

Gloucester Shire

Local Flood Plan



GLOUCESTER SHIRE FLOOD EMERGENCY SUB PLAN

A Sub-Plan of the Gloucester Local Emergency Management Plan (EMPLAN)

Volume 1 of the Gloucester Shire Local Flood Plan



AUTHORISATION

The Gloucester Shire Flood Emergency Sub Plan is a sub plan of the Gloucester Local Emergency Management Plan (EMPLAN). It has been prepared in accordance with the provisions of the **State Emergency Service Act 1989 (NSW)** and is authorised by the Local Emergency Management Committee in accordance with the provisions of the **State Emergency and Rescue Management Act 1989 (NSW)**.

Recommended



NSW SES Gloucester Local Controller

Date: 10/9/15

Approved



Chair, Local Emergency Management Committee

Date: 16/4/15

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DISTRIBUTION LIST

Recipient	Number of Copies
NSW SES Gloucester Shire Local Controller	1
NSW SES Gloucester Shire Unit Controller	1
NSW SES Gloucester Shire Unit	1
NSW SES Mid North Coast Region Headquarters	1
NSW SES State Headquarters	1
Gloucester, Local Emergency Operations Controller	1
NSW Police Force, Manning Great Lakes Local Area Command	1
Gloucester, Local Emergency Management Committee Members	4
Gloucester, Local Emergency Management Officer	1
Gloucester, Local Emergency Operations Centre	1
Gloucester Shire Council, Mayor	1
Gloucester Shire Council, General Manager	1
Gloucester Shire Council, Technical Services Department	1
Fire and Rescue NSW, Gloucester	1
NSW Rural Fire Service, Gloucester	1
Ambulance Service of NSW, Gloucester	1
Office of Environment and Heritage	1
Evacuation Centres	1 each
Hospitals	1 each
Schools	1 each
Caravan Parks	1 each
Council Libraries	1 each
Total	

VERSION HISTORY

The following table lists all previously endorsed versions of this plan.

Description	Date
Gloucester Shire Local Flood Plan	October 2009

AMENDMENT LIST

Suggestions for amendments to this plan should be forwarded to:

The Gloucester Shire Local Controller
 NSW State Emergency Service
 23 Tate Street, Gloucester, NSW 2422

Amendments promulgated in the amendments list below have been entered in this plan.

Amendment Number	Description	Updated by	Date

Document Issue: V1-30122014

LIST OF ABBREVIATIONS

The following abbreviations have been used in this plan:

AEP	Annual Exceedance Probability
AHD	Australian Height Datum
AIIMS	Australasian Inter-service Incident Management System
ARI	Average Recurrence Interval (Years)
ALERT	Automated Local Evaluation in Real Time
AWRC	Australian Water Resources Council
BUREAU	Australian Government Bureau of Meteorology
CBRN	Chemical, Biological, Radiation or Nuclear
DCF	Dam Crest Flood
DSC	Dams Safety Committee
DSEP	Dam Safety Emergency Plan
DVR	Disaster Victim Registration
EMPLAN	Emergency Management Plan
FRNSW	Fire and Rescue NSW
GIS	Geographic Information System
GRN	Government Radio Network
IAP	Incident Action Plan
IFF	Imminent Failure Flood
LEMC	Local Emergency Management Committee
LEOCON	Local Emergency Operations Controller
LO	Liaison Officer
LGA	Local Government Area
MHL	Manly Hydraulics Laboratory
NOW	NSW Office of Water

NSW SES	NSW State Emergency Service
OEH	Office of Environment and Heritage (previously DECCW)
PMF	Probable Maximum Flood
PMR	Private Mobile Radio
PMP	Probable Maximum Precipitation
PIIC	Public Information and Inquiry Centre
REMC	Region Emergency Management Committee
REMO	Regional Emergency Management Officer
RMS	Roads and Maritime Services
RFS	Rural Fire Service
SEOCN	State Emergency Operations Controller
SERCON	State Emergency Recovery Controller
SEWS	Standard Emergency Warning Signal
SITREPs	Situation Reports
VRA	Volunteer Rescue Association
WICEN	Wireless Institute Civil Emergency Network

GLOSSARY

Annual Exceedance Probability (AEP). The chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. For example, if a peak flood level (height) has an AEP of 5%, there is a 5% chance (that is, a one-in-20 chance) of such a level or higher occurring in any one year (see also Average Recurrence Interval).

Assistance Animal. A guide dog, a hearing assistance dog or any other animal trained to assist a person to alleviate the effect of a disability (Refer to Section 9 of the Disability Discrimination Act 1992).

Assembly Area. An assembly area is a designated location used for the assembly of emergency-affected persons before they move to temporary accommodation or a nominated evacuation centre. As such these areas do not provide welfare assistance nor are they used for long term sheltering or provision of meals. An assembly area may also be a prearranged, strategically placed area, where support response personnel, vehicles and other equipment can be held in readiness for use during an emergency.

Australian Height Datum (AHD). A common national surface level datum approximately corresponding to mean sea level.

Average Recurrence Interval (ARI). The long-term **average** number of years between the occurrence of a flood as big as, or larger than, the selected event. For example, floods reaching a height as great as, or greater than, the 20 year ARI flood event will occur **on average** once every 20 years.

Catchment (River Basin). The land area draining through the main stream, as well as tributary streams, to a particular site. It always relates to an area above a specific location.

Coastal Erosion. The loss of land along the shoreline predominantly by the offshore movement of sand during storms.

Coastal Flooding. Flooding due to tidal or storm-driven coastal events, including storm surges in lower coastal waterways. This can be exacerbated by wind-wave generation from storm events (1).

Dambreak Study. A Dambreak Study is undertaken to determine the likely downstream inundation areas in case of a dam failure. Modelling is undertaken for a range of dam breach possibilities and design floods. The dambreak study includes information such as the extent of flooding, flood travel times and flood water velocities. The study can assist dam owners, regulators, and emergency agencies in

the preparations of evacuation plans, dam break and other flood warning systems, and hazard classification of affected areas.

Dam Failure. The uncontrolled release of a water storage. The failure may consist of the collapse of the dam or some part of it, or excessive seepage or discharges. The most likely causes of dam failure are;

- **Flood Induced Dam Failure:** Dam failure caused by flood, either due to overtopping erosion or by subsequent structural failure.
- **Sunny Day Dam Failure:** Dam Failure as a result of factors other than flood i.e. other than flood flow into the reservoir. Causes of "Sunny Day" dam failure can include internal erosion, landslide, piping, earthquake or sabotage.

Dam Safety Emergency Plan (DSEP). A DSEP outlines the required actions of owners and their personnel at dams in response to a range of possible emergency situations. The NSW Dam Safety Committee requires a quality controlled DSEP, with associated dambreak warning procedures to be prepared for prescribed dams where persons may be at risk downstream, if the dam failed.

Design Flood (or Flood Standard). A flood of specified magnitude that is adopted for planning purposes. Selections should be based on an understanding of flood behaviour and the associated flood risk, and take account of social, economic and environmental considerations. There may be several design floods for an individual area.

Emergency Alert. The national telephone warning system used by emergency services to send voice messages to landlines and text messages to mobile phones within a defined area, about likely or actual emergencies.

EMPLAN (Emergency Management Plan). The object of an EMPLAN is to ensure the coordinated response by all agencies having responsibilities and functions in emergencies.

Essential Services. Those services, often provided by local government authorities, that are considered essential to the life of organised communities. Such services include power, lighting, water, gas, sewerage and sanitation clearance.

Evacuation. The temporary movement of people from a dangerous or potentially dangerous place to a safe location, and their eventual return. It is a safety strategy which uses distance to separate people from the danger created by the hazard.

Evacuation Order. Notification to the community, authorised by the NSW SES, when the intent of an Incident Controller is to instruct a community to immediately evacuate in response to an imminent threat.

Evacuation Warning. Notification to the community, authorised by the NSW SES, when the intent of an Incident Controller is to warn a community of the need to prepare for a possible evacuation.

Flash Flooding. Flooding which is sudden and often unexpected because it is caused by sudden local or nearby heavy rainfall. It is sometimes defined as flooding which occurs within six hours of the rain that causes it.

Flood. Relatively high water level which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flooding associated with drainage before entering a watercourse, and/or coastal inundation resulting from super-elevated sea levels and/or waves overtopping coastline defences, including Tsunami.

Flood Classifications. Locally defined flood levels used in flood warnings to give an indication of the severity of flooding (minor, moderate or major) expected. These levels are used by the State Emergency Service and the Australian Government Bureau of Meteorology in flood bulletins and flood warnings.

Flood Intelligence. The product of collecting, collating, analysing and interpreting flood-related data to produce meaningful information (intelligence) to allow for the timely preparation, planning and warning for and response to a flood.

Flood Fringe. The remaining area of flood prone land after floodway and flood storage have been defined.

Flood Liable Land (also referred to as Flood Prone Land). Land susceptible to flooding by the Probable Maximum Flood (PMF) event. This term also describes the maximum extent of a **floodplain** which is an area of a river valley, adjacent to the river channel, which is subject to inundation in floods up to this event.

Flood of Record. Maximum observed historical flood.

Floodplain. Area of land which is subject to inundation by floods up to and including the probable maximum flood event, that is, flood prone land (2).

Floodplain Management Plan. A plan developed in accordance with the principles and guidelines in the New South Wales Floodplain Development Manual. Such a plan usually includes both written and diagrammatic information describing how particular areas of flood prone land can be used and managed to achieve defined objectives.

Flood Plan. A response strategy plan that deals specifically with flooding and is a sub-plan of an Emergency Management Plan. Flood plans describe agreed roles, responsibilities, functions, strategies and management arrangements for the

conduct of flood operations and for preparing for them. A flood plan contains information and arrangements for all floods whereas an IAP is for a specific flood/event.

Flood Rescue. The rescue or retrieval of persons trapped by floodwaters.

Flood Storage Areas. Those parts of the floodplain that are important for the temporary storage of floodwaters during the passage of a flood. The extent and behaviour of flood storage areas may change with flood severity, and loss of flood storage can increase the severity of flood impacts by reducing natural flood attenuation.

Floodway. An area where a significant volume of water flows during floods. Such areas are often aligned with obvious naturally-defined channels and are areas that, if partially blocked, would cause a significant redistribution of flood flow which may in turn adversely affect other areas. They are often, but not necessarily, the areas of deeper flow or the areas where higher velocities occur.

Flood Watch. A Flood Watch is a notification of the potential for a flood to occur as a result of a developing weather situation and consists of short generalised statements about the developing weather including forecast rainfall totals, description of catchment conditions and indicates streams at risk. The Bureau will also attempt to estimate the magnitude of likely flooding in terms of the adopted flood classifications. Flood Watches are normally issued 24 to 36 hours in advance of likely flooding. Flood watches are issued on a catchment wide basis.

Flood Warning. A Flood Warning is a gauge specific forecast of actual or imminent flooding. Flood Warnings specify the river valley, the locations expected to be flooded, the likely severity of flooding and when it will occur.

Functional Area. A category of services involved in the preparations for an emergency, including the following:

- Agriculture and Animal Services;
- Energy and Utility Services;
- Engineering Services;
- Environmental Services;
- Health Services;
- Public Information Services;
- Telecommunication Services;
- Transport Services; and
- Welfare Services.

Geographic Information System (GIS). A geographic information system (GIS) integrates hardware, software, and data for capturing, managing, analysing, and displaying all forms of geographically referenced information.

Incident Action Plan (IAP). An action plan for managing a specific event. Information from the Local Flood Plan is used to develop the flood IAP.

Indirect Effect. Indirect effects are generally a consequence of infrastructure damage or interruption of services and can affect communities distant from the actual flood footprint i.e. floodplain. Indirect effects can also refer to indirect losses due to disruption of economic activity, both in areas which are inundated or isolated. Indirect effects are one of the three primary sources of risk in the context of flooding (the other two are inundation and isolation).

Inundation. See definition for Flood.

Isolation. Properties and/or communities where flooding cuts access to essential services or means of supply. Isolation is one of the three primary sources of risk in the context of flooding (the other two are inundation and indirect effects).

Liaison Officer (LO). A person, nominated or appointed by an organisation or functional area, to represent that organisation or functional area at a control centre, emergency operations centre, or coordination centre. A liaison officer maintains communications with and conveys directions/requests to their organisation or functional area, and provides advice on the status, capabilities, actions and requirements of their organisation or functional area (3).

Local Emergency Management Committee (LEMC). The LEMC is responsible for the preparation of plans in relation to the prevention of, preparation for, response to and recovery from emergencies in the local government area for which it is constituted. In the exercise of its functions, the Committee is responsible to the Region Emergency Management Committee (REMC) and may communicate with the REMC for matters associated with Functional Areas that are not represented at the local Level.

Local Overland Flooding. Inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.

Major Flooding. Flooding which causes inundation of extensive rural areas, with properties, villages and towns isolated and/or appreciable urban areas flooded.

Minor Flooding. Flooding which causes inconvenience such as closing of minor roads and the submergence of low-level bridges. The lower limit of this class of flooding, on the reference gauge, is the initial flood level at which landholders and/or townspeople begin to be affected in a significant manner that necessitates the

issuing of a public flood warning by the Australian Government Bureau of Meteorology.

Moderate Flooding. Flooding which inundates low-lying areas, requiring removal of stock and/or evacuation of some houses. Main traffic routes may be covered.

Moveable Dwellings. Any tent, or any caravan or other van or other portable device (whether on wheels or not), used for human habitation; or a manufactured home; or any conveyance, structure or thing of a class or description prescribed by the (Local Government) regulations (4).

Peak Height. The highest level reached, at a nominated gauging station, during a particular flood event.

Prescribed Dam. "Prescribed" dams are those listed in Schedule 1 of the Dams Safety Act 1978. The NSW Dam Safety Committee will prescribe those dams with the potential for a failure which could have a significant adverse effect on community interests.

Probable Maximum Flood (PMF). The largest flood that could conceivably be expected to occur at a particular location, usually estimated from probable maximum precipitation. The PMF defines the maximum extent of flood prone land, that is, the floodplain. It is difficult to define a meaningful Annual Exceedance Probability for the PMF, but it is commonly assumed to be of the order of 10^4 to 10^7 (once in 10,000 to 10,000,000 years).

Riverine Flooding. Inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam. Riverine flooding generally excludes watercourses constructed with pipes or artificial channels considered as stormwater channels (1).

Runoff. The amount of rainfall which ends up as stream flow, also known as 'rainfall excess' since it is the amount remaining after accounting for other processes such as evaporation and infiltration.

Stage Height. A level reached, at a nominated gauging station, during the development of a particular flood event.

Stream Gauging Station. A place on a river or stream at which the stage height is routinely measured, either daily or continuously, and where the discharge is measured from time to time so as to develop a relationship between stage and discharge or rating curve.

Total Flood Warning System. A flood warning system is made up of components which must be integrated if the system is to operate effectively. Components of the total flood warning system include monitoring rainfall and river flows, prediction,

interpretation of the likely impacts, construction and dissemination of warning messages, response by agencies and community members, and review of the warning system after flood events (5).

PART 1 - INTRODUCTION

1.1 PURPOSE

- 1.1.1 This plan covers preparedness measures, the conduct of response operations and the coordination of immediate recovery measures from flooding within the Gloucester LGA. It covers operations for all levels of flooding within the council area.

1.2 AUTHORITY

- 1.2.1 This plan is issued under the authority of the *State Emergency and Rescue Management Act 1989* (NSW) and the *State Emergency Service Act 1989* (NSW). It has been approved by the NSW SES Gloucester Shire Local Controller and the NSW SES Mid North Coast Region Controller as a NSW SES plan and endorsed by the Gloucester Local Emergency Management Committee as a sub plan of the Local EMPLAN.

1.3 AREA COVERED BY THE PLAN

- 1.3.1 The area covered by the plan is the Gloucester LGA which includes: the townships of Gloucester and the villages of Barrington, Bundook, Craven and Stratford plus about 500 rural properties.
- 1.3.2 The council area and its principal rivers and creeks are shown in Attachment 3.
- 1.3.3 The Council area is contained within the Manning River catchment and includes:
- a. The Manning River downstream to its junction with Bakers Creek.
 - b. The Little Manning River.
 - c. A section of the Pigna Barney River.
 - d. The Barnard River from near its source (plus its main tributary – Curricabark Creek) to its junction with the Manning River.
 - e. The Bowman River from its source (plus its main tributary – Cravens Creek) to its junction with the Gloucester River.
 - f. The Barrington River and its tributaries – Dilgry, Cobark, Arundel and Kerripit Rivers plus Moppey Creek – to its junction with the Gloucester River.
 - g. The Gloucester River to its junction with the Manning River.
 - h. The Avon River (plus its tributaries – Waukivory Creek and Mograni.
 - i. Creek) to its junction with the Gloucester River.
 - j. Bakers Creek to its junction with the Manning River.

- 1.3.4 The council area is in the NSW SES Mid North Coast Region and for emergency management purposes is part of the Mid North Coast Emergency Management Region.

1.4 DESCRIPTION OF FLOODING AND ITS EFFECTS

- 1.4.1 The NSW SES maintains information on the nature of flooding and effects of flooding on the community in the Gloucester LGA.

1.5 RESPONSIBILITIES

- 1.5.1 The general responsibilities of emergency service organisations and supporting services (functional areas) are listed in the Local and State Emergency Management Plans (EMPLAN). Some specific responsibilities are expanded upon in the following paragraphs. The extent of their implementation will depend on the severity of the flooding.

- 1.5.2 **NSW SES Gloucester Shire Local Controller.** The NSW SES Gloucester Shire Local Controller is responsible for dealing with floods as detailed in the State Flood Plan, and will;

Preparedness

- a. Maintain a Local Headquarters at 23 Tate Street, Gloucester in accordance with the NSW SES Controllers' Guide and the NSW SES Operations Manual.
- b. Ensure that NSW SES members are trained to undertake operations in accordance with current policy as laid down in the NSW SES Controllers' Guide and the NSW SES Operations Manual.
- c. Coordinate the development and operation of a flood warning service for the community.
- d. Participate in floodplain risk management initiatives organised by the Gloucester Shire Council.
- e. Coordinate a community engagement and capacity building program regarding local flood issues and associated risks to assist communities in building resilience to floods.
- f. Identify and monitor people and/or communities at risk of flooding.
- g. Ensure that the currency of this plan is maintained.

Response

- h. Appoint an appropriate Local Incident Controller to undertake response roles. The Incident Controller will;
 - Control flood and storm response operations. This includes;
 - Directing the activities of the NSW SES units operating within the council area.

- Coordinating the activities of supporting agencies and organisations and ensuring that liaison is established with them.
- Contribute to preparation of Region IAP.
- Provide an information service in relation to;
 - Flood heights and flood behaviour.
 - Road conditions and closures.
 - Advice on methods of limiting property damage.
 - Confirmation of evacuation warnings and evacuation orders.
- Direct the conduct of flood rescue operations.
- Direct the evacuation of people and/or communities.
- Provide immediate welfare support for evacuated people.
- Coordinate the provision of emergency food and medical supplies to isolated people and/or communities.
- Coordinate operations to assist the community to protect property. This may include;
 - Arranging resources for sandbagging operations.
 - Lifting or moving household furniture.
 - Lifting or moving commercial stock and equipment.
- Where possible, arrange for support (for example, accommodation and meals) for emergency service organisation members and volunteers assisting them.
- Ensure that the managers of caravan parks are advised of flood warnings and the details of any evacuation order.
- If NSW SES resources are available, assist with emergency fodder supply operations conducted by Agriculture and Animal Services.
- If NSW SES resources are available, assist the NSW Police Force, RMS and Council with road closure and traffic control operations.
- Exercise financial delegations relating to the use of emergency orders as laid down in the NSW SES Controllers' Guide.
- Coordinate the collection of flood information for development of intelligence.
- Submit Situation Reports to the NSW SES Mid North Coast Region Headquarters and agencies assisting within the council area. These will contain information on;
 - Road conditions and closures.
 - Current flood behaviour.
 - Current operational activities.

- Likely future flood behaviour.
- Likely future operational activities.
- Probable resource needs.
- Keep the Local Emergency Operations Controller advised of the flood situation and the operational response.
- Issue the 'All Clear' when flood operations have been completed.

Recovery

- i. Ensure that appropriate After Action Reviews are held after floods.
- j. Provide appropriate representation to the recovery committee for the duration of the response phase of an event and as agreed during the recovery phase.

1.5.3 NSW SES Gloucester Shire Unit Members

- a. Carry out flood response tasks. These may include;
 - The management of the NSW SES Gloucester Shire Local and Unit Headquarters Operations Centres.
 - Assist in the collection of flood information for the development of intelligence.
 - Flood rescue.
 - Evacuation.
 - Providing immediate welfare for evacuated people.
 - Delivery of warnings and information.
 - Resupply.
 - Sandbagging.
 - Lifting and/or moving household furniture and commercial stock.
 - Animal rescue.
 - Assisting with road closure and traffic control operations.
 - Assisting with emergency fodder supply operations.
- b. Assist with preparedness activities.
- c. Undertake training in flood and storm response operations.

1.5.4 Gloucester Local Emergency Operations Controller (LEOCON)

- a. Monitor flood operations.
- b. Request and coordinate support to the NSW SES Gloucester Shire Local Controller if requested to do so.

1.5.5 Gloucester Local Emergency Management Officer

- a. Provide executive support to the LEMC and LEOCON in accordance with the Gloucester Local Emergency Management Plan.
- b. At the request of the NSW SES Gloucester Shire Local Controller, advise appropriate agencies and officers of the start of response operations.

1.5.6 Gloucester Shire Council**Preparedness**

- a. Develop and implement floodplain risk management plans in accordance with the NSW Government's Flood Prone Land Policy and the Floodplain Development Manual.
- b. Establish and maintain floodplain risk management committees and ensure that key agencies are represented on such committees.
- c. Provide levee studies, flood studies and floodplain management studies to the NSW SES.
- d. Provide information on the consequences of dam failure to the NSW SES for incorporation into planning and flood intelligence.
- e. Maintain a plant and equipment resource list for the council area.
- f. Work with NSW SES on the development and implementation of a community engagement and capacity building program.

Response

- g. At the request of the NSW SES Local Controller, deploy personnel and resources for flood related activities.
- h. Close and reopen council roads (and other roads nominated by agreement with the RMS) and advise the NSW SES Gloucester Shire Local Controller and the Police.
- i. Provide information on the status of roads.
- j. Provide filled sandbags to urban and village areas in which flooding is expected.
- k. Assist with the removal of caravans from caravan parks.
- l. Provide back-up radio communications.
- m. In the event of evacuations, assist with making facilities available for the domestic pets and companion animals of evacuees.

Recovery

- n. Provide for the management of health hazards associated with flooding. This includes removing debris and waste.
- o. Ensure premises are fit and safe for reoccupation and assess any need for demolition.
- p. Arrange for storage of evacuees' furniture as required.

1.5.7 Community Members

Preparedness

- a. Understanding the potential risk and impact of flooding;
- b. Preparing homes and property to reduce the impact of flooding;
- c. Understanding warnings and other triggers for action and the safest actions to take in a flood;
- d. Households, institutions and businesses developing plans to manage flood risks, sharing and practicing this with family, friends, employees and neighbours;
- e. Having an emergency kit;
- f. Being involved in local emergency planning processes.

1.5.8 Agriculture and Animal Services Functional Area

- a. When requested by NSW SES;
 - Activate the Agriculture and Animal Services Supporting Plan as required and coordinate the provision of required services which may include;
 - Co-ordinate response for all animals including pets, livestock and wildlife.
 - Supply and delivery of emergency fodder.
 - Emergency water replacement in certain circumstances.
 - Coordinate the management of livestock and farm animals.
 - Advice on dealing with dead and injured farm animals.
 - Financial, welfare and damage assessment assistance to flood affected farmers.
 - Co-ordinate the establishment of animal shelter compound facilities for the domestic pets and companion animals of evacuees.

1.5.9 The Ambulance Service of NSW

- a. Assist with the evacuation of at risk communities (in particular elderly and/or infirm people).
- b. Deploy ambulance resources to appropriate locations if access is expected to be lost.
- c. Assist the NSW SES with flood rescue operations.

1.5.10 Australian Government Bureau of Meteorology (The Bureau)

- a. Provide Flood Watches for the Manning River Basin.
- b. Provide Flood Warnings, incorporating height-time predictions, for Gloucester Gauge - 208020
- c. Provide severe weather warnings when flash flooding is likely to occur.

1.5.11 Caravan Park Proprietor(s)

- a. Prepare a flood emergency plan for the Caravan Park.
- b. Ensure that owners and occupiers moveable dwellings are aware that the caravan park is flood liable by;
 - Providing a written notice to occupiers taking up residence. The notice will indicate that the caravan park is liable to flooding and designate the location of flood liable land within the park.
 - Displaying this notice and the emergency arrangements for the Caravan Park prominently in the park.
- c. Ensure that owners and occupiers of moveable dwellings are aware that if they are expecting to be absent for extended periods, they should:
 - Provide the manager of the caravan park with a contact address and telephone number in case of an emergency.
 - Leave any moveable dwelling in a condition allowing it to be relocated in an emergency (i.e.: should ensure that the wheels, axles and draw bar of the caravans are not removed, and are maintained in proper working order) (6).
- d. Ensure that occupiers are informed of Flood Information. At this time, occupiers should be advised to;
 - Ensure that they have spare batteries for their radios.
 - Listen to a local radio station for updated flood information.
 - Prepare for evacuation and moveable dwelling relocation.
- e. Ensure that owners and occupiers of caravans are aware of what they must do to facilitate evacuation and moveable dwelling relocation when flooding occurs.
- f. Coordinate the evacuation of people and the relocation of moveable dwellings when floods are rising and their return when flood waters have subsided. Moveable dwellings will be relocated back to the caravan park(s) by owners or by vehicles and drivers arranged by the park managers.
- g. Secure any moveable dwellings that are not able to be relocated to prevent floatation.
- h. Inform the NSW SES of the progress of evacuation and/or moveable dwellings relocation operations and of any need for assistance in the conduct of these tasks.

1.5.12 Child Care Centres and Preschools

- a. Childcare Centres are to be contacted by the NSW SES in the event of possible flooding or isolation.
- b. When notified the child care centres and preschools should;

- Liaise with the NSW SES and arrange for the early release of children whose travel arrangements are likely to be disrupted by flooding and/or road closures.
- Assist with coordinating the evacuation of preschools and child care centres.

1.5.13 Energy and Utility Services Functional Area

- a. When requested by NSW SES;
 - Implement the Energy and Utilities Services Functional Area Supporting Plan.
 - Where required, coordinate energy and utility services emergency management planning, preparation, response and recovery, including the restoration of services following a flood event.
 - Coordinate advice to the NSW SES of any need to disconnect electricity, gas, water or wastewater services.
 - Assist the NSW SES to identify infrastructure at risk of flooding for incorporation into planning and intelligence.
 - Identify interdependencies between flooding and utility services due to secondary impacts of flooding and advise the NSW SES.
 - Assist the NSW SES with advisory notices relating to hazards from utility services during flooding.
 - Coordinate with utilities on restoration of services, including advisory notices relating to estimated time for restoration and mandatory safety checks prior to reconnection. Advise the NSW SES and the relevant recovery committee and coordinator of the timetable for restoration.
- b. Local utility service distribution providers (electricity, gas, water, waste water):
 - Provide advice to the NSW SES Gloucester Shire Local Controller of any need to disconnect power/gas/water/waste water supplies or of any timetable for reconnection.
 - Advise the NSW SES of any hazards from utility services during flooding.
 - Advise the public with regard to electrical hazards during flooding and to the availability or otherwise of the electricity supply.
 - Clear or make safe any hazard caused by power lines or electricity distribution equipment.
 - Reconnect customers' electrical/ gas/ water/waste water installations, when certified safe to do so and as conditions allow.
 - Assist the NSW SES to identify infrastructure at risk of flooding for incorporation into planning and intelligence.

1.5.14 Engineering Services Functional Area

- a. When requested by NSW SES;
 - Provide engineering advice regarding the integrity of damaged structures.
 - Assist the NSW SES with damage assessment.
 - Acquire and/or provide specialist technical engineering expertise.
 - Assist the NSW SES and councils with the assessment and operation of flood protection levees when requested.
 - Assist with property protection, including the construction or repair of levees.
 - Coordinate the restoration of critical public facilities.
- b. When requested by the Recovery Coordinator:
 - Establish Recovery Centres by the procurement and fit-out of suitable properties.

1.5.15 Environmental Services Functional Area

- a. When requested by NSW SES;
 - Implement the Environmental Services Functional Area (Enviroplan) Supporting Plan if required.

1.5.16 Fire and Rescue NSW, Gloucester

- a. FRNSW responsibilities are primarily confined to the FRNSW Fire District. Any deployment of FRNSW resources to assist NSW SES in flood events rests with the respective FRNSW Commander which must be a Senior Officer.
- b. The FRNSW Commander will assess the capability of FRNSW to assist NSW SES in the following tasks:
 - Assist the NSW SES with the warning and/or evacuation of at risk communities.
 - Assist the NSW SES with the monitoring / reconnaissance of flood prone areas.
 - Assist the NSW SES with the resupply of isolated communities and/or properties.
 - Assist the NSW SES with property protection tasks including sandbagging.
 - Provide resources for pumping flood water out of buildings and from low-lying areas.
 - Assist with clean-up operations, including the hosing out of flood affected properties.

- Coordinate the deployment of fire resources to communities within Fire and Rescue NSW fire districts if access is expected to be lost in consultation with the NSW SES.
- c. FRNSW will use its best endeavours to deploy appliances and or resources into locations where access is expected to be lost.

1.5.17 Forestry Corporation of NSW

- a. Close and evacuate at risk camping grounds in State Forest managed areas.
- b. Close and reopen Forestry Corporation of NSW roads when affected by flood waters and advise the NSW SES of its status.
- c. Facilitate the safe reliable access of emergency resources on Forestry Corporation managed roads.
- d. Assist the NSW SES with identification of road infrastructure at risk of flooding.
- e. Manage traffic in Forestry Corporation of NSW roads.
- f. Assist the NSW SES with the communication of warnings and information provision to the public through variable message signs and other appropriate means.

1.5.18 Health Services Functional Area

- a. When requested by NSW SES;
 - Activate Healthplan if required.
 - Ensure that appropriate business continuity plans are developed for essential health infrastructure and are activated during floods.
 - Provide medical support to the NSW SES.
 - Establish health surveillance in affected areas.
 - Assess potential public health risks that either acutely endanger the health of human populations or are thought to have longer term consequences.
 - Provide environmental health advice.
 - Provide public health warnings and advice to affected communities.
 - Provide psychological counselling support to the community and emergency response workers impacted, via NSW Health Mental Health Division.
 - Assist the NSW SES with the warning and evacuation of public hospitals, private hospitals and residential aged care facilities.
 - Undertake vulnerable persons assessment for mental health and drug and alcohol dependant persons, dialysis, frail and/or aged and oxygen dependant persons in the community, known to the health service.

1.5.19 Hunter/New England Area Health Service: Newcastle

- a. Manage the evacuations of patients from hospitals and nursing homes as required.
- b. Ensure aged care health facilities within the area have suitable and relevant flood management and evacuation plans established that provide for their respective needs during an event.
- c. Work towards developing a high risk register of people within the community who are home based and in need of special medical support such as dialysis or disabled access requirements.
- d. Be prepared to provide a brief on logistical and medical support requirements in order to assist in the evacuation of vulnerable members of the community.
- e. Be prepared to provide an administrative health liaison officer to the NSW SES Gloucester.

1.5.20 Gloucester Community Groups

- a. Assist with;
 - Delivery of evacuation warnings.
 - Conduct of evacuations.
 - Lifting and/or moving household furniture and commercial stock.
 - Sandbagging.
 - Monitoring of levees.
 - Relocation of caravans.

1.5.21 Gloucester Water Users Association- Barrington and Gloucester

- a. Provide information on the consequences of flooding to the members.

1.5.22 NSW Office of Water

- a. Collect and maintain flood data including data relating to flood heights, velocities and discharges.
- b. Provide the Bureau of Meteorology and NSW SES real-time or near real-time access to river height gauges and height data for the development of official flood warnings.
- c. Provide flow rating charts for river height gauges.
- d. Manage (with technical support from OEH) the approval process under the Water Act 1912 and Water Management Act 2000 for flood control works (earthworks, embankments and levees which can affect the distribution of floodwaters) including;
 - Assessment and approval of flood control works (including flood mitigation works) in rural areas designated under the Acts.

- Use of floodplain management plans prepared by OEH in rural areas designated under the Acts to assess flood control work approvals.
- Giving the NSW SES access to relevant studies regarding flooding and studies supporting floodplain management plans prepared by OEH including flood studies, floodplain risk management studies and flood behaviour investigations.

1.5.23 NSW Police Force, Manning Great Lakes Local Area Command (LAC)

- a. Assist the NSW SES with the delivery of evacuation warnings and evacuation orders.
- b. Assist the NSW SES with the conduct of evacuation operations.
- c. Conduct road and traffic control operations in conjunction with council and/or RMS.
- d. Coordinate the registration of evacuees.
- e. Secure evacuated areas.

1.5.24 NSW Rural Fire Service (RFS Gloucester)

- a. Provide personnel in rural areas and villages to;
 - Inform the NSW SES Gloucester Shire Local Controller about flood conditions and response needs in their own communities, and
 - Disseminate flood information.
- b. Provide personnel and high-clearance vehicles for flood related activities.
- c. Assist the NSW SES with the delivery of evacuation warnings and evacuation orders.
- d. Assist the NSW SES with the conduct of evacuations,
- e. Provide equipment for pumping flood water out of buildings and from low-lying areas.
- f. Assist with the removal of caravans.
- g. Provide back-up radio communications.
- h. Assist with clean-up operations, including the hosing of flood affected properties.
- i. Deploy fire resources to appropriate locations if access is expected to be lost.

1.5.25 Office of Environment and Heritage

- a. Assist the NSW SES gain access to relevant studies regarding flooding, including Flood Studies and Floodplain Risk Management Studies undertaken under the Floodplain Management Program.
- b. Assist the NSW SES in obtaining required outputs (Section 3.1.4) from Flood Studies and Floodplain Risk Management Studies under the Floodplain Management Program which assist the NSW SES in effective

emergency response planning and incorporating information into the NSW Floods Database.

- c. Coordinate the collection of post event flood data, in consultation with the NSW SES.
- d. Provide specialist advice to the NSW SES on flood related matters on the identification of flood risks.
- e. Collect and maintain flood data relating to flood heights, velocities and discharges in coastal areas of NSW (through a contract with MHL as discussed separately).
- f. Provide data to the Bureau of Meteorology and NSW SES real-time or near real-time access to river height gauges and height data for the development of official flood warnings (through a contract with MHL as described in the Response section of this plan).
- g. Assist the NSW SES in the exercising of this Flood Sub Plan.
- h. **Parks and Wildlife Service**
 - Close and reopen Parks and Wildlife Service roads when affected by flood waters and advise the NSW SES of its status.
 - Facilitate the safe reliable access of emergency resources on National Parks and Wildlife Service managed roads.
 - Assist the NSW SES with identification of road infrastructure at risk of flooding.
 - Manage traffic on Parks and Wildlife Service roads.
 - Assist the NSW SES with the communication of warnings and information provision to the public through variable message signs and other appropriate means.

1.5.26 Public Information Services Functional Area

- a. When requested by NSW SES;
 - Assist the NSW SES in the establishment and operation of a Joint Media Information Centre.

1.5.27 Roads and Maritime Services

- a. Manage traffic on state roads, state highways and waterways affected by flood waters and advise the NSW SES of their status.
- b. Facilitate the safe reliable access of emergency resources on RMS managed roads.
- c. Assist the NSW SES with identification of road infrastructure at risk of flooding.
- d. Assist in Traffic management associated with evacuations where necessary.
- e. Enter state road closure information into the Live Traffic site.

- f. Assist the NSW SES and local councils with the communication of warnings and information provision to the public through variable message signs.
- g. Cooperate with the Mid North Coast Transport Services Functional Area Coordinator.

1.5.28 School Administration Offices (including Catholic Education Office Port Macquarie, Department of Education & Communities Great Lakes Principal Network and Private Schools)

- a. Liaise with the NSW SES and arrange for the early release of students whose travel arrangements are likely to be disrupted by flooding and/or road closures (or where required, for students to be moved to a suitable location until normal school closing time).
- b. Pass information to school bus drivers/companies and/or other schools on expected or actual impacts of flooding.
- c. Provide warning to the following schools, including:
 - Gloucester High School
 - Gloucester Primary School
 - St Josephs Catholic School
 - Barrington Public School
 - Stratford Public School
- d. Assist with coordinating the evacuation of schools when flooding or isolation is expected to occur.
- e. Provide space in schools for evacuation centres where necessary.

1.5.29 Telecommunication Services Functional Area

- a. When requested by NSW SES;
 - Coordinate the restoration of telephone facilities damaged by flooding.
 - Assist the NSW SES to identify infrastructure at risk of flooding for incorporation into planning and intelligence.

1.5.30 The Mid North Coast Transport Services Functional Area Coordinator (TSFAC)

- a. The TSFAC will assist NSW SES, emergency services and other functional areas through the provision of transport services, including;
 - The movement of emergency equipment and personnel.
 - The movement of emergency supplies and goods, including water, fuel and food.
 - The evacuation of people and animals.
 - Assistance for medical transport.

- Transportation of animals and infectious material/dangerous goods.
- Maintaining and operating a transport route advisory service to the NSW SES, emergency services organisations and other Functional Areas and members of the community.

1.5.31 NSW Train Link

- a. Operate NSW regional and interstate rail services through the Gloucester Shire including the management of railway services affected by flood waters and advise the NSW SES.
- b. Assist the NSW SES with the movement or evacuation of people during flood response operations if required.
- c. Convey flood information and flood warnings to passengers and travellers on NSW trains.
- d. Cooperate with, and assist the NSW SES Local Controller in relation to public safety during flood emergencies.
- e. Cooperate with the Mid North Coast Transport Services Functional Area Coordinator.

1.5.32 NSW SES River Gauge Readers Network

- a. Provide flood information to the Gloucester Shire Local Controller.

1.5.33 Welfare Services Functional Area

- a. When requested by NSW SES;
 - Establish and manage evacuation centres, and provide disaster welfare services from recovery centres.
 - Administer the Personal Hardship and Distress component of the NSW Disaster Relief Scheme established to provide financial assistance to people affected by emergencies.

PART 2 - PREPAREDNESS

2.1 MAINTENANCE OF THIS PLAN

- 2.1.1 The NSW SES Gloucester Shire Local Controller will maintain the currency of this plan by;
- a. Ensuring that all agencies, organisations and officers mentioned in it are aware of their roles and responsibilities.
 - b. Conducting exercises to test arrangements.
 - c. Reviewing the contents of the plan;
 - After each flood operation.
 - When significant changes in land-use or community characteristics occur.
 - When new information from flood studies become available.
 - When flood control or mitigation works are implemented or altered.
 - When there are changes that alter agreed plan arrangements.
- 2.1.2 The plan is to be reviewed no less frequently than every five years.

2.2 FLOODPLAIN RISK MANAGEMENT

- 2.2.1 The NSW SES Gloucester Shire Local Controller will ensure that;
- a. NSW SES participates in local floodplain risk management committee activities when those committees are formed, in accordance with the protocols outlined in the NSW SES Controllers' Guide.
 - b. The NSW SES Mid North Coast Region Headquarters is informed of involvement in floodplain risk management activities.

2.3 DEVELOPMENT OF FLOOD INTELLIGENCE

- 2.3.1 Flood intelligence describes flood behaviour and its effects on the community.
- 2.3.2 The NSW SES maintains a centralised flood intelligence system.

2.4 DEVELOPMENT OF WARNING SYSTEMS

- 2.4.1 The NSW SES establishes total flood warning systems for areas affected by flooding. This requires;
- a. An identification of the potential clients of flood warning information at different levels of flooding (i.e. who would be affected in floods of differing severities).
 - b. Available information about the estimated impacts of flooding at different heights.

- c. Identification of required actions and the amounts of time needed to carry them out.
 - d. Appropriate means of disseminating warnings to different clients and at different flood levels.
- 2.4.2 Council and the Bureau have installed hardware and software to monitor water levels in the Manning River catchments. Data gathered informs Flood Warnings issued by the Bureau and is provided to the NSW SES.

2.5 COMMUNITY RESILIENCE

- 2.5.1 The community needs to be as prepared as emergency agencies for the impact of all hazards (5) including flooding.
- 2.5.2 As the combat agency, NSW SES has the primary responsibility for the collation, assessment and public dissemination of information relating to flooding (3). To do this, NSW SES will require assistance from other agencies, particularly local government councils, dam owners, and the Bureau in the development and delivery of materials.
- 2.5.3 The NSW SES Gloucester Shire Local Controller, with the assistance of the Gloucester Shire Council, the NSW SES Mid North Coast Region Headquarters and NSW SES State Headquarters, is responsible for the collation, assessment and public dissemination of information relating to flooding (3).
- 2.5.4 A range of tailored strategies to be employed with NSW communities include:
- a. Dissemination of flood-related brochures and booklets in flood liable areas.
 - b. Talks and displays orientated to at-risk groups, community organisations, businesses and schools.
 - c. Publicity given to this plan and to flood-orientated NSW SES activities through local media outlets, including articles in local newspapers about the flood threat and appropriate responses.

2.6 TRAINING

- 2.6.1 Throughout this document there are references to functions that must be carried out by the members of the NSW SES Gloucester Shire Unit(s). The NSW SES Gloucester Shire Local Controller is responsible for ensuring that the members are;
- a. Familiar with the contents of this plan.
 - b. Trained in the skills necessary to carry out the tasks allocated to the NSW SES.

2.7 RESOURCES

- 2.7.1 The NSW SES Gloucester Shire Local Controller is responsible for maintaining the condition and state of readiness of NSW SES equipment and the NSW SES Gloucester Shire Local Headquarters.
- 2.7.2 The NSW SES Gloucester Shire Unit Controller has similar responsibilities in relation to the Gloucester Shire Unit Headquarters and equipment.

PART 3 - RESPONSE

CONTROL

3.1 CONTROL ARRANGEMENTS

- 3.1.1 The NSW SES is the legislated Combat Agency for floods and is responsible for the control of flood operations. This includes the coordination of other agencies and organisations for flood management tasks.
- 3.1.2 The Local EMPLAN will operate to provide support as requested by the NSW SES Local Incident Controller.

3.2 OPERATIONAL MANAGEMENT

- 3.2.1 NSW SES utilises the Australasian Inter-service Incident Management System (AIIMS), which is based on three principles;
 - a. Functional management
 - b. Management by objectives
 - c. Span of control.
- 3.2.2 AIIMS provides for different incident levels based on the complexity of management.
- 3.2.3 The Local Government Area may be divided into sectors and divisions to manage the flood event (divisions are usually a group of sectors).
- 3.2.4 Sectors and divisions may be based on floodplain classifications, geographical, physical or functional boundaries. A town, city or suburb may be one sector or split into several sectors and divisions.

3.3 START OF RESPONSE OPERATIONS

- 3.3.1 This plan is always active to ensure that preparedness actions detailed in this plan are completed.
- 3.3.2 Response operations will begin;
 - a. On receipt of a Bureau of Meteorology Preliminary Flood Warning, Flood Warning, Flood Watch, Severe Thunderstorm Warning or a Severe Weather Warning for flash flooding.
 - b. On receipt of a dam failure alert.
 - c. When other evidence leads to an expectation of flooding within the council area.
- 3.3.3 Contact with the Bureau of Meteorology to discuss the development of flood warnings will normally be through the NSW SES Mid North Coast Region Headquarters and/or NSW SES State Headquarters.

- 3.3.4 The following persons and organisations will be advised of the start of response operations regardless of the location and severity of the flooding anticipated:
- a. NSW SES Mid North Coast Region Headquarters.
 - b. NSW SES Gloucester Shire Gloucester Shire Controller(s).
 - c. NSW SES Gloucester Shire Gloucester Shire Unit.
 - d. Gloucester Local Emergency Operations Controller (for transmission to the NSW Police Force Local Area Command Headquarters).
 - e. Gloucester Local Emergency Management Officer (for transmission to appropriate council officers and departments).
 - f. Gloucester Shire Council Mayor.
 - g. Other agencies listed in this plan will be advised by the Local Emergency Management Officer on the request of the NSW SES Gloucester Shire Local Incident Controller and as appropriate to the location and nature of the threat.

3.4 RESPONSE STRATEGIES

- 3.4.1 The main response strategies for NSW SES flood operations include;
- a. Information Provision and Warning
 - Provision of warnings, information and advice to communities.
 - Inform the community regarding the potential impacts of a flood and what actions to undertake in preparation for flooding.
 - Provide timely and accurate information to the community.
 - b. Property protection
 - Protect the property of residents and businesses at risk of flood damage.
 - Assistance with property protection by way of sandbagging and the lifting or transporting of furniture, personal effects, commercial stock and caravans.
 - Assistance with the protection of essential infrastructure.
 - c. Evacuation
 - Evacuation is a risk management strategy that may be used to mitigate the effects of an emergency on a community. It involves the movement of people to a safer location and their return. For an evacuation to be effective it must be appropriately planned and implemented (7).

- d. Flood Rescue
 - The rescue or safe retrieval of persons or animals trapped by floodwaters.
 - e. Resupply
 - Minimise disruption upon the community by resupplying towns and villages which have become isolated as a consequence of flooding.
 - Ensure supplies are maintained to property owners by coordinating the resupply of properties which have become isolated as a consequence of flooding.
- 3.4.2 The NSW SES Local Incident Controller will select the appropriate response strategy to deal with the expected impact of the flood in each sector and/or community. The impact may vary so a number of different strategies may need to be selected and implemented across the whole operational area. The available strategies for each sector and/or community are maintained by the NSW SES.
- 3.4.3 Supporting agency strategies may include;
- a. Protect the community from incidents involving fire and hazardous materials.
 - b. Maintain the welfare of communities and individuals affected by the impact of a flood.
 - c. Minimise disruption to the community by ensuring supply of essential energy and utility services.
 - d. Ensure coordinated health services are available to and accessible by the flood affected communities.
 - e. Maintain the welfare of animals affected by the impact of a flood.

3.5 OPERATIONS CENTRES

- 3.5.1 The NSW SES Gloucester Shire Operations Centre is located at 23 Tate Street, Gloucester, NSW 2422.
- 3.5.2 Supporting EOCs are located at the Gloucester Emergency Operations Centre, located at NSWRFHS HQ Lowe Street Gloucester.

3.6 LIAISON

- 3.6.1 Any agency with responsibilities identified in this plan may be requested by the NSW SES to provide liaison (including a liaison officer where necessary) to the NSW SES Gloucester Shire Operations Centre, or designated Emergency Operations Centre.

- 3.6.2 In accordance with NSW EMPLAN, Liaison Officers will;
- a. Maintain communication with and convey directions/requests to their organisation or functional area;
 - b. Provide advice on the status, resource availability, capabilities, actions and requirements of their organisation or functional area, and
 - c. Where appropriate, have the authority to deploy the resources of their parent organisation at the request of the NSW SES Local Incident Controller.

3.7 END OF RESPONSE OPERATIONS

- 3.7.1 When the immediate danger to life and property has passed the NSW SES Region Incident Controller or the NSW SES Local Incident Controller will issue an 'All Clear' message signifying that response operations have been completed. The message will be distributed through the same media outlets as earlier evacuation messages. The relevant Controller will also advise details of recovery coordination arrangements, arrangements made for clean-up operations prior to evacuees being allowed to return to their homes, and stand-down instructions for agencies not required for recovery operations.

PLANNING

3.8 COLLATING SITUATIONAL INFORMATION

Strategy

- 3.8.1 The NSW SES maintains and records situational awareness of current impacts and response activities.

Actions

- 3.8.2 The NSW SES Gloucester Shire Local Headquarters collates information on the current situation in the Gloucester LGA and incorporates in Situation Reports.
- 3.8.3 The NSW SES Mid North Coast Region Headquarters collates Region-wide information for inclusion in NSW SES Region Situation Reports.
- 3.8.4 Sources of situational information during times of flooding are;
- a. **Agency Situation Reports.** Agencies and functional areas provide regular situation reports (SITREPs) to the NSW SES.
 - b. **Active Reconnaissance.** The NSW SES Gloucester Shire Local Incident Controller is responsible for coordinating the reconnaissance of impact areas, recording and communicating observations. Reconnaissance can be performed on the ground and using remote sensing (more commonly aerial). The NSW SES monitors the following problem areas:
 - Rocky Crossing on Barrington West Road (causeway)
 - Gloucester Holiday Caravan Park - Gloucester - no gauge is present

- Church Street - Gloucester - no gauge is present
 - Avon Flat - Buckets Way
 - Fairbairn Road - Avon River
 - Jacks Road - Avon River
 - Boundary Road
- c. The **Bureau of Meteorology's Flood Warning Centre** provides river height and rainfall information, data is available on the website <http://www.bom.gov.au/nsw/flood/>.
- d. **Manly Hydraulics Laboratory (a business unit within NSW Public Works)** automated river watch system funded by the Office of Environment and Heritage. This system provides river height and rainfall readings for a number of gauges in the Gloucester LGA. Recent data from this system is available on the Manly Hydraulic Laboratory website: <http://www.mhl.nsw.gov.au>. A history of area floods is also available upon request via the website.
- e. **NSW Office of Water**. This office advises flow rates and rates of rise for the Manning River. Daily river reports containing information on gauge heights and river flows are available from the website: <http://waterinfo.nsw.gov.au/>.
- f. **NSW SES Mid North Coast Region Headquarters**. The Region Headquarters provides information on flooding and its consequences, including those in nearby council areas (this information is documented in Bulletins and Situation Reports).
- g. **Gloucester Shire Council**. The Gloucester Shire Council will provide Road Closure Bulletin and information to the public.
- 3.8.5 During flood operations sources of information on roads closed by flooding include;
- a. Gloucester Shire Council (<http://www.gloucester.nsw.gov.au/>)
 - b. Manning Great Lakes Police Local Area Command.
 - c. Roads and Maritime Services (<http://www.rms.nsw.gov.au/> and telephone service).
 - d. NSW SES Mid North Coast Region Headquarters.
 - e. NSW SES Gloucester Shire Local Headquarters.
- 3.8.6 Situational information relating to consequences of flooding should be used to verify and validate NSW SES Flood Intelligence records.

3.9 PROVISION OF FLOOD INFORMATION AND WARNINGS

Strategy

- 3.9.1 The NSW SES Gloucester Shire Local Headquarters provides advice to the NSW SES Mid North Coast Region Headquarters on current and expected impacts of flooding in the Gloucester LGA.
- 3.9.2 The NSW SES Mid North Coast Region Headquarters issues NSW SES Flood Bulletins, NSW SES Livestock and Equipment Warnings, Evacuation Warnings and Evacuation Orders to media outlets and agencies on behalf of all NSW SES units in the Region.

Actions

- 3.9.3 The NSW SES Gloucester Shire Local Incident Controller will ensure that the NSW SES Mid North Coast Region Incident Controller is regularly briefed on the progress of operations.
- 3.9.4 NSW SES Gloucester Shire Local Headquarters operations staff will be briefed regularly so that they can provide information in response to inquiries received in person or by other means such as phone or fax.
- 3.9.5 **Bureau of Meteorology Severe Thunderstorm Warning.** These are issued direct to the media by the Bureau when severe thunderstorms are expected to produce dangerous or damaging conditions, including flash flooding. Severe thunderstorms are usually smaller in scale than events covered by Flood Watches and Severe Weather Warnings.
- 3.9.6 **Bureau of Meteorology Severe Weather Warnings for Flash Flooding.** These are issued direct to the media by the Bureau and provide a warning of the possibility for flash flooding as a result of intense rainfall. These warnings are issued when severe weather is expected to affect land based communities with 6 to 24 hours. Severe Weather Warnings may also include other conditions such as Damaging Winds.
- 3.9.7 **Bureau of Meteorology Flood Watches.** Flood Watches are issued by the Bureau to advise people of the potential for flooding in a catchment area based on predicted or actual rainfall. Flood Watches will be included in NSW SES Flood Bulletins issued by the NSW SES Mid North Coast Region Headquarters.
- 3.9.8 **Bureau of Meteorology Flood Warnings.** The NSW SES Mid North Coast Region Headquarters will send a copy of Bureau Flood Warnings to the NSW SES Gloucester Shire Unit. On receipt the NSW SES Local Incident Controller will provide the NSW SES Mid North Coast Region Headquarters with information on the estimated impacts of flooding at the predicted heights for inclusion in NSW SES Region Flood Bulletins.
- 3.9.9 **NSW SES Livestock and Equipment Warnings.** Following heavy rain or when there are indications of significant creek or river rises (even to levels below Minor Flood heights), the NSW SES Gloucester Shire Local Incident Controller

- will advise the NSW SES Mid North Coast Region Headquarters which will issue NSW SES Livestock and Equipment Warnings.
- 3.9.10 **NSW SES Local Flood Advices.** The NSW SES Local Incident Controller may issue Local Flood Advices for locations not covered by Bureau Flood Warnings. They may be provided verbally in response to phone inquiries but will normally be incorporated into NSW SES Region Flood Bulletins.
- 3.9.11 **NSW SES Flood Bulletins.** The NSW SES Mid North Coast Region Headquarters will regularly issue NSW SES Flood Bulletins which describe information on the estimated impacts of flooding at the predicted heights (using information from Bureau Flood Warnings and NSW SES Local Flood Advices) to NSW SES units, media outlets and agencies on behalf of all NSW SES units in the Region.
- 3.9.12 **NSW SES Evacuation Warnings and Evacuation Orders.** These are usually issued to the media by the NSW SES Region Incident Controller on behalf of the NSW SES Local Incident Controller.
- 3.9.13 **Special Warnings.**
- 3.9.14 **Standard Emergency Warning Signal (SEWS).** This signal may be played over radio and television stations to alert communities to Evacuation Warnings, Evacuation Orders, Special Warnings or Dam-Failure Warnings. Approval to use the signal is associated with who approves the warning/order message.
- 3.9.15 **The Public Information and Inquiry Centre (PIIC)** (operated by the NSW Police Force) will answer calls from the public regarding registered evacuees.
- 3.9.16 **The Disaster Welfare Assistance line** is a central support and contact point for disaster affected people inquiring about welfare services advice and assistance. This normally operates during business hours, but can be extended when required.
- 3.9.17 **The RMS Transport Information Line** will provide advice to callers on the status of roads. The RMS website also lists road closure information.
- 3.9.18 **Gloucester Shire Council** will provide information on the status of roads.
- 3.9.19 Collation and dissemination of road information is actioned as follows:
- a. As part of Situation Reports, the NSW SES Gloucester Shire Local Incident Controller provides road status reports for main roads in the council area to the NSW SES Mid North Coast Region Headquarters.
 - b. The NSW SES Mid North Coast Region Headquarters distributes information on main roads to NSW SES units, media outlets and agencies as part of NSW SES Flood Bulletins.

OPERATIONS

3.10 AIRCRAFT MANAGEMENT

- 3.10.1 Aircraft can be used for a variety of purposes during flood operations including evacuation, rescue, resupply, reconnaissance and emergency travel.
- 3.10.2 Air support operations will be conducted under the control of the NSW SES Region Headquarters, which may allocate aircraft to units if applicable.
- 3.10.3 NSW SES maintains the following information for the Gloucester Council area;
- a. Locations of suitable helicopter landing points, including:
 - Barrington Public School (Bowman 9234-2-S 970620) - for use when Barrington is isolated
 - Gloucester High School Sports-fields (Gloucester 9233-1-N 016570) - to access the Hospital
 - RFS Headquarters, Lowe St (Gloucester 9233-1-N 015555) - for all other operations
 - b. Locations of suitable airports and records detailing aircraft size and type that can land at airports.
 - c. Intelligence on when access to these locations is expected to be lost.
- 3.10.4 **Airport.** Access to the Gloucester Airstrip (Gloucester 9233-1-N 032533) remains until road access is lost by the Avon River at 5.7m on auto gauge. The airport is capable of handling small fixed wing aircraft, the airstrip may be closed due to soft ground during extended wet periods.

3.11 ASSISTANCE FOR ANIMALS

- 3.11.1 Matters relating to the welfare of livestock, companion animals and wildlife are to be referred to Agriculture and Animal Services Functional Area.
- 3.11.2 Requests for emergency supply and/or delivery of fodder to stranded livestock, or for livestock rescue, are to be referred to Agriculture and Animal Services Functional Area.
- 3.11.3 Requests for animal rescue should be referred to the NSW SES.

3.12 COMMUNICATION SYSTEMS

- 3.12.1 The primary means of communications between fixed locations is by telephone, email and facsimile.
- 3.12.2 The primary means of communication to and between deployed NSW SES resources is by NSW SES PMR.
- 3.12.3 All liaison officers will provide their own communication links back to their parent agencies.

- 3.12.4 All other organisations will provide communications as necessary to their deployed field teams.
- 3.12.5 Back-up communications are provided as follows:
- a. A portable repeater is available from the NSW SES Mid North Coast Regional Headquarters.
 - b. Alternatively all NSW SES GRN radio's have the capability to operate on UHF.

3.13 PRELIMINARY DEPLOYMENTS

- 3.13.1 When flooding is expected to be severe enough to cut road access to towns, within towns and/or rural communities, the NSW SES Gloucester Shire Local Incident Controller will ensure that resources are in place for the distribution of foodstuffs and medical supplies to the areas that could become isolated.
- 3.13.2 When access between locations is expected to be cut, the NSW SES Gloucester Shire Local Incident Controller will advise appropriate agencies so that resources (including sandbags, fire fighting appliances, ambulances, etc.) are deployed to ensure that operational capability is maintained.

3.14 ROAD AND TRAFFIC CONTROL

- 3.14.1 A number of roads within the council area are affected by flooding. NSW SES maintains details of these roads.
- 3.14.2 The council closes and re-opens its own roads.
- 3.14.3 The NSW Police Force has the authority to close and re-open roads but will normally only do so (if the Council or the RMS have not already acted) if public safety requires such action.
- 3.14.4 When resources permit, the NSW SES assists Council, RMS or the Police by erecting road closure signs and barriers.
- 3.14.5 In flood events, the NSW SES Gloucester Shire Local Incident Controller may direct the imposition of traffic control measures. The entry into flood affected areas will be controlled in accordance with the provisions of the State Emergency Service Act, 1989 (Part 5, Sections 19, 20, 21 and 22) and the State Emergency Rescue Management Act, 1989 (Part 4, Sections 60KA, 60L and 61).
- 3.14.6 Police, RMS or Council officers closing or re-opening roads or bridges affected by flooding are to advise the NSW SES Gloucester Shire Local Headquarters, which will then provide a road information service to local emergency services, the public and the NSW SES Mid North Coast Region Headquarters. All such information will also be passed to the Police, RMS and the Council.

3.15 STRANDED TRAVELLERS

- 3.15.1 Flood waters can strand travellers. Travellers seeking assistance will be referred to the Welfare Services Functional Area for the arrangement of emergency accommodation. The following areas are of particular risk:
- a. Gloucester
 - b. Gloryvale Camping grounds
 - c. Bretti Camping grounds
 - d. Stratford township
 - e. Barrington township
 - f. Copeland village - no facilities
 - g. Cobark – Scone Rd Camping grounds
 - h. Gloucester Tops - Camping and Caravan grounds - no facilities
- 3.15.2 A small number of evacuations may be required for Travellers; assistance will be referred to Community Services for the arrangement of temporary accommodation.

3.16 MANAGING PROPERTY PROTECTION OPERATIONS

Strategy

- 3.16.1 Protect the property of residents and businesses at risk of flood damage.

Actions

- 3.16.2 The NSW SES is the responsible agency for the coordination of operations to protect property.
- 3.16.3 Property may be protected from floods by;
- a. Lifting or moving of household furniture.
 - b. Lifting or moving commercial stock and equipment.
 - c. Sandbagging to minimise entry of water into buildings.
- 3.16.4 Sandbagging equipment will be pre-positioned in Church St during floods at the following locations:
- a. Cnr of Denison St
 - b. Cnr of Hume St

3.17 MANAGING FLOOD RESCUE OPERATIONS

Strategy

- 3.17.1 Rescue of people and animals from floods.

Actions

- 3.17.2 The NSW SES Gloucester Shire Local Incident Controller controls flood rescue in Gloucester LGA during a flood emergency.
- 3.17.3 Flood rescues, may be carried out by accredited units in accordance with appropriate standards.
- 3.17.4 Additional flood boats and crews can be requested through the NSW SES Mid North Coast Region Headquarters.
- 3.17.5 There may be some residual population which did not evacuate during the early stages of flooding and which require rescue.

3.18 MANAGING EVACUATION OPERATIONS

Strategy

- 3.18.1 When there is a risk to public safety, evacuation is the primary strategy. Circumstances may include;
- a. Evacuation of people when their homes or businesses are likely to flood.
 - b. Evacuation of people who are unsuited to living in isolated circumstances, due to flood water closing access.
 - c. Evacuation of people where essential energy and utility services are likely to fail, have failed or where buildings have been made uninhabitable.

Actions

- 3.18.2 The evacuation operation will have the following stages:
- a. Decision to evacuate.
 - b. Mobilisation (mobilisation may begin prior to the decision to evacuate).
 - c. Evacuation Warning delivery.
 - d. Evacuation Order delivery.
 - e. Withdrawal.
 - f. Shelter.
 - g. Return.
- 3.18.3 During floods evacuations will be controlled by the NSW SES. Small-scale evacuations will be controlled by the NSW SES Gloucester Shire Local Incident Controller. Should the scale of evacuation operations be beyond the capabilities of local resources control may be escalated to the NSW SES Mid North Coast Region Incident Controller.

Decision to evacuate

- 3.18.4 In most cases the decision to evacuate rests with the NSW SES Gloucester Shire Local Incident Controller who exercises his/her authority in accordance with Section 22(1) of The State Emergency Service Act 1989. However, the decision to evacuate will usually be made after consultation with the NSW SES Mid North Coast Region Incident Controller and the Local Emergency Operations Controller.
- 3.18.5 In events that require large scale evacuations, the decision to evacuate may be escalated to the Region or the State Incident Controller.
- 3.18.6 Some people will make their own decision to evacuate earlier and move to alternate accommodation, using their own transport. This is referred to as self-managed evacuation (8).

Mobilisation

- 3.18.7 The NSW SES Local Incident Controller will request the following personnel for doorknock teams for designated Sectors/locations:
- NSW SES Gloucester Shire Unit members.
 - RFS Gloucester District members via the RFS Fire Control Officer.
 - Local Police Force officers via the local area command.
- 3.18.8 The NSW SES Mid North Coast Region Incident Controller will request any additional personnel required to assist with doorknock teams using;
- NSW SES members from the NSW SES Mid North Coast Region and surrounding NSW SES Regions.
 - FRNSW personnel arranged via the FRNSW Liaison Officer.
 - RFS personnel arranged via the RFS Liaison Officer.
- 3.18.9 The NSW SES Local Incident Controller will request the Chairperson of the LEMC to provide Council personnel to assist with traffic coordination within Sector(s)/Community.
- 3.18.10 The NSW SES Local Incident Controller will arrange liaison officers for Sector Command Centres.
- 3.18.11 The NSW SES Mid North Coast Region Operations Controller will request the required number of buses for Sectors via the Transport Services Functional Area.

Delivery of Evacuation Warnings and Evacuation Orders

- 3.18.12 The NSW SES will advise the community of the requirements to evacuate. The NSW SES will issue an **Evacuation Warning** when the intent of an NSW SES Incident Controller is to warn the community of the need to prepare for a possible evacuation.

- 3.18.13 The NSW SES will issue an **Evacuation Order** when the intent of the NSW SES Incident Controller is to instruct a community to immediately evacuate in response to an imminent threat.
- 3.18.14 The NSW SES Local Incident Controller will distribute Evacuation Warnings and Evacuation Orders to;
- a. Sector/Division Command Centres (where established).
 - b. Gloucester Local Emergency Operations Centre.
 - c. Gloucester Shire Council.
 - d. Manning Great Lakes Police Local Area Command.
 - e. Gloucester Rural Fire Service Control Centre.
 - f. Radio Stations.
 - g. Other local agencies and specified individuals.
- 3.18.15 The NSW SES Mid North Coast Region Incident Controller will distribute Evacuation Warnings and Evacuation Orders to;
- a. The NSW SES State Operations Centre.
 - b. The NSW SES Gloucester Shire Local Incident Controller.
 - c. Affected communities via dial-out warning systems where installed or applicable.
 - d. Relevant media outlets and agencies.
- 3.18.16 Evacuation Warnings and Evacuation Orders may be delivered through;
- a. Radio and television stations.
 - b. Doorknocking by emergency service personnel.
 - c. Public address systems (fixed or mobile).
 - d. Telephony-based systems (including Emergency Alert).
 - e. Two-way Radio.
 - f. Direct access to Local Radio Station broadcasters.
- 3.18.17 The Standard Emergency Warning Signal (SEWS) may be used to precede all Evacuation Orders broadcast on Radio Stations.
- 3.18.18 Doorknock teams will work at the direction of;
- a. The Local Incident Controller.
- 3.18.19 Field teams conducting doorknocks will record and report back the following information to their Sector Commander/Division Commander/Local Incident Controller;
- a. Addresses and locations of houses doorknocked and/or evacuated.
 - b. The number of occupants.

- c. Details of support required (such as transport, medical evacuation, assistance to secure house and/or property and raise or move belongings).
 - d. Details of residents who refuse to comply with the Evacuation Order.
- 3.18.20 Refusal to evacuate. Field teams cannot afford to waste time dealing with people who are reluctant or refuse to comply with any Evacuation Order. These cases are to be referred to the NSW Police Force.

Withdrawal

- 3.18.21 Evacuations will generally be carried out in stages starting from the lowest areas, low flood islands and low trapped perimeters; and progressively from higher areas. Table 1 indicates the phasing and priority of evacuation.

Table 1. Phasing and priority of evacuation

Trigger	Priority 1	Priority 2	Priority 3	Priority 4
Flood Warning	Schools and Child Care Centres, Special needs/home care patients	Elderly and infirm		
Failure of Essential Services	Hospitals Special needs/home care patients	Aged Care Facilities	Identified at risk home residents	Other residents and pets as possible.
Flooding affecting properties	Special needs/home care patients	Ground Level residents/Caravan Parks	Other residents and pets when possible	
Isolation of properties	Elderly and infirm	Single Parent families	Resupply	
Imminent dam failure	Identified at risk residents immediately downstream	Schools and Child Care Centres, Special needs/home care patients	Elderly and infirm	All Ground Level residents Caravan Parks

- 3.18.22 The most desirable method of evacuation is via road using private transport. This may be supplemented by buses for car-less people. However, other means of evacuation may also be used if available and as necessary (e.g. by foot, rail, air).

- 3.18.23 Evacuees who require emergency accommodation or disaster welfare assistance will be directed to designated evacuation centres. Evacuees who

- have made their own accommodation arrangements will not be directed to evacuation centres. It is not possible to determine in advance how many will fall into this category.
- 3.18.24 There are of elderly persons residing in the Gloucester catchment who may need assistance when evacuating. During peak tourist periods there may also be large numbers of people who are unaware of the risk posed by flooding.
- 3.18.25 Evacuees will:
- a. Move under local traffic arrangements from the relevant Sectors/Community as directed.
 - b. Continue along the suburban/regional/rural road network to allocated Evacuation Centres.
- 3.18.26 **Health Services:** The Health Services Functional Area will coordinate the evacuation of hospitals, health centres and aged care facilities (including nursing homes).
- 3.18.27 **Schools:** School administration offices (Department of Education and Communities, Catholic Education Office and Private Schools) will coordinate the evacuation of schools if not already closed.
- 3.18.28 If there is sufficient time between the start of response operations and the evacuation of communities, the NSW SES Mid North Coast Region Incident Controller will discuss the temporary closure of appropriate schools with the Regional Director, Region, Department of Education and Communities. This will enable pupils to stay at home or be returned home so they can be evacuated (if required) with their families.
- 3.18.29 Note that in the Gloucester LGA, school principals may close some schools affected by flooding in the early stages of flooding.
- 3.18.30 **Caravan parks:** When an evacuation order is given occupiers of moveable dwellings should:
- a. Isolate power to moveable dwellings.
 - b. Collect personal papers, medicines, a change of clothing, toiletries and bedclothes.
 - c. Lift the other contents in any remaining dwellings as high as possible.
 - d. Move to friends, relatives or a designated evacuation centre if they have their own transport, or move to the caravan office to await transport.
 - e. If undertaking self-managed evacuation, register their movements with the caravan park management upon leaving the park.
- 3.18.31 Where possible, dwellings that can be moved will be relocated by their owners. Park managers will arrange for the relocation of moveable dwellings as required. Council and NSW SES personnel may assist if required.
- 3.18.32 Caravan park managers will ensure that their caravan park is capable of being evacuated in a timely and safe manner.

- 3.18.33 Advise the NSW SES Gloucester Shire Local Controller of:
- a. The number of people requiring transport.
 - b. Details of any medical evacuations required.
 - c. Whether additional assistance is required to effect the evacuation.
- 3.18.34 Check that all residents and visitors are accounted for.
- 3.18.35 Inform the NSW SES Gloucester Shire Local Controller when the evacuation of the caravan park has been completed.
- 3.18.36 Provide the NSW SES Gloucester Shire Local Controller with a register of people that have been evacuated.
- 3.18.37 **Assistance Animals, Pets and Companion Animals of Evacuees:** Assistance animals (guide dogs, hearing assistance animals, etc.) will remain in the care of their owners throughout the evacuation. This includes transport and access into evacuation centres etc. Due to safety restrictions, it may not be possible to allow companion animals to accompany their owners when being transported via aircraft or flood rescue boats. Agriculture and Animal Services will make separate arrangements for the evacuation and care of companion animals.
- 3.18.38 **Transport and storage:** Transport and storage of furniture from flood threatened properties will be arranged as time and resources permit. The following locations may be suitable:
- a. Uniting Church Hall – Cowper St
 - b. Presbyterian Hall – Barrington St
 - c. Baptist Church Hall – Denison St
 - d. Anglican Church Hall – Hume St
 - e. Senior Citizen Centre – Hume St
- 3.18.39 **Security:** The NSW Police Force will coordinate the provision of overall security for evacuated areas.
- 3.18.40 The NSW SES Local Incident Controller is to provide the following reports to the NSW SES Mid North Coast Region Headquarters:
- a. Situation Reports and include:
 - SMEACC Principles.
 - Road conditions and closures.
 - Current flood behaviour.
 - Current operational activities.
 - Likely future flood behaviour.
 - Likely future operational activities.
 - Probable resource needs.

- 3.18.41 **Assembly areas:** An assembly area is a designated location used for the assembly of emergency-affected persons before they move to temporary accommodation or a nominated evacuation centre. As such these areas do not provide welfare assistance nor are they used for long term sheltering or provision of meals. An assembly area may also be a prearranged, strategically placed area, where support response personnel, vehicles and other equipment can be held in readiness for use during an emergency.

Shelter

- 3.18.42 **Evacuation Centres:** Evacuees will be advised to go to friends or relatives, or else be taken to the nearest accessible evacuation centre, which may initially be established at the direction of the NSW SES Gloucester Shire Local Incident Controller, but managed as soon as possible by Welfare Services.
- 3.18.43 The following locations are suitable for use as flood evacuation centres:
- a. Gloucester High School, Ravenshaw St, Gloucester
 - b. RSL Club Auditorium, Denison St Gloucester.
 - c. Gloucester Senior Citizens Centre, Hume St Gloucester
 - d. Barrington Community Hall, Barrington.
 - e. Stratford Hall, Stratford.
- 3.18.44 **Registration:** The NSW Police Force will facilitate the requirement of Disaster Victim Registration for people evacuated to designated evacuation centres.
- 3.18.45 **Animal shelter compounds:** Animal shelter compounds will be set up for the domestic pets and companion animals of evacuees if required. Facilities will be managed by Agriculture and Animal Services.

Return

- 3.18.46 The NSW SES Local Incident Controller will advise when return to evacuated areas is safe after flood waters have receded and reliable access is available.
- 3.18.47 The NSW SES Local Incident Controller will determine when it is safe for evacuees to return to their homes in consultation with:
- a. The Recovery Coordinating Committee (if established)
 - b. Welfare Services Functional Area Coordinator (welfare of evacuees)
 - c. Engineering Services Functional Area Co-ordinator (safety of buildings, structural integrity of levees/dams)
 - d. Health Service Functional Area Coordinator (public health)
 - e. Transport Services Functional Areas Coordinator (arrangement of transport)
 - f. The Gloucester LEOCON
 - g. The Gloucester Shire Council

- h. NSW SES Region Incident Controller
 - i. Other appropriate agencies/functional areas as required (mitigation and advice regarding identified risks resulting from the flood event).
- 3.18.48 Once it is considered safe to do so, the NSW SES Incident Controller will authorise the return of evacuees.
- 3.18.49 The return will be controlled by the NSW SES Local Incident Controller and may be conducted, at their request, by the Recovery Coordinator.

3.19 MANAGING RESUPPLY OPERATIONS

- 3.19.1 The NSW SES is responsible for the coordination of the resupply of isolated communities and properties.
- 3.19.2 If isolation is expected to occur, residents should be encouraged to consider their needs and suitability for an unknown period of isolation.
- 3.19.3 If properties/communities are going to remain in locations expected to become isolated, households/retailers should be encouraged to stock up on essential supplies.
- 3.19.4 Where practicable, once supplies are delivered to the NSW SES designated loading point, the NSW SES Local Incident Controller will arrange for the delivery of essential foodstuffs, fuels or urgent medical supplies required by an isolated property or community.
- 3.19.5 All reasonable effects will be made to deliver supplies, however where necessary the NSW SES will prioritise the delivery of items.

Resupply of Isolated Towns and Villages

Strategy

- 3.19.6 Minimise disruption upon the community by resupplying towns and villages which have become isolated as a consequence of flooding.

Actions

- 3.19.7 The NSW SES is responsible for the coordination of the resupply of isolated communities.
- 3.19.8 If flood predictions indicate that areas are likely to become isolated, the NSW SES Local Incident Controller should advise retailers that they should stock up.
- 3.19.9 When isolation occurs, retailers will be expected to place orders with suppliers where they have a line of credit and to instruct those suppliers to package their goods and deliver them to loading points designated by the NSW SES.
- 3.19.10 The NSW SES is prepared to deliver mail to isolated communities but may not be able to do so according to normal Australia Post timetables.
- 3.19.11 The NSW SES will assist hospitals with resupply of linen and other consumables where able.

Resupply of Isolated Properties

Strategy

- 3.19.12 Ensure supplies are maintained to properties by coordinating the resupply of properties which have become isolated as a consequence of flooding.

Actions

- 3.19.13 The resupply of isolated properties is a common requirement during floods and coordination can be difficult because requests can emanate from a variety of sources. Isolated properties may call their suppliers direct, place their orders through their own social networks or contact the NSW SES.
- 3.19.14 The principles to be applied when planning for the resupply of isolated properties are;
- a. The NSW SES will coordinate resupply and establish a schedule.
 - b. Some isolated households will not have the ability to purchase essential grocery items due to financial hardship. If an isolated household seeks resupply from the NSW SES and claims to be, or is considered to be, in dire circumstances, he/she is to be referred to Welfare Services for assessment of eligibility. Where financial eligibility criteria are met, Welfare Services will assist with the purchase of essential grocery items. Welfare Services will deliver the essential grocery items to the NSW SES designated loading point for transport.
 - c. Local suppliers will liaise with the NSW SES regarding delivery of resupply items to the designated loading point.
 - d. Local suppliers are responsible for packaging resupply items for delivery.
- 3.19.15 A flowchart illustrating the Resupply process is shown in Attachment 1. Please note that the flowchart outlines the resupply process but does not encompass all potential situations and/or outcomes.

PART 4 - RECOVERY

4.1 RECOVERY COORDINATION AT THE LOCAL LEVEL

- 4.1.1 The NSW SES Gloucester Shire Local Controller will ensure that planning for long-term recovery operations begins at the earliest opportunity, initially through briefing the Local Emergency Management Committee (LEMC). As soon as possible the LEMC will meet to discuss recovery implications including the need for a Local Recovery Committee. The LEMC will consider any impact assessment in determining the need for recovery arrangements. This is conveyed in the first instance to the State Emergency Operations Controller (SEOCN) for confirmation with the State Emergency Recovery Controller (SERCON).
- 4.1.2 Once the need for recovery has been identified, the SERCON, in consultation with the SEOCN, may recommend the appointment of a Local Recovery Coordinator and nominate an appropriate candidate to the Minister for Police and Emergency Services.
- 4.1.3 The SERCON may send a representative to the LEMC and subsequent recovery meetings to provide expert recovery advice and guidance.
- 4.1.4 The NSW SES Gloucester Shire Local Controller and Local Emergency Operations Controller (LEOCN) attend recovery meetings to provide an overview of the emergency response operation.
- 4.1.5 The NSW SES Region Incident Controller, the Regional Emergency Management Officer and appropriate Regional Functional Area Coordinators will be invited to the initial local meeting and to subsequent meetings as required.
- 4.1.6 The recovery committee will:
- a. Develop and maintain a Recovery Action Plan with an agreed exit strategy.
 - b. Monitor and coordinate the activities of agencies with responsibility for the delivery of services during recovery.
 - c. Ensure that relevant stakeholders, especially the communities affected, are involved in the development and implementation of recovery objectives and strategies and are informed of progress made.
 - d. Provide the SERCON with an end of recovery report.
 - e. Ensure the recovery is in line with the National Principles of Disaster Recovery and the NSW tenets.

4.2 RECOVERY COORDINATION AT THE REGION AND STATE LEVEL

- 4.2.1 In the event that an emergency affects several local areas, a Region Emergency Management Committee (REMC) will meet to discuss recovery

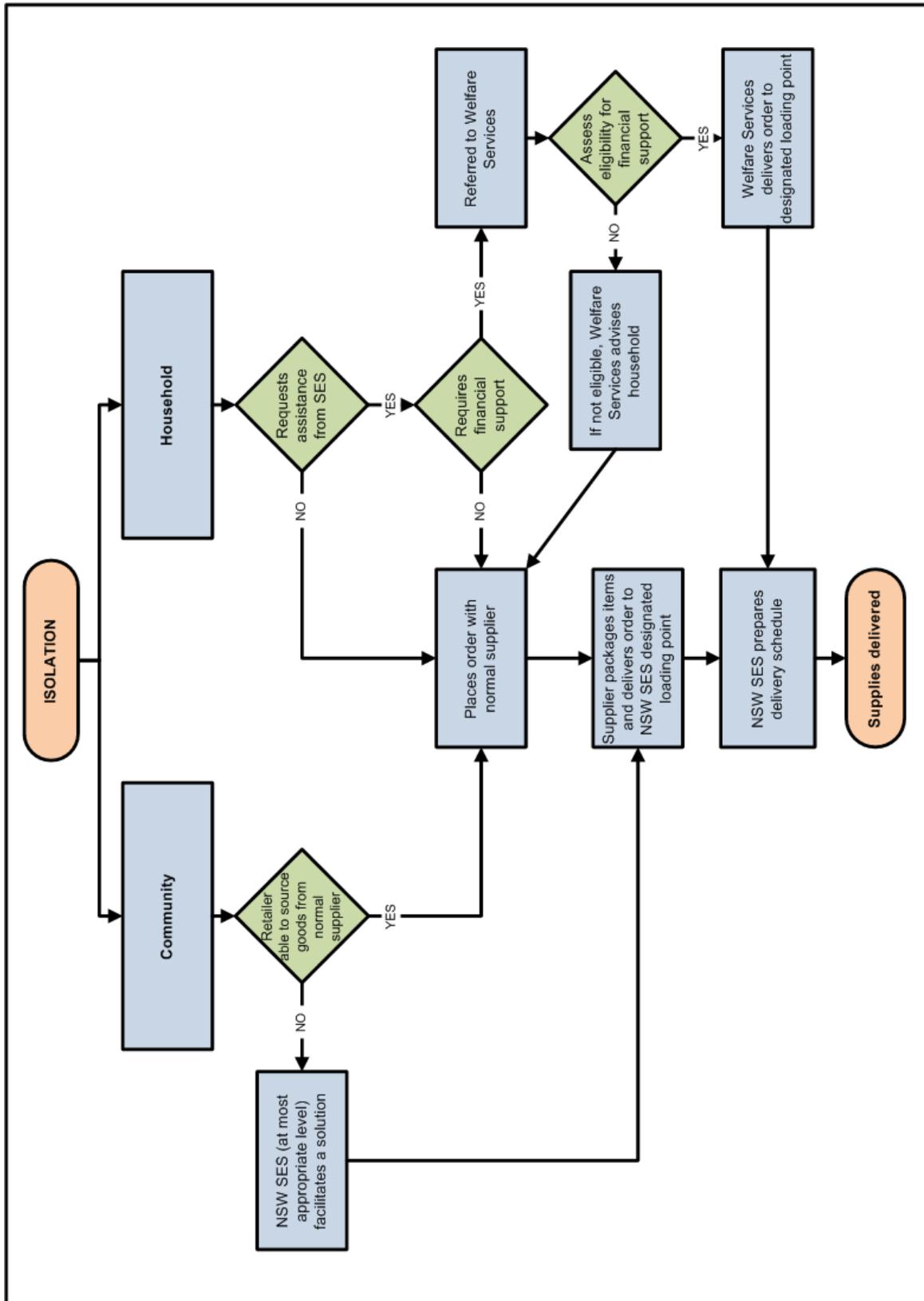
implications including the need for a Region Recovery Committee. This is conveyed in the first instance to the SEOCN for confirmation with the SERCON.

- 4.2.2 In the event of an emergency which affects multiple regions, or is of state or national consequence, or where complex, long term recovery and reconstruction is required, it may be necessary to establish a State Recovery Committee and the appointment of a State Recovery Coordinator.

4.3 ARRANGEMENTS FOR DEBRIEFS / AFTER ACTION REVIEWS

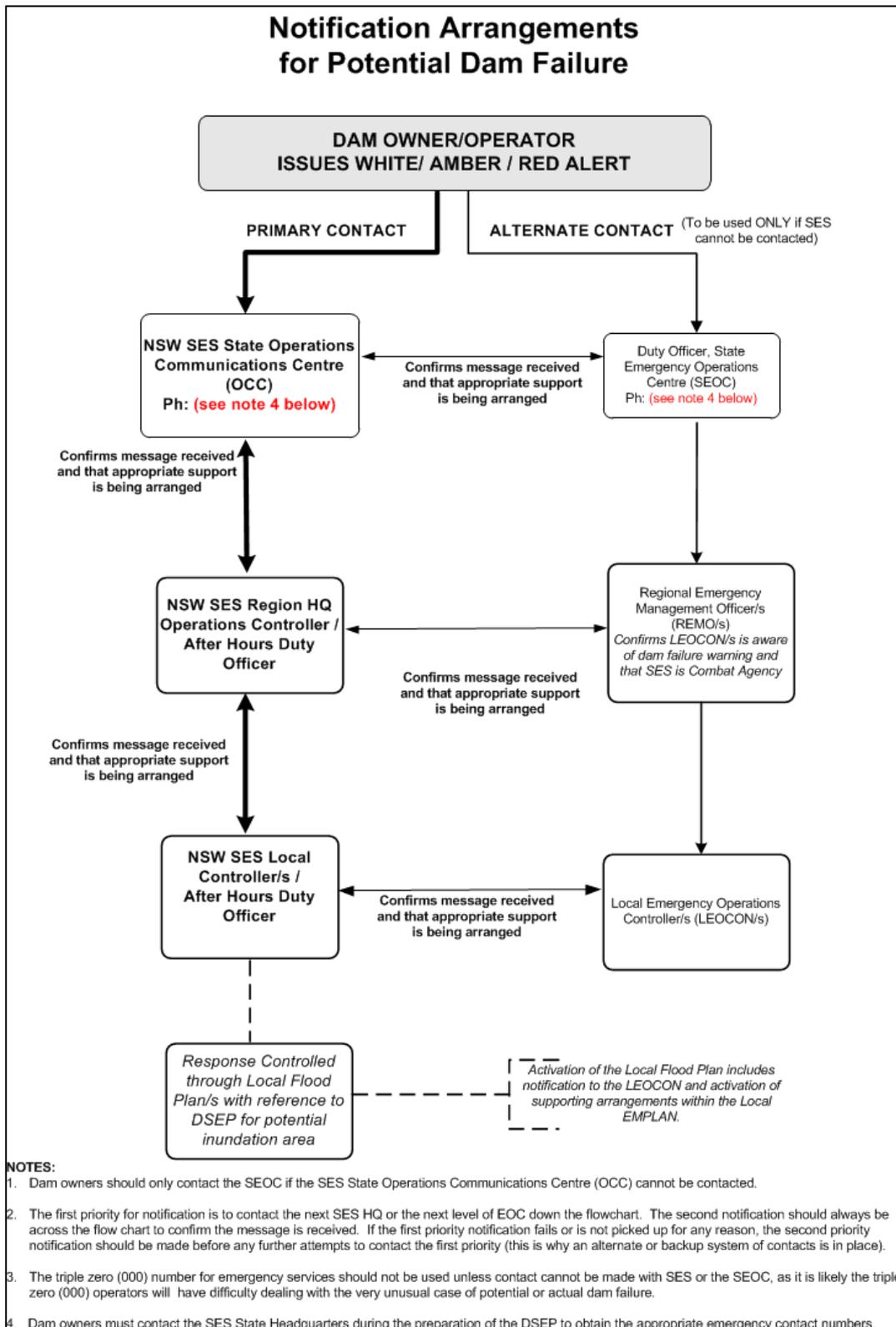
- 4.3.1 As soon as possible after flooding has abated, the NSW SES Gloucester Shire Local Controller will advise participating organisations of details of response operation after action review arrangements.
- 4.3.2 The NSW SES Gloucester Shire Local Controller will ensure that adequate arrangements are in place to record details of the after action review and each item requiring further action is delegated to an organisation or individual to implement.
- 4.3.3 Follow-up to ensure the satisfactory completion of these actions will be undertaken by the Gloucester Local Emergency Management Committee.

ATTACHMENT 1 - RESUPPLY FLOWCHART

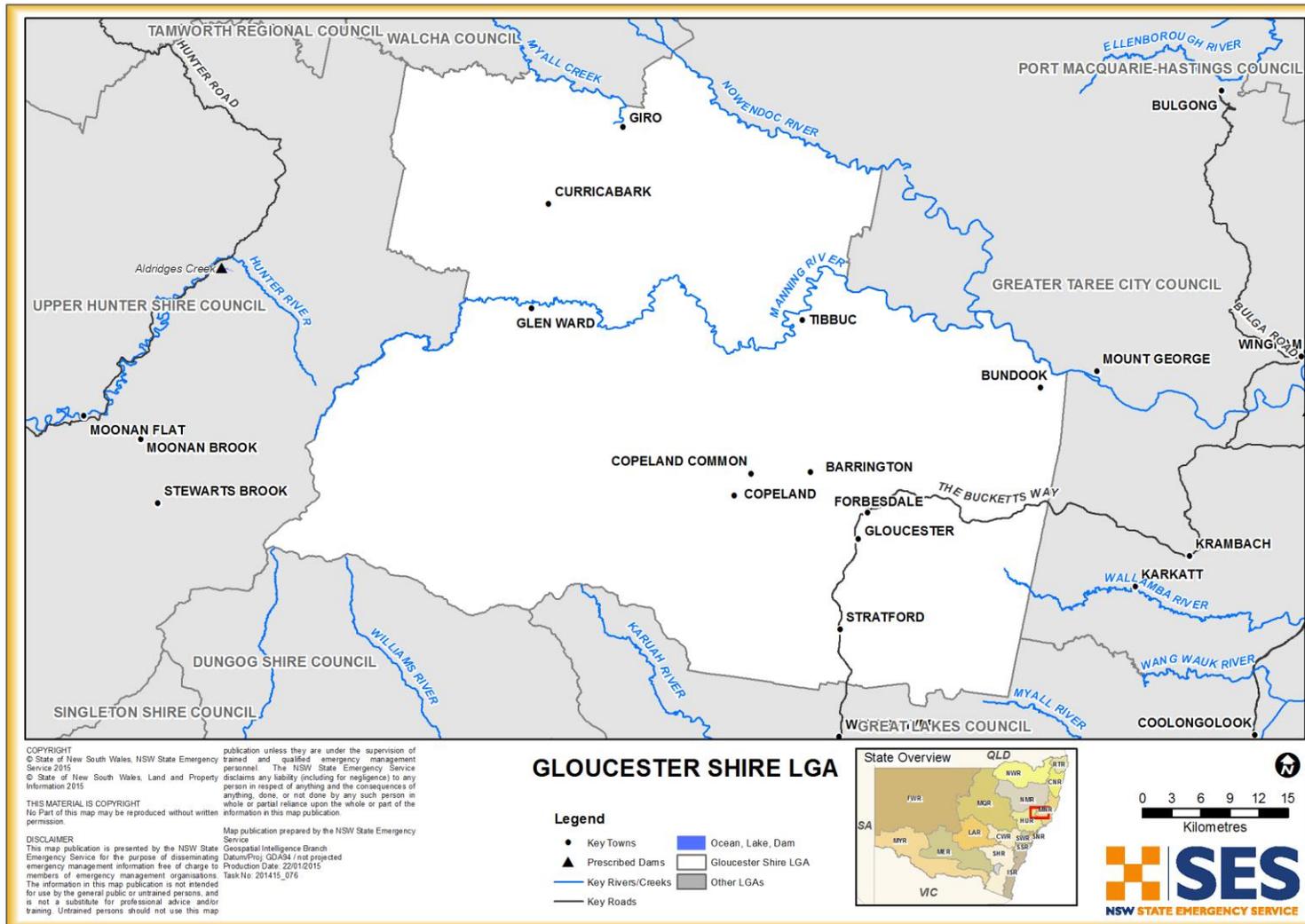


Please Note: The chart outlines the resupply process, but does not encompass all potential situations and outcomes.

ATTACHMENT 2 - DAM FAILURE ALERT NOTIFICATION ARRANGEMENTS FLOWCHART



ATTACHMENT 3 - GLOUCESTER LGA MAP



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HAZARD AND RISK IN THE FORMER GLOUCESTER SHIRE

Volume 2 of the Mid Coast Local Flood Plan

Last Update: January 2017

AUTHORISATION

The Hazard and Risk in the former Gloucester Shire has been prepared by the NSW State Emergency Service (NSW SES) as part of a comprehensive planning process. The information contained herein has been compiled from the latest available technical studies.

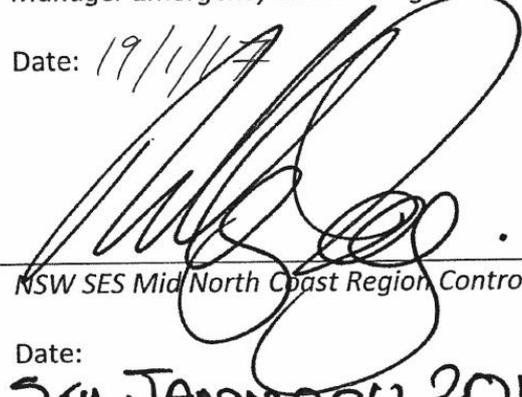
Approved



Manager Emergency Risk Management

Date: 19/1/17

Approved



NSW SES Mid North Coast Region Controller

Date:

5th JANUARY 2017

Tabled at LEMC

Date: 14 March 2017

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VERSION LIST

The following table lists all previously approved versions of this Volume.

Description	Date
Gloucester Shire Local Flood Plan – Annex A & B	Oct 2009

AMENDMENT LIST

Suggestions for amendments to this Volume should be forwarded to:

The Gloucester Local Controller

NSW State Emergency Service

23 Tate Street, Gloucester, NSW, 2422

Amendments promulgated in the amendments list below have been entered in this Volume.

Amendment Number	Description	Updated by	Date

Document Issue: Version 3-02052016

1 THE FLOOD THREAT

1.1 OVERVIEW

Manning River Basin

- a. The former Gloucester Shire Council area covers 2,930 kilometres of rugged to undulating terrain within the upper catchment of the Manning River. The area consists of the Manning River to its confluence with Bakers Creek; the Little Manning River; a section the Piga Barney River; the Barnard River to its confluence with the Manning River; the Bowman River to its confluence with the Gloucester River, the Barrington River to its confluence with the Gloucester River; the Gloucester River to its junction with the Manning River; and the Avon River to its confluence with the Gloucester River (1).
- b. The Gloucester, Avon and Barrington Rivers form part of the broader Manning River catchment, which is over 8,000 square kilometres in size and drains to the Tasman Sea on the New South Wales mid-north coast (2). The Manning River basin is shown in Map 1.

1.2 LANDFORMS AND RIVER SYSTEMS

- a. The Avon, Gloucester and Barrington Rivers all influence flooding in Gloucester and surrounding areas. The Manning River runs through the top third of the LGA. Each river is described below:
 - i. **Gloucester River:** The headwaters of the Gloucester River start approximately 40 kilometres west of the town, in the Barrington Tops National Park. The peak elevation in the catchment is 1,349 metres above sea level. The catchment is steep and tends to respond quickly to rainfall. At Gloucester the river has a catchment area of 250 square kilometres (1).
 - The Billabong runs between Boundary and Church Street, and enters the Gloucester River near Boundary Street.
 - ii. **Avon River:** The catchment of the Avon River is comparatively flat, with a peak elevation of 460 metres above sea level. The river is characterised by a small shallow channel and a wide flat floodplain. At Gloucester the river has a catchment area of 290 square kilometres (1). Mining activity in the south of the catchment may also have some influence on the catchment flood hydrology (2).
 - iii. **Barrington River:** The Barrington River catchment is topographically similar to the Gloucester River. The headwaters of the river lie in the rugged terrain of the Barrington Tops National Park. The peak elevation within the catchment is

1380 metres. The catchment has a total area of 700 square kilometres (1). It consists of a number of major tributaries draining the eastern slopes of the Barrington Tops. These form three rivers – the Cobark, Barrington and Kerripit – that join at a single confluence location. This configuration has the potential to generate significant flood flows and subsequent elevated tail water conditions along the Gloucester River from the Barrington River confluence (2).

- iv. **Manning River:** The Great Dividing Range forms the upper limit of the Manning River catchment, where elevations of around 1200 metres are typical. The Barrington Tops, in the south-west of the catchment, peaks at just below 1600 metres. The Manning River spills onto a vast, low-lying floodplain area downstream of Taree (3).
- b. There are some extensive areas of alluvial flats along the lower reaches of the Avon, Gloucester and Barrington Rivers with isolated areas of flats also along the Bowman River and along the Manning River between the Barnard and Gloucester Rivers. In these areas the flood threat is extended to inundation of and damage to river frontage properties (1).
- c. Land use within the catchment primarily consists of forested areas, comprising 70% of the Barrington catchment, 60% of the Gloucester catchment and 65% of the Avon catchment. The remaining land uses are predominantly pastureland and other cultivated areas (2).
- d. The township of Gloucester is the main community within the catchment, followed by the much smaller communities of Stratford and Barrington (2).
- e. The two main transport routes that traverse the area are the Bucketts Way (connecting Gloucester with Taree 50 kilometres to the east and Newcastle 100 kilometres to the south) and the Thunderbolts Way (connecting Gloucester with Armidale 170 kilometres to the north). The north coast railway also traverses the area. These transport routes cross the floodplains of the Gloucester, Avon and Barrington Rivers. They may both impact the flood behaviour and/or be impacted by flooding (2).

1.3 STORAGE DAMS

- a. There are no prescribed dams in the Gloucester area or upstream on the Manning, Gloucester, Avon or Barrington Rivers.

1.4 WEATHER SYSTEMS AND FLOODING

- a. The heavy rain which produces floods in the Gloucester area tends to come from the following kinds of weather systems:

- i. Monsoonal low-pressure systems moving across the Great Dividing Range from Northern Australia, usually during summer and autumn months. These systems are indicated on weather maps as elongated low-pressure troughs stretching from the Northern Territory to the north coast of NSW (1).
- ii. Tropical Cyclones moving south from the Coral Sea and the Gulf of Carpentaria may reach the Gloucester area in decayed form as rain depressions, causing flooding. Usually such flooding occurs in the months from January to April. High seas, large waves and storm surge conditions may occur in addition to extremely heavy rain (1).
- iii. East Coast low-pressure systems which travel along the coast, usually during the cooler months, and direct moist on-shore winds over the Gloucester area. Orographic uplift of these air masses brings heavy rain over the ranges. Rains from these systems can persist for some days (1).
- iv. High intensity, short duration convective thunderstorms occur frequently over the Gloucester area, especially during the summer months. The rain from such storms can cause town drainage systems or minor creeks to surcharge, creating local flooding of low-lying areas and mountain gullies. No rise in the main rivers is likely from such events (1).
- v. Floods are most prevalent over the period January to March, however, can occur at any time of year (1).

1.5 CHARACTERISTICS OF FLOODING

- a. Flooding within the Barrington River catchment is characterised by deep and rapidly rising floodwaters. The Barrington River floodplain is broad, reaching approximately 300-500 metres wide, and up to one kilometre in locations downstream near Barrington. It has well-defined and steep valley sides. The channel is wide and deep and has considerable flow conveyance capacity. For the modelled design events, the initial response of rising floodwaters occurs approximately 8 hours after the onset of rainfall. Flow through some sections of the Barrington River remains entirely in-channel up to the 2% AEP design event, with velocities through the channel reaching above five metres per second. The deep, fast flow of floodwaters through the Barrington River pose a significant flood hazard, particularly to vehicle crossings (2).
- b. Flooding in the Gloucester River is characterised by an extensive network of flood runners through the floodplain. Floodplain inundation first occurs around 5.0 metres, however extensive floodplain inundation is not observed until the gauge height reaches 5.6 metres. Typical depths of floodwaters throughout the floodplain are within the order of 0.5-1 metres. However, the depth of floodwater through the Gloucester River channel downstream of the Barrington River confluence reaches around 13- 15 metres during floods in the order of 8.2 metres. Floodplain inundation

- generally occurs around 15 hours after the onset of rainfall, but can happen faster or slower (2).
- c. When the rate of flow in the Avon River exceeds channel capacity, it spills onto the floodplain. The in-channel capacity of the Avon River is breached during the 50% AEP event and significant floodplain inundation occurs. Initially, floodwater rises at a much slower rate compared to the other two catchments, however the onset of floodplain inundation occurs at a similar time to that of the Gloucester River. Areas of the floodplain can remain inundated for days after the peak of the event is reached. Typical depths of inundation across the Avon River floodplain are within the order of 1-1.5 metres during the 10% AEP event and 2-3 metres during the 1% AEP event (2).
 - d. Throughout the three catchments, the majority of properties in the broader catchment area are situated at or beyond the edge of inundation. There are only a few properties that become inundated during the PMF event (2).
 - e. The following table gives indicative flow travel times for the Manning River.

Table 1: Indicative Flow Travel Time for the Manning River (4)

Locations	Travel Time
Gloucester – Mt George	20-25 hours
Mt George - Wingham	4-6 hours
Wingham - Taree	3 hours
Taree - Croki	2-8 hours
Croki - Harrington	3 hours

1.6 FLOOD HISTORY

- a. The largest flood to hit Gloucester this century occurred in 1929. Although the exact gauge height is not known, anecdotal evidence suggests it was around two metres higher than the 1978 flood, and therefore estimated to be 7.3 metres. In this flood, the railway station flooded, businesses in Church Street were flooded to 1.2 metres and lives of two men were lost (1). The 1956 flood is the highest since gauge recording commenced in 1952 (1).
- b. The 1956 flood is the highest since gauge recording commenced in 1952. This flood reached 7.01 metres and resulted in 35 shops in Church Street and residences in Hume Street being inundated (2).
- c. During the March 1978 flood, 24-hour rainfalls of up to 300 millimetres were reported on the tributary streams of the Gloucester system and the river level reached 5.7 metres. Record floods were experienced in the catchments of the Barrington, Cobark, Dilgry, Bowman and Little Manning Rivers and Craven Creek. The loss of communications west of Gloucester was almost complete before the flood

reached its peak. Several bridges were washed away or severely damaged during the flood. In Gloucester, many businesses were again inundated with significant associated damage and loss of stock. Two shops in Church Street with over floor flooding; 0.5m water in Billabong Lane; water to intersection Church Street and Park, Denison, Hume Streets (1).

- d. The following table lists historical flood heights on the Gloucester, Avon and Barrington Rivers. The Gloucester gauge 208020 was changed to an automatic gauge in 2003, with a corresponding change in gauge zero of -0.295 metres. The pre-2003 values in the table below have been adjusted to show what the levels would be, as measured by the automatic gauge.

Table 2: Flood peak heights for the Gloucester and Forbesdale gauges (5) (2) and selected other gauges on the Gloucester, Avon and Barrington Rivers (4) (6) .

*The Gloucester gauge pre-2003 heights have been adjusted to account for the change in gauge zero, where the new gauge zero is 0.295 metres below the original gauge height.

Date	Gloucester River				Avon River	Barrington River	
	Gloucester 208020 (m)	Gloucester (m AHD)	Forbesdale 208008 (m)	Hiawatha (m)	Avon Flatbridge (m)	Forbesdale Causeway (m)	Pumping Station (m)
1929	7.3 * estimated						
June 1950			2.59				
Feb 1954	4.72*						
Feb 1955			3.07				
Mar 1956	7.01*	91.85	3.53				
Feb 1957	6.4*	91.24					
Mar 1957			2.59				
Jan 1974	5.49*	90.34			4.26		5.48
Mar 1976	5.47*	90.32	2.78				5.79
Mar 1978	5.68*	90.52	3.14	2.76	5.18		~9.14
Mar 1963	5.25*	90.09				3.66, 2.82	
Apr 1963						3.05	
May 1963	5.4*	90.25	2.59				
Oct 1967						3.43	
Mar 1977	4.06				3.71		
1987							5.00
1989	4.2			2.6			
1990							8.6
Dec 1992				2			
June 2005	5.11	89.96	2.64				
Apr 2009	4.32						
Jun 2011	5.54	90.39	2.87				
Feb 2012	4.34						
Feb 2013	4.75	89.60	2.60				

1.7 FLOOD MITIGATION SYSTEMS

- a. There are no known structural flood mitigation systems within the Gloucester area (1).

1.8 EXTREME FLOODING

- a. On very rare occasions, flooding of extreme proportions will occur. Extreme floods can reach far greater heights than any previously recorded. Moreover, such floods are generally both faster to rise and more dangerous in terms of depth and velocity than previous floods. Large amounts of damage would be expected including widespread infrastructure failure (1).
- b. Table 4 shows design flood levels at Gloucester and the Forbesdale gauge for PMF, 1%-10% AEP floods. Given that the flood levels at the Gloucester gauge can be influenced by flooding on the Avon and Barrington Rivers it is worth also considering the water levels at the Forbesdale gauge as well as the Gloucester gauge, as it is flood flows on the Gloucester River that are the principal driver of flood conditions along the Billabong (2).

Table 3: Design flood levels at Gloucester and Forbesdale gauges (5), (2)

Flood % (AEP)	Gloucester Gauge 208020	Forbesdale Gauge 208008
	(m)	(m)
20	5.0	2.8
10	5.3	3.1
5	5.6	3.3
2	6.8	3.6
1	8.2	3.9
0.5	9.6	4.2
0.2	11.6	4.6
PMF	17.5	6.0

- c. The PMF would reach 17.5 metres at the Gloucester Gauge, which is around 9 metres above the 1% AEP level. The depth of flooding in the Billabong area is likely to increase significantly to over 10 metres and the flood extent would move further east, past Church Street and Bucketts Way (2). Flood depths for the PMF have been modelled to exceed 10-12 metres in the Gloucester area, including Thunderbolts Way and Bucketts Way (2).

2 EFFECTS ON THE COMMUNITY

2.1 COMMUNITY PROFILE

Table 4: Census of Housing and Population data (2011)

Census Description	Gloucester LGA	Gloucester
Total Persons	4,877	2,870
Aged 0-4 yrs	235	160
Aged 5-14 yrs	546	309
Aged 65 + yrs	1,267	792
Of Indigenous Origin	228	177
Who do not speak English well	6	4
Have a need for assistance (profound/severe disability)	329	211
Living alone (Total)	591	404
Living alone (Aged 65+)	285	218
Residing in caravans, cabins or houseboats or improvised dwellings	50	40
Occupied Private Dwellings (Households)	2,000	1,202
No Motor Vehicle	142	116
Caravan, cabin, houseboat or improvised dwell	31	25
Rented via State or Housing Authority	45	39
Rented via Housing Co-Op or Community Church Group	6	0
No Internet Connection	624	433
Unoccupied Private Dwellings	453	193
Average persons per occup dwelling	2.3	2.1
Average vehicles per occup dwelling	1.7	1.5

SPECIFIC RISK AREAS - FLOOD

- a. Numerous areas within the Gloucester area are at risk of flooding and/or isolation. Areas of Gloucester, Stratford, Rookhurst, Avon Flat, Barrington Flat and numerous camping reserves are at risk of inundation, while Waukivory, Fairburn's Rd, Bowman Farm, Barrington, Meadows Estate, Gloryvale, Bretti, Copeland and Barrington Tops are all at risk of isolation (1).

2.2 GLOUCESTER

2.2.1 Community Overview

- a. The population of Gloucester is approximately 2870 and around one quarter of these are over 65 years (7). Elderly people are often frail and unable to respond quickly without assistance. Some of them may also be socially isolated, resulting in them being unaware of evacuation warnings or unable to decide on a course of action. Areas with particularly high portions of elderly residents should be targeted for doorknocking and the provision of transport (4).

2.2.2 Characteristics of flooding

- a. Flooding in Gloucester is a consequence of riverine flooding from Gloucester and Avon Rivers and associated flood runners described in section 2.2.3.

2.2.3 Flood Behaviour

- a. The township of Gloucester is located about one kilometre upstream of the junction of the Gloucester and Avon Rivers and is on relatively high ground between river flats. Flood runners develop across these flats as river levels rise. The most significant of these develops when the Gloucester River breaks its right bank near the Golf Course about two kilometres upstream of the town. This flood water then flows north along the line of the Billabong Lagoon, then through the low area between Church Street and Boundary Street before re-joining the river at Lehman's Flat. More extreme levels of flooding can inundate significant river flat areas to the west, north and east of the town (1).
- b. The nature of flooding in the Gloucester town area is dependent on the relative peak flows, not only of the Gloucester and Avon Rivers, but also of the Barrington River at their junction some three kilometres downstream of the town. This problem is made worse with the relatively short warning times available. However, the gauges on the headwaters of the Barrington and Gloucester Rivers can provide three hours notice respectively of the arrival of flood waters in the Gloucester area. Confirmation of the size and timing of floods is obtained from the 'Hiawatha' gauge on the Gloucester River- although this is only about 30 minutes travel time upstream from the town (1).

- c. Flow velocities across the floodplain at Gloucester are expected to vary. Floods in the order of 8.2 metres are expected to create flow velocities above two metres per second (7.2 kilometres an hour) in the Gloucester River channel and up to 1.2 metres per second (4.3 kilometres an hour) along the Billabong (1).
- d. The high velocities in the CBD could result in structural damage to buildings. High velocities also increase the risk to persons wading or driving through flood waters (1).
- e. For the floods in the order of 8.2 metres, (1% AEP design event) the flood levels in The Billabong (the small creek that runs parallel to and between Boundary Street, Billabong Lane and Church Street) are anticipated to rise rapidly at around 16 hours from the onset of rainfall and the floodwaters rise relatively quickly, 0.5-1.0 metres per hour. However, the flood water from the Billabong rises before flooding may be observed on Gloucester gauge (2).
- f. Most of the flooding, in each design flood is classed as floodway (2). Small areas of the Gloucester River floodplain around Gloucester town do not experience as severe flooding and are classed as flood fringe. There are almost no areas of flood storage within the area, with the exception of isolated sections along the Avon River floodplain (2).
- g. Around Gloucester township, around approximately 5.3 metres, the floodway area extends from the Gloucester River near Park Street, through the Billabong, to just south of Phillip Street, affecting residential land between Church Street and Boundary Way. This continues further south as flood fringe. As the severity of the flood event increases, the floodway broadens and extends further south, affecting most residential areas between Church Street / Bucketts Way and Gloucester River. On the east side of the town, there are no residential areas affected by the Avon River floodway (2).
- h. By around 5 metres on the Gloucester gauge the channel capacity of the Gloucester River is exceeded and flood waters spill from the right bank between Sandy Creek and the caravan park. Around 5.3 metres flood flows exceed the capacity of The Billabong and flow along Billabong Lane, which was formerly another channel branch of The Billabong. Around 8.2 metres flood waters along The Billabong rise high to surround the commercial properties and flow along Church Street (2).
- i. The hazard classification around the township, in general follows the pattern of the hydraulic classification, in that the areas of floodway are generally high hazard and the flood fringe is low hazard (2).

2.2.4 Classification of Floodplain

- a. Most of the flood affected properties in Gloucester are situated along Billabong Lane and Church Street. It best classified as a Rising Road Access Area toward the east (2).

- b. The caravan park, which is situated between Gloucester River and the Billabong, is isolated when Gloucester gauge height exceeds 5.3 metres and access via Denison Road /Boundary Road is cut, thereafter becoming a Low Flood Island. This classification also applies to other properties situated to the west of Billabong Lane (2).

2.2.5 Inundation

- a. The Bureau of Meteorology issues warnings for the Gloucester River Gauge at The old Lehman's Flat Bridge site (208020).
- b. General farmland around Gloucester Flats becomes inundated from around 4.3 metres on the Gloucester gauge (1).
- c. The majority of Gloucester's CBD is prone to inundation during major floods, as are a small number of residential buildings. The river flats between Gloucester township and the Gloucester River are also flood prone. This area includes the Gloucester Holiday Park, sport and recreation facilities and a number of residences along Thunderbolts Way (1).
- d. The Caravan Park floods around 5.4 metres on the Gloucester gauge (3). Shortly thereafter, businesses in the CBD on the Western side of Church Street, Park Street, Denison Street, Hume Street and Billabong Lane occurs around 5.5 metres on the Gloucester gauge (5).
- e. Properties situated at the northern edge of town along the Gloucester River are at risk of flooding from combined flood flows on the Gloucester and Avon Rivers, and to some extent the Barrington River. Inundation to properties along Macleay Street begins to occur around 6.8 metres. By around 11.6 metres properties along the eastern side of town also become inundated from flooding on the Avon River (2).
- f. Flood prone properties are located in Macleay Street, Park Street, Boundary Street, Church Street and the western ends of Hume, King, Queen, Denison, Philip and Cook Streets (1).
- g. A more detailed analysis of the number of properties at risk of flooding is summarised in the table below.

Table 5: Summary of property inundation in Gloucester (2)

Gauge height (m) (Gloucester)	Businesses with over-floor flooding	Houses with over-floor flooding	Houses with above ground flooding
5.0	0	0	1
5.3	5	0	2
5.6	12	1	8
6.8	60	13	25
8.2	74	31	42
11.6	94	108	126
17.5	99	401	428

2.2.6 Isolation

- a. Gloucester can be isolated by road from both Taree and Newcastle (1) when Thunderbolts Way and Bucketts Way roads may be cut at approximately 5.55 metres at the Gloucester gauge.
- b. Isolation within the Gloucester area could also occur as a consequence of landslides and bridge and road damage (4), as happened in Kimbriki and Bulliac in 1956 (9).
- c. Park Street becomes flooded at Billabong Bridge around 4.25 metres at Gloucester gauge, potential to affect movements to northwest and east (9).
- d. Boundary Street becomes flooded by around 5.4-7.1 metres to the south of the Thunderbolts Way intersection and near Hume Street.
- e. The caravan park is situated on an island that becomes isolated by floodwaters when Denison Street, Boundary Street and Thunderbolts Way are cut. It then becomes flooded from 5.4 metres (9), becoming completely submerged at 6.8 metres (2).

2.2.7 Flood Mitigation Systems

- a. There are no structural flood mitigation systems within the Gloucester LGA (1).

2.2.8 Dams

- a. There are no prescribed dams in the Gloucester LGA or upstream on the Manning, Gloucester, Avon or Barrington Rivers.

2.2.9 At Risk Facilities

- a. The facilities that are at risk of flooding and/or isolation within Gloucester LGA including possibly child care centres, hospitals, aged care facilities, infrastructure and caravan parks, are shown in Annex 2.

2.2.10 Other Considerations

- a. The number of people in Gloucester is likely to increase during holiday periods. These people will likely occupy camping grounds, caravan parks and motels, some of which are flood prone or are likely to become isolated (1). For example (10):
 - i. Apr-May: Gloucester Motorcycle Expo, showground
 - ii. Mar: Country Music Hoedown, Poley's Place campground

2.3 RURAL AREAS

2.3.1 Stratford

- a. Stratford is a small village about 14 kilometres south of Gloucester next to the Avon River. It has a population of around 110 (7).
- b. A small number of properties in the Stratford area may be affected by flooding, particularly in the Parkers Road and Bridge Street areas. Road access is not maintained between Gloucester and Stratford during a flood and therefore the community can become isolated (1).

2.3.2 Rookhurst

- a. Rookhurst is a locality about 20 kilometres northwest of Gloucester, upstream of the confluence of Chainman's and Cravens Creeks. It has a population of around 177 (7).
- b. It has steep sided gullies and may be susceptible to isolation with the closure of Thunderbolts Way.
- c. Historical records indicate that the old Rookhurst Primary School is at risk of flooding. As at May 2016, the school is closed and is relocated on Thunderbolts Way (1).

2.3.3 Barrington

- a. Barrington is a small village seven kilometres northwest of Gloucester, either side of the Barrington River.
- b. Approximately two dwellings in this area are prone to flooding (1), although the remainder of the town remains largely flood free.
- c. Thunderbolts Way becomes flooded across the Barrington Flats and in Gloucester from around 5.3 metres (10% AEP event). The community may become isolated for a few hours to a couple of days (dependent of event magnitude and duration) and so is best classified as a High Flood Island (2).

ROAD CLOSURES AND ISOLATED COMMUNITIES

2.4 ROAD CLOSURES

- a. Table 6 lists roads liable to flooding in the Gloucester LGA.

Table 6: Roads liable to flooding in Gloucester LGA (1)

Road	Closure location	Consequence of closure	Alternate Route	Indicative gauge height
Bucketts Way (Truck Road 90)	Avon Flat Bridge – east of Gloucester (Gloucester 9233-1-N 029581)	Restricts access between Gloucester and coastal towns such as Taree	n/a	n/a
	Avon River at Stratford (Gloucester 9233-1-N 998464) (2)	Restricts access between Stratford and Gloucester	Via Stroud, unless roads at Stroud are also closed	2.6 m flood depth at 1% AEP (Stroud)
	Railway Underpass (Gloucester 9233-1-N 998476)	Restricts access between Gloucester and coastal towns such as Taree	Alternative may be available via Northgate Street	localised flooding
Thunderbolts Way (Gloucester to Nowendoc)	Gloucester River Bridge approach at Gloucester (Gloucester 9233-1-N 009589)	Prevents access between Barrington and	n/a	Approximately 6.6 metres

Road	Closure location	Consequence of closure	Alternate Route	Indicative gauge height
		Gloucester, and to the showground from Gloucester		
	Billabong Bridge approaches at Gloucester (Gloucester 9233-1-N 014584) (2)	Restricts access between Gloucester and the Showground and Barrington	n/a	2.0 m flood depth at 1% AEP
	Kia Ora Flat north of Gloucester	Restricts access between Gloucester and Barrington	Via Barrington East Road	n/a
	Barrington River Flat at Barrington (Bowman 9234-1-S 965618) (2)	Prevents access between Barrington and Rookhurst	no	1.2 m flood depth at 1% AEP
	Craven Creek Bridge approach at Rookhurst (Bowman 9234-1-S 939697)	Prevents access between Barrington and Rookhurst	no	n/a
	Leslie's Bridge on the Little Manning River (Tibbuc 9324-2-N 949775)	Restricts access between	no	n/a

Road	Closure location	Consequence of closure	Alternate Route	Indicative gauge height
		Nowendoc and Rookhurst		
	Gloryvale Bridge on the Little Manning River (Tibbuc 9324-2-N 933743)	Restricts access between Nowendoc and Rookhurst	no	n/a
Scone Road (Copeland or Forestry Road)	Copeland Creek at Copeland (Bowman 9234-1-S 924621)	Cuts Copeland into two and prevents access between Copeland and Gloucester, isolates Copeland when Schultz Bridge is also flooded	no	n/a
	Schultz's Bridge on the Cobark River (Bowman 9234-1-S 820618)	Prevents access between Copeland and Cobark, isolates Copeland when Copeland Bridge is also flooded.	no	n/a
Jacks Road	Avon River below Waukivory Ck. Approach to bridge. (Gloucester 9233-1-N 009589)	Restricts access	Not if Bucketts Way is already	n/a

Road	Closure location	Consequence of closure	Alternate Route	Indicative gauge height
		between Gloucester and coastal towns such as Taree	flooded	
Fairbairns Road	Avon River approach to bridge. (Gloucester 9233-1-N 009589)	Restricts access for two residents along Fairbairns Road	Potential 4WD track to the east	n/a
Maslens Lane	Avon River (Gloucester 9233-1-N 027587)	Prevents access between Gloucester and the Airstrip	no	n/a

2.5 SUMMARY OF ISOLATED COMMUNITIES AND PROPERTIES

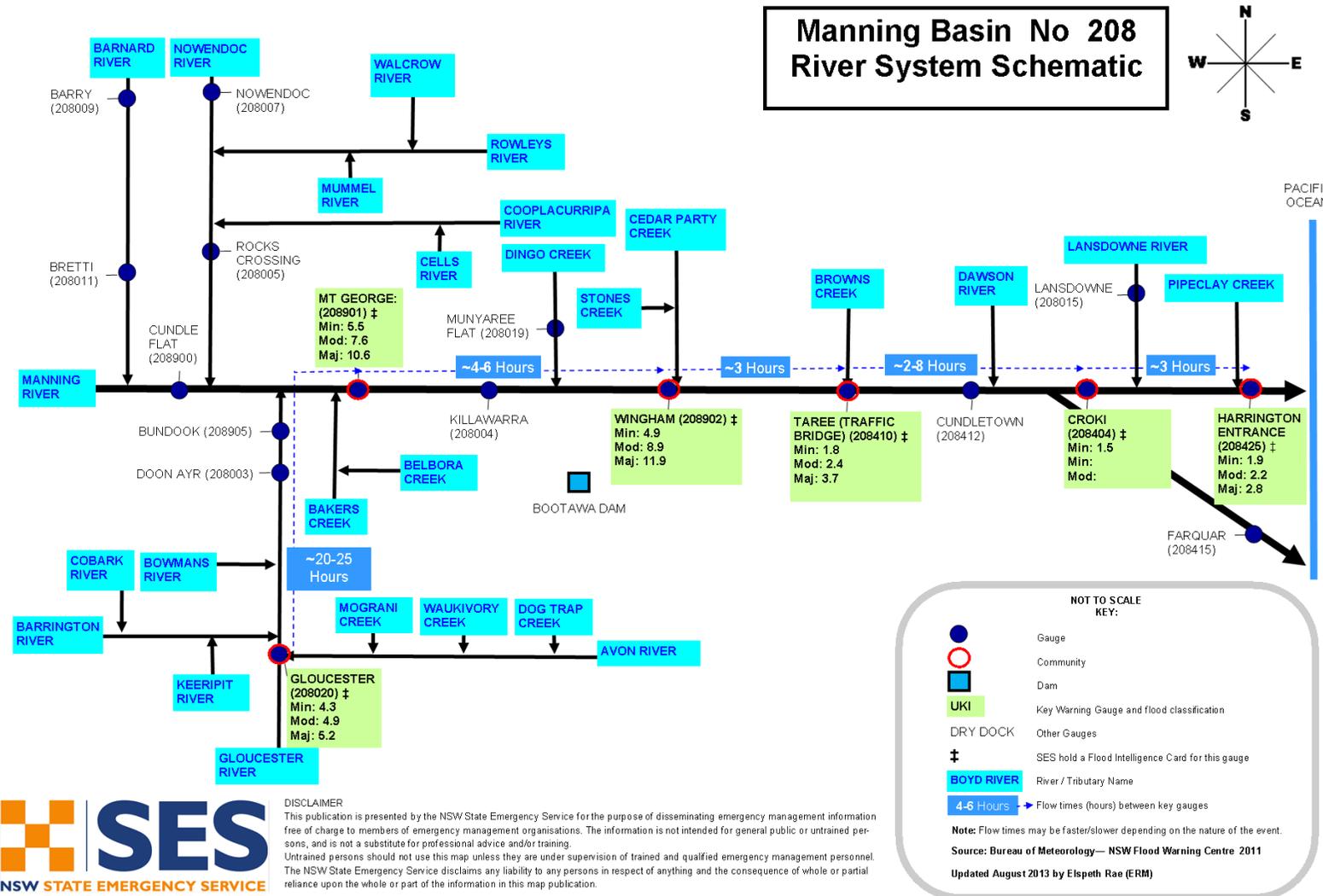
- a. Table 7 lists communities liable to isolation and potential periods of isolation. Information presented here is based on historical and design events and does not reflect the duration of isolation expected in larger and extreme events.

Table 7: Potential Periods of Isolation for communities in the Gloucester LGA during a Major flood.

Town / Area (River Basin)	Population/ Dwellings (7)	Flood Affect Classification	Approximate period isolation	Days								NOTES	
				1	2	3	4	5	6	7	8		
Gloucester Caravan Park		Low Flood Island	1 – 5 days	1	2	3	4	5					
Barrington	240 properties	High flood island	1 – 5 days	1	2	3	4	5					Some properties at risk of inundation
Rookhurst	280 properties	High flood island	1 – 5 days	1	2	3	4	5					No significant property inundation known
Stratford	156 properties	High flood island	1 – 5 days	1	2	3	4	5					Some properties at risk of inundation

Note: Periods of isolation are a guide only. Liaison with the Local Controller and communities/residents involved is essential during periods of potential and actual isolation.

ANNEX 1: MANNING RIVER BASIN SCHEMATIC



ANNEX 2: FACILITIES AT RISK OF FLOODING AND/OR ISOLATION

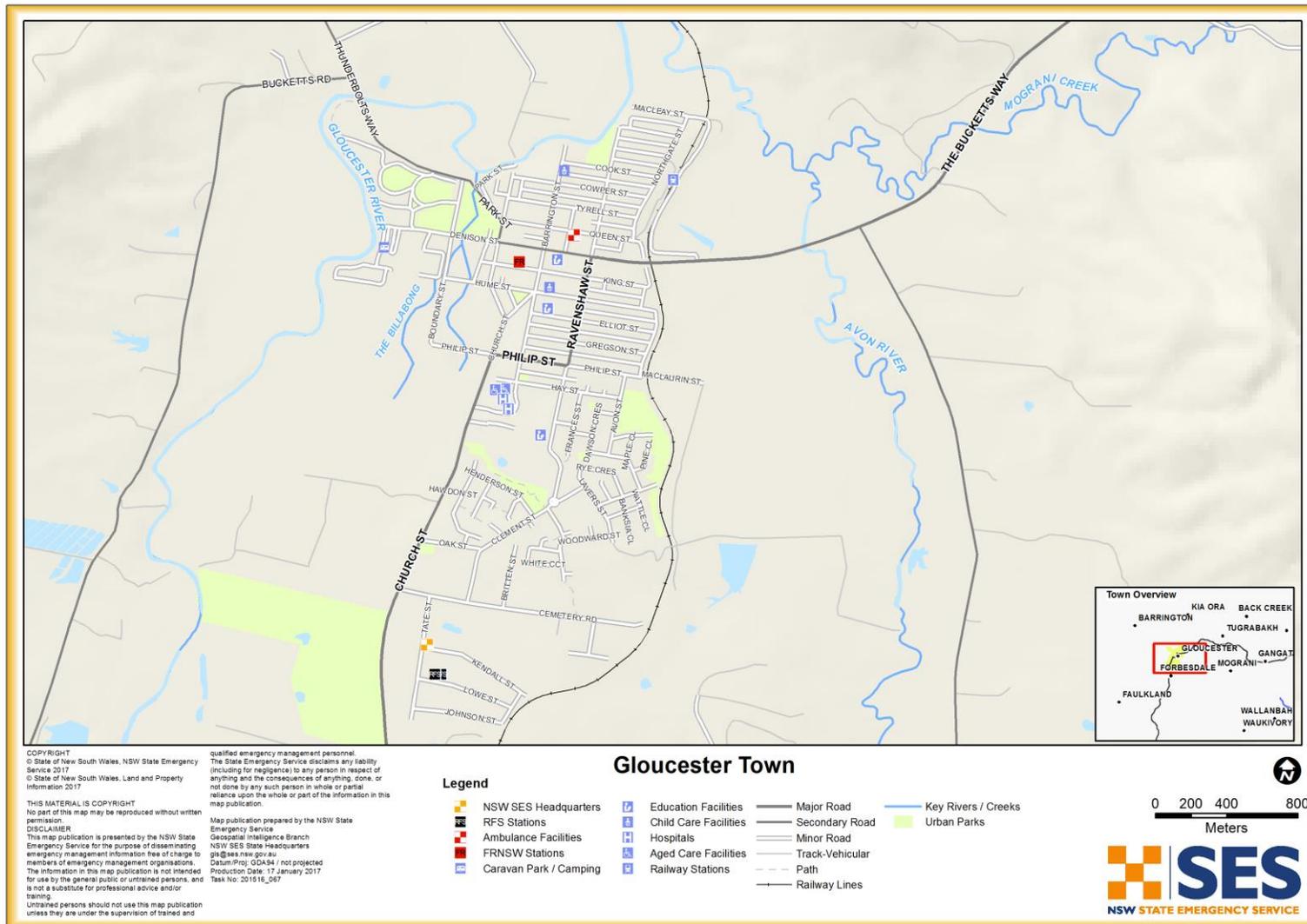
Facility Name	Street	Suburb	Comment
Schools			
Former Rookhurst Primary School	Thunderbolts Way	Rookhurst	10 enrolments in 2003, currently closed
Child Care Centres			
Barrington Street Pre School	4 Barrington Street	Gloucester	Situated on the edge of the 1% AEP flood extent
Hospitals			
Gloucester Community Health Service	166-182 Church Street	Gloucester	Situated on the edge of the 1% AEP flood extent
Gloucester Hospital	Church Street	Gloucester	Situated on the edge of the 1% AEP flood extent
Facilities for the aged / infirm			
Hillcrest Nursing Home	166-182 Church Street	Gloucester	Situated on the edge of the 1% AEP flood extent
Utilities and infrastructure			
Country Energy Sub Station	Phillip Street	Gloucester	Flooded at some point between the 1% AEP flood and the PMF
Electricity and Telephone distribution networks	Church Street, Park Street and TR90 to Taree	Gloucester	Both electricity and telephone distribution networks within the flood liable areas. The telephone network includes a local cable network and an optical cable along Church St, Park Street and TR90 to Taree.
Railway line and Railway Station		Gloucester	The Gloucester railway station will be flooded at some stage between the 1% AEP and the PMF.
Road Access to Airstrip			Gloucester airstrip is flood free; however, road access is likely to be cut.
Sewer ponds and sewer pump stations	(Bowman 9234 2 S GR 604)	Lehman's Flat	The auxiliary pumping station of the sewerage treatment works near Lehman's Flat is flooded at approximately 5 metres on the Gloucester gauge.

Facility Name	Street	Suburb	Comment
Petrol stations		Gloucester	Numerous petrol stations with gas tanks within the flood prone area. May potentially generate hazardous materials incidents.
Chlorine Store at Gloucester Swimming Pool		Gloucester	Within the flood prone area. May potentially generate hazardous materials incidents.
Camping Ground / Caravan Parks			
Gloucester Holiday Park	Denison Street	Gloucester	The caravan park requires evacuation prior to the onset of flooding as it is situated on an island that becomes isolated by floodwaters. (2) See Gloucester section on Isolation.
Bretti Reserve Camping area	Thunderbolts way	30 mins north of Gloucester	100+ people during peak periods, may become isolated from Gloucester (1)
Gloryvale Reserve Camping area	Thunderbolts way	30 mins north of Gloucester	30 people during peak periods, may become isolated from Gloucester (NSW SES, 2009)
Barrington Top camping area			Likely to become isolated (1).
Gloucester Tops camping area			Likely to become isolated (1).

MAP 1: MANNING RIVERBASIN



MAP 2: GLOUCESTER TOWN MAP



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NSW SES RESPONSE ARRANGEMENTS FOR GLOUCESTER SHIRE

Volume 3 of the Mid Coast Local Flood Plan

CONTENTS

Chapter 1: Flood Warning Systems and Arrangements

- *Dissemination options for NSW SES flood information and warning products.*
- *Gauges monitored by the NSW SES within the LGA.*

Chapter 2: NSW SES Locality Response Arrangements

- *NSW SES flood response arrangements by individual sector within the LGA.*

Chapter 3: NSW SES Dam Failure Arrangements

- *Not Applicable.*

Chapter 4: NSW SES Caravan Park Arrangements

- *Arrangements for the Evacuation of flood liable Caravan Parks within the LGA.*
- *Specific arrangements for individual parks likely to be affected by flooding.*

GLOUCESTER FLOOD WARNING SYSTEMS AND ARRANGEMENTS

**Chapter 1 of Volume 3 (NSW SES Response Arrangements for
Gloucester) of the Mid Coast Local Flood Plan**

Last Update: March 2017

AUTHORISATION

Gloucester Flood Warning Systems and Arrangements has been prepared by the NSW State Emergency Service (NSW SES) as part of a comprehensive planning process.

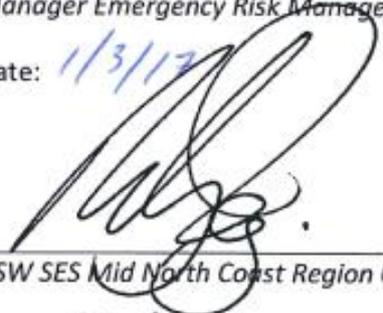
Approved



Manager Emergency Risk Management

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1. GAUGES MONITORED BY THE NSW SES GLOUCESTER LOCAL HEADQUARTERS

Table 1: Gauges monitored by the NSW SES Gloucester Local Headquarters

Gauge Name	Type	AWRC No.	Bureau Gauge No.	Stream	Flood level classification in metres			Special Reading Arrangements	Owner
					MIN	MOD	MAJ		
Forbesdale Barrington River (Rocky Crossing)	Tele	208006	560001	Barrington River	-	-	-	BOM	DPI Water
“Bellevue” Gloucester River	Tele		560063	Gloucester River	-	-	-	BOM	DPI Water
Forbesdale Gloucester River	Tele	208008	560061	Gloucester River	-	-	-	BOM	DPI Water
Gloucester * ‡ Gloucester River	Tele	208020	560062	Gloucester River	4.30	4.90	5.20	BOM	DPI Water
Avon River D/S Waukivory Ck	Tele	208028	560060	Waukivory Creek	-	-	-	BOM	DPI Water

Notes: The Bureau of Meteorology provides flood warnings for the gauges marked with an asterisk (*).

NSW SES Local Flood Advices are provided for the gauges marked with a single cross (†).

The NSW SES holds a Flood Intelligence Card for the gauges marked with a double cross (‡).

“Tele” refers to gauges that are telemetered.

Table 2: Rainfall Gauges

Gauge Name	Type	AWRC No.	Reading Arrangement
Moppy Lookout Barrington Tops	Pluviometer	60153	BOM
Cobark	Pluviometer	60152	BOM
Upper Bowman	Pluviometer	60075	BOM
Gloucester *	Pluviometer	60015	BOM
Waukivory	Pluviometer	60155	BOM
Craven	Pluviometer	60042	BOM
Carey's Peak Barrington Tops	Pluviometer	61413	BOM

2. DISSEMINATION OPTIONS FOR NSW SES FLOOD INFORMATION AND WARNING PRODUCTS

The NSW SES Mid North Coast Region Headquarters distributes NSW SES Flood Bulletins, NSW SES Evacuation Warnings and NSW SES Evacuation Orders to the following regional media outlets and agencies:

Television Stations:

Station	Location
Prime TV	Taree
Southern Cross Ten	Taree
NBN 9 TV	Taree

Radio Stations:

Station	Location	Frequency	Modulation
MAX FM	Taree	107.3	FM
2RE	Taree	1557 & 100.1	AM/FM
2TLP (Ngarralinyi)	Taree	103.3	FM
2 BOB FM	Taree	104.7	FM
Breeze FM	Gloucester	97.7	FM

Newspapers:

Name	Location
Manning River Times	Taree
Gloucester Advocate	Gloucester

Other Agencies:

Flood bulletins will be issued by the Region Headquarters to the following;

- Region Emergency Management Officer (REMO)
- Local Emergency Operations Controller (LEOCON)
- Local Emergency Management Office (LEMO)
- Community Service NSW – District Manager (CS)
- NSW Ambulance – Operation Centre Newcastle (for distribution to own stations)

- NSW Police Force – Operations Centre Newcastle (for distribution to own stations)
- Fire and Rescue NSW – Operations Centre Newcastle (for distribution to own stations)
- Essential Energy
- NSW Rural Fire Service
- Hunter New England Health
- NSW Police Force – Gloucester
- Department of Primary Industries
- Transport for NSW

Emergency Alert (EA):

Predefined areas for utilising EA have been developed for Gloucester

- If height to exceed 5.5m
- If height to exceed 5.6m

GLOUCESTER NSW SES LOCALITY RESPONSE ARRANGEMENTS

**Chapter 2 of Volume 3 (NSW SES Response Arrangements for
Gloucester) of the Mid Coast Local Flood Plan**

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NSW SES Locality Response Arrangements in Gloucester has been prepared by the NSW State Emergency Service (NSW SES) as part of a comprehensive planning process.

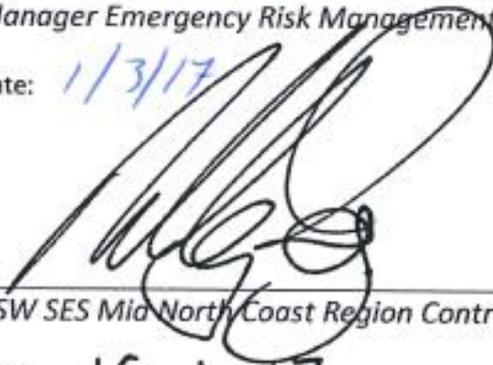
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SECTOR OVERVIEW

Table 1: Overview of Sectors in the former LGA of Gloucester.

Sector Name	Community	Sector Basis	Total properties	Properties potentially at risk
Sector 1	Gloucester	High Flood Island, Caravan Park is a Low Flood Island	1499	105

1. GLOUCESTER SECTOR / COMMUNITY

	<p>1.1. GLOUCESTER RESPONSE ARRANGEMENTS</p> <p>Refer to Volume 2: Hazard and Risk in Gloucester for more information about this Sector/Community.</p>					
Sector Description	<p>The former Gloucester Shire area covers 2,930 kilometres of rugged to undulating terrain within the upper catchment of the Manning River. The area consists of the Manning River to its confluence with Bakers Creek; the Little Manning River; a section the Piga Barney River; the Barnard River to its confluence with the Manning River; the Bowman River to its confluence with the Gloucester River, the Barrington River to its confluence with the Gloucester River; the Gloucester River to its junction with the Manning River; and the Avon River to its confluence with the Gloucester River.</p> <p>The town of Gloucester sits between the Gloucester and Avon Rivers and is located around one kilometre upstream of their confluence. The Barrington River joins the Gloucester River around one kilometre downstream of the Avon River confluence.</p> <p>Refer to Volume 2 for cultural and population information.</p>					
Hazard	<p>The nature of flooding in the Gloucester town area is dependent on the relative peak flows, not only of the Gloucester and Avon Rivers, but also of the Barrington River at their junction some three kilometres downstream of the town.</p> <p>This problem is made worse with the relatively short warning times available. However, the gauges on the headwaters of the Barrington and Gloucester Rivers can provide three hours' notice respectively of the arrival of flood waters in the Gloucester area. Confirmation of the size and timing of floods is obtained from the 'Hiawatha' gauge on the Gloucester River- although this is only about 30 minutes travel time upstream from the town. Predictive warnings provided by the Bureau provide advance notice of at least three hours.</p> <p>The rural areas of Stratford and Barrington Flat have a small number of properties that can be affected by flooding in severe events.</p> <p>In Stratford road access is unlikely to be maintained between Gloucester and Stratford during a flood and approximately 6 properties are at risk of flooding up to a PMF.</p> <p>In Barrington Flat approximately two properties are prone to flooding.</p>					
Flood Affect Classification	<p>Rising Road Access to a High Flood Island for the majority of Gloucester, including the CBD, up to and including a PMF.</p> <p>The Caravan Park and areas to the west of Billabong Lane become a low flood island around 6.6 metres.</p>					
At risk properties	105	Total number of properties within Sector/Community			2000	
Sector Control	<p>Command - The assigned NSW SES Incident Controller will command operations in the local area.</p> <p>Control – The NSW SES Gloucester Unit Controller will control operations and evacuations in the sector.</p> <p>In larger events, incident control may scale up to LGA level with the Mid Coast Local Controller becoming the Incident Controller.</p> <p>Conduct and Coordination – The NSW SES Gloucester Unit will conduct and coordinate operations and evacuations in this sector with assistance from other agencies.</p>					
Key Warning Gauge Name	Name	Watercourse	AWRC No.	Min (m)	Mod (m)	Maj (m)
	Bobs Crossing	Barrington River	208001	n/a	n/a	n/a

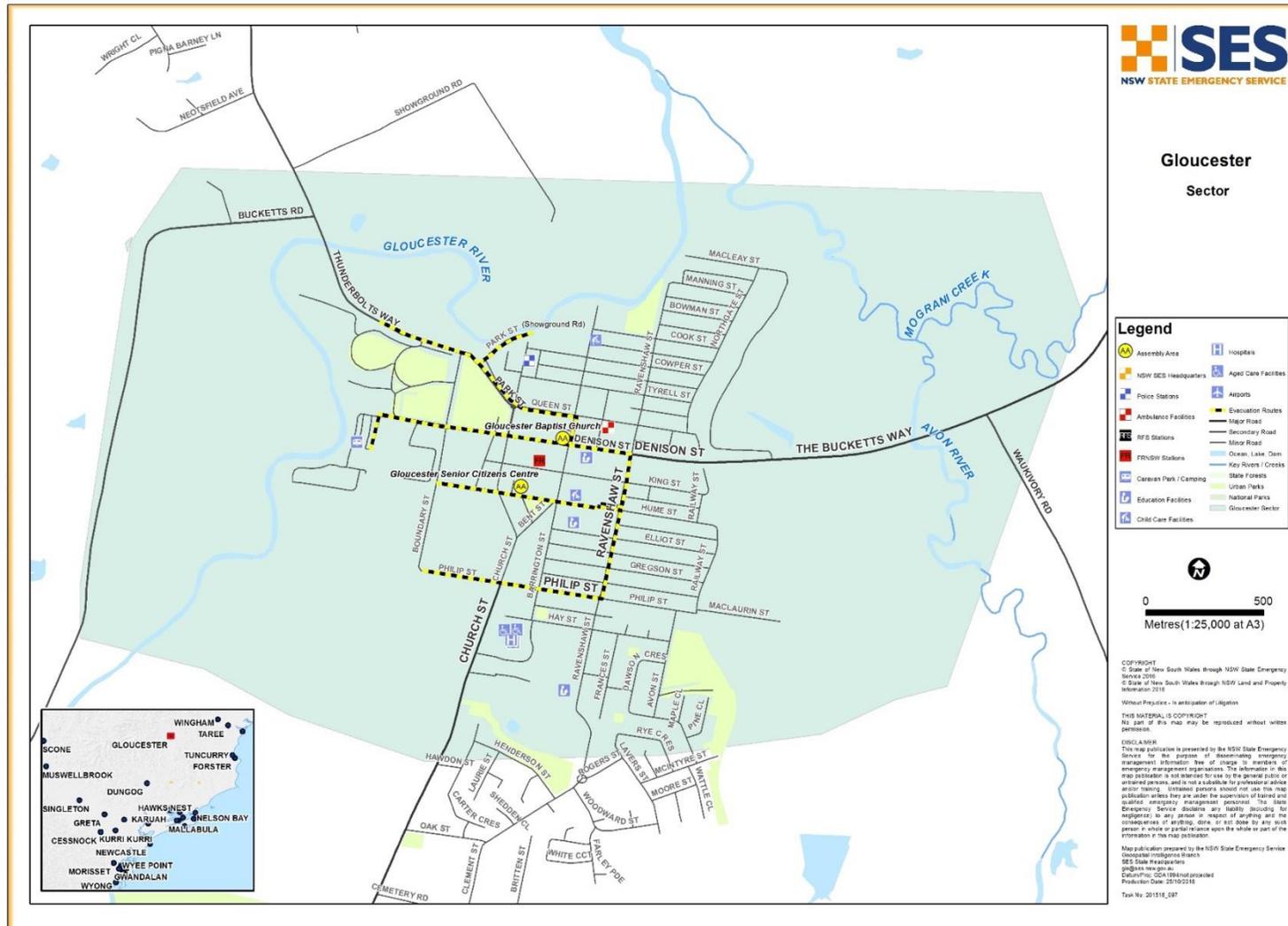
	Forbesdale (Rocky Crossing)	Barrington River	208006	n/a	n/a	n/a
	Bellevue	Gloucester River	560063 (BOM)	n/a	n/a	n/a
	Forbesdale	Gloucester River	208008	n/a	n/a	n/a
	Gloucester	Gloucester River	208020	4.30	4.90	5.20
General Strategy	<ul style="list-style-type: none"> • Manage operations in response to predicted heights indicating likely consequences that pre-empt appropriate actions. • Issue of early warning of flood level impacts and potential isolation. • Assistance with property protection where time and resources permit. • Evacuation of at risk population: <ul style="list-style-type: none"> ○ Self-Evacuation to friends/family outside the impact area. ○ Establishment of an Assembly Area/Evacuations Centre in consultation with the Welfare Services Functional Area Coordinator. ○ Establishment of a helicopter landing zone at Gloucester High School Sports field. • Flood rescue where evacuation has failed, or where people have driven into floodwater. • Resupply of isolated properties and communities. 					
Key Risks / Consequences	<p><u>Inundation</u> The majority of Gloucester’s central business district (CBD) is prone to inundation during major floods as are a small number of residential buildings. There are 105 properties at risk of over-floor inundation by 8.2 metres at the Gloucester gauge.</p> <p><u>Structural Damage and Loss of Life</u> The high velocities in the CBD could result in structural damage to buildings and also increase the risk to people wading or driving through floodwaters.</p> <p><u>Isolation</u> Gloucester can be isolated by road from both Taree and Newcastle. The caravan park becomes isolated at around 6.6 metres.</p>					
Information and Warnings	<p>NSW SES Flood Bulletins will localise the consequences of the Bureau products on the sector. NSW SES Mid North Coast Region will issue timely, relevant and tailored information to the public in the following formats:</p> <ul style="list-style-type: none"> • NSW SES Bulletins <ul style="list-style-type: none"> ○ Flood Watch ○ Flood Warning ○ Equipment, Livestock and Aquaculture Warnings ○ Media Release such as– Isolation Warnings • Evacuation Warning • Evacuation Order • All Clear • Emergency Alert • Standard Emergency Warning Signal (SEWS) • Sequenced door knocking • Media briefing 					

	<ul style="list-style-type: none"> Interagency Local Emergency Management Committee (LEMC) briefings <p>Bureau products, such as Flood Watches and Flood Warnings, will include NSW SES safety advice.</p>
Property Protection	<p>Assistance with property protection:</p> <p>NSW SES will monitor rising flood waters and provide the following assistance for flood-threatened properties where time and resources permit:</p> <ul style="list-style-type: none"> Relocation of personal property for at risk locations Relocate moveable at risk public assets Control surface water through sandbagging Monitor integrity of dwellings surrounded by flood waters
Evacuation Triggers	<p>The Key evacuation triggers based on Bureau of Meteorology flood height predictions at the Gloucester Gauge (208020).</p> <p>1. If prediction to reach and/or exceed 5.40m Low lying parts of Gloucester Caravan Park must be evacuated by this height.</p> <p>2. If prediction to reach and/or exceed 5.50m Low lying businesses (5) must be evacuated by this height in:</p> <ul style="list-style-type: none"> Boundary Street Western end of Hume Street Billabong Lane Western side of Church Street in Gloucester CBD Park Street Western end of Denison Street <p>3. If prediction to reach and/or exceed 5.60m 12 businesses and 1 residence in the CBD area must be evacuated by this height.</p> <p>4. If predicted to reach and/or exceed 6.60m Gloucester Caravan Park must be fully evacuated by this height to the Gloucester Showground.</p> <p>5. If predicted to reach and/or exceed 6.80m 60 businesses and 12 residences must be evacuated by this height including Macleay Street adjacent to the river.</p> <p>6. If predicted to reach and/or exceed 8.2m 74 businesses and 31 residences adjacent to the river must be evacuated by this height.</p> <p>7. If predicted to reach and/or exceed 17.5m 99 businesses and 401 residences in Gloucester must be evacuated by this height.</p>
Sequencing of evacuation	<p>Evacuation sequencing will be as per the triggers for identified at risk properties.</p> <p>Outside the identified sequenced evacuation areas, a number of residences and properties may need to be evacuated during periods of significant flooding. In most floods, the evacuation tasks will only involve a small number of people from impacted properties. These properties would be dealt with on a case by case basis in conjunction with NSW Police and the Welfare Services Functional Area Coordinator.</p> <p>Evacuations will be conducted incrementally as the flood height predictions become known and the impact extent established.</p>

	<p>Evacuations will be staged as follows.</p> <p>Stage 1:</p> <p>Evacuation of the elderly, sick and infirm as well as families with young children. Evacuation will be by way of road along higher ground to the nominated Assembly Area or Evacuation Centre.</p> <p>Stage 2:</p> <p>Evacuation of all persons not required for emergency operations. Evacuation will be by way of road along higher ground prior to roads being flooded.</p> <p>Stage 3:</p> <p>Full evacuation of the sector if required (including emergency services). Evacuation will be by way of road along higher ground.</p> <p>If access is impeded or blocked by water, flood boats and helicopters may be utilised for rescue dependent upon prevailing conditions.</p>
Evacuation Routes	<p>The topography of Gloucester township is such that flood evacuation routes move from the lower parts of the town to the higher parts. The length of these routes is in the order of a few hundred metres. Thus provided evacuations are commenced early, the risk of persons becoming trapped by rising water is minimal.</p> <p>Refer to sector map.</p> <ul style="list-style-type: none"> ○ Thunderbolts Way ○ Park Street ○ Queen Street ○ Denison Street ○ Ravenshaw Street ○ Hume Street ○ Phillip Street
Evacuation Route Closure	<p>The evacuation route for Gloucester Holiday Caravan Park is via a grassed over dirt track and is closed at 6.6 m on the Gloucester gauge.</p>
Method of Evacuation	<p>Evacuations should reflect the principles outlined in Evacuation Planning Handbook (Australian Emergency Management Institute, 2013). Options include-</p> <ul style="list-style-type: none"> ● Self-evacuation by private transport to the Evacuation Centre or family and friends ● Where resources permit, with assistance of NSW SES or emergency services to the Evacuation Centre. <p>At risk residents will be advised via warnings issued (media broadcast and Emergency Alert system) and or doorknocks from emergency services personnel advising of evacuation details and arrangements.</p>
Evacuation Centre/Assembly Point	<p>Evacuation Centre will be determined by the Welfare Services Functional Area Coordinator. Potential locations identified are:</p> <ul style="list-style-type: none"> ● Gloucester Baptist Church ● Gloucester Senior Citizen Centre
Large scale evacuations	<p>In a large or full scale evacuation evacuees will be moved to the Evacuation Centre in consultation with the Welfare Services Functional Area.</p> <p>NSW Police will be responsible for security of evacuated areas.</p> <p>Population densities with the sector would not exceed capacity of the surround evacuation centres and services.</p>
Rescue	<p>The NSW SES Gloucester Unit will manage flood rescue operation in accordance with the responsibilities outlined in the Flood Emergency Sub Plan.</p>
Resupply	<p>Resupply may be required in Barrington Village, Rural properties and remote camping</p>

	<p>areas within the Gloucester area.</p> <p>The need to resupply will depend on the duration of the event. Any event longer than 3 days may require prolonged resupply.</p> <p>Table 2, in Volume 2 provides information about isolated communities in the Gloucester area and potential periods of isolation. Periods are generally between 1 and 5 days.</p> <p>A flowchart illustrating the Resupply process is shown in Volume 1 of the Local Flood Plan, Attachment 1</p>
<p>Aircraft Management</p>	<p><i>Helicopter Landing Points:</i></p> <p>Suitable landing points are located at:</p> <ul style="list-style-type: none"> ▪ Gloucester High School Sports field (latitude -32.015, longitude 151.9601). <p><i>Airports:</i></p> <ul style="list-style-type: none"> ▪ Nil
<p>Other</p>	<p>The number of people in Gloucester is likely to increase during holiday periods. These people will likely occupy camping grounds, caravan parks and motels, some of which are flood prone or are likely to become isolated (1). For example (8):</p> <ol style="list-style-type: none"> i. Apr-May: Gloucester Motorcycle Expo, showground ii. Mar: Country Music Hoedown, Poley’s Place campground <p>These arrangements will stay in place until the ‘ALL CLEAR’ is provided by the SES to residents to return to their premises.</p>

1.2. GLOUCESTER SECTOR MAP



GLOUCESTER NSW SES CARAVAN PARK ARRANGEMENTS

**Chapter 4 of Volume 3 (NSW SES Response Arrangements for
Gloucester) of the Mid Coast Local Flood Plan**

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AUTHORISATION

The Gloucester NSW SES Caravan Park Arrangements have been prepared by the NSW State Emergency Service (NSW SES) as part of a comprehensive planning process.

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1 ARRANGEMENTS FOR THE EVACUATION OF CARAVAN PARKS AND THE RELOCATION OF MOVABLE DWELLINGS

1.1 GENERAL

1.1.1 The following caravan parks are flood liable:

- a. The Gloucester Holiday Caravan Park located at Denison Street off Boundary Road, Gloucester.

1.1.2 For more information on individual caravan parks see Table 1 at the end of this Chapter.

1.2 ADVISING PROCEDURES

1.2.1 Caravan Park proprietors will ensure that the owners and occupiers of movable dwellings are:

- a. Made aware that the caravan park is flood liable by:
 - Providing a written notice to occupiers taking up residence. The notice will indicate that the caravan park is liable to flooding and designate the location of flood liable land within the park (1).
 - Displaying this notice and the emergency arrangements for the Caravan Park prominently in the park.
- b. Made aware that if they are expecting to be absent for extended periods, they should:
 - Provide the manager of the caravan park with a contact address and telephone number in case of an emergency.
 - Leave any movable dwelling in a condition allowing it to be relocated in an emergency (i.e.: should ensure that the wheels, axles and draw bar of the caravans are not removed, and are maintained in proper working order).
- c. Informed of Flood Warning Information. At this time, occupiers will be advised to:
 - Ensure that they have spare batteries for their radios.
 - Listen to a local radio station for updated flood information.
 - Prepare for evacuation and movable dwelling relocation.

1.2.2 The NSW SES Gloucester Local Controller will ensure that the managers of caravan parks are advised of flood information (described in Volume 1 of the Gloucester Local Flood Plan).

1.3 EVACUATION OF OCCUPANTS AND RELOCATION OF MOVEABLE DWELLINGS

1.3.1 When an evacuation order is given caravan park occupants should follow the flood evacuation procedures for the park under the direction of the caravan park management. This should include advice to:

- a. Isolate power to moveable dwellings.
- b. Collect personal papers, medicines, a change of clothing, toiletries and bedclothes.
- c. Lift the other contents in any remaining dwellings as high as possible.
- d. Move to friends, relatives or a designated evacuation centre if they have their own transport, or move to the caravan office to await transport.
- e. If undertaking self-managed evacuation, register their movements with the caravan park management upon leaving the park.

1.3.2 Where possible, movable dwellings that can be moved will be relocated by their owners. Park managers will arrange for the relocation of movable dwellings as required. Council and NSW SES personnel may assist if required. Vans are to be moved to the locations outlined in Tables 1 and 2 at the end of this Chapter.

1.3.3 Caravan park managers will:

- a. Secure any movable dwellings that are not able to be relocated to prevent floatation.
- b. Ensure that their caravan park is capable of being evacuated in a timely and safe manner.
- c. Advise the NSW SES Gloucester Local Controller of:
 - The number of people requiring transport.
 - Details of any medical evacuations required.
 - Whether additional assistance is required to effect the evacuation.
- d. Check that all residents and visitors are accounted for.
- e. Inform the NSW SES Gloucester Local Controller when the evacuation of the caravan park has been completed.
- f. Provide the NSW SES Gloucester Local Controller with a register of people that have been evacuated.

1.4 RETURN OF OCCUPANTS AND MOVEABLE DWELLINGS

1.4.1 The NSW SES Gloucester Local Controller, using council resources as necessary, will advise when it is safe for the caravan parks to be re-occupied.

- 1.4.2 Moveable dwellings will be returned back to the caravan park(s) by owners or by vehicles and drivers arranged by the park managers.
- 1.4.3 Council and NSW SES personnel may assist by request where resources are available.

Table 1: Caravan Parks at risk of Inundation and/or Isolation from Flooding.

Name	Address/ Location description	Town/ Sector	Number of sites	Risk	Evacuation route	Evacuation route closure	Moveable dwelling relocation location	Evacuation centre	Notes
Gloucester Holiday Caravan Park	Denison Street off Boundary Road, Gloucester	Gloucester	60 semi- permanent (non- moveable) vans and 60 tourist vans, 200 tents and several storage vans.	Inundation begins at 5.4m on Gloucester Gauge (208020).	Evacuation is via a dirt track.	The majority of the park becomes flooded at 6.8m and must be evacuated before the evacuation route to Gloucester Showgrounds is lost around 6.6m.	Away from the area, or to the north of Gloucester Showgrounds, noting the eastern section becomes flooded by 8.2 metres and therefore should not be used.	Evacuation Centre will be determined by the Welfare Services Functional Area Coordinator. Potential locations identified are: Gloucester Baptist Church Gloucester Senior Citizen Centre	The evacuation route to the showgrounds is a dirt track and is closed at 6.6m on the Gloucester gauge. At peak times (January and Easter) it may accommodate 1500 people. There are approximately 12 'permanent' residents.

LIST OF REFERENCES

1. **NSW Government.** *Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005 Part 3 Division 3 Subdivision 7 Clause 123.* 2005.