassed or low crop areas
Fire – Industrial/Commercial	Industrial related fires
Fire – Residential	House fires
Flood	An increase in water level such that it impacts on people or structures causing damage. Includes flash flooding
Fog	Impacts on ability to see and could lead to transport accidents but needs to be controlled in its own right when present
Hazardous Materials	Chemicals, dangerous goods, hazardous substances
Industrial Accident	An event at an industrial premises that could cause harm to people, property or infrastructure
Infestation – Animal	Animal infestations might include cane toads, rodents,
Infestation – Insect	Insect infestations might include ants, grasshoppers, mosquitos
Infestation – Plant	Plant infestations might include exotic weeds, Paterson's curse, tussock grass
Infrastructure Failure – Communication	Loss of telephone, mobile telephone, radio, two way communications systems
Infrastructure Failure – Gas	Loss of reticulated gas systems
Infrastructure Failure – Power	Loss of electrical power supply to the region
Infrastructure Failure – Sewerage	Loss of sewerage treatment and storage facilities and infrastructure
Infrastructure Failure – Water	Loss of water supply to a town or the region
Land Subsidence	Caused by mining or natural collapse of the soil
Landslip/Rock fall/Mudflow	Including coal storage piles
Mine Accident	Resulting in the loss of the mine, people, property
Pollution – Chemical	Caused by illegal dumping, accidents in road and rail transport affecting people and the environment
Pollution – Hazardous Waste	Industrial waste disposal or accidents involving industrial waste transport or disposal
Pollution – Oil/Fuel	Pollution of waterways and the environment
Radiological Hazards	Deliberate or accidental loss of control of radioactive substances or sources in the region
Severe Storm – Electrical	Electrical storms can impact on electricity supply, communications and cause the death of people and or fires
Severe Storm – Hail	Hail storms causing damage to property or death to people or stock
Severe Storm – Rain	Causing flooding, flash flooding
Severe Storm – Wind	Flying debris, damage to property

Hazard	Definition / Description
Snow Storm	Interfering with transport and infrastructure with the potential to damage property, stock and people
Tornado	Small high velocity wind storm affecting small areas and communities

Hazard	Definition / Description
Transport Accident – Air	Aircraft crash or accident
Transport Accident – Rail	Rail accident / derailment
Transport Accident – Road	Accidents involving many deaths that are not handled as part of routine accident management

Table 5: Hazard Definitions

4.3 PREVIOUSLY DEFINED RISKS

Emergency Management Australia (EMA) has, in the past, issued documentation describing the level of risk of certain events. These risk profiles were included in a number of maps that were used to guide the participants involved in the risk assessment process. These maps are contained in the following figures.
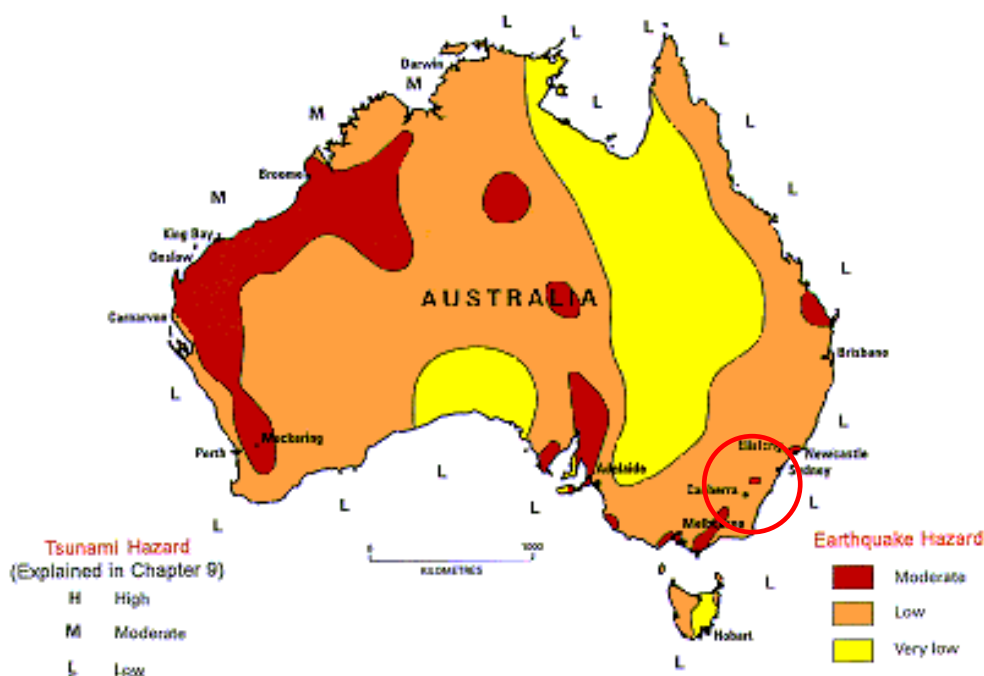

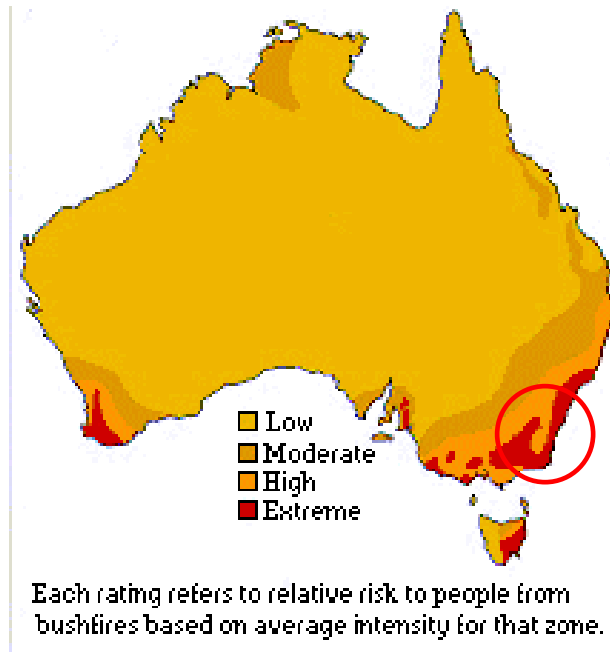**Figure 3: Tsunami and Earthquake Hazards/Risks**
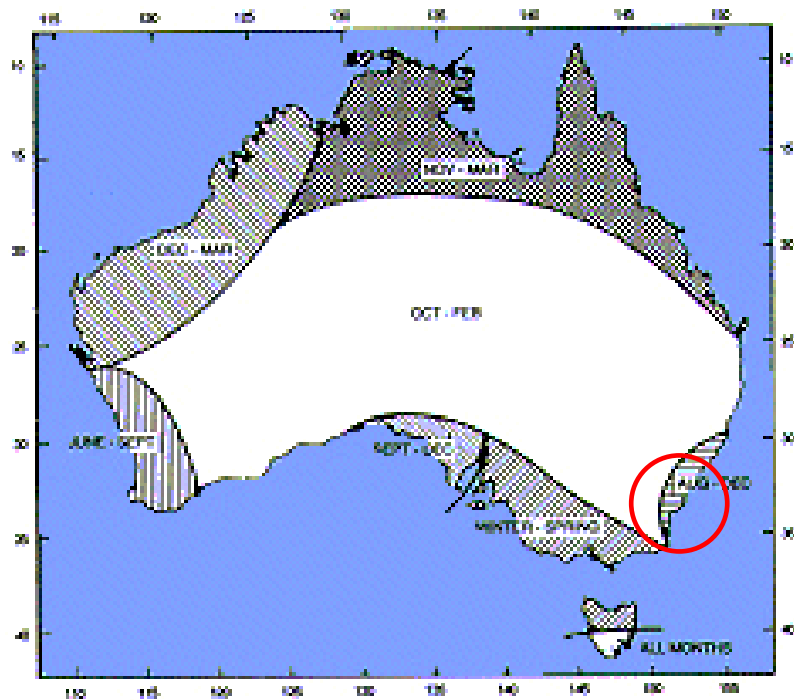
Figure 4: Bushfire Risks

Figure 5: Storm and Wind Risks

4.2 COMMUNITY DESCRIPTION

Maps providing a breakdown of each of the geographical areas have been included in the database. The communities included a number of towns and general regions covered in the following list:

Bawley Point	Jervis Bay Territory
Bendalong	Kangaroo Valley
Berry	Lake Conjola
Bomaderry	Milton
Burrill Lake	Nowra
Callala Bay	Rural Central
Cambewarra	Rural North
Comerong Island	Rural South
Culburra	Shoalhaven Heads
Currarong	Sussex Inlet
Durras North	Tabourie Lake
Greenwell Point	Tomerong
HMAS Albatross	Ulladulla
Huskisson	Wandandian

4.3 RISK STATEMENTS

There are 44 hazards, 28 regional locations and 6 risk elements resulting in the potential for up to 7,392 risk assessments. When coupled with the context which relates only to risks with the potential to require a significant and coordinated multi - agency response, not all the risk assessments are considered to be relevant. However, the risk assessments were undertaken with the view to keeping stakeholders informed on what was and was not considered in the risk management / risk assessment process as part of the ERM project. The method used to create the risk statements included the following elements in the statement:

- What is my problem?

- How will it impact on the people / property / environment / infrastructure / animals (stock) / socioeconomic issues? and

- Will it require a significant and coordinated multi agency response?

This was one of the most difficult aspects in developing the risk statements which are aimed at getting a picture in words of what the problem is and how it will impact the community. The combat agencies performed well and provided more information than was expected in the development of risk statements and supporting information on the scope of the problems. 1,717 risk assessments were entered into the original database and this was pared down by the LEMC to 1,176 applicable risk assessments based on the SEMC definitions.

5. RISK ANALYSIS AND EVALUATION

5.1 SUMMARY OF DATA ANALYSIS

The risk assessment tool used to undertake the risk assessments is contained in the *NSW State Emergency Management Committee – Implementation Guide for Emergency Management Committees* (Implementation Guide) and was based on the *Australian / New Zealand Standard 4360:1999 – Risk Management* (AS/NZS 4360:1999). A copy of the matrix and descriptors is

included for information at Figure 2 with the descriptors at Tables 2 and 3 shown previously in this report.

RISKS

Review of information contained in the Risk Assessment Workshop (RAW) Database disclosed, in broad terms, the following information:

➢ The responses provided were broken down into the various risk types by using the risk matrix provided by the SEMC and based on AS/NZS 4360:1999 in the pie chart at Figure 6.
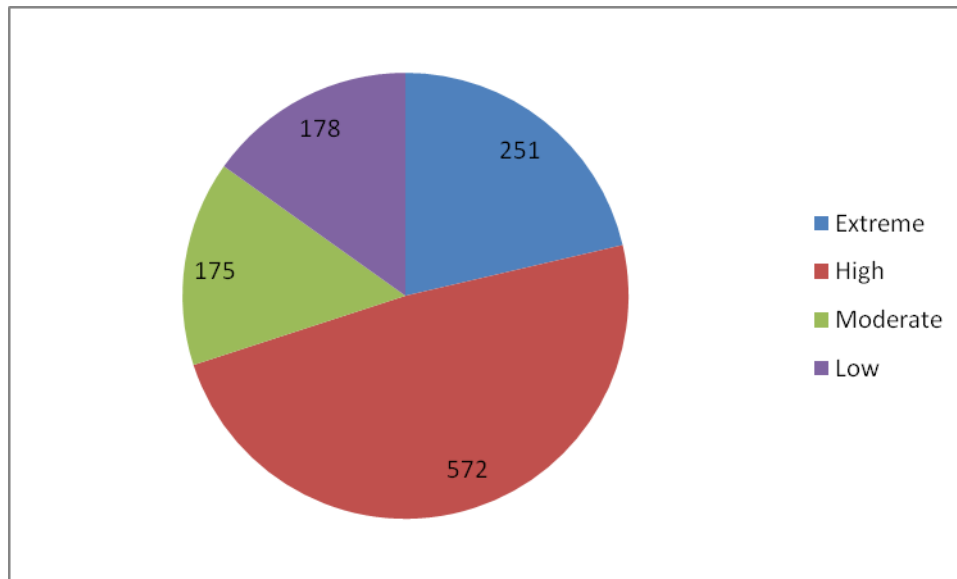

Figure 6 – Breakdown of Risk Assessment Results

- o 251 Extreme, 572 High, 175 Moderate, and 178 Low risks were identified
- o Many of the risk assessments will not require the activation of the LEMC but have been assessed.
- o 70% of the risks were assessed as High to Extreme which is as a result of the risk matrix used by the SEMC and represents the risk appetite of the organisation (risk averse) and the focus of the combat agencies who undertook the risk assessments.
- o It is understood that many of the High to Extreme risks are covered by existing emergency management implementation plans. These plans, and linked prevention programs have been reviewed in light of the risks identified to the communities involved and/or affected. The risk management plans have also been reviewed by the combat agencies within the last five years.
- o High to Extreme risks should be dealt with by the combat agencies in their prevention and preparedness programs in the first instance as high priority and should be reported to the LEMC on a regular basis (timing to be decided by the LEMC).

Extreme Risks

➢ Of the Extreme risk results received (n=251) the top 10 are shown in figure 7.
  - o This list needs to be prioritised by the LEMC as the results are based on numbers of risk assessments conducted with Extreme risk recorded and not according to the community perceptions of risk.

o The priorities could be divided by combat agency and dealt with by the LEMC as reports on a regular basis. A recommendation for priorities will be provided later in the report noting that the LEMC must make the decision.
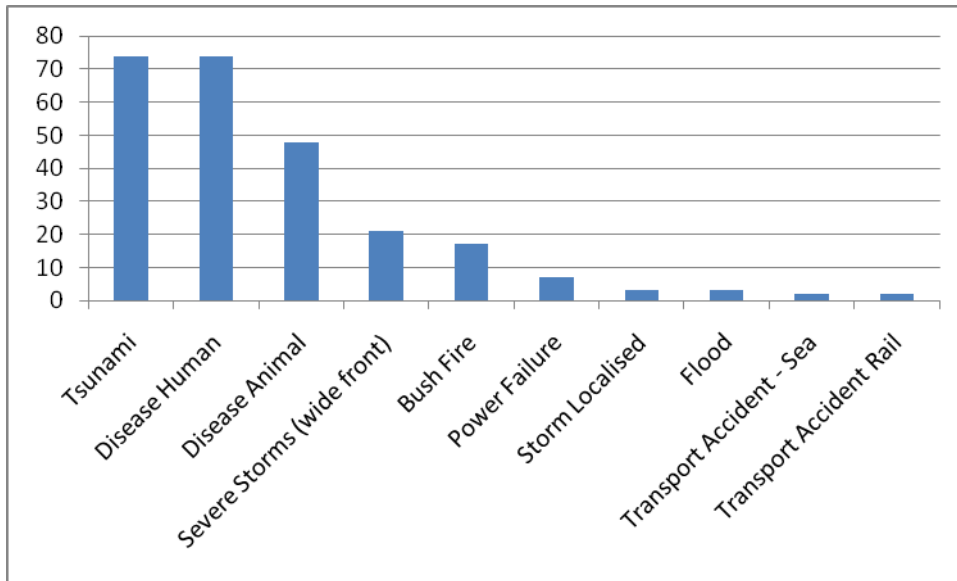

Figure 7: Top 10 Extreme Risks

➢ There are opportunities to prepare disease prevention programs, to harden buildings against wind and hail and to adjust fire breaks and exclusion zones to reduce the impact of bushfire. Controls were provided in many of the responses provided and will need to be managed by the combat agencies following a review of existing plans and reported to the LEMC. It was believed that little could be done to prevent a catastrophic tsunami. The LEMC will need to update the database to include controls and timeframes for monitoring.

High Risks

➢ 572 assessments were recorded as High Risk. The top 10 High risks are shown in Figure 8.
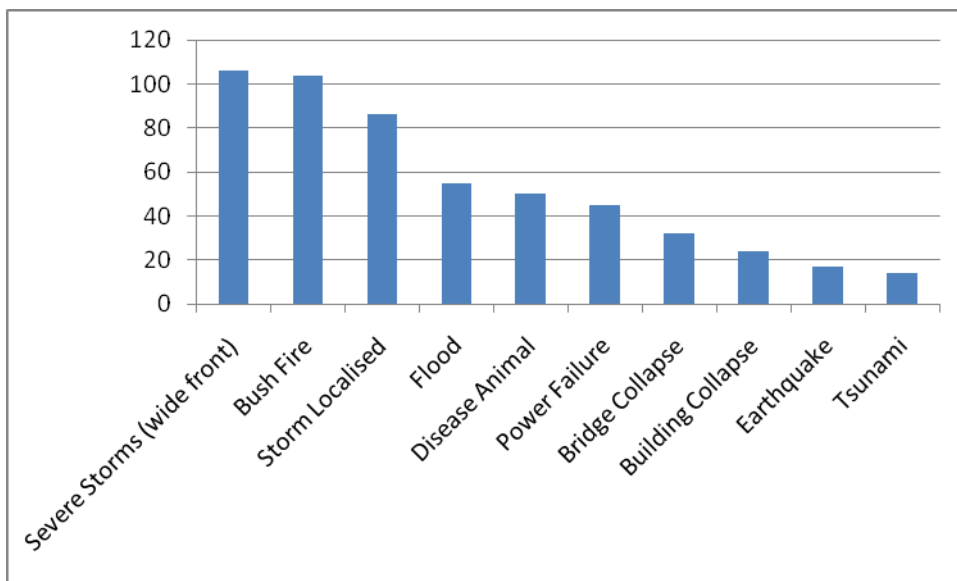➢

Figure 8: Top 10 High Risks

- o As with the Extreme risks, the high risk list needs to be prioritised from a community perspective and according to combat agency. This will be dealt with later in the report under the heading Priorities for Consideration.

LIKELIHOOD

The likelihood of an emergency event occurring was examined in the analysis of the data. The breakdown of Likelihood of an event occurring is shown at Figure 9.
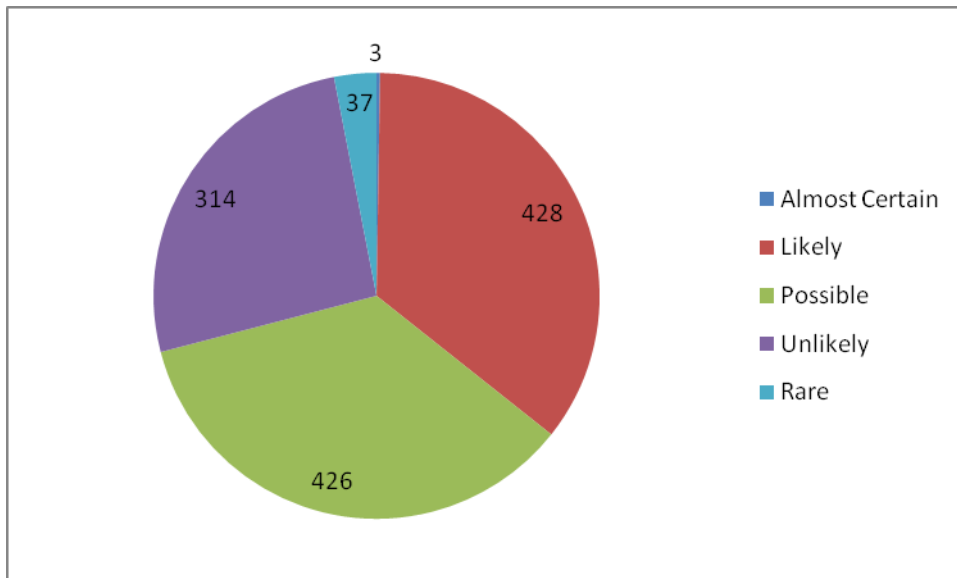

Figure 9: Breakdown of Likelihood

Almost Certain

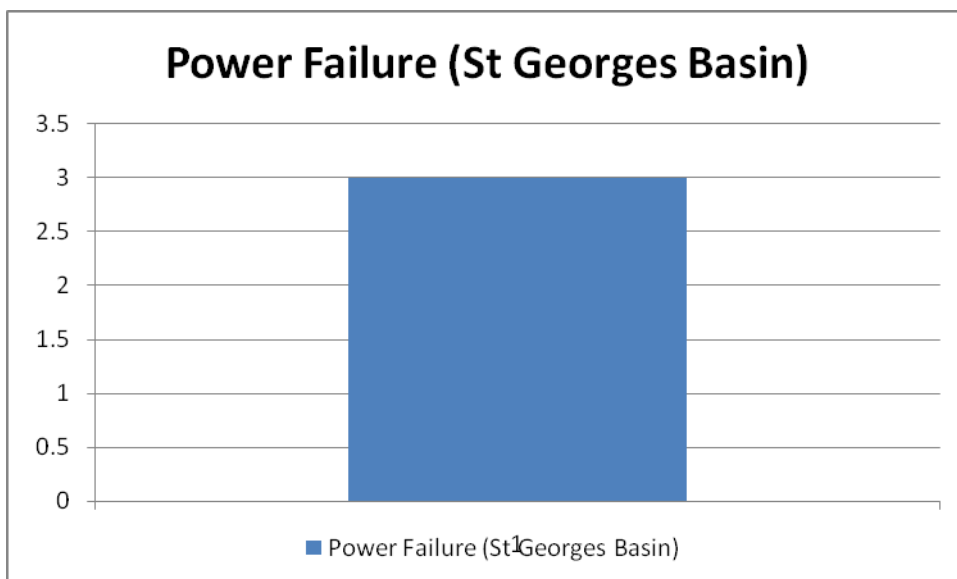- ➤ The Almost Certain events are shown in Figure 10.

Figure 10: Almost Certain Events

➢ The "Almost Certain" events (n = 3) were examined and it was shown a power failure is almost certain in the St Georges Basin area resulting in high to extreme impacts on infrastructure (sewerage and water), people and property. While this event's occurrence cannot be predicted, mitigation plans have been developed to reduce the impact of these events on the community and hopefully to prevent the occurrence or reduce the likelihood of the occurrence.

Likely Events

➢ The top 5 Likely events are shown in Figure 11.
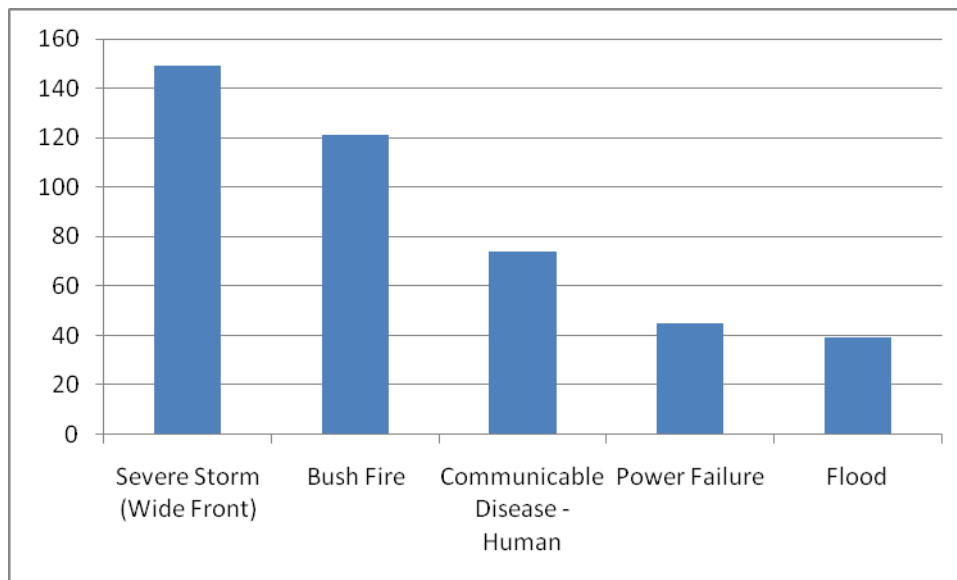

Figure 11: Top 5 Likely Events

➢ The impact of storms can only be controlled by improving construction standards and maintaining existing storm-water flow systems. The intensity of bush fires can be controlled by hazard reduction burning and the creation of fire breaks around critical areas and infrastructure. Human disease is well known to the Health Services in the region and mitigation plans are in place. Power failure in both the almost certain and likely likelihood area suggest that power infrastructure may not have kept up with housing development within the city.

CONSEQUENCES

A review of the consequence data disclosed 62 potentially "Catastrophic" events and 333 "Major" events for the Shoalhaven City region based on the submissions. A breakdown of Consequences is shown in Figure 12.
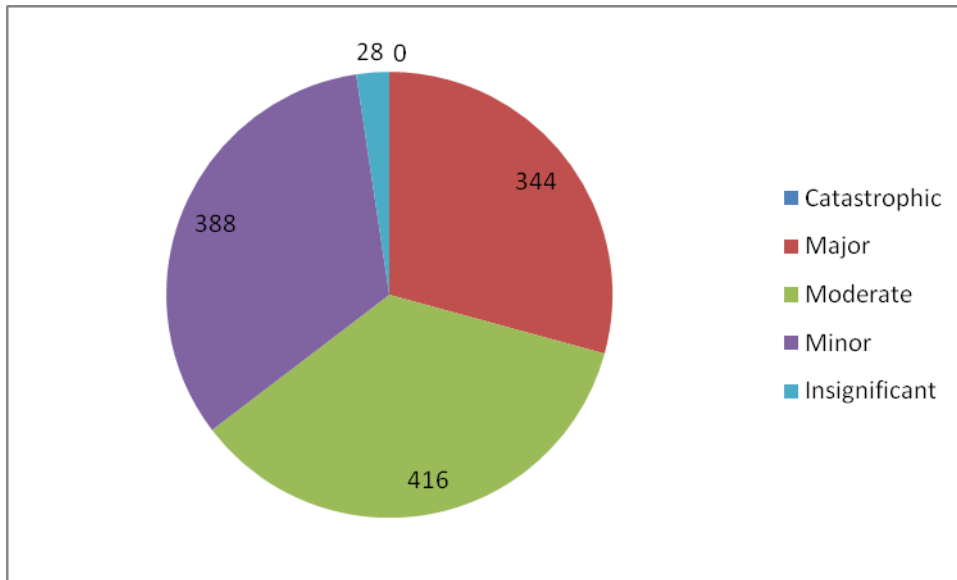
Figure 12: Breakdown of Consequences

Catastrophic Consequences

➢ There were no catastrophic events identified in any of the 1,176 risk assessments contained in the database.

Major Consequences

➢ The top 10 Major Consequences are shown in Figure 14.
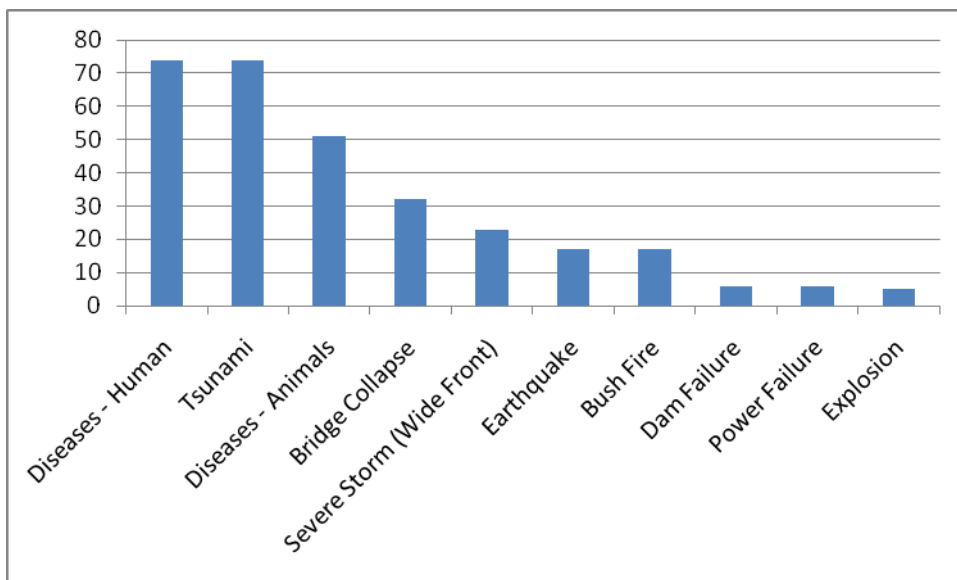
Figure 14: Top 10 Major Consequence Events.

➢ Human disease is well known to the Health Services in the region and mitigation plans are in place. It was believed that little could be done to prevent a catastrophic tsunami. Animal diseases have been an issue in the past with an outbreak of Equine Influenza in the recent past. This was handled under a quarantine program that affected a number of States in Australia. Severe storms cannot be controlled and the potential consequences

can only be managed through improved building construction and education. Earthquakes are rare but not impossible and the consequences could be major. Bush fires can be managed and intensity reduced by regular hazard reduction burning and the creation of fire breaks or buffer zones around towns and villages.

➢ Many of the risk assessment results have been based on the individual's bias or knowledge for the area being assessed or the level of the population exposed in these regions creating the perceived level of risk.

5.2 SUMMARY OF EVALUATION

A number of hazards/risks present themselves as being almost certain or likely and in many cases leading to major events. Most of these are shown as extreme to high risk in the database. This aligns with the context and the risk appetite shown in the risk assessment tools provided by the SEMC and can be prioritised by the combat agencies and reported to the LEMC in a timeframe aligned to the Priority Action table (Table 6).

The most important hazards/risks that are likely in the region are:

Bushfires
Communicable Diseases - Animal
Communicable Diseases - Human
Power failures
Storms of all types

5.3 RISK REFERRAL

In this instance there is little hope of risk referral in the way of insurance. The only possible means of referring risk from the LEMC is centred in the development and maintenance of prevention strategies and recovery plans by the combat agencies. Most of the hazards and associated risks cannot be predicted.

Extreme to High risks that have been identified need to be referred to Combat Agencies for the development, review and maintenance of emergency management plans.

The Completed Database

7,392 risk assessments were identified for completion and return in soft copy form for data entry. A 95% return including non-applicable risks provided an excellent basis from which to prioritise and review risks associated with emergency management for the region into the future. This process aligns with the original SEMC intention of gathering the data, populating the database and prioritising the risks for action. The data collected provides information on consequence and likelihood of events impacting on the communities in the region and provides a risk outcome that allows prioritisation of effort for the development of preparedness programs into the future. From the return 1,176 risk were deemed of importance to the task and were contained in the database for future review, analysis and works prioritisation.

A broad data analysis was conducted on the database and data was exported to Microsoft Excel (through the tools in the database) for analysis. Details were reported in previous sections of this report.

The database can be used by the LEMC to monitor risks in the region and to align priorities according to shifting risk patterns. These shifting risk patterns may be seasonal by nature. The completed database was provided to the Chair of the LEMC at the completion of the project and as part of this report.

6. RISK TREATMENT

6.1 Risk Treatment Options

Risk treatment normally follows the hierarchy of controls which is:

- Elimination – the removal of the hazard
- Substitution – replacing the hazard with something less hazardous
- Isolation – isolating the people from the hazard
- Administrative controls – training and education about the hazard and
- Personal Protective Equipment (Not applicable to the ERM Project)

The higher the controls position in the hierarchy of controls, the more effective the control.

With the ERM project for the Shoalhaven City Council, most of the hazards and associated risks are out of the control of the LEMC. Natural hazards like storms and earthquake, bush fire, floods, fog and heatwaves are not able to be controlled except through mitigation programs which are designed to reduce the consequences or time for recovery from such events. Man made hazards such as transport accidents, mine accidents, pollution, bridge and building collapse, dam failure and infestations are generally capable of being controlled but not eliminated or substituted. Probably the most important control available to the LEMC would be the isolation of an affected community from the loss of control of the hazard. Education and training provide information to the affected community but do not directly control the hazard.

6.2 Assessment Criteria for Risk Treatment Options

In many cases these options should be managed by the combat agencies responsible for the management of the hazards using a number of different methods including:

- The potential threat to a community from the hazard

- Priorities according to the determined level of risk

- The level of the consequences and likelihood of those consequences occurring

- Cost benefit analyses for treatment options

It is up to the LEMC to determine the treatment options. However, it is better left to the Combat Agencies to determine treatment options and report results and methods to the LEMC on a regular basis.

6.3 Summary of Risk Treatment Planning

Many risks are out of the control of the LEMCs and as such cannot be prevented (natural hazards). Consequences can be mitigated by proper planning and the development of mitigation plans to reduce the impact of emergencies on the affected communities. Combat and support agencies should review plans associated with the mitigation of emergencies on a regular basis.

PRIORITIES FOR CONSIDERATION

Assessments were conducted using different perspectives and specialist assessors with different opinions. The risk elements used to undertake the various assessments (considered to be in a priority order) included:

  (a) People

  (b) Property

  (c) Infrastructure

  (d) Environment

  (e) Animals/Stock

  (f) Socio-Economic

If the LEMCs wish to reprioritise these risk elements they are free to do so and it will not impact on the proposed method of actioning tasks through the combat agencies.

To be able to handle the application of priorities through the LEMC it is recommended that the hazards be divided by combat agency for action based on the risk levels, likelihood of an event occurring and consequences if the event should occur. Priorities could be assumed as shown in Table 6 but will need to be determined by the LEMC in consultation with the Combat Agencies.

Priority	Action
1.	Report status of prevention planning and review of response plans at every meeting (at least quarterly) of the LEMC. Report incidents requiring activation of an emergency plan either in part or in full. (Extreme Risks)
2.	Six monthly reporting of the status of prevention planning and reviews. (High Risk)
3.	Annual report on the status of prevention and response plans and associated reviews. (Moderate Risk)
4.	Bi annual review of risks (Low Risk)

Table 6: Suggested Priority Actions

Priorities for the LEMC, based on the priorities shown in Table 6 and an evaluation of the likelihood, consequences and risk levels taken from the database, for selected regions, may be as shown in Table 7 for consideration by the LEMC. It should be noted that the assessments do not relate to all regions within the study and analysis.

Combat Agency	Hazard	Worst Likelihood	Worst Consequence	Worst Risk	Priorities for LEMC
HMAS Albatross	Aeronautical	TBA			4
ARTC	Transport Accident Rail (Berry and Bomaderry)	Possible	Major	Extreme	1
Country Energy	Infrastructure Power	Almost Certain	Moderate	Extreme	1
NSW Department of Agriculture	Communicable Disease Animals Communicable Disease Plants Infestation Animal Infestation Insect Infestation Plant	Possible TBA TBA TBA TBA	Major	Extreme	1
LEMC	Review of combat agency planning Update of database - annually				1 3
Local Government	Bridge Collapse (Nowra) Sewerage Failure Water Failure Landslip/rock fall	Unlikely TBA Possible TBA	Major Moderate	High High	2 2
NSW Ambulance	Heat Wave	TBA			
NSW Fire Brigade	Fire – Industrial/Commercial Hazardous Materials	TBA Possible	Minor	Moderate	3
NSW Health	Communicable Disease Humans	Likely	Major	Extreme	1
NSW Police	Aeronautical Building Collapse Earthquake Transport Accident Air Transport Accident Road	TBA Unlikely Unlikely Unlikely A. Certain	Major Major Major Major	High High High Extreme	2 2 2 1
RFS	Fire – Bush	Likely	Major	Extreme	1
SES	Flood Severe Storm (all types)	Likely Likely	Major Major	Extreme Extreme	1 1
State Water	Dam Failure	Rare	Major	High	2

Table 7: Responsibilities of Combat Agencies Based on Priority Reporting Requirements

Appendices:

Appendix 1 - Risk Treatment Plans

RISK TREATMENT PLANS

During the course of the ERM Project a number of emergency management plans were provided to the consultant for review. Details are contained in the following table.

Name	Agency	Status	Comments
Bush Fire Management Committee Handbook	NSW RFS	Edition 1 – June 2006	Current
EOC Police – A Supporting Plan to the Shoalhaven DISPLAN	NSW Police	March 2011	Updated electronic version to be distributed to agencies at next LEMC meeting in June 2011.
Flood SOP Supporting Plan to the Shoalhaven DISPLAN	LEMC/SES	July 2008	Awaiting Update from SES, if received prior to LEMC meeting in June 2011will be distributed to agencies with other plans.
HMAS Albatross – Defence A Supporting Plan to the Shoalhaven DISPLAN	HMAS Albatross	February 2010	New update expected shortly, if received prior to LEMC meeting in June 2011 will be distributed to agencies with other plans.
Media Sub Plan to Shoalhaven DISPLAN	LEMC	March 2011	Updated electronic version to be distributed to agencies at next LEMC meeting in June 2011.
Medical & Health A Supporting Plan to the Shoalhaven DISPLAN	Shoalhaven LEMC	March 2011	Updated electronic version to be distributed to agencies at next LEMC meeting in June 2011.
Shoalhaven City Communications – a Supporting Plan to the Shoalhaven DISPLAN	Shoalhaven LEMC	February 2011	Updated electronic version to be distributed to agencies at next LEMC meeting in June 2011.
Shoalhaven City Council Engineering Services – A supporting plan to the Shoalhaven DISPLAN	Shoalhaven LEMC	July 2008	Awaiting update, if received prior to LEMC meeting in June 2011 will be distributed to agencies with other plans.
Shoalhaven City Council Welfare Services – A supporting plan to the Shoalhaven DISPLAN	Shoalhaven LEMC	November 2010	Updated electronic version to be distributed to agencies at next LEMC meeting in June 2011.

Shoalhaven City Local Disaster Plan – A supporting plan to the Shoalhaven DISPLAN	Shoalhaven LEMC	March 2011	Updated electronic version to be distributed to agencies at next LEMC meeting in June 2011.
Shoalhaven DISPLAN Register of Distributed Copies	Shoalhaven LEMC	No longer distributed in hardcopy format.	All agencies to receive an electronic version of full DISPLAN including supporting plans at LEMC meeting in June 2011.
Shoalhaven Emergency Management District Contact Directory	Shoalhaven LEMC	April 2011	Hardcopy to be distributed with minutes of June 2011 LEMC meeting. Also electronic version will be included in the updates which will be distributed to agencies at the LEMC meeting in June 2011.
Shoalhaven Transport Services Support Plan	Shoalhaven LEMC	February 2011	Updated electronic version to be distributed to agencies at next LEMC meeting in June 2011.
Shoalhaven Flood Plan	LEMC/SES	July 2008	Awaiting Update from SES

It was noted that not all of the documents provided in soft copy form were signed and some were still in draft form. These documents need to be reviewed and updated with respect to issue status as a matter of priority. Further, not all of the documents were accessible by the consultant and were password protected. Their status also needs to be reviewed.