

**Lake Macquarie
Local Emergency
Management Plan
July 2017**



Part 1 – Administration

Authority

The Lake Macquarie Local Emergency Management Plan (EMPLAN) has been prepared by the Lake Macquarie Local Emergency Management Committee in compliance with the State Emergency & Rescue Management Act 1989.

APPROVED

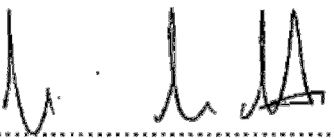


Chair

Lake Macquarie Local Emergency Management Committee

Dated: 1 August 2017

ENDORSED



Chair

Hunter Central Coast Regional Emergency Management Committee

Dated: 1 August 2017

Contents

Part 1 – Administration	2
Authority.....	2
Contents.....	3
Purpose.....	4
Objectives	4
Scope.....	4
Principles	5
Test and Review Process	5
 Part 2 – Community Context	6
Annexure A – Community Profile	6
General.....	6
Climate	7
Land Use.....	8
Population and People	9
The following tables providing an overview of city statistics are extracted from the Australian Bureau of Statistics, 2011 Census of Population and Housing, Basic Community Profile.	9
Transport Routes and Facilities.....	10
Economy and Industry.....	11
Annexure B – Hazards and Risks Summary	12
Annexure C – Local Sub Plans, Supporting Plans and Policies.....	17
 Part 3 – Restricted Operational Information	18
Annexure D – Community Assets	18
Key Resources and Infrastructure	18
Annexure E – Vulnerable Facilities List.....	23
Annexure F – Consequence Management Guides	25

Purpose

Details arrangements for, prevention of, preparation for, response to and recovery from emergencies within the Local Government Area(s) covered by this plan.

It encompasses arrangements for:

- emergencies controlled by combat agencies;
- emergencies controlled by combat agencies and supported by the Local Emergency Operations Controller (LEOCON);
- emergency operations for which there is no combat agency; and
- circumstances where a combat agency has passed control to the LEOCON.

Objectives

The objectives of this plan are to:

- define participating organisation and Functional Area roles and responsibilities in preparation for, response to and recovery from emergencies;
- set out the control, co-ordination and liaison arrangements at the Local level;
- detail activation and alerting arrangements for involved agencies; and
- detail arrangements for the acquisition and co-ordination of resources.

Scope

The plan describes the arrangements at Local level to prevent, prepare for, respond to and recover from emergencies and also provides policy direction for the preparation of Sub Plans and Supporting Plans:

- Arrangements detailed in this plan are based on the assumption that the resources upon which the plan relies are available when required; and
- The effectiveness of arrangements detailed in this plan are dependent upon all involved agencies preparing, testing and maintaining appropriate internal instructions, and/or standing operating procedures.

Principles

The following principles are applied in this plan:

- a) The Emergency Risk Management (ERM) process is to be used as the basis for emergency planning in New South Wales. This methodical approach to the planning process is to be applied by Emergency Management Committees at all levels.
- b) Responsibility for preparation, response and recovery rests initially at Local level. If Local agencies and available resources are not sufficient they are augmented by those at Regional level.
- c) Control of emergency response and recovery operations is conducted at the lowest effective level.
- d) Agencies may deploy their own resources from their own service from outside the affected Local area or Region if they are needed.
- e) The Local Emergency Operations Controller (LEOCON) is responsible, when requested by a combat agency, to co-ordinate the provision of resources support. EOCs would not normally assume control from a combat agency unless the situation can no longer be contained. Where necessary, this should only be done after consultation with the Regional Emergency Operations Controller (REOCON) and agreement of the combat agency and the appropriate level of control.
- f) Emergency preparation, response and recovery operations should be conducted with all agencies carrying out their normal functions wherever possible.
- g) Prevention measures remain the responsibility of authorities/agencies charged by statute with the responsibility.

Test and Review Process

The Lake Macquarie Local Emergency Management Committee (LEMC) will review this Plan every three (3) years, or following any:

- activation of the Plan in response to an emergency;
- legislative changes affecting the Plan; and
- exercises conducted to test all or part of the Plan.

Part 2 – Community Context

Annexure A – Community Profile

General

Lake Macquarie is located on the east coast of Australia, 90 minutes north of Sydney, 10 minutes from Newcastle, and 40 minutes from the Hunter Valley and Central Coast.

The Awabakal tribe (Awabakal meaning ‘people of the calm surface’) first inhabited Lake Macquarie over 8,000 years ago. European settlement dates from 1826, with the naming of the City after Governor Lachlan Macquarie and the issuing of the first land grants, mainly for timber production and farming. The northern part of the City was developed from the 1870s primarily for the establishment of coal mining, and development in the southern part of the City in the early 1900s was aided by the construction of the railway line to Sydney.

The most significant development occurred in the years after the two World Wars, especially from the 1960s.

Lake Macquarie has a picturesque landscape of more than 780 square kilometres containing spectacular beaches, mountains, and lake foreshore. The Watagan Mountains to the west have forests, numerous lookouts, magnificent waterfalls and picnic and camping spots.

The centrepiece of the City, Lake Macquarie itself, is one of the largest coastal saltwater lagoons in Australia, about twice the area and volume of Sydney Harbour. With more than 38,000 hectares of natural ecosystems, the City is home to a variety of wildlife including more than 100 threatened species such as the: Squirrel Glider (*Petaurus norfolcensis*); Green and Golden Bell Frog (*Litoria aurea*); Powerful Owl (*Ninox strenua*); and the plant, Black-eyed Susan (*Tetradlea juncea*).

The City has an estimated population of 200,796 (ABS 2014), distributed around the lake in more than 90 settlements. This makes the City the largest in the Lower Hunter, the 5th most populous local government area (LGA) in NSW and the 13th most populous LGA in Australia (ABS 2014). The population is expected to increase by 60,000 people between 2006 and 2031, creating demand for 36,000 new dwellings and 12,200 new jobs.

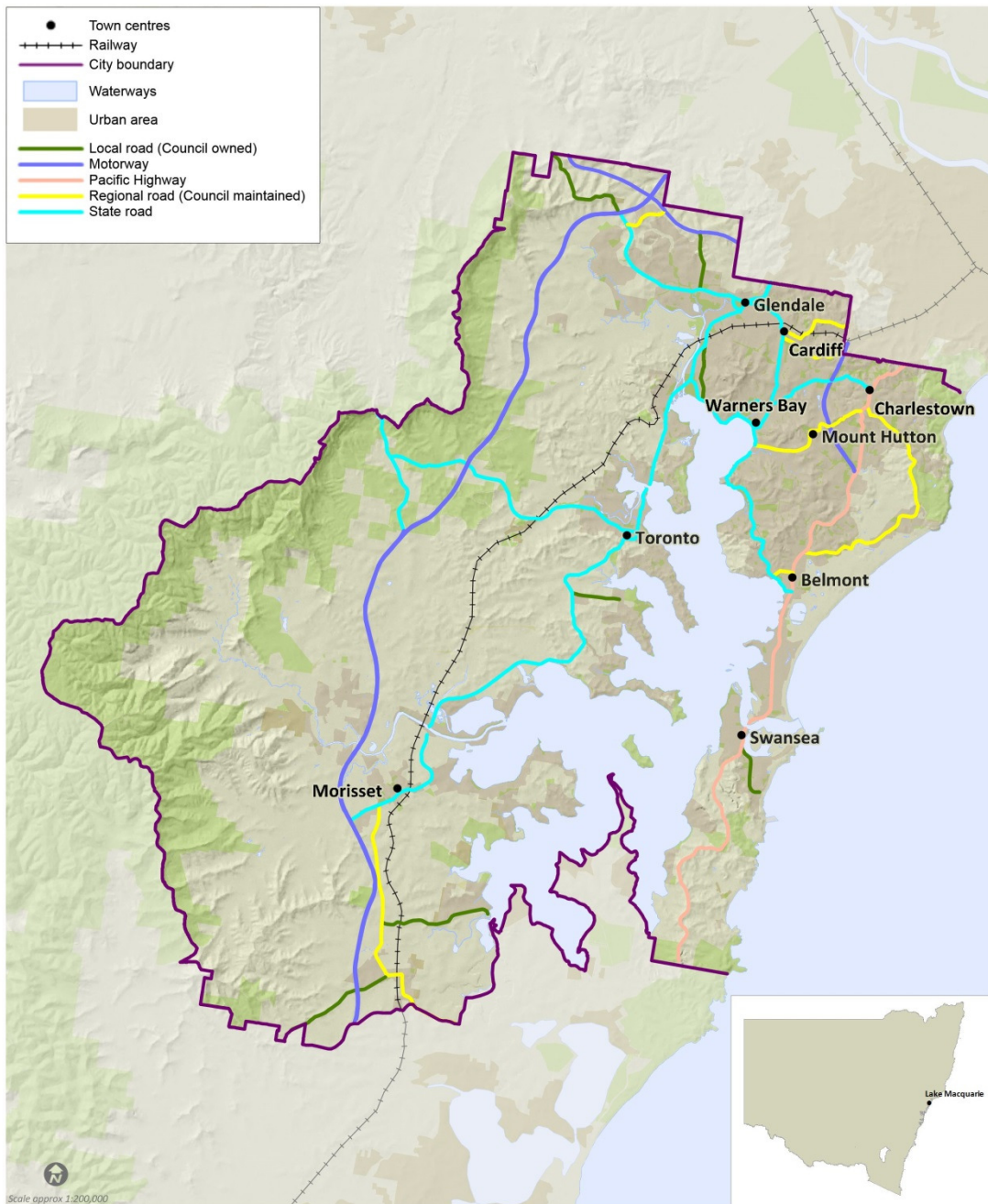
Snapshot of Lake Macquarie City	
City area*	Estimated 787.4km ²
Lake circumference/length of foreshore*	Estimated 174km
Population (preliminary estimate) **	Estimated 200,796
Mean temperature*	Minimum 11.50 Celsius Maximum 24.10 Celsius
Rainfall (annual)*	1,150mm
Labour force*	88,252
Unemployment rate*	5.3%

Businesses *

12,096

Source *LMCC(2103) ABS (2014)

Map- city overview



Climate

Lake Macquarie area lies at around 33o South latitude and has a temperate maritime climate with warm wet summers and cool and slightly drier winters. It is at the cross-over between the sub-tropical summer rainfall zone and the temperate winter rainfall zone.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Mean max (°C)	25.6	25.4	24.7	22.8	19.9	17.4	16.7	18.0	20.1	22.1	23.5	24.9	21.8
Highest max (°C)	40.8	40.9	39.0	36.8	28.5	26.1	26.3	29.9	34.4	36.7	41.0	42.0	42.0
Mean days 35°+	0.9	0.5	0.2	0	0	0	0	0	0	0	0.1	0.6	0.9
Mean min (°C)	19.1	19.3	18.2	15.3	11.9	9.6	8.4	9.2	11.4	13.9	16.0	18.0	14.2
Lowest min (°C)	12.0	10.3	11.1	7.4	4.7	3.0	1.8	3.3	5.0	6.5	7.2	11.0	1.8
Mean rain (mm)	91.4	105.6	121.9	115.9	118.6	117.8	97.2	76.2	73.7	74.3	69.5	82.4	1144.6
9am humidity (%)	76	80	78	78	79	79	77	73	70	68	71	74	75
3pm humidity (%)	72	74	72	66	64	63	59	56	59	64	68	71	66
Highest rain (mm)	404.0	559.2	544.4	546.4	441.3	485.7	351.1	545.3	283.1	277.5	203.9	326.5	
Highest daily rain	144.8	252.7	283.7	231.1	181.9	190.3	118.6	168.9	157.5	96.5	103.7	177.5	
Lowest rain (mm)	2.0	0.5	2.8	0	2.1	3.6	0	0.8	1.6	4.6	2.4	4.6	
Max gust (km/h)	142.6	140.8	137.2	114.8	170.6	151.9	139.0	135.4	131.4	140.8	144.7	129.6	170.6

Land Use

Land Use Category	Percent	Sum of Area sq km	Notes
Business	0.7%	5.4	Medium to high density residential housing may also occur in this area
Environmental	46.1%	349.2	Low intensity residential housing may occur in this area
Industrial	0.8%	6.0	
Infrastructure	5.2%	39.6	
Mining and other special uses	1.1%	8.3	
Recreation	2.7%	20.8	Tourist accommodation may also occur in this area (including caravan parks)
Residential	13.0%	98.2	
Rural	15.3%	115.6	Low intensity residential housing may also occur in this area
Tourist	0.1%	1.1	
Water	14.9%	112.9	
Grand Total	100.0%	757.2	

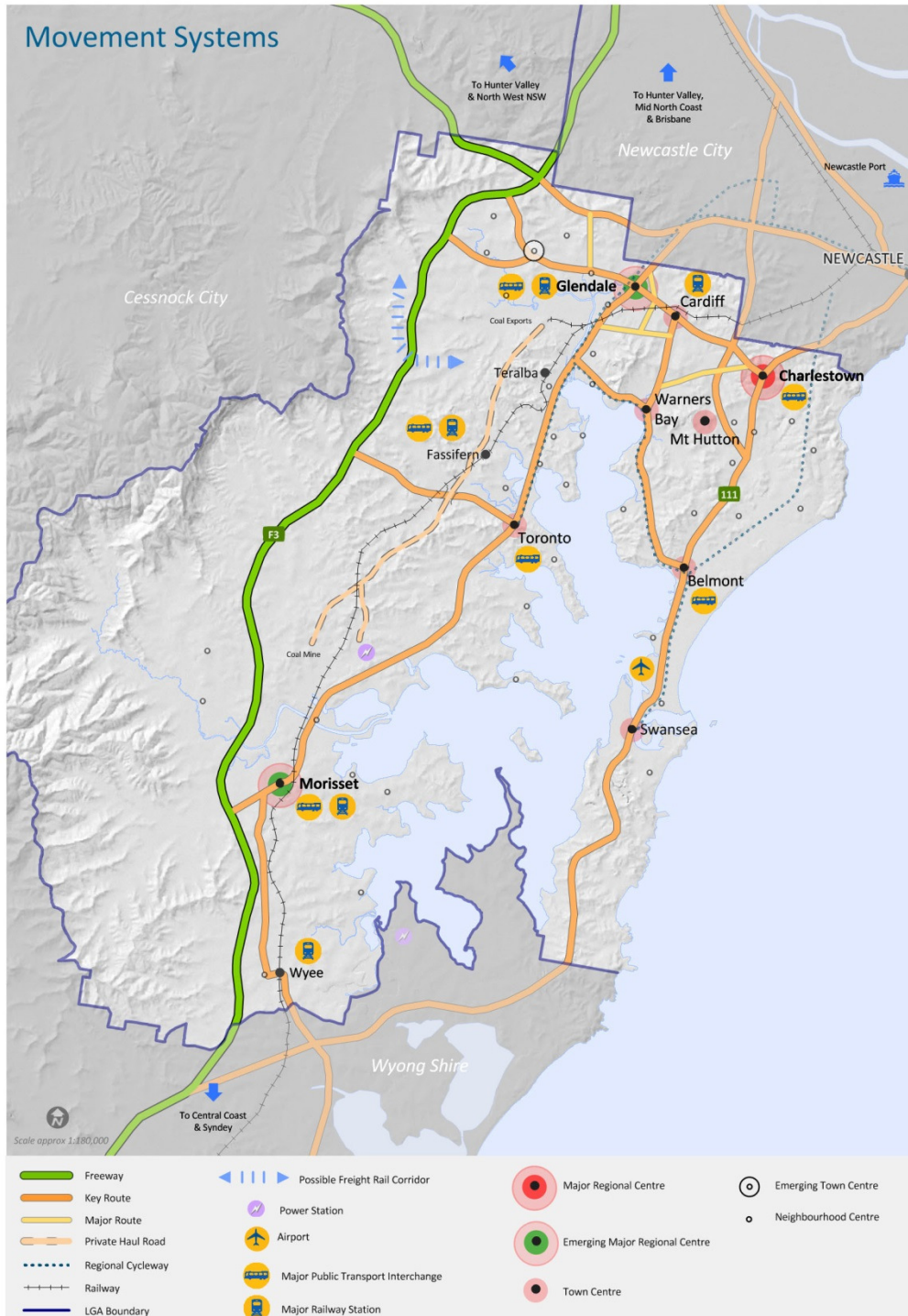
Population and People

The following tables providing an overview of city statistics are extracted from the Australian Bureau of Statistics, 2011 Census of Population and Housing, Basic Community Profile.

B01 SELECTED PERSON CHARACTERISTICS BY			
Count of persons			
	<i>Males</i>	<i>Females</i>	<i>Persons</i>
Total persons	92,311	96,695	189,006
Age groups:			
0-4 years	5,745	5,549	11,294
5-14 years	12,269	11,613	23,882
15-19 years	6,729	6,251	12,980
20-24 years	5,491	5,316	10,807
25-34 years	9,602	10,029	19,631
35-44 years	11,873	12,418	24,291
45-54 years	12,779	13,542	26,321
55-64 years	12,039	12,912	24,951
65-74 years	8,713	9,423	18,136
75-84 years	5,315	6,581	11,896
85 years and over	1,755	3,061	4,816
Counted on Census Night:			
At home	87,323	92,414	179,737
Elsewhere in Australia	4,990	4,279	9,269
Indigenous persons:			
Aboriginal	2,600	2,784	5,384
Torres Strait Islander	57	72	129
Both Aboriginal and Torres Strait Islander(a)	46	35	81
Total	2,703	2,891	5,594
Birthplace:			
Australia	79,569	83,332	162,901
Elsewhere(b)	8,890	9,462	18,352
Language spoken at home:			
English only	85,869	89,849	175,718
Other language(c)	3,335	3,814	7,149
Australian citizen	85,640	89,939	175,579
This table is based on place of usual residence unless otherwise stated.			
(a) Applicable to persons who are of both Aboriginal and Torres Strait Islander origin.			
(b) Includes 'Australian External Territories', 'Inadequately described', and 'At sea'.			
(c) Includes 'Inadequately described' and 'Non-verbal, so described'.			
(d) Comprises 'Pre-school', 'Infants/Primary' (including Government, Catholic, Other Non Government), 'Secondary' (including Government, Catholic, Other Non Government), 'Technical or Further Educational Institution (including TAFE Colleges)', and 'University or other Tertiary Institutions'. Excludes persons who did not state which type of educational institution they were attending.			
(e) Applicable to persons aged 15 years and over.			
(f) Data are based on place of enumeration.			
(g) Includes 'Visitors only' and 'Other non-classifiable' households, 'Non-private dwellings' and 'Migratory, off-shore and shipping' SA1s.			

Transport Routes and Facilities

Map- Overview of main transport routes and facilities



Economy and Industry

Lake Macquarie has a diverse economy. Our City has performed well over the past decade, capturing its share of higher employment growth industries, particularly in healthcare, mining, finance, manufacturing and professional services.

The output generated by the Lake Macquarie economy is estimated at \$17.763 billion.

Our economy represents almost 19% of the \$94.603 billion generated in the Hunter Region.

The total value added by our economic is estimated at \$8.054 billion.

The number of businesses within the City turning over in excess of \$2 million has increased 13% over the last five years to 2013.

Over \$376 million worth of projects were approved in the City in 2014, up from \$305 million in 2009.

The nature of economic activity in the local government area (LGA) is changing. Council encourages a prosperous economy, promoting balanced economic growth, managed in a way to enhance quality of life and satisfy the employment and environmental aims of the community.

Manufacturing, a sector central to the creation and retention of jobs, has played an important role in the local and regional economy. The City's service based economies continue to grow, and the importance of town centres, supporting local economic activity, continues to increase. Non-centre based economic activity (including home-based business and industries) remain very important to the prosperity of the LGA. Council continues to encourage these activities in order to increase employment, start up new business opportunity, provide an additional platform for small business growth, and to facilitate the transition of the Non-centre based economic activities to traditional commercial and industrial locations.

Annexure B – Hazards and Risks Summary

A Local Emergency Risk Management (ERM) Study has been undertaken by the Lake Macquarie Local Emergency Management Committee identifying the following hazards as having risk of causing loss of life, property, utilities, services and/or the community's ability to function within its normal capacity. These hazards have been identified as having the potential to create an emergency. The *Emergency Risk Management Plan, City of lake Macquarie*, prepared by, The Institute for International Development Emergency Risk Management Study, May 2007 (ERM) should be referenced to identify the complete list of consequences and risk descriptions.

Seven characteristics of the risks posed by each hazard have been used to provide a 'risk rating' in order to rank the risks. The characteristics used to analyse the relative risk and range of significance used are:

- Frequency
- Seriousness
- Manageability
- Awareness
- Urgency
- Growth
- Outrage

Hazard (ERM 2007)	Risk Description	Risk Priority Score (ERM 2007)	Combat / Responsible Agency
Heatwave	A sequence of abnormally hot conditions having the potential to affect a community adversely	29	SEOCN
Human pandemic	Pandemic illness that affects, or has potential to affect, large portions of the human population	28	NSW Department of Health
Creek flood	Creek flows exceed the capacity of normal creek system that flow into lake Macquarie	25	NSW SES

Hazard (ERM 2007)	Risk Description	Risk Priority Score (ERM 2007)	Combat / Responsible Agency
Bush fire	Major fires in areas of bush or grasslands.	25	RFS- Rural (Bush, Grass and other fires within Rural Fire Districts as prescribed in the Rural Fires Act 1997) FRNSW- Urban (within Fire Districts proclaimed under the provisions of the Fire Brigades Act 1989).
Localised storm	Storm with accompanying lightning, hail, wind, and/or rain that causes severe damage and/or localised flooding	24	NSW SES
Lake flood	Foreshore flooding of Lake Macquarie	22	NSW SES
Earthquake	Earthquake of significant strength that results in localised or widespread damage	22	LEOCON

Hazard (ERM 2007)	Risk Description	Risk Priority Score (ERM 2007)	Combat / Responsible Agency
Hazardous materials	Hazardous material released as a result of an incident or accident	22	<p><u>NSW Fire & Rescue Services</u> - rendering safe and clean up operations that are land based including inland and coastal waterways other than State Waters. (Fire Brigades Act 1989)</p> <p><u>Newcastle Port Corporation</u>- rendering safe and clean up State Waters and Port Hunter based operations.</p> <p><u>NSW environment protection Authority</u> - scientific support, enforcement and legislative requirements.</p> <p>NSW Health - Provide advice and health warnings in the event of persons being affected by the hazardous material.</p>
Terrorism	A form of politically motivated violent criminal activity, carried out against the interests of a nation state and its citizens	22	NSW Police
Large-scale storm	Severe storm with accompanying lightning, hail, wind, and/or rain that causes severe damage and/or localised flooding.(includes tornado)	21	NSW SES

Hazard (ERM 2007)	Risk Description	Risk Priority Score (ERM 2007)	Combat / Responsible Agency
Landslide	Landslip/landslide resulting in localised or widespread damage	19	LEOCON
Transport accidents	A major vehicle accident that disrupts one or more major transport routes that can result in risk to people trapped in traffic jams, restrict supply routes and/or protracted loss of access to or from the area.	19	LEOCON
Contamination and pollution	A major environmental pollution event as a result of a hazard such as a hazardous materials incident, earthquake, floods	19	FRNSW EPA
Storm tide	a short-term elevation of normal sea level that is additional to the normal range of the astronomical tide	17	NSW SES
Drought	acute water shortage	17	Agriculture -Local Land Services Water storage – Hunter Water Corporation
Mine Subsidence	Movement of the ground surface following the underground extraction of coal	17	LEOCON
Structure failure	Failure of a major structure with or without warning owing to structural failure or as a result of external/ internal events or other hazards/ incidents.	15	LEOCON FRNSW (NSW Major Structures Collapse Sub Plan 2001)

Hazard (ERM 2007)	Risk Description	Risk Priority Score (ERM 2007)	Combat / Responsible Agency
Structure fire	Serious fire within a residential, commercial or industrial structure	15	RFS- Rural (Bush, Grass and other fires within Rural Fire Districts as prescribed in the Rural Fires Act 1997) FRNSW- Urban (within Fire Districts proclaimed under the provisions of the Fire Brigades Act 1989).
Animal epidemic	An agriculture/horticulture incident that results, or has potential to result, in the spread of a communicable disease or infestation	14	Department of Primary Industries
Plant epidemic	A rapid outbreak of plant disease or pests	14	Department of Primary Industries
Meteorite strike	The impact from a larger meteorite hitting earth	13	LEOCON
Space debris re-entry	The impact from the atmospheric re-entry of space debris	13	LEOCON
Tsunami	A tsunami wave of magnitude that presents a risk to land and marine elements	12	NSW SES
Fog and frost	A weather event that results in severe fog or frost	8	LEOCON

Annexure C – Local Sub Plans, Supporting Plans and Policies

Responsibility for the preparation and maintenance of appropriate sub and supporting plans rest with the relevant Combat Agency Controller or the relevant Functional Area Coordinator.

The sub/supporting plans are developed in consultation with the Lake Macquarie LEMC and the community.

The plans listed below are supplementary to this EMPLAN. The sub/supporting plans have been endorsed by the LEMC and are determined as compliant and complimentary to the arrangements listed in this EMPLAN.

These plans are retained by the Council on behalf of the LEMC and public release versions are available on the Council Website.

Plan/Policy	Purpose	Combat / Responsible Agency
Lake Macquarie City Flood Emergency Sub Plan	Preparedness measures, the conduct of response operations and coordination of immediate recovery measures from flooding & arrangements for management of coastal erosion	NSW State Emergency Service